# HONEYWELL

# CP-6
# OPERATIONS
# REFERENCE
# MANUAL

# SOFTWARE

CP-6

OPERATIONS REFERENCE
MANUAL

SUBJECT

Description of Operations Environment Including Operator Key-ins and
Messages Sent to Operator Consoles

SOFTWARE SUPPORTED

Operating System C00.

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**Honeywell**

# Preface

This document is a reference manual for the C00 version of the Honeywell CP-6 Operating System. It is organized in encyclopedic fashion for ease of reference with the keyins listed in alphabetical order and is not intended to be guide-like or tutorial.

The specific subset of operations procedures used at any particular CP-6 installation should be documented by the system manager and made available to the operations staff.

The Los Angeles Development Center (L.A.D.C.) of Honeywell Information Systems Inc. has developed Computer Aided Publications (CAP). CAP is an advanced document processing system providing automatic table of contents, automatic indexing, format control, integrated text and graphics, and other features. This manual is a product of CP-6 CAP.

Readers of this document may report errors or suggest changes through a STAR on the CP-6 STARLOG system. Prompt response is made to any STAR against a CP-6 manual, and changes will be incorporated into subsequent releases and/or revisions of the manuals.

The information in this publication is believed to be accurate in all respects. Honeywell Information Systems cannot assume responsibility for any consequences resulting from unauthorized use thereof. The information contained herein is subject to change. New editions of this publication may be issued to incorporate such changes.

# Table of Contents

## Tables:

# About This Manual

This manual discusses the operator's role in relation to CP-6 system operation.  The manual is organized in the following fashion:

Section 1 describes the CP-6 operations environment, with descriptions of different types of operator consoles.  A new subsection, Alignment of Output Symbiont Devices, has been added for the C00 release.

Section 2 describes the procedure for system booting (start-up), orderly shutdown, and recovery.

Section 3 describes the keyins that are issued from the operator console.  Keyins are special commands to the system that the operator issues to guarantee system integrity and service to the users.

Section 4 describes the types of messages that may be sent by the system or by the users of the system to the operator console.

Section 5 discusses labeling of magnetic tapes.

Appendix A describes the hardware configurations for the CPU and front-end devices.  The ADDRESS IOM BASE switch settings and INTERRUPT BASE switch settings have been changed for the C00 release.

Appendix B is a summary of keyin syntax.

Appendix C gives a list of Monitor Service error messages.

Appendix D gives a list of recovery error messages and screech codes.

Appendix E gives rules for tape and disk handling.

Appendix F is a list of related publications for supported peripheral devices.

Appendix G gives information concerning FEP connected unit record peripherals.

# Notation Conventions

Notation conventions used in command specifications and examples are listed in the Notation Conventions table below.

| Notation | Description |
|---|---|
| CAPITAL LETTERS | Capital letters must be entered as shown for input, and will be printed as shown in output. |
| lowercase letters | Lowercase letters identify an element that must be replaced with a user-selected value.<br><br>AP i could be entered as AP 2. |
| Special Characters | Numbers that appear on the line (i.e., not subscripts), special symbols, and underlines appear as shown in output messages and must be entered as shown when input.<br><br>#xxx could be entered as #011. |
| Brackets | An element inside brackets is optional. Several elements separated by an "or" bar inside a pair of brackets means that the user may select any one or none of those elements.<br><br>[key]   —   means a key value may be entered.<br><br>When enclosing keywords, brackets signify that all or part of the bracketed portion may be entered.<br><br>K[EY] can appear as K, KE, or KEY. |
| Braces and Or Bar | Elements placed inside a pair of braces identify a required choice. These are always used with the Or bar ( \| ). The Or bar separates the elements in a required choice.<br><br>{A\|id}   —   means that either the letter A or the value of id must be entered. |

| (cont.) | |
|---|---|
| Notation | Description |

**Ellipsis**

The horizontal ellipsis indicates that a previous bracketed element may be repeated, or that elements have been omitted.

option[,option]...   —   means that one or more options may be entered, with a comma inserted between each variable.

**Carated Letters**

Letters inside carats indicate the keys on a physical terminal device.

<ESC> <BS>   —   means press the escape key and then the backspace key.

Note that the control key (shown as <CNTL>) is similar to the shift key: it does nothing on its own, but changes the meaning of the keys that are hit while it is depressed.

**Keywords**

Keywords can be typed in uppercase or lowercase or a combination of both. In this manual, keywords are always shown in uppercase.

**Double Quotes**

Comments within command streams are denoted by being enclosed in double quotes marks (").

**Apostrophe**

Strings that contain delimiters must be enclosed by apostrophes ('); if an apostrophe is part of a string, it is denoted by adjacent apostrophes ('').

# Section 1

# The CP-6 Operations Environment

## Introduction

In the CP-6 environment, operators are responsible for several functions:

o   Maintaining system integrity, including file system maintenance.

o   Monitoring system functions and keeping precise records.

o   Responding to system and user operator requests.

o   Alerting other specialists when hardware or software maintenance is required.

o   Performing certain preventive maintenance.

Operating the CP-6 system and peripheral devices includes taking safety precautions to prevent injury to personnel or damage to the equipment. To avoid the possibility of serious injury to personnel, the operating staff must follow basic safety practices. No informal or "emergency" practice should ever allow the operator to endanger personnel or expose the equipment to possible damage.

Operators must know the overall configuration and understand how the equipment can be configured both before and while running the system. Setting of the hardware configuration switches should be done under the direction of the field engineering staff or the installation manager. The settings of these switches are crucial to the operation of the system; therefore, the settings should not be changed unless specifically authorized.

Operators assist in the preservation of the integrity of the CP-6 file management system. Copies of files or entire accounts are often periodically dumped onto tapes or disk packs as backup. In most cases, these tapes or disk packs must not leave the computer room or be processed by unauthorized personnel; otherwise, all steps taken by the system to preserve the security of the information may be in vain.

Preventive maintenance reduces the frequency of operations difficulties. A regular schedule of preventive maintenance lowers the risk of hardware failure.

Naturally, instances may occur where the operators lack the experience to cope with a serious problem; in this case, they should request assistance from the installation manager or Honeywell Customer Service Representative.

## Terminology

OPERATOR    denotes a person responsible for the orderly running of a CP-6 system or for running a terminal (RBT) connected to a CP-6 system, and who is responsible for answering system requests for human intervention for control of the CP-6 system or terminal.

KEYIN    is the set of characters an operator types on a keyboard display device (console) and transmits to the CP-6 system. The word "keyin" can also refer to the act of inputting and transmitting a message.

MESSAGE    a set of characters that the CP-6 system transmits to a console for display. (The message is what the CP-6 system says to the operator, the keyin is what the operator says to the CP-6 system.)

CONSOLE    one of several types of "console" devices connected to the CP-6 system. The most general description of a console is any combination keyboard-display device that is capable of displaying messages of 80 or more characters in length, is capable of generating keyins of 80 or more characters, and scrolls automatically. For remote batch terminals (RBTs) with built-in keyboard-display devices, the keyboard-display is the RBT console. For RBTs without such built-in devices, any device capable of being a CP-6 time-sharing terminal can be the console for that RBT.

CONSOLE ATTRIBUTE    the characteristic of a console which determines what messages it will display and what keyins it may perform. Attributes are given to a console when it is created by the installation manager.

DEVICE    a unit of communications hardware treated as a separate entity by the system. A time-sharing terminal is one device, as is the printer at an RBT.

TERMINAL    a unit of communication hardware connected to the CP-6 system via one communication line. A keyboard display unit is typically a terminal as well as a device; an RBT is a terminal supporting several devices.

STATION    denotes a group of devices under the control of, and including, a single device console. For example, an Intelligent Remote Batch Terminal (IRBT), its devices, and its console constitute a station.

WORKSTATION (WSN)    denotes the environment of devices made available to a user. The CP-6 system qualifies all requests for access to devices by a WSN designation, which is used to control access and to resolve addressing to an actual device.


## System Operation

CP-6 system operation is separated into two phases: the startup and initialization phase and the daily monitoring and servicing that keeps the system running. The startup phase includes adjusting as necessary the equipment configuration controls, and initializing the system to give control to the system software. During the course of daily system operation, little operator action is required, with the exception of servicing the peripheral equipment and responding to special requests from the system and from the system's users.

Since the CP-6 system functions effectively with a minimum of operator intervention, operator action during daily system operation is essentially maintaining service to users, primarily filling user requests to mount tapes, and the monitoring and servicing of peripherals.

System integrity checks normally detect if a system recovery ("screech") needs to be performed, and if so, what level of system recovery needs be performed. System initiated screeches normally proceed automatically, sending a screech code message to the operator console. If necessary, the operator can initiate an automatic recovery when it appears that the system is not running properly.

When the system encounters a problem with a peripheral device, it displays an error message to the console. For errors that are recoverable with operator assistance, the operator responds with a device keyin or corrects the malfunction (such as paper jams or paper replacement).

In addition to reporting errors on the operator's console, the system maintains a system error log file. This file contains a log of system and peripheral device failures that were corrected, that were irrecoverable, and that require operator assistance for recovery.

The system has the capability for maintaining records of all console transactions in the "console history file", for later access and review by the system manager, using the CP-6 system's REPLAY processor.

## Unattended Operation

The CP-6 system supports two modes of operation: unattended and attended. In unattended mode, no operator is present and the CP-6 system itself forbids activities requiring operator intervention or assistance. In attended mode, the CP-6 system can, depending on user activity, request an operator's assistance in completing certain tasks. The system manager sets certain parameters using CONTROL and other CP-6 system processors to define the "unattended" state.

In general, unattended mode means that the CP-6 system activities that would require operator intervention are inhibited (i.e., the line printer and card punch are locked out, as are tape drives and other removable resource devices). During the unattended mode, users who require tape or disk mounts are informed that such devices are not available (such activities cannot be completed because an operator is not physically present). As a result, if the CP-6 system is allowed to run out of paper in the printer, or request tape mounts, this condition would be considered attended by the CP-6 system regardless of whether there is a human in the computer room or not. It is the system manager's responsibility to define the condition of attended operation and unattended operation of the CP-6 system. In the event of a power failure, unattended recovery will not take place.


## Attended Operation

During the attended mode, the CP-6 system operator's functions are of the following types:

o   Responsibility items, requiring operator assistance and intervention to complete the job efficiently and correctly.

o   Authority items, permitting an operator to perform the duties needed to guarantee system security and efficient throughput.

o   Informational items, permitting an operator to see certain items in order to remain knowledgeable about the state of the CP-6 system.

As can be seen from the above discussion, a human operator is an important part of the CP-6 system. Although the CP-6 system can be used extensively in the unattended mode, many users require the assistance of an operator to effectively utilize the resources and features of the CP-6 system. The CP-6 system may request that a reel of tape be mounted on a tape drive for time-sharing use, or a disk pack set be mounted on certain disk drives for a batch job's use. In these cases, the process that the time-sharing or batch user is executing is suspended, and cannot proceed until the requested mount is completed.

With this in mind, the operator must be considered to be an essential element in providing smooth, uninterrupted services to the users of the CP-6 system. Likewise, should a line printer run out of paper, the operator will be informed of the condition, and to keep the system running at its full capacity (and to ensure that a user will eventually receive his output), the operator is expected to correct the out-of-paper condition as quickly as possible.

The items a specific operator must perform in relation to a specific CP-6 system vary from site to site, and from day to day, and it is impossible for all such cases to be discussed here. The areas in which an operator has authority are determined by the system manager and enforced by the CP-6 system using console attributes. In general, authority items are those items that an operator can modify using personal judgment. These items may include altering the batch queue priorities, aborting users, or any number of items. The CP-6 system is always able to run without an operator exercising any of these authority items. They are provided to the operator to encourage security and efficient use of the CP-6 system.

Informational items are, again, determined by a console's attributes, and are provided to the operator to give a "feel" of how the CP-6 system is running. Informational items can be useful in conjunction with authority items to help a system run more efficiently. Informational items available at operator's consoles can be user logons and logoffs, tape usage, and batch queue contents and priorities.

## Overview of Consoles

Operators consoles are a very powerful and versatile feature of the CP-6 system. Operator communication facilities provide an operator with:

o    Information about system activity.

o    Information about devices which need attention.

o    The ability to communicate with users, programs, and transaction processing administrators (TPAs).

o    The ability to manipulate and control users and batch queues.

o    Information about problems or potential problems within the system.

o    The capability for multiple operator consoles per system.

o    The ability to use any device that can operate as a CP-6 time-sharing terminal as the CP-6 system console.

o    Common input syntax for all operator commands to the CP-6 system.

o    Consoles that may be defined to have limited scope and authority. Consoles can be associated with a particular group of users or devices, and thus can only receive information about and/or control those users or devices. The console may be limited so that only information can be received. Control over individual users can similarly be restricted.

o    Operator's consoles that may simultaneously execute programs as time-sharing terminals.

o    The capability to use four types of hardware-configured consoles:  the Low Cost Console, the System Control Console, the FEP Connected Console, and the I  T Control Console.

## Console Attributes

Console attributes determine the functional characteristics and capabilities of the consoles connected to the CP-6 system. Each console has a set of INPUT attributes (which limit the set of valid keyins acceptable from that console) and a set of OUTPUT attributes (which limit the set of valid messages that will be printed at    t console, as well as limiting the set of valid informational keyins).

There are five console attributes, which may be defined as either INPUT or OUTPUT or both, for any given console:  ADMINISTRATIVE, COMMUNICATIONS, DEVICE, SYSTEM, and TP.

Consoles are authorized by the system manager for any combination of these attributes. The attributes of a currently active console may be displayed via the CONSOLE STATUS keyin.

## Administrative Console Attributes

Administrative consoles are associated with workstations (WSNs). An ADMINISTRATIVE INPUT console can modify the batch queue for its WSN, abort users with a matching workstation of origin (WOO), communicate with users of its WSN, and answer M$KEYINS of users whose WOO matches its WSN. An ADMINISTRATIVE OUTPUT console can, of course, only display those items concerned with its WSN. An ADMINISTRATIVE INPUT console is sometimes referred to as a PADMIN console. An ADMINISTRATIVE OUTPUT console is sometimes referred to as a UADMIN console.

## Communications Console Attributes

A console with communications attributes displays (OUTPUT) or modifies (INPUT) actions of communications equipment connected to the CP-6 system. Typical actions include activating IRBT communications lines in FEPs (commonly called synchronous communications lines, SYNC for short), displaying the status of an FEP connected to the CP-6 system, or communicating with remote master hosts when the CP-6 system is acting as a slave IRBT to another system.

## Device Console Attributes

A console with device attributes receives information about (OUTPUT) or controls (INPUT) one or more types of devices, depending in how the console's station is defined. Devices are referred to by four character names from device consoles; the first two characters identify the device type (LP, CP, CR, DP, MT) followed by a two-digit device number (01, 15, 99, etc.). (The CP-6 system identifies devices as the four character name plus the station name. However, operators at device consoles neither see nor need to type the station name, as a device console implicitly knows its station.) The CP-6 system may have many LP01's but each must be associated with a different station. Therefore, if a console controls an LP01, it can only control that LP01, and none of the other LP01's on the system. Additionally, device consoles are allowed to examine and manipulate the output queue for its station, providing such a queue exists.

A device console also receives information about or controls the MPC hardware that controls devices at its station. Typically MPC names are of the same format as device names, but use the following MPC type names rather than device names.

    UCnn    unit record controller

    TCnn    tape device controller

    DCnn    disk device controller

A device console may be limited to receive information about or to control only one of a station's devices. Device consoles concern themselves with several types of devices. Among these types are:

    TAPE (MT) for tape drives.

    DISK (DP) for disk drives.

    Unit Record (LP, CR, CP) for unit record input and output devices.

## System Console Attributes

System consoles are the most powerful consoles that the CP-6 system supports. SYSTEM
OUTPUT consoles receive all administrative messages, all communications messages, and
all device messages for STATION LOCAL. SYSTEM INPUT consoles can display and modify all
WSNs batch queues, all stations output queues, all communications gear, the number and
type of users in the system, and all devices at the LOCAL station.

SYSTEM INPUT consoles are also given privilege to start and stop secondary CPUs,
authorize diagnostic users, and initiate automatic system recoveries.

System consoles combine the capabilities of DEVICE, PADMIN, TP, and COMMUNICATIONS
consoles and (unless defined otherwise by the system manager) have no WSN restrictions.

## Transaction Processing Console Attributes

A console with the transaction processing attributes displays (OUTPUT) such messages as
transaction processing application program (TPAP) aborts, forms program (FPL) aborts,
undefined transaction ID's, etc. This type of attribute also allows a console to send
(INPUT) any valid transaction processing command to any transaction processing
"instance" (i.e., a running copy of transaction processing is associated with an
account, only one instance may run in any account at any given time). A transaction
processing console is similar in function to a transaction processing master control
terminal. The difference lies in the fact that a master control terminal can only
receive messages from, and only affect the instance it is associated with. For a
complete discussion of transaction processing commands and TP master control terminals,
see the TP Administrator Guide (CE50).

A transaction processing console's logical association within the CP-6 system is similar
to a console with the communications attribute, i.e., it is not associated with any
workstation (as in ADMIN consoles) or any multiple device station (as in DEVICE
consoles).

## Console Security

Security on the CP-6 system is dependent upon a certain amount of common sense in the
placing and authorization of operator consoles. Since a wide flexibility has been given
for the definition of a console's attributes, the system manager must be aware of the
ramifications of improper physical location of the more powerful console types. In
addition, the operators must make a definite effort to conform to any security
procedures that are established, because it is essential to the security of the system
that consoles be accessible only to those authorized to use them.

## Console Hardware Types

There are four hardware types of consoles that may be connected to the CP-6 system.
Each type of console requires different procedures to communicate with the CP-6 system.
The four types are:

1.  IOM connected Low Cost Console (LCC)

2.  IOM connected System Control Console (SCC)

3.  FEP Connected Console (FCC)

4.  IRBT Control Console (ICC)

# IOM-CONNECTED Consoles

The Low Cost Console (LCC) and the System Control Console (SCC) are both connected to the system through the I/O Multiplexor (IOM). In addition to housing a keyboard and printer, the LCC or SCC contains initialize and boot controls as well as emergency power and other controls. Either an SCC or an LCC can be used to boot the system, and run XDELTA (the CP-6 system executive debugger). The SCC has a set of special keys while the LCC uses an exclusive set of escape sequences to perform special functions.

IOM-connected consoles have the following special features:

o   Automatic Logon (as part of automatic LOCAL station Logon).

o   Automatic "SYSTEM" attributes.

o   Automatic special editing.

IOM-connected consoles are half-duplex devices. Keyins cannot be entered while messages are printing at the console. To ready the LCC for input the <RETURN> key is pressed; to send that input the <RETURN> is pressed at the end of the keyin. To ready the SCC for input, the <REQ> key is pressed; to send that input the <EOM> key is pressed at the end of the keyin.

IOM-connected consoles can be logged off via the !BYE or !OFF keyins. If an IOM connected console is logged off, it can be connected by pressing <RETURN> <RETURN> (on the LCC) or by pressing REQ followed by <EOM> (on the SCC). Normal console activity then resumes.

At system boot time, the "LOCAL" station is automatically connected to the CP-6 system. This means that no special activity by the operator is required to connect the console to the CP-6 system.

Messages are automatically output to an IOM-connected console whenever they are available to print, as long as a keyin is not in progress at the time.

Since IOM-connected consoles do not communicate with the CP-6 system through the front-end processor (FEP), the special input editing features supplied by the FEP cannot be used. The CP-6 system provides a special "shift and edit" mode for IOM-connected users.

When "shift and edit" is in effect, any alphabetic character (A-Z-a-z) that is input automatically is assumed to be upper case, solving the problems of having to work with shift lock on. No other characters are "translated" automatically.

"Shift and edit" also gives an operator the ability to correct keyin errors without having to press <CNTL-X> (LCC) or OPER ERR (SCC) and retyping the whole line. Editing on an IOM-connected console is best described by example. Imagine an operator wants to enter RETRY LP01 but instead types in:

    !RETRY LP02

If the operator notices the error before pressing <RETURN> (or <EOM>), the mistake may be corrected by typing backspace <BS> (or <CNTL-H> for low cost consoles) <1>. If <RETURN> (or <EOM>) is then pressed, the CP-6 system will interpret the input to mean:

    !RETRY LP01

Again, if an operator wishes to RETRY DP02, but instead types:

    !RETRY LP02

the correction may be made by typing four backspaces and DP02, so that the CP-6 system sees

    !RETRY DP02

Note that the backspacing effectively erases each character that is backspaced over, so that all characters to the right of the error must be retyped. Characters to the left of the error are unaffected.

"Shift and edit" mode is automatically given to LCCs and SCCs when they connect. "Shift" may be turned off by using the keyin

    !UC OFF

Note that only upper-case shifting is turned off when UC is OFF. Restoration of upper-case shifting may be accomplished by keying in

    !UC ON


## Low Cost Console (LCC)

The Low Cost Console (LCC) consists of various combinations of RS232 connected CRT and/or hard-copy terminals connected to one module, a microprocessor driven IOM Adaptor Board. Also included is an optional small operator's panel containing the INITIALIZE, BOOTLOAD, and EMERGENCY POWER OFF buttons.

The LCC uses a standard ASCII terminal, but does not function like a time-sharing terminal. The LCC has the following special function keys:

| Special Key | Meaning |
|---|---|
| <RETURN> or <CR> | Activate read mode. This causes a "!" to be printed so that a keyin can be entered at the console. |
| <RETURN> or <CR> | Terminates a keyin, submitting it to the system. The rule is, if you want to enter a keyin, press <CR> before and after you type it in. |
| <CNTL-X> | Voids the current keyin entry. This is used when a keyin is being entered, but a serious spelling error is made or the operator decides not to enter the keyin. <CNTL-X> kills the entry, and generates an error message at the console. |
| <BKSP> or <CNTL-H> | Can be used to correct errors in a keyin being entered. Type as many backspaces as it takes to reach the error, then retype the characters correctly. |
| <SYSTEM INITIALIZE> or <ESC> <CNTL-I> | Causes the system to be initialized. Some LCCs do not have a <SYSTEM INITIALIZE> button; with these, use <ESC> <CNTL-I>. |
| <BOOTLOAD> or <ESC> <CNTL-B> | The LCC optionally has a BOOTLOAD button; if not, an <ESC> character followed by a <CNTL-B> causes the bootload process. Note that this sequence should never be typed, except when booting the system. |

Since the LCC is designed to accommodate 300 baud, 1200 baud, or 9600 baud terminals, the LCC microprocessor has autobauding logic in order to determine the speed of the specific terminal being used. Furthermore, this auto-bauding function must be performed after every system initialize.

The autobaud function is accomplished by depressing the RETURN key once after SYSTEM INITIALIZE and BOOTLOAD. After the RETURN key is depressed, the LCC will tell you that the console is ready by displaying "/CONSOLE READY VER n.n/". If this message does not appear, the initialization sequence must be started again. The other consideration is that the console will "beep" indicating that it wished operator attention when the first input is requested. The first character typed resets this "attention" condition, but is also ignored.

It is suggested that when the CP-6 system first outputs a message during the boot process, that a space be typed, followed by the requested input.

LCC Keyin Procedure

When performing a keyin through the LCC, remember that an LCC is a half-duplex device; that is, the device must be ready to accept input from the operator before the operator can input anything. Therefore, keyins cannot be performed while messages are being output.

To perform a keyin on a LCC, the operator must first press the RETURN key on the console. When the CP-6 system is ready to accept input from the operator, it will print an exclamation point (!), (also called bang) at the left margin of the display. The operator may then type a keyin. When the command is typed in, the special RETURN key must be pressed again. The entire sequence for performing a keyin on a IOM connected console is:

a. Press <RETURN>

b. Wait for !

c. Type in command

d. Press <RETURN>


## System Control Console (SCC)

The System Control Console is very much like the Low Cost Console, except that it has a set of special function keys:

| Special Key | Meaning |
| --- | --- |
| <REQ> | Activate read mode. This causes a "!" to be printed, so that a keyin can be entered at the console. |
| <EOM> | Terminates a keyin, submitting it to the system. |
| <OPER ERR> | Voids the current keyin entry. This is used when a keyin is being entered, but a serious spelling error is made or the operator decides not to enter the keyin. It kills the entry, and generates an error message at the console. |
| <BS> | Can be used to correct errors in a keyin being entered. Type as many backspaces as it takes to reach the error, then retype any characters to the right correctly. |
| <SYSTEM INITIALIZE> | Causes the system to be initialized, resets the master CPU. Note that this sequence should never be typed except when booting the system. |
| <BOOTLOAD> | Starts a system boot. |

When performing a keyin through the SCC, remember that an SCC is a half-duplex device; that is, the device must be ready to accept input from the operator before the operator can input anything. Therefore, keyins cannot be performed while messages are being output.

To perform a keyin on a SCC, the operator must first press a special key on the console marked REQ (for request). When the CP-6 system is ready to accept input from the operator, it will print an exclamation point (!), (also called bang) at the left margin of the display. The operator may then type a keyin. When the command is typed in, another special key, marked EOM (end of message) must be pressed. The entire sequence for performing a keyin on an IOM connected console is:

a.  Press REQuest

b.  Wait for !

c.  Type in command

d.  Press EOM


## FEP Connected Console (FCC)

Any device that can be a CP-6 time-sharing terminal can be a CP-6 operators console. There are several advantages to a FCC:

o   Full FEP editing features may be used.

o   Full duplex operation means no special "request" key need be pressed.

o   Console is not hardwired (therefore not physically restricted) to an IOM.

An FEP connected console is authorized by the system manager, using SUPER, who assigns its attributes, password, maximum priority, default profile, and other characteristics.

To connect a FEP connected console to the CP-6 system, an operator must be at the

    LOGON PLEASE:

point. A time-sharing user can then connect with the correct logon name and account, or a console can connect. The form for a console logon is

    consolename[,,password] [PRO=profilename]

The password is required only if the console has been authorized with a password (a recommended inclusion), and profilename need only be specified if the device which is about to become an operator's console requires a different device profile that the console's authorized default profile.

Note that only one console may logon to the CP-6 system using a specific authorization (unlike time-sharing authorizations, which many users can use simultaneously). Therefore, if two consoles are to be connected to the CP-6 system they must have separate authorizations, even though the two consoles' attributes may be identical. If the logon is successful, the CP-6 system will display a connected message on the console. To disconnect the console from the CP-6 system, the keyin:

    !BYE or !OFF

can be used.

Messages print on FEP connected consoles whenever they are available to print, provided the operator is not in the process of performing a keyin.

Keyins may be performed on a FEP-connected console simply by typing the desired characters. If the console is idle, a bang (!) will appear, followed by the characters that the operator typed in. If the console is outputting, it will finish its current message, and will begin echoing the keyin as if it had been idle. Keyin input is terminated by a carriage return (CR) or linefeed (LF) character.

Input buffers may be edited using normal FEP editing functions.  Commonly-used editing features are:

| Function | Sequence | Meaning |
|----------|----------|---------|
| To Retrieve | <ESC><R> | Retypes the current input record. |
| | <ESC><D> | Recalls the last saved input record. |
| To Replace | <ESC><M> | Set the replacement mode, disables overstrike. |
| To Position | <BS> or <CNTL-H> | Moves the edit point left one column. |
| | <CNTL-R> | Moves the edit point right one column. |
| | <ESC><RET> | Moves the edit point to the beginning of the input line. |
| To Insert | <ESC><J> | Toggles insert mode.  Characters can be added inside the input record. |
| To Overstrike | <ESC><O> | Sets the overstrike mode, disables replacement. |
| To Delete | <DEL> | Deletes a column in the input record. |
| | <ESC><X> or <CNTL-X> | Deletes the current input record. |

## IRBT Control Console (ICC)

Depending on the manufacturer, IRBTs have different ways of accepting keyins and displaying messages.  The manufacturer's instructions should be followed for transmitting to, and receiving from, the CP-6 remote host system.  The CP-6 system does not support card reader submitted operational commands for 2780-type RBTs.  For these terminals, a timesharing terminal connected as an FCC should be used.

## Console Ghosts

A special feature of the CP-6 system is the ability to use any console as a time-sharing terminal at the same time that it is being used as a console.  This allows the central site operator to perform time-sharing functions, such as running CONTROL, batching a job, or running STATS.  At a remote site, a console ghost can be used, for example, to correct and resubmit faulty job control commands.

A console ghost is initiated by the keyin

    !GHOST acct_no,user_name[,acct_password]

Where acct_no, user_name and acct_password are any SUPER-authorized user identification for ONLINE use.

Output from a console ghost is preceded by the characters G: (to indicate that it is output from your GHOST). When a console ghost is ready to receive input from the operator, it will output the message

    *READ (G:) n BYTES, prompt

where n is the maximum number of bytes allowed in the read and prompt is the character(s) of the read prompt.

Note that n may be larger than the maximum number of bytes transmittable from the physical console. If the operator wishes to input to the console ghost, the keyin

    !G:[text-string]

is used, and text-string is sent to the console ghost as if the text-string were typed to an on-line terminal. The strings may be null (of zero length). Therefore, an operator may keyin:

```
    !GHOST GOOBER,104ZILCH,PIGLETS
    18:15
     Console ghost GOOBER,104ZILCH is SYSID 8218
     G:     *** SYSID 8218 ON SOME L66 AT 18:15:12.05 FRI JUN 08 '84.
     G:
     G:
     8218: GOOBER ON
     *READ(G:)* 256 BYTES,*

    !G:B FILE
     *READ(G:)* 256 BYTES, 1.000

    !G:XXYZ
     *READ(G:)* 256 BYTES, 2.000

    !G:AVDE
     *READ(G:)* 256 BYTES, 3.000

    !G:
    18:16
     *READ(G:)* 256 BYTES, *

    !G:END
     *READ(G:) 256 BYTES, !

    !G:PCL

    G: PCL C00 HERE
     *READ(6:) 1024 BYTES, <

    !G:C FILE TO ME(K)
     G:     1 -     1.000 XXYZ
     G:     2 -     2.000 AVDE
     *READ(G:)* 1024 BYTES, <

    !G:END
     *READ(G:)* 256 BYTES, !

    !G:BYE
     8218: Console ghost GOOBER,104ZILCH off
     G: CON=00:01:28  EX=00:00:00.36  SRV=00:00:01.82  PMME=   192  CHG= 1.20
```

Several other keyins are available for console ghost usage:

    !Y:    performs a <CNTL-Y> on the console ghost.

    !B:    performs the <BREAK> function on the console ghost.

!F:    performs an <ESC><F> on a console ghost's read.

Note that type ahead is not allowed for console ghosts.  The operator must wait for the
*READ(G:) and message before proceeding to key-in more to the console ghost, except for
Y: and B:, which may be performed at any time.

Note also that normal console activities proceed uninterrupted when a console ghost is
running and that only one console ghost may run per console.  If a console logs off with
a console ghost still active, the console ghost will be X'd off the system, as if an
operator had performed an X keyin on its sysid.

If the *READ (G:)* message rolls off the screen (or out of sight) it may be retrieved by
typing the keyin

    !PEND[ING] [READS]

If a ghost is active and it is ready to read, the *READ (G:)* message will be displayed.
This can be useful because the prompt printed in the message can tell what the operator
was doing when last using the console ghost.

Please note that console ghosts are intended for light time-sharing use, and cannot be
used for applications involving screen addressing and other advanced time-sharing
applications.


## HELP Facility

Information about keyins is readily available at any console, via the HELP keyin.  For
example, entering:

    HELP SEND

causes the syntax of the SEND keyin to be printed.  Entering a question mark, provides a
description of the keyin, and entering a second question mark prints the minimum
attribute required to execute the keyin.  Entering:

    HELP TOPICS

prints a list of items that can be typed as part of a HELP keyin.  Note that summary
information is included for convenience.


## Other Facets of Operations

In the course of his duties, the operator may be called upon to run certain system
management processors, primarily VOLINIT, PIG, EFT, and LABEL.  These processors are
documented in the CP-6 System Support Reference Manual, order number CE41.

The VOLINIT processor prepares a disk pack so that it may be used by the CP-6 system.
After VOLINIT has prepared a disk pack, the Packset Initializer may be used to assign
the pack to a packset.

The Packset Initializer, (PIG) is used to initialize the disk packsets and to maintain
the Master Account Directory (MAD), which identifies which accounts are on which public
packset.

The EFT processor provides facilities for the preservation and backup of files.

The LABEL processor initializes magnetic tapes for use as ANS volumes by writing
standard labels.  The primary use of LABEL is in semi-protected and fully-protected
systems in which all tapes must be prelabeled before they can be used as labeled
volumes.  In a semi-protected system, the OVER keyin is permitted to initialize labeled
tapes; in a fully-protected system, LABEL must be used to initialize all labeled tapes.
In either type of protection mode, any type of tape can be relabeled by a user
possessing the FMSEC or LABEL processor privilege.  LABEL can be run from a time-sharing
terminal or as a console ghost.

## Alignment of Output Symbiont Devices

Output symbiont devices can be aligned when in the IDLE state. This enables the operator to align a device at his/her leisure instead of having to wait for the output of a specific form.

Note that alignment of any form can be done on any idle device (provided the form type matches the device type) by simply issuing a FORM keyin prior to initiating the alignment sequence.

See the ALIGN and FORM ON keyins.


## Concurrent Output Mode

When a user copies output to LP, chunked files are created by the system in groups of ten-granule extents. When the file exceeds approximately 70 granules, output to OUTSYM in 70-granule "chunks" begins. When OUTSYM receives the final chunk, the file is automatically PRIOed and printed.

If the user specifies the CONCURR=YES option on the !LDEV command, the file will be scheduled for printing when OUTSYM is notified about the first chunk. Also, if the operator performs a PRIO keyin on a CMFW (Concurrent Multi File Wait) file, this will trigger OUTSYM to print the file and treat it as concurrent until completion.

If the CONCURR=YES option has not been specified, as the job is generating output and the symb size exceeds 70, an operator DISPO keyin will show it (with priority W) but it will not yet print.

Example:

A user copies output to LP. The sysid file number is visable to the operator as:

    Output sysid 43476-1 (ACCOUNT): LP0LOCAL 70 grans prio W 2nd

The operator inserts:

    !PRIO O 43476 15

The output queue shows the entry:

    Output sysid 43476-1 (ACCOUNT): LP0LOCAL 70 grans prio 15(C) 1st

When sysid 43476 starts printing, the message:

    LP02 sysid 43476-1 on concurrent mode

appears on the operator console.

# Section 2

# System Start-up and Recovery

## Overview

A particularly important function of the operations staff is to start-up the CP-6 system, and, if necessary, to initiate and monitor system recovery.

CP-6 boots fall into two categories: tape boot and disk boot. A tape boot reads the information necessary to build a monitor, from a multi-volume tape set called the PO tape set. It then builds the monitor in memory, and writes a copy of it to the system disk (DP#SYS). A disk boot takes a monitor image from the system disk and copies it into memory.

The remainder of this section covers the following topics.

o   Organization of the PO tape set.

o   Tape boot concepts and processes.

o   Patching.

o   Disk boot concepts and processes.

o   Boot operations, including the detailed sequence of questions, answers, and informational messages which come into play during a boot.

o   Booting scenarios for specific tasks and situations, e.g., booting to change TIGR-built tables, booting to install new patches, booting after power failure, etc.

o   Process of creating a boot-tape set via the DEF processor.

o   Recovery (both automatic and operator).

o   FEP recovery.

## Organization Of The Honeywell-Supplied PO Tape Set

There are two different portions of the PO tape set. The two portions have different uses and accordingly have different formats.

o   Volume one consists of free-format record images. This portion of the tape set is used to initialize the unmanaged system area of the system disk. Volume one is also referred to as the unlabeled portion of the tape set. This volume does not have a valid CP-6 ANS label. However, when volume one is mounted on a running CP-6 system, file management will mount the tape as ANSSCRATCH #CP6PO1. This volume has one managed file, $XINSTALL, at the end of the reel.

o   Subsequent volumes consist of CP-6 ANS labeled tape format files. This portion of the tape set is used to initialize the :SYS account in the file-managed area of the system disk. These volumes are referred to as the labeled portion of the tape set. These volumes contain valid labels, such as #CP6PO2 and #CP6PO3.

# Tape Boot Concepts and Processes

Volume one of the PO tape contains the following items and performs the following processes:

| | |
|---|---|
| AARDVARK | The CP-6 bootstrap loader and control processor for booting. |
| firmware | The set of CP-6 firmware current at the time the PO tape was created by Honeywell Software Distribution. This firmware may be superseded by an IFAD tape released by Honeywell Customer Services Division (CSD). The customer can then replace the PO tape firmware with the new firmware using procedures described later. Note that the firmware included on the PO tape is the minimum needed for a CP-6 installation. It does not contain test and diagnostic (T and D) pages. |
| XDELTA | The executive debugger, which patches GHOST1 and the monitor. It may be retained for later debugging, or disassociated, as selected by a boot option. |
| GHOST1 | The first user that runs during a boot. It performs initialization tasks. |
| M:MON | The CP-6 monitor. |
| debug schema | The M:MON debug schema for use by XDELTA. While the full schema can be placed on this section of the PO tape, the tape supplied by Honeywell contains a very small subset called the default schema. The default schema contains all monitor SYMDEFs and ENTDEFs, plus schema for B$JIT, F$DCB, B$USER, and other monitor tables. |
| patches | Appearing here are: |

o   Patches to AARDVARK and XDELTA, processed by the mini-debugger contained in AARDVARK.

o   Patches to M:MON and GHOST1, processed by XDELTA.

o   TIGR commands.

o   DELTA RUM (Run Unit Modification) commands to patch processors and FEPs.

o   patches to the libraries, processed by PLOVER.

| | |
|---|---|
| $XINSTALL | The XEQ file for the DINGO ghost. |

The patching process is described in more detail later in this section.


## PO Tape

The PO tape set is arranged to allow each site to rebuild volume one periodically, incorporating new patches, changes to the TIGR commands and changes to $XINSTALL. The first volume is very short, less than 1000 feet, allowing the use of a small tape reel. The time required to build volume one, via the DEF processor, is also very short, less than one minute of real time on an unloaded system. The capability of building a new first volume quickly and easily allows a site to maintain the current patches on tape and still remain responsive to the need for quick patch changes on a cardless system. The total real time required to repatch the monitor and all system processors, including rebuilding volume one of the PO tape set, is on the order of one hour.

## Initiating Tape Boot

To initiate a tape boot, volume one of the PO tape set is placed on a tape drive,
preferably device number one, as this allows defaults to be assumed, reducing console
interaction.  The next steps depend upon the type of console:

For a system console, press the INITIALIZE and BOOT buttons.

For an LCC console with the optional button pod, depress the INITIALIZE button, then
wait for the terminal to reset internally, i.e.,, until the DATA SET READY indicator
stops flashing.  Then press the BOOT button.  The RETURN key must be pressed after the
buttons are pushed.

The low cost console will sound its alarm at this point; type any character to silence
it.  Do not follow this character by a RETURN; it is ignored by the system, and is not
echoed.

For the LCC without the optional pod, use the following key sequences instead of the
initialize and boot buttons:

        <ESC> <CNTL-I>
        <RETURN>
        <ESC> <CNTL-B>

    where <ESC> is the escape key and <CNTL> is the control key.  Hold the control key
    down while typing the other indicated character.

For all consoles, the procedures described result in AARDVARK being read into memory.

If the system pack has not been used as such before, the question

    SYSTEM AREA SIZE - 0 OK TO PROCEED?

will be asked.  Verify that the pack is the correct one to use; then respond 'Y'.  This
pack will become the DP#SYS pack set during the boot process.  Note that any device
designated as SYSTEM PACK must contain either a scratch pack, or a pack which has
previously been used on the SYSTEM PACK device.


## Aardvark and TIGR

AARDVARK initializes the hardware environment, reads options input by the operator, and
processes the first volume of the PO tape set.  This processing includes reading/loading
firmware, reading XDELTA, GHOST1, and M:MON into memory, calling XDELTA to patch,
writing XDELTA, GHOST1, M:MON, patches, and schema to disk, and transferring control to
the TIGR portion of the monitor.  TIGR builds monitor tables, performs initialization
tasks, including loading firmware and initialization of secondary CPUs in a
multi-processor configuration, and then transfers control to the CP-6 scheduler, which
starts execution of GHOST1.


## Ghost1

If directed to do so by boot options, GHOST1 will read all files from the labeled
portion of the PO tape set.  GHOST1 attempts to read the patch file (which AARDVARK
built on the unmanaged portion of DP#SYS), and builds several patch files in
DP#SYS.:SYS.  If the files are non-empty, DELTA is initialized and called via M$ALIB
monitor service to RUM the CP-6 processors and FEP rununits, and then is disassociated.
PLOVER is called via M$LINK to patch the HOST and FEP unshared libraries.  GHOST1 then
initializes all shared processors described by SPROC options in the TIGR MON command.
GHOST1 then invokes the M$LDTRC monitor service to transfer control to SLUG (System
Logon User Ghost).

## Startup Process

SLUG causes the other system ghosts to start (KEYIN, OUTSYM, PRESCAN, INSYM, ELF, PIG, FROG and GOOSE) and the system comes up. When SLUG gets control from GHOST1, a 5-phase startup process is begun. Each phase is started only when the previous phase is completed. The phases are:

PHASE 1:  If this is a 'Yes to new files Tape Boot', or if one of the SUPER-built files is bad, SUPER will be run as a ghost. Phase 1 is complete when SUPER completes.

PHASE 2:  KEYIN, PIG and ELF are started. If this is a tape boot, DINGO is started also (See The DINGO Ghost, below). PIG and ELF will perform their initialization functions, a message will be sent to SLUG saying that they are phase-complete, and PIG and ELF will wait. If DINGO was started, a message will be sent informing SLUG when DINGO completes. Phase 2 is complete when DINGO has completed and PIG and ELF have completed their initialization.

PHASE 3:  INSYM, OUTSYM, PRESCAN, FROG and MBS (part of SLUG) are started in order to perform their initialization. Each one of these ghosts writes a phase-complete message to SLUG when their initialization is complete. These ghosts all wait for another message from SLUG before continuing their processing. Phase 3 is complete when all of the above ghosts have completed their initialization.

PHASE 4:  A message is sent from SLUG to the ghosts INSYM, OUTSYM, PRESCAN, FROG and MBS (the phase 3 ghosts) telling them that they may do any of their normal processing except starting of users. SLUG now starts the rest of the MING ghosts and RCVR2. These MING ghosts are DOG, GOOSE, JAYS, MAILMAN, and SCOTTY. MONKEY is told that the NOUSERS keyin is no longer legal. The NOUSERS bit is checked by SLUG and if it is reset, the ghosts SLUG, MBS and GOOSE are told that they may now start users. Upon receipt of this message, SLUG will also boot the FEPs if this is a tape boot with new files or start the FEPs on any other kind of a boot. Phase 4 is complete when all of the above functions have been performed.

PHASE 5:  This is the normal running state of CP-6. NOUSERS may still be set and the FEPs may not be active. This situation will be remedied as soon as an ON [{TS|BATCH|GHOST|TP}] xx keyin is received with xx not equal to zero.

NOTE: Once KEYIN is started, the STARTUP!! Keyin can be used to determine which of the remaining phases is currently active. The response is a message station, phase number and the next ghost due to check in.

## Patching

Permanent patching of the monitor, XDELTA, or GHOST1 may be performed only during a tape boot. While processors in the :SYS account and the FEPs can be patched at any time, the best time to do it is during a tape boot. Some catastrophic errors, e.g., IBEX will not run at all, can be patched only during a tape boot. The CP-6 system provides an easy-to-use, yet flexible method of patching.

CP-6 patches are categorized in six groups. Each group is used as input to a separate processor during a tape boot. The groups and processors are listed below:

Mini DELTA    Patches to AARDVARK and XDELTA performed by the mini debugger in AARDVARK

XDELTA        Patches to the monitor and GHOST1, performed by XDELTA.

TIGR          Not really patches at all, these are the configuration commands used by TIGR. They are grouped with patches for ease in discussion, as they are read in the same way as patches.

Processor RUM    Patches to processors and FEPs, performed by the RUM mode of DELTA.

PLOVER          Patches to HOST and FEP unshared libraries, performed by PLOVER.

BOOTIME         Honeywell-supplied IBEX commands, to be executed during $XINSTALL.

The patch records are read by AARDVARK, and routed to the right processor at the right time.  Input to AARDVARK's patch stream may come from any of the three physical sources: tape, card, and console.  AARDVARK collates records from each device so that groups are merged together before they are passed to the target processor.  Each group on each device is optional, but if present must appear in the order given below.  Each group, if present, must be preceded by its group separator:

1.  !MINI

2.  !XDEL

3.  !TIGR

4.  !RUM

5.  !PLOVER

6.  !BOOTIME

7.  !FIN — if any records are present for a patch source, the last record from that source must be !FIN.

If a group is present in more than one source, the records for each group are collated in the following order:

1.  TAPE

2.  CARD

3.  CONSOLE

Example:

Assume !XDEL patches, !RUM patches, !FEP patches, and !FIN are present on tape.  Assume !RUM patches and !FIN are in the card reader.  Assume the operator will enter !XDEL, and !FIN from the console.

The group as collated by AARDVARK will be:

    !XDEL from tape
    !XDEL from console
    !RUM from tape
    !RUM from card
    !FEP from tape

An additional feature of CP-6 patching is the capability to specify, via boot options, that patch groups in a specified device are to be ignored.  These options are described in detail under "Boot Options".

Example:

Assume that the TIGR deck on tape is to be replaced by a TIGR deck on cards. Simply precede the card TIGR deck with a !TIGR card, and follow it with a !FIN card (assuming no other groups exist on cards). During the boot specify

    P in response to CHANGE BOOT OPTIONS
    MXRF in response to TAPE PATCHES
    T in response to CARD PATCHES

AARDVARK will skip over the !TIGR group on tape.

Note: The success of the collation process depends on each processor's reading until it reaches the end of its group. Do not use commands which terminate the reading of commands, i.e., GO, QUIT, and END. These commands are simulated at the proper time when AARDVARK reports a "no more records for that group" condition.

It is recommended that new patches and TIGR deck changes be placed on a new first volume of the PO tape set. The procedures for installing changes from this tape are described under "Boot Scenarios for Specific Tasks".

## Disk Boot Concepts and Processes

A disk boot may be started in two ways:

o   If a good copy of AARDVARK is in memory, a disk boot may be started by pressing the INITIALIZE and BOOT buttons on the console, with no tape mounted on the device selected by the tape MPC switches. Note that the Low Cost Console requires pressing the RETURN key after pressing the INITIALIZE button and the BOOT button.

o   If a good copy of AARDVARK is not in memory, a disk boot is begun as a tape boot, with DB specified as the type of boot. Note that a good copy of AARDVARK is not in memory following a ZAP! keyin, as the recovery portion of AARDVARK writes zeroes to memory as its last task.

The flow of control for a disk boot is identical to a tape boot with the following exceptions. XDELTA, GHOST1, M:MON and debug schema are read into memory from the system area of DP#SYS, not from tape. Nothing is written to disk on a disk boot, and of of the patching steps are omitted. Non-permanent modifications can be made to the monitor and GHOST1 during a disk boot by direct interaction with XDELTA through the console. These modifications will be destroyed by the next disk boot or automatic recovery, as the copy from disk is read in again at that time. No files are read from the labeled portion of the PO tape set. DINGO will not be started.

## The DINGO Ghost

The DINGO ghost is started and is run after any system startup, in phase two of the startup process. It always executes (XEQs) a control file called $XINSTA  :SYS, restored to .:SYS by GHOST1, and placed on the PO tape by the INSTALL command of DEF. Within that file are conditional tests and branches that cause different commands to be performed based on the type of boot just done. In particular, there are some PCL commands that modify the access controls on certain files in the :SYS account. These accesses may be too severe or too lenient for an individual site, and may be modified appropriately to meet the needs of that site. For example, a site may have additional files that require specific access controls.

Additionally, $XINSTALL.:SYS contains some commands that copy the system authorization files over themselves, thus rebuilding the upper-level index granules for these files, and making the individual records faster to access. Please note that $XINSTALL can only modify or access files contained on the DP#SYS packset, as the other packsets have not been mounted when this job is run.

The $XINSTALL command file as supplied by Honeywell contains boot-time modifications for items that may need boot-time modification but cannot be modified by the patch process. Among these items are: FEP configurations, Console TEMPLATE file, Object Unit Libraries, TEXT macro files, and access control on Patch files. Since Honeywell supplies necessary commands in this file, the customer, in adding additional commands to perform site-specific modifications, should not negate the Honeywell-supplied actions.

## Boot Operations

The CP-6 system provides for efficient and convenient booting, with a minimum of operator action. The system offers flexibility with respect to an installation's choice of physical devices to be used for booting, including the boot tape drives, drive for system disk pack, line printer, card reader, and tape drive for a firmware tape. Similarly, the system offers flexibility as to the device or devices to be used for reading patches. There are default assumptions with respect to these choices, as explained below. If these defaults are taken, a full tape boot may be made with a very minimum of operator action — the boot dialog will consist of only a very few system questions and brief operator answers.

## Default Assumptions Concerning Device Assignments

Listed below are the device assignments presumed by the booting process, if the operator does not override them. In this list, IOM b means the IOM of the boot device, usually IOM 0.

o   The boot load channel for the unit record controller (abbreviated BASE CHAN) is IOM b, channel 24.

o   If a line printer is to be used during the boot, it is on IOM b, channel 24.

o   If a card reader is to be used during the boot, it is on IOM b, channel 26.

o   Volume one of the PO tape set is mounted on device one of the tape MPC used for booting.

o   Volume one of DP#SYS is mounted on device one of the disk MPC whose lowest disk channel is IOM b, channel 8.

o   If a firmware tape is used, it is on device two of the tape MPC used for booting.

## Default Assumptions Concerning Reading Of Patches

Listed below are the default assumptions made with respect to the reading of patches. These assumptions will be made by the system, if the operator does not override them.

o   If the boot is to be a tape boot, and if the tape boot is to replace or augment the file system, then all patches present on tape are to be read and applied.

o   If the boot is a tape boot which does not change or augment the file system, all AARDVARK, XDELTA, and MON/GHOST1 patches present on tape are to be used — any processor RUM patches and FEP RUM patches present on the tape are to be skipped.

o   No cards are to be read.

o   No patches are to come through the console.

## Details of the Boot Process

In this discussion, the following conventions are used to explain the boot dialog.

o    Each system message is enclosed in a box.  Where a set of possible responses to a
     question are shown separated by a slash or slashes (e.g., Y/N), only one of the
     responses may be entered.  Where a set of responses is not separated (e.g., MXTR),
     any combination of the responses may be entered.  When the possible responses to a
     message are keywords (often single-letter keywords), these response choices are
     displayed by the system as part of the message.  When the response is a variable,
     the message and response are shown enclosed in a partitioned box; the left portion
     is the message as displayed by the system, the right portion is the designation of
     the response.

o    Each system message is preceded by a sentence defining the conditions under which
     the message appears.

o    To the right of the boxed system message, the default, when applicable, is given.
     Responding with an end-of-message (eom) indication causes the default to be used.
     (On a Low Cost Console, the eom indication is made by the carriage return key; on a
     System Control Console, the eom indication is made by the END OF MESSAGE key).  Most
     questions will also take the default on a time-out basis, if no response is entered
     within 30 seconds.  If the default is not taken on a time-out basis, the explanation
     will so state.

o    Following the boxed system message is a brief explanation of the purpose and
     significance of the message.

o    The next item is the explanations of parameters, keywords, abbreviations, variables,
     etc., appearing in the message or the response.

o    The last item, where required, is miscellaneous operational notes.

o    System messages that always appear are shown at the left margin; messages that
     appear conditionally, depending on answers to previous messages, are indented from
     the margin.

The following message always appears:

```
 _____
|               |
| TB/DB/OR/VO?  |     no default
|_____|
```

AARDVARK is requesting you to specify the Boot Type.

Parameters:

TB      tape boot

DB      disk boot

OR      operator recovery.  This is a special type of disk boot.  It is used to attempt
automatic recovery, if other means have failed.  For further information, see the
description of system recovery in the System Support Reference (CE41).

VO      VOLINIT only.  The stand-alone VOLINIT processor will be entered, instead of
GHOST1, after TIGR runs.

One of the forms of the following message always appears:

```
┌─────────────────────────────────────────────────────┐
│ Change boot options (Y/N)/(ADPXF)/(?for HELP)?      │   default = N
│                     (Y/N)/(DF)   /(?for HELP)?      │
│                     (Y/N)/(D)    /(?for HELP)?      │
└─────────────────────────────────────────────────────┘
```

AARDVARK is asking whether you want to override the default hardware assignments and default patch input device choices, whether you want to keep XDELTA after patching, and whether you want to read a firmware tape. A response of ? will cause a brief description of the options to be output.

Parameters:

Y    all of ADPXF

N    none of ADPXF

A    If boot type TB was specified, read AARDVARK patches from console. This option is used to patch the mini debugger/bootstrap section of AARDVARK.

D    change default device assignments. If D is specified, AARDVARK will ask you later to specify your choices. If D is not specified, the defaults shown below will be taken. In this default list, b means the IOM number of the boot device and n means the channel of the boot device. If OR or DB is selected, AARDVARK will only enquire about the system disk assignment.

    BASE CHAN    b-24
    LP       b-24
    CR       b-26
    FEP      b-33
    PO tape      b-n-1
    FW tape      b-n-2
    System disk      b-8-1

P    If boot type TB was specified, change patch input device choices. If P is specified, AARDVARK will ask you later to specify your choices. If P is not specified, the defaults which will be taken depend partially on choices elected later, and are as follows:

when Boot Type is TB and NEW FILE SYSTEM response is Y or S:

—    Use all patches and TIGR commands found on tape

—    No card patches

—    No console patches

when Boot Type is TB and NEW FILE SYSTEM is N:

—    Use all AARDVARK, XDELTA, and MON/GHOST1 patches and TIGR commands found on tape

—    Skip RUM and FEP patches on tape

—    No card patches

—    No console patches

when Boot Type = DB, OR, or VO:

—    No patching allowed

X    If boot type TB was specified, keep XDELTA after patching. This option is normally used for debugging only.

F    read firmware tape.  This option is used only under the direction of Customer
Service.

The following message always appears:

```
_____
|                                |
| AARDVARK-C00 at your service   |
| Memory size is nnnn pages      |
|_____|
```

AARDVARK is announcing that it has been successfully loaded, and states the amount of
real memory pages it found.  If the size reported is correct, continue the boot.  The
correct size is 4096 for 4MW systems, and 6144 for 6MW systems.  If the reported number
is incorrect, memory is not configured correctly or AARDVARK found a parity error.
Restart the boot.  If the number is still incorrect, a Honeywell Field Engineer will
need to look at memory.

If boot type TB, the following message appears:

```
_____
| The following firmware modules were found. |
| Rev.U1 of M500.                            |
| Rev.M1 of M601.                            |
| Rev.K2 of M610.                            |
| Rev.G2 of TPUR.                            |
| Rev.G2 of URTP.                            |
| Rev.D3 of U400.                            |
| Rev.D3 of UCRP.                            |
| Rev.P3 of UCMN.                            |
| Rev.N1 of M191.                            |
| Rev.K1 of D500.                            |
| Rev.F2 of D500.                            |
|_____|
```

If boot type TB and Boot Option D were specified, the following message appears:

```
_____
|                            |
| URC assignments OK (Y/N)?  |  default is Y
|_____|
```

AARDVARK is asking you whether the boot unit record controller and devices (line
printer and card reader) are on the default channels.

Parameters:

Y    yes, the devices are on the default channels

N    no, the devices are not on the default channels

If the response to URC ASSIGNMENTS OK is N, the following three messages appear:

BASE CHAN        iom-channel        default is b-24
LP 0-24 LP       iom-channel        default is b-24
CR 0-26 CR       iom-channel        default is b-26

Responses:

enter correct iom-channel for UR controller, LP, and CR, e.g.

b-24
b-24
b-26

If boot type TB and Boot Option D were specified, the following message appears:

| FEP 0-33 = FEP | iom-channel | default is 0-33

AARDVARK is asking you to specify the IOM and channel of FEP1.

The following message always appears:

| LP n-nn HELP. (6/5/G/S)? | no regular default, time-out default is S

AARDVARK is requesting action or instructions on commencing printing or on responding to a printer error condition.

Parameters:

n-nn    iom-channel of the line printer used at boot time.

S    skip.  Don't use printer during boot.

6    load firmware and print chain image for line printer using a 600 print chain.  The line printer must first be manually aligned to top-of-page, and synchronized.

5    load firmware and print chain image for line printer using a 500 print chain.  The line printer must first be manually aligned to top-of-page, and synchronized.

G    continue.  Used after a condition which stopped output has been corrected, e.g., out-of-paper, printer is in standby.

If Boot Type TB was specified, the following message appears:

| Do you want users (Y/N)? | no default

AARDVARK is asking whether you wish to allow any users on the system as soon as the system is ready.

Parameters:

Y    allow users onto the system as soon as SLUG enters phase 5 of the startup procedure.

N    do not allow users onto the sytem until SLUG has entered phase 5 of the startup process and an ON [{TS|BATCH|GHOST|TP}] xx keyin has been entered where xx is not equal to zero.

Note 1:  If no users are desired on the sytem but this is not a TB boot, or if Y is entered by mistake to the above question from AARDVARK, the NOUSERS! keyin will perform the same function.  This keyin is allowed until SLUG decides that the system is open for business.

Note 2:  The FEPs will not be started or booted automatically until SLUG allows users onto the system.

Also, if Boot Type TB was specified, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| New file system (Y/N/S)? |    no default
|_____|
```

AARDVARK is asking whether you wish to create or replace the files on DP#SYS — yes, no, or partially.

Parameters:

Y    create new file system on DP#SYS.  Other packsets are unaffected.

N    no files are to be read from the LABELed portion of the PO set.  This allows for patching of AARDVARK, M:MON(disk), and changes to the TIGR deck as reflected by the CHANGE BOOT OPTIONS above.  This reply will not read or apply patches to :SYS system processors or the FEP run units.

S    read the total PO tape set into the :SYS account, apply patches as indicated by the CHANGE BOOT OPTIONS question above, without disturbing other files or accounts on DP#SYS.

If Boot Type TB and NEW FILE SYSTEM N or S were specified, or if Boot Type DB was specified, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| Reconstruct (Y/N)? |    default is N
|_____|
```

AARDVARK is asking whether you want to perform a reconstruction of the files on DP#SYS, using PIG.

Parameters:

Y    reconstruct

N    don't reconstruct

Note:  If files are to be read in, they will be read in after the reconstruct takes place.

If Boot Option D was specified and Boot Type VO was not specified, the following message will appear:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| System pack (0-08-01) | iom-channel-unit |    default is 0-8-1
|_____|_____|
```

AARDVARK is asking you to specify the location of DP#SYS.

If Boot Option D and Boot Type TB were specified, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|‾‾‾‾‾‾|
| PO tape 0-16- | unit |    default is 1
|_____|_____|
```

AARDVARK is asking you to specify the unit number of the tape drive on which volume one of the PO tape set is mounted.

At this point, if Boot Type is TB, AARDVARK checks the validity of the system pack. If a deficiency is found, AARDVARK will issue one of the following two messages, depending on the severity of the deficiency.

If AARDVARK has found a minor deficiency in the system pack, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| packerrorcondition  -  OK TO CLOBBER? |
|_____|
```

If the pack mounted as DP#SYS is the correct one, enter Y. AARDVARK will correct the deficiency, which is usually a field in the Volume Identification (VID) table not filled in during VOLINIT. If the pack is not the correct one, enter N. AARDVARK will then ask for another system pack.

If AARDVARK has found a major deficiency, for example, the pack is not a CP-6 pack or not a system pack, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| packerrorcondition  -  CAN'T CLOBBER |
|_____|
```

AARDVARK then asks for another system pack.

The following message always appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| CP-6 C00 ywwhh:mm mon dd'yy |
|_____|
```

AARDVARK is showing the version number, time and date of creation of the current PO tape set.

If Boot Type is TB, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| Functional code groups= |     default is B_
|_____|
```

AARDVARK is requesting you to enter the two-digit FCG identifiers for any functional code groups you want included in the debug schema copied from the PO tape to the system disk. Unless special debugging needs indicate to the contrary, take the default by entering an empty line.

If Boot Option P was specified, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| Tape patches (Y/N)/(MXTRPB)/(? for HELP)? |     default is N
|_____|
```

AARDVARK is asking you to specify what tape patches you want used. A response of ? to this message results in a brief description of the options being output.

Parameters:

Y    use all patches found on tape

N    skip all patches and TIGR commands on tape

M    use AARDVARK format patches from tape to patch PO tape contents or AARDVARK

X    use XDELTA format patches from tape to patch MON/GHOST1, etc.

T    use TIGR commands from tape

R    use RUM format patches from tape

P    user PLOVER format patches from tape

B    use BOOTIME commands from tape

If Boot Option P was specified, the following message appears:

```
 _____
|                                           |
| Card patches (Y/N)/(MXTRPB)/(? for HELP)? |     default is N
|_____|
```

AARDVARK is asking you to specify what card patches you want used.

Parameters:

Y    use all patches found on cards.

N    skip all patches and TIGR commands on cards

M    use AARDVARK format patches from cards to patch PO tape contents or AARDVARK

X    use XDELTA format patches from cards to patch MON/GHOST1, etc.

T    use TIGR commands from cards

R    use RUM format patches from cards

P    user PLOVER format patches from tape

B    use BOOTIME commands from tape

Note:  If any response other than N is to be entered, the cards and card reader must be readied before the response is entered; otherwise, no cards will be read.

If Boot Option P was specified, the following message appears:

```
 _____
|                                           |
| Console patches (Y/N)/(MXTRPB)/(? for HELP)? |
|_____|
```

AARDVARK is asking you to specify what patches you want read through the console.

Parameters:

Y    read all patches from operator's console

N    skip reading from operator's console

M    read AARDVARK format patches from operator's console to patch PC tape contents or AARDVARK

X    read XDELTA format patches from operator's console to patch MON/ HOST1, etc.

T    read TIGR commands from operator's console

R    read RUM format patches from operator's console

P    use PLOVER format patches from tape

B    use BOOTIME commands from tape

If Boot Type is DB, the following message appears:

```
|--------------------------|
| Do you want XDELTA(Y/N)? |    default is N
|--------------------------|
```

AARDVARK is asking you if you want to keep XDELTA in the system after booting completes.

Responses:

Y    yes, keep XDELTA.  Keeping XDELTA allows the system programmer to debug the system from the console, but will require some amount of memory.

N    no, discard XDELTA.  Discarding XDELTA leaves more memory on the system for users.

If Boot Type is TB, messages of the following form appear:

```
|-------------------------|
| !!mpcname firmware loaded |
|-------------------------|
```

TIGR is reporting a successful firmware load.  A message will appear for the mpc name of each peripheral controller that has been defined via TIGR.

The following messages always appear:

```
|----------------|
| Date (MM/DD/YY) |
| Time (HH:MM)    |
|----------------|
```

AARDVARK is asking you to enter the date and time, in the format indicated, for example:

12/15/84
13:25

The following message always appears:

```
|----------------------------------------|
| System set #SYS VSN LIST:    n[,n]...   |
|----------------------------------------|
```

GHOST1 is displaying the volume serial list for DP#SYS.

   If Boot Type is TB and if the Y response has been entered for NEW FILE SYSTEM, the following message appears:

```
|----------------|
| OK to proceed? |    no default
|----------------|
```

GHOST1 is asking you to verify that the previously-displayed volume serial number list for DP#SYS is correct.

Responses:

Y    the list is correct.

N    the list is not correct.  In this case, the boot halts, and must be restarted from the beginning, after the correct pack set is mounted.

At this point, if NEW FILE SYSTEM response is not Y, the system will attempt to verify that the date and time you entered is reasonable and consistent with its records.  If the system detects a discrepancy, the following message appears.

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| Timewarp detected.  You say it's yourentry. |
| CP6 was up at lastup.   ? for HELP          |
|_____|
```

Responses:

If you want to see an amplifying HELP message, enter ?.

If the time and date you entered, as shown in the first line of the TIMEWARP message, are correct, enter YES$ to proceed.

If the time and date are not correct, the boot must be restarted from the beginning. (For a reconfiguration boot, a disk boot may be restarted at this time.)  There is no way to correct the error at this point.

If a ? was entered in response to the TIMEWARP message, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| Did you enter the correct time and date?  If not you must reboot. |
| If CP6 was down for >9 hours then type 'YES$' to proceed.         |
|_____|
```

Responses:

enter YES$ to proceed, or restart the boot, according to whether the time you entered is or is not correct.

If Boot Type is TB and NEW FILE SYSTEM response is Y or S, a message of the following form appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| **** Mount next PO reel (CP6POn) |
|_____|
```

The system is asking you to mount volume n of the PO tape set, where n is a decimal integer, 2 or greater.  The message is repeated for all values of n in the PO set.

If Boot Type is TB and RUM patches were requested from any source, the following message appears:

```
|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾|
| Beginning RUM for processors |
|_____|
```

The system is announcing that GHOST1/DELTA have begun the RUM process.  Depending on the number of patches present, the process could last 20-40 minutes.

If the above message appears, the following message appears when the RUM process for
processors concludes:

```
_____
|                                    |
| RUM completed for system processors |
|_____|
```

The system is announcing that GHOST1/DELTA have finished the RUM process.

The following message always appears:

```
_____
|                                  |
| Logging of console activity initiated |
|_____|
```

After FEP patching is performed, the following message always appears:

```
_____
|                                |
| System is open for business    |
|_____|
```

The system is announcing that it is up.

## Boot Scenarios For Specific Tasks

The recommended answers to boot questions are given below for the following tasks.

Task 1.   Initial boot, using TIGR deck on tape.

Task 2.   Initial boot, TIGR deck on cards.

Task 3.   Initial boot, non-standard URC device configuration.

Task 4.   Initial boot, TIGR deck on cards with MT01 down.

Task 5.   Re-boot to install new patches from tape.

Task 6.   Re-boot to install new patches, some patches are on cards.

Task 7.   Disk boot after ZAP! for Preventive Maintenance or after power off on MEMORY.

In the scenarios below, user responses are underlined.

For each of the tasks:

   The response to FUNCTIONAL CODE GROUPS is    eom

   The response to LP n-nn HELP is    6, or S if no LP output is desired.

   The response to OK TO PROCEED is    Y, after confirming the DP#SYS volume
                                       serials.

   The response to DO YOU WANT USERS is Y.

Task 1.   Initial boot, using TIGR deck on tape

```
TB/DB/OR/VO              TB
CHANGE BOOT OPTIONS      N
NEW FILE SYSTEM          Y
```

Task 2.  Initial boot, TIGR DECK on cards

```
    TB/DB/OR/VO              IB
    CHANGE BOOT OPTIONS      P
    NEW FILE SYSTEM          Y
    TAPE PATCHES             MXRPB
    CARD PATCHES             Y
    CONSOLE PATCHES          N
```

Task 3.  Initial boot, non-standard URC device configuration

```
    CHANGE BOOT OPTIONS      D
    URC ASSIGNMENTS OK       N
    BASE CHAN 0-24           0-24
    LP 0-24 LP               0-26
    CR 0-26 CR               0-24
    TB/DB/OR/VO              IB
    NEW FILE SYSTEM          Y
    SYSTEM PACK              0-8-1
    PO TAPE 0-16-            1
```

Task 4.  Initial boot, MT01 is down, TIGR deck on cards

```
    TB/DB/OR/VO              IB
    CHANGE BOOT OPTIONS      DP
    URC assignments OK       Y
    NEW FILE SYSTEM          Y
    SYSTEM PACK              0-8-1
    PO TAPE 0-16-            2
    TAPE PATCHES             MXRPB
    CARD PATCHES             I
    CONSOLE PATCHES          N
```

Task 5.  Re-boot to install new patches from tape.

```
    TB/DB/OR/VO              IB
    CHANGE BOOT OPTIONS      N
    NEW FILE SYSTEM          S
```

Task 6.  Re-boot to install new patches, where some of the patches are on cards.

```
    TB/DB/OR/VO              IB
    CHANGE BOOT OPTIONS      P
    NEW FILE SYSTEM          S
    TAPE PATCHES             Y
    CARD PATCHES             Y
    CONSOLE PATCHES          N
```

Task 7.  Disk boot after ZAP! for Preventive Maintenance, or after lost power on memory

```
    TB/DB/OR/VO              DB
    CHANGE BOOT OPTIONS      P
    DO YOU WANT XDELTA       N
```

## Boot Tape Creation via DEF

The DEF processor is used to create a bootable system tape set for a CP-6 installation.

## The DEF Process

Through DEF, a system manager can put all files for operating the CP-6 system and its supporting processors onto one tape set. There are two distinct portions on this tape set: the unlabeled portion and the labeled portion. The unlabeled portion consists of all programs and data necessary to boot-load, patch and initialize the monitor, and to install the files from the labeled portion of the tape. The labeled portion consists of CP-6 labeled tape format files which are to be copied into the :SYS account during the boot process.

The DEF process selects the files to be written and permits the system manager to specify the selection criteria. The tape set created by the DEF processor is known as the PO tape set. The contents of the unlabeled portion of the PO tape set initialize the unmanaged system area of the system disk. The contents of the labeled portion of the PO tape set initialize the :SYS account in the file—managed area of the system disk. The contents of both portions of the PO tape are discussed in more detail below.


## Unlabled Portion of the PO Tape Set

DEF writes the following items to the unlabeled portion of the PO tape.

o   AARDVARK (the bootstrap program)

o   Firmware (procedure and data for the microprogrammed controllers (MPC)).

o   XDELTA (system debugger)

o   MONITOR (including the TIGR procedure)

o   GHOST1 (system initialization ghost)

o   Patches to the system components listed above, TIGR commands, processor patches, and patches to the FEP software. Writing of any of these patch elements to the PO tape is optional, since they may alternatively be read from the card reader or the operator's console.

o   $XINSTALL job.

If all patches and TIGR commands are included on the tape, the system can be booted without using a card reader for these items.


## Labeled Portion of the PO Tape Set

The list of files that DEF is to write to the labeled portion of the PO tape is specified by a combination of INSTALL, INCLUDE, SEARCH, ACCOUNT, and IGNORE commands. DEF contains a list of files that are required elements of the labeled portion of the PO tape. Once the labeled portion of the PO tape is written, DEF prints out a list of any required files that were not found.

The labeled portion of the PO tape set is written in the order in which files are specified in the INCLUDE command(s). The INSTALL command is processed first, followed by ACCOUNT commands, followed by INCLUDE commands. If two files of the same name are written to the tape, the last one on the tape will be the file written in :SYS.

## DEF Invocation

DEF is invoked by the IBEX command !DEF. DEF may be run as a batch job, online job, or console ghost job. DEF commands are read through the M$SI DCB. DEF writes the PO tape through the M$PO DCB. A free-form tape must be used for the PO tape. The free-form specification may be accomplished by issuing an appropriate SET command for the M$PO DCB, or by means of parameters in the !DEF command.

The format of the !DEF command is:

$$\text{!DEF [fid]} \begin{bmatrix} \begin{Bmatrix} \text{ON} \\ \text{OVER} \\ \text{TO} \end{Bmatrix} & \begin{Bmatrix} \text{MT[\#vsn]} \\ \text{FT[\#vsn]} \end{Bmatrix} \end{bmatrix}$$

Parameters:

fid    is the file of DEF commands. If no fid is given, DEF will look to the command stream for its commands.

MT or FT    are alternative ways of indicating that a free-form tape must be used. This specification may be omitted if the M$PO DCB has been SET to free-form tape.

vsn    is the volume serial number of the tape to be used. If a multivolume PO tape is created, subsequent volumes will have the serial numbers CP6PO2, CP6PO3,....,CP6PO9.

## DEF Commands

DEF commands for defining the PO tape are listed in Table 2-1. Most of the DEF commands direct DEF to obtain a particular CP-6 element from a specified file (fid) and put it on the PO tape. A default fid exists for most of these commands. The default fid for each such command is shown in the command description in the table. For most of these commands, the default account name is the current file-management account. For others, the default account name is explicitly stated in the command description shown in Table 2-1. When a command has a default, the default fid may be obtained by omitting the command during PO tape creation.

The maximum length of a DEF input line is 300 characters. All DEF commands may optionally begin with the colon character, ":". DEF commands may be continued from one line to another by terminating the input line with a semicolon. Multiple PATCH, SCHEMA, INCLUDE, SEARCH, ACCOUNT and IGNORE commands are allowed and these are the only commands which may be duplicated.

| Table 2-1.  DEF Commands | |
| --- | --- |
| Command | Description |
| ACCOUNT fid [((ft[,ft,...]])] | |
| | Specifies that all files of a type designated in the ft list be copied from the account specified by fid. The ft list is a list of two-character file types shown below; a question mark may be used as a wildcard character. |
| | ft codes, first character: |
| | D = Data |
| | I = Database |
| | O = Object Unit |
| | R = Run Unit |
| | S = Source |
| | U = Update |

| Table 2-1.  DEF Commands (cont.) | |
|---|---|
| **Command** | **Description** |

W = Workspace
X = Work file
1 = schema for databases
2 = subschema for databases
* = file reserved for system use; can only be created by
    operating system; can be read or defined by user.
blank = undefined

ft codes, second character for processor object units:

A = APL
a = ARES
B = BASIC
C = COBOL
D = TP (TRADER)
E = EDIT
F = FORTRAN
f = FPL
G = GMAP
I = IDS
J = IMP
K = reserved
P = Performance monitor, or PARTRGE
Q = IDP
R = RPG
S = SORT
T = TEXT
1 = reserved
6 = PL-6

ft codes, second character for data files:

A = ASCII
B = ASCII and single precision
D = Double precision
S = Single precision
a = APL data block attributes
c = APL component file
blank = undefined or unformatted

---

**BOOTSTRAP fid**

Specifies the bootstrap program file.

The default is AARDVARK.  A fid of NIL specifies that the bootstrap program is to be omitted.

---

**DENSITY {800|1600|6250}**

Specifies the density (bpi) at which the PO tape is to be written.

Default is 1600.

| Table 2-1. DEF Commands (cont.) | |
|---|---|
| Command | Description |
| END | Terminates the DEF command input. |
| FIRMWARE fid | Specifies the MPC firmware file. The default is FIRMWARE. |
| GHOST1 fid | Specifies the GHOST1 run unit file. The default is GHOST1. |
| G1HJIT fid | Specifies the GHOST1 HJIT run unit file. The default is G1HJIT in the account from which GHOST1 is obtained. |
| IGNORE fid [,fid[,...]] | Overrides the ACCOUNT command with respect to the files named in the fid list. A file in an account specified by an ACCOUNT command will not be copied if it is named in an IGNORE command. |
| INCLUDE fid [,fid[,...]] | The list of fids is the list of files to be written on the labeled portion of the PO tape. If a fid consists of only a file name, the file will be searched for as described in the SEARCH command description below. |
| INSTALL fid | Specifies the file to be written to the PO tape as $XINSTALL  $XINSTALL is used as an XEQ file by the DINGO ghost. The default is $XINSTALL in the current File Management account. If the specified file does not exist, no $XINSTALL file will be written on the PO tape and a warning message will be printed. |

| Table 2-1. DEF Commands (cont.) | |
|---|---|
| Command | Description |
| MHJIT fid | Specifies the monitor HJIT file.<br><br>The default is MHJIT. |
| MINI_ID | Specifies an identifier for the site, in addition to the site id. |
| MON fid | Specifies the monitor run unit file.<br><br>The default is M:MON. A fid of NIL specifies that the monitor run unit and monitor linkage segments are to be omitted. |
| NOBOOT | Do not write the unlabeled portion of the tape. |
| NOFILES | Do not put files on volume 1 of the PO tape. If no INCLUDE or ACCOUNT commands are specified, only volume 1 will be written. $XINSTALL will always be placed on volume 1. |
| NOLIST | Do not list patch cards when listing contents of PO tape. |
| PATCH fid[,fid...] | Specifies the files of patches and TIGR commands to be written on the unlabeled portion of the PO tape.<br><br>There is no default fid; no monitor patches are written if no fid is specified. |
| PO id | Specifies a tape id to be written on the PO tape. The id may be up to three characters.<br><br>Default is the id of last PO tape booted. |

| Table 2-1. DEF Commands (cont.) |
|---|
| Command     Description |

QUIT

        Exit DEF immediately.

---

SALUTATION 'character string'

        Specifies the logon saluation.  Maximum length of the salutation is 43
        characters.

        Default is the current salutation on the system on which DEF is being
        run.

---

SCHEMA fcg[,fcg...]

        Include monitor debug schema only for the specified functional code
        groups.  Each fcg specification is one or two characters.

        If this command is omitted, all monitor debug schema will be included.

---

SEARCH fid [,fid[,...]]

        Command specifies accounts whose file directories are to be searched for
        files that were specified in the INCLUDE command only by a file name.
        If this command is present, the current account is not automatically
        searched; it is searched only if it is included in the SEARCH command's
        list.

        If the SEARCH command is omitted, the current account is automatically
        searched.  Accounts are searched in the order specified in the SEARCH
        command(s).  The current account may be specified

        The default is the current account.

---

SITEID siteid

        Specifies the site id to be put into B_SITEINFO.SITE_ID.  The maximum
        length of the siteid is 6 characters.  (See the M$MONINFO description in
        the Host Monitor Services Reference Manual, CE74.)
        A site id will be assigned to each site by Honeywell.  This command
        should be used only when creating a PO tape for another installation.

        Default is the current site id on the system on which DEF is being run.

---

SITENAME 'character string'

        Specifies the site name printed as part of the greeting after a user
        logon.  The maximum length of the site name is 119 characters.

        Default is the current site name on the system on which DEF is being
        run.

Table 2-1.  DEF Commands (cont.)

| Command | Description |
|---------|-------------|
| VERIFY | An existing PO tape is to be read and verified. |
| XDLT fid | Specifies the file containing XDELTA.<br><br>The default is XDELTA. |
| XDLTLS fid | Specifies the XDLETA linkage segment file.<br><br>The default is XDELTAS in the account from which XDELTA is obtained. |

## Sample DEF Job

A sample DEF job is shown below.  Each line of the job is annotated for better understanding.

| Command | | Note |
|---------|---|------|
| :PO | C00 | 1 |
| :BOOTSTRAP | AARDVARK.:C00GEN | 2 |
| :FIRMWARE | FIRMWARE.:C00MISC | 3 |
| :MON | MONSTER.CP6JTA | 4 |
| :MHJIT | HJIT.:C00GEN | 5 |
| :GHOST1 | GHOST1.CP6JTA | 6 |
| :XDLT | XDELTA.:C00GE1 | 7 |
| :XDLTS | XDELTAS.:C00GEN | 8 |
| :PATCH | PATCH.CP6JTA | 9 |
| :INSTALL | $XINSTALL_557.JTA | 10 |
| :INCLUDE | FILE1,FILE2,FILE3.:C00MISC | 11 |
| :SEARCH | .ACCT1,.,.ACCT2 | 12 |
| :SEARCH | .ACCT3 | 13 |
| :ACCOUNT | .CP6JTA(R6,RG,RF,X?) | 14 |
| :ACCOUNT | .:C00GEN | 15 |
| :IGNORE | FILEA,FILEB.:C00GEN | 16 |
| :END | | 17 |

Notes

1.    The tape id is C00.

2.    The bootstrap is in file AARDVARK in account :C00GEN.

3.    The file containing the MPC firmware is FIRMWARE.:C00MISC.

4.    The monitor run unit is MONSTER.CP6JTA.

5.    The file containing the monitor HJIT is HJIT.:C00GEN.

6.      The GHOST1 run unit is GHOST1.CP6JTA.

7.      The XDELTA run unit is XDELTA.:C00GEN.

8.      The XDELTA linkage segment is in XDELTALS.:C00GEN.

9.      Patches are in PATCH.CP6JTA.

10.     $XINSTALL is to come from $XINSTALL_557.JTA.

11-13.  ACCT1, the current account, ACCT2 and ACCT3 are to be searched for
        FILE1 and FILE2.  FILE3 is in :C00MISC.

14-16.  All files of type R6, RG, RF, and X followed by any character are
        to be copied from CP6JTA except for FILEA.  All files are to be
        copied from :C00GEN except FILEA and FILEB.

17.     End of DEF commands.


Error Reporting

Table 2-2 shows the error/exception messages which will be printed when incorrect usage
of DEF occurs or other anomalies create exception conditions.

The second column of the table shows the actions of the system after the message is
printed — abort the DEF job or permit continuation, abbreviated "Cont."  For the abort
messages, the operator must correct the erroneous condition or command, and re-run the
job.  For the continuation-permitted messages, the operator may continue the job, if
such continuation is meaningful.  If the job is being run in on-line mode, the operator
may enter a corrected version of the rejected command.


| Table 2-2.    DEF Error Messages | | |
| --- | --- | --- |
| Message | Action | Remarks |
| ERROR OPENING BOOTSTRAP FILE x | Abort | |
| ERROR OPENING FIRMWARE FILE x | Abort | |
| ERROR OPENING XDELTA RUN UNIT x | Abort | |
| ERROR OPENING MONITOR HJIT FILE x | Abort | |
| ERROR OPENING MONITOR RUN UNIT x | Abort | |
| ERROR OPENING GHOST1 READ ONLY SEGMENT FILE x | Abort | |
| ERROR OPENING GHOST1 RUN UNIT x | Abort | |
| ERROR OPENING n | Abort | |
| RUN UNIT x HAS NO HEAD RECORD | Abort | |
| REQUIRED PROGRAM RECORDS ARE MISSING FROM RUN UNIT x | Abort | Relink run unit. |
| WRITE ERROR w DCB n | Abort | See error message that follows |
| READ ERROR r DCB n | Abort | See error message that follows |

| Table 2-2. DEF Error Messages (cont.) | | |
|---|---|---|
| **Message** | **Action** | **Remarks** |
| INSUFFICIENT BUFFER SPACE AVAILABLE | Abort | Run again with more MEM on RESOURCE or ORES command. |
| ERROR ON DCB n | Abort | See error message that follows. |
| ERROR PROCESSING DEBUG SCHEMA | Abort | Bad monitor run unit. |
| DEF MUST HAVE FMSEC PRIVILEGE TO RUN | Abort | DEF must either be run from an account with the FMSEC privilege or it must be linked with FMSEC and reside in :SYS. |
| DEF CANNOT GET FMSEC PRIVILEGE. DEF ABORTING | Abort | See above |
| GHOST1 RUN UNIT HAS NO ROSEG RECORD(S). | Abort | Bad GHOST1 run unit. |
| VERIFICATION ERROR ON UNLABELED PORTION OF PO TAPE. | Abort | |
| DUPLICATE COMMAND IGNORED | Cont | |
| FILENAME MAY NOT BE SPECIFIED HERE | Cont | |
| THIS FID MUST CONTAIN AN ACCOUNT SPECIFICATION | Cont | |
| FILE TYPE SPECIFICATIONS MAY NOT EXCEED 2 CHARACTERS. | Cont | |
| FILE NAME IS REQUIRED IN THIS FID | Cont | |
| TAPE ID MAY NOT EXCEED 3 CHARACTERS | Cont | |

## Recovery

There are several types of recovery that the operator needs to recognize or initiate. In addition, different types of recovery errors may take place, depending on the type of recovery.

## Automatic Recovery

The CP-6 system initiates an automatic recovery procedure every time it detects a software or hardware failure that could have an adverse effect on the system. The recovery procedure provides for preserving information relating to the failure, and when necessary, re-initialization of the operating system.

There are four levels of automatic recovery and of orderly shutdown in the CP-6 system, as follows:

o   Screech — When it is determined that the operating system is too damaged to continue normal operations, a full recovery will ensue.  All users will be removed from the system and the monitor will be re-initialized.

o   Single User Abort — If the system failure can be safely isolated to one user, that user is aborted and all others continue.  If an attempt to abort a single user produces a second failure, a full system recovery will be initiated.

o   Snapshot Dump — When a potential software failure is detected, the operating system may initiate an automatic recovery to provide system information for the Honeywell analyst.  No users are affected.

o   Zap — This is an operator-initiated action that shuts the system down prior to turning off the power or temporarily terminating service.  When a ZAP! keyin is issued from operator's console, all timesharing and batch users are logged off, with all batch jobs that specified RERUN being entered into a queue that will be reinstated when service is continued.  All pack sets are logically removed from the system, and all ghost jobs are run down.  The recovery routines are then called to maintain the proper conditions for eventual system startup.

## Automatic Recovery Messages

When automatic recovery is initiated, one of the following messages is output on the operator's console:

```
SCREECH  AT .ic
SUA  xxx AT .ic
SNAP xxx AT .ic
ZAP      AT .ic
```

Parameters:

AT .ic   is the monitor's instruction counter (in octal) that indicates the location in memory where the call to recovery was initiated.

xxx     is the current user number (in octal).

After one of the above messages has been printed, the following message is then output to the console:

```
CODE: mid-screechcode-sev
```

Parameters:

mid     identifies the monitor routine that initiated the automatic recovery.

screechcode     is the unique decimal number identification of the failure that caused the automatic recovery.

sev     is the severity of the failure that caused recovery to be initiated, as follows:

    7 — Screech
    6 — Single User Abort
    5 — Snapshot Dump
    4 — Zap

A complete list of CP-6 screech codes is contained in Appendix D.

After the above message has been printed, a dump of the relevant monitor and user data is written to a protected area of the system disk.  This can then be examined and analyzed for problem detection.

## Full Recovery

When a full recovery is initiated, the following additional sequence of events then takes place:

1.  Online users are notified by the FEP that Host Recovery is in progress.  The current accounting information for each user is written to the system disk.

2.  All open files are checked for consistency and, whenever possible, user files are closed and saved so that they are accessible to the user.  All symbiont files are preserved.

3.  Vital data from the running system is written to a protected area of the system disk and a new copy of the monitor is read in from disk storage.  Before recovery is completed, this previously saved information is inserted into the referenced copy of CP-6, bringing it up to date.

4.  The :ACCTLG file is updated from the user accounting information that has been preserved on the system disk.

5.  Standard monitor initialization is provided.

After the system has been re-initialized following a full recovery, or following a Single User Abort or Snapshot Dump, the RCVR2 System Ghost is automatically initiated to convert the dump area of the system disk to a keyed file.  The ANLZ processor is then initiated as a system ghost and the standard crash analysis report is output to the line printer.

## Operator Recovery

When the system appears to be in a loop or when there are reasons to suspect that the operating system is not running properly, the operator can initiate an automatic recovery as if it were initiated by the system.

The CP-6 system provides four methods for initiating an operator recovery.  When it has been determined that an operator recovery is required, one of the following methods should be used.

1.  DIE! keyin

    This keyin should cause a full system recovery to be initiated.  If KEYIN is responding to the request key (i.e., the ! prompt is output) but the DIE! keyin is ignored, pressing <CNTL-Y> followed by DIE! should cause recovery to be initiated.  Should this fail, or if KEYIN is not responding to the operator request button, method 2 should be used.

2.  EXECUTE FAULT

    An EXECUTE FAULT is recognized by CP-6 as a request for an operator recovery.  The method of generating an EXECUTE FAULT varies depending on the type of the Master CPU on which CP-6 is running.  The following describes the three methods to be used.  These procedures must only be performed on the Master CPU.

    o   On Level 66 CPUs, the maintanence panel mode switch must be set to TEST and the EXECUTE SWITCHES/EXECUTE FAULT switch set to EXECUTE FAULT.  Pressing the EXECUTE CONTROL button will result in an entry to Recovery.

    o   On 8/20C and 8/44C CPUs, the CPU firmware diskette must be inserted into the diskette drive and the following commands entered at the Diagnostic Console, which is normally the operator console.  The lowercase text indicates operator input commands, and the uppercase text is information output by the system.

```
# ena mai
    *DISC - SDA
<MAINT> INITIALIZE CPU DI-PORT?  n<cr>
<MAINT>   e/f<cr>
<MAINT> CURRENT TEST MODE
    - STOP CONTROL - NON-STOP
    - START CONTROL - GIVEN MICRO ADR
    - INITIALIZE - NON-INIT
<MAINT> HALT CPU?   y<cr>
<MAINT> CPU STOPPED, IC=xxxx
<MAINT> CPU RUNNING
<MAINT>*  b<cr>
```

On 8/47 and 8/49 CPUs, the CPU firmware diskette must be inserted into the diskette drive and the following commands entered at the Diagnostic Console, which is normally the operator console.  The lowercase text is what the operator types.

```
# ena mai
    *DISC - SDA
<M> INITIALIZE CPU DI-PORT?  n<cr>
<M>   e/f<cr>
<M> CURRENT TEST MODE
 - STOP CONTROL - NON-STOP
 - START CONTROL - SPECIFIED MICRO
 - INITIALIZE - NON-INIT
<M> HALT CPU?   y<cr>
<M> CPU STOPPED, IC=xxxx
<M> CPU RUNNING
<M>*  b<cr>
```

o   On 8/50C, 8/52C, 862C AND 8/70C CPUs, the maintenance panel PROCESSOR switch must be in TEST mode.  The operator may then respond to the prompt <CPU CMD> at the console by typing EX4<CR>, to generate an Execute Fault and enter Recovery.

3.  PO Tape Boot

An Operator Recovery may be initiated by booting the CP-6 PO tape.  When the tape is booted the operator is prompted with the following query;

    TB/DB/OR/VO?

A response of OR will cause an entry to Recovery.

4.  Direct Entry to Recovery

The operator may cause a direct entry to Recovery by manipulating the control panel to cause execution of an instruction that will transfer control to a Recovery calling sequence.  Again, there are three ways to do this, depending on the type of the Master CPU on which CP-6 is running.

o   On Level 66 CPUs, the STEP switch must be placed in the STEP CU position and the system initialized by pressing the System INITIALIZE pushbutton on the Operators Console. (The maintenance panel MODE switch must be at the TEST position.) The operator may then set the maintenance panel DATA toggle switches as follows:

    '000020710000'O

The EXECUTE SWITCHES/EXECUTE FAULT switch should be set to EXECUTE SWITCHES, the EXECUTE pushbutton depressed, the STEP switch returned to OFF (running) position and the STEP pushbutton depressed to enter Recovery.

o   On 8/50C, 8/52C, 8/60C and 8/70C CPUs, the maintenance panel PROCESSOR switch must be in the TEST position and the system must be initialized by pressing the INITIALIZE pushbutton at the Operator Console.  Recovery may then be entered by typing the following commands on the console.

```
                 <CPU CMD> init clear
                 <CPU CMD> tra 20
                 <CPU CMD> go

     o   On 8/20C and 8/44C CPUs, the CPU firmware diskette must be inserted in the
         diskette drive.  After pressing the INITIALIZE pushbutton on the system console
         the following commands must be entered at the Diagnostic Console, which is
         normally the operator console.  The lowercase text is what the operator types.

              # ena mai
                   *DISC - SDA
              <MAINT> INITIALIZE CPU DI-PORT?  n<cr>
              <MAINT>* e/i/000020710000<cr>
              <MAINT> CURRENT TEST MODE
                   - STOP CONTROL - NON-STOP
                   - START CONTROL - GIVEN MICRO ADR
                   - INITIALIZE - NON-INIT
              <MAINT> HALT CPU? y<cr>
              <MAINT> CPU STOPPED, IC=000000
              <MAINT> CPU RUNNING
              <MAINT>*b<cr>
```

On 8/47 and 8/49 CPUs, the CPU firmware diskette must be inserted into the
diskette drive.  After pressing the INITIALIZE button on the system console, the
following commands must be entered at the Diagnostic Console, which is normally
the operator console.  The lowercase text is what the operator types.

```
              # ena mai
                   *DISC - SDA
              <M>* e/i/000020710000<cr>
              <M> CURRENT TEST MODE
               - STOP CONTROL - NON-STOP
               - START CONTROL - SPECIFIED MICRO
               - INITIALIZE - NON-INIT
              <M> HALT CPU?   y<cr>
              <M> CPU STOPPED, IC=000000
              <M> CPU RUNNING
              <M>*   b<cr>
```

## FEP Recovery

To reboot an FEP from a running CP-6 system, a keyin is entered from a communications or
system operator's console in the form:

!BOOT FEP n

where "n" is the FEP number from the TIGR deck for local FEPs or SUPER for remote FEPs.

To up-line dump an FEP from a running CP-6 system, a keyin is entered from a
communications or system operator's console in the form:

!DUMP FEP n

where "n" is the FEP number defined via TIGR for local FEPs or SUPER for remote FEPs.
The operator will be notified of the name of the file in the :SYSTAC account where the
dump will be placed.  The !DUMP keyin halts FEP operation.  Therefore, if the FEP is to
be restarted, a !BOOT keyin must be entered as described above.

The !CRASH FEP Keyin, which combines the functions of the !DUMP Keyin and the !BOOT
Keyin, may be used in place of separate !DUMP and !BOOT keyins.

Note:

If the Host detects an FEP timeout, or if an FEP screeches (but not necessarily if the Host screeches), a dump is taken automatically as above. The operator will, again, be notified of the name(s) of the :SYSTAC account file(s) where the dump(s) will be placed. In this case, however, the FEP is automatically rebooted when the up-line dump has completed.

If the FEP fails to boot following a host recovery, see the FEP initialization procedures described in Appendix A.

To boot or dump a remote FEP, it must already be logged on to the system. See the FEP initialization procedures in Appendix A.

## System Shutdown

The CP-6 system provides convenient facilities for performing an orderly shutdown of the system. The shutdown procedure is automatic. It performs the following actions to bring all activity to an orderly stop.

o   Ensures that no new users are allowed to start

o   Aborts current time-sharing users

o   Aborts current batch jobs and, if they are eligible, resubmits these jobs to the input queue

o   Shuts down the remote devices in an orderly manner

o   Saves error logging buffers

o   Stops secondary CPUs

o   Saves output being processed by symbiont devices

After the system has been shut down in this manner, it is in a quiescent state, ready for a disk boot. If desired it may be powered down and powered up for a disk boot when the installation wishes to resume service. Methods of starting the system are discussed in a previous subsection.

If desired, the installation may give current users prior notice of an impending shutdown by means of the BROADCAST keyin (See Section 3).

The orderly shutdown, usually called a ZAP, is initiated by the operator from a console with the SYSTEM attribute by means of the following keyin:

    !ZAP![ zapmessage]

The zap message appended to the ZAP! keyin will be given to users attempting to log on, as long as the FEPs remain powered up. The ZAP! keyin causes the system to perform the following sequence of tasks.

1.   Institute prevention of log-on of new users. (Part of ZAP phase 1.)

2.   Perform the STOP FEPs function. (Discussed under the STOP FEPs key description in section 3 of this manual.) The ZAP message appended to the ZAP! keyin will be displayed to users attempting to log on. (Part of ZAP phase 1.)

3.  Perform the RERUN function on all running batch jobs (discussed under the RERUN
    keyin description in section 3 of this manual.) If a job specified NORERUN, it will
    simply be aborted, as if the system operator had performed an X keyin on its sysid.
    Otherwise, it will be aborted and resubmitted to the input queue, with a priority
    that is one greater than it had when it started, except that the augmented priority
    may not exceed 14. When a ZAPped system is brought up via a disk boot, the batch
    queue will be reconstructed automatically. Batch processing will resume and the
    jobs resubmitted by the ZAP procedure will run. (Part of ZAP phase 1.)

4.  Perform the DISMOUNT NOW function for all active packsets, except #SYS (discussed
    under the DISMOUNT keyin description in Section 3 of this manual). (ZAP phase 2.)

5.  Abort remaining users, including auto-saved online user's images. This function is
    performed in the same manner as if the system operator had performed an X keyin on
    each on-line sysid. (ZAP phase 3.)

6.  Coordinate shutdown actions with the system ghosts INSYM, OUTSYM, DOG, and PRESCAN.
    Each of these ghosts must "answer back" in order to allow the ZAP to continue.
    During this phase, OUTSYM will perform the SAVE function on all symbiont devices
    currently engaged in output activity (discussed under the SAVE keyin description in
    Section 3 of this manual). (ZAP phase 4.)

7.  The system ghost ELF saves the error log buffers by writing them to the current
    day's error log file in :SYSTAC, then closes the error log file. (ZAP phase 5.)

8.  The system ghost SLUG closes the system accounting file (:ACCTLG.:SYS). (ZAP phase
    6.)

9.  Perform the STOP CPU function for all secondary CPUs. (Part of ZAP phase 7.)

10. Print the following messages.

    ZAP AT .ic

        THAT'S ALL FOLKS ...

    (Part of ZAP phase 7.)

11. Clear memory.

General notes on the system shutdown process:

Note that the system must be past a certain phase in the startup process in order to
assure a successful ZAP. If this necessary phase of system startup has not completed,
the operator who issued the ZAP keyin will receive an error message to that effect.

It is possible that a ZAP may take several minutes, due to the number of users on the
system, the amount of Exit Control Processing to be done, the number of devices on the
system and other considerations. If, after several minutes, an operator wishes to
ascertain the status of the shutdown procedure, the following keyin may be used:

    ZAP!!

The response to the ZAP!! keyin is a status message indicating which phase the shutdown
process is currently in, and, if applicable, which system ghosts have not completed the
appropriate action in the current phase. There are some reasons why a ZAP cannot
complete correctly, which the operator can correct and therefore should be aware of.
Among these unusual conditions are:

o   Outstanding error condition on LOCAL device. The error status of LOCAL devices can
    be obtained by using the !DEVICE keyin. If any device shows an error condition, it
    should be corrected by making the device ready (if applicable) or using the
    appropriate ERROR or RETRY keyin.

o   Outstanding error condition on the system packset #SYS.  If, for example, the error
    message !!DP77 IO ERROR 482770012111 or some similar message prints, and the
    operator cannot obtain a response to the !DEVICE keyin, the spindle with the #SYS
    packset on it probably has an error condition outstanding.  This should be corrected
    by using the device-related keyins discussed under "Special System Control Keyins"
    in section 3 of this manual.

If, after an appropriate period of time, the operator determines that the shutdown is
"stuck" in a certain ZAP phase, it may be necessary to perform a DIE!  keyin to close
the necessary files on the system and bring the system to a halt (see Special System
Keyins in Section 3 of this manual).  Should a DIE! become necessary during a ZAP!, and
the operator wishes to truly leave the system in a quiescent state, the INITIALIZE
button should be depressed after the following two messages print:

    AARDVARK-C00 AT YOUR SERVICE
    MEMORY SIZE IS nnnn PAGES

# Section 3

# The KEYIN Processor

## Introduction

The KEYIN ghost provides operator control of devices (such as disk, tape, and unit record equipment), batch and on-line users, front-end processors, and central processing units (CPU). Although a wide range of keyins are available, their use is restricted by the attributes of the console that the keyins are issued from. In addition, the information that can be displayed at a console is limited by the console's attributes.

## KEYIN Groups

The keyins for operator consoles on the CP-6 system can be organized (with some overlap) into the following groups:

    General Console Keyins
    System Control Keyins
    Special System Keyins
    User Control Keyins
    General Device Keyins
    Tape Drive Keyins
    Disk Drive Keyins
    Unit Record Keyins
    Queue Control Keyins
    Job Display Keyins
    Communications Keyins
    Diagnostic Keyins
    Console Ghost Keyins
    Informational Keyins
    Message Sending Keyins
    Transaction Processing Keyins
    Comgroup Keyins

## General Console Keyins

The following keyins provide general console functions:

| | |
|---|---|
| ? | Obtains additional levels of HELP. |
| ?? | Obtains all additional levels of HELP. |
| BYE | Logs the console off the system. |
| CONSOLES | Displays information about all consoles. |
| CONSOLE STATUS | Displays information about the issuing console. |
| HELP | Prints information about valid CP-6 keyins. |
| HISTORY | Enables or disables console activity logging. |
| INFO | Prints ETMF, TIME, DATE, and 90% RESPONSE TIME. |
| MSG | Sends a message to all system consoles. |
| MYREAD | Sets the account for READ keyins. |
| NATLANG | Sets the active language for the console. |
| OCHIST | Closes current history file and opens a new one. |
| OFF | Logs the console off the system. |
| PENDING | Displays outstanding M$KEYIN request. |
| PROFILE | Sets the terminal profile for an FEP Connected Console. |

| | |
|---|---|
| READ | Executes a file of keyins. |
| READ$ | Begins each READ file. |
| READACCT | Changes default account for READ keyins. |
| TIME | Requests the time if activity has occurred in the last minute. |
| TURNOVER | Closes current history or accounting file and opens a new file at the specified time. |
| UC | Requests or suppresses the increase to Upper-Case translation. |
| X CONSOLE | Allows a system console to remove other consoles from the system. |

## System Control Keyins

The following are system control keyins:

| | |
|---|---|
| ACCTLG | Renames accounting log file. |
| AUTO SCHEDULING | Sets automatic scheduling by GOOSE. |
| BATCH | Controls entry to batch queue, or display batch job status. |
| CPU | Displays status of CPU by portnumber. |
| CPUS | Displays status of all processor CPUs in the system. |
| DATE | Gives the CP-6 system the current date. |
| DELTA | Associates XDELTA with the system. |
| DIE! | Initiates recovery sequence. |
| E | Errors job step for specified users. |
| FLUSH | Flushes the input stream. |
| MAKE CPU | Turns a slave CPU into a master CPU. |
| NOUSERS! | Prevents startup of users and remote devices. |
| ON | Specifies maximum number of users. |
| ON BA | Specifies maximum number of batch users. |
| ON GH | Specifies maximum number of ghost users. |
| ON TP | Specifies maximum number of TP users. |
| ON TS | Specifies maximum number of on-line (time-sharing) users. |
| START CPU | Begins usage of secondary labeled central processing unit. |
| STARTUP!! | Displays the progress of a system boot. |
| STATION | Displays all devices associated with a console. |
| STOP CPU | Ends usage of secondary labeled central processing unit. |
| TIME | Gives the CP-6 system the current time. |
| USERS | Displays maximum allowed number of users. |
| X | Aborts specified user. |
| X FEP | Aborts a specifed sysid with a named FEP. |
| XDELTA | Transfers control to the executive debugger. |
| ZAP! | Causes orderly system shutdown. |
| ZAP!! | Displays the current progress of the ZAP! procedure. |

## Special System Keyins

In addition to the standard keyins described above, a set of keyins is available before the KEYIN ghost is started (at boot time), or if the system is in an unknown state or the system packset is in trouble.

NOTE: These keyins:

o   Are available only on an IOM-connected console

o   Must be input in their full form, as there are no abbreviations

o   Must be preceded by a <CNTL-Y> character if the system has come up and KEYIN is running (or has run) and the standard set of keyins is unavailable.

The special keyins are:

DELTA        Transfer to XDELTA, the executive debugger.

DIE!         Crash the system.

ERROR        Error a device's I/O.

FIRMLOAD     Causes a firmware download.

NOUSERS!     Prevents startup of users and remote devices.

PROCEED      Ignore a device's I/O error.

RETRY        Retry a device's I/O.

In addition to the above mentioned keyins, an alternative way of transferring
to XDELTA is to type (on the LCC) <CNTL-Y> <CNTL-Y> <RETURN> or (on the SCC) <ESC> <ESC>
<EOM>.


## User Control Keyins

The following are user control keyins:

sysid:       Replies to M$KEYIN.
BROADCAST    Sends a message to user terminals and assigns a
             logon header.
CANREAD      Cancels current 'READ' file for the console.
E            Errors a job step for a specified user.
HEADER       Sets a message to be printed with the logon banner.
PENDING      Displays the outstanding M$KEYIN reads requiring a
             response from this console.
RERUN        Requests a specified job be aborted and that this job be
             reinstated in the input queue.
SEND         Sends a message to an individual user terminal.
SENDALL      Like BROADCAST, but does not change logon message.
SENDFEP      Sends a message to all active stations on the specified FEP.
X            Aborts a user.


## General Device Keyins

The following keyins apply to all devices:

DEVICES      Displays devices currently in an error condition.
ERROR        Suspends activity on a specified device.
FIRMLOAD     Requests a firmware download to an MPC.
PROCEED      Overrides I/O error condition and return to normal.
QUIET        Suppresses repetitive error reporting at the console.
RETRY        Retries current erroring I/O.


## Tape Drive Keyins

The following keyins apply to tape drives:

ANSSCRATCH   Authorizes use of an ANS scratch tape.
CANT MOUNT   Aborts a requested tape mount.
CANT OVER    Aborts a requested tape mount that requested an OVER keyin.
CANT RING    Aborts a requested tape mount with RING.
DISMOUNT     Dismounts a tape.
LOAD         Requests an automatic start sequence.
MOUNT        Specifies or changes serial numbered mounted tape.
OVER         Permits a unexpired ANS tape to be overwritten.
REQUEST      Dismounts a tape if no user is associated.

```
RESERVE      Reserves a tape to be used by a specified sysid.
RING         Dismounts tape so that a write ring can be inserted.
SCRATCH      Allows use of an unmanaged tape.
TAPE         Displays usage of a tape drive.
TAPES        Displays usage of all tape devices.
UNRESERVE    Cancels a RESERVE keyin.
VOLUME       Displays usage of mounted tape volume.
VOLUMES      Displays usage of all mounted tape volumes.
```

## Disk Drive Keyins

The following keyins apply to disk drives:

```
DISK         Displays status of a disk drive.
DISKS        Displays status of all disk drives.
DISMOUNT     Requests dismount of unused packset.
EXCLMOUNT    Specifies that a packset is to be used exclusively.
PUBLIC       Mounts a public packset.
REQUEST      Removes a packset from further access.
SET          Displays status of a specified packset.
SETS         Displays status of all currently mounted packsets.
SHARE        Mounts a shared packset.
VOLUMES      Displays the volume mounted on a specified disk drive.
```

## Unit Record Device Keyins

The following keyins apply to unit record equipment:

```
ABORT        Aborts current output.
ALIGN        Initiates alignment sequence.
CONTINUE     Resumes suspended output.
FLUSH        Flushes the input stream.
FORM         Mounts a logical form.
LOCK         Suspends output after current output is finished.
MAKE         Logically makes a device a resource.
NCTL         Changes default NCTL fid for an input device.
REPRINT      Reprints the current output from the keyin.
SAVE         Locks device and returns current output.
SETUP        Requests information about a formname.
SPACE        Causes forward or backward skipping.
START        Removes LOCK and resumes output.
SUSPEND      Suspends output after current granule.
SYMB INPUT   Displays status of symbiont input device.
SYMB OUTPUT  Displays status of symbiont output device.
```

## Queue Control Keyins

The following keyins apply to queue control:

```
DELETE INPUT           Deletes input from batch queue.
DELETE INPUT ALL       Deletes all input from batch queue.
DELETE OUTPUT          Deletes the output for specified sysid.
DELETE OUTPUT ALL      Deletes all output symbiont files.
DELETE OUTPUT ALL FORM Deletes all output symbiont files for forms.
DISPLAY                Displays information about batch queues.
PRIO INPUT             Changes input batch queue priority.
PRIO INPUT ALL         Changes all input batch queue priorities.
PRIO OUTPUT            Changes output batch queue priority.
RERUN                  Aborts a specified job and reruns it.
```

| | |
|---|---|
| RERUN ALL | Performs a RERUN for all running jobs. |
| RESTRICT | Restricts usage of symbiont devices. |
| S | Forces the multi-batch scheduler to schedule. |
| SWITCH OUTPUT | Changes output destination for symbiont file. |
| UNRESTRICT | Cancels RESTRICT keyin. |

## Job Display Keyins

The following keyins display information about the jobs currently on the system. Because the output of these keyins could be (under certain circumstances) very long, a message notifying the operator of a long list is sent, and the list is not printed. The operator can override this restriction by adding "FORCE" to the DISPLAY keyin (which forces the list to print) or by adding "ON LP" to the DISPLAY keyin, which prints the list on to the line printer. Some forms of DISPLAY also allow "SHORT" to be added, which generates a shortened version of the DISPLAY output.

| | |
|---|---|
| DISPLAY ALL | Combines a DISPLAY RUNNING, DISPLAY INPUT and DISPLAY OUTPUT. |
| DISPLAY DEFER | Displays deferred jobs. |
| DISPLAY INPUT | Displays input queue. |
| DISPLAY NORUN | Displays waiting jobs. |
| DISPLAY NSFORM | Displays output devices with nonstandard forms. |
| DISPLAY OUTPUT | Displays the output queue. |
| DISPLAY PRIO | Displays input jobs of specified priority. |
| DISPLAY RUNNING | Displays currently running jobs. |
| DISPLAY sysid | Displays current job status. |

## Communications Keyins

The following keyins apply to communications consoles:

| | |
|---|---|
| @mastername | Sends a textstring to a master terminal or another CP-6 system. |
| BOOT FEP | Reboots specified front end processor. |
| CRASH FEP | Disables specified FEP after requesting an online dump, then automatically restarts the FEP. |
| DISABLE LINES | Removes available lines from FEP. |
| DISCONNECT | Disconnects terminal associated with a console. |
| DUMP FEP | Disables and requests dump of FEP. |
| E FEP | Errors the current job step for the specified FEP. |
| ENABLE | Makes lines available for logon and use. |
| FEPS | Displays status of all front end processors. |
| HEADER | Defines logon header message. |
| HOSTS | Displays status of host or all hosts. |
| KILL | Immediately disconnects and disables a line or lines. |
| LINKS | Displays status of local FEP connected to this host. |
| MASTERS | Displays master terminals connected to CP-6 slave system. |
| NETWORK ROUTE | Displays network routing information for node or nodes. |
| NODES | Displays status of specified node or all nodes. |
| STATION | Displays all devices associated with a console. |
| START FEP | Allows specified FEP to operate normally. |
| START FEPS | Performs START FEP for all FEPs. |
| STOP FEP | Shuts down but does not crash specified FEP. |
| STOP FEPS | Performs STOP FEP for all FEPs. |
| TELL | Sends string to specified console. |
| TELLALL | Sends string to all consoles. |
| TERMINAL | Displays terminals that are currently connected. |
| TERMINALS | Displays all communications-connected terminals and devices. |

## Diagnostic Keyins

The following keyins can only be issued from a SYSTEM console, and apply to diagnostic access:

| | |
|---|---|
| DIAG | Authorizes a user for diagnostic access. |
| ERSEND | Places a textstring in the system error logging file. |
| NODIAG | Denies a user diagnostic access. |

## Console Ghost Keyins

The following keyins apply to console ghosts:

| | |
|---|---|
| B: | Issues a "BREAK" to the console ghost. |
| F: | Performs an "END-OF-FILE" to a pending read for a console ghost. |
| G: | Provides input to a console ghost. |
| GHOST | Initiates a console ghost. |
| PENDING READ | Displays the outstanding M$KEYIN reads requiring a response from this console. |
| Y: | Sends a <CNTL-Y> to the console ghost. |

## Informational Keyins

The following keyins provide information:

| | |
|---|---|
| ? | Requests additional HELP. |
| ?? | Requests all additional HELP. |
| NETWORK ROUTE | Displays network routing data for node or all nodes. |
| BATCH | Displays batch job status. |
| CONSOLES | Displays currently logged on consoles. |
| CONSOLE STATUS | Displays the attributes of the current console. |
| DEVICES | Displays currently erroring devices. |
| DISKS | Displays status of disk drives. |
| DISPLAY | Displays information about batch queues. |
| FEPS | Displays front-end processor status. |
| HELP | Describes keyins and gives keyin syntax. |
| HOSTS | Displays status of host or all hosts. |
| INFO | Displays ETMF, TIME, DATE, and 90% RESPONSE TIME. |
| LINKS | Displays status of local FEP connected to this host. |
| MASTERS | Displays master terminals. |
| NODES | Displays status of node or nodes. |
| PENDING | Displays outstanding M$KEYIN requests. |
| SETS | Displays packset status. |
| SETUP | Displays information about a form. |
| STARTUP!! | Displays the progress of a system boot. |
| STATION | Displays all devices associated with a console. |
| SYMB | Displays symbiont information. |
| TAPES | Displays tape drive usage. |
| TERMINALS | Displays communications-connected terminals. |
| USERS | Displays maximum users permitted. |
| VOLUMES | Displays tape usage. |
| ZAP!! | Displays the current progress of the ZAP! procedure. |

## Message Sending Keyins

The following keyins send messages to various destinations:

| | |
|---|---|
| @mastername | Sends a message to a master control terminal. |
| BROADCAST | Sends a message to all on-line users and makes it a a logon header. |
| ERSEND | Sends a textstring to the system error logging file. |
| HEADER | Performs a logon header message change. |
| MSG | Sends a message to all SYSTEM consoles. |
| SEND | Sends a message to a user terminal. |
| SENDALL | Sends a message to all user terminals. |
| SENDFEP | Sends a message to all stations connected to the specified FEP. |
| sysid: | Replies to an M$KEYIN request. |
| TELL | Sends a message to another console. |
| TELLALL | Sends a message to all consoles. |

## Transaction Processing Keyins

The following keyins apply to transaction processing:

| | |
|---|---|
| START TP | Invokes an instance of TP. |
| TP/ | Sends a valid TP command to the specified TP instance. |
| ON TP | Specifies the maximum number of TP users. |

## Comgroup Processing Keyins

The following keyins apply to comgroups:

| | |
|---|---|
| RESTRICT | Restricts usage of symbiont devices. |
| ROUTE FROM | Routes (or inhibits) processing of a workstation by an output symbiont device or class of devices at a terminal name. |
| ROUTE INTO | Routes processing of a workstation to an output symbiont device or class of devices. |
| SYMB INPUT | Displays status of symbiont input device. |
| UNROUTE | Removes ROUTE FROM restrictions and ROUTE INTO additions on devices. |

## Keyin Components

The following rules apply to the discussion of keyins:

1. A devicename is of the form MT01 or mt01.

2. A wsnname is of the form @wsnname (1 to 8 characters).

3. A terminalname is of the form @terminalname (1 to 8 characters).

4. A stationname is of the form @stationname (1 to 8 characters).

5. A packsetname is of the form #packsetname (1 to 6 characters).

6. A serialnumber is of the form #serialnumber (1 to 6 characters).

7. A formname is an alphanumeric of 1 to 6 characters.

8. Some items are limited in the characters that can be keyed in to satisfy them. When the full complement of characters is needed, enclosing an item in single quotes may allow the keyin to be performed successfully.

For example:

!MOUNT MT01 #123045     is illegal because of the 0 in the serial number.

However, if necessary, the following keyin may be performed:

!MOUNT MT01 #'123045'

9.  Brackets ([]) indicate optional items.

10. The vertical bar (|) means "or".

11. Braces {} mean one of the items must be specified.

## CP-6 Operator Keyins

Available CP-6 keyins are:

| | |
|---|---|
| General Console: | ?, ??, BYE, CONSOLES, CONSOLE STATUS, HELP, HISTORY, INFO, MSG, MYREAD, NATLANG, OCHIST, OFF, PENDING, PROFILE, READ, READ$, READACCT, TIME, TURNOVER, UC, X CONSOLE. |
| System Control: | ACCTLG, AUTO SCHEDULING, BATCH, CPU, CPUS, DATE, DELTA, DIE!, E, FLUSH, MAKE CPU, NOUSERS!, ON, ON BA, ON GH, ON TP, ON TS, START CPU, STARTUP!!, STATION, STOP CPU, TIME, USERS, X, XDELTA, ZAP!, ZAP!!. |
| Special System: | DELTA, DIE!, ERROR, FIRMLOAD, NOUSER!, PROCEED, RETRY. |
| User Control: | sysid:, BROADCAST, CANREAD, E, HEADER, PENDING, RERUN, SEND, SENDALL, SENDFEP, X, X FEP. |
| General Device: | DEVICES, ERROR, FIRMLOAD, PROCEED, QUIET, RETRY. |
| Tape Drives: | ANSSCRATCH, CANT MOUNT, CANT OVER, CANT RING, DISMOUNT, LOAD, MOUNT, OVER, REQUEST, RESERVE, RING, SCRATCH, TAPE, TAPES, UNRESERVE, VOLUME, VOLUMES. |
| Disk Drives: | DISK, DISKS, DISMOUNT, EXCLMOUNT, PUBLIC, REQUEST, SET, SETS, SHARE, VOLUMES. |
| Unit Record Devices: | ABORT, ALIGN, CONTINUE, FLUSH, FORM, LOCK, MAKE, NCTL, REPRINT, SAVE, SETUP, SPACE, START, SUSPEND, SYMB INPUT, SYMB OUTPUT. |
| Queue Control: | DELETE INPUT, DELETE INPUT ALL, DELETE OUTPUT, DELETE OUTPUT ALL, DELETE OUTPUT ALL FORM, DISPLAY, PRIO INPUT, PRIO INPUT ALL, PRIO OUTPUT, RERUN, RERUN ALL, RESTRICT, S, SWITCH OUTPUT, UNRESTRICT. |
| Job Display: | DISPLAY ALL, DISPLAY DEFER, DISPLAY INPUT, DISPLAY NORUN, DISPLAY NSFORM, DISPLAY OUTPUT, DISPLAY PRIO, DISPLAY RUNNING, DISPLAY sysid. |
| Communications: | @mastername, BOOT FEP, CRASH FEP, DISABLE LINES, DISCONNECT, DUMP FEP, E FEP, ENABLE, FEPS, HEADER, HOSTS, KILL, LINKS, MASTERS, NETWORK ROUTE, NODES, START FEP, START FEPS, STOP FEP, STATION, STOP FEPS, TELL, TELLALL, TERMINAL, TERMINALS, X FEP. |
| Diagnostic: | DIAG, ERSEND, NODIAG. |
| Console Ghost: | B:, F:, G:, GHOST, PENDING READ, Y:. |

| Informational: | ?, ??, BATCH, CONSOLES, CONSOLE STATUS, DEVICES, DISKS, DISPLAY, FEPS, HELP, HOSTS, INFO, LINKS, MASTERS, NETWORK ROUTE, NODES, PENDING, SETS, SETUP, STARTUP!!, STATION, SYMB, TAPES, TERMINALS, USERS, VOLUMES, ZAP!!. |
|---|---|
| Message Sending: | @mastername, BROADCAST, ERSEND, HEADER, MSG, SEND, SENDALL, sysid:, TELL, TELLALL. |
| Transaction Processing: | START TP, TP/, ON TP. |
| Comgroups: | RESTRICT, ROUTE FROM, ROUTE INTO, SYMB INPUT, UNROUTE. |

Each keyin is described below in alphabetical order.


@mastername Keyin

Syntax:

@mastername textstring

Description:

Sends the specified text-string to the corresponding master terminal when the CP-6 system is acting as a slave IRBT to another computer system.

Console Attribute Required:

COMMUNICATIONS INPUT


## ? Keyin

Syntax:

?

Description:

This keyin is used to obtain additional levels of help.  It should only be entered following a HELP keyin.

Console Attribute Required:

ANY

## ?? Keyin

Syntax:

??

Description:

This keyin is used to obtain all additional levels of HELP.  It should only be issued following a HELP or a ? keyin.

Console Attribute Required:

ANY

## ABORT Keyin

Syntax:

ABOR[T] devicename [[ IF ] sysid]

Description:

Aborts the current output on the specified symbiont device. If the optional sysid is specified, the ABORT occurs only if the specified sysid is currently outputting.

Console Attribute Required:

DEVICE INPUT

## ACCTLG Keyin

Syntax:

ACCT[LG] filename

Description:

Causes the :ACCTLG.:SYS file to be renamed to the specified filename in the :SYS account so that it can be accessed by billing and statistical programs. The filename must be less than 32 characters long. The resultant file has the same access controls as :ACCTLG.:SYS.

Console Attribute Required:

SYSTEM INPUT

## ALIGN Keyin

Syntax:

ALIG[N] devicename

Description:

The ALIGN keyin initiates an alignment sequence for the specified symbiont device, and may be issued when the device is busy or idle.

For a busy device, the alignment sequence begins by automatically suspending the device. Then the VFU image, chain image, and alignment image are sent to the device. If the form on the device contains no alignment image, the file automatically resumes printing at completion of the alignment sequence. If the form contains an alignment image, the operator uses the CONTINUE keyin after aligning the paper to cause the file to resume output. For LP devices, the resumption point is the top of the form immediately preceeding the point of interruption. For CP devices, it is the card immediately preceeding the point of interruption. For all other device types, output resumes at the point of interruption.

For an idle device, when the ALIGN keyin is issued the device is locked, and the alignment information follows. The device remains locked until the operator re-starts it by use of the START keyin. This enables the operator to print several alignment images, if necessary, to get the paper aligned properly without being interrupted by a new file.

Console Attribute Required:

DEVICE INPUT

## ANSSCRATCH Keyin

Syntax:

ANSS[CRATCH] devicename [ [ WITH ] #serialnumber ] [ FOR ] sysid

Description:

Authorizes the user with the specified sysid to use the tape on the specified device as an ANS scratch tape.  If the serialnumber is specified, the scratch tape is given that serialnumber.

Console Attribute Required:

DEVICE INPUT

## AUTO SCHEDULING Keyin

Syntax:

AUTO S[CHEDULING] {ON|OFF}

Description:

When ON, initiates the automatic scheduling of keyins, ghost jobs, and messages by the GOOSE ghost job.  When OFF, the automatic scheduling does not take place.

Console Attribute Required:

SYSTEM INPUT

## AUTO SCHEDULING MESSAGE Keyin

Syntax:

AUTO S[CHEDULING] M[ESSAGE] {ON|OFF}

Description:

When ON, warning messages are sent by the GOOSE ghost when it schedules a keyin or a ghost job.  When OFF, the warning messages are disabled.

Console Attribute Required:

SYSTEM INPUT

## AUTO SCHEDULING UPDATE Keyin

Syntax:

AUTO S[CHEDULING] U[PDATE]

Description:

Notifies the GOOSE ghost that the GOOSE_EGG file has been changed.

Console Attribute Required:

SYSTEM INPUT

## B: Keyin

Syntax:

B:

Description:

Simulates a "BREAK" or "ESCAPE-B" to the console ghost associated with this console.

Console Attribute Required:

ANY

## BATCH Keyin

Syntax:

BATC[H]

Description:

Allows a SYSTEM or ADMINISTRATIVE (PADMIN, UADMIN) console to display the status of batch jobs in the system. The following items are shown:

| | |
|---|---|
| BATCH | if new jobs can be entered, then BATCH is ON, otherwise, BATCH is off. |
| N in queue | is the total number of jobs in the input queue. |
| N allowed | is the total number of batch jobs allowed to run (see ON BA keyin). |
| N running | is the number of currently running batch job. |

Console Attribute Required:

ADMINISTRATIVE OUTPUT

## BATCH ON/OFF Keyin

Syntax:

BATC[H] { ON | OFF }

Description:

Allows an operator at a SYSTEM console to control the entry of jobs into the input queue. If ON is specified, then jobs may be !BATCHed from IBEX and entered from remote and local input symbiont devices. If OFF is specified, then jobs cannot be !BATCHed or entered from input symbiont devices.

Console Attribute Required:

SYSTEM INPUT


## BOOT FEP Keyin

Syntax:

BOOT FEP {fepnumber|fepname}

Description:

Re-boots the specified FEP, which may be local or remote.

Console Attribute Required:

COMMUNICATIONS INPUT


## BROADCAST Keyin

Syntax:

BROA[DCAST] [textstring]

Description:

Sends the specified text to all online users and logged-on consoles that are FEP connected. Additionally, the textstring becomes the "administrative message" placed in the log-on salutation. If no textstring is present, a blank field becomes the administrative message.

Console Attribute Required:

SYSTEM INPUT


## BYE Keyin

Syntax:

BYE

Description:

Logs the operator's console off. If this keyin is performed on the SCC, it ceases to function until a REQuest/EOM sequence is typed in, which logs it back on. If this keyin is performed on the LCC, it ceases to function until a RETURN/RETURN sequence is typed in, which logs it back on.

Console Attribute Required:

ANY

## CANREAD Keyin

Syntax:

CANR[EAD]

Description:

Cancels the current 'READ' file for the console.

Console Attribute Required:

ANY

## CANT MOUNT Keyin

Syntax:

CANT MOUN[T] devicename

Description:

Aborts a requested tape or disk mount because the operator can't or won't mount the reel or pack that is being requested on the specified device.

Console Attribute Required:

DEVICE INPUT

## CANT OVER Keyin

Syntax:

CANT OVER devicename

Description:

Aborts a tape mount which has requested an OVER keyin.  The user receives an error indicating the operator denied a re-write of an unexpired ANS tape.

Console Attribute Required:

DEVICE INPUT

## CANT RING Keyin

Syntax:

CANT RING devicename

Description:

Aborts a request for a RING keyin for the reel on the specified tape drive.  The user receives an error indicating the operator deemed it unsafe to mount this reel with a write ring.

Console Attribute Required:

DEVICE INPUT


## CONSOLE STATUS Keyin

Syntax:

CONS[OLE] STAT[US]

Description:

Displays the following information:

1.  The devicename of the console, the associated terminal, and the workstation of the console this keyin was submitted from.

2.  If a console ghost is active, the current console ghost prompt.

3.  The attributes and maximum priority for PRIO keyins.

4.  The status of the UC (uppercase) flag, the current profile, the status of the TIME messages (whether or not they are being printed) and the natural language of the console.

5.  The turnover of the accounting log and the history file.

6.  The current accounts for READ keyins, and the line printer workstation name.

Console Attribute Required:

ANY


## CONSOLES Keyin

Syntax:

CONS[OLES]

Description:

Displays currently logged-on consoles.  (Useful when using the TELL and X CONSOLE Keyins.)  Information displayed includes console device name, associated terminal, associated workstation, and input and output attributes for each console.  If a console is a FEP connected console that did not log on as part of a terminal, its logon string is also displayed.

Console Attribute Required:

ANY

## CONTINUE Keyin

Syntax:

CONT[INUE] devicename

Description:

Allows suspended output to be resumed at the point of interruption.  See the SUSPEND keyin.  Devicename must specify an output symbiont device.

Console Attribute Required:

DEVICE INPUT

## CPU Keyin

Syntax:

CPU portnumber

Description:

Allows a SYSTEM or ADMINISTRATIVE console to display the status of the CPU specified by its decimal portnumber.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

## CPUS Keyin

Syntax:

CPUS

Description:

Allows a console to display the status of all known CPUs in the system.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

## CRASH FEP Keyin

Syntax:

CRASH FEP {fepnumber|fepname}

Description:

Disables the specified FEP after requesting an upline dump of its contents, then automatically restarts the FEP after it has been dumped. FEP specified may be local or remote.

Console Attribute Required:

COMMUNICATIONS INPUT

## DATE Keyin

Syntax:

DATE mm/dd/yy

Description:

Sets the current date for the CP-6 system. Often used in conjunction with the TIME keyin.

Console Attribute Required:

SYSTEM INPUT

## DELETE INPUT Keyin

Syntax:

DELE[TE] I[NPUT] sysid

Description:

Deletes the specified sysid from the batch input queue.

Console Attribute Required:

ADMINISTRATIVE INPUT

## DELETE INPUT ALL Keyin

Syntax:

DELE[TE] I[NPUT] ALL [ .account ] [ @wsnname ]

Description:

If no options are given, all waiting and running jobs for this workstation will be deleted (if keyed in at a console with the ADMINISTRATIVE INPUT attribute), or all waiting and running jobs in the system will be deleted (if keyed in at a INPUT console with the SYSTEM INPUT attribute).

If the optional @wsnname is specified from a SYSTEM console, only waiting and running jobs at the specified workstation will be deleted. If the optional account is given, only waiting and running jobs from that account will be deleted.

Console Attribute Required:

ADMINISTRATIVE INPUT

If .account or @wsnname is specified, SYSTEM INPUT is required.

## DELETE OUTPUT Keyin

Syntax:

DELE[TE] O[UTPUT] sysid [-identifier]

Description:

Deletes the output for the specified sysid.  If the optional identifier is omitted, all
output for that sysid is deleted.  If the identifier is a valid identifier for an output
symbiont sub-file, only that sysid's sub-file is deleted.

Console Attribute Required:

ADMINISTRATIVE INPUT


## DELETE OUTPUT ALL Keyin

Syntax:

DELE[TE] O[UTPUT] ALL [[NOT] .account] [[NOT] @wsnname]

Description:

Deletes all output symbiont files created by the specified account.  If the keyin is
performed at a unit record console (such as an IRBT console) only output destined for
the terminal is deleted.  If the keyin is performed from a SYSTEM console, and the
optional wsnname is specified, then only output for that account at that workstation is
deleted.

If wsnname is not specified, and if the console is a system console, all output in the
system is deleted; otherwise all output for the issuing console's terminal is deleted.
If wsnname is specified (allowed at SYSTEM consoles only), all output for the specified
workstation is deleted.

The NOT allows the specification of all accounts or workstations that are not named
specifically.

Console Attribute Required:

ADMINISTRATIVE INPUT

If @wsnname is used, SYSTEM INPUT is required.


## DELETE OUTPUT ALL FORM Keyin

Syntax:

DELE[TE] O[UTPUT] ALL [NOT] FORM=formname [[NOT] @wsnname]

Description:

Deletes all output symbiont files created for and waiting to output on the specified form. If the keyin is performed at a unit record console (such as an IRBT console) only output destined for that terminal is deleted. If the keyin is performed from a SYSTEM console, and the optional wsnname is specified, only output for that form name at that workstation is deleted. If the optional wsnname is not specified, all output for that form name at all terminals is deleted. The NOT allows the specification of all formnames or workstations that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE INPUT

If @wsnname is used, SYSTEM INPUT is required.

## DELTA Keyin

Syntax:

DELTA

Description:

Transfers control of the system to the executive debugger if retained in memory during the last tape or disk boot. Note that if the keyin is used from a system console that is not IOM connected, i.e., not an LCC or SCC, the system will stop in DELTA and will not accept DELTA commands from the console that issued the keyin. DELTA will only accept commands from an LCC or SCC. Same as the XDELTA keyin.

Console Attribute Required:

SYSTEM INPUT

## DEVICES Keyin

Syntax:

DEVI[CES]

Description:

Displays the devices that currently have an error condition. These devices may need a RETRY, ERROR, or PROCEED keyin, or may require manual intervention in order to clear the error condition.

Console Attribute Required:

DEVICE OUTPUT@LOCAL

## DIAG Keyin

Syntax:

DIAG sysid

Description:

Authorizes the specified user for diagnostic access.

Console Attribute Required:

SYSTEM INPUT

## DIE! Keyin

Syntax:

DIE!

Description:

Initiates an OPERATOR RECOVERY.  The exclamation point (!) is required.

Console Attribute Required:

SYSTEM INPUT

## DISABLE LINES Keyin

Syntax:

DISA[BLE] [LINE[S]] {fepnumber|fepname} - startingline [ -> endingline ]

Description:

Removes availability of the specified line(s) in the specified FEP.  If endingline is
specified, all lines from startingline through endingline in the specified FEP will be
disabled.  If only startingline is specified, then only the single line identified by
startingline will be disabled.

If the DISABLE keyin refers to line(s) currently supporting a logged on terminal or
timesharing user, the line will become unavailable after the lines' user(s) log c.i.  If
there are no current users, the lines will be disabled immediately.  Once disabled no
new logons will be allowed until a subsequent ENABLE keyin is performed.

Console Attribute Required:

COMMUNICATIONS INPUT

## DISCONNECT TERMINAL Keyin

Syntax:

DISC[ONNECT] TERM[INAL] [ @terminalname ]

Description:

Disconnects the terminal associated with this console if performed at an ADMINISTRATIVE
INPUT console, or any specified terminal if performed at a SYSTEM console.  A SYSTEM
console must specify the terminal name.

Console Attribute Required:

COMMUNICATION INPUT
ADMINISTRATIVE INPUT

## DISK Keyin

Syntax:

DISK [devicename]

Description:

Displays the status of the requested disk drive and its mounted packset, if any.  If devicename is not specified, displays the status of all disk drives controlled by this console that have physically mounted packsets on them.

Console Attribute Required:

DEVICE OUTPUT

## DISMOUNT Keyin

Syntax:

DISM[OUNT] packsetname [{FAST|NOW}]

Description:

Requests the dismount of the specified packset when all users who are now associated with it cease to be associated with it.  Note, however, that a still-spinning pack (as in a 501) is still subject to user accessing.  To prevent this, use the EXCLMOUNT keyin specifying this packset.

If FAST is specified, the dismount is delayed until all batch users have completed and when associated online users reach jobstep (barring them further access).  If NOW is specified, the dismount takes place immediately and associated users will be aborted.

Console Attribute Required:

DEVICE INPUT

## DISPLAY sysid Keyin

Syntax:

DISP[LAY] sysid [FULL] [{F[ORCE]|S[HORT]}]

Description:

If FULL is not requested, displays the current status of the given sysid as a batch job or as symbiont output.  That is, if no symbiont output exists for the sysid, and if it is not a running or waiting job, the following message appears:

"Sorry, you have nothing to display for sysid <sysid>"

Otherwise, appropriate messages appear.  Specifically, if the sysid is a job waiting to run, the message shown under DISP PRIO or DISP DEFER or DISP NORUN (as determined by the job's status) appears.  If the sysid is a running job, the message shown under DISP RUN appears.  In addition, if any symbiont output for the sysid exists, each such file results in a message of the type shown under DISP OUTPUT.

Requesting FULL causes the display to be different only in that if the sysid is a job waiting to run, or running, then the following message is displayed regardless of its status:

"Sysid <sysid> (<jobname>.<accn>) [(<oan>)] [(<org>)] <gpos>

<rql> [(<fol>)]"

where

<oan>　　appears only if the job specified is at least one of ORDER, ACCOUNT, NRERUN, and is one of "O", "A", "N", "OA", "ON", "AN", "OAN" depending on which combination was specified.

<org>　　describes the WSN from which the job originated (W1) and the job under which the job will run (W2); it appears only if at least one of W1, W2 does not match the console's WSN, and has the form

　　W1

if W1=W2, and otherwise has the form

　　W1 -> W2

<gpos>　　is "deferred to <time>" if the job is deferred,

　　"NORUN"　　if the job is norun,

　　<pos>　　if the job is waiting to run. (See <pos> under DISP PRIO n).

<rql>　　is resource requirement list as defined under "DISP NORUN".

<fol>　　appears only if the job follows some other job(s), and is:

　　"follows <sysid1>,<sysid2>,..."

Console Attribute Required:

ADMINISTRATIVE OUTPUT

## DISPLAY ALL Keyin

Syntax:

DISP[LAY] ALL [[NOT].account] [{F[ORCE]|ON LP|S[HORT]}]

Description:

Performs a DISP JOB, DISP INPUT, and DISP OUTPUT combined, thus showing all jobs that could possibly be displayed.

The NOT allows the specification of all accountnames that are not named specifically.

Console Attribute Required:

DEVICE OUTPUT

## DISPLAY DEFER Keyin

Syntax:

DISP[LAY] DEFE[R] [[NOT].account] [[NOT]@wsnnname] [{F[ORCE]|ON LP}]

Description:

If no deferred jobs are found, the following message appears:

"Sorry, you have no deferred jobs"

Otherwise, the following message appears for each deferred job:

"sysid <sysid> (<jobname>.<accn>) deferred to <time>"

where <time> is the date and time at which the job is to be scheduled.

The NOT allows the specification of all accountnames or @wsnnames that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

If @wsn is specified, SYSTEM OUTPUT is required.

## DISPLAY INPUT Keyin

Syntax:

DISP[LAY] I[NPUT] [[NOT].account] [[NOT]@wsnnname]
[{F[ORCE]|ON LP|S[HORT]}]

Description:

Displays the entire input queue.  If there is none (for the issuing console), the following message appears:

"Sorry, you have no waiting jobs"

Otherwise, a list of the input queue appears.  Jobs that are waiting to run are listed first (from priority 15 to priority 0); for each of these, a message as shown under DISP PRIO n appears.  Next, the NORUN jobs (if any) are listed, with the message for each as shown under DISP NORUN.  Then the deferred jobs (if any) are listed, with the message for each as shown under DISP DEFER.

The NOT allows the specification of all accountnames or wsnnames that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

If @wsnname is specified, SYSTEM OUTPUT is required.

## DISPLAY NORUN Keyin

Syntax:

DISP[LAY] NORU[N] [[NOT].account] [[NOT]@wsnname]
[{F[ORCE]|ON LP}]

Description:

Displays all waiting jobs which cannot run with the current partition definition and resource configuration. If no such jobs are found, the following message appears:

"Sorry, you have no norun jobs"

Otherwise, the following message appears for each such job:

"Sysid <sysid> (<accn>) requires TIM=mm:ss MEM=k [<psl>] [<dvl>] [<sul>]"

where:

psl     appears if the job requires packsets, and is a packset list of the form:

   #name(pa),#name(pa),...

   where pa = PB (public), PR (private), EX (exclusive)

<dvl>    appears if the job requires resource devices, and is a device list of the form:

   LLD (<atl>),LLD (<atl>),...

   where <atl> is an attribute list of the form:

      <atr>,<atr>,...  with each <atr> one of the following:

         LC, BIN, APL, OVR, 100MB, 200MB, 800BPI, 1600BPI, 6250BPI

<sul>    appears if the job requires pseudo resources, and is a pseudo-resource list of the form:

   name1=n,name2=m,...

The NOT allows the specification of all account names or wsnnames that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

If @wsnname is specified, SYSTEM OUTPUT is required.

## DISPLAY NSFORM Keyin

Syntax:

DISP[LAY] NSFO[RM] [[NOT].account] [[NOT]@terminalname]
[{F[ORCE]|ON LP}]

Description:

Displays output files with nonstandard forms. A nonstandard form is defined as any
formname not beginning with the letters "STD" (STDLP is standard, CPUNCH is not). If
there are none, the following message appears:

"Sorry, you have no symbiont output for nonstandard form"

Otherwise, each such file is listed with the same message as for DISP OUTPUT:

"output <sysid>-<num>(<accn>): <dt> [@<wsn>] form<form>"

where <form> is the formname.

The NOT allows the specification of all accounts or terminalnames that are not named
specifically.

Console Attribute Required:

DEVICE OUTPUT

If @terminalname is specified, SYSTEM OUTPUT is required.


## DISPLAY OUTPUT Keyin

Syntax:

DISP[LAY] O[UTPUT] [[NOT] FORM=[formname] [[NOT] .account]
[FOR devicetype] [[NOT]@terminalname][{F[ORCE]|ON LP|S[HORT]}]

If @terminalname is specified, SYSTEM OUTPUT is required.

Description:

If devicetype is not specified, this keyin displays the entire queue of output symbiont
files associated with the issuing console, and if none exist, the following message
appears:

"Sorry, you have no symbiont output"

If the optional terminal name is specified (legal only from SYSTEM consoles), only that
terminal's output is displayed. If the terminalname is not specified from SYSTEM
console, ALL output in the host system is displayed.

If devicetype is specified, it is a device type (e.g., LP, CP, etc.), and then only
those files destined for the given type are displayed; if none exists, the following
message appears:

"Sorry, you have no symbiont output for devicetype"

Otherwise, the appropriate files are listed. When an operator displays output symbiont
file information interactively, a combination of the following message appears in the
response:

"Output <sysid>-<num> (<accn>): <dt>[@<term>] [<form>] nn [xc] grans prio <p>[(C)]
[on<dt> nn | being spilled]

In non-interactive responses (i.e. those directed to LP), messages are listed in column format with the following headings:

SYSID, NUM, MODE, JOBNAME, ACCOUNT, DESTINATION, GRANS, COPIES, PRIO, SAP, COM, *FORM*, ATTR, *CREATED AT*, *NODEV*

where

sysid     is the system id.

num     is the output sub-file identifier for the sysid.

(accn):     is the account from which the output is generated.

dt     is the device type (e.g., LP)

[θterm]     is the destination TERMINAL which appears only on system consoles and in non-interactive responses.

[form]     specifies the formname enclosed in brackets ([]), which is printed only if it is neither STDLP nor STD**. In non-interactive responses, the form always appears and is not enclosed in brackets.

n grans     is the size of the file in granules.

[xc]     is the number of copies to print (displayed only in interactive responses).

prio p     is the assigned priority of the file from 0 to 15 or one one of the following:

    SPLD     specifies spilled.

    CMFW     specifies a concurrent multi-file wait (i.e. incomplete chunked file).

    HOLD     specifies that output is being held after printing the number of copies specified in the SAPCOPIES field in the FIT.

(C)     appears only if the file is built in commode chunks and is eligible to print (i.e., prio not W). If OUTSYM has received the last commode chunk of a file, or the file is not chunked the commode field contains "N". If a commode file is still being built, the commode field contains the highest chunk number that has currently been built.

dtnn     is the device that the file is being output on if it is currently being output. For both interactive and non-interactive responses, when a device is available for output, the field is left blank; otherwise it contains the message "*NODEV*" for non-interactive responses and "NODEV" for interactive responses.

MODE     specifies the mode of the output creator (i.e. BAtch, GHost, Time Sharing (TS) or Transaction Processing (TP)) and is listed only in non-interactive responses.

SAP     is a flag (displayed only in non-interactive responses) which informs OUTSYM to save a file after printing because more copies are to be printed. If "copies" or "hold copies" was specified on the LDEV command, then SAP (Save After Print) and SAPCOPIES (Save After Print COPIES) are set in the output file's FIT. SAPCOPIES contains the number specified in "hold copies" and tells OUTSYM to halt after printing the number of copies specified. If only one copy is to be printed, the field contains "N". If multiple copies are to be printed, the field contains "SAPCOPIES".

ATTR     specifies the file output attributes (displayed only in non-interactive responses). The following is a list of attributes:

    O     true overprint.

L    lower case.

B    binary.

A    APL.

CREATED AT    is the creation time of the output.

The NOT allows the specification of all formnames, accountnames, or terminalnames that are not named specifically.

Console Attribute Required:

DEVICE OUTPUT

If @terminalname is specified, SYSTEM OUTPUT is required.

## DISPLAY PRIO Keyin

Syntax:

DISP[LAY] PRIO [[NOT].account] n [TO m] [[NOT]@wsnname]
[{F[ORCE]|ON LP}]

Description:

Displays the input queue of jobs at priority n, or, if "TO m" is specified, priority n thru m (m > n).

If no such jobs are found, the message

"Sorry, you have no jobs waiting at the specified priority"

appears on the issuing console.

Otherwise, for each waiting job, the following message appears:

"Sysid <sysid> (<accn>) <pos>, prio n"

where

<pos> is the position (e.g., 1st, 33rd, etc).

The NOT allows the specification of all accountnames or wsnnames that are not named specifically.

Console Attribute Required:

DEVICE OUTPUT

If @wsnname is specified, SYSTEM OUTPUT is required.

## DISPLAY RUNNING Keyin

Syntax:

DISP[LAY] R[UNNING] [[NOT].account] [[NOT]@wsnname] [{F[ORCE]|ON LP}]

Description:

Displays the currently running jobs.  If no running jobs are found, the message

"Sorry, you have no running job"

appears on the issuing console, even if ON LP was requested.

Otherwise, the following message appears for each job found:

"Job <sysid> (<jobname>.<accn>) on since <hh:mm>, in part <part>#"

The NOT allows the specification of all accountnames or wsnnames that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

If wsnname is used, SYSTEM OUTPUT is required.


## DUMP FEP Keyin

Syntax:

DUMP FEP {fepnumber|fepname}

Description:

Disables the specified FEP after requesting an upline dump of its contents.  A BOOT FEP keyin must be issued to restart the FEP after it has been DUMPed.  May only be used with local fepnumber or fepname.

Console Attribute Required:

COMMUNICATIONS INPUT


## E FEP Keyin

Syntax:

E FEP n-sysid

Description:

Errors the current job step for the specified FEP.

Console Attribute Required:

ADMINISTRATIVE INPUT


## E Keyin

Syntax:

E sysid

Description:

Errors the current job step for the specified user.

Console Attribute Required:

ADMINISTRATIVE INPUT

## ENABLE Keyin

Syntax:

```
ENAB[LE] {fepnumber|fepname} - startingline [-> endingline]
    [ONCE] [LGN=textstring]
```

Description:

Makes the specified line or lines available for logon and use (if DISABLEd or KILLed).

If only startingline is specified, only that single line will be enabled.  If endingline is specified, then all lines from startingline through endingline will be enabled.  If ONCE is specified, the line or lines are to allow only one logon, and then be automatically disabled when the line's user logs off (see DISABLE keyin).

If LGN=textstring is specified, the textstring will become the line's automatic logon, that is, it is automatically returned when the line becomes active, as though the user had typed it in response to "LOGON PLEASE:".

Console Attribute Required:

COMMUNICATIONS INPUT

## ERROR Keyin

Syntax:

ERRO[R] devicename

Description:

If the specified device has an error condition, this keyin causes the current I/O activity on the specified device to be suspended, and returns an error code to the device's user.

Console Attribute Required:

DEVICE INPUT

## ERSEND Keyin

Syntax:

ERSE[ND] textstring

Description:

Causes the specified textstring to be placed in the system error logging file.

Console Attribute Required:

ADMINISTRATIVE INPUT, DEVICE INPUT

## EXCLMOUNT Keyin

Syntax:

EXCL[MOUNT] packsetname

Description:

Specifies that the next time the specified packset is mounted, it will be mounted for exclusive access only.  Must follow a DISMOUNT keyin if the operator wants to prevent user access to a still-spinning pack.

Console Attribute Required:

DEVICE INPUT

## F: Keyin

Syntax:

F:

Description:

Performs an "END-OF-FILE" on the read currently outstanding for the console ghost associated with this console.

Console Attribute Required:

ANY

## FEPS Keyin

Syntax:

FEP[S]   [ {fepnumber|fepname} ]

Description:

Displays the status of the specified FEP.  If no FEP number or name is given, the status of all FEPs will be displayed.

Console Attribute Required:

ANY

## FIRMLOAD Keyin

Syntax:

FIRM[LOAD] mpcname

Description:

Requests a firmware download to the specified MPC. Possible mpcname are TCnn, UCnn, and DCnn, where nn is 01, 02, etc., as defined in the system TIGR deck.

Console Attribute Required:

DEVICE INPUT


## FLUSH Keyin

Syntax:

FLUSH devicename

Description:

Causes the specified input symbiont to discard the current job or NCTL file being built, and to flush the input stream up to the end of the current job/file.

Console Attribute Required:

DEVICE INPUT


## FORM ON Keyin

Syntax:

FORM [ON] devicename [IS] formname

Description:

Causes the specified form to be mounted on the specified output device. If the FORM keyin is issued to a symbiont output device, then the device MUST BE IDLE. If the FORM keyin is issued to a resource (non-symbiont) output device, then the device MUST NOT BE IN USE (idle or requesting a form mount).

After this keyin is issued to a symbiont device, the device is considered to be "unaligned". This means that the first time a file starts output on the device, an alignment sequence is initiated. However, if the device is not symbiont, no further action is taken by the CP-6 system; thus the program owning the resource output device must perform its own alignment sequence.

For symbiont devices, if the form was defined by SUPER to have no alignment image, then an 'alignment sequence' simply consists of loading the VFU image, whereupon the message "VFU image loaded" appears, and the file starts to output. Otherwise (i.e., if there really is an alignment image), the alignment image is output; when this finishes, the device automatically suspends (to permit the operator to verify the alignment). If re-alignment is desired, the ALIGN keyin may be used to cause the alignment image to be output again (followed by automatic suspend).

When the operator is satisfied with the alignment, the CONTINUE keyin causes the file to start output. After the alignment has been completed successfully, the device is considered to be aligned. Note that if the alignment sequence aborts due to a device error, then the CONTINUE keyin is rejected (because the device is unaligned); the operator must complete the alignment sequence before continuing. Note also that while the alignment sequence is in progress, none of the usual keyins (REPRINT, SUSPEND, etc) can be issued to the device.

Console Attribute Required:

DEVICE INPUT

## G: Keyin

Syntax:

G: [textstring]

Description:

Causes the specified text to satisfy the read of the console ghost associated with this console.

Console Attribute Required:

ANY

## GHOST Keyin

Syntax:

GHOST acctno , acctname [ ,acctpassword ]

Description:

Initializes a console ghost for this console if the specified acctno, acctname and acctpassword are a legal logon ID. Note that the account must be authorized for ONLINE usage by SUPER.

Console Attribute Required:

ANY

## HEADER Keyin

Syntax:

HEAD[ER] [textstring]

Description:

Defines the administrative message seen in the logon header to be the specified textstring. This keyin, unlike the BROADCAST keyin, does not send the text to all online users. If the textstring is not specified, the administrative message is reset to blanks.

Console Attribute Required:

SYSTEM INPUT

## HELP Keyin

Syntax:

HELP [(KEYIN)] [TOPICS] [keyword1] [keyword2]

Description:

Prints information about the valid CP-6 keyins.  (Only KEYIN HELP is available from a console.  In addition, ranges of HELP are prohibited from a console).  The following examples illustrate the use of the HELP keyin:

| Keyin | Description |
|---|---|
| HELP | prints an overview of KEYIN. |
| HELP TOPICS | prints a list of valid keywords. |
| HELP SEND | prints the first level message for the SEND keyin.  Entering a question mark (?) prints the next deeper level of the message.  Entering a double question mark (??) prints all levels. |
| HELP SEND ATT | prints the minimum attribute required for the SEND keyin. |
| HELP DISK DES | prints a description of the DISK keyin. |

Console Attribute Required:

ANY

## HISTORY Keyin

Syntax:

HIST[ORY] { ON | OFF }

Description:

Specifies whether logging of operator console activity is to be enabled (ON) or disabled (OFF).  When the system is booted, HISTORY is ON.  The status is remembered across crashes.  History logging is recommended to aid Honeywell support personnel diagnose problems remotely.

Console Attribute Required:

SYSTEM INPUT

## HOSTS Keyin

Syntax:

HOST[S]   [ {hostnumber|hostname} ]

Description:

Displays the status of the specified host.  If no host number or name is given, the status of all hosts will be displayed.

Console Attribute Required:

ANY

## INFO Keyin

Syntax:

INFO

Description:

Prints ETMF, TIME, DATE, and 90% RESPONSE TIME, similar to the IBEX !DI command.

Console Attribute Required:

ANY

## KILL Keyin

Syntax:

KILL [LINE[S]] {fepnumber|fepname} - starting line [ -> endingline ]

Description:

Immediately disconnects and disables the specified line(s) in the specified FEP (see DISABLE keyin).  If only startingline is specified, only that single line will be killed.  If endingline is specified, all lines from startingline through endingline will be killed.  Any connected users or terminals will be disconnected (and autosaved if possible).  Any KILLed lines must be enabled (see ENABLE keyin) before they can be used again.

Console Attribute Required:

COMMUNICATION INPUT

## LINKS Keyin

Syntax:

LINK[S]

Description:

Displays the status of the local FEP connected to this host.

Console Attribute Required:

ANY

## LOAD Keyin

Syntax:

LOAD devicename

Description:

Requests that an automatic start sequence be performed on the specified tape drive i.e., acts as if the START button on the tape drive has been pressed.

Console Attribute Required:

DEVICE INPUT

## LOCK Keyin

Syntax:

LOCK devicename

Description:

Keeps the specified symbiont device from outputting after the current file is finished outputting.

Console Attribute Required:

DEVICE INPUT

## LPWSN Keyin

Syntax:

LPWS[N] [=]@workstation_name

Description:

Allows an operator with a wild-carded workstation name to select the workstation to which the results of DISPLAY ... ON LP are directed. This field must contain a non-blank or non-wildcarded value to successfully perform DISPLAY ... ON LP keyins.

Console Attribute Required:

ANY

## MAKE CPU Keyin

Syntax:

MAKE CPU portnumber [MAST[ER]]

Description:

If the CPU on the specified port number is usable as a slave CPU, it will become the master CPU. The currently running master CPU will become a slave CPU, and will be automatically stopped (see STOP CPU keyin). If the operator desires to continue using the old master CPU as a slave CPU, he must issue a START CPU keyin on the old master CPU's port number.

This keyin will be rejected and an appropriate error message will be printed if either CPU is running in diagnostic mode.

Console Attribute Required:

SYSTEM INPUT

## MAKE RESOURCE Keyin

Syntax:

MAKE devicename RESO[URCE]

Description:

Causes the specified symbiont devicename to become a resource device rather than a symbiont device.

Console Attribute Required:

DEVICE INPUT

## MAKE SYMBIONT Keyin

Syntax:

MAKE devicename SYMB[IONT]

Description:

Causes the specified resource device to become a symbiont device.

Console Attribute Required:

DEVICE INPUT

## MASTERS Keyin

Syntax:

MAST[ERS]

Description:

Allows SYSTEM and COMMUNICATION consoles to display the master terminals connected to this CP-6 slave system.

Console Attribute Required:

COMMUNICATIONS INPUT

## MOUNT Keyin

Syntax:

MOUN[T] devicename [WITH] serialnumber [[FOR] sysid]

Description:

Allows the operator to specify or change the serial number of the tape mounted on the specified device. FOR sysid, specifies that only that sysid can use the drive.

Console Attribute Required:

DEVICE INPUT

## MSG Keyin

Syntax:

MSG textstring

Description:

Causes the textstring to be sent to all SYSTEM consoles in the CP-6 system. (See also the TELL and TELLALL keyins.)

Console Attribute Required:

ANY

## MYREADACCT Keyin

Syntax:

MYRE[ADACCT] {.account|R[ESET]}

Description:

Sets the default account from which READ files will be read for the issuing console. The "default" read account is as follows: if an operator READs a file, and does not specify an account, the default READ account set via this keyin will be used. If no default account is set, the default account will be the current system default read account. Otherwise use the KEYIN global READ account. RESET specifies use the KEYIN global READ default account.

Console Attribute Required:

ANY

## NATLANG Keyin

Syntax:

NATL[ANG] [languagecharacter]

Description:

Sets the native language in which the console receives messages.

Console Attribute Required:

ANY

## NCTL Keyin

Syntax:

NCTL devicename textstring  [ ONCE ]

Description:

Changes the default NCTL FID for the specified input symbiont device to the specified string.  This is the FID used by such devices as paper tape readers (i.e., those for which it is awkward or impossible to transmit a !NCTL record), or when a record containing simply '!NCTL' is encountered.  The FID must be not more than 25 characters in length.  If ONCE is specified, then the FID will only be used the next time a default is required, after which the default reverts to its value before the keyin was issued.

Console Attribute Required:

DEVICE INPUT

## NETWORK ROUTE Keyin

Syntax:

NETW[ORK] ROUT[E] [nodenumber]

Description:

Displays network routing information for specified node, or, if node number is not specified, for all nodes.

Console Attribute Required:

ANY

## NODIAG Keyin

Syntax:

NODI[AG] sysid

Description:

Denies the DIAG keyin request for the specified sysid.

Console Attribute Required:

SYSTEM INPUT

## NODES Keyin

Syntax:

NODE[S]  [nodeumber]

Description:

Displays the status of the specified node.  If no node number is given, the status of all nodes will be displayed.

Console Attribute Required:

ANY

## NOUSERS! Keyin

Syntax:

NOUS[ERS!]

Description:

Prevents unnecessary users from accessing the system.  This keyin can only be used prior to SLUG completing the five-phased system startup process.

The NOUSERS!  Keyin has the same effect as answering 'N' to the AARDVARK prompt 'DO YOU WANT USERS (Y/N).' Otherwise, the operator is informed that it is too late to prevent unnecessary users from system access.  This keyin is counteracted by submitting any "ON" type keyin.

If this keyin is entered before the message 'LOGGING OF CONSOLE ACTIVITY INITIATED' is output, the keyin cannot be abbreviated and the full form NOUSERS! must be used.  For more details see Section 2 of this manual.

Console Attribute Required:

SYSTEM INPUT

## OCHIST Keyin

Syntax:

OCHI[ST] filename

Description:

Causes the :OCHIST.:SYSTAC file (KEYIN console activity file) to be closed and renamed to the specified file name in the :SYSTAC account. :OCHIST will then be rebuilt, depending on whether HISTORY is ON or OFF.

Console Attribute Required:

SYSTEM INPUT

## OFF Keyin

Syntax:

OFF

Description:

Logs the operator's console off. If this keyin is performed on the LCC, it ceases to function until a RETURN/RETURN sequence is typed in, which logs it back on. If this keyin is performed on the SCC, it ceases to function until a REQUEST/EOM sequence is typed in, which logs it back on.

Console Attribute Required:

ANY

## ON Keyin

Syntax:

ON numberofusers

Description:

Specifies the maximum number of users permitted to use the system. Note that this number need not be the sum of the ON TS, ON GH, and ON BA numbers. Note that this number cannot be set less than 13, the number of required system ghosts.

Console Attribute Required:

SYSTEM INPUT

## ON BA Keyin

Syntax:

ON BA numberofusers

Description:

Specifies the maximum number of batch users permitted to run simultaneously.

Console Attribute Required:

SYSTEM INPUT

## ON GH Keyin

Syntax:

ON GH numberofusers

Description:

Specifies the maximum number of ghost users permitted to run simultaneously.

Note that this number cannot be set less than 13, the number of required system ghosts.

Console Attribute Required:

SYSTEM INPUT

## ON TP Keyin

Syntax:

ON TP numberofusers

Description:

Specifies the maximum number of transaction processing users permitted to run simultaneously.

Console Attribute Required:

SYSTEM INPUT

## ON TS Keyin

Syntax:

ON TS numberofusers

Description:

Specifies the maximum number of online (timesharing and console ghost) users permitted to run simultaneously.

Console Attribute Required:

SYSTEM INPUT

## OVER Keyin

Syntax:

OVER devicename

Description:

Permits the user associated with the unexpired ANS tape on the specified device to write over it.

Console Attribute Required:

DEVICE INPUT

## PENDING Keyin

Syntax:

PEND[ING] [READ[S]]

Description:

Displays the outstanding M$KEYIN reads requiring a response from this console.  This keyin will display the console ghost read size and prompt, if such read is active.

Console Attribute Required:

ANY

## PRIO INPUT Keyin

Syntax:

PRIO I[NPUT] sysid [ TO ] priority

Description:

Allows the operator to change the input batch queue scheduling priority on the specified sysid to the specified priority.  The system manager (using SUPER) sets the maximum priority value allowed for an individual console.

For use of PRIO keyins with concurrent output, see description of concurrent output mode in section 1.

Console Attribute Required:

ADMINISTRATIVE INPUT

## PRIO INPUT ALL Keyin

Syntax:

PRIO I[NPUT] ALL [[AT] oldpriority] [.account] [@wsnname]
[TO] newpriority

Description:

Specifies that all waiting batch jobs that meet all of the given criteria be given the new priority. If no criteria are specified, then all waiting jobs are to be given the new priority. @wsnname, when specified, may only be specified from a SYSTEM console.

For use of PRIO keyins with concurrent output, see concurrent output mode, Section 1.

Console Attribute Required:

ADMINISTRATIVE INPUT

If .account and @wsnname are specified, SYSTEM INPUT is required.

## PRIO OUTPUT sysid Keyin

Syntax:

PRIO O[UTPUT] sysid [-identifier] [ TO ] priority

Description:

Changes the output symbiont scheduling priority for the specified sysid's output files to the specified priority. If the optional identifier is not given, all files for the specified sysid have their priority changed. If the optional identifier is given, and it is a valid output symbiont sub-file identifier, only the specified sub-file is affected.

For use of PRIO keyins with concurrent output, see description of concurrent output mode in section 1.

Console Attribute Required:

ADMINISTRATIVE INPUT

## PRIO OUTPUT .account Keyin

Syntax:

PRIO O[UTPUT] .account [ @wsnname ] [ TO ] priority

Description:

Changes the output symbiont scheduling priority for all output files created by the specified account. If the keyin is performed from a SYSTEM console, and the optional wsnname is not specified, then ALL output for the selected account at ALL terminals is affected. If the optional wsnname is specified from a SYSTEM console, then only output at the selected terminal is affected.

For use of PRIO keyins with concurrent output, see description of concurrent output mode in section 1.

Console Attribute Required:

ADMINISTRATIVE INPUT

If @wsnname is specified, SYSTEM INPUT.

## PRIO OUTPUT ALL Keyin

Syntax:

PRIO O[UTPUT] [ALL] [@stationname] [TO] priority

Description:

Allows the operator to change the output symbiont scheduling priority for ALL output files at the station in which the issuing console resides. If the issuing console is a SYSTEM console, ALL output files in the system will change priority. If @stationname is specified, the keyin allows the operator to change the output symbiont scheduling priority for all output files at a particular station.

For use of PRIO keyins with concurrent output, see description of concurrent output mode in section 1.

Console Attribute Required:

ADMINISTRATIVE INPUT

If @stationname is specified, SYSTEM INPUT is required.

## PROCEED Keyin

Syntax:

PROC[EED] devicename

Description:

Causes the current I/O error condition on the specified device to be ignored and normal status to be returned to the user, in spite of the actual error.

Console Attribute Required:

DEVICE INPUT

## PROFILE Keyin

Syntax:

PROF[ILE] profilename

Description:

Sets the terminal profile for an FEP-connected console. This keyin is not legal from IOM-connected consoles.

Console Attribute Required:

ANY

## PUBLIC Keyin

Syntax:

PUBL[IC] packsetname

Description:

Mounts the specified packset as a shared packset and merges its account directory into the master account directory (MAD). (See SHARE keyin).

Console Attribute Required:

DEVICE INPUT

## PWIDTH Keyin

Syntax:

PWID[TH] [=]width

Description:

Sets the number of printable characters per line on an IOM-connected console to a value in the range 72-132. This value only applies to IOM-connected consoles, as FEP-connected consoles rely on the FEP for terminal handling (e.g., wraparound). The system default is 132 when the system is booted, or comes up during recovery.

Console Attribute Required:

SYSTEM INPUT

## QUIET Keyin

Syntax:

QUIE[T] devicename

Description:

Requests that the error message that is printing for the specified device stop printing. Note that this does not correct the error condition. It does stop the message from printing once a minute. The CP-6 system will remind the operator at one hour intervals that the error still exists, or the operator may use the DEVICES keyin to get a display of which devices are in an errored state.

Console Attribute Required:

DEVICE INPUT

## READ$ Keyin

Syntax:

READ$ [{LOGO[N]=console_logon_name | DEVI[CE]= [console_devnm]@station}]

Description:

Each READ file must begin with this keyin.

This guarantees security on READ files.  In the case where a logon name is specified,
the file will be restricted and can only be READ from the console with that logon.  When
console_devnm@station is specified, the file will be restricted and can only be READ
from that console.  If just @station is specified, then any console at that station may
READ the file.  If just READ$ is specified, any console may READ that file.

Console Attribute Required:

ANY


## READ Keyin

Syntax:

READ fid

Description:

Performs keyins from the specified file as if the operator has keyed them in manually.
Any syntax error terminates the entire READ.  Non-legal keyin attempts from a READ file
will also halt the READ.  Note that the file must be read-accessible to KEYIN.:SYS.
Note also that the first "keyin" in the input file must be a READ$ keyin.  (See READ$).

Console Attribute Required:

ANY


## READACCT Keyin

Syntax:

READA[CCT] {.account|RESET}

Description:

Changes the default global account for READ file from :SYS to the specified account.
The default will be changed for all consoles.  The RESET option changes the default read
account to :SYS.

Console Attribute Required:

SYSTEM INPUT


## REPRINT Keyin

Syntax:

REPR[INT] devicename [[IF] sysid]

Description:

Causes the specified symbiont device to print from the beginning of the output symbiont file. The optional sysid, if specified, indicates that the action is to be taken only if the specified sysid is currently outputting.

Console Attribute Required:

DEVICE INPUT

## REQUEST Keyin

Syntax:

REQU[EST] devicename

Description:

This keyin is used to:

o    physically dismount tapes

o    physically dismount disks on MSU0451 disk drives

o    logically dismount MSU0501 disk drives

If the requested device is a disk drive, and the packset mounted on the specified device is dismounted (see DISMOUNT keyins), the disk drive will be powered off. If the specified device is a tape drive, and no user is using the tape mounted on the tape drive, the tape will be unloaded. REQUEST keyins can only be performed for devices that have packsets or tapes mounted on them.

Console Attribute Required:

DEVICE INPUT

## RERUN Keyin

Syntax:

RERU[N] sysid

Description:

Requests that the specified job be aborted and, if RERUN was requested for that sysid, that the job be re-inserted in the input queue. The job is re-inserted at a priority one unit greater than the priority it had when started.

Console Attribute Required:

ADMINISTRATIVE INPUT

## RERUN ALL Keyin

Syntax:

RERU[N] ALL

Description:

Performs a RERUN for all running batch jobs. Jobs that cannot be rerun will be reported as such, and must have X keyins performed on them if they are to be aborted immediately.

Console Attribute Required:

SYSTEM INPUT


## RESERVE Keyin

Syntax:

RESE[RVE] devicename [FOR] sysid

Description:

Allows the operator to make any tape mounted (currently or subsequently) on the specified tape drive available only to the specified sysid.

Console Attribute Required:

DEVICE INPUT


## RESTRICT Keyin

Syntax:

REST[RICT] devicename [TO] {.account | @wsnname}

Description:

Restricts the use of the specified output symbiont device to a single account or workstation.

When used with account, first, the specified device is prevented from processing files from any account other than the one specified. Second, the specified account is prevented from being processed by any other unrestricted device. This, however is more complex than it might appear at first. It only applies to files from the specified account which are destined for devices of the same type as the one specified, and at the same TERMINAL as the one specified.

When used with wsnname, a device can be restricted to a workstation. However, account restrictions take precedence over workstation restrictions.

Examples:

The following example illustrates the use of RESTRICT with account:

Suppose the operator @SEATTLE issues the keyin:

    RESTRICT CP01 TO .BLOTTO

This would not prevent files from account BLOTTO which are destined for LP@SEATTLE from printing, since CP and LP are different device types. Neither would it prevent files from account BLOTTO which are destined for CP@BOSTON from punching on the punch @BOSTON.

Furthermore, the second restriction does not apply to files which could not print on the specified device. Thus, for example, if @SEATTLE has two printers, LP01 and LP02, where LP01 has APL character set and LP02 does not, then the keyin:

    RESTRICT LP02 TO .BLOTTO

will not prevent a file from account BLOTTO which requires APL from printing on LP01.

Note that the account specification may be wild-carded. That is, it may contain a leading or trailing '?'. Specifying 'ABC?' means any account beginning in ABC; specifying '?ABC' means any account ending with 'ABC'.

Devices may be identically restricted if this is desirable. For example, if there is a large backlog of output from account BLOTTO, the operator may wish to dedicate two or more devices to that account by restricting both to .BLOTTO.

The following example illustrates how account restrictions take precedence over workstation restrictions:

If LP01 processes WSN @REDONDO and is restricted to .WINTON, and LP02 is restricted to @REDONDO, ALL output from .WINTON to an LP@REDONDO will print on LP01. Conversely, if LP01 does not process WSN @HERMOSA and LP02 does, ALL output from .WINTON to an LP@HERMOSA will print on LP02.

Usage Notes:

1. The use of this keyin does not preclude the use of other device types by output from this account.

2. A symbiont device cannot be restricted to an account and workstation simultaneously.

3. A symbiont device cannot be restricted to multiple workstations (see ROUTE keyin).

Console Attribute Required:

DEVICE INPUT


## RETRY Keyin

Syntax:

RETR[Y] devicename

Description:

Retries the currently erroring I/O for the specified device.

Console Attribute Required:

DEVICE INPUT


## RING Keyin

Syntax:

RING devicename

Description:

Requests that the tape on the specified drive be dismounted so that the operator can put a write ring in it.

Console Attribute Required:

DEVICE INPUT

## ROUTE FROM Keyin

Syntax:

ROUT[E] [NOT] [@wsnname] FROM devicetype [devicenumber[@terminalname]]

Parameters:

wsnname     is the name of the workstation to route from the device(s).

devicetype    is a 2 character device type

devicenumber    is a 2 character (numeric) device identifier

Description:

Routes (or inhibits) processing of a workstation by a output symbiont device or class of devices at a terminal name.  If no terminalname is specified, the terminal name of the issuing console is assumed.  If no terminal name is specified and the issuing console is a SYSTEM console, 'LOCAL' is assumed.  On a device class route, all symbiont devices known to the output symbiont manager (connected or not) are subject to the route provided they match the specified criteria.  In other words, recovery information is updated with each route.  Note that routing the only instance of a wsn from a device type will result in a *NODEV* status on all files destined for that device type and wsn.

Console Attribute Required:

DEVICE INPUT

If @terminalname is specified, SYSTEM INPUT is required.

## ROUTE INTO Keyin

Syntax:

ROUT[E] @wsnname INTO devicetype [devicenumber[@terminalname]]

Description:

Routes (in this case adds) processing of a workstation to an output symbiont device or class of devices at a terminalname.  If no terminalname is specified, 'LOCAL' is assumed.

Recovery information is updated for both connected and disconnected devic.

Finally, adding the only instance of a wsn to a device type will affect the *NODEV* status on all files destined for that device type and workstation.

Console Attribute Required:

SYSTEM INPUT

## S Keyin

Syntax:

S

Description:

Allows an operator at a SYSTEM console to force the multi-batch scheduler (MBS) to schedule. This is useful if a batch partition definition has just been modified by the use of the CONTROL processor.

Console Attribute Required:

SYSTEM INPUT

## SAVE Keyin

Syntax:

SAVE devicename [[IF] sysid] [CHEC[KPOINT]]

Description:

Locks the device, and returns the currently outputting file to the queue for outputting later. If the optional sysid is specified, that action only occurs if the specified sysid is outputting. If CHECKPOINT is requested, the file begins outputting at the point of interruption (to the nearest page or card) when it next becomes eligible to output. Note that once a file has been CHECKPOINTed this way, it can still be printed from the beginning by the REPRINT keyin.

Console Attribute Required:

DEVICE INPUT

## SCRATCH Keyin

Syntax:

SCRA[TCH] devicename [FOR] sysid

Description:

Allows the specified user to use the tape on the specified drives as an unmanaged (free-form) scratch tape.

Console Attribute Required:

DEVICE INPUT

## SEND Keyin

Syntax:

SEND sysid [textstring]

Description:

Sends the specified text to the specified user's terminal.

Console Attribute Required:

ADMINISTRATIVE INPUT

## SENDALL Keyin

Syntax:

SENDALL [textstring]

Description:

Sends the textstring to ALL user's terminals and logged on consoles. This keyin is legal only from a SYSTEM console. This keyin, unlike the BROADCAST keyin, does not affect the "administrative message" seen in logon salutations. If no textstring is specified, a blank line is sent.

Console Attribute Required:

SYSTEM INPUT

## SENDFEP Keyin

Syntax:

SENDALL FEP {fepnumber|fepname} textstring

Description:

Sends a textstring to all timesharing terminals and consoles connected to the specified FEP.

Console Attribute Required:

SYSTEM INPUT

## SET Keyin

Syntax:

SET packsetname

Description:

Requests a status display of the specified packset.

Console Attribute Required:

DEVICE OUTPUT

## SETS Keyin

Syntax:

SETS

Description:

Requests a display of all currently mounted packsets.

Console Attribute Required:

DEVICE OUTPUT

## SETUP Keyin

Syntax:

SETU[P] formname

Description:

Requests a display of how to mount the specified formname.

Console Attribute Required:

DEVICE OUTPUT

## SHARE Keyin

Syntax:

SHAR[E] packsetname

Description:

Mounts the specified packset as a shared packset, but does not merge its account directory into the master account directory (MAD). (See PUBLIC keyin.) Note that if the packset has already been mounted PUBLIC (and a PIG MADDELETE has not been performed), that the packset's account directory will still exist in the MAD.

Console Attribute Required:

DEVICE INPUT

## SPACE Keyin

Syntax:

SPAC[E] devicename spacecount [FROM {BOF|EOF|HERE}] [[IF] sysid ] [CONT[INUE]]

Description:

Requests that the SPACE function count output units from the beginning (BOF) or the end-of-file (EOF) of the output file instead of the current point in the output file.

If HERE is specified (assumed if neither FROM BOF or FROM EOF is specified), the default requests that the output on the specified device be forward-skipped a certain number of output units (if the number is positive) or backward-skipped a certain number of output units (if the number is negative) from the current point in outputting.  Output units are pages on line printers and individual records for other devices.

The optional sysid, if specified, indicates that the action is only taken if the specified sysid is currently outputting.  If CONTINUE is specified, automatic suspension of the device when the output file reaches EOF will not occur.

Console Attribute Required:

DEVICE INPUT


## START Keyin

Syntax:

STAR[T] devicename

Description:

Unlocks a locked symbiont output device, and attempts to begin output if the device has any output queued for it.  The CONTINUE keyin can be used to restart SUSPENDed output.

Console Attribute Required:

DEVICE INPUT


## START CPU Keyin

Syntax:

STAR[T] CPU portnumber

Description:

Instructs the CP-6 system to begin using the CPU connected to the specified portnumber as a secondary processor.

Console Attribute Required:

SYSTEM INPUT


## START FEP Keyin

Syntax:

STAR[T] FEP {fepnumber|fepname}

Description:

Allows the specified FEP to operate normally.  If the FEP was STOPped, it will resume running.  If it has crashed, or it is down, the FEP is re-booted.  May only be used with local fepnumber or fepname.

Console Attribute Required:

COMMUNICATIONS INPUT

## START FEPS Keyin

Syntax:

STAR[T] FEPS

Description:

Performs the START FEP function for all FEPs in the system.

Console Attribute Required:

COMMUNICATION INPUT

## START TP Keyin

Syntax:

STAR[T] TP/account,tpname[,password]

Description:

Begins a TP instance in the specified account.  Only one instance may run in any account at any given time.  The first command is the one specified for this ghost via SUPER.

Console Attribute Required:

TP INPUT

## STARTUP!! Keyin

Syntax:

STARTUP!!

Description:

Displays the progress of a system boot.  See System Startup in Section 2 of this manual.

Console Attribute Required:

SYSTEM INPUT

## STATION Keyin

Syntax:

STAT[ION]

Description:

Allows any console to display all devices associated with its own terminal.  This keyin is not legal from SYSTEM INPUT consoles.

Console Attribute Required:

ANY

## STOP CPU Keyin

Syntax:

STOP CPU portnumber

Description:

Instructs the CP-6 system to stop using the CPU at the specified portnumber as a secondary processor.  This keyin will be rejected if the CPU is running in diagnostic mode.

Console Attribute Required:

SYSTEM INPUT

## STOP FEP Keyin

Syntax:

STOP FEP {fepnumber|fepname} [ textstring ]

Description:

Allows the operator to shut down, but not crash the specified FEP.  If the optional textstring is specified, it is sent to all users who are on or subsequently attempt to log on through that FEP.  Note that all users or IRBTs that are connected via the selected FEP will disconnect as if a line hangup has occurred.  May only be used with local fepnumber or fepname.

Console Attribute Required:

COMMUNICATIONS INPUT

## STOP FEPS Keyin

Syntax:

STOP FEPS [textstring]

Description:

Performs the STOP FEP function for all FEPs in the system.

Console Attribute Required:

COMMUNICATIONS INPUT

## SUSPEND Keyin

Syntax:

SUSP[END] devicename [[IF] sysid ]

Description:

Causes the specified output symbiont device to cease output after the current granule is exhausted.  The current file remains 'on' the device (unlike SAVE, which pulls the file off the device).  Output may be continued from the point of suspension by use of the CONTINUE keyin.  If the optional sysid is specified, it indicates that suspension is only to occur if the specified sysid is currently outputting.

Console Attribute Required:

DEVICE INPUT

## SWITCH OUTPUT Keyin

Syntax:

SWIT[CH] O[UTPUT] ALL [NOT]@wsnname1 [TO] @wsnname2

Description:

Requests that all output symbiont files at wsnname1 be made to output at wsnname2.

The NOT allows the specification of all workstations that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE INPUT

## SWITCH OUTPUT .account Keyin

Syntax:

SWIT[CH] O[UTPUT] [NOT].account [[NOT]@wsnname1] [[TO] @wsnname2 ]

Description:

If entered at a SYSTEM console, this keyin requests that ALL output for the specified account is to be switched to be output at wsnname2.

If wsnname1 is not specified, ALL output for that account at all terminals is switched to wsnname2.  If wsnname1 is specified, then only output for the specified account at the specified wsnname1 is switched to wsnname2.

If any output that the DEVICE INPUT console controls is for the specified account, then it is switched to LOCAL.

The NOT allows the specification of all accountnames and WSNs that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE INPUT

If @WSN is specified, SYSTEM INPUT is required.

## SWITCH OUTPUT ALL Keyin

Syntax:

SWIT[CH] O[UTPUT] ALL

Description:

Requests that all existing output that this console can control should be switched to
LOCAL.

Console Attribute Required:

ADMINISTRATIVE INPUT

## SWITCH OUTPUT FORM Keyin

Syntax:

SWIT[CH] O[UTPUT] [NOT] FORM=formname [[NOT] @wsnname1] [[TO] @wsnname2]

Description:

If entered at a SYSTEM console, this keyin requests that all output for the specified
form is to be switched to be output at wsnname2.

If wsnname1 is not specified, all output for that account at all workstations is
switched to wsnname2. If wsnname1 is specified, only output for the specified accc;nt
at the specified wsnname1 is switched to wsnname2.

If any output that the DEVICE INPUT console controls is for the specified formnam;, then
it will be switched to LOCAL. The NOT allows the specification of all formnames or
workstations that are not named specifically.

Console Attribute Required:

ADMINISTRATIVE INPUT

If wsnname1 or @wsnname is specified, SYSTEM INPUT is required.

## SWITCH OUTPUT sysid Keyin

Syntax:

SWIT[CH] O[UTPUT] sysid [-identifier] [[TO] @wsnname]

Description:

Allows the operator to change the workstation receiving an output symbiont file. If the optional identifier is not given, all output for the specified sysid is switched. If the identifier is specified, and it is a valid output symbiont sub-file identifier, only the sub-file is switched.

Console Attribute Required:

ADMINISTRATIVE INPUT

If @wsnname is specified, SYSTEM INPUT is required.

## SYMB INPUT Keyin

Syntax:

SYMB I[NPUT] [devicename] [@terminalname]

Description:

Displays the status of the specified input symbiont device. If the devicename is not given at a DEVICE console, all input symbiont device relating to this console are displayed. If @terminalname is specified, then the appropriate devices at the specified terminal will be displayed.

Console Attribute Required:

DEVICE OUTPUT

If @terminalname is specified, SYSTEM OUTPUT is required.

## SYMB OUTPUT Keyin

Syntax:

SYMB O[UTPUT] [ devicename] [@terminalname] [WSN|THROTTLE]

Description:

Displays the status of the specified output symbiont device. If the devicename is not given, all output symbiont devices relating to this console are displayed. If @terminalname is specified, the appropriate device(s) at the specified terminal are displayed. If the WSN option is specified, a list of workstation names currently associated with the device(s) is also displayed. If the THROTTLE option is specified, the number of times and the amount of time the symbiont output line has been throttled is displayed.

Console Attribute Required:

DEVICE OUTPUT

If @terminal name is specified, SYSTEM OUTPUT is required.

## sysid: Keyin

Syntax:

sysid: [textstring]

Description:

Replies to a solicited request for operator response, via the M$KEYIN service. The sysid must match the sysid of the user requesting the response.

Console Attribute Required:

ADMINISTRATIVE INPUT

## TAPES Keyin

Syntax:

TAPE[S] [devicename]

Description:

Displays the usage of all tape drives controlled by this console. If devicename is specified, then only the usage of the specified drive will be displayed.

Console Attribute Required:

DEVICE OUTPUT

## TELL Keyin

Syntax:

TELL {OCnn|SCnn} [@terminalname] textstring

Description:

Sends the specified textstring to the specified operator's console. The OCnn and terminal name may be obtained from the CONS[OLES] keyin. If terminalname is not specified, the terminal name of the originating console will be used.

Console Attribute Required:

ANY

## TELLALL Keyin

Syntax:

TELLALL textstring

Description:

Sends the specified textstring to all active operator's consoles.  The keyin is legal only from a SYSTEM console.

Console Attribute Required:

SYSTEM

## TERMINAL Keyin

Syntax:

TERM[INAL] @stationname [F[ULL]]

Description:

Allows a SYSTEM or COMMUNICATION console to display devices which were connected at the same time as the specified station.  If FULL is specified, any device associated with the station is displayed.

Console Attribute Required:

COMMUNICATIONS OUTPUT

## TERMINALS Keyin

Syntax:

TERM[INALS]

Description:

Allows a SYSTEM or COMMUNICATION console to display all communications-connected terminals and devices.

Console Attribute Required:

COMMUNICATIONS OUTPUT

## TERMINAL ON Keyin

Syntax:

TERM[INALS] ON comgroup_fid

Description:

Requests a display of all the devices connected to the specified comgroup.

Console Attribute Required:

COMMUNICATIONS OUTPUT

## TIME Keyin

Syntax:

TIME hh:mm

Description:

Allows an operator at a SYSTEM console to input the current time to the CP-6 system. Often used in conjunction with the DATE keyin.

Console Attribute Required:

SYSTEM INPUT

## TIME ON/OFF Keyin

Syntax:

TIME {ON|OFF}

Description:

If ON is specified, this keyin requests that the time be printed on this console if any activity has occurred in the last minute, and on the hour regardless of the activity. If OFF is specified, requests that time printing activity be suppressed. This can be useful if the console is a master console for a computer which prints the time itself. The default is to print the time. This keyin only affects time printing on the issuing console.

Console Attribute Required:

ANY

## TP/ Keyin

Syntax:

TP/ tpinstance command

Description:

Sends a valid TP command to the specified instance of TP. If the specified instance is not running, a message will display indicating the fact.

Console Attribute Required:

TP INPUT

## TURNOVER Keyin

Syntax:

[DONT] TURN[OVER] {ACCTLG|OCHIST|ALL}

Description:

Closes the current account logging file (:ACCTLG) or the current console history file (:OCHIST) on both (ALL) and opens a new file (or files) at 23:59 each day. The account logging files will be named :ACCTLGyymmdd, where yymmdd is the current date. The history file will be named :OCHISTyymmdd. If DONT is specified, the corresponding file(s) will not be closed at midnight, as is the default.

Console Attribute Required:

SYSTEM INPUT


## UC Keyin

Syntax:

UC {ON|OFF}

Description:

Requests that all lower case characters input at this console be interpreted as upper case. This command also activates a "backspace edit mode" that is especially useful on the IOM connected console. This is the default on system start-ups for IOM-connected consoles. If OFF is specified, requests that upper case interpretation and backspace edit mode be discontinued for this console. UC OFF is the default for FEP-connected consoles.

Console Attribute Required:

ANY


## UNRESERVE Keyin

Syntax:

UNRE[SERVE] devicename

Description:

Cancels the previous RESERVE keyin for this device.

Console Attribute Required:

DEVICE INPUT


## UNRESTRICT Keyin

Syntax:

UNREST[RICT] devicename

Description:

Cancels the effect of the RESTRICT keyin, freeing the specified device from being limited to use by a single account or workstation.

Console Attribute Required:

DEVICE INPUT

## UNROUTE Keyin

Syntax:

UNRO[UTE] [NOT] [@wsnname] FROM devicetype [devicenumber[@terminalname]]

Description:

Removes route wsn restrictions (ROUTE FROMs) and route wsn additions (ROUTE INTOs) on devices. If no terminal name is specified, the issuing consoles terminalname is assumed. If no terminalname is specified and the issuing console is a System console, 'LOCAL' is assumed.

Recovery information is updated for both connected and disconnected devices.

Finally, note that issuance of an UNROUTE keyin can send files into the *NODEV* state if there is no longer a type-wsn combination available that matches certain file destinations.

Console Attribute Required:

DEVICE INPUT

If @terminalname is specified, SYSTEM INPUT is required.

## USERS Keyin

Syntax:

USER[S]

Description:

Displays the allowed number of users in all modes and the current number of users in all modes. The allowed figures may be modified by use of the ON keyin.

Console Attribute Required:

ADMINISTRATIVE OUTPUT

## VOLUMES Keyin

Syntax:

VOLU[MES] [devicename]

Description:

Displays the mounted tape volumes for all tape drives controlled by this console. If devicename is specified, the mounted volume for the specified tape or disk drive will be displayed.

Console Attribute Required:

DEVICE OUTPUT

## X Keyin

Syntax:

X sysid

Description:

Aborts the user with the specified sysid.

Console Attribute Required:

ADMINISTRATIVE INPUT

## X CONSOLE Keyin

Syntax:

X CONS[OLE] OCnn [@terminalname]

Description:

Allows a SYSTEM console to abort any other non-SYSTEM console.  SYSTEM consoles may only
be aborted from the IOM-connected console.  No console is allowed to abort the
IOM-connected console.  If @terminalname is not specified, the terminal name of the
originating console will be used.

Console Attribute Required:

SYSTEM INPUT

## X FEP Keyin

Syntax:

X FEP n-sysid

Description:

Aborts the specified sysid with the named FEP.

Console Attribute Required:

ADMINISTRATIVE INPUT

## XDELTA Keyin

Syntax:

XDELTA

Description:

Transfers control of the system to the executive debugger.  Same as the DELTA keyin.

Console Attribute Required:

SYSTEM INPUT

## Y: Keyin

Syntax:

Y:

Description:

Performs the "CONTROL-Y" function on the console ghost associated with this console (if any).

Console Attribute Required:

ANY

## ZAP! Keyin

Syntax:

ZAP! [textstring]

Description:

Initiates an orderly shutdown of a CP-6 system.  This process may take as much as five minutes if many users need to be aborted.  The optional textstring, when specified, is used like the textstring in the STOP FEPS keyin.  After this keyin is performed, al' batch, online, and non-system ghosts will be aborted, the packsets will be dismounted, and the FEPs will be stopped.  A tape or disk boot will be required to restore the CP-6 system to life.  See System Shutdown discussion in Section 2.

Console Attribute Required:

SYSTEM INPUT

## ZAP!! Keyin

Syntax:

ZAP!!

Description:

Displays the current progress of the ZAP procedure (initiated via ZAP!).  A system ZAP is divided into the following phases:

1.  Execute a RERUNALL operation, "X" the users and stop the FEPs.

2.  Dismount all but the SYS packset.

3.  "X" remaining users (Those who specified NRERUN or those who are autosaved).

4.  Send messages to OUTSYM, INSYM, DOG, and PRESCAN informing them to close all files.

5.  Close the ERRLOG (ELF).

6.  Close the ACCTLG (SLUG).

7.  Screech.

Console Attribute Required:

SYSTEM INPUT

# Section 4

# Console Message Overview

## Introduction

In an effort to aid the operator in determining which action to take (if any) in response to a message output on a console, certain conventions have been established. These conventions are evident by what is called a "message class token" that is displayed at the beginning of each message destined for output on an operator's console.

Messages to consoles fall into seven classes:

1.  NULL (message prints at left margin of page)

2.  INFORMATION (message preceded by four blanks "     ")

3.  DEVICE STATUS (message preceded by two spaces and two stars "  **")

4.  OPERATIONAL (message preceded by two spaces and two arrows "  >>")

5.  MOUNT ACTIVITY (message preceded by three dashes and an arrow "--->")

6.  SYSTEM PROBLEM (message preceded by two spaces and two bangs "  !!")

7.  DEVICE ERROR (message preceded by four asterisks "****")

## Null Messages

In a null message, the text of the message appears immediately at the left margin, with no leading blanks or extra characters. Messages with the null class are usually responses to operator keyins requesting information. For example, the output from the TAPES keyin appears at the left margin:

    !TAPES
    MT01 empty unassigned

Often, messages with the null class indicate an error response to an operator keyin. For example:

    Batch job 1234 is not running.
    You can't send to sysid 4567.

## Information Messages

An information message is preceded by four spaces. Messages of this class provide information about the system and its operation. Information messages are generated automatically by the CP-6 system and can print at any time. Usually, these messages indicate that some activity has just taken place, such as a line connection, an online user has logged on, or a batch job has completed. Most of the time, no operator action is necessary, but site-specific requirements may vary.

Examples:

    1234: Batch job CHARLIE,TUNA off
    Line 1-4C80: DARTH,VADER is sysid 7890

## Device Status Messages

A device status message is preceded by two spaces and two asterisks "**". These messages indicate that a device's status has changed, usually in response to an operator keyin. Messages in this class are printed at all applicable consoles (consoles other than the console that the "changing" keyin was performed at), so that all operators concerned with the device are notified of the change of status.

Examples:

    **OUTSYM device LP01 connected — form STDLP
    **DC01 is partitioned
    **ANSSCRATCH #XXYZ is on MT01 for 3456

Occasionally, a change of device status will require an operator response, for example:

    **OUTSYM device PR02 connected — FORM keyin required

means that before the device will operate, the operator must perform a FORM keyin for the device PR02.

## Operational Messages

Operational information messages are preceded by two spaces followed by two right arrows " >>". These messages are usually from the users of the system, generated as a result of the !MESSAGE command in IBEX, or the use of the M$KEYIN PMME in a user's program. Messages are also in this class if the console they appear on is running as a slave console to a remote system. More often than not, messages in this class will require some action on the part of the operator.

Examples:

    >>1234: DARTH *MSG* Please mount tape #DTHSTR ring in

A user has requested that the operator mount a certain tape with the write ring in.

    >>2345: OBIWAN *MSG* PLEASE INPUT BEGINNING CHECK NUMBER
    >>2345: OBIWAN *READ(2345:)* 15 bytes

A user has performed an M$KEYIN PMME requesting a response. In this case, the operator must evaluate the beginning check number (whatever that might mean) and return that information to the user's program. If, for example, the beginning check number turned out to be G00045, the operator would perform the following keyin:

    !2345:G00045

## Mount Activity Messages

A mount activity message is preceded by three dashes and a right arrow "——>". These messages are displayed when the operator is required to mount a magnetic tape, or is required to perform a keyin relating to a tape that has already been mounted.

Example:

    ——>Mount LT#KENOBI on MT02 for 5678 (OBIWAN) with ring

In this case, the user with sysid 5678, logon account OBIWAN is requesting the mount of a tape named KENOBI on drive MT02.

----->SCRATCH on MT02 requires MOUNT or SCRATCH keyin

The operator mounted a tape on MT02 which cannot be used immediately. Before it can be used, the operator should perform a MOUNT keyin or a SCRATCH keyin for the device MT02.

----->Don't bother mounting LT#KENOBI on MT02 for 5678 (OBIWAN)
     with ring

The online user with sysid 5678 decided that the mount was unnecessary or had something else to do, and has hit control-Y or break and therefore has had his MOUNT request cancelled automatically. The previously requested mount of tape KENOBI is no longer required.

Additionally, mount activity messages are displayed when an operator keyin is required to allow a user of TOLTS (usually a Honeywell CSR) access to a specific device. For example:

----->8900: HLISD,CSR requests DIAG keyin to open MT99 for MTAR

This means that the user with sysid 8900, who logged on as HLISD,CSR is running an online diagnostic test called MTAR and is planning to use MT99 in that test. If the device is available and the operator believes that the user called HLISD,CSR is allowed to use MTAR, the proper response would be to enter the keyin:

     !DIAG 8900


## System Problem Messages

System problem messages are preceded by two spaces followed by two exclamation points " !!". These messages are printed when some event has occurred that is very significant, and often indicates some trouble that should be acted upon, or brought to the attention of the system manager as quickly as possible.

Examples:

     !!System memory saturation approaching. Suggest no new users
       be allowed

The CP-6 system is running out of memory to support users. It is possible that additional users could cause loss of service to users already using the system. A possible response would be to limit the number of on-line users by entering !ON 30 (or some suitably small number) and, when a sufficient number of users have logged off or batch jobs have completed, set the number back to a more reasonable level. This temporary limiting of system access should prevent the memory saturation.

     !!3: SYSTEM GHOST OUTSYM ABORTING — CODE = HFA-000549-7

In this case, the OUTSYM system ghost, which controls any output symbiont devices is aborting because it has encountered the error condition HFA-549-7. This code can be found in the errors section of this manual, and indicates that a hardware error has occurred and as a result has interrupted the proper execution of OUTSYM. In this case, an CSR should be contacted to determine the cause of the error. For other error conditions, of course, other actions could be taken.

     !!: HLP BAD! Run full SUPER setup before allowing BATCH ON or
        STARTing LPs

In this case, one of the essential data files in the :SYS account has been destroyed. The operator (or system manager) must rerun the SUPER authorization job to re-establish normal system operations.

# Device Error Messages

Serious device error messages are preceded by four asterisks "****". These messages are printed when some serious problem has occurred with some peripheral device, demanding some operator monitoring to return it to full operation. When some operator action is required, this is usually indicated in the message. However, these messages can be printed when the device is capable of self-recovery messages indicate some serious problem requiring further investigation on the part of the operator or possibly the Honeywell CSR.

Examples:

> ****FEP 5 timed out — RECOVERY initiated

This indicates that an attempt to access a front-end-processor failed. Usually this means that the connection between the CP-6 host system and the FEP has been broken. In any case, the system is attempting to restart the FEP.

> ****Illegal AVR on MT05 — REQUEST MT05 but DO NOT USE MT05
>    UNTIL DISMOUNT!

The operator has mounted a tape on a tape drive thought to be in use by another user. In this case, the operator must key-in !REQUEST MT05 in order to get the just-mounted tape off the drive.

> ****CR03: missing control command — flushing

The card placed in CR03 did not have a card containing an exclamation point as the first character in the beginning of the deck. Cards are going to be ignored until a card with a bang in column 1 is encountered.

> ****CR03: illegal NCTL fid (M$FID error 559) — flushing

A card deck (or remotely submitted file) with a !NCTL control command specified a destination on the !NCTL command that the file could not be sent to. Once again the error code 559 indicates an error code that can be looked up in the monitor error message summary in the appendices of this manual. The requested NCTL file will not be created.

> ****DP09 OFF-LINE: KEYIN or READY

Something has gone wrong with DP09, probably a blown breaker or some other hard physical failure of the device. See if DP09 can be powered back up. If it can, it will be made "READY" automatically. If it is already running that means that a !RETRY keyin is probably necessary to restore normal operations.

> ****DP77 TIMED OUT — MPC IS DC02 : FIRMLOAD DC02

Something very bad has happened to the disk controller called DC02. CP-6 is requesting that the operator perform the !FIRMLOAD DC02 keyin.

> ****DP54 IO ERROR, STATUS=400400771121 : FYI

DP54 has had a non-fatal error, and the message has been printed for your information (FYI). If many of these messages print, it probably indicates a failing device or MPC and the Honeywell CSR should probably be notified.

> ****CR01 CARD JAM: KEYIN or READY (RE-READ LAST CARD)

While reading a card deck in CR01, a card jam occurred. The (RE-READ LAST CARD) indication says that the last card in the output hopper was not read, and should be reread. If the (RE-READ LAST CARD) indication does not show up on card reader messages, it indicates that the last card in the output hopper was read successfully, and only cards before the read station need be restacked and reinserted. Usually, clearing the jam and restarting the card reader is enough in this situation.

        ****LP03 DEVICE CHECK:KEYIN or READY

The printer LP03 is needed by the CP-6 system to print something, and is probably not ready to print. If the paper in the printer is not aligned, it needs to be aligned and the printer made ready. If the paper is already aligned, the START button probably needs to be pressed.

        ****LP01 PAPER CHECK:KEYIN or READY

LP01 has run out of paper. Reload and realign LP01 and the problem will probably be fixed.

        ****DC02 SUBSYSTEM POWER OFF: FIRMLOAD REQUIRED

The disk controller called DC02 has reported a 'power off' status, indicating that the controller firmware must be reloaded. The system will automatically try once to reload the firmware, except on a unit record controller or disk and tape controller.

# Section 5

# Labeling Magnetic Tapes via LABEL

## Introduction

The LABEL processor initializes magnetic tapes for use as ANS volumes by writing
standard labels.  The primary use of LABEL is in semi-protected and fully-protected
systems in which all tapes must be prelabeled before they can be used as labeled
volumes.  In a semi-protected system, the OVER keyin can be used to initialize labeled
tapes; in a fully-protected system, LABEL must be used to initialize all labeled tapes.
In either type of protection mode, any type of tape can be relabeled by a user
possessing the FMSEC or LABEL processor privilege.

LABEL can be run in a time-sharing or batch environment, or as a console ghost.  The
LABEL processor has commands that label single tapes, label a number of tapes
sequentially, and scratch previously labeled volumes.  For the purposes of this
discussion the terms "tape" and "volume" are synonyms.

## Tape Security Levels

The CP-6 file management system offers labeled tape protection both at the volume and
file levels.  (Free and managed (device, unlabeled) tapes have no standard labels and
therefore cannot be protected.)  Volume protection is performed for the volume itself to
determine if the volume can be written at all, and for the volume owner to determine if
the volume can be read or written by a specific user.

Protecting the volume itself ensures that a labeled tape cannot be overwritten until a
specified expiration date and that a labeled tape cannot be 'changed' into an unlabeled
tape or into a labeled tape with a different serial number.  The strictness of
enforcement is specified by the system manager through TIGR or CONTROL commands, and
falls into one of three protection modes:

| Mode | Description |
| --- | --- |
| Fully protected | Unexpired labeled tape cannot be overwritten; expired labeled tape can be overwrittten. |
| Semi-protected | Unexpired labeled tape can only be overwritten after an OVER keyin; expired labeled tape can be overwritten. |
| Unprotected | Both unexpired and expired labeled tape can be overwritten. |

User read and write protection ensures that users other than the volume owner (account
of user creating the volume) have no access, only read access, or any access to a
particular volume.  These access controls are established by the user at volume creation
time.

Access to labeled tape files with a CP-6 specific organization is controlled by the same
access control features used for disk files, except that there are no account defaults.
These access controls are established by the user at file creation time.

## Commands

The LABEL processor recognizes the following commands:

| Command | Function |
|---------|----------|
| LABEL | Label a single tape volume. |
| SEQUENTIAL | Label multiple tapes in a sequential order. |
| SCRATCH | Write a double tape file mark at the beginning of a tape. |
| REMOVE | Dismount a specified volume. |

## LABEL Command

The LABEL command labels or relabels a single volume, optionally assigning an owning account and an account access control. The form of the command is:

LAB[EL] TO LT#serial[,option]...

where

serial    specifies the serial number to be assigned to the tape. This can be from 1 to 6 characters.

option    specifies one or more of the following options, separated by commas:

[{LT|MT|FT]} #serial

where

serial    is the serial number of the tape to be relabeled. If unspecified, a new scratch tape is assumed.

ACC[OUNT]=account    specifies the volume owner's account. The default is no owning account.

ACCESS={IN|ALL|NONE}

where

IN    specifies that only the owner can write to the volume.

NONE    specifies that only the owner can read from or write to the volume.

ALL    specifies that any account can read from or write to this volume. The default is ALL. ACCESS cannot be specified without an ACCOUNT option.

DEN[SITY]={800|1600|6250}    specifies the allowable tape densities.

Example:

LABEL TO LT#NEWVOL,FT#OLDVAL,ACC=:SYS,ACCESS=NONE

This command writes a label on free tape #OLDVAL, which then becomes labeled tape #NEWVAL, belonging to the :SYS account.  Only the :SYS account is permitted to access the tape.

## SEQUENTIAL Command

The SEQUENTIAL command labels a number of tapes in a sequential order, optionally assigning an owning account and an account access control.  The format of the command is:

SEQ[UENTIAL] [NUM[BER]] TO LT#serial[,option]...

where

NUMBER    is documentary in purpose.

serial    specifies a serial number image that is used as a basis (template) for composing a list of sequential serial number.

option    specifies one or more of the following options separated by commas:

n [TAPE[S]]

where

n    specifies a number of unnamed tapes to be initialized.

[{LT|MT|FT}] #sn1[#snw]...    specifies the serial numbers of named tapes to be relabeled.

INC[REMENT]=n    specifies the value by which to increment each successive sequence number, based upon the initial serial number given in the "TO LT#" portion of the command.  This default is 1.

PLACE=n1[-n2]

where

n1    specifies the character position in the template serial number that will be altered as successive volumes are initialized.- The default is the sixth character of the serial number; if the serial number is less than six characters in length, the sequence number will be padded to the left with zeroes.

n1-n2    specifies starting and ending character positions that define a field within SN to be altered as successive volumes are initialized.

ACC[OUNT]=account    specifies the volume owner's account.

ACCESS={IN|ALL|NONE}

where

IN    specifies that only the owner can write to these volumes.

NONE    specifies that only the owner can read from or write to these volumes.

ALL    specifies that any account can read from or write to these volumes.  The default is ALL.  Note that ACCESS is meaningless unless ACCOUNT is also specified.

DEN[SITY]={800|1600|6250}    specifies the allowable tape densities.

Examples:

SEQ TO LT#XXX,3 TAPES,LT#A,START=3,INC=2

This command involves four tapes: three that are nameless (new or scratch) and one that is presently named #A. When the command has successfully been completed, the four tapes will be numbered XXX003, XXX005, XXX007, XXX009 (which was tape LT#A).

SEQ TO LT#SNXXXA,1,LT#A,2,LT#B#C,START=10,PLACE=3-5

This command involves six tapes. The first is nameless (specified as 1 in the command). The second is labeled #A. The third and fourth are nameless (specified by 2 in the command), and the fifth and sixth are labeled #B and #C. After successful completion of the command, the six tapes will be numbered SN010A, SN011A, SN012A, SN013A, SN014A, and SN015A. Note that the PLACE option determines the area in which the sequencing took place.

Named and nameless volumes can be freely intermixed to create volume sets from various kinds of tapes. Nameless volumes should be mounted for labeling at the operator's discretion from the new and old tapes available.

## SCRATCH Command

The SCRATCH command writes a double tape file mark at the beginning of the tape. The format of the command is:

SCRATCH [{LT|MT|FT}] #serial[#serial]...

where

serial    specifies a volume to be scratched.

Note: This command destroys data only on the first portion of tape. Tapes that contain sensitive information should be degaussed (demagnetized) for additional security.

Example:

SCRATCH LT#A#B#C

This command requests that labeled tapes #A, #B, and #C be mounted and scratched.

## REMOVE Command

The REMOVE command causes the specific volume to be dismounted. Note that the tape type (LT, MT, FT) need not be specified. The format of the command is:

REM[OVE] [{LT|MT|FT}]#serial

where

serial    specifies the serial number of the tape to be dismounted.

Example:

REM #GORBLE

means remove tape #GORBLE.

## Confirmation Messages

LABEL confirms the successful labeling or scratching of volume by printing a message or messages which contain:

1. The new serial number.

2. The serial number by which the reel was requested.

3. The actual old serial number.

Confirmation messages have the following form:

xxxxxx < yyyyyy (zzzzzz)

where

xxxxxx    is the new serial number. This field is always present unless the operation is a SCRATCH, in which case it is printed as blanks.

yyyyyy    is the serial number by which the reel was requested; if not present, no tape was named.

zzzzzz    is the actual old serial number; if not present, the tape did not have a label.

Examples:

SN010A < A      (A      )

This message means that a volume requested as serial number A, did exist with the serial number A, and was successfully relabeled as serial number SN010A.

SN020A <        (B      )

This message means that an unnamed volume was requested, and a tape (presumably no longer necessary) that was labeled B was mounted and relabeled to serial number SN020A.

SN030A < C

This message means that the volume C was requested and an unlabeled tape was mounted and labeled to serial number SN030A.

SN040A

This message means that an unlabeled tape was requested, mounted, and relabeled to SN040A.

       < A      (B      )

This message means that a scratch request for labeled tape A actually caused volume B to be scratched.

       < A

This message confirms the successful scratching of labeled tape A.

## Confirmation Messages for SEQUENTIAL Command

When a series of unlabeled tapes are labeled via the SEQUENTIAL command, a variation of the confirmation message will be printed in the form:

nnnnnn — mmmmmm

where

nnnnnn      specifies the new serial number of the first volume in the sequence of tapes.

mmmmmm      specifies the new serial number of the last volume in the sequence of tapes.

Example:

TAPE01 — TAPE08

This message indicates that a sequence of volumes, each previously unlabeled, was successfully labeled.  The actual number of tapes depends upon the INCREMENT option in the SEQUENTIAL command.

## Error Messages

As a general rule, when a syntactically incorrect LABEL command is printed, LABEL will echo the command up to the first character of the offending field.  A number of additional error messages indicate conflicting or unspecified options.  These messages are listed below:

    *** Serial number must be 6 characters or less

Tape serial numbers cannot exceed 6 characters in length.


    *** PLACE must identify character position within serial number

An attempt was made to sequence in a position in the serial number that cannot exist. Both n1 and n2 must be integers between 1 and 6 inclusive.


    *** End of PLACE range must be at least as large as start

In the PLACE option n2 is less than n1, thus specifying a non-existent field for serial number sequencing.


    *** Account number must be 8 characters or less

The CP-6 system limits accounts to eight characters.


    *** Option only valid for SEQUENTIALLY NUMBER command

An attempt was made to use an option that was invalid for the issued command.


    *** Option already specified

An option was entered twice and the second occurrence is illegal.


    *** Syntax error

The command was invalidly composed.

\*\*\* At least 1 tape must be specified

A labeling command must indicate at least one tape to be labeled.


\*\*\* No more than 1 tape can be specified

An attempt was made to label more than one tape with a LABEL command.


\*\*\* A serial number cannot begin with blanks

Although serial numbers may have trailing blanks (i.e., be shorter than 6 characters), they must begin with a non-blank character.


\*\*\* The serial sequence number cannot be placed in the SN

The next serial number in a sequence of tapes cannot be labeled, as the PLACE option specified a field that was too small for the incremented portion of the serial number to contain. For example, if PLACE=6, only 10 tapes can be initialized (counting the first tape whose serial number ends in zero).


\*\*\* A label TO serial number must be specified

The TO portion of the LABEL or SEQUENTIAL command was omitted.


\*\*\* An ACCOUNT must be specified if ACCESS is specified

The ACCESS option implies that certain accounts are to have that access. Therefore, specifying ACCESS without ACCOUNT is meaningless.


\*\*\* A serial number can not contain blanks

Serial numbers must be composed of non-blank characters.


\*\*\* Option not valid for SCRATCH command

An attempt was made to utilize an invalid LABEL option in a SCRATCH command.


\*\*\* You are not allowed to run LABEL

You do not have the LABEL processor privilege or the FMSEC privilege.

# Appendix A

# Configurations

## General Operating Procedures

Operating the equipment includes taking safety precautions to prevent injury to personnel or damage to the equipment, turning power on and off when required, adjusting the equipment configuration controls when the system is to be configured or reconfigured, preparing the system to a pre-startup condition, starting up the system and giving control to the system software. From then on the operator and the system software communicate with messages received and sent on the console.

In addition, prompt response is required if alert conditions occur or emergency situations arise. Further, light equipment maintenance activities need to be established to maintain equipment operating efficiency.

## Safety Precautions

Certain safety practices should be observed while operating or working around the equipment. Some of these are as follows:

o   Covers should not be removed from any part of the equipment.

o   Equipment doors should be closed at all times except when making adjustments to configuration panels or when turning equipment ac circuit breakers on/off, or when cleaning the equipment.

## Turning Equipment Off and On

Applying power to a system requires the turning on of both the ac and the dc power to each operating unit in the system. The location of all the emergency on/off controls, the ac power distribution panels, and the ac circuit breakers for each unit in the system should be known.

Ac power is connected/disconnected to/from the equipment by turning on/off the AC circuit breakers connected in line to the units. The ac power distributed to the units of the central system, consoles, and peripheral processors is isolated from the ac power distributed to the peripheral units and each is distributed through separate distribution panels. Power to a system is applied as follows.

## Central System Units, Console, Peripheral Processors

1.  Turn on incoming ac power from power company to MG set by setting primary ac disconnect switch or circuit breaker to ON.

2.  Turn on MG set by pressing MOTOR ON push button at MG set control unit.

3.  At central system unit's AC distribution panel, set main AC circuit breaker to ON.

4.  Set each unit ac circuit breaker on central system units AC distribution panel to ON.

5. At each unit, set ac circuit breaker on its ac power panel to ON.

6. Check that unit control panel AC BREAKER ON indicator is lit (AC BKR ON, AC ON, AC PRESENT, on consoles).

7. Check that unit control panel POWER OFF indicator is lit.

8. Press unit control panel POWER ON switch. Check that indicator lights and POWER OFF indicator goes out.

9. Check that READY/TROUBLE indicator is lit in READY field (except consoles).

10. Check that NORMAL/TEST indicator is lit in NORMAL field (except consoles).

11. Check that OVERTEMP and ALARM RESET indicators are not lit.

## Peripheral Units

1. At peripheral unit ac distribution panel, set main ac circuit breaker to ON.

2. Set each peripheral unit ac circuit breaker to ON.

3. Set each peripheral unit to the READY state. At this stage, each unit is ready for configuration and startup as described below. If power cannot be properly turned on to a unit, the Honeywell field engineer should be notified.

## Central Processor (For DPS-B and DPS-C Systems)

Prior to the system startup, open the CPU doors and verify the following switch settings:

## Left CPU Panel

1. Set STORE SIZE dials to the memory size for the memory attached to each active port, A-D. The setting of these dials depends on the settings of the PORT SIZE MULTIPLE switches on the right CPU door.

   The settings are:

   Effective Port Size

   | STORE SIZE | PORT SIZE MULTIPLE 512K-4M (Up) | 32K-256K (Down) |
   |---|---|---|
   | 32K | 512K | 32K |
   | 64K | 1M | 64K |
   | 128K | 2M | 128K |
   | 256K | 4M | 256K |

   Your Customer Service Representative can tell you the size of each memory attached to the ports. The settings on unused ports have no significance.

2. Set the CONFIGURATION PORT ENABLE switches on (up) for each port to be used (A-D). Turn the remaining switches off.

3. The ASSIGNMENT SWITCHES determine the base address of each of the banks of memory; the setting of the switches is determined by the STORE SIZE/PORT SIZE MULTIPLE switches:

Effective Base Address

| ASSIGN-<br>MENT | Port Size | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 32K | 64K | 128K | 256K | 512K | 1M | 2M | 4M |
| 000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 001 | 32K | 64K | 128K | 256K | 512K | 1M | 2M | 4M |
| 010 | 64K | 128K | 256K | 512K | 1M | 2M | 4M | 8M |
| 011 | 96K | 192K | 384K | 768K | 1.5M | 3M | 6M | 12M |
| 100 | 128K | 256K | 512K | 1M | 2M | 4M | 8M | n/a |
| 101 | 160K | 320K | 640K | 1.25M | 2.5M | 5M | 10M | n/a |
| 110 | 192K | 384K | 768K | 1.5M | 3M | 6M | 12M | n/a |
| 111 | 224K | 448K | 896K | 1.75M | 3.5M | 7M | 14M | n/a |

Memory must be contiguous for the CP-6 system to operate, and it must start at zero.

4. Set the INITIALIZE ENABLE switch on (up) for the port assigned to 000 (zero). Set all the other switches off (down).

5. Set the INTERLACE switches according to your Field Engineer's instructions; if in doubt, set them off (down).

6. The PROC NUMBER switches are read into memory during fault handling; otherwise, they have no effect on CP-6 operation. Normally, these switches are set to 0.

7. Set the ALARM DISABLE switch to "normal".

8. Set the MAINTENANCE PANEL MODE to "test"; this enables the lower portion of the panel to assist in debugging. The "test" light on the outside of the door will light.

9. Set the EXECUTE CONTROL switches to "Execute PB", "Initialize Control", and "Execute Fault". When the switch is in the "Execute Fault" position, pressing the "Execute" button will cause the system to enter XDELTA for debugging if XDELTA is in memory or will cause an operator recovery if XDELTA is not in memory.

10. Set the TEST CONTROL switches to "norm".

11. Set ADDRESS STOP to "off".

12. Set the FAULT CONTROL switches to off (down).

13. Set STEP COUNT AUTO switch to "off".

14. Set STEP COUNT CYCLE switch to "off".

15. If the PARITY COMP ERROR light is on, press the RESET button. This light will come on when an irrecoverable parity error occurs and will not go out until RESET is pressed.

## Right CPU Panel

16. Set the MODE switch to "VMS".

17. The PORT SIZE MULTIPLE switches were set in (1) above.

18. Set the STOP ON ADDRESS CONTROL switch to "off".

19. Set the VU STOP ON FAULT CONTROL switches off (down). In the "on" (up) position, the CPU will stop if the selected fault(s) occurs.

20. Set the VU TIMING MARGIN switch to "normal".

21. Set the PTW-AM CONTROL to "on". This enables the associative memory.

Other indicators of interest to the operator during system operation include the following:

In the DISPLAY section, the first row of lights includes the OPCODE display, indicating the current opcode being executed.

The ADDRESS lights in the second row show the effective address being accessed.

The IWR INSTRUCTION COUNTER display in the third row shows the current value of the instruction counter.

The FAULTS lights in the bottom row parallel the FAULT CONTROL switches above. The corresponding light will light when a fault occurs and the switch is set to STOP.

The DIS light, also in the bottom row, indicates when the CPU is executing a Delay-until-Interrupt-Signal opcode; this is the equivalent to the "wait" light.

On the VU MAINTENANCE DISPLAY AND CONTROL, the EFFECTIVE WORKING SPACE lights indicate the type of user currently in execution on the CPU: 1 is the monitor, 5 is DELTA, 9 is a user program.

The VU FAULTS lights parallel the VU stop on fault switches in the same manner as the FAULTS lights, explained above.

Table A-1 summarizes the switch settings for both the left and right sides of the CPU panel.

| Table A-1. CPU Switch Checklist | |
| --- | --- |
| Switch | Setting |
| Configuration Panel (left side) | |
| STORE SIZE knobs | ON (for A - D used) |
| PORT ENABLE toggles | ON (for A - D used) |
| ASSIGNMENT toggles | Binary setting to address |
| INITIALIZE toggles | On (up for 000 address) |
| INTERLACE toggles | As specified |
| ALARM DISABLE | NORMAL |
| MAINTENANCE PANEL MODE | TEST |
| Maintenance Display and Control Panel (left side) | |
| EXECUTE CONTROL toggles | EXECUTE PB (up) |
| | INITIALIZE CONTROL (down) |
| | EXECUTE FAULT (down) |
| TEST CONTROL toggles | NORM (down) |
| ADDRESS STOP | OFF |
| FAULT CONTROL toggles | OFF (down) |
| STEP COUNT AUTO | OFF |
| STEP COUNT CYCLE | OFF |
| (PARITY COMP ERROR lamp) | (Off) |
| VU Maintenance Display and Control (right side) | |
| MODE | VMS |
| PORT SIZE MULTIPLE | ON (up for all ports in use) |
| VU Test Control Panel (right side) | |

| Table A-1. CPU Switch Checklist (cont.) | |
|---|---|
| Switch | Setting |
| STOP ON ADDRESS CONTROL | OFF |
| VU STOP ON FAULT CONTROL toggles | OFF |
| VU TIMING MARGIN | NORMAL |
| PTW-AM CONTROL | ON (down) |

## SCU Switch Settings

Prior to system startup, open all memory cabinets and verify the following switch settings on the SCU (System Control Unit):

1.  SCU DISPLAY SELECT and READ ADDRESS switches have no effect on system operation.

2.  SCU DISPLAY HISTORY REGISTER POSITION thumbwheel should be "off".

3.  SCU DISPLAY DISABLE ON IA switch should be "on". This will halt the display when an illegal action (such as a parity error) occurs and allows the F.E. to diagnose the problem from the contents of the history register.

4.  PORT ENABLE (Under SCU CONFIGURATION) must be "on" (up) for the master CPU, each slave CPU, and each IOM port to be used. Normally, CPU numbering begins with 7 and goes down to 4; IOM numbering begins at 0 and goes up to 3. After system boot, the PORT ENABLE switches will be controlled by the CP-6 system if the SCU MODE switch (see below) is set to "PROGRAM".

5.  CYCLIC PRIORITY switches should be set "off" for all ports. In a multiple CPU system they will be controlled by the CP-6 system if the SCU MODE switch (see below) is set to "PROGRAM".

6.  NON-EXISTENT ADDRESS switches should usually be "off" (down).

7.  MASK/PORT ASSIGNMENT thumbwheel "A" must be set to the port number of the (master) CPU on the SCU housing the low-order memory bank (check the CPU CONFIGURATION ASSIGNMENT switches to determine which SCU is lowest). It should be set to "off" in other CPUs. Thumbwheel "B" should be "off" in all SCUs.

8.  ALARM should be set to "ENABLE".

9.  PANEL should be set to "NORMAL".

10. LWR STORE SIZE thumbwheel should be set to the total size of the lower bank or banks controlled by this SCU. The lower banks are A and A1 if the LWR STORE switch is set to "A" or B and B1 if the LWR STORE switch is set to "B". In a 4 Megaword cabinet with one SCU, each bank (A, A1, B, and B1) would be 1 Megaword, and therefore the lower store size would be 2 Megawords (thumbwheel setting of "6").

11. MODE should be set to "PROGRAM".

12. The STORE switches must be "on" (up) for each bank of memory to be used in this SCU. In a 2 Megaword cabinet with one SCU, "A" and "B" are "on" (up) and "A1" and "B1" are "off" (down).

    In a 4 Megaword cabinet with one SCU, all four switches are "ON" (UP).

13. Set the INTERLACE switches according to your Customer Service Representative's instructions; if in doubt, set them "off" (down).

14. The LWR STORE switch must be set to the memory bank which is to be the lower address, usually "A", but check with your F.E.

15. SCU MAINTENANCE STOP ON IA switches should be all "0" or "OFF".

16. MARGIN CONTROL switches should be all down.

17. The SYNDROME NORMAL switch (not shown in diagram) is usually set to "normal".

SCU controls of interest to the operator during system operation are the following:

1. The HRD light in the SCU MAINTENANCE section indicates an irrecoverable memory error has occurred. If the DISABLE ON IA switch is set "on", the information in the history registers has been frozen for examination by the F.E. so that he may correct the error.

2. The PANEL CLEAR pushbutton resets the HRD light and allows the history registers to be updated once again.

3. The MEMORY CLEAR pushbutton on the syndrome panel (not shown in diagram) does indeed clear memory and must not be pressed while the system is running.

4. The SYNDROME RESET pushbutton on the syndrome panel (not shown in diagram) clears the syndrome lights, which display information concerning the last single-bit correctable parity error which occurred in the memory bank. This information is periodically read by the operating system and written in the error log.

Table A-2 summarizes the SCU switch settings.

| Table A-2. SCU Switch Checklist | |
|---|---|
| Switch | Setting |
| SCU Display Panel | |
| HISTORY REGISTER PORT ASSIGN thumbwheel | OFF |
| DISABLE ON IA | ON (up) |
| SCU Configuration Panel | |
| PORT ENABLE toggles | ON (for all CPU's and IOM's) |
| CYCLIC PRIORITY toggles | OFF |
| NON-EXISTENT ADDRESS toggles | OFF (down) |
| MASK/PORT ASSIGNMENT: | |
|     MASK A thumbwheel | Port number of CPU (master) |
|     MASK B thumbwheel | OFF |
| ALARM | ENABLE |
| PANEL | NORMAL |
| LWR STORE SIZE thumbwheel | As specified |
| MODE | PROGRAM |
| STORE | ON LINE (as specified) |
| INTERLACE | OFF (or as specified) |
| LWR STORE | As specified |
| SCU Maintenance Panel | |
| STOP ON IA toggles | OFF or 0 |
| MARGIN CONTROL toggles | "down" (OFF, NORM,MANUAL) |
| Module (add-on) Panel | |
| SYNDROME NORMAL | NORMAL |

## IOM/ICU Switch Settings

Prior to system startup, open the IOM or ICU cabinets(s) and verify the following switch settings (refer to the IOM charts):

### Left Side

The left side switches are normally involved only with maintenance functions; however, the following should be set as indicated:

1. OPERATION SELECTOR switch should be set to "online".

2. STOP CONDITIONS switches should be set to "normal", unless directed otherwise by your F.E.

3. AUTOMATIC RATE should be set "off".

All other switches should be set "off" or down as appropriate, unless your F.E. directs you otherwise.

### Right Side

The IOM CONFIGURATION switches must be set to correspond with the switch settings in the CPU; however, please note that the ASSIGNMENT switches are interpreted differently in the IOM (see below).

4. Turn the PORT SELECT switches "on" (up) for each port to be used. Note that the IOM has 8 ports (A-H) whereas the CPU had only 4 (A-D). Only A-D will be used. An ICU has only two ports, A and B.

5. Turn the INITIALIZE ENABLE switch "on" (up) for the port to be assigned as low memory; turn the remaining switches "off" (down).

6. The ASSIGNMENT switches require more explanation. The size of the memory is not controlled directly by these switches, but rather by jumpers on the "IF" board in the IOM itself. Each jumper block specifies the size of each of two adjacent memory ports (A-B or C-D). Your F.E. can tell you what "size" jumpers have been installed, based on your memory configuration. Set the ADDRESS RANGE and ASSIGNMENT switches such that all memory is accessible and contiguous. Exactly one port must be assigned to "000" (all down); this is the port which must have the INITIALIZE ENABLE switch "on" (up).

7. The INTERLACE switches are set according to your F.E.'s instructions; if in doubt, set them OFF (down).

8. ALARM should be set to "normal".

9. MAINTENANCE PANEL MODE should be in "test" to allow operation of the left side switches for debugging; otherwise, set it to "normal".

10. The ADDRESS IOM BASE switches are set as follows: Switches 6-11 are set to "0" (down); switches 12-17 are set according to the IOM number:

| IOM# | 12 | 13 | 14 | 15 | 16 | 17 | Octal equivalent |
|------|----|----|----|----|----|----|------------------|
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | '30' |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | '44' |
| 2 | 1 | 1 | 0 | 0 | 0 | 0 | '60' |
| 3 | 1 | 1 | 1 | 1 | 0 | 0 | '74' |

11. The INTERRUPT BASE switches are set as follows:

```
12   13   14   15   16   17   18
 0    0    0    1    1    1    1
```

12. The IOM NUMBER switches are set to "00" (IOM 0), "01" (IOM 1), "10" (IOM 2), or "11" (IOM 3), as appropriate.

    The BOOTLOAD section determines the address of the boot device.

13. The SOURCE switch should be set to "tape".

14. The top row of CHANNEL NUMBER switches refers to the card reader, and may be set to its channel number if desired. CP-6 does not boot from the card reader.

15. The bottom row of CHANNEL NUMBER switches refers to the tape subsystem, and must be set to the MPC channel number for the tape drives from which you wish to boot. In a "standard" CP-6 configuration, this is "16" (decimal) or '20'O or "010000" (binary).

16. The ZERO-BASE SC PORT No. switches are set to the port number at the system controller (usually 0 through 3) which this IOM is connected to. If this IOM is connected to multiple system controllers, the system controller associated with the ASSIGNMENT switch setting of "000" should be used.

17. The OPERATING MODE switch must be set to "paged".

The SYSTEM INITIALIZE and BOOTLOAD switches mirror the switches on the operator's console and may be used to initiate the bootload process. They must not be pressed while the system is running.

Table A-3 summarizes the IOM/ICU switch settings.

| Table A-3.   IOM/ICU Switch Checklist | |
|---|---|
| Switch | Setting |
| Test Panel (left side) | |
| OPERATION SELECTOR | ONLINE |
| STOP CONDITIONS toggles | NORMAL (or as specified) |
| AUTOMATIC RATE | OFF |
| Configuration Panel (left side) | |
| PORT SELECT toggles | ON (for A - D used) |
| INITIALIZE ENABLE toggles | ON (for A - D used) |
| ASSIGNMENT | BINARY setting to port number |
| ADDRESS RANGE | As specified |
| INTERLACE toggles | As specified |
| ALARM | NORMAL |
| MAINTENANCE PANEL MODE | NORMAL |
| ADDRESSES IOM BASE toggles | As specified binary setting |
| ADDRESSES IOM NUMBER toggles | As specified |
| Bootload Panel (left side) | |
| SOURCE | TAPE |
| CHANNEL NUMBER bottom toggles | Binary setting as specified |
| ZERO-BASE S.C. PORT NO. | As specified |
| OPERATING MODE | PAGED |

## Front-End Processor

The Front-End Processor has a number of technical requirements which are included here for reference purposes.

o   CPU — Level 6 Model 47, Model 57 or a DN8/C running in Long Address Format (LAF).

o   Memory — refer to current FEP SRB for memory requirements.

o   MLCP's (Multi-line Communications Processors), now called CIBs (Channel Interface Base) — Channel Interfaces (CI's) on any given CIB must be of same type; no mixing of ASYNC, SYNC, or HDLC CI's on same CIB.  CIB's should be ordered (from cabinet top to bottom) as follows:  ASYNC, SYNC, HDLC, Broadband SYNC, and Broadband HDLC.

o   Addressing — The FEP/Host coupler address must be X'400' for local FEPs; the diskette address must be X'480' for remote FEPs.  The following are the relative bus slot assignments:

```
        Priority                                    Cabinet Position
        Low                                         Top
        .                                           .
        .           Cache (1)                       .
        .           CPU                             .
        .           Commercial Instruction Processor .
        .           MDC (2)                          .
        .           MDC (1)                          .
        .           Coupler (1)                      .
        .           MLCP or CIB                      .
        .           Memory                           .
        High                                        Bottom
```

(1) — Optional.

(2) — MDC is a Multiple Device Controller for diskette and unit record peripherals.

o   Host Addressing — The FEP coupler can connect to any available Direct Data Channel address on the HOST IOM.

o   Hardware Revision Levels — The FEP has a minimum revision level requirement for some components.  Currently, the only known requirements are that the MLCP mother board (MLC9103) must be revision 12 or higher to support synchronous communication lines, the coupler (DCF6700) must be revision 3 or higher and the CIP firmware must be revision 12 or higher.

o   Coupler Switches — The mailbox switch on the FEP/Host coupler board must be set to '000'.

The following procedure should be carried out prior to first using the FEP, or after CSR maintenance activities:

1.   Turn power on by placing the POWER switch in the up position.

2.   Unlock the control panel by turning the PANEL SECURITY SWITCH fully clockwise.

3.   Press the red "S" (step) and "CLR" (clear) buttons in that order.

4.   For local FEPs, lock the control panel by turning the PANEL SECURITY SWITCH fully counterclockwise.  For remote FEPs, load the diskette drive unit 0 located at address X'400' with a diskette containing :FEP_DX.:SYS, press "L" (load), press "R" (ready), press "E" (execute), wait for QLT tests to complete; press "E" (execute) again.  Locking the control panel for remote FEPs is optional.

5. Verify that the DC ON, LAF and READY indicators are on, and that the CHECK indicator is out. For remote FEPs, register C0 (S register) should contain X'403F' upon successful booting from diskette.

6. The FEP is now ready to be connected from the host.

7. The diskette containing the boot image should remain loaded in remote FEPs in drive 0 and a formatted scratch diskette should remain in drive 1 to be ready for use should a recovery be necessary.

In the event that the FEP hangs up, and cannot be booted from the host, repeat the above sequence. In the even that the FEP can still not be booted, a Customer Service Representative should be contacted.

When the host is first booted, all local FEPs defined via TIGR, and all remote FEPs defined via SUPER and already booted will be loaded and placed into a running state automatically.

To reboot an FEP from a running CP-6 system, a keyin is entered from a communications or system operator's console in the form:

    !BOOT FEP n

where n is the FEP number from the TIGR deck.

# Appendix B

# KEYIN Summary

```
@mastername textstring
?
??
ABOR[T] devicename [[ IF ] sysid]
ACCT[LG] filename
ALIG[N] devicename
ANSS[CRATCH] devicename [ [ WITH ] #serialnumber ] [ FOR ] sysid
AUTO S[CHEDULING] {ON|OFF}
AUTO S[CHEDULING] M[ESSAGE] {ON|OFF}
AUTO S[CHEDULING] U[PDATE]
B:
BATC[H]
BATC[H] {ON|OFF}
BOOT FEP {fepnumber|fepname} [ filename ]
BROA[DCAST] [textstring]
BYE
CANR[EAD]
CANT MOUN[T] devicename
CANT OVER devicename
CANT RING devicename
CONS[OLE] STAT[US]
CONS[OLES]
CONT[INUE] devicename
CPU portnumber
CPUS
CRASH FEP
DATE mm/dd/yy
DELE[TE] I[NPUT] sysid
DELE[TE] I[NPUT] ALL [ .account ] [ @wsnname ]
DELE[TE] O[UTPUT] sysid [-identifier]
DELE[TE] O[UTPUT] ALL [[NOT] .account] [[NOT] @wsname]
DELE[TE] O[UTPUT] ALL [NOT] FORM=formname [[NOT] @wsname]
DELTA
DEVI[CES]
DIAG sysid
DIE!
DISA[BLE] [LINE[S]] {fepnumber|fepname} - startingline [ -> endingline ]
DISC[ONNECT] TERM[INAL] [ @terminalname ]
DISK [devicename]
DISM[OUNT] packsetname [{FAST|NOW}]
DISP[LAY] sysid [FULL] [{F[ORCE]|ON LP|S[HORT]}]
DISP[LAY] ALL [[NOT].account] [{F[ORCE]|ON LP|S[HORT]}]
DISP[LAY] DEFE[R] [[NOT].account] [[NOT]@wsnname] [{F[ORCE]|ON LP}]
DISP[LAY] I[NPUT] [[NOT].account] [[NOT]@wsnname] [{F[ORCE]|ON LP | S[HORT]}]
DISP[LAY] NORU[N] [[NOT].account] [[NOT]@wsnname] [{F[ORCE]|ON LP}]
DISP[LAY] NSFO[RM] [[NOT].account] [[NOT]@terminalname] [{F[ORCE]|ON LP}]
DISP[LAY] O[UTPUT] [[NOT] FORM=[formname] [[NOT] .account] [FOR devicetype]
     [[NOT]@terminalname][{F[ORCE]|ON LP|S[HORT]}]

DISP[LAY] PRIO [[NOT].account] n [TO m] [[NOT]@wsnname] [{F[ORCE]|ON LP}]
DISP[LAY] R[UNNING] [[NOT].account] [[NOT]@wsnname] [{F[ORCE]|ON LP}]
DUMP FEP {fepnumber|fepname} [fid]
E FEP n-sysid
E sysid
```

KEYIN SUMMARY

```
ENAB[LE] {fepnumber|fepname} - startingline [-> endingline]
     [ONCE] [LGN=textstring]
ERRO[R] devicename
ERSE[ND] textstring
EXCL[MOUNT] packsetname
F:
FEP[S]  [ {fepnumber|fepname} ]
FIRM[LOAD] mpcname
FLUSH devicename
FORM [ON]  devicename  [IS]  formname
G: [textstring]
GHOST acctno , acctname [ ,acctpassword ]
HEAD[ER] [textstring]
HELP [(KEYIN)] [TOPICS] [keyword1] [keyword2]
HIST[ORY] { ON | OFF }
HOST[S]  [ {hostnumber|hostname} ]
INFO
KILL [LINE[S]] {fepnumber|fepname} - starting line [ -> endingline ]
LINK[S]
LOAD devicename
LOCK devicename
LPWS[N] [=]@workstation_name
MAKE CPU portnumber [MAST[ER]]
MAKE devicename RESO[URCE]
MAKE devicename SYMB[IONT]
MAST[ERS]
MOUN[T] devicename [WITH] serialnumber [[FOR] sysid]
MSG textstring
MYRE[ADACCT] {.account|R[ESET]}
NATL[ANG] [languagecharacter]
NCTL devicename textstring  [ ONCE ]
NETW[ORK] ROUT[E] [nodenumber]
NODE[S]  [nodeumber]
NODI[AG] sysid
NOUS[ERS!]
OCHI[ST] filename
OFF
ON numberofusers
ON BA numberofusers
ON GH numberofusers
ON TP numberofusers
ON TS numberofusers
OVER devicename
PEND[ING] [READ[S]]
PRIO I[NPUT] sysid [ TO ] priority
PRIO I[NPUT] ALL [[AT] oldpriority] [.account] [@wsname] [TO] newpriority
PRIO O[UTPUT] sysid [-identifier] [ TO ] priority
PRIO O[UTPUT] .account [@wsname] [TO] priority
PRIO O[UTPUT] [ALL] [@stationname] [TO] priority
PROC[EED] devicename
PROF[ILE] profilename
PUBL[IC] packsetname
PWID[TH] [=]width
QUIE[T] devicename
READ$ {LOGO[N]=console_logon_name | DEVI[CE]= [console_devnm]@station}
READ fid
READA[CCT] {.account|RESET}
REPR[INT] devicename [[IF] sysid]
REQU[EST] devicename
RERU[N] sysid
RERU[N] ALL
RESE[RVE] devicename [FOR] sysid
REST[RICT] devicename [TO] {.account | @wsname}
RETR[Y] devicename
RING devicename
ROUT[E] [NOT] [@wsname] FROM devicetype [devicenumber[@terminalname]]
```

```
ROUT[E] @wsname INTO devicetype [devicenumber[@terminalname]]
S
SAVE devicename [[IF] sysid] [CHEC[KPOINT]]
SCRA[TCH] devicename [FOR] sysid
SEND sysid [textstring]
SENDALL [textstring]
SENDALL FEP {fepnumber|fepname} textstring
SET packsetname
SETS
SETU[P] formname
SHAR[E] packsetname
SPAC[E] devicename spacecount [FROM {BOF|EOF|HERE} [[IF] sysid ] [CONT[INUE]]
STAR[T] devicename
STAR[T] CPU portnumber
STAR[T] FEP {fepnumber|fepname}
STAR[T] FEPS
STAR[T] TP/account,tpname[,password]
STAR[TUP!!]
STAT[ION]
STOP CPU portnumber
STOP FEP {fepnumber|fepname} [textstring]
STOP FEPS [textstring]
SUSP[END] devicename [[IF] sysid ]
SWIT[CH] O[UTPUT] [NOT].account [[NOT]@wsname1] [[TO] @wsname2]
SWIT[CH] O[UTPUT] sysid [-identifier] [[TO] @wsname]
SWIT[CH] O[UTPUT] ALL
SWIT[CH] O[UTPUT] ALL [NOT]@wsname1 [TO] @wsname2
SWIT[CH] O[UTPUT] [NOT] FORM=formname [[NOT] @wsname1] [[TO] @wsname2]
SYMB I[NPUT] [devicename] [@terminalname]
SYMB O[UTPUT] [ devicename] [@terminalname] [WSN|THROTTLE]
sysid: [textstring]
TAPE[S] devicename
TELL OCnn [@terminalname] textstring
TELLALL textstring
TERM[INAL] @stationname [F[ULL]]
TERM[INALS]
TERM[INALS] ON comgroup_fid
TIME hh:mm
TIME {ON|OFF}
TP/ tpinstance command
[DONT] TURN[OVER] {ACCTLG|OCHIST|ALL}
UC {ON|OFF}
UNRE[SERVE] devicename
UNREST[RICT] devicename
UNRO[UTE] [NOT] [@wsnname] ON devicetype [devicenumber[@terminalname]]
USER[S]
VOLU[MES] devicename
X FEP n-sysid
X sysid
X CONS[OLE] OCnn @terminalname
XDELTA
Y:
ZAP! [textstring]
ZAP!!
```

KEYIN SUMMARY

# Appendix C

# Monitor Service Error Messages

The error codes listed in this appendix describe monitor services errors that may be reported to the caller of these services.

Monitor service errors are presented in numeric order by decimal error code and functional code group-severity, with a complete listing of all error messages.

The standard format for monitor service error information is illustrated below:

| Content | Field Name | Format | Bits |
|---|---|---|---|
| Functional Code Group | xx.ERR.FCG | VALUE-BIT(12) | 1-12 |
| Module Identifier | xx.ERR.MID | VALUE-BIT(6) | 13-18 |
| Monitor Flag | xx.ERR.MON | VALUE-BIT(1) | 19 |
| Error Number | xx.ERR.ERR# | VALUE-DEC(0-16383) | 20-33 |
| Severity Level | xx.ERR.SEV | VALUE-DEC(0-7) | 34-36 |

For more detailed information concerning these codes, see CE75, Host Monitor Services Reference Manual.

| Table C-1. Monitor Service Errors (All Messages) | | |
|---|---|---|
| Code | FCG-SEV | ERROR NAME/MESSAGE |
| 0001 | -2 | E$OPER<br>Message:  Tape error, position lost% on %SN% |
| 0001 | FTI-2 | E$OPER<br>Message:  Fatal device error% on %TA%<br>Remarks:  DCB.TYC.OPER was set by NIO$QUE. |
| 0002 | -2 | E$EOT<br>Message:  End-of-tape% on %SN% |
| 0002 | FTW-2 | E$EOT<br>Message:  End of tape% on %TA%<br>Message1: The end of tape marker was passed on the last write.<br>Remarks:  See message. |
| 0003 | -2 | E$BOT<br>Message:  Beginning-of-tape% on %SN% |
| 0003 | FTO-2 | E$BOT<br>Message:  Beginning of tape% on %TA%<br>Message1: The beginning of tape was encountered on a backspace record or backspace file operation. |

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0003    FTW-2    E$BOT**
Message:   Beginning of tape% on %TA%
Message1:  An attempt to position before tape load point was
           made. This might be due to user not realizing that
           a volume change has been made.

**0004      -2    E$BOF**
Message:   Beginning-of-file% on %UF%

**0004    FMI-2    E$BOF**
Remarks:   An M$PRECORD by number of records attempted to
           position beyond the beginning of the file.

**0004    FTW-    E$BOF**
Message:   Beginning of file hit% on %TA%
Message1:  An attempt to position before the beginning
           of file was made.
Message2:  A backspace record of backspace file encountered
           the beginning of file.

**0005      -2    E$BLNKTP**
Message:   Blank tape encountered on read% of %SN%

**0005    FTI-2    E$BLNKTP**
Message:   Blank tape on read% on %TA%
Remarks:   DCB.TYC.BLNKTP was set by NIO$QUE.

**0006      -2    E$EOF**
Message:   End-of-file% on %UF%

**0006    FMI-2    E$EOF**
Remarks:   An M$READ without a key to a random file was
           given when the current position was at EOF.

**0006    FSD-2    E$EOF**
Message:   End of File.
Message1:  End of File; you tried to read a control command.

**0006    FSE-2    E$EOF**
Message:   End of file.
Message1:  End of file; no more control commands are left for
           your batch job.

**0006    FTL-2    E$EOF**
Message:   End of file% on %TA%
Message1:  The last record of the file has already been
           passed.
Remarks:   End of data hit on read.

**0006    FTW-2    E$EOF**
Message:   End of file% on %TA%
Message1:  An attempt to position or read past file end was
           made.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE | |
|------|---------|-----|-----|

**0007    -2    E$LD**
Message:  Lost data% on %UF%
Message1: Attempt to read more than will fit in your buffer,
          or write more than is allowed

**0007    FMH-2    E$LD**
Message:  Buffer size discrepancy% for %UF%
Message1: For M$READ, the byte count of your buffer was not
          large enough to hold the entire record. For M$WRITE
          REWRITE, the byte count of your buffer was not
          equal to the original size of the record.

**0007    FMI-2    E$LD**
Message1: One of the following conditions occurred:
          1 - A read or write began at a legal block number
          but crossed beyond the end of the file.
          2 - A read without a key specified a byte count not
          a multiple of the block size.
          3 - A read without a key specified zero bytes.

**0007    FMJ-2    E$LD**
Remarks:  A read requested fewer bytes than existed in the
          record, or a write requested more than the record
          size of the file

**0007    FTW-2    E$LD**
Message:  Lost data% on %TA%
Message1: Read-your buffer is too small; Write-total record
          length would exceed DCB.RECL.
Remarks:  The user's buffer is not large enough to contain
          the next record (portion) on a read.  On a write,
          the total record length exceeds DCB.RECL.

**0007    KIA-0    E$LD**
Message:  Lost data.
Message1: The buffer on the receiving end was less
          than the amount of data that needed to be
          sent.

**0007    KIP-E    E$LD**
Message:  M$PROFILE buffer too small to hold PROFILE.
Message1: The M$PROFILE service requires a buffer sufficient
          to hold the PROFILE record be passed. 1K bytes
          is reccomended.  Try again with a larger buffer.
Remarks:  File management returned lost data when we tried
          to read the profile record into the users buffer

**0007    PHA-E    E$LD**
Message:  Lost data.
Message1: The buffer that you supplied wasn't large enough to
          hold all of the performance monitoring data
          available.  Partial data may have been transferred
          to your buffer anyhow.

**0007    UMS-2    E$LD**
Message:  You didn't pass a large enough VLR_SYSID area to
          hold all running SYSIDs

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0008      -2      E$IOERR
                  Message:  I/O error% on %UF%
                  Message1: A hardware I/O error occurred

0008    FTI-2     E$IOERR
                  Message:  Irrecoverable I/O error% on %TA%
                  Remarks:  DCB.TYC.IOERR was set by NIO$QUE.

0008    KIF-E     E$IOERR
                  Message:  Unexpected condition encountered in loading FPRG

0009      -2      E$DI
                  Message:  Data inconsistency% in file %FN%
                  Message1: Due to a hardware error, or file management error,
                            the data for one or more records have been lost.

0009    FMI-2     E$DI
                  Message:  An attempt was made to read one or more blocks
                            that were never written% in file %FN%
                  Remarks:  One or more of the granules read by this M$READ
                            was never written.

0009    FTW-2     E$DI
                  Message:  An attempt was made to read a record which was
                            never written% in %TA%

0009    KQF-E     E$DI
                  Message:  Data inconsistency building INFORM message.

0010      -2      E$EOD
                  Message:  End-of-data% on %UF%
                  Message1: An !EOD was read thru the command stream

0011      -2      E$MTRAP
                  Message:  Buffer inaccessible% for %UF%%, DCB %DC%
                  Message1: The buffer does not have the proper memory access

0011    FMI-2     E$MTRAP
                  Remarks:  Buffer has wrong access.

0011    FTI-2     E$MTRAP
                  Message:  Buffer inaccessible during I/O% on %TA%
                  Remarks:  DCB.TYC.MTRAP was set by NIO$QUE.

0012      -2      E$LDSC
                  Message:  Line disconnect or absent comgroup station% on %DC%

0012    KCI-E     E$LDSC
                  Message:  That station is not connected.
                  Message1: Terminal control services require that the
                            addressed station be connected during the
                            service.  The one you specified is not.
                  Remarks:  This is independant of WAS, RAS.
                  Remarks:  See KCI$RWCG

| Table C-1. Monitor Service Errors (All Messages) (cont.) | | |
|---|---|---|
| Code | FCG-SEV | ERROR NAME/MESSAGE |

**0012  KIA-A  E$LDSC**
Message:  Your timesharing line is disconnected!
Remarks:  Only logoff should see this error JIT.BAKIC would loop.

**0012  KIF-E  E$LDSC**
Message:  M$SETFP aborted — station disconnected
Remarks:  Reported by comgroup I/O

**0012  KIP-E  E$LDSC**
Message:  Terminal control aborted — station disconnected
Remarks:  Reported by comgroup I/O

**0012  KNA-  E$LDSC**
Message:  Disconnect received from endpoint.
Message1: The other endpoint is disconnecting

**0013   -2   E$DACTR**
Message:  You are deactivated — I/O not permitted% on %DC%

**0013  KIF-E  E$DACTR**
Message:  M$SETFP aborted — you are deactivated
Remarks:  The AU deactivated him during the pmme or he was already deactivated when he did it.

**0013  KIP-E  E$DACTR**
Message:  Terminal control aborted — you are deactivated
Remarks:  The AU deactivated him during the pmme or he was already deactivated when he did it.

**0014   -2   E$TIMO**
Message:  Read timed out% on %DC%

**0015   -2   E$PROT**
Message:  %%SN %Write-protected

**0015  FTI-2  E$PROT**
Message:  Write protected drive% on %TA%
Remarks:  DCB.TYC.PROT was set by NIO$QUE.

**0015  FTR-2  E$PROT**
Message:  Volume protected% — #%SN%
Message1: Volume has no ring and is not at beginning of volume.
Remarks:  System does not permit RING keyin for tapes which are not at beginning of volume.

**0016   -2   E$FRAW**
Message:  Read after forward write on tape% %SN%

**0016  FTI-2  E$FRAW**
Message:  Attempt to read after writing tape% on %TA%
Remarks:  DCB.TYC.FRAW was set by NIO$QUE.

**0017   -2   E$LAST**
Message:  Error occurred on previous operation% on %DC%

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0018**     -2     E$CDALRT
Message:  Invalid ASCII character detected on write% on DCB %DC%

**0018**     FTI-2     E$CDALRT
Message:  Non-ASCII byte on write% to %TA%
Remarks:  DCB.TYC.CDALRT was set by NIO$QUE.

**0019**     -2     E$XTRARD
Message:  Read with read pending% on %DC%
Message1: A read was issued when a read was already pending

**0020**     -2     E$CGKEYV
Message:  COMGROUP key violation% on %DC%
Message1: A COMGROUP read or write illegally specified a
          station or message type that does not exist

**0020**     KIF-E     E$CGKEYV
Message:  M$SETFP aborted - station disconnected
Remarks:  Reported by comgroup I/O

**0020**     KIP-E     E$CGKEYV
Message:  Terminal control aborted - station disconnected
Remarks:  Reported by comgroup I/O

**0021**     -2     E$CGLWRV
Message:  COMGROUP LATCHed write violation% on %DC%
Message1: A COMGROUP write specified LATCH, but there was
          no latched input message to use, or the latched
          input message's spawn or spawn count was
          exhausted., or the destination was wild-carded.

**0022**     -2     E$CGFULL
Message:  COMGROUP full% - %DC%
Message1: When encountered on M$WRITE, this error indicates
          that the designated COMGROUP has no more space.
          When encountered on M$READ it means that the
          comgroup has insufficient memory available to
          process the read request.

**0022**     KIF-E     E$CGFULL
Message:  M$SETFP aborted - comgroup queue full
Remarks:  Reported by comgroup I/O

**0022**     KIP-E     E$CGFULL
Message:  Terminal control aborted - comgroup queue full
Remarks:  Reported by comgroup I/O

**0022**     KQF-E     E$CGFULL
Message:  Your comgroup space is exhausted.

**0023**     -2     E$CGCRCW
Message:  COMGROUP LATCHed write in progress% on %DC%
Message1: An M$READ to COMGROUP with an input message
          currently latched causes that message to be deleted
          and its latched writes sent.  This error occurs
          when a continued latched write is still awaiting
          its last segment at the time the read is issued.
          The latched write must either be finished via
          M$WRITE, or deleted via M$UNLATCH.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0023**  KIF-E  **E$CGCRCW**
**Message:**  M$SETFP aborted — latch violation
**Remarks:**  Reported by comgroup I/O

**0023**  KIP-E  **E$CGCRCW**
**Message:**  Terminal control aborted — latch violation
**Remarks:**  Reported by comgroup I/O

**0024**  -2  **E$CGCWRV**
**Message:**  COMGROUP continued write or read violation% on %DC%
**Message1:**  A COMGROUP write specified continue, but
a different message type was specified on
this subsequent write, or a wild-carded
destination was specified on this first write,
or a comgroup read specified CONT and there
was no message to continue reading.

**0038**  FMG-2  **E$FREC**
**Message:**  Inconsistency in record pointers% in file %FN%
**Remarks:**
The current record is inaccessible

**0038**  FMH-2  **E$FREC**
**Message:**  Inconsistency in record pointers% in file %FN%
**Message1:**  This record is inaccessible

**0039**  -2  **E$MI**
**Message:**  System error — master index% of file %FN% is broken
**Message1:**  One or more records in file %FN are lost
**Remarks:**  An inconsistency has been detected in a master
index granule.  All records in this granule are
inaccessible.

**0040**  -0  **E$ULMI**
**Message:**  Inconsistency in upper level index
**Remarks:**  An inconsistency has been detected in the
upper level index of a keyed or indexed file.  This
error is not reported to the user — it is only
logged in the error log.

**0041**  -2  **E$FIT**
**Message:**  System error — FIT% of file %FN% is broken
**Message1:**  Entire file %FN is lost
**Remarks:**  An inconsistency has been detected in the file's
FIT.  The entire file is inaccessible.

**0041**  FMG-2  **E$FIT**
**Message:**  Error reading FIT of %FN while deleting all records
**Remarks:**
An error occured while trying to update UGRANS and
NGAVAL in the FIT after the number of records in
the file went to zero.

**0041**  FMH-2  **E$FIT**
**Message:**  Error reading FIT of file %FN
**Remarks:**  An error occurred while reading the FIT to
update NRECS, LDA, etc. after a delete forward.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0042    -2    E$FD
              Message:   System error - file directory% of account %AC% is
                         broken
              Message1:  File %FN and all files beyond it in this account
                         are lost
              Remarks:   An inconsistency has been detected in the file
                         directory.  All files from this point to the end of
                         the directory have been lost.

0043    -2    E$PAD
              Message:   System error - account directory% on set %SN% is
                         broken
              Message1:  Inconsistency in account directory on set %SN
              Remarks:   An inconsistency has been detected in the
                         account directory.  All accounts on this pack set
                         beyond this point are inaccessible.

0044    -2    E$MAD
              Message:   System error - master account directory is broken

0045    -2    E$GP
              Message:   System error - granule allocation pool% of pack
                         %SN% is broken

0046    -2    E$MIIO
              Message:   Disk error reading index granule from file %FN
              Remarks:   Unable to read a master index granule due to
                         hardware error.  All records in this granule are
                         lost.

0047    -0    E$ULMIIO
              Message:   Disk error reading upper level index
              Remarks:   A disk error occurred reading the upper
                         level index of a keyed or indexed file.  This error
                         is not reported to the user - it is only logged in
                         the error log.

0048    -2    E$FITIO
              Message:   Disk error reading FIT of file %FN
              Remarks:   Unable to read the file's FIT due to a
                         hardware error.  The entire file is inaccessible.

0049    -2    E$FDIO
              Message:   Disk error reading file directory% for account %AC%
              Remarks:   Unable to read a file directory granule due to
                         a hardware error.  All files from this point to the
                         end of the directory are lost.

0050    FMD-2  E$PADIO
              Message:   Disk error reading PAD% for set %SN%

0051    -2    E$MADIO
              Message:   Disk error reading MAD

0052    -2    E$GPIO
              Message:   Disk error reading granule pool for pack set %SN

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0053    FMG-2    E$REWRITE
                 Message:   You are not allowed to rewrite records% in file
                            %FN%
                 Remarks:   The user does not have permission to rewrite
                            existing records in this file.

0054    FMG-2    E$WRITNEW
                 Message:   You are not allowed to write new records% in file
                            %FN%
                 Remarks:   This user does not have permission to write new
                            records into this file.

0055    FMF-2    E$WRITE
                 Message:   You are not allowed to write% to %UF%

0056    FMF-2    E$READ
                 Message:   You are not allowed to read% from %UF%

0056    FMI-E    E$READ
                 Message:   DS sharing %of %FN% denied because you can't do
                            anything.
                 Message1:  To share a file %(%UF) % in a data segment, you
                            must be able to read the information therein.

0056    GFM-E    E$READ
                 Message:   An M$READ has been attempted on a ORG=CQ DCB.

0057    FMF-2    E$DELREC
                 Message:   You are not allowed to delete records% from %UF%

0058    FMF-2    E$POS
                 Message:   You are not allowed to position% in %UF%

0058    FSE-2    E$POS
                 Message:   You are not allowed to position% in %UF%

0059    FMF-2    E$EXTEND
                 Message:   You are not allowed to extend %UF

0061    FMG-2    E$OLDREC
                 Message:   Key already exists and NEWKEY was specified% for
                            %FN%
                 Remarks:   The key already exists in the file and NEWKEY
                            was specified and ONEWKEY was not.

0062    FMG-2    E$NEWREC
                 Message:   NEWKEY or ONEWKEY required to write new records% in
                            %FN%
                 Remarks:   The key does not already exist in the file and
                            NEWKEY or ONEWKEY was not specified

0063    FMG-2    E$BADKEY
                 Message:   Illegal key length% for %UF%
                 Message1:  Key length is 0 or > 255

0063    FTW-2    E$BADKEY
                 Message:   Illegal key length% for %TA%
                 Message1:  Key length is less than 1 or greater than 255.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0064    FMG-2    E$BADKEY2
                 Message:   M$DELREC:   The length of the second key is bad% for
                            %FN%

0065    FMG-2    E$WRWOKEY
                 Message:   This M$WRITE or M$DELREC must specify a key%, file
                            %FN%
                 Message1:  An M$WRITE or M$DELREC without a key is not allowed
                            if: A)  This operation was not preceeded by an
                            M$READ or M$PRECORD, or
                            B)  This M$DELREC caused the alternate index to
                            change.

0065    FMJ-2    E$WRWOKEY
                 Remarks:   An M$WRITE or M$DELREC was issued when
                            the previous operation was not a successful M$READ
                            or M$PRECORD or M$WRITE

0066      -2     E$NOKEY
                 Message:   The specified key does not exist% in %UF%

0066    FMJ-2    E$NOKEY
                 Remarks:   The record with the requested key is deleted

0066    FMN-E    E$NOKEY
                 Message:   Account% DP#%SN%%.%AC% does not exist.

0066    FTW-2    E$NOKEY
                 Message:   The specified key does not exist% in %TA%

0066    KIP-E    E$NOKEY
                 Message:   The specified PROFILE does not exist!
                 Remarks:   We went to M$MREAD to read :PRO using the profile
                            name as a key, and FM said no such key.

0067    FMH-2    E$WRDEL
                 Message:   Illegal M$WRITE or M$DELREC on consecutive file %FN
                 Message1:  An M$WRITE REWRITE or an M$DELREC to a consecutive
                            file is illegal unless the previous operation was a
                            successful M$READ or M$PRECORD

0067    FMI-2    E$WRDEL
                 Message:   M$DELREC to random or IDS file %%FN %requires a key

0070    FMD-2    E$DECOMP
                 Message:   Decompression error% in file %FN%
                 Message1:  This record contains illegal compressed language

0071    FMI-2    E$RANBADBLK
                 Message:   Illegal block number% for file %FN%
                 Message1:  The specified block # is negative or greater than
                            size of the file
                 Remarks:   The block number specified for a random file is
                            beyond the end of the file.

0071    FTW-2    E$RANBADBLK
                 Message:   Illegal block number% for file %TA%
                 Message1:  The specified block number is negative or greater
                            than the size of the file.

| | Table C-1. Monitor Service Errors (All Messages) (cont.) | |
|---|---|---|

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|---|---|---|

0072   FMG-2   E$INDBC
                Message:  Byte count on M$WRITE to indexed file is too small.
                Remarks:  The byte count on an M$WRITE to an indexed file
                                is too small to include all of the key(s).

0072   FTW-2   E$INDBC
                Message:  Key not contained in record% for %TA%
                Message1: On a write to an indexed file the key must be
                                contained in the initial record segment.

0073   FTW-2   E$KEYORDER
                Message:  Out of order key% for %TA%
                Message1: On a write to KEYED or INDEXED files with
                                ACS=SEQUEN the key is not greater than that of the
                                previous record.

0074   FMF-2   E$CORRES
                Message:  The two DCBs are assigned to the same thing

0075   FMG-2   E$NOCONT
                Message:  Illegal use of CONT option
                Message1: An attempt was made to use the CONT option in one
                                of the following illegal situations:
                                1) Previous operation was not the same as this
                                operation
                                2) File is compressed or encryption was specified
                                3) File is opened in shared mode unless KEYS is
                                specified

0075   FTW-2   E$NOCONT
                Message:  Illegal use of CONT% on %TA%
                Message1: Continuation is not allowed because previous
                                operation was not an M$READ.
                Remarks:  The user specified continued read after a non-read
                                operation.

0076   FMH-2   E$CONCOMP
                Message:  It is illegal to rewrite records in a compressed
                                consecutive file.

0077   FMI-2   E$RANBOUND
                Message:  Buffer% for file %FN% must be word aligned
                Message1: Buffer must be on word boundary and byte count
                                must be non-zero word multiple
                Remarks:  RANDOM and IDS reads and writes with FULL=YES
                                and all block access reads and writes must have a
                                word- aligned buffer and must be for an integral
                                number of words.

0078   FJJ-E   E$JRNLCLSD
                Message:  Attempt to open journal% %UF% after owner closed.
                Message1: Other users are still open to the journal.

0078   FMF-2   E$JRNLCLSD
                Message:  Attempt to access journal% %UF% after owner closed

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE | |
|------|---------|------|---|

**0079    FMG-2    E$INDSEED**
Message:   Encryption is illegal for indexed and IREL files%,
           file %FN%
Remarks:
           An encryption seed may not be specified for reads
           and writes to indexed files.

**0080    FMJ-2    E$FILLIM**
Message:   Attempt to access a record outside the limits of
           file %UF

**0080    FTW-2    E$FILLIM**
Message:   Attempt to access record outside the limits of
           file% %TA%

**0081    FMH-2    E$DELFWD**
Message:   Delete forward not allowed% on file %FN%
Message1:  DELR permission is needed to write at other than
           end-of-file

**0083    FMF-2    E$PMMEINT**
Message:   Service request interrupted by break or control-y

**0084    FMG-2    E$NOSUCHINDX**
Message:   Indexed file %%UF %does not have the specified
           index.

**0085    FMF-2    E$NWIO**
Message:   You are not allowed to do no-wait I/O% to %UF%
Message1:  Command processors, debuggers and ASLs are not
           allowed to do no-wait communications I/O

**0086    FMG-2    E$NOREC**
Message:   No such record
Message1:  The specified record in this key does not exist.

**0087    FMG-2    E$ALLIDS**
Message:   There are more IDs than could fit in the passed
           buffer.
Message1:  The vector passed was not large enough to hold a
           single ID, if ID was specified, or all IDs if IDALL
           was specified.

**0088    FMG-2    E$KEYCHNG**
Message:   There are no more records of the same key.

**0089    FMG-2    E$DUPKEY**
Message:   Attempt to write duplicate key into alternate
           index.

**0090    FMH-2    E$UBLOCK**
Message:   Misuse of ACS=UBLOCK% on %UF%

**0091    FMG-2    E$NOALT**
Message:   Specified alternate index is incomplete.
Message1:  The alternate indexes must be rebuilt before
           they can be accessed.

**0092    FMG-2    E$NOPB**
Message:   The IDALL option is not allowed if PBS or PBR is
           specified.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0093**   FMF-2   **E$BROKEN**
Message:   File% %UF% contains inconsistancies, no updates
allowed.
Message1:   File% %UF% was damaged due to a system error, no
updates are allowed unless FMSEC is active.

**0094**   FMG-2   **E$IDSMALL**
Message:   ID buffer is too small
Message1:   The ID buffer passed to file management is too
small to hold an entire ID.

**0095**   FMG-2   **E$NOALTKEY**
Message:   A key must be specified
Message1:   Operations on alternate indexes to a shared
file must specify a key.

**0096**   FMD-2   **E$PARTFIELD**
Message:   Record contains an incomplete field %in %UF%
Message1:   The last field in the record is not complete.
The field number is in F$DCB.ARS.   %In %UF%.

**0100**   FMM-C   **E$DCBOPEN**
Message:   DCB% %DC% is still open.
Message1:   DCB% %DC% must be closed before open or release.
Remarks:   ATTEMPT TO OPEN A DCB THAT IS ALREADY OPEN.

**0100**   GFM-E   **E$DCBOPEN**
Message:   The DCB on M$OPEN is already opened.

**0100**   TDP-   **E$DCBOPEN**
Message:   T & D DCB% %DC % is already open.

**0101**   FMM-E   **E$INVASN**
Message:   ASN in DCB% %DC% is not FILE/TAPE/DEVICE/COMGROUP.
Remarks:   INVALID ASSIGNMENT TYPE.

**0101**   FMP-E   **E$INVASN**
Message:   DCB% %DC% was not opened by CP-6.

**0101**   GFM-E   **E$INVASN**
Message:   ASN in your DCB is not DEVICE.
Message1:   Only ASN=DEVICE is currently supported by LCP-6.

**0103**   FMM-C   **E$DCBHERE**
Message:   Special DCB% %DC% already exists.

**0104**   FMM-E   **E$NOSLOTS**
Message:   No spare DCBSLOTS left for this M$GETDCB.
Message1:   The run unit should be LINKed with more DCBSLOTS.

**0104**   GFM-E   **E$NOSLOTS**
Message:   No more user slots available for this DCB.

**0105**   FMM-E   **E$BADDCBNAME**
Message:   DCBNAME more than 31 characters for M$GETDCB

**0105**   GFM-E   **E$BADDCBNAME**
Message:   DCBNAME more than 31 characters on LCP-6 M$GETDCB.

**0106**   FMP-E   **E$NONEWU**
Message:   Packset% DP#%SN% is being dismounted.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0107   FMN-E   E$BADVOL
                Message:  Packset volume #%SN is not part of its set.

0108   FMN-C   E$FDEOF
                Message:  End of% %AC% file directory reached.

0109   FMN-E   E$FILEBUSY
                Message:  File %FN is busy.

0109   KCO-2   E$FILEBUSY
                Message:  Comgroup% %UF% is busy

0109   KIF-E   E$FILEBUSY
                Message:  Can't access FEP program — file is busy

0110   FMN-E   E$CREATERR
                Message:  File% %FN% exists.
                Message1: EXIST=ERROR specified to create file% %FN%, but it
                          exists.

0111   FMN-E   E$NOCFUS
                Message:  System table space unavailable% to open %DC%

0111   FTO-    E$NOCFUS
                Message:  No system table space for SN list% for %TA%
                Message1: There is no CFU space for a serial number table.
                Remarks:  There is not enough CFU space to hold the user's
                          serial number list.

0111   FTR-2   E$NOCFUS
                Message:  No system table space for SN list% for %TA%

0112   FMN-E   E$INVSTAR
                Message:  File %FN is not accessible from your domain
                Message1: *N and *X are reserved for CP-6, *A and *S may be
                          opened only input except by a command processor,
                          and *I is reserved for alternate shared libraries.%
                          %FN was the culprit this time.%

0113   FMN-E   E$NOFILE
                Message:  File% %FN% does not exist
                Message1: File %FN does not exist in DP#%SN.%AC

0113   FTL-2   E$NOFILE
                Message:  File% %TA% specified in DCB% %DC% was not found

0113   JLL-E   E$NOFILE
                Message:  Can't continue from M$LINK.  Your linking load
                          module disappeared.

0113   JQS-E   E$NOFILE
                Message:  Can't restore your SAVE program image; the run-unit
                          no longer exists.
                Message1: The run-unit that was in execution at the time of
                          the save has been deleted.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0113  KCO-2  E$NOFILE**
Message:  Comgroup% %UF% does not exist
Message1: Comgroup %UF does not exist in DP#%SN.%AC

**0113  KIF-E  E$NOFILE**
Message:  That FEP program does not exist.

**0114  FMN-E  E$BADFNME**
Message:  Improper name or account%: %FN%
Message1: A permanent filename must consist of 1 to 31
          characters: alpha-numeric,_,-,$ or :. An account
          name must consist of non-control, 7-bit ASCII
          characters. A standard format ANS tape filename
          must be 1 to 17 characters: upper case, numeric,
          !"%&'()*+,./?;:<>=-.

**0114  FMP-E  E$BADFNME**
Message:  Rename% of %FN% not permitted.
Message1: The new file% %U1% either exists, is being created,
          or is not the same "starness"% as %UF%

**0114  GJM-E  E$BADFNME**
Message:  Your M$LDTRC request did not specify a run-unit
          name.

**0114  JST-E  E$BADFNME**
Message:  Invalid run unit name% %U1%% %FN%

**0114  UMF-4  E$BADFNME**
Message:  Bad file NAME
Message1: A permanent file name must consist of 1 to 31
          characters: alphanumeric, _, -, $, or :.  A
          standard-format ANS tape name must be 1 to 17
          characters:  upper case, numeric, ! " % & ' ( ) * +
          , . / ? ; : < > -.

**0115  FMN-E  E$QSTOW**
Message:  File% %FN% is read-only because it is archived.
Message1: File% %UF% is stowed or waiting to be stowed.

**0116   -E  E$NOACCESS**
Message:  Access denied% to %UF% %through %DC%

**0116  FTO-2  E$NOACCESS**
Message:  Access denied% to %TA%% through DCB %DC%
Remarks:  Attempt to open a file to which access is denied.

**0116  KIF-E  E$NOACCESS**
Message:  You don't have access to that FEP program.

**0117  FMO-E  E$FPARAM**
Message:  FPARAM area too small% for %UF%

**0118  FMO-E  E$REATTR**
Message:  You cannot change the attributes of %UF.

**0119  FMO-E  E$RENAME**
Message:  You cannot change the name or password of %UF.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0120**  FSN-2  E$INVRES
Message:  Invalid resource specified in DCB %DC

**0120**  KNA-  E$INVRES
Message:  An invalid resource expressed on OPEN

**0120**  UMF-4  E$INVRES
Message:  Invalid RES.

**0121**  FMN-E  E$JRNLERR
Message:  Journal protocol incorrect% for %UF%.
Message1: Journal% %UF% must be CONSEC, not IN, and not
SCRATCH. Its first OPEN must be CREATE. A tape
journal must not have the same name and account as
an existing disk file.

**0122**  FMO-E  E$VLPERR
Message:  The FIT% for %FN% won't fit in a granule.

**0123**  FMN-E  E$NEWFILE
Message:  You may not create a new file% for %UF%
Message1: DP#%SN.%AC does not permit you to create new files

**0124**  FMI-E  E$NOSHRDS
Message:  Shared data segment file %FN must be shared alike.
Message1: All users of %UF must share it in a data segment,
or they must all share it normally.

**0125**  FMN-E  E$ADEOF
Message:  End of% DP#%SN% account directory reached.

**0126**  FMN-E  E$NONEWFD
Message:  You may not create a new account% for %UF%

**0127**  -2  E$CGFILE
Message:  You are not allowed to open comgroup% %UF% as a
file

**0127**  FMN-2  E$CGFILE
Message:  You are not allowed to create a file with ORG=CG#

**0128**  FMI-E  E$SHRDS2BIG
Message:  File %%FN %shared in a data segment must fit there.
Message1: File %FN is > 257k or < 2k, so it cannot be DS
shared.

**0129**  KCO-2  E$FILECG
Message:  File% %FN% is not a comgroup
Message1: You have attempted to open a non-comgroup file as
a comgroup
Remarks:  Attempt to open a non-comgroup file with
ASN=COMGROUP.  Message text is in KCO$INIT.

**0130**  FMN-E  E$STOWEDFILE
Message:  File% %UF% is stowed inactive or deleted.
Message1: EFT must be the opener of inactive or deleted
files. You tried to open% %DC% to one of them%
(%UF)%.

**0131**  FMO-E  E$BADALT
Message:  KEYX+KEYL exceeds 4000 or KEYL=0% for %UF%.

| | | |
|---|---|---|
| | Table C-1. | Monitor Service Errors (All Messages) (cont.) |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|---|---|---|

0132  FMO-E  E$BADLEN
             Message:  Bad field length in field definition% for %UF%.
             Message1: One or more of the field definitions% for %UF% has
                       a bad length.  The first bad field number is in
                       DCB.ARS.

0133  FMO-E  E$BADFTYPE
             Message:  Bad field type for IREL key% of %UF%.
             Message1: An IREL key% of %UF% uses a field
                       with an unusable type.  Key number is in DCB.ARS

0134  FMO-E  E$BADIKEY
             Message:  No such field for IREL key% of %UF%.

0135  FMO-E  E$BADFLEN
             Message:  Key field after byte 4000% for %UF%.

0136  FMO-E  E$NOFLD
             Message:  No fields defined% for %UF%.
             Message1: Indexed relational files must specify a field
                       definition.  See VLP_RECFIELD. %For %UF%

0137  FMO-E  E$BIGKEY
             Message:  IREL key too long% for %UF%.
             Message1: The total size of the key plus the number of key
                       segments exceeds 511 bytes %for %UF%

0138  FMD-2  E$BADRFIELD
             Message:  The record contains a bad field %in %UF%
             Message1: One of the fields in the record contains bad data.
                       This is likely caused by a decimal field with an
                       illegal decimal value, or a character varying field
                       with a size byte that exceeds the size of the
                       field. %In %UF%

0139  FMD-2  E$BADIRKEY
             Message:  The specified key contains a bad key segment %in
                       %UF%
             Message1: Either the key contains a badly defined field,
                       or it contains an incomplete key fragment.  The
                       bad segment number is in F$DCB.ARS. %In %UF%

0140  FAG-E  E$PSGRANS
             Message:  Packset% #%SN% disk space exhausted% for %UF%

0141  FAG-E  E$USGRANS
             Message:  !LIMIT for disk space exceeded% for %UF%

0142  FAG-E  E$ACGRANS
             Message:  Account% %AC% disk space exceeded% for %UF%

0143  FMN-E  E$XCLSET
             Message:  Packset %DP#%SN %is busy

0144  FMN-E  E$SETDOWN
             Message:  Packset% DP#%SN% is not ready to use.
             Message1: Packset% #%SN% is either not up, is use by an
                       exclusive user, or is waiting for the operator to
                       make it available.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|---------------------|

0145    FMN-c    E$DUPSN
                 Message:  Dual sets% (e.g. #%SN)% must be used exclusively.
                 Message1: The :DUAL.$$EFT file must not exist if a packset is
                           to be used in a shared mode (SHARED or PUBLIC).

0146    FMN-E    E$SPLITRES
                 Message:  No DP resource available to mount split set% %UF%.
                 Message1: Set% #%UF% occuppies a multi-set volume and PIG
                           was unable to allocate its resource when it AVR'ed.

0147    FMO-E    E$TOOMANYF
                 Message:  More than 750 fields are specified% for %UF%.

0148    FSN-2    E$NOTDBG
                 Message:  Only a debugger may open with ORG=DBGxxx

0149    FSN-2    E$INVDBG
                 Message:  Invalid debug destination specified
                 Message1: Something is wrong with your debug destination.
                           possibilities include: o That DCB is not open
                           o That DCB is not an FPRG DCB
                           o That station is not an FPRG station

0150    FMP-C    E$DCBCLOSED
                 Message:  DCB% %DC% is already closed.

0150    GFM-E    E$DCBCLOSED
                 Message:  A CLOSE on a DCB which isn't open was attempted

0150    KNA-     E$DCBCLOSED
                 Message:  That DCB is already closed

0151    FSP-0    E$NOCLSMUC
                 Message:  M$UC may not be closed.

0152    FMN-E    E$BADJRNL
                 Message:  Journal file% %UF% is broken, open not allowed
                 Message1: Journal file% %UF% has been damaged by a system
                           error.  Opens are not allowed without FMSEC.

0153    FMO-E    E$BADSTART
                 Message:  Integer field not byte-aligned% for %UF%.
                 Message1: An integer field% for %UF% is not
                           byte_aligned. The bad field number is in DCB.ARS.

0155    FMN-E    E$CLSREL
                 Message:  You may not replace file %FN

0155    FMO-E    E$CLSREL
                 Message:  You may not control access, or release NGAVAL%, for
                           %FN%
                 Message1: An attempt to close with RELG, ACCESS, or ACSVEH
                           failed because you do not have DELF access% to %UF%

0155    FMP-E    E$CLSREL
                 Message:  You may not delete file %FN

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0175    FMN-A    E$BADFIT
                 Message:   File% %FN% is irrecoverably lost.
                 Message1:  File% %UF% has been mucked up by a system failure,
                            and is completely inaccessible. Use backup copy if
                            needed.

0199    FSE-2    E$UNIMP
                 Message:   Unimplemented I/O Medium.

0199    GFM-E    E$UNIMP
                 Message:   M$WRTMLT not allowed on DCB with ORG = CQ.

0200    JSA-E    E$BADDBUGR
                 Message:   Invalid Debugger name.

0200    JST-E    E$BADDBUGR
                 Message:   Invalid Debugger name.

0201    JSP-E    E$DEBUGSP
                 Message:   You cannot associate a debugger with a shared
                            processor.
                 Remarks:   YC DELTA when executing a standard shared
                            processor.

0202    GHS-2    E$DEBUGXONLY
                 Message:   You may not debug an execute-only run unit

0202    GJU-E    E$DEBUGXONLY
                 Message:   You are not allowed to debug an execute only FPRG.
                 Remarks:   Should only happen here on post association.

0202    JSA-E    E$DEBUGXONLY
                 Message:   You cannot debug an execute-only run unit.

0202    JST-E    E$DEBUGXONLY
                 Message:   You cannot debug an execute-only run unit.

0203    JST-E    E$PROCACCESS
                 Message:   You are not allowed to access that processor.

0206    JST-E    E$PROGTOOBIG
                 Message:   Program size exceeds user authorization or limit.

0207    JST-E    E$NOSHRLIB
                 Message:   The requested shared library does not exist.

0208    JSA-E    E$NOVIRTUAL
                 Message:   Virtual memory not available for shared library.
                 Message1:  Virtual pages 224 - 255 must be unallocated
                            to associate a shared library.

0211    JST-E    E$BADROSEG
                 Message:   Run Unit% %U1%% %FN% contains a bad Read Only
                            Segment.

0212    JST-E    E$BADHEAD
                 Message:   The Run Unit HEAD record is bad.

0212    KIF-E    E$BADHEAD
                 Message:   The head record does not exist or is not the proper
                            size.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0215   JST-E   E$HALFHEAD
                Message:  The HEAD record size is invalid for that run unit.

0216   JST-E   E$HALFTREE
                Message:  The TREE table's size is incorrect.

0217   JST-E   E$NOTANRU
                Message:  File% %U1%% %FN% is not a valid run unit.

0218   JSA-E   E$TCBSZBAD
                Message:  TCB size is less than minimum required.

0218   JST-E   E$TCBSZBAD
                Message:  Run Unit% %U1%% %FN% TCB size specification too
                          large.

0219   JST-E   E$DCBSZBAD
                Message:  Run Unit% %U1%% %FN% contains too many DCBs.

0231   GJS-E   E$STING
                Message:  Attempt to open (create) a shared file and there
                          are no available entries in the shared file table.

0232   JST-E   E$NOSUCHASL
                Message:  The requested Alternate Shared Library does not
                          exist.

0233   GJS-E   E$BADSSP
                Message:  That shared file is now being installed.
                Remarks:  Used internally.  The user should never see
                          this error message.

0233   JSA-E   E$BADSSP
                Message:  That Special Shared Processor is not initialized

0233   JST-E   E$BADSSP
                Message:  That special shared processor has not been
                          installed.

0234   GJS-E   E$NOPROC
                Message:  That Special Shared Processor doesn't exist.

0234   JSA-E   E$NOPROC
                Message:  That Special Shared Processor doesn't exist.

0235   GJS-E   E$WRONGTYPE
                Message:  That shared processor is not of the requested type.

0235   JSP-E   E$WRONGTYPE
                Message:  The processor is not of the type specified by
                          M$FINDPROC PTYPE.

0236   JST-E   E$RESTRICTED
                Message:  You are not allowed to use that restricted
                          processor.

0236   KIF-E   E$RESTRICTED
                Message:  The FEP run unit is restricted.
                Remarks:  The locks do not match for the rununit and the
                          user.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0237** JST-E **E$NSTDINVOC**
**Message:** That processor must be invoked with standard syntax.
**Message1:** Standard syntax is as follows:

!Run_unit [source] [,update] [ ON|OVER|INTO [object] [,listout]] [(optionlist)]
Where
Run_unit – specifies the fid of a run unit created by the LINK processor.
source – specifies the fid of the source input (M$SI). update – specifies the fid of the update input (M$UI). ON – specifies that the run unit is to be aborted if the object or listout file currently exists. OVER – specifies that the object or listout files are to overwrite any existing files of the same name. INTO – specifies that if object or listfiles exist they are to be updated; otherwise new files are to be created. object – specifies the fid of the output file (M$OU). listout – specifies the fid of the listing output (M$LO). optionlist – contains run unit specific options, enclosed in parenthesis and separated by commas.
**Message7:** That processor must be invoked with standard syntax.

**0239** GJS-E **E$LIBSIZE**
**Message:** FPRG library data size exceeds that reserved in the FPRG.

**0239** JSA-E **E$LIBSIZE**
**Message:** Library data size larger than reserved size in run unit.
**Message1:** The run unit was linked with a library with less data than the one currently be associated.

**0250** JSE-E **E$ERRPMME**
**Message:** M$ERR issued by user.

**0251** JSE-A **E$XXXPMME**
**Message:** M$XXX issued by user-domain program.

**0252** GUM-E **E$EKEY**
**Message:** FPRG terminated via 'QUIT' command to debugger.

**0252** JSA-E **E$EKEY**
**Message:** Job errored by the user. (!QUIT)

**0252** SSQ-4 **E$EKEY**
**Message:** Job errored by the operator

**0253** SSQ-6 **E$XKEY**
**Message:** Job aborted by the operator

**0254** SSQ-4 **E$LIMX**
**Message:** Limit exceeded; consult M$XCON (B$XCON.LIMIT) to determine which limit.

**0255** SSQ-6 **E$DROP**
**Message:** Line disconnect

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0256**   JSP-E   **E$OFF**

               **Message:**   Your Command Processor has logged you off.

               **Remarks:**   The Command Processor, when issuing an M$CPEXIT with OFF specified should also have JERR specified in the FPT. Therefore the user should never see this error message.

**0256**   SSQ-6   **E$OFF**

               **Message:**   Monitor has canceled the job

**0257**   JSP-E   **E$CYALT**

               **Message:**   Command Processor has signaled ALTRET to your M$YC Service Request.

               **Remarks:**   The Command Processor, when issuing an M$CPEXIT with ALTRTN specified should also have JERR specified in the FPT. Therefore the user should never see this error message.

**0259**   SSQ-6   **E$MAXTIME**

               **Message:**   Time limit exceeded

**0260**   JSE-E   **E$ASLERR**

               **Message:**   M$ERR issued by Alternate Shared Library.

**0260**   UEP-E   **E$ASLERR**

               **Message:**   Your Alternate Shared Library has errored the job.

               **Remarks:**   QUIT command to the Debugger following an M$ALIB service request from an Alternate Shared Library. Exit Control for both the user and Alternate Shared Library will be honored and the Debugger will reamin associated.

**0261**   JSE-A   **E$ASLXXX**

               **Message:**   M$XXX issued by Alternate Shared Library.

**0262**   JSE-E   **E$DBERR**

               **Message:**   M$ERR issued by Debugger.

**0263**   JSE-A   **E$DBXXX**

               **Message:**   M$XXX issued by Debugger.

**0264**   JSE-E   **E$CPERR**

               **Message:**   M$ERR issued by Command Processor.

**0265**   JSE-A   **E$CPXXX**

               **Message:**   M$XXX issued by Command Processor.

**0266**   JSE-A   **E$ASLABRT**

               **Message:**   Your Alternate Shared Library aborted the job.

**0267**   JSE-A   **E$DBABRT**

               **Message:**   Your Debugger aborted the job.

**0268**   JSE-A   **E$CPABRT**

               **Message:**   Your Command Processor aborted the job.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|---------------------|

**0269  JSP-A  E$XCONRTN**
Message:  Abort by Special Shared Processor via M$XCONRTN.
Message1: An abort condition, such as operator abort,
          line hang-up, or limit exceeded, has occurred while
          one of your Special Shared Processors was in
          control.  Bit settings in your Exit Control TCB
          frame (or in the JIT) will indicate the cause
          of the abort.
Message6: Abort by Special Shared Processor via M$XCONRTN.
Remarks:  The user should never see this message as
          the Special Shared Processor should always specify
          the error code to be returned to the user.  See the
          description of M$XCONRTN in the CP_6 Monitor
          Services Reference Manual.

**0270  UEP-E  E$NOLIB**
Message:  You are not allowed to associate a debugger with
          that FPRG.
Remarks:  An unknown FCN code was in the message read as a
          response to the GJ_GETDB request sent to LCP-6.

**0271  JSA-E  E$DLIBREQ**
Message:  Another debugger is already associated.

**0271  JSP-E  E$DLIBREQ**
Message:  A Library or Debugger of the same type is already
          associated.
Message1: M$ALIB of an Alternate Shared Library or of a
          Debugger requires that a processor of the same
          type is not already associated.

**0272  JSP-C  E$DLIB**
Message:  M$ALIB caused disassociation of another shared
          library.

**0273  JSP-E  E$NOTASSOC**
Message:  Library/Debugger not associated

**0280  JSP-E  E$SSAVE**
Message:  Save not allowed when in Exit Control for SAVE-GET

**0285  JSP-E  E$JOBSTEP**
Message:  That command is meaningless at Job Step

**0286  JSP-  E$NJOBSTEP**
Message:  That command is allowed only at Job Step

**0287  JSP-E  E$CPALT**
Message:  M$CPEXIT Bad (Altret set—CP_YCPMME not set)

**0288  JSP-E  E$LOGOFF**
Message:  M$CPEXIT Bad (Logoff when not at Job Step or
          Run-down)

**0289  JSP-  E$NOSTEPS**
Message:  No more Job Steps allowed.
Remarks:  M$CPEXIT called to initiate another Job Step
          when CP_LOGOFF has been set in CPFLAGS1.

**0290  JSP-0  E$DFBUSY**
Message:  System dump file busy-no file written

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG–SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0291    JSP–E    E$SNAPUSR
                 Message:  User specified via M$SCREECH FPT does not exist.

0300    JDP–4    E$NOOVRLY
                 Message:  That shared processor overlay does not exist.

0300    JDS–4    E$NOOVRLY
                 Message:  The named overlay does not exist in the TREE.

0300    JSP–0    E$NOOVRLY
                 Message:  M$OLAY request allowed only in overlaid run–units.

0301    JDS–4    E$BADTREE
                 Message:  The TREE table is improperly linked.

0302    JDS–A    E$CIRCTREE
                 Message:  The TREE table is circularly linked.

0303    JDU–A    E$OVDATASZ
                 Message:  Data size in TREE table is too large.

0304    JDU–A    E$OVPROCSZ
                 Message:  Procedure size in TREE table is too large.

0305    JDU–A    E$OVDATALOC
                 Message:  Bad data location in TREE table.

0306    JDU–A    E$OVPROCLOC
                 Message:  Bad procedure location in TREE table.

0307    JDU–A    E$OVRLYCVM
                 Message:  Page obtained via M$CVM encountered.

0320    JLU–4    E$LDLNKCVM
                 Message:  CVM page encountered below dynamic data area.

0320    JQU–4    E$LDLNKCVM
                 Message:  CVM page encountered below dynamic data area.

0321    JST–A    E$LDLNKSSP
                 Message:  M$LINK and M$LDTRC to a Special Shared Processor is
                           not allowed.

0324    JSP–E    E$SAVELINK
                 Message:  M$LINK or M$LDTRC not allowed during SAVE–GET.

0325    JSP–E    E$XCONLINK
                 Message:  M$LINK–M$LDTRC not allowed when XCON Class 2 or 3
                           in progress.

0330    JLS–4    E$JQNOPROC
                 Message:  Processor needed by SAVE file not in system.

0331    JQU–4    E$JQNOSAVES
                 Message:  SAVE not allowed in M$LINKed to program.

0332    JQU–4    E$JQCANTSAVE
                 Message:  This program may not be saved.
                 Message1: A previously issued M$SCON Service Request
                           specified that this program is not to be saved.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0333    JLS-2    E$JQOLDSAVE**
Message:  That program was saved under an older, incompatible
          system version.

**0339    JLS-E    E$JQBADFILE**
Message:  Saved image cannot be restored.
Remarks:  Internal consistancy checks failed when
          trying to restore a SAVEd or M$LINKing
          run unit.

**0339    JQU-4    E$JQBADFILE**
Message:  That file is not a valid SAVE file.

**0340    JLS-2    E$JQPRIV**
Message:  That program was saved by an account with more
          privilege than you.

**0350    JZD-A    E$JZNOPROG**
Message:  There is no suspended program for the current user

**0351    JZD-A    E$JZLOGONONLY**
Message:  That Service Request may only be used by LOGON.

**0400    -E    E$BADCODE**
Message:  Undefined Service Request.

**0400    GFM-E    E$BADCODE**
Message:  Unknown MCL code passed to GMF$MCL.

**0400    GUD-E    E$BADCODE**
Message:  LCP-6 System does not provide that monitor service.

**0400    UDA-E    E$BADCODE**
Message:  Undefined Service Request.
Remarks:  The value in X0 on entry to the PMME
          Handler cannot be found in UD_MAXTAB,
          the table that defines the valid Service
          Request codes.

**0401    -E    E$OLDPMME**
Message:  That Service Request is no longer supported by
          CP-6.

**0401    UDA-E    E$OLDPMME**
Message:  M$SSTATE, M$XSTATE and M$GETSTATE are no longer
          supported.

**0403    UDA-E    E$OPTPMME**
Message:  System does not include Service Request.

**0404    -E    E$BADDCB#**
Message:  DCB# in your FPT is bad.

**0404    FMF-2    E$BADDCB#**
Message:  One or both of the DCB numbers passed to M$CORRES
          is for a DCB that doesn't exist

**0404    FMM-E    E$BADDCB#**
Message:  Nonexistent DCBs cannot be released.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0404    GFM-E    E$BADDCB#
                 Message:   The DCB# in your LCP-6 FPT is bad.

0404    KNA-     E$BADDCB#
                 Message:   An invalid DCB has been passed

0404    UDA-E    E$BADDCB#
                 Message:   DCB# in your FPT is bad.

0404    UEP-E    E$BADDCB#
                 Message:   The FPRG DCB# in the M$DRTN FPT is bad.

0405    -E       E$NOTAUTH
                 Message:   You are not permitted to use that Service Request.

0405    FMN-E    E$NOTAUTH
                 Message:   File management privilege inadequate.
                 Message1:  MAD modification requires FMDIAG privilege,
                            M$OPEN NXTA requires FMSEC privilege,
                            Many PIG functions require FMDIAG or PIGC
                            privilege.

0405    FOM-E    E$NOTAUTH
                 Message:   You are not permitted to use this service
                 Message1:  Only the system ghost OUTSYM may use M$SYMBIO.

0405    FRP-A    E$NOTAUTH
                 Message:   M$MBS is not available to user programs!
                 Remarks:   Only SYSTEM GHOSTS and CPs may issue M$MBS and
                            except MBS, may only do the display form of the
                            pmme

0405    FSN-2    E$NOTAUTH
                 Message:   You do not have the privilege to use M$OPEN in that
                            form
                 Message1:  The PR_MFEP privilege is required to use M$OPEN to
                            create FEP device handlers
                 Message2:  You tried to M$OPEN with ASN=DEVICE, RES=FExx and
                            ORG=FPRG without the PR_MFEP privilege

0405    GUS-E    E$NOTAUTH
                 Message:   Only Node Admin may use the M$MAKEUSR monitor
                            service.

0405    JSP-E    E$NOTAUTH
                 Message:   you are not allowed to use M$SCREECH.
                 Remarks:   User programs (except System Ghosts) must
                            have EXMM privilege to use M$SCREECH.

0405    KIP-A    E$NOTAUTH
                 Message:   You are not authorized to control FEPs!
                 Message1:  M$FECTL, M$FEDUMP and M$FEBOOT require modify FEP
                            privilege and you dont have it.
                 Remarks:   Cant have everyone booting FEPs

0405    KLM-A    E$NOTAUTH
                 Message:   Users are not allowed to use M$PATHCON and M$EXHUME
                 Remarks:   Only SLUG may use M$PATHCON; only ELF may
                            use M$EXHUME.

| Table C-1. Monitor Service Errors (All Messages) (cont.) |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|
| 0405 | NIE- | E$NOTAUTH |
| | | Message: IOQ or IOQW privilege is required for this service request. |
| 0405 | OTW-A | E$NOTAUTH |
| | | Message: You can't use M$TEMPWROC once the system is really up |
| | | Remarks: The M$TEMPWROC PMME is for use only by system ghosts before the KEYIN is running. |
| 0405 | TDP- | E$NOTAUTH |
| | | Message: You do not have the privilege to use the M$SYSCON service. |
| | | Message1: The PR_SYSCON privilege is required to partition or return components. PR_SYSCON or PR_SPCLMM or PR_EXMM is required to display the status of a component. |
| 0405 | UDA-E | E$NOTAUTH |
| | | Message: M$RUE users must run in the system account. |
| 0405 | UDB-E | E$NOTAUTH |
| | | Message: M$IOQ users must run with the IOQ privilege on. |
| 0405 | UDC-E | E$NOTAUTH |
| | | Message: M$RDSYSLOG users must run in the system account. |
| 0405 | UDD-E | E$NOTAUTH |
| | | Message: M$WRSYSLOG users must have TND or SYSLOG privilege on. |
| 0405 | UDE-E | E$NOTAUTH |
| | | Message: That service request requires TND privilege. |
| 0405 | UMT- | E$NOTAUTH |
| | | Message: Insufficient privilege for this PMME. |
| 0406 | -E | E$DOMAIN |
| | | Message: That Service Request is not permitted from your domain. |
| 0406 | AFA-2 | E$DOMAIN |
| | | Message: You may not use that form of M$ACCT from your domain |
| 0406 | FMF-2 | E$DOMAIN |
| | | Message: DCB %%DC %opened by another domain |
| | | Remarks: This DCB, connected to an execute-only file, was opened by another domain and may not be accessed from this domain. |
| 0406 | FMM-E | E$DOMAIN |
| | | Message: M$* must be opened by CP-6. |
| 0406 | FMP-E | E$DOMAIN |
| | | Message: DCB% %DC% cannot be closed from your domain. |
| 0406 | FSM-2 | E$DOMAIN |
| | | Message: Execute-only DCB %DC opened by another domain. |

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|---------------------|

**0406**   FTW-2   E$DOMAIN
Message:  Execute-only DCB% %DC% opened by another domain
Remarks:  This DCB, connected to an execute-only file, was opened by another domain and may not be accessed from this domain.

**0406**   GJM-4   E$DOMAIN
Message:  M$LDTRC not allowed from interrupt level.

**0406**   GUM-E   E$DOMAIN
Message:  M$DRTN allowed only from the debugger.

**0406**   JSP-E   E$DOMAIN
Message:  That Service Request is not permitted from your domain.
Remarks:  M$ALIB or M$DLIB and not user domain.
M$CPEXIT and not CP domain.
M$INTRTN and not ASL domain.
M$YC from CP domain.

**0406**   UDA-E   E$DOMAIN
Message:  That Service Request is not permitted from your domain.

**0406**   UEP-E   E$DOMAIN
Message:  M$DRTN allowed only by a Debugger.

**0406**   UMS-2   E$DOMAIN
Message:  Only GHOST1 or OUTSYM may use M$SYSID

**0407**   GUD-E   E$NOFPT
Message:  That monitor service requires an FPT.

**0408**   GUD-E   E$BADFPT
Message:  Your address of your FPT is bad.

**0409**   GUM-C   E$NOPRIV
Message:  Cannot effect the entire privilege change request.

**0409**   UMT-C   E$NOPRIV
Message:  Cannot effect entire privilege change requested.

**0410**   UMT-C   E$MAXCHG
Message:  Charges have exceeded field size.

**0417**   -E   E$MODE
Message:  That Service Request is not permitted for your user mode.

**0417**   GJM-E   E$MODE
Message:  M$LDTRC not allowed in LCP-6 for handlers and ghosts.

**0419**   GUD-E   E$BADSEGSPAN
Message:  FPT vector spans a segment.
Remarks:  Could be an FEPLINK problem.

**0420**   -0   E$BADVECT0
Message:  Access to or alignment of data via FPT vector 0 is incorrect.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0420    FMF-2    E$BADVECT0
                 Message:  Trap accessing V area of FPT%, DCB %DC%

0420    GUM-E    E$BADVECT0
                 Message:  Either the new or previous condition setting must
                           be specified.

0420    JSP-E    E$BADVECT0
                 Message:  FPT Vector 0 must not be null for that Service
                           Request.
                 Message1: One of the following Service Requests was issued
                           with required Vector 0 set to the ADDR(NIL) :
                           M$LINK — M$LDTRC — M$SAVE — M$YC

0421    -0       E$BADVECT1
                 Message:  Access to or alignment of data via FPT vector 1 is
                           incorrect.

0421    FMF-2    E$BADVECT1
                 Message:  Trap accessing KEY parameter%, file %UF%%, DCB %DC%
                 Message1: KEY location not accessible or not large enough

0421    GFM-E    E$BADVECT1
                 Message:  On a OPEN ORG=CQ a VLP describing the circular
                           queue must be supplied.

0421    JSP-E    E$BADVECT1
                 Message:  Invalid name length on M$FINDPROC NAME option.
                 Message1: The length of a shared processor is limited to 31.
                 Message7: Invalid name length on M$FINDPROC NAME option.

0422    -E       E$BADVECT2
                 Message:  Access to or alignment of data via FPT vector 2 is
                           incorrect.

0422    FMF-2    E$BADVECT2
                 Message:  Trap accessing LKEY parameter%, file %UF%%, DCB
                           %DC%
                 Message1: The LKEY parameter for M$DELREC is not large enough
                           or is inaccessible

0422    FMM-E    E$BADVECT2
                 Message:  SETSTA VLP for M$OPEN %of %DC% is too small.

0422    FOS-E    E$BADVECT2
                 Message:  The RESULTS vector is NIL/ERASE in your M$JOBSTATS
                           CHECK, CHECKF, SPILL, or SRCH FPT.

0422    KNA-     E$BADVECT2
                 Message:  An invalid buffer pointer was passed

0423    -E       E$BADVECT3
                 Message:  Access to or alignment of data via FPT vector 3 is
                           incorrect.

0423    FMF-2    E$BADVECT3
                 Message:  STATION paramater% for %UF% inaccessible or not
                           large enough

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|---|---|---|

0423   FOS-E   E$BADVECT3
                 Message:   The CRITERIA vector is NIL/ERASE in your M$JOBSTATS
                           SPILL or SRCH FPT.

0423   JSP-E   E$BADVECT3
                 Message:   The processor number specified on M$FINDPROC is
                           bad.

0424     -E   E$BADVECT4
                 Message:   Access to or alignment of data via FPT vector 4 is
                           incorrect.

0425     -E   E$BADVECT5
                 Message:   Access to or alignment of data via FPT vector 5 is
                           incorrect.

0425   FMO-E   E$BADVECT5
                 Message:   Access control list inaccessible% for %UF%

0425   JSP-E   E$BADVECT5
                 Message:   The CMD parameter of M$LINK or M$LDTRC is bad.
                 Message1: Either the length byte of a TEXTC command is larger
                         than the vector framing the command or the command
                         itself is larger than B$JIT.CCBUF.
                 Message7: The CMD parameter of M$LINK or M$LDTRC is bad.

0426     -E   E$BADVECT6
                 Message:   Access to or alignment of data via FPT vector 6 is
                           incorrect.

0426   FMO-E   E$BADVECT6
                 Message:   Access vehicle list inaccessible% for %UF%

0427     -E   E$BADVECT7
                 Message:   Access to or alignment of data via FPT vector 7 is
                           incorrect.

0427   FMO-E   E$BADVECT7
                 Message:   UATTR area inaccessible% for %UF%

0428     -E   E$BADVECT8
                 Message:   Access to or alignment of data via FPT vector 8 is
                           incorrect.

0428   FMO-E   E$BADVECT8
                 Message:   INSTATTR area inaccessible% for %UF%

0429     -E   E$BADVECT9
                 Message:   Access to or alignment of data via FPT vector 9 is
                           incorrect.

0429   FMO-E   E$BADVECT9
                 Message:   PROCATTR area inaccessible% for %UF%

0430     -E   E$BADVECT10
                 Message:   Access to or alignment of data via FPT vector 10 is
                           incorrect.

0431     -E   E$BADVECT11
                 Message:   Access to or alignment of data via FPT vector 11 is
                           incorrect.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0432**    -E    E$BADVECT12
    Message:  Access to or alignment of data via FPT vector 12 is
              incorrect.

**0432**    FMO-E    E$BADVECT12
    Message:  Bad ALTKEY vector on close% of %UF%

**0433**    -E    E$BADVECT13
    Message:  Access to or alignment of data via FPT vector 13 is
              incorrect.

**0434**    -E    E$BADVECT14
    Message:  Access to or alignment of data via FPT vector 14 is
              incorrect.

**0434**    FMM-E    E$BADVECT14
    Message:  RECFIELD VLP for M$OPEN %of %DC% is too small.
    Message1: The number of fields specified %for %DC% is greater
              than the area framed.

**0435**    -E    E$BADVECT15
    Message:  Access to or alignment of data via FPT vector 15 is
              incorrect.

**0435**    FMM-E    E$BADVECT15
    Message:  HDR VLP for M$OPEN %of %DC% is too small.

**0436**    -E    E$BADVECT16
    Message:  Access to or alignment of data via FPT vector 16 is
              incorrect.

**0436**    FMM-E    E$BADVECT16
    Message:  Too many keys specified% for %DC%.
    Message1: The vector for defining keys frames an area too
              small to hold all of the requested keys.

**0437**    -E    E$BADVECT17
    Message:  Access to or alignment of data via FPT vector 17 is
              incorrect.

**0437**    FMM-E    E$BADVECT17
    Message:  FPRG VLP for M$OPEN %of %DC% is too small.

**0449**    -0    E$NOTPURCHASED
    Message:  That seperately priced software has not been
              purchased by your installation.

**0490**    UEP-E    E$NOTCB
    Message:  That Service Request not allowed if no TCB.
    Message1: One of the following Service Requests has
         caused you to be aborted because you have
         no TCB:

```
M$STIMER    M$TTIMER    M$EVENT
M$INT       M$XCON      M$TRAP
M$STRAP     M$MERC      M$RETRY
M$SENV      M$TRTN      M$CLRSTK
M$MERCS     M$RETRYS    M$RENV
```

    Message2: That Service Request not allowed if no TCB.
    Remarks:  Should never happen to a user level program
         as JST$STEP will always build a TCB for him.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0491    JSP-E    E$DLTALT
                 Message:   Debugger signaled ALTRET from your M$ALIB request.
                 Message1:  Please refer to your Debugger reference manual.
                 Message7:  Debugger signaled ALTRET from your M$ALIB request.
                 Remarks:   The user should never see this message as
                            DELTA always (?) specifies the error code
                            to be returned to the user.

0492    UEP-E    E$DRTN
                 Message:   M$DRTN from Debugger when top TCB frame is the
                            Debugger's.
                 Remarks:   This error is returned only to an interactive
                            Debugger.  The user should never see this message.

0493    UEP-E    E$NOCONTROL
                 Message:   Control of that exceptional condition has not been
                            established.
                 Remarks:   This error is reported to DELTA when
                            the M$DRTN Service Request has specified
                            that a user's Exceptional Condition processing
                            routine is to be entered and the user has
                            not asked for control over the specified condition.

0494    UEP-E    E$BADPTR
                 Message:   Bad pointer specified on M$TRTN or M$RETRY.
                 Message1:  The SEGID of a pointer specified via the DRS option
                            of M$TRTN or M$RETRY must reference the Linkage
                            Segment.

0495    FMF-2    E$NOEVENT
                 Message:   No event handler specified
                 Message1:  You can't read or write no-wait with an event
                            without an event handler defined

0495    SSQ-6    E$NOEVENT
                 Message:   NO EVENT PROCEDURE FOR THIS EVENT

0496    UEP-E    E$NOTPMME
                 Message:   Top TCB Stack frame does not contain a Service
                            Request environment.

0497    GUM-E    E$ALTEMPTY
                 Message:   That Service Request is not allowed when the ALTRET
                            frame in the TCB is empty.
                 Message1:  One of the following service requests has caused
                            you to be aborted because the ALTRET frame in
                            your TCB is empty:
                            M$MERC    M$RETRY    M$SENV

0497    UEP-E    E$ALTEMPTY
                 Message:   That Service Request is not allowed when the ALTRET
                            frame in the TCB is empty.
                 Message1:  One of the following service Requests has caused
                            you to be aborted because the ALTRET frame in
                            your TCB is empty:
                            M$MERC    M$RETRY    M$SENV

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0498  GUM-E  E$TCBEMPTY**
Message:  That Service Request not allowed when the TCB stack
           is empty.
Message1: One of the following Service Requests has
           caused you to be aborted because your TCB
           Stack is empty:
           M$TRTN   M$CLRSTK   M$MERCS   M$RETRYS   M$RENV

**0498  UEP-E  E$TCBEMPTY**
Message:  That Service Request not allowed when the TCB stack
           is empty.
Message1: One of the following Service Requests has
           caused you to be aborted because your TCB
           Stack is empty:
           M$TRTN     M$CLRSTK   M$MERCS   M$RETRYS
Remarks:  Could also happen on M$DRTN.

**0499  -E  E$TCBFULL**
Message:  A300 YOUR TCB IS FULL OR NOT THERE

**0499  JSX-E  E$TCBFULL**
Message:  Insufficient room in TCB for SAVE or LDTRC Exit
           Control.

**0499  UED-E  E$TCBFULL**
Message:  Can't give you control, your TCB is full.
Message1: The user's TCB is full, so DELTA cannot pass
           control to the user's exceptional condition
           handling routine.
Message7: Can't give you control, your TCB is full.

**0499  UEJ-E  E$TCBFULL**
Message:  Debugger TCB full.  Can't enter debugger for
           SAVE/GET user XCON.

**0499  UEP-E  E$TCBFULL**
Message:  Can't M$SENV - Your TCB is full.
Message1: Unfortunately, the environment you were trying to
           save has been destroyed by the M$SENV ALTRET
           environment.
Message7: Can't M$SENV - Your TCB is full.

**0501  HFA-E  E$MEMORY**
Message:  Memory fault

**0501  HFE-E  E$MEMORY**
Message:  (M$STRAP)  Memory fault

**0502  HFA-E  E$MME**
Message:  MME fault

**0502  HFE-E  E$MME**
Message:  (M$STRAP)  MME fault

**0503  HFA-E  E$FAULT_TAG**
Message:  Fault Tag fault

**0503  HFE-E  E$FAULT_TAG**
Message:  (M$STRAP)  Fault Tag fault

| | Table C-1. Monitor Service Errors (All Messages) (cont.) | |
|---|---|---|

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|---|---|---|
| 0505 | HFA-E | E$COMMAND<br>Message:  Command fault |
| 0505 | HFE-E | E$COMMAND<br>Message:  (M$STRAP)  Command fault |
| 0506 | HFA-E | E$DERAIL<br>Message:  Derail fault |
| 0506 | HFE-E | E$DERAIL<br>Message:  (M$STRAP)  Derail fault |
| 0507 | HFA-E | E$LOCKUP<br>Message:  Lockup fault |
| 0507 | HFE-E | E$LOCKUP<br>Message:  (M$STRAP)  Lockup fault |
| 0509 | HFA-E | E$PRTY<br>Message:  Parity Error fault |
| 0509 | HFE-E | E$PRTY<br>Message:  (M$STRAP)  Parity Error fault |
| 0510 | HFA-E | E$IPR<br>Message:  Illegal Procedure fault |
| 0510 | HFE-E | E$IPR<br>Message:  (M$STRAP)  Illegal Procedure fault |
| 0511 | HFA-E | E$OPNC<br>Message:  OP Not Complete fault |
| 0511 | HFE-E | E$OPNC<br>Message:  (M$STRAP)  OP Not Complete fault |
| 0513 | HFA-E | E$OVERFLOW<br>Message:  Overflow fault |
| 0513 | HFE-E | E$OVERFLOW<br>Message:  (M$STRAP)  Overflow fault |
| 0514 | HFA-E | E$DIVIDE_CHECK<br>Message:  Divide Check fault |
| 0514 | HFE-E | E$DIVIDE_CHECK<br>Message:  (M$STRAP)  Divide Check fault |
| 0516 | HFA-E | E$SECURITY_1<br>Message:  Security 1 fault |
| 0516 | HFE-E | E$SECURITY_1<br>Message:  (M$STRAP)  Security 1 fault |
| 0517 | HFA-E | E$DLNK<br>Message:  Dynamic Link fault |
| 0517 | HFE-E | E$DLNK<br>Message:  (M$STRAP)  Dynamic Link fault |

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0518**  HFA-E  E$MISSING_SEGMENT
Message:  Missing Segment fault

**0518**  HFE-E  E$MISSING_SEGMENT
Message:  (M$STRAP)  Missing Segment fault

**0519**  HFA-E  E$MWSP
Message:  Missing Work Space fault

**0519**  HFE-E  E$MWSP
Message:  (M$STRAP)  Missing Work Space fault

**0520**  HFA-E  E$MISSING_PAGE
Message:  Missing Page fault

**0520**  HFE-E  E$MISSING_PAGE
Message:  (M$STRAP)  Missing Page fault

**0521**  HFA-E  E$SECURITY_2
Message:  Security 2 fault

**0521**  HFE-E  E$SECURITY_2
Message:  (M$STRAP)  Security 2 fault

**0522**  -A  E$ASF
Message:  Your Argument/Parameter Stack is full.

**0522**  HFB-A  E$ASF
Message:  Your Argument/Parameter Stack is full.
Message1: A Missing Page fault occurred while
accessing the Argument/Parameter Stack.

**0522**  JSE-A  E$ASF
Message:  Argument/Parameter Stack is full on entry to the
Command Processor.
Remarks:  This error can occur if:
1) The user enters the Exit/Abort logic
with less than 10 words remaining on the
Argument/Parameter Stack.
2) The user hits Control-Y causing a call
to JSE$ACP with less than nn words
remaining on the Argument/Parameter
Stack.
In either case, the error code in the JIT is
is set to E$ASF only if it currently is non-
zero.  The Argument/Parameter Stack is flushed
in all frames found on Safe-Store and the user
is aborted.

**0522**  SSU-E  E$ASF
Message:  Argument/Parameter Stack is full on entry to your
Debugger.

**0523**  -A  E$SSF
Message:  You blew the Safe-Store Stack.

**0523**  JSE-A  E$SSF
Message:  Your Safe-Store Stack is full on entry to the
Command Processor.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0523    JSN-A    E$SSF
                 Message:  You blew the Safe-Store Stack.

0523    SSU-E    E$SSF
                 Message:  Your Safe-Store Stack is full on entry to your
                           Debugger.

0523    UDN-A    E$SSF
                 Message:  The Safe-Store Stack is too full to allow Service
                           Requests.

0524    MMP-0    E$ASE
                 Message:  Your Argument/Parameter Stack is empty.
                 Message1: A call was made to M$PAS when no descriptors
                           are currently on the Argument Stack.

0526    HFE-E    E$MISSING_PTC
                 Message:  Restore without PTC (M$TRAP)

0527    HFE-E    E$NO_TD_PRIV
                 Message:  T&D authorization required to take HARDWARE trap
                           control.

0528    HFE-E    E$BAD_STRAP_CODE
                 Message:  Not a user visible fault (M$STRAP).

0540    GHM-E    E$NO_MSYS
                 Message:  M$SYS or M$INTCON-PRIVILEGED needs MSYS privilege.

0541    GHM-E    E$NO_INTCON
                 Message:  M$INTCON requires INTCON privilege to be active.

0542    GHM-E    E$BADLEVEL
                 Message:  M$INTCON LEVEL must be between 12 and 48.

0543    GHM-E    E$BADRUNLEVEL
                 Message:  M$INTCON RUNLEVEL must be between 12 and 48 and
                           <=LEVEL.

0544    GHM-E    E$USEDLEVEL
                 Message:  M$INTCON can provide service to only one process
                           per level.

0549    HFA-E    E$HARDWARE
                 Message:  Hardware Error
                 Message1: This error indicates that a hardware error (e.g.
                           parity fault) has occurred which probably was not
                           caused by software.
                 Message2: The following faults are included in this category:

                           1)  Any PARITY FAULT, OP NOT COMPLETE FAULT,
                           DYNAMIC LINKING FAULT, OR MISSING WORKING
                           SPACE FAULT.

                           2)  A MEMORY FAULT (STR FAULT) due to either a
                           non-existent address (fault register bit 4)
                           or a non-zero illegal action code (fault
                           register bits 16-31) received from the system
                           controller.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

3)  A COMMAND FAULT that was not caused by an
illegal slave procedure (fault register bit 2)
and was not caused by an illegal system
controller command (illegal action code of
12 octal) received from the system controller.

A procerror error log entry is created for each
hardware error.  The specific fault type causing
the hardware error can be determined by looking
at the procerror errors entries (ERROR PROCERR) in
the error log (ELAN processor).  The fault code
that caused the hardware error can also be
determined by examining word 5 of the safe store
frame that was created by the fault.

Since some hardware errors are intermittent, a user
whose job or program was aborted by a hardware
error might try resubmitting the job or rerunning
the program.

0600   MMP-0   E$SEGSIZE
               Message:  Illegal size specified.

0601   MMP-0   E$CONFUSED
               Message:  Both COMMON and AUTO were specified.

0602   MMH-0   E$BADSEGID
               Message:  That SEGID is not a valid data segment SEGID.

0602   MMP-0   E$BADSEGID
               Message:  Illegal SEGID.
               Message1: An illegal SEGID was specified on a call to M$FDS
                         or M$GDS otherwise no SEGID was specifed on M$FDS.

0603   MMP-0   E$ALLUSED
               Message:  All dynamic data segments have been allocated.

0604   MMG-0   E$ALLGONE
               Message:  All segment space has been allocated.

0604   MMH-0   E$ALLGONE
               Message:  All data segment space has been allocated.

0605     -0    E$MEMLIMIT
               Message:  User- or installation-set memory limit reached.

0605   GFM-E   E$MEMLIMIT
               Message:  User has no space for this DCB

0605   GJS-E   E$MEMLIMIT
               Message:  FEP User's memory limit exceeded.
               Remarks:  If the severity of the error is G_SEV_ERROR#,
                         the error was because the maxcore test internal
                         to the GJS$STEP routine failed.  If the severity
                         is G_SEV_ABORT#, it indicates an ALTRET from the
                         GMA$GET routine.

0605   GMA-0   E$MEMLIMIT
               Message:  User memory limit exceeded.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0605**  JLL-E  E$MEMLIMIT
Message: User or installation memory limit exceeded while restoring M$LINK image.
Remarks: This error results in a class 2 exit control condition. %RS_LIMX# will be set in B$JIT.RNST and %XL_MEM# will be set in B$JIT.XLIMFLG.

**0605**  JQS-E  E$MEMLIMIT
Message: User or installation memory limit exceeded while restoring SAVE image.
Remarks: This error results in a class 2 exit control condition. %RS_LIMX# will be set in B$JIT.RNST and %XL_MEM# will be set in B$JIT.XLIMFLG.

**0605**  MMH-0  E$MEMLIMIT
Message: User- or installation-set memory limit reached.

**0606**  MMG-0  E$BIGFREE
Message: Attempt to free more space than is in data segment.

**0606**  MMH-0  E$BIGFREE
Message: Attempt to free more space than is in data segment.

**0606**  MMI-0  E$BIGFREE
Message: Attempt to free more pages than are in dynamic data.

**0607**  MMI-0  E$CVMORGVP
Message: Page allocated via M$CVM or M$GVP encountered.

**0608**  MMI-0  E$USERONLY
Message: That service is allowed for user-mode programs only.

**0609**  -0  E$NOTFREE
Message: That page is already allocated.

**0610**  MMG-0  E$BADVP
Message: Bad virtual page no. - not in free segment area.

**0610**  MMP-0  E$BADVP
Message: Page not within available area of virtual memory.

**0611**  -0  E$HANDSOFF
Message: That page does not belong to you.

**0612**  -0  E$MMPRIV
Message: Insufficient privilege for the requested service.

**0612**  MMM-0  E$MMPRIV
Message: Insufficient privilege for requested service.

**0612**  MMP-0  E$MMPRIV
Message: Insufficient privilege for requested service.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0612**   PHA-    **E$MMPRIV**
Message:    Insufficient privilege for requested service.
Message1: You are not authorized to request that particular
Performance Monitor service. Data acquisition
services (M$GETPM, and M$GETMOUSE) require
Performance Monitor authorization. Executive
services (M$SMOUSE et al) require Extended
Performance Monitor authorization.

**0613**   MMP-0    **E$ALLSTOLEN**
Message:    No stealable physical pages are available.

**0613**   PHA-    **E$ALLSTOLEN**
Message:    No stealable pages are available.
Message1: I couldn't steal enough memory to start up the
Performance Monitor function that you requested.
Please try again later.

**0614**   MMP-0    **E$NOTSTOLEN**
Message:    That is not a stolen page.

**0615**      -0    **E$BADAREA**
Message:    The specified area contains pages which aren't
yours.

**0615**   MMP-0    **E$BADAREA**
Message:    The specified area contains pages not owned by user

**0617**      -0    **E$JIT**
Message:    The JIT, HJIT, AND PAGE TABLE cannot have their
access modified.

**0618**      -0    **E$FPOOL**
Message:    A file management buffer cannot have its access
modified.

**0619**      -0    **E$PGINUSE**
Message:    You cannot CVM a previously allocated virtual page.

**0619**   MMV-0    **E$PGINUSE**
Message:    All pages in use for fragment page table.

**0620**      -0    **E$BADPP**
Message:    That physical page does not exist.

**0621**   MMK-0    **E$SLUGONLY**
Message:    This service available only to SLUG ghost.

**0623**   MMM-0    **E$BADSAD**
Message:    Invalid SEGID specified on M$SAD or M$STD.

**0624**      -0    **E$IOACTIVE**
Message:    Attempt to free page with master function count > 0

**0625**   GHM-E    **E$MONPP**
Message:    M$INTCON couldn't allocate a page for the HHJIT.

**0625**   MMH-0    **E$MONPP**
Message:    Unable currently to allocate physical page to
monitor

| Table C-1. Monitor Service Errors (All Messages) (cont.) |
| --- |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
| --- | --- | --- |

0626    MMH-0    E$MONDSFULL
Message:   Monitor data segment has grown to its max size.

0627    MMP-0    E$TESTERR
Message:   Attempt to return page still in test to free page chain.

0628    MMM-0    E$DRTYPEBAD
Message:   Monitor SEGID must indicate a type 0-3 descriptor.

0630    MMH-0    E$SEGFULL
Message:   You attempted to enlarge a data segment past 256k.
Message1:   You have attempted to exceed the maximum size a segment descriptor is capable of framing: 256k words.

0631    MMQ-2    E$NOCGPG
Message:   There are no physical page slots available for mapping comgroup context or addressing blocks.

0632    MMQ-2    E$NOCGPP
Message:   There are currently no physical pages available for comgroup usage.

0633    MMQ-2    E$NOCGDBLK
Message:   There are no remaining free comgroup chunks.

0634    MMQ-2    E$BADCGPTR
Message:   That is not a valid context, address block, or data page pointer.

0635    MMQ-2    E$CGNOTALLOC
Message:   That context, address block, or data page is already free.

0637    MMQ-2    E$CGADBLKMAX
Message:   That comgroup address block already frames the maximum possible amount of data.

0638    MMQ-2    E$CGPGTYPBAD
Message:   The page indicated by your pointer is not the correct type for the operation requested.

0639    MMH-0    E$DSPROTBAD
Message:   Illegal value specified for data segment descriptor protection.

0640    MMP-0    E$NOTBADPP
Message:   Attempt to return a page which was never taken out of service.

0641    MMH-0    E$DSMODEBAD
Message:   Attempt to change the share mode of an allocated data segment.

0642    MMP-0    E$ITISSHARED
Message:   You may not release a shared data segment with M$FDS.
Message1:   A shared data segment must be released with the proper form of M$CLOSE.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0643**  MMP-0  E$SHRPROTECT
Message:  You are not allowed to change the protection on
a shared data segment.

**0644**  MMH-  E$DBLDSMAP
Message:  Attempt to map more than one file per data segment.

**0646**  MMQ-E  E$CGDNMT
Message:  The passed descriptor segment is not empty

**0647**  MMH-0  E$BRKCTY
Message:  User hit break or control Y during a memory request

**0648**  -S  E$VSINUSE
Message:  The specified Virtual segment is already in use
Message1: The access method specified a virtual segment
and that segment is in use by another DCB.

**0649**  -S  E$VSTOBIG
Message:  The size is greater than the maximum allowable.
Message1: The size of the virtual area is greater than
the maximum allowable size.

**0650**  FRA-E  E$BADSER
Message:  Serial number% %SN% does not match what's mounted.
Message1: You've specified both a serial number and a virtual
drive on which to use it%( %UF)%.
There is currently a different serial number
mounted by you on that drive.
Message2: It is possible to open to resources by generic type
(MT) or specific virtual drive (MT01).  The virtual
drive was defined by you on a !RES or !ORES
command. Now you've specified both a serial number
AND the virtual drive% (%UF)%, but you already have
something else mounted there.  REMOVE the current
serial number, use a different virtual drive, or
ask for the drive generically (MT#ABCD not
MT01#ABCD.
Remarks:  The user said something like:
C MT01#ABCD/XX TO MT01#WXYZ/BB

**0650**  UMF-4  E$BADSER
Message:  Bad packset or serial number.

**0651**  FRA-E  E$DUPREEL
Message:  You're already using that serial number% (%SN)%.
Message1: You've specified both a serial number and a virtual
drive on which to use it%( %UF)%.
You currently have that same serial number mounted
on another virtual drive.  It is possible that this
error occurred because you asked for the same tape
but specified different densities for the drive.
Message2: It is possible to open to resources by generic type
(MT) or specific virtual drive (MT01).  The virtual
drive was defined by you on a !RES or !ORES
command. Now you've specified both a serial number
AND the virtual drive% (%UF)%, but you already have
the serial number mounted on another drive. REMOVE
the serial number, use a different virtual drive,
or ask for the drive generically (MT#ABCD not

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

MT01#ABCD).

Remarks:  This has most often happened because of changes in the density at which a given tape reel was requested. The user could have said:
C MT01#ABCD/XX TO MT02#ABCD/YY

0652   FRA-E   E$REOPN
Message:   That resource% (%UF)% is already open!
Message1:  Only one DCB at a time may be open to a given resource. The resource you opened to% (%UF)% is already open.
Remarks:   In this case the user asked for a tape by serial number and already had a DCB open to it.  like:
C MT#ABCD/XX TO MT#ABCD/YY
Remarks:   In this case the user asked for a specific drive that he already has a DCB open to

0653   FRA-E   E$NORES
Message:   Your resources of this type% (%UF)% are exhausted!
Message1:  Physical resources are obtained via the !RES or !ORES command.  Non-BATCH users are permitted at most two tape drives without the use of !ORES.  If you own any of the resources you are asking for% (%UF)%, they are all in use.  Note that you might have (e.g.) tapes but none with the attributes you requested.
Remarks:   We cannot find (or get) a drive owned by this user to which to open his DCB. Watch out for attribute mismatches — the user may have a tape left that does not have the attributes (density) he is asking for

0653   GHM-E   E$NORES
Message:   Your limit of interrupt levels has been reached.

0654   FRA-E   E$BADRES
Message:   The full resource name% for %UF% must be specified.
Message1:  Except for tape or disk resources% (%UF here)%, it is not legal to specify only the generic type (e.g. LP) of the resource.  The full virtual name as specified on the !RES or !ORES command (e.g. LP01) must be given as RES on the M$OPEN.  If you did not intend to open to a resource, check the list of legal oplabels in the reference manual.
Remarks:   Probably the user did something like:
C ME TO QQ#
QQ is not an oplabel but the # says its a device

0655   FRA-E   E$NODP
Message:   Scratch disk packs% (as in %DC)% are not allocatable.
Message1:  A serial number must be specified to begin use of a disk pack% as you've requested in %DC%.
Remarks:   See message 1.

0655   FRP-E   E$NODP
Message:   Packset usage incompatible with request.
Message1:  The packsetrequest at VLP_RPSN.FAILX was exclusive and it is in use, or said shared and it isn't.
Remarks:   The request cannot be satisfied until something changes.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0656    FRA-E    E$MNTBRK**

Message:  BREAK or CONTROL-Y during mount% of %UF%.

Message1: When a terminal user hits BREAK or CTL-Y with a
mount operation in progress, that operation is
aborted.  If you still wish to do the mount% of
%UF%, please try it again.

Remarks:  The worst part of the problem is CVOL, where the
current operation requires both reels to be up to
complete.  It seems wrong to dissallow break and
control-y while the operator looks for the next
reel, so we make the user start over.  after all,
he is the one with the itchy fingers

**0657    FRP-E    E$NRLOPN**

Message:  You tried to release an in use resource!

Message1: There is still a DCB open to the physical resource
you are attempting to release.

Remarks:  In this case the user specifically requested the
release of a physical resource he still had a DCB
open to.

Remarks:  In this case a release all was done with a DCB
still open to a physical resource.

**0657    FRZ-E    E$NRLOPN**

Message:  There is a DCB open to that tape% %SN%.

Message1: You attempted to rewind, remove, or release a
tape% (%SN)% that you still have a DCB open to.

Remarks:  FRZ$RRR is called because of M$REW, etc. pmmes.
These operations are performed on serial numbers.
In this case, the serial number was found on a
drive that still shows a DCB open to it.

**0658    FRP-E    E$NOTUR**

Message:  You tried to free resources you don't own!

Message1: One or more of the resources you tried to free did
not belong to you or you tried to free more than
you owned.  The resources you did own have been
freed as requested.

Remarks:  This error is reported from various places in
FRP$PMME.  In this case too much MEMory was freed.

Remarks:  In this case an attempt to release more than the
users owned pseudo resources was made

Remarks:  In this case an un-owned physical resource had its
release requested.  This error is only reported
if not superseded by E$NRLOPN above.

**0658    FRZ-E    E$NOTUR**

Message:  That tape% (%SN)% is not mounted.

Message1: You attempted to rewind, remove or release a
tape% (%SN)% that you do not have mounted. You must
have M$OPENed to the tape at least once to perform
these operations.

Remarks:  FRZ$RRR is called because of M$REW, etc. pmmes
describing the tape involved by serial number.
This error occurs when the serial number is not
found mounted on as drive belonging to the user

**0658    GHM-E    E$NOTUR**

Message:  M$INTREL called for LEVEL not M$INTCONned.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|---------------------|

**0659    FRA-E    E$CANT**

Message:   The operator cannot do your mount request% for
%UF%!

Message1:  When a request to mount a tape appears on the
operators console, the operator has the ability
to cancel the mount request with a keyin.  This
was done to your last mount request% for %UF%.

Remarks:   This error results from use of the CANT MOUNT keyin

**0660    FRP-E    E$SUOUT**

Message:   The pseudo resources you requested are not
available.

Message1:  Granting your request for pseudo resources would
cause the total in use on the system or the total
in use for your mode (e.g. online) to exceed the
maximum.

Message2:  The system manager sets maxima for the number
of each pseudo resource that can be allocated
and for the number that any mode can own.  Your
request would exceed one or both of these.  If
you are not requesting more than is legal, try
again later after someone has released enough.

Remarks:   He wants more than he can have now.

**0660    GJS-E    E$SUOUT**

Message:   The pseudo resources you require are not available.

Message1:  The number of LCP-6 pseudo resources associated
with the run-unit exceeds the maximum number of
pseudo resources of that type for which you have
been authorized or granting your request for LCP-6
pseudo resources would cause the total in use on
the system or the total in use for your mode (User,
CG or Handler) to exceed the maximum.

**0661    FRZ-E    E$NORSS**

Message:   None of these resources are available on the
system.

Message1:  You explicitly (via !RES or !ORES) or implicitly
(by asking for a tape online without using !ORES)
asked the system to allocate a resource for you.
All of the system's resources of that type are
either allocated or not available.

Remarks:   We are out of what he wants — all in use or
partitioned

**0662    FRP-A    E$BSUNM**

Message:   The pseudo resource name specified does not exist!

Message1:  Pseudo resource names are established by the system
manager at boot time when TIGR is run.  You
attempted to acquire, release, or require a pseudo
resource whose name does not appear in that list.

Remarks:   In this case the severity of this error is abort
since the calling processor presumedly does not
want to run the users program without the
non-existent pseudo resource.

Remarks:   In this case the error is reported on an M$LIMIT
pmme issued by the command processor — probably the

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

|  |  | user put a bad pseudo name on a !LIMIT or<br>!RESOURCE command. |
|  |  | **Remarks:**  In this case, a bad pseudo name was passed on an<br>M$RELRES pmme.  This error is only reported if it<br>is the most severe error on the M$RELRES. |
| 0662 | GJS-E | E$BSUNM |
|  |  | **Message:**  The pseudo resource associated with the FPRG does<br>not exist. |
| 0662 | JST-A | E$BSUNM |
|  |  | **Message:**  The pseudo resource required by that run-unit does<br>not exists. |
| 0663 | FRP-A | E$NORQ |
|  |  | **Message:**  You do not own required pseudo resources! |
|  |  | **Message1:**  The processor you are attempting to run requires<br>that its users own certain pseudo resources.  These<br>must be acquired via the !RES or !ORES command<br>before the processor is invoked. |
|  |  | **Remarks:**  Standard failure for M$REQUIRE pmme. |
| 0664 | FRZ-E | E$NORSM |
|  |  | **Message:**  No more of this resource available for your mode. |
|  |  | **Message1:**  You explicitly (via !RES or !ORES) or implicitly<br>(by asking for a tape online without using !ORES)<br>asked the system to allocate a resource for you.<br>Allocating the resource would exceed the limit<br>placed on your mode (TIMESHARING, BATCH) for this<br>resource by the system manager. |
|  |  | **Remarks:**  Current for this mode for this resource would<br>exceed max if we allocated the resource |
| 0665 | FRA-E | E$BDATTR |
|  |  | **Message:**  Your resource% for %UF% does not have those<br>attributes! |
|  |  | **Message1:**  You attempted to open to a resource% for %UF%<br>specifying attributes that it does not have.<br>Attributes (e.g. 1600BPI,LOWERCASE) must be<br>requested on the !RES or !ORES command used to<br>acquire the resource. |
|  |  | **Remarks:**  The user probably asked for a 6250 BPI tape on a<br>drive he acquired without asking for that<br>attribute. |
| 0666 | FMP-E | E$NORSNN |
|  |  | **Message:**  Batch access to packset% DP#%SN% must be requested. |
|  |  | **Message1:**  Packset% DP#%SN% was not listed on a !RESOURCE<br>command and is not the system set or your HPSN<br>(home packset). |
| 0666 | FRA-E | E$NORSNN |
|  |  | **Message:**  You do not own such a resource% for %UF%! |
|  |  | **Message1:**  You tried to open% to %UF% with a full resource<br>name (dvnn not dv) but you have no resource by that<br>name.  The resource virtual name may be optionally<br>specified on the !RES or !ORES command. |
|  |  | **Remarks:**  He probably left something off his !resource<br>command. |

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0667**   FRP-E   E$NORMRM
Message:   Display area on M$DISPRES too small!
Message1: One of the VLPs supplied on M$DISPRES is too small
           to hold all of the users resources.  The area that
           was supplied has been filled in and FAILX indicates
           the VLP in error.
Remarks:   In this case VLP_PSEUDO was too small.
Remarks:   In this case the users physical resources won't
           fit.

**0668**   FRP-C   E$LESMEM
Message:   CONTACT YOUR SYSTEM MANAGER!!!
Remarks:   This error is only reported to LOGON.

**0669**   TDP-   E$PRTBSY
Message:   Device in use.  Will be partitioned when released.

**0670**   TDP-   E$UPNLDT
Message:   Cannot return that device because there are no
           LDCTs available

**0671**   GUS-E   E$MAXACCT
Message:   Can't start your FPRG; no entry available in
           account resource table.

**0672**   GUS-E   E$MAXFPRGS
Message:   Maximum number of FPRGs for your account has been
           exceeded.

**0701**   FTL-2   E$POSERR
Message:   Illegal ANS tape label or file structure% on %TA%
Message1: Error% on %TA% due to incorrect tape structure or
           bad or non-standard tape labels or file marks that
           are not what they are supposed to be.
Remarks:   An unexpected label was encountered.

**0702**   FTC-   E$PARTIALSN
Message:   Incomplete SN list returned% for DCB %DC%
Message1: Not enough space was supplied to return the
           entire serial number list% for DCB %DC%.

**0703**   FTO-2   E$BRDUPSN
Message:   Blank or duplicate serial number% on DCB %DC%
Message1: The serial number list contains either a blank
           serial number between non-blank serial numbers or a
           serial number that is duplicated% on DCB %DC%.

**0704**   FTW-2   E$NOTFULL
Message:   Must read/write FULL RANDOM/IDS tape files% for
           %TA%
Message1: Only full granule reads or writes of RANDOM or IDS
           files is supported for labelled tape.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0705    FTO-2    E$NORESTRICT
       Message:  No access to RESTRICT format files allowed% on DCB
                %DC%
       Message1: FMBLK privilege is needed to access RESTRICT
                format tape files.

0706    FTW-2    E$NONDECRCW
       Message:  Non-decimal control bytes% in %TA%
       Message1: The record control word, segment control word, or
                block control word of a tape file format with
                decimal control information is non-decimal.

0707    FTO-2    E$NOTFREEORG
       Message:  ORG not valid for managed tape% on DCB %DC%
       Message1: Only FREE, UNDEF, FIXED, and VARIABLE are permitted
                for managed free tape organizations.

0708    FTO-2    E$7TERROR
       Message:  7T tapes must have ASN=DEVICE, ORG=FREE% on DCB
                %DC%
       Message1: 7-track tapes are limited to free tape operations.

0709    FTW-2    E$NOTJRNLOWNER
       Message:  Only the journal owner can CVOL% on DCB %DC%

0710    FJJ-E    E$NOSN
       Message:  No serial number for journal.
       Message1: Serial numbers must be specified for tape journals.

0710    FTC-2    E$NOSN
       Message:  Blank serial number
       Message1: A serial number must be specified on a M$REM/M$REW
                call.

0710    FTO-2    E$NOSN
       Message:  No SN specified% on DCB %DC%
       Message1: An attempt to open an input or update volume with
                no serial number specified was made.

0711    FTR-2    E$NORING
       Message:  Ring for volume% #%SN% denied
       Message1: Operator refused to put a ring in your tape.
       Remarks:  The operator replied CANT RING on a ring request.

0712    FTW-2    E$CANTTRANSLATE
       Message:  EBCDIC translation required% on %TA% but buffer
                inaccessible
       Message1: Translation of data from ASCII to EBCDIC is
                required before data can be written, but the
                monitor is not able to access your buffer because
                it is write-protected (CONSTANT).

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0713    FTO-2    E$NOFIDTHIS
                 Message:  No file specified% on DCB %DC%
                 Message1: No file name or file sequence number is specified.
                 Remarks:  An attempt to open an input or update tape file
                           with no name was specified.


0714    FTO-2    E$BADFSN
                 Message:  FSN > 9999% for %TA%
                 Message1: You can't create a tape file with file sequence
                           number greater than 9999.
                 Remarks:  Obvious.


0715    FTL-2    E$EOVOL
                 Message:  End of volume% on %TA%
                 Message1: End of volume with user-requested CVOL
                           notification.
                 Remarks:  End of volume hit on read—user requested CVOL
                           handling.

0715    FTW-2    E$EOVOL
                 Message:  End of volume% for %TA%
                 Message1: End of volume with user requested CVOL
                           notification.
                 Remarks:  End of volume and user asked to be notified.


0716    FTL-2    E$EOSET
                 Message:  End of volume set% on %TA%
                 Message1: The last file of the volume set has already been
                           passed.
                 Remarks:  Looking for file by file sequence number
                           resulted in end of set.


0716    FTO-2    E$EOSET
                 Message:  Beginning/end of volume set% looking for %TA%
                 Message1: On an open NXTF the beginning or end of set
                           was detected% on LT#%SN% looking for %TA%


0717    FTL-2    E$EOVOLS
                 Message:  End of volume...partial record% on %TA%
                 Message1: The last record (segment) of the current volume
                           indicates that the current record has not yet ended
                           but you asked for CVOL control and you got it!
                 Remarks:  End of volume hit on read—user requested CVOL
                           handling.

0717    FTW-3    E$EOVOLS
                 Message:  End of volume...partial record% on %TA%
                 Message1: End of volume with user requested CVOL notification
                           during write of spanned record.
                 Remarks:  End of volume while spanning and user asked to
                           be notified.

| Table C-1.  Monitor Service Errors (All Messages) (cont.) |
| --- |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
| --- | --- | --- |
| 0718 | FTL-2 | E$TAPBRK |
| | | Message: Break or ctrl-Y during tape file search% for DCB %DC% |
| | | Message1: A tape file search (by name or sequence number) was interrupted by a break or ctrl-Y.  The search is aborted. |
| 0718 | FTR-2 | E$TAPBRK |
| | | Message: Break or ctrl-Y during RING/OVER keyin request% for %TA% |
| | | Remarks: While waiting for RING/OVER keyin, SSR$REQ altreturned. |
| 0720 | FTL-2 | E$NOFPOOL |
| | | Message: No FPOOL buffer% for %TA% |
| | | Message1: The are no FPOOL buffers for label processing. |
| | | Remarks: An attempt to find an available FPOOL buffer for label processing failed. |
| 0720 | FTO-2 | E$NOFPOOL |
| | | Message: Not enough FPOOLs% for %TA% |
| | | Message1: FPOOL limit does not permit label processing and file blocking/deblocking. |
| 0721 | FTW-0 | E$BADBLKL |
| | | Message: Inconsistent block length% for %TA% |
| | | Message1: Actual block length is less than that specified in the Block Header Record. |
| | | Remarks: The block size specified in the BOL is larger than the actual block size. |
| 0722 | FTW-0 | E$BADRECL |
| | | Message: Inconsistent record length% for %TA% |
| | | Message1: Record (segment) length is less than that specified in the Record Control Word. |
| | | Remarks: Probably bad tape. |
| 0723 | FTL- | E$BADSPAN |
| | | Message: Inconsistent spanning information% on %TA% |
| | | Message1: Either the previous record segment indicated that the current segment should be a continuation or indicated that the current segment should begin the next record. |
| | | Remarks: End of file hit while expecting continuing segment. |
| 0723 | FTW-0 | E$BADSPAN |
| | | Message: Inconsistent spanning information% on %TA% |
| | | Message1: A new record either started without the previous record terminating properly or it didn't begin properly. |
| | | Remarks: A record segment started a record without the previous segment indicating previous record end or the previous record segment ended the previous record but the current segment does not start a record. |

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0724   FTW-2   **E$PARTIALKEY**
Message:   Partial key% for %TA%
Message1:  Part of key is not present in block.
Remarks:   The key contained in the last record of a tape
           block is not wholly contained in the block.


0725   FTL-2   **E$BLKCNT**
Message:   Inconsistent block count% for %TA%
Message1:  The accumulated block count did not match the
           count specified in the end of file section labels.
Remarks:   The system accumulated block count is not the
           same as the block count in the EOV or EOF label.


0726   FTO-2   **E$VOLERR**
Message:   Specified VOL not in SN list% on DCB %DC%
Message1:  DCB.VOL specifies a volume not contained in the
           serial number list.
Remarks:   DCB.VOL was greater than 1 and no serial number
           list was specified or DCB.VOL specified a serial
           number not contained within the list.


0727   FTL-2   **E$VOLOUT**
Message:   No next volume% on %TA%
Remarks:   An output CVOL was attempted with no next volume.


0727   FTR-2   **E$VOLOUT**
Message:   No more volumes% for %TA%
Remarks:   DCB.MAXVOL = 0 and no more serial
           numbers exist.


0728   FTL-2   **E$VOLORDER**
Message:   Volume missing or out of order% for %TA%
Message1:  The volume with expected file sequence numbers can
           not be found in the volume set as described in the
           serial number list.
Remarks:   An attempt to find a file by its sequence number
           failed even though files with higher and lower
           sequence numbers were found.


0728   FTR-2   **E$VOLORDER**
Message:   Volume missing% for %TA%
Message1:  A file section can not be found...a volume must be
           missing.
Remarks:   An attempt to change to a missing volume or
           find a non-existent file by its sequence number was
           made.


0729   FTO-2   **E$FUNNYPOS**
Message:   Improper position% on %TA%
Message1:  Tape volume is not positioned for creating a new
           file.
Remarks:   The tape is positioned after an EOV label group
           or position is unknown.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0730    FTR-2    E$DENSBAD
                        Message:  Unavailable density% for %TA%
                        Remarks:  Attempt to open tape to a density which
                                    is unavailable in system or on drive.

0731    FTI-2    E$CANTIO
                        Message:  I/O not allowed% on %TA% due to previous error
                        Remarks:  I/O was attempted after an error which caused
                                    tape position to be lost occurred.

0731    FTW-2    E$CANTIO
                        Message:  I/O not allowed% on %TA% due to previous error
                        Message1: I/O is not allowed due to previous error.
                        Remarks:  Either position was lost or no drive.

0732    FTO-2    E$EBCDICTAP
                        Message:  You can't create an ASCII tape file on an EBCDIC
                                    volume set% (LT#%SN)%
                        Remarks:  The user attempted to write an ASCII format file
                                    to an EBCDIC tape.

0733    FTO-2    E$ASCIITAP
                        Message:  You can't create an EBCDIC tape file on an ASCII
                                    volume set% (LT#%SN)%
                        Remarks:  The user attempted to write an EBCDIC format file
                                    to an ASCII tape.

0734    FTO-     E$NOIFPARAM
                        Message:  No IFPARAM specified% for %TA%
                        Message1: Restrict tape files must have IFPARAM specified
                                    for creation.
                        Remarks:  An attempt to open a RESTRICT tape file in
                                    CREATE mode without having an IFPARAM buffer was
                                  made.

0735    FTL-2    E$FSNERR
                        Message:  File sequence number error% on %TA%
                        Message1: File specified by sequence number was not found
                                    because file sequence numbers in volume set were
                                  out of order.

0737    FTL-2    E$SECTERR
                        Message:  File section missing% for %TA%
                        Message1: A file section which should be present can not
                                    be found in the volume set as described in the
                                  serial number list.
                        Remarks:  The previous or next file section couldn't
                                    be found.

0738    FTO-2    E$SCRORDER
                        Message:  Out of order ANSscratch volume% on DCB %DC%
                        Message1: ANSscratch tapes can not be CVOLed to unless
                                    at beginning of volume set.
                        Remarks:  Attempt to open a scratch tape not at set
                                  beginning. This error helps to enforce ANS FSN
                                field in HDR1 by ensuring that the correct FSN is
                                always known.

| | Table C-1. Monitor Service Errors (All Messages) (cont.) |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0739   FTR-2   E$NOTANS
             Message:   Not an ANS volume% — FT#%SN%
             Message1:  Attempt to open or use an unlabelled tape as an ANS
                       tape.

0740   FTR-2   E$NOTDEV
             Message:   Not an unlabelled tape% LT#%SN%
             Message1:  You can't open an ANS volume as an unlabelled tape.
             Remarks:   Attempt to change to a tape which is not a device
                       tape.

0741   FTR-2   E$UNEXPIRED
             Message:   Volume unexpired% — #%SN%
             Message1:  You can't write on unexpired volumes.
             Remarks:   Attempt to open an unexpired ANS tape for output.

0742   FTR-2   E$OPROT
             Message:   Write access to volume% #%SN% denied
             Remarks:   Either: 1) after being asked to put a ring in
                       volume operator decided not to or 2) after being
                       asked for an OVER keyin operator decided not to.

0743   FTW-2   E$SMALLRECL
             Message:   Record too small% for %TA%
             Message1:  Tape records of less than 4 bytes are not allowed.
             Remarks:   Attempt to write a tape block with a record
                       of less than 4 bytes.

0744   FTR-2   E$NOTOWNR
             Message:   Only owner access allowed% to LT#%SN%
             Message1:  The owner of this volume set protected this volume
                       against all public access.

0745   FTR-2   E$NOTOWNRW
             Message:   Only owner write access allowed% to LT#%SN%
             Message1:  The owner of this volume set protected this volume
                       against all public write access.

0750   OCU-A   E$KEYIN
             Message:   No message or reply buffer specified
             Remarks:   The user has executed an M$KEYIN PMME
                       with no message or reply buffer
                       specified in his fpt

0751   OCU-A   E$NOTDEVICE
             Message:   DCB for M$KEYIN must be assigned to a device
             Remarks:   The user has requested communication with
                       a device console but has supplied a non-device
                       dcb.

0752   KNA-    E$NOTOPEN
             Message:   The DCB you have choosen must already be open

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0752   OCU-A   E$NOTOPEN**
Message:  DCB in M$KEYIN must be open to device
Remarks:  The user has requested communication with
          a device console but has supplied a
          closed dcb.

**0753   OCU-A   E$NODCBKI**
Message:  Illegal device DCB number specified for console
          communication.
Remarks:  The user has requested communication with
          a device console but has supplied an
          illegal dcb number.

**0754   OCU-A   E$TWONWIO**
Message:  Simultaneous M$KEYIN operations not permitted
Remarks:  The user has issued an M$KEYIN while
          he still has one outstanding

**0755   KIP-C   E$NKFUNC**
Message:  That terminal control service is not available to
          console ghosts
Remarks:  KEYIN only process some terminal control PMMEs.
          Other functions must be performed via keyins

**0755   OCU-C   E$NKFUNC**
Message:  Illegal function on a console ghost
Message1: Console Ghosts cannot perform all functions
          that are legal on a timesharing terminal.  You
          tried an illegal one.  Ignoring this error may
          well be the correct solution for your program.
Remarks:  Usually a 'get' type terminal control PMME that
          won't make it through KEYIN.

**0760   FSL-2   E$LDEVINCONS**
Message:  Inconsistent options for LDEV.
Message1: The LDEV option CONTINUE is inconsistent with the
          SCRUB, REMOVE, and ERASE options or with a change
          of destination or form name.

**0761   FSL-2   E$LDEVSNAME**
Message:  Illegal Logical Device name on LDEV.
Message1: Logical Device names must be four characters
          long:  two letters followed by two digits.
          Acceptable abbreviations are 'LP' for 'LP01', 'CP'
          for 'CP01', and 'ALL' to mean all defined logical
          devices. The name 'UC' refers to interactive user
          terminal.

**0762   FSL-2   E$LDEVNOSTREAMS**
Message:  No more Logical Devices can be defined.
Message1: All sixteen Logical Device slots are in use.
          You must un-define a Logical Device with LDEV
          (REMOVE) before you can define another one.

**0762   FSN-2   E$LDEVNOSTREAMS**
Message:  You can't use CP01 at this time
Message1: All Logical Device slots are in use.  To use CP01,
          LDEV (REMOVE) one of your Logical Devices.

**0763   FSL-2   E$INVDEV**
Message:  Illegal device name specified for from stream.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0763  FSW-2  **E$INVDEV**
Message:  There is no such device at that workstation.

0764  FSW-2  **E$INVWSN**
Message:  No such workstation.

0764  UMF-4  **E$INVWSN**
Message:  Bad WSN.

0765  FSW-2  **E$CANTWSN**
Message:  You aren't authorized to use that workstation.

0766  FSW-2  **E$INVFORM**
Message:  No form exists with that name.

0767  FSW-2  **E$CANTFORM**
Message:  That form is not available for that device.

0768  FSW-2  **E$CANTATTR**
Message:  That device doesn't have the requested attributes.

0769  FSN-2  **E$ILLIN**
Message:  This device does not permit that mode of opening.

0770  FSW-2  **E$ILLOUT**
Message:  That device can not be written.

0771  FSD-2  **E$BATOFF**
Message:  Batching of jobs is disallowed.

0772  FSW-2  **E$NOTAUTHFORM**
Message:  You aren't authorized to use that form.

0780  FSE-0  **E$INVVFC**
Message:  That VFC character is invalid.

0781  FSE-2  **E$CANTBIN**
Message:  BIN writes illegal here.

0782  FSE-2  **E$ILLBV**
Message:  M$WRITE with BIN and VFC illegal.

0783  FSN-0  **E$ORGNOTCOM**
Message:  The ORG is not compatible.
Message1: The orginization specified on the M$OPEN is not
          compatible with a DCB already opened to this
          stream.

0783  KNA-C  **E$ORGNOTCOM**
Message:  The ORG is not compatible.
Message1: The ORG you are trying to open
          is in compatible with another
          DCB open to the same stream.

0800  UQC-2  **E$DSFULL**
Message:  ENQ/DEQ table space exhausted.
0801  UQB-2  **E$DLOCK**
Message:  ENQ request would wait forever (deadlock detected).
Message1: A wait ENQ request would result in a circular chain
          of unsatisfied wait ENQ requests.  It was not
          honored.

## Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0802**    UQB-2    E$TIMELIMIT
Message: ENQ/DEQ wait time limit exceeded.

**0803**    UQB-2    E$NOEADDR
Message: Nowait M$ENQ requires event control

**0804**    UQB-2    E$CRD_ERR
Message: Type of DEQ incompatible with state.

**0805**    UQB-2    E$PDOMAIN
Message: ENQ/DEQ user domain conflict.
Message1: A resource has been ENQued by a different domain of the user

**0806**    UQB-2    E$MISSING_PARAM
Message: RNAME and SHARE must be specified for M$ENQ

**0807**    UQB-2    E$BAD_DCB
Message: The M$ENQ or M$DEQ DCB must have access to a file.
Message1: The DCB used as a parameter for M$ENQ or M$DEQ must exist, must be open to a file (ASN=FILE), and must be by the same domain if DCB.FFLG.EXEC.

**0808**    UQB-2    E$BAD_TIME
Message: WAIT_TIME for M$ENQ must be positive or -1.

**0809**    TDP-0    E$BREAK
Message: Break or control Y received during M$TDOPEN. Open not performed.

**0809**    UQB-2    E$BREAK
Message: Break or cntl Y occurred while waiting for ENQ.

**0810**    UQB-2    E$BAD_UPGRADE
Message: Resource must be allocated before upgrade attempted.

**0812**    UQB-2    E$ENQ_LIMIT
Message: System limit on number of ENQ's per user exceeded.

**0813**    UQB-2    E$UQ_NOCHANGE
Message: You re-ENQ'd that item with exactly the same options.

**0814**    UQB-2    E$UQ_DOWNGRADE
Message: Attempted downgrade request

**0815**    UQB-2    E$NO_UPGRADE
Message: Attempted upgrade request.

**0837**    UMC-3    E$NOTCMDNAME
Message: There is no such command variable.

**0838**    UMC-3    E$BADCMDNAME
Message: Bad command variable name.

**0839**    UMC-3    E$BADCMDCALL
Message: Bad call to M$CMDVAR

**0840**    EMH-1    E$NOHPROC
Message: No HELP is available for that processor.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0841  EMH-1  E$BADHOPT
              Message:   Conflicting options

0842  EMH-1  E$NOMOREHELP
              Message:   End of topic.
              Message1:  No further HELP exists for that topic

0843  EMH-1  E$BADHFID
              Message:   Bad processor FID

0844  EMH-1  E$NOTOPIC
              Message:   No such topic

0845  EMH-1  E$NOSTOPIC
              Message:   No such subtopic

0846  EMH-1  E$HERROR
              Message:   HELP ERROR
              Message1:  M$HELP either has generated an error, or the CALL
                         was bad

0847  EMH-1  E$NEEDRESULTS
              Message:   ALL and MORE options require the RESULTS area

0848  EMH-1  E$HELPDERR
              Message:   HELP database error
              Message1:  That M$HELP database is malformed

0849  EMH-   E$BADHPARAM
              Message:   Bad CALLing parameter

0850  UMF-4  E$NOFID
              Message:   No TEXTFID to process
              Message1:  Either TEXTFID contained only blanks or a NIL
                         pointer to TEXTFID was passed.
              Remarks:   Either the pointer to TEXTFID=ADDR(NIL) or
                         TEXTFID contains only blanks.

0851  UMF-4  E$BADFID
              Message:   Illegal FID
              Message1:  The string passed does not represent a valid FID.
              Message2:  TEXTFID contained an illegal combination of
                         delimiters(#,/,.,@) describing an illegal FID

0852  UMF-4  E$NOFIELD
              Message:   Required FID field missing
              Message1:  A FID element was found for which no destination
                         field was provided.

0853  EMR-0  E$ERRMSGALT
              Message:   M$ERRMSG altreturned to user.
              Remarks:   M$ERRMSG USES THIS CODE TO ALTRET

0854  UMT-0  E$BADDT
              Message:   Date or Time format error
              Remarks:   Date or time character string non numeric or
                         incorrectly formatted.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0856   UMF-4   E$FIDOFLOW**
Message:   Fid field too small
Message1: Some FID field was too small to hold its requested
contents

**0857   UMF-4   E$BADACCT**
Message:   Bad file ACCOUNT
Message1: An account name consists of 1 to 8 non-control,
7-bit ASCII characters.

**0858   UMF-4   E$BADPASS**
Message:   Bad file PASSWORD

**0860   FOM-E   E$NOSTA**
Message:   M$SYMBIO can't find that device
Remarks:   The STATION specified on M$SYMBIO was either not
found on the OSCG, or was found but was not
symbiont.

**0860   KCI-E   E$NOSTA**
Message:   Null destination specified on comgroup service.
Message1: For 'output' comgroup services (e.g. M$WRITE),
the destination must be specified or defaulted.
You specified ANYDCB = NO, and then either
speciified a blank STATION, or did not specify
it and the default would be blanks.   Such
an operation is legal only if a previous read
or write has set the "last station read or
written" in your DCB.
Remarks:   The user did an M$WRITE such that all of the
available places to get STATION (VLP_STATION,
VLP_SETSTA, and LASTSTA) were blank, and ANYDCB
was reset.   He probably wants to specify station,
or read before he writes.
Remarks:   See KCI$RWCG

**0861   KCI-E   E$TOOBIG**
Message:   Too many bytes written to comgroup.
Message1: The administrative user sets the max bytes written
through a comgroup.   You tried to write more than
that.

**0862   KCD-E   E$STACHAR**
Message:   Illegal first character in new FPRG station name

**0862   KCI-E   E$STACHAR**
Message:   Illegal STATION on comgroup read, write, or open.
Message1: STATIONs specified on comgroup service calls
must have a legal file name character as their
first character.   You specified one that does not.
Remarks:   Nobody can use special STATIONs

**0862   KQC-E   E$STACHAR**
Message:   Illegal character in station name on M$CGCTL
Message1: A station name supplied to M$CGCTL had an illegal
first character.

**0862   KQF-E   E$STACHAR**
Message:   The ORIGIN or DEST station of your VLP_CGMA is
invalid.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|---------------------|

0863   KCI-E   E$TYPCHAR
                Message:  Illegal MSGTYP on comgroup read, write, or open.
                Message1: MSGTYPs specified on comgroup service calls
                          must have a legal file name character as their
                          first character.  You specified one that does not
                          or you specified '*AUEV' which is reserved for CP-6
                          use.
                Remarks:  Only the AU can use special MSGTYPs, and then
                          only on a read.

0863   KQC-E   E$TYPCHAR
                Message:  Illegal character in message type on M$CGCTL
                Message1: A message type supplied to M$CGCTL had an illegal
                          first character.

0863   KQF-E   E$TYPCHAR
                Message:  The MSGTYP of your VLP_CGMA is invalid.

0864   KLM-E   E$NOCG
                Message:  Your comgroup is not currently available
                Remarks:  The comgroup we're trying to connect the thing
                          to isn't active.

0865   KCO-2   E$TWOAU
                Message:  This comgroup already has an administrative user
                Message1: Each comgroup may have only one administrative
                          user at a time, and this one already has one.

0866   KCO-2   E$STAILLGL
                Message:  The station name you specified is not allowed on
                          this comgroup
                Message1: The comgroup you are attempting to connect to has
                          a restricted list of legal stations, and the
                          station name you used is not in that list

0866   KLM-E   E$STAILLGL
                Message:  That station is illegal for the comgroup
                Remarks:  The target comgroup doesn't allow the use of
                          the given station name.

0867   KCD-E   E$DUPNM
                Message:  The station name you intended for your FPRG is
                          already in use

0867   KCO-2   E$DUPNM
                Message:  That station name is already in use
                Message1: The station name specified on an open to a
                          comgroup must be unique on that comgroup.
                          The name specified on your open is currently
                          in use by another user or terminal.

0867   KLM-E   E$DUPNM
                Message:  That station already connected to the comgroup
                Remarks:  The target comgroup already has a connected
                          station under the given name.  This error also
                          occurs when SLUG tries to connect a %KLAT_TRM#
                          and something of the same name is already on
                          the NOCG chain.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**0868**  KCD-E  **E$NOMEM**
> **Message:**  No room available in your comgroup to create your FPRG station

**0868**  KQC-E  **E$NOMEM**
> **Message:**  Insufficent comgroup memory available
> **Message1:**  Your comgroup has insufficient memory available for the additions you requested via M$CGCTL, or for its initial creation via M$OPEN.

**0869**  KCO-2  **E$CGCTLBAD**
> **Message:**  Unable to open comgroup% %UF%, saved context information is bad

**0870**  KCP-E  **E$NOTCG**
> **Message:**  That DCB% (%DC)% is not open to comgroup.
> **Message1:**  The DCB specified in your service request is required to be open to a comgroup, but is not.
> **Remarks:**  The comgroup-specific PMMEs all require a DCB open to comgroup.

**0871**  KCP-E  **E$NOTAU**
> **Message:**  Only the administrative user may control the comgroup
> **Message1:**  You issued a comgroup control service request, the use of which is restricted to the administrative user. You are not he.
> **Remarks:**  Only the AU may issued the comgroup control service requests.

**0872**  KCP-C  **E$NDSCL**
> **Message:**  Don't try to disconnect a local device
> **Message1:**  One the targets of an M$DEACTIVATE service request with DISCONNECT=YES was not a communications device. The device has been deactivated but cannot be disconnected.
> **Remarks:**  The operation would require wire cutters or some new order codes (BURN WIRES ASCII) in the IOM.

**0873**  KCP-E  **E$BSYMA**
> **Message:**  Illegal operation on symbiont device
> **Remarks:**  Only OUTSYM can get this error. He has his own PMMEs to activate and deactivate his devices whilst they are symbiont.

**0874**  KCI-C  **E$NOTCL**
> **Message:**  You are not allowed to use terminal control services.
> **Message1:**  The terminal control services (including M$SETFP) may only be done on a comgroup by users authorized to do so. You attempted a terminal control service without being authorized. This can be done by the administrative user.
> **Remarks:**  On comgroups terminal control is an access control like read or write. He doesn't have it.

**0875**  KCO-2  **E$NCGAU**
> **Message:**  You are not allowed to be the administrative user for comgroup %UF

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0876   KCO-2   E$NDCBCG
               Message:  DCBs are not allowed to connect to this comgroup

0877   KCI-E   E$LOCSTA
               Message:  You are not permitted to use that STATION!
               Message1: You have only restricted access to the comgroup
                         you are using, and the STATION you specified is not
                         allowed.
               Message2: The possible STATIONs accessable by a comgroup
                         user may be restricted by the comgroup itself or
                         via a !SET command. You tried to specify a STATION
                         outside of this restricted list
               Remarks:  SETSTA.LOCK is set and the user specified a STATION
                         not allowed by SETSTA.STATION.

0878   KCI-E   E$LOCTYP
               Message:  You are not permitted to use that MSGTYP!
               Message1: You have only restricted access to the comgroup
                         you are using, and the MSGTYP you specified is not
                         allowed.
               Message2: The possible MSGTYPs accessable by a comgroup
                         user may be restricted by the comgroup itself or
                         via a !SET command. You tried to specify a MSGTYP
                         outside of this restricted list.
               Remarks:  SETSTA.LOCK is set and the user specified a MSGTYP
                         not allowed by SETSTA.MSGTYP.

0879   KCI-E   E$LOCCTL
               Message:  You are not allowed to change STATION options!
               Message1: Your access to comgroup is restricted such that you
                         may not change STATION options (e.g. EOFNONE).
               Message2: The VLP_STATION control flags
                         (EOFNONE,ALLTRMS,etc.) that a comgroup user may
                         specify may be restricted by the comgroup itself or
                         via a !SET command.  You tried to specify
                         restricted control flags.
               Remarks:  SETSTA.LOCK is set and the users CTL is trying to
                         specify options not set in SETSTA.CTL.

0881   KCO-2   E$STABAD
               Message:  Illegal character(s) in station name
               Message1: Your VLP_SETSTA.MYSTATION# has an illegal
                         first character, or begins with the character '&'.

0882   KCP-E   E$NACTV
               Message:  That station is not active
               Message1: Your control service attempted to perform an
                         illegal operation on a deactivated station.

0883   KCO-2   E$NOCGLDCT
               Message:  Insufficient system LDCT space to connect you
               Remarks:  Unable to get an LDCT for this DCB

0884   KCO-2   E$CGGRANS
               Message:  IXTNSIZE for comgroup% %UF% is not large enough
               Message1: IXTNSIZE for a comgroup must be at least as large
                         as MAXPG+1

0885   KCO-2   E$CGSHARE
               Message:  Only the AU may open a comgroup with other than
                         SHARE=ALL

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV ERROR NAME/MESSAGE |
|------|----------------------------|

**0886**  KCO-2  E$CGNOCLS
Message:  Comgroup% %UF% was never closed properly
Message1: It is not possible to open a comgroup that was
          never properly closed.  The only way this should
          ever occur is if the system crashes and recovery
          fails.

**0887**  KCP-E  E$NOAURD
Message:  You require AU or AURD access to get comgroup
          information
Message1: You issued a comgroup informational service request
          but do not have AU or AURD access to the comgroup.

**0888**  KCO-2  E$PRIVSTA
Message:  The station name you used is restricted.
Message1: Only the AU may use the station name that you
          specified.

**0889**  KCO-2  E$CGSTAR
Message:  COMGROUPs may not be star or scratch files

**0890**  KLM-E  E$NTRMSTA
Message:  The comgroup doesn't allow terminals under that
          name
Remarks:  The target comgroup doesn't allow terminals to
          connect with the supplied name.

**0891**  KCO-2  E$OLDCG
Message:  Unable to open comgroup% %UF% - old version
Message1: The comgroup you tried to open was created
          by a previous version of CP-6, and cannot
          be used.

**0892**  KCO-E  E$CGORAU
Message:  Your M$OPEN was rejected by the comgroup
          administrator
Remarks:  The comgroup has DWBCONWA = YES and the AU
          M$DEACTIVATEd this user after getting the DCB OPEN
          event.

**0893**  KCO-2  E$RCVRBAD
Message:  Cannot reopen comgroup - recovery area is bad

**0894**  KCI-E  E$NFPTCTL
Message:  You may not issue terminal control services to an
          FPRG terminal

**0895**  KCF-4  E$BADMSGTYP
Message:  Message type invalid.

**0896**  KCF-4  E$BADSTA
Message:  Illegal station.

**0900**  TDP-0  E$ERRTOOBIG
Message:  Entry greater than maximum size of 1000 words.

**0901**  TDP-0  E$NOBUFS
Message:  NO ERROR LOG BUFFERS TO BE READ.
Remarks:  There are no error log buffers to pass.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0902    TDP-0    E$BUF2SMALL
                 Message:  M$RDSYSLOG BUFFER LESS THAN 512 WORDS.
                 Remarks:  The buffer specified in the M$RDSYSLOG fpt is
                           smaller than 512 words.

0903    TDP-0    E$TDNOPERM
                 Message:  Operator refused permission to use T&D services.

0904    TDP-     E$TDNODEV
                 Message:  Device requested by M$TDOPEN does not exist.

0905    TDP-0    E$TDNOTEST
                 Message:  No test was specified in M$TDOPEN fpt

0906    TDP-0    E$TDBADDVN
                 Message:  Device number bad in M$TDOPEN fpt.

0907    TDP-0    E$TDMPCBSY
                 Message:  The requested MPC is not available for T & D.

0909    TDP-0    E$TDNOTOPEN
                 Message:  DCB %DC is not open.

0910    TDP-0    E$TDNOTDCB
                 Message:  DCB %DC is not a T&D dcb.

0911    TDP-0    E$TDDEVBSY
                 Message:  The requested device is not available for T&D.

0912    TDP-0    E$TDMISC
                 Message:  T & D feature not yet implemented.

0913    TDP-0    E$TDBADIDCW
                 Message:  T & D DCW list contains an illegal IDCW.
                 Message1: It is illegal to write on other than a diagnostic
                           cylinder of a shared disk.

0914    TDP-0    E$NOCPU
                 Message:  DESIGNATED CPU IS UNAVAILABLE
                 Remarks:  THE SPECIFIED CPU IS NOT CONFIGURED IN THE SYSTEM

0915    TDP-0    E$CPUSTOPPED
                 Message:  DESIGNATED CPU NOT RUNNING
                 Remarks:  THE SPECIFIED CPU IS PRESENT BUT IS NOT RUNNING.

0916    TDP-0    E$CPUDIAGERR
                 Message:  ANOTHER USER OR CPU IS IN DIAGNOSTIC MODE;

0917    TDP-0    E$CPUASSIGNERR
                 Message:  REQUESTED CPU NOT IN DIAGNOSTIC MODE

0918    NIE-     E$BADDCB
                 Message:  DCB %DC is open.
                 Message1: The DCB used for M$IOQ must not be open.

0918    TDP-0    E$BADDCB
                 Message:  M$IOQ DCB %DC open or assigned.

0919    TDP-0    E$BADDCWLIST
                 Message:  M$IOQ bad DCW list.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0920 NIE- E$BADDLA
Message: Bad device logical address.
Message1: Either the DCTX does not correspond to a local device or the specified granule number converts to a sector number greater than 1048575.

0920 TDP-0 E$BADDLA
Message: M$IOQ bad Device Logical Address

0921 NIE- E$BADLFC
Message: Bad logical function code.
Message1: That logical function code exceeds the maximum logical function code or is not implemented for this device.

0921 TDP-0 E$BADLFC
Message: M$IOQ bad Logical Function Code.

0922 TDP-0 E$TDALTBAD
Message: Bad altpath specified on M$TDIO.
Message1: The altpath specified does not exist or reaches a device other than the one the T & D DCB is opened to.

0923 TDP- E$INFO2SMALL
Message: The buffer area passed is smaller than the size of the entry.
Message1: The area framed by the ENTRY vector of the M$WRSYSLOG fpt must be at least as big as the value specified for SIZE.

0924 TDP-0 E$SCNNOCOMP
Message: The specified component does not exist.

0925 TDP-0 E$SCNNOTDEV
Message: The specified component is not a device (It is probably an MPC)

0926 TDP-0 E$SCNNOTMPC
Message: The specified component is not an MPC. (It is probably a device)

0927 TDP-0 E$SCNNOPATH
Message: Can't return that device because all paths to it are partitioned.

0928 TDP-0 E$ONLYPATH
Message: Can't partition that component because it is the only path to some device that has not been partitioned.

0929 TDP-0 E$SCNNOTFEP
Message: The specified FEP does not exist

0930 TDP-0 E$SCNTDUSER
Message: Cannot return that component because there is a T & D user using it.

0932 TDP- E$TDNOTFEP
Message: FEP does not exist.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

0933    TDP-    E$TDBADWINDOW
                Message:  Window area must be present for T&D FEP open and
                          must begin and end on a page boundary.

0935    TDP-0   E$CWFORNONDP
                Message:  Cannot set CHECKWRITE% for device %U1.%
                Message1: CHECKWRITE is only legal for disk devices.

0936    TDP-    E$TDCHANDOWN
                Message:  Cannot run MDR through partitioned channel.

0937    TDP-0   E$REMOTEFEP
                Message:  Cannot perform operations on remote FEPs.
                Message1: Partition, return, or display of remote FEPs
                          is not supported in SYSCON.

0951    PHA-C   E$NOMOUSE
                Message:  Sorry - MoUsE isn't running.
                Message1: I can't honor your M$GETMOUSE service request -
                          MoUsE isn't running at the moment.

0953    PHA-C   E$NOT_FROG
                Message:  You can't do M$FEPDATA requests!  >croak<
                Message1: The M$FEPDATA service is for the use of the FROG
                          ghost only! If you wish to examine the FEP
                          performance data, please use M$GETPM.

0954    FSN-0   E$BAD_FEP
                Message:  There is no FEP with that name.

0954    PHA-C   E$BAD_FEP
                Message:  M$FEPDATA is not supported.
                Message1: The monitor no longer keeps FEP stats data, and the
                          M$FEPDATA service has been deleted.

0955    PHA-E   E$CANT_START
                Message:  I can't start that feature - it's already started!
                Message1: The special performance monitoring feature that you
                          requested was already in effect.  If you wish to
                          re-initialize the feature, you must STOP it and
                          then START it again.

0956    PHA-E   E$CANT_STOP
                Message:  I can't stop that feature - it's not running!
                Message1: The special performance monitoring feature that you
                          asked me to stop was not active - therefore, there
                          is nothing for me to stop!

1000    TDP-    E$NTRY2BIG
                Message:  System log entries may not exceed 1000 words.

1001    GTM-0   E$SLBUSY
                Message:  Sysloging is currently busy.  Retry later.

1001    TDP-    E$SLBUSY
                Message:  System log is busy.  Try again later.

1002    TDP-    E$NEEDPAGE
                Message:  System log needs a buffer page and can't get it
                          right now.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1003   TDP-   E$SLFILE
            Message:   System log file number may not exceed 99.

1051   KIP-C   E$NOTTS
            Message:   You have no terminal to control!
            Message1:  The terminal control service requests are only
                       legal if the user has a terminal to control.  This
                       is not true if the job is BATCH or a system GHOST.
                       The best thing to do is ignore this CONTINUE
                       severity error or use it to check mode.
            Remarks:   This CONTINUE severity error is produced mainly
                       to provide an easy way to check mode by issuing
                       an M$PROMPT pmme.  In this way, the JIT need not
                       be INCLUDEd

1053   KIP-A   E$NILOPT
            Message:   Required option missing on terminal control service
                       request.
            Remarks:   Messages are in KIP$PMME.  In this case BUF or
                       RESULTS in M$FEBOOT or M$FEDUMP is too small
            Remarks:   This error occurs whenever any of the required
                       VLPs are missing on the terminal control pmmes.
                       Essentially all of them have required VLPs.
                       Watch out for missing BUF on M$PROFILE

1054   KIP-C   E$O2SMALL
            Message:   Option area too small on terminal control service
                       request.
            Message1:  On such terminal control requests as M$STRMATTR and
                       M$STRMCTL, the option area is required to be
                       exactly the size of the corresponding VLP.  On the
                       M$GTRMATTR and M$GTRMCTL, etc. services it must be
                       at least as large as the corresponding VLP.  Use of
                       the supplied VLP MACROs is reccommended.
            Remarks:   On attribute  reading pmmes this is essentially
                       lost data, although nothing is transferred.  On the
                       setting ones, all option values must be specified.

1055   KIP-C   E$O2BIG
            Message:   Option area too large on terminal control service
                       request.
            Message1:  The option areas on such terminal control services
                       as M$STRMATTR and M$STRMCTL are sent as messages
                       to the front end.  Because of this their size must
                       be limited to that of the appropriate VLP MACRO.
                       Your request specifies an option area exceeding
                       this. Use the appropriate VLP when issuing the
                       terminal control service requests.
            Remarks:   On the terminal control pmmes that set attributes
                       the options are required to be exactly the size of
                       the corresponding VLP.  The user no doubt tried to
                       invent his own or mis-issued the pmme

1056   KIA-C   E$BYD
            Message:   Asynchronous event interrupted terminal I/O.
            Message1:  One of the following occurred while I/O to
                       your timesharing terminal was pending: BREAK,
                       CONTROL-Y, X keyin, E keyin,  DISCONNECT.  If
                       you can continue the I/O will be re-issued.
            Remarks:   As a rule, the user never sees this error.  Either
                       he is Xed, ERRORed, or disconnected such that he

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

does not continue to run; or BREAK or CTL-Y was
hit.  In the case of BREAK, the users break control
routine can examine this code to discover whether
terminal writes or control pmmes were in progress.
In any case B$JIT.JUNK.JJ_BAKIC is set such that
if the user does an M$TRTN or says GO to IBEX the
interrupted pmme is re-issued

**1056    KNA-    E$BYD**
    Message:   Asyncronous event interupted I/O.

**1057    KIP-A    E$CURBOOT**
    Message:   That FEP is already being rebooted!
    Remarks:   The FEP being halted on an M$FECTL is currently in
           the boot or dump process

**1058    KIP-A    E$BADFEX**
    Message:   No such FEP exists!
    Message1:  FEP# in your FPT_FECTL is invalid.
    Remarks:   Self explanitory - if you can issue this pmme, you
           probably shouldnt make this mistake.  SLUG uses
           this error to say THERE IS NO FEP n

**1059    KIA-C    E$BYDR**
    Message:   Asynchronous event interrupted terminal read.
    Message1:  One of the following occurred while a read to
           your timesharing terminal was pending: BREAK,
           CONTROL-Y, X keyin, E keyin,  DISCONNECT.  If
           you can continue the read will be re-issued.
    Remarks:   As a rule, the user never sees this error.  Either
           he is Xed, ERRORed, or disconnected such that he
           does not continue to run; or BREAK or CTL-Y was
           hit.  In the case of BREAK, the users break control
           routine can examine this code to discover whether
           a read to the terminal was interrupted.
           In any case B$JIT.JUNK.JJ_BAKIC is set such that
           if the user does an M$TRTN or says GO to IBEX the
           interrupted pmme is re-issued

**1059    KIF-E    E$BYDR**
    Message:   M$SETFP interupted by async event.
    Remarks:   A comgroup read was interrupted by break or ctl Y.

**1059    KQY-C    E$BYDR**
    Message:   WAIT M$READ to COMGROUP interrupted by asynchronous
           event.
    Message1:  You had a WAIT M$READ pending to comgroup when you
           hit BREAK or CONTROL-Y or disconnected or were
           aborted. If you continue this process the read will
           be re-issued.
    Remarks:   The user will seldom see this error since he is
           going away (Xed,ERRORed,disconnected), to IBEX
           (CTL-Y) or to BREAK control.  The error is provided
           so that BREAK control routines can detect that a
           read was pending when the BREAK was hit.
           B$JIT.JUNK.JJ_BAKIC is set so that an M$TRTN or a
           GO to IBEX will re-issue the M$READ

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1060  KIP-C  E$BPROTYP
       Message:  That PROFILE is impossible for your terminal!
       Message1: Each PROFILE contains a code describing the types
                 of terminals that it describes.  Should an attempt
                 be made to (say) assign an IRBT profile to a
                 timesharing terminal, the code does not match that
                 of the terminal and this error results.
       Remarks:  MESSAGE1 says it - The user is probably trying to
                 be cute

1061  KIP-A  E$FEPRUN
       Message:  That FEP is not halted!
       Message1: The FEP that you attempted to BOOT or DUMP is
                 currently booting or dumping.
       Remarks:  In this case a GO was issued on a running FEP
       Remarks:  Either someone is trying to boot/dump a running FEP
                 or two people are trying to boot/dump the same one

1062  KIP-A  E$NFEMAP
       Message:  BUF on M$FEBOOT or M$FEDUMP is too big to map!
       Message1: The BUF of an M$FEBOOT or M$FEDUMP must be mapped
                 into the FEPs WSQ.  This requires it be no greater
                 than 248K words — yours is bigger.
       Remarks:  This is almost certainly a coding error in the
                 calling program or a memory management bug

1063  KIP-A  E$NBTDMP
       Message:  M$FEDUMP or M$FEBOOT failed.
       Message1: Your M$FEBOOT or M$FEDUMP request did not run to
                 completion.  The reason for failure was returned in
                 RESULTS.ERR and the size of any partially complete
                 dump in RESULTS.ARS.
       Remarks:  Standard error to let the booter or dumper know
                 the process did not complete.  The real reason
                 why is in the FPT results area

1064  KIP-A  E$FEPDN
       Message:  Dont try to STOP a down FEP!
       Message1: The FEP you tried to STOP is not running.
       Remarks:  Either someone is trying to stop a stopped FEP or
                 two people are trying to stop the same one.

1065  KIP-A  E$FEPART
       Message:  That FEP is partitioned!
       Message1: No control operations can be performed on that FEP
                 until it is RETURNed via SYSCON.
       Remarks:  This is to prevent keyins, etc. on partitioned FEPs

1066  KIF-E  E$NOTFP
       Message:  M$SETFP is illegal on that DCB% (%DC)%
       Message1: The M$SETFP service is only available on ORG=FPRG
                 or ORG=HANDLER, ASN=DEVICE DCBs and COMGROUP DCBs.
                 Either your DCB% (%DC)% is not so assigned, or it
                 is not open.
       Remarks:  FCD, ASN, AND ORG are checked.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**1067**   KCI-E   **E$BTCSTA**
   Message:   You can't terminal control a DCB!
   Message1:  The terminal control services (including M$SETFP)
              may only be issued to stations which represent
              communications terminals, not DCBs.  The station
              name you specified was that of a DCB or IOM
              connected device.
   Remarks:   Can't have them doing this can we?

**1068**   KIF-E   **E$NFPRQ**
   Message:   That destination doesn't need a form!
   Message1:  The M$SETFP service may only be performed on a
              destination which has a forms program at job step.
   Remarks:   ~LDCT.LKFLG.FPSTEP

**1069**   KIF-E   **E$NONFP**
   Message:   Thats no FEP program!
   Message1:  The file described on ar M$SETFP service must be a
              FEP program.

**1071**   KIF-E   **E$FPDBSY**
   Message:   Attempt to use M$SETFP on a busy DCB% (%DC)%.
   Message1:  M$SETFP may not be issued on a DCB% ,like %DC,%
              which has no-wait I/O in progress.
   Remarks:   This is a good time to catch a DCB with a pending
              read which would cause no end of trouble later.

**1073**   GHS-2   **E$TWODBG**
   Message:   That FPRG is already being debugged!

**1074**   KIP-E   **E$NOACC**
   Message:   No write access provided to M$PROFILE buffer!
   Remarks:   File management couldnt read the profile into the
              users buffer because of access protection

**1077**   FSN-0   **E$NOFPRG**
   Message:   No FPRG is currently running.
   Message1:  After an open with ORG=FPRG a run unit must be down
              line loaded.

**1077**   GHS-2   **E$NOFPRG**
   Message:   That FPRG does not exist

**1077**   GUM-4   **E$NOFPRG**
   Message:   That FPRG does not exist

**1080**   GJA-    **E$CHAN_NOT_PART**
   Message:   This channel was never partitioned

**1083**   GJA-    **E$CONT_OWNED**
   Message:   This controller is wholy or partially owned
              already.

**1084**   GJA-    **E$CHAN_OWNED**
   Message:   This channel is already owned by someone.

**1085**   GJA-    **E$NO_DEVICES**
   Message:   No available devices meet the specified criteria.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE | |
|------|---------|--------|---|

**1087   KIF-E   E$FPFID**
Message:   That PROFILE-specified FPRG is not a valid fid
Message1:   For a load-by-profile type of M$SETFP, the FPRG
FID found in the PROFILE record must be for a
disk file and be an otherwise valid FID. Your's
did not pass.

**1088   KCF-4   E$NODAT**
Message:   No data available.
Message1:   No data with the reqested MSGTYP or STATION is
currently avoiable.

**1088   KIA-C   E$NODAT**
Message:   No throttling to write this message.

**1088   KNA-   E$NODAT**
Message:   No throttling available for this write
or no data available for this read.

**1090   GJA-   E$CHAN_PART**
Message:   Operation illegal on a partitioned channel.

**1092   GJA-   E$NOT_OWNED**
Message:   Operation illegal on an unowned channel

**1093   GJA-   E$NO_HANDLER**
Message:   Specified handler is not currently running.

**1094   GHS-2   E$NODBGACC**
Message:   You do not have debug access to that FPRG

**1095   KIS-7   E$FECRASH**
Message:   The FEP crashed.
Message1:   The FEP, that you were connected to, crashed.

**1096   KIA-7   E$TERM**
Message:   Your connection has been terminated.
Message1:   The session connection has been terminated.

**1100   FOM-E   E$BSYSY**
Message:   M$SYMBIO can't open a busy symbiont
Remarks:   The symbiont that the user is trying to open
is already open.

**1101   FOM-E   E$NHLTD**
Message:   M$SYMBIO can't continue or space a busy symbiont
Remarks:   A CONTINUE or SPACE M$SYMBIO PMME was issued
against a symbiont which was not halted.

**1102   FOM-E   E$XTEXT**
Message:   M$SYMBIO - symbiont doesn't need another extent
Remarks:   Another extent was passed to a symbiont which did
not need one yet.

**1103   FOM-E   E$NSBLK**
Message:   No LDCTs available for M$SYMBIO OPEN or SPACE
Remarks:   Opening a symbiont output device requires an LDCT
for the symbiont context block.  This error occurs
when there are none.  It also occurs if no LDCT
(used as a tabs buffer) is available when
commencing a spacing operation.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**1104   FOM-E   E$NVMEM**
Message:  No virtual map space for output symbiont
Remarks:  Each OPEN or CONTINUE M$SYMBIO requires a page
          in the appropriate FEWSQ map, for the symbiont
          disc buffer.  This error occurs when the space
          is not available.  On an OPEN, the error results
          in a failed open; on a CONTINUE (or SPACE) the
          error results in the symbiont being left in state
          HELD.

**1104   FOS-E   E$NVMEM**
Message:  No space to map status segment in page table
Remarks:  The buffer passed with M$JOBSTATS REMAP is assumed
          to be a segment of the in-core job status infor-
          mation.  This buffer is to be mapped into the
          page table used for framing the various segments
          of the in-core file.  This error occurs when the
          page table contains insufficient room for the map-
          ping to be performed.

**1105   FOM-E   E$NSCLS**
Message:  M$SYMBIO can't close or write a busy symbiont
Remarks:  The symbiont that the user is closing or writing
          is neither idle nor halted.

**1106   FOM-E   E$NOHLT**
Message:  M$SYMBIO can't halt a non-busy symbiont
Remarks:  The symbiont that the user is trying to halt is
          in the process of being halted (for some other
          reason) or disconnected.

**1107   FOM-E   E$BADFC**
Message:  Unknown M$SYMBIO function code
Remarks:  The function code (order) passed with M$SYMBIO
          was unknown.

**1107   FOS-E   E$BADFC**
Message:  Unknown M$JOBSTATS function code
Remarks:  The function code (order) passed with M$JOBSTATS
          was unknown.

**1108   FOM-E   E$LOCAL**
Message:  M$SYMBIO - illegal function on local device
Remarks:  The function code issued with M$SYMBIO is
          not appropriate for a local device.

**1109   FOS-E   E$NAUTHFC**
Message:  You are not authorized to use this function
Message1: Only the MBS, PRESCAN and OUTSYM system ghosts
          may execute the REMAP function of M$JOBSTATS.
          Only users with EFT privilege may issue the
          SPILL/FILL functions of M$JOBSTATS.
Remarks:  Although any user may issue the informational forms
          of M$JOBSTATS, the system co-ordination function(s)
          are restricted to use by system processes.

**1110   FOS-E   E$NOTFND**
Message:  M$JOBSTATS was unable to find the requested job(s)

| Table C-1.  Monitor Service Errors (All Messages) (cont.) |
| --- |

| Code | FCG-SEV | ERROR NAME/MESSAGE | |
| --- | --- | --- | --- |
| 1111 | FOS-E | E$NOTYJ | |
| | | Message: | M$JOBSTATS refuses to CANCEL/UNHOLD this job - it is not yours |
| | | Message1: | The requested job belongs to another account, therefore you are not allowed to CANCEL/UNHOLD it |
| 1112 | FOM-E | E$BADEXT | |
| | | Message: | M$SYMBIO - Bad extent passed |
| | | Remarks: | Either the first or last granule in the passed extent did not pass FAF$SRTODR check. |
| 1113 | FOS-E | E$JOBAOFF | |
| | | Message: | The job to be cancelled has already run |
| | | Message1: | This error occurs when a CANCEL is issued but output is not to be deleted, and the job has finished running and has output waiting or printing. |
| | | Remarks: | As in MESSAGE1.  Note that if OUTPUT is specified, then output will be cancelled in this situation. |
| 1114 | FOS-E | E$JSIRAS | |
| | | Message: | Insufficient number of M$JOBSTATS results frames. |
| | | Message1: | While performing an M$JOBSTATS SPILL or SRCH service, you have specified too few frames in the primary (RESULTS_) results area. |
| 1115 | FOS-E | E$JSIRLS | |
| | | Message: | Insufficient M$JOBSTATS resource list space |
| | | Message1: | While performing an M$JOBSTATS SRCH (batch queue) service, you have specified too few frames in the resource list (RESLIST_) results area. |
| 1116 | FOS-E | E$JSISLS | |
| | | Message: | Insufficient M$JOBSTATS serial number list space |
| | | Message1: | While performing an M$JOBSTATS SRCH (batch queue) service, you have specified too few frames in the serial number list (SNLIST_) results area. |
| 1117 | FOS-E | E$NSPILL | |
| | | Message: | That file is not marked for spill |
| | | Message1: | The file specified on an M$JOBSTATS SPILLDONE call was found not marked for spill. |
| 1118 | FOS-E | E$FNOTFND | |
| | | Message: | M$JOBSTATS was unable to find the requested file. |
| 1119 | FOS-E | E$NSPILLED | |
| | | Message: | That file is not spilled |
| | | Message1: | The file specified on an M$JOBSTATS FILL call was found not spilled. |
| 1120 | FOS-E | E$SQRCVR | |
| | | Message: | Symbiont queue recovery in progress. |
| | | Message1: | Your job status service request cannot be processed because the job status information is being recovered. |
| | | Remarks: | One of the ghosts who supply the jobstats info is still performing his post-boot recovery. |

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**1121    FOM-E    E$ALGNDSC**
Message:  M$SYMBIO — inopportune disconnect
Remarks:  The device started disconnecting.  OUTSYM won't
          find out about this if we are in the middle of
          an alignment sequence until it's too late.  This
          is a way to let OUTSYM know immediately.

**1122    FOS-E    E$JSIRPS**
Message:  Insufficient M$JOBSTATS results parameter size.
Message1: While performing an M$JOBSTATS CHECK, CHECKF,
          SPILL, or SRCH service, you have specified too
          small an area to serve as a results (RESULTS_)
          parameter.

**1123    FOS-E    E$JSICPS**
Message:  Insufficient M$JOBSTATS criteria parameter size.
Message1: While performing an M$JOBSTATS SPILL or SRCH
          service, you have specified too small an area to
          serve as a criteria (CRITERIA_) parameter.

**1125    JGP-E    E$NGHMEM**
Message:  No memory available to start user
Remarks:  SLUG couldnt get memory to make the initial user
          image.

**1126    JGP-E    E$NGHUSR**
Message:  No user slots available to start user
Message1: Either max users on system or max users of
          requested mode on system would be exceeded by
          starting your use- or no sysids available.
Remarks:  SLUG cant get a user slot to start the user

**1128    JGP-E    E$BGHNM**
Message:  Illegal user name
Message1: User names must be > 0 and <= 12 bytes in length
Remarks:  His name is too big.

**1129    JGP-E    E$CCGT256**
Message:  M$GJOB CCBUF string exceeds 256 bytes
Remarks:  Can't pass a CCBUF string longer than 256 bytes
          since it won't fit into B$JIT.CCBUF

**1129    KIF-E    E$CCGT256**
Message:  M$SETFP specified a CCBUF greater than 256
          characters

**1130    JGP-E    E$NGLGN**
Message:  No such user logon from M$GJOB

**1131    JGP-E    E$NGAUTH**
Message:  Requested user not authorized to run in requested
          mode

**1135    KQM-E    E$CGCGMP**
Message:  Can't get MINPG pages for your COMGROUP
Message1: The requested minimum amount of memory for your
          COMGROUP is not available.

| | Table C-1.  Monitor Service Errors (All Messages) (cont.) |

| Code | FCG-SEV ERROR NAME/MESSAGE |
| --- | --- |

**1136**  KCO-2  E$CGCXT
Message:  Insufficient space in comgroup to connect you
Message1: There is not enough space available in the comgroup
for the context necessary to connect you

**1136**  KLM-E  E$CGCXT
Message:  No space in the comgroup to connect
Remarks:  The comgroup doesn't have space to perform the
requested connection.

**1136**  KQM-E  E$CGCXT
Message:  Unable to allocate context for your COMGROUP
Message1: No memory was available for the initial context
of your COMGROUP, therefore it cannot be opened.

**1137**  KQU-E  E$BCGULO
Message:  Illegal option on M$UNLATCH
Message1: One of the INPUT or OUTPUT fields in your M$UNLATCH
FPT contained an unknown disposition code, or you
illegaly specified INPUT = HOLD/RERUN and
OUTPUT ~= DELETE.

**1138**  KQU-E  E$CGNTUL
Message:  Nothing to UNLATCH
Message1: You have no LATCHed message of the type you
attempted to UNLATCH.

**1139**  KQC-E  E$CGMSDT
Message:  M$CGCTL SET TYPE LIST must set the default types
Message1: The message type list supplied with M$CGCTL was
supposed to be the entire list (TYPFC=SETLIST),
yet did not include the default TERMINAL and
DCB message types (VLP_CGCP.TMTYP, VLP_CGCP.DMTYP).
This is not legal, and, while the supplied list
has been added, none of those types not in the
list have been deleted.

**1140**  KQU-E  E$MULDCW
Message:  You can only UNLATCH DELETE a continued, LATCHed
write
Message1: Your DCB has a LATCHed continued output message
waiting for the next segment to be written.  Since
this is your most recent LATCHed output, it clearly
cannot be sent yet; M$UNLATCH can only delete it.

**1141**  KQU-  E$CULUSR
Message:  Can't UNLATCH DELETE an input until successfully
read
Message1: You cannot UNLATCH DELETE an input message read
with latch until it has been successfully read.

**1142**  KQC-E  E$BCGPRI
Message:  Illegal M$CGCTL priority setting
Message1: Your M$CGCTL service attempted to set a default or
station or message type priority to an illegal
value.

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1143   KQC-E   E$CGCDDT
               Message:   M$CGCTL cannot delete a default message type
               Message1:  You specified a message type for deletion which
                          was the default type for messages from terminals
                          or DCBs.  This is illegal.

1144   KQC-E   E$CGCDXT
               Message:   Default message type unknown and illegal to add it
               Message1:  The default message type specified in VLP_CGCP in
                          M$CGCTL was not in the comgroup's list, and it
                          could not be added because VLP_CGCP.XTYPLGL was
                          reset.

1145   KQC-E   E$CGUAFC
               Message:   Unknown M$CGCTL function code
               Message1:  The STAFC or TYPFC code in your M$CGCTL FPT is
                          unknown.

1145   KQI-E   E$CGUAFC
               Message:   Unknown M$CGINFO function code
               Message1:  The STAFC or TYPFC code in your M$CGINFO FPT is
                          unknown.

1146   KQC-E   E$CGCDAN
               Message:   M$CGCTL cannot delete an active queue node
               Message1:  You cannot delete a message-type/station from the
                          list of legal queue keys when messages of that key
                          are active.

1147   KQC-E   E$CGCDCS
               Message:   M$CGCTL cannot delete a connected station

1148   KQI-E   E$CGITLS
               Message:   Insufficient M$CGINFO TYPE list space
               Message1:  The TYPLIST area specified in your M$CGINFO service
                          is not large enough to hold all the message types
                          you requested.  All that it would hold have been
                          returned to you.

1149   KQI-E   E$CGISLS
               Message:   Insufficient M$CGINFO STATION list space
               Message1:  The STALIST area specified in your M$CGINFO service
                          is not large enough to hold all the stations you
                          requested.  All that it would hold have been
                          returned to you.

1150   KQC-E   E$CGIQLS
               Message:   Insufficient QLIST area space for M$CGCTL
               Message1:  The QLIST area specified by your M$CGCTL service
                          is not as long as the list (STALIST or TYPLIST) it
                          is parallel to.

1150   KQI-E   E$CGIQLS
               Message:   Insufficient QLIST area space for M$CGINFO
               Message1:  The QLIST area specified by your M$CGINFO service
                          is not as long as the list (STALIST or TYPLIST) it
                          is parallel to.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1151    KQC-E    E$CGTTRP
         Message:   Bad TYPLIST or QLIST area specified by M$CGCTL
         Message1: Either the TYPLIST or QLIST area specified by your
                   M$CGCTL service is inaccessible.

1151    KQI-E    E$CGTTRP
         Message:   Bad TYPLIST or QLIST area specified by M$CGINFO
         Message1: Either the TYPLIST or QLIST area specified by your
                   M$CGINFO service is inaccessible.

1152    KQC-E    E$CGSTRP
         Message:   Bad STALIST or QLIST area specified by M$CGCTL
         Message1: Either the STALIST or QLIST area specified by your
                   M$CGCTL service is inaccessible.

1152    KQI-E    E$CGSTRP
         Message:   Bad STALIST or QLIST area specified by M$CGINFO
         Message1: Either the STALIST or QLIST area specified by your
                   M$CGINFO service is inaccessible.

1153    KQC-    E$CGAFNT
         Message:   M$CGCTL can't find that message type
         Message1: One of the message types specified in your M$CGCTL
                   service's TYPLIST could not be found.

1153    KQI-E    E$CGAFNT
         Message:   M$CGINFO can't find that message type
         Message1: One of the message types in your M$CGINFO
                   service's TYPLIST could not be found.

1154    KCP-C    E$CGAFNS
         Message:   That STATION does not exist!
         Message1: Your M$ACTIVATE or M$DEACTIVE service specified
                   STATION options which resulted in no stations
                   being processed.

1154    KQC-    E$CGAFNS
         Message:   M$CGCTL can't find that station
         Message1: One of the stations specified in your M$CGCTL
                   service's STALIST could not be found.

1154    KQI-E    E$CGAFNS
         Message:   M$CGINFO can't find that station
         Message1: One of the stations in your M$CGINFO
                   service's STALIST could not be found.

1155    KQM-E    E$CGCGDB
         Message:   Can't get defer blocks.
         Message1: The requested number of defer blocks cannot be
                   obtained due to insufficient memory.

1156    KQC-E    E$CGMPEN
         Message:   Your file is too small for that MAXPG value
         Message1: A comgroup file must always have MAXPG free
                   granules in it, for system recovery processing.
                   This error results from attemping to increase MAXPG
                   when the file has too few free granules.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1157   KCO-2   E$CGCROP
        Message:  Unable to reopen your comgroup
        Message1: Your comgroup was previously closed, but
                  is so badly broken that it cannot be reopened.

1158   KQM-E   E$CGMPLC
        Message:  Your comgroup is at its MAXPG limit
        Message1: No more physical memory can be allocated to your
                  comgroup since it already has the AU-established
                  maximum number of pages.

1159   KQM-E   E$CGCPLA
        Message:  Your account's comgroup CURPG limit has been
                  reached
        Message1: No more physical memory can be allocated to your
                  comgroup since the account in which it lies has
                  reached the account limit for currently in-use
                  physical pages.

1160   KQF-E   E$FWCG_V
        Message:  The V_ area of your FPT_FWCG is bad.

1161   KQF-E   E$FWCG_CRITERIA
        Message:  The CRITERIA_ area of your FPT_FWCG is bad.

1162   KQF-E   E$FWCG_SCA
        Message:  The SCA_ area of your FPT_FWCG is bad.
        Message1: You specified CRITERIA which requires a valid SCA_
                  area.

1163   KQF-E   E$FWCG_REATTR
        Message:  The REATTR_ area of your FPT_FWCG is bad.

1164   KQF-E   E$FWCG_SRA
        Message:  The SRA_ area of your FPT_FWCG is bad.
        Message1: You specified REATTR which requires a valid SRA_
                  area.

1165   KQF-E   E$FWCG_RESULTS
        Message:  The RESULTS_ area of your FPT_FWCG is bad.

1166   KQF-E   E$FWCG_ONEATTR
        Message:  The ONEATTR_ area of your FPT_FWCG is bad.

1167   KQF-E   E$FWCG_QSELECT
        Message:  The QSELECT parameter of your FPT_FWCG is bad.

1168   KQF-E   E$FWCG_NOLATCHED
        Message:  There is no currently LATCHED input message to
                  M$FWCG.
        Message1: You requested the currently LATCHED input message
                  by setting CRITERIA to NIL, and you don't have any
                  such message.

1169   KQF-E   E$FWCG_MSGIDXT
        Message:  The MSGIDXT of your VLP_CGMA is invalid.

1170   KQF-E   E$FWCG_NONE
        Message:  NO messages with the specified criteria were found.

Table C-1.   Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1171   KQF-E   E$FWCG_DATAPGS
                Message:   Comgroup data cache too small for M$FWCG INFORM.
                Message1:  M$FWCG with INFORM requires that the data cache
                           in the comgroup have a minimum size of at least
                           2.  Your comgroup's cache does not.

1172   KQI-E   E$CGIWILD
                Message:   '?' not found as trailing character of TYPE or
                           STATION
                Message1:  You specified TYPFC=WILD but did not supply a
                           wildcarded type in VLR_CGTYPL.LIST.NAME(0), or
                           you specified STAFC=WILD but did not supply a
                           wildcarded station in VLR_CGSTAL.LIST.NAME(0).

1190   KCP-E   E$CGNWDR
                Message:   That STATION isn't awaiting disconnect permission
                Message1:  One of the targets of an M$DEACTIVATE service
                           request with DSCGO=YES was not waiting for
                           permission to disconnect.

1191   KQC-E   E$BDJFID
                Message:   Bad JRNLFID passed to M$CGCTL
                Message1:  The JRNLFID parameter in your M$CGCTL service is
                           inaccessable or too small, or too large.

1191   KQI-E   E$BDJFID
                Message:   Bad JRNLFID passed to M$CGINFO
                Message1:  The JRNFID parameter on your M$CGINFO call is
                           insufficiently large to receive the entire journal
                           FID of the comgroup.

1200   KLM-E   E$PCFEPDN
                Message:   The FEP just crashed
                Remarks:   The FEP on which the subject device lives isn't
                           up.  Caused by the inevitable timing window in
                           SLUG/ELF.

1201   KCD-E   E$PCNLDCT
                Message:   No LDCTs available to ACTIVATE your FPRG user

1201   KLM-E   E$PCNLDCT
                Message:   No LDCTs available for connection.
                Remarks:   The connection requires a new LDCT but none are
                           available.

1203   KLH-E   E$NUSR
                Message:   !!!MAX USERS ALREADY IN SYSTEM

1204   KLH-E   E$NOOL
                Message:   !!!NO MORE ONLINE USERS CURRENTLY ALLOWED

1205   KLH-E   E$NOSYD
                Message:   !!!NO SYSTEM ID AVAILABLE TO LOG YOU ON

1206   KLH-E   E$NJIT
                Message:   !!!INSUFFICIENT PHYSICAL PAGES TO START A NEW USER

1207   KLH-E   E$BDID
                Message:   !!!ACCT, NAME, PW OR PRO TOO LONG — TYPE '?' FOR
                           SYNTAX

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1208  KLH-E  E$ILGL
             Message:  !!!NO SUCH LOGON - PLEASE TRY AGAIN - TYPE '?' FOR
                       SYNTAX

1209  KLH-E  E$NGPR
             Message:  !!!SPECIFIED PROFILE DOES NOT EXIST

1210  KLH-E  E$NOPR
             Message:  !!!DFLT PROFILE BAD - TYPE (E.G.) PRO=TTY AFTER
                       ACCT,NAME

1211  KLH-E  E$NFIL
             Message:  !!!SYSTEM NOT YET READY FOR LOGONS

1212  KLH-E  E$HLPBD
             Message:  !!!ACCOUNT DEFINITION BAD - SEE YOUR SYSTEM MANAGER

1213  KLH-E  E$SGSYN
             Message:  !!!TYPE: 'ACCOUNT,NAME,PASSWORD' E.G.
                       5555,MYUSERNAME,SECRET

1214  KLH-E  E$OLIL
             Message:  !!!THAT LOGON ILLEGAL FOR TIMESHARING

1215  KLH-E  E$BDPR
             Message:  !!!ILLEGAL PROFILE TYPE - TRY AGAIN

1216  KLH-0  E$NGPRS
             Message:  !!!DFLT PROFILE BAD - HANDLER PROFILE USED

1217  KLH-0  E$NOPRS
             Message:  !!!SPECIFIED PROFILE DOES NOT EXIST - HANDLER
                       PROFILE USED

1218  KLH-0  E$BDPRS
             Message:  !!!ILLEGAL PROFILE TYPE - HANDLER PROFILE USED

1219  KLH-0  E$NOHOST
             Message:  !!!That Host is not currently available.

1221  KLC-E  E$NOFE
             Message:  That FEP does not exist

1221  KLI-4  E$NOFE
             Message:  That FEP does not exist.
             Message:  That FEP does not exist.
             Message:  That FEP does not exist.

1222  KLI-4  E$NFPRG
             Message:  No authorization to start an FPRG.

1223  KLI-4  E$NODENA
             Message:  That node is not currently available.
             Message:  That node is not currently available.
             Message:  That node is not currently available.

1226  FJJ-E  E$ASNERR
             Message:  Incorrect journal ASN.
             Message1: The journal ASN is not the same as that specified
                       when the journal was created.

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1227  FJJ-E  E$JRNLSTAR
             Message:  JAYS can't journal on your * file.
             Message1: JAYS can't open Star file journal in your account.

1230  MMV-S  E$VSBADAC
             Message:  Memory accesses out of range for virtual segment
             Message1: The virtual address is larger than the maximum
                       allowable for the virtual area

1231   -S   E$VSNOPP
             Message:  At least two physical pages is needed for a
                       Virtual Segment.

1232   -S   E$NOVLPVIRT
             Message:  VLP_VIRTUAL must be specified.
             Message1: The access method specified VS1 or VS2 or VS3
                       and VIRTUAL was not specified on the open.

1233   -S   E$ILGLSEG
             Message:  Illegal segment number.
             Message1: The segment number for the virtual segment
                       was not 1, 2, or 3.

1234  MMP-0  E$BADWSQ
             Message:  Illegal WSQ specified.
             Message:  Illegal WSQ specified.

1235  GMA-0  E$ACCT_MEMLIMIT
             Message:  Account memory limit exceeded.

1235  GUS-E  E$ACCT_MEMLIMIT
             Message:  Maximum memory for your LCP-6 account has been
                       exceeded.

1236  GMA-0  E$MODE_MEMLIMIT
             Message:  User Mode memory limit exceeded.

1236  GUS-E  E$MODE_MEMLIMIT
             Message:  Maximum memory for your LCP-6 mode has been
                       exceeded.

1241  KNA-   E$NOLDCT
             Message:  No LDCT for this network Session is available

1241  KNH-G  E$NOLDCT
             Message:  No LDCTs available for this connection

1242  KNH-G  E$BADMFMT
             Message:  Bad message format.
             Message1: The message in the circular queue is invalid.

1243  KNH-G  E$ILLDCT
             Message:  The LDCT specified in the message is invalid

1244  KNH-G  E$NOCQMEM
             Message1: No memory available for Handler Monitor Interface

1245  KNH-G  E$ILGCTYPE
             Message:  Illegal connection type specified in FPT

Table C-1. Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

**1246**    KNA-    E$NORTE
Message: No network connection is available

**1246**    KNH-G    E$NORTE
Message: No route available to that destination

**1247**    KNH-G    E$CQFUL
Message: The destination cirqular queue is full

**1248**    KNH-G    E$BADSCQFMT
Message: The circqular queue is invalid

**1250**    KNH-G    E$NOHMI
Message: No HMI entry available.
Message1: All the available HMI entries are used.

**1251**    KNH-G    E$RESUNDEF
Message: The resource in the FPT is undefined.

**1252**    KNH-G    E$HMIBUSY
Message: The HMI interface is currently busy.
Message1: Another level is currently using the HMI interface.
Remarks:
    The HMI context is marked busy which means another
    level is currently doing an MCL on the HMI.

**1254**    KNA-    E$NET_ADDR
Message: No network address has been specified for this
        resource.

**1255**    KNA-    E$APE_SSN
Message: Unable to establish a network Session for this DCB

**1256**    KNA-    E$CNCFAIL
Message: The attempt to create the network connection has
        failed

**1257**    KNA-    E$NO_IOP
Message: No I/O packets available for this operation

**1260**    GJA-0    E$NOHANDLER
Message: There is no handler with the specified name.

**1261**    KNA-0    E$NOQ
Message: No circular queue available for this write

**1262**    KNH-G    E$INVFUNCTION
Message: Invalid function on message.
Message1: The function on this message is invalid for the
        current state.

**1302**    GHB-A    E$TRACE
Message: Trace/Breakpoint Trap

**1303**    GHB-A    E$NO_SIP
Message: Uninstalled SIP Trap

**1304**    GHB-A    E$TROT
Message: Watch Dog Timer Runout

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1305   GHB-A   E$UNIMPL
              Message:  Unimplemented Instruction Trap

1306   GHB-A   E$INT_REG_OV
              Message:  Integer Register Overflow Trap

1307   GHB-A   E$S_DBZ
              Message:  SIP Divide by Zero Trap

1308   GHB-A   E$S_EXP_OV
              Message:  SIP Exponent Overflow Trap

1309   GHB-A   E$STK_UF
              Message:  Stack Underflow Trap

1310   GHB-A   E$STK_OV
              Message:  Stack Overflow Trap

1312   GHB-A   E$REMOTE_DESC
              Message:  Remote Data Descriptor Trap

1313   GHB-A   E$PRIV
              Message:  Privilege Violation Trap

1314   GHB-A   E$MEM_PROT
              Message:  Memory Protection Trap

1315   GHB-A   E$INT_UR
              Message:  Internal Unavailable Resource Trap

1316   GHB-A   E$PROG_ERR
              Message:  Program Error Trap

1317   GHB-A   E$INT_MBE
              Message:  Internal Memory or Bus Error Trap

1319   GHB-A   E$S_EXP_UF
              Message:  SIP Exponent Underflow Trap

1320   GHB-A   E$S_PROG_ERR
              Message:  SIP Program Error Trap

1321   GHB-A   E$S_SIGNIF
              Message:  SIP Significance Error Trap

1322   GHB-A   E$S_PRECISION
              Message:  SIP Precision Error Trap

1323   GHB-A   E$EXT_UR
              Message:  External (CIP or SIP) Unavailable Resource Trap

1324   GHB-A   E$EXT_MBE
              Message:  External (CIP or SIP) Memory or Bus Error Trap

1325   GHB-A   E$C_DBZ
              Message:  CIP Divide by Zero Trap

1326   GHB-A   E$C_SPEC
              Message:  CIP Illegal Specification Trap

|  | Table C-1. Monitor Service Errors (All Messages) (cont.) |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|
| 1327 | GHB-A | E$C_CHAR<br>Message: CIP Illegal Character Trap |
| 1328 | GHB-A | E$C_TRUNC<br>Message: CIP Truncation Trap |
| 1329 | GHB-A | E$C_OV<br>Message: CIP Overflow Trap |
| 1330 | GHB-A | E$CIP_QLT<br>Message: CIP QLT Fault |
| 1331 | GHB-A | E$SIP_QLT<br>Message: SIP QLT Fault |
| 1347 | GHB-0 | E$FPRG_EXIT<br>Message: FPRG M$EXIT. |
| 1348 | GHB-0 | E$FPRG_ERR<br>Message: FPRG M$ERR. |
| 1349 | GHB-0 | E$FPRG_XXX<br>Message: FPRG M$XXX. |
| 1350 | GHB-0 | E$FPRG_LDTRC<br>Message: FPRG requesting M$LDTRC. |
| 1351 | GHB-0 | E$FPRG_XBREAK<br>Message: FPRG (FPL interpreter) M$XBREAK. |
| 1352 | GHB-0 | E$FPRG_SCREECH<br>Message: FPRG M$SCREECH |
| 1360 | GHB-0 | E$DB_TIMER<br>Message: FEP Debugger Timer Runout.<br>Remarks: Used for internal LCP-6 flag.<br>The user should never see this message. |
| 1361 | GHB-0 | E$FPRG_START<br>Message: FPRG started via M$SETFP. |
| 1362 | GHB-0 | E$FPRG_START2<br>Message: FPRG started via M$LDTRC. |
| 1363 | GHB-0 | E$HOST_INT<br>Message: FPRG interrupted by Host Debugger. |
| 1370 | GHB-0 | E$FPRG_EVENT<br>Message: FPRG entry to event handler. |
| 1371 | GHB-0 | E$FPRG_BRK<br>Message: FPRG entry to break handler. |
| 1372 | GHB-0 | E$FPRG_XCON<br>Message: FPRG entry to exit control. |
| 1403 | KVF-E | E$NO_FLDSLC<br>Message: No input fields selected to read% %UF%.<br>Message1: Either no fields were selected before reading%<br>%UF%, or all of the selected fields were protected. |

Table C-1.  Monitor Service Errors (All Messages) (cont.)

| Code | FCG-SEV | ERROR NAME/MESSAGE |
|------|---------|--------------------|

1404  KVM-E  E$IMP_ILGCMNTYP
               Message:  Bad IMP command or function type.
               Message1: IMP command not ADD or DELETE, or function type not
                         one of: PRIMARY or SECONDARY ESCAPE, SPECIAL CHAR,
                         CONTROL STRING, FUNCTION KEY, or SHIFTED FUNCTION
                         KEY.

1405  KVM-E  E$IMP_ILGID_TKNTYP
               Message:  this error never happens.

1406  KVM-E  E$IMP_ILGINTTKNTYP
               Message:  Bad IMP introducer type.

1407  KVM-C  E$IMP_CNTGETMMR
               Message:  Can't get memory for your IMP table.

1408  KVM-E  E$IMP_TBLSIZLMTEXC
               Message:  Your IMP request would exceed the IMP memory limit.

1409  KV -E  E$DATDLT_DLT
               Message:  Data ignored due to output-delete function.

1410  KVM-C  E$DATDLT_DSC
               Message:  Data was ignored because it was received after a
                         disconnect
               Message1: Data (probably written by a CP-6 or LCP-6 program)
                         has been ignored because it was received after a
                         disconnect was initiated (probably caused by the
                         terminal's link dropping).

1415  KVO-C  E$X364_P_CNTEXC
               Message:  Too many Pn values (numeric parameters) specified
                         on ANS X3.64 function.
               Message1: More than 16 Pn values (numeric parameters) were
                         specified on an ANS X3.64 function sent to an ANS
                         X3.64 virtual device.

1416  KVO-C  E$X364_P_MAXVALEXC
               Message:  Pn value (numeric parameter) specified on ANS
                         X3.64 function is > 32750
               Message1: The maximum value of a Pn value (numeric parameter)
                         specified on an ANS X3.64 function sent to an ANS
                         X3.64 virtual device is 32759.

1417  KVO-C  E$X364_ILGF_CHR
               Message:  An apparent ANS X3.64 control sequence has an
                         illegal F character.
               Message1: The F (identifying) character specified
                         on an ANS X3.64 function sent to an ANS X3.64
                         virtual device is illegal – there is no such
                         function.

1418  KVO-C  E$X364_ILGCE_CHR
               Message:  An apparent ANS X3.64 CE independent control has an
                         illegal CE character.
               Message1: The CE (identifying) character specified
                         on an ANS X3.64 function sent to an ANS X3.64
                         virtual device is illegal – there is no such
                         function.

| Table C-1. Monitor Service Errors (All Messages) (cont.) |
| --- |

| Code | FCG-SEV | ERROR NAME/MESSAGE |
| --- | --- | --- |
| 1419 | KVO-C | E$X364_ILGFE_CHR<br>Message:  An apparent ANS X3.64 FE independent control has an<br>               illegal FE character.<br>Message1: The FE (identifying) character specified<br>               on an ANS X3.64 function sent to an ANS X3.64<br>               virtual device is illegal — there is no such<br>               function. |

# Appendix D

# RECOVERY Error Messages and SCREECH Codes

## Error Reporting

Certain messages are reported by the recovery routines that are useful to the system analyst when the console log is examined along with the recovery dump. These messages are:

| Message | Meaning |
|---------|---------|
| RCVR-MON PAGE 0 CLOBBERED | The data in page 0 of the mapped Monitor Instruction Segment failed the consistency checks. |
| RCVR-TRAP ACCESSING MONITOR DATA | The routine accessing the monitor data required to build a dump file was trapped. |
| RCVR-MON JIT PAGE BAD | The monitor's page table PGINMEM bit is not set, or the physical page does not exist for the JIT page. |
| RCVR-USER JIT PAGE BAD | The user's page table PGINMEM bit is not set or the physical page does not exist for the JIT page. |
| RCVR-TRAP IN RVF$CLSF | Indicates a trap in RVF$CLSF. This is printed if RVDEBUGM is non-zero. RVBUF.CLSFTRAP will be set. |
| RCVR-TRAP IN RVF$CFUS | Indicates a trap in RVF$CFUS. This is printed if RVDBUGM is non-zero. RVBUFF.CFUTRAP will be set. |
| RCVR-TRAP IN ISN$RCVRIO | Recovery trapped while completing outstanding writes. |

## Recovery Errors

Occasionally errors will occur during the recovery procedure. The following messages indicate a recovery failure of a limited nature:

| Message | Meaning |
|---------|---------|
| RCVR-ERROR WHILE WRITING DUMP FILE | An I/O error occurred during the writing of the recovery file. |
| RCVR-ERROR WRITING USER DIRECTORY | An I/O error occurred during the writing of the recovery buffer. |

| RCVR-DUMP ARE EXCEEDED | A partial dump file has been written because the system dump area has been exhausted. |
| RCVR-LAST DUMP FILE USED | The last slot allocated for recovery dumps has been used. In this case, the next SUA will result in a full SCREECH and the next SNAP will be ignored. No users will be permitted to log on until the dump files have been converted to keyed files, thus permitting additional storage for subsequent system failures. |

## Single User Abort Failures

When a single user abort is not successfully completed, one of the following messages is printed, and the SUA is converted to a full SCREECH.

| Message | Meaning |
| --- | --- |
| NO CURRENT USER | There is no current user, thus an SUA is impossible. |
| SAME SUA USER | When a user was being run down as a result of a single user abort, this process itself caused an abort. |
| USER HAS GATE LOCKED | An attempt was made to abort a user that has a gate locked. |
| THIS CPU GATE LOCKED BY OTHER USER | The gate assigned to the screeching CPU was locked by another user. |
| USER GATE LOCKED ON OTHER CPU | The user to be aborted has locked a gate assigned to a CPU other than the screeching CPU. |
| REQUIRED GHOST SUA | A required system ghost has been aborted. |

When one of the above conditions occurs, the following message is also printed that specifies the unique decimal screech identifier indicating the screech that caused the error.

## Recovery Dump Failure

Occasionally a condition will exist that prevents a recovery dump from taking place. The following messages describe these conditions:

| Message | Meaning |
| --- | --- |
| RCVR-NO DUMP AREA ON SYS DISK | Either the system area pack was built with no dump area, or the system area file directory has been deleted. |
| RCVR-ERROR READING SAD | An error occurred while reading the System Area Directory (SAD). |
| RCVR-ALL DUMP SLOTS BUSY | The system is screeching faster than the dump files can be converted. |
| RCVR-SNAP DUMP SKIPPED | All but the last dump slot on the system was busy when recovery was called to do a snapshot dump. |

## Recovery Failure

If one of the following messages is printed, recovery cannot take place, and the system will have to be reinitialized (booted from tape).

| Message | Meaning |
| --- | --- |
| RCVR-CP6 NOT UP | The system screeched before TIGR initialization was completed. |
| RCVR-SAFE STORE FAULT IN RECOVERY | A safe store fault has been discovered in the recovery process making recovery impossible. |
| RCVR-RECOVERY IMPOSSIBLE | The system has failed to the point where recovery is impossible. |

## SCREECH CODE Descriptions

Table D-1 provides a listing of screech codes and a description for each.

| Table D-1. SCREECH Codes | |
| --- | --- |
| Code | Description |
| 0001   GHB- | S$SSFRAME<br>Type:      SUA<br>Message:  Invalid domain number in UHJIT.<br>Remarks:  The bad domain was detected by GHB$TRAP1 which expects only G_DMN_USR_SVC or G_DMN_DB_SVC. |
| 0001   GJU- | S$SSFRAME<br>Type:      SUA<br>Message:  Invalid domain number in UHJIT.<br>Remarks:  The bad domain was detected by GJU$XCON which expects only G_DMN_USR_SVC or G_DMN_DB_SVC. |
| 0001   JSE- | S$SSFRAME<br>Type:      SUA<br>Message:  Invalid frame on the users Safe-Store Stack.<br>Remarks:  The bad Safe-Store frame was detected by JSE$EXITS when running down the Job Step. The WSR in the ISR is not 7,6,5 or 4. |
| 0002   JSE- | S$MAGIC<br>Type:      SUA<br>Message:  The users Argument Stack is full at abort/exit or JSE$ACP.<br>Remarks:  JSE$EXITS was called to rundown the Job Step with less than 10 words remaining on the users Argument Stack. Can also happen if trying to enter the Command Processor with less than nn words remaining on the Argument Stack. If the top Safe-Store Stack frame is the users he is aborted with error code E$ASF instead of of Screeching. |

| Code | | Description |
|------|---|-------------|

**0002  SSU-**    S$MAGIC
          Type:      SUA
          Message:   The user's Argument Stack is full on entry to
                     DELTA.
          Remarks:   The user has pushed too much on the Argument Stack.
                     This can only happen if the top Safe-Store frame
                     is not the user's.

**0003  JSA-**    S$CPTCB
          Type:      SUA
          Message:   Unable to get TCB space for command processor.

**0004  JSA-**    S$RUNDSPC
          Type:      SUA
          Message:   JSA$RUNDSPC was called with a bad WSR

**0005  GJI-**    S$CPEXIT
          Type:      SUA
          Message:   GJS$STEP returned to an M$CPEXIT MCL.

**0005  JSP-**    S$CPEXIT
          Type:      SUA
          Message:   JSP$PMME failed to analyze the M$CPEXIT

**0007  JSR-**    S$FMRUND
          Type:      SUA
          Message:   All file management buffers not released at
                     rundown.

**0008  GJS-**    S$MING
          Type:      SCREECH
          Message:   A System Handler has aborted.

**0008  JSE-**    S$MING
          Type:      SUA
          Message:   A System Ghost has aborted.
          Remarks:   SCREECH will turn this SUA into a full Screech
                     if this is a required System Ghost that is
                     aborting. Called as a SUA so the user# is output on
                     the OC log.
                     These screeches may be avoided by modifying the
                     JG_SCREECHG table.

**0010  MM0-**    S$MM10
          Type:      SCREECH
          Message:   Page chain inconsistant.

**0011  MME-**    S$MM11
          Type:      SCREECH
          Message:   Bad virtual page number passed to MM.

**0012  MMB-**    S$MM12
          Type:      SCREECH
          Type:      SCREECH
          Message:   Physical page 0-3 cannot be released.
          Message:   Physical page 0-3 cannot be released.
          Remarks:   Some higher level routine is trying to release
                     a physical page that cannot possibly be free.
          Remarks:   Some higher level routine is trying to release
                     a physical page that cannot possibly be free.

| | Table D-1. SCREECH Codes (cont.) |
| --- | --- |

| Code | | Description |
| --- | --- | --- |
| 0013 | MMD– | S$MM13 |
| | | Type: SCREECH |
| | | Message: Monitor called RSPP with a non-stolen page. |
| | | Remarks: The monitor has returned a page which was never stolen |
| 0014 | MMJ– | S$MM14 |
| | | Type: SNAP |
| | | Message: I/O cache page count has gone negative. |
| | | Remarks: Page was probably obtained from MMB$GPP |
| 0015 | MME– | S$MM15 |
| | | Type: SCREECH |
| | | Message: Unable to get physical page guaranteed by CKSIZE. |
| 0016 | MME– | S$MM16 |
| | | Type: SCREECH |
| | | Message: Illegal monitor get virtual page request. |
| 0017 | MME– | S$MM17 |
| | | Type: SCREECH |
| | | Message: Illegal monitor free virtual page request. |
| 0018 | MME– | S$MM18 |
| | | Type: SCREECH |
| | | Message: The virtual page being freed does not belong to the user. |
| | | Remarks: The physical page mapped to the virtual page being freed does not belong to the user. |
| 0022 | MMH– | S$MM22 |
| | | Type: SUA |
| | | Message: Inconsistancy between MMH$GDS and MMG$SGVP. |
| 0023 | MMH– | S$MM23 |
| | | Type: SCREECH |
| | | Message: Inconsistancy between MMH$FDS and MMG$SFVP. |
| 0024 | MMH– | S$MM24 |
| | | Type: SCREECH |
| | | Message: Illegal data segment SIZE specification passed to MMH |
| 0025 | MMG– | S$MM25 |
| | | Type: SCREECH |
| | | Message: SEGID invalid for memory allocation. |
| 0026 | MMI– | S$MM26 |
| | | Type: SCREECH |
| | | Message: ILLEGAL MONITOR–MODE CALL ON MMI ROUTINES. |
| 0027 | MMI– | S$MM27 |
| | | Type: SUA |
| | | Message: MMI$FDP & MMG$SFVP don't agree on size of ISEG. |
| 0028 | MMJ– | S$MM28 |
| | | Type: SUA |
| | | Message: Unable to TRUNC enough FPOOL'S |

| Code | | Description |
|------|---|-------------|

0033   MMS-   S$MM33
              Type:      SCREECH
              Message:   Bad WSQ# or BUF PTR passed to an MMS routine.
              Remarks:   Either the CWSQ number is illegal, or the pointer
                         we are supposed to VGET has an illegal WSR in it.

0038   MMB-   S$MM38
              Type:      SNAP
              Message:   Attempt to return bad page which wasn't on bad
                         page list.

0039   MME-   S$MM39
              Type:      SNAP
              Message:   CURRCORE count has gone negative.

0040   MMQ-   S$MM40
              Message:   Less than two pages reserved for CG context & addr
                         blocks.
              Remarks:   There must be at least 2 pages reserved, as
                         adressing blocks must be on housekeeping pages and
                         context blocks must not.

0041   MMQ-   S$MM41
              Type:      SNAP
              Message:   Invalid request to MMQ$RECON
              Remarks:   Something is wrong with the MMQ$RECON request.
                         Either the passed pointer is invalid, or the
                         desired page is already mapped to something.

0043   MMH-   S$MM43
              Type:      SCREECH
              Message:   Passed page chain count doesn't agree with actual
                         length.

0044   MMH-   S$MM44
              Type:      SCREECH
              Message:   CVM failed while trying to initialize a data
                         segment.

0045   MMJ-   S$MM45
              Type:      SNAP
              Message:   The page chain count passed does not agree with the
                         actual length of the chain.

0046   MME-   S$MM46
              Type:      SNAP
              Message:   CMF greater than MF while releasing a page

0047   MMV-   S$MM47
              Type:      SUA
              Message:   Inconsistency in large virtual segment

0048   GMA-   S$MM48
              Type:      SCREECH
              Message:   An internal monitor call passed bad parameters.

0049   GMA-   S$MM49
              Type:      SCREECH
              Message:   Memory shuffle failed to provide promised space

| Code | | Description |
|------|---|-------------|

0050   FRS-   S$STRSERR
              Type:      SUA
              Message:   Error in *S accounting resources.

0051   FRZ-   S$BDREM
              Type:      Screech
              Message:   Attempt to dismount an open or unmounted resource
              Remarks:   FRZ$DSMT is called as a result of remove or release
                         closes and because of the REQUEST keyin.  Each of
                         these places should have already checked whether
                         the resource could be dismounted.  This screech
                         occurs when these tests fail, probably because of
                         inconsistant resource management tables (esp. RAT)

0052   FRB-   S$BCLRES
              Type:      SUA
              Message:   Resource close called for non-resource device
              Remarks:   FRB$CLS was called with a DCB whose SETX
                         indexed a DCT entry with a NIL RAT$

0053   FRB-   S$RSOWNR
              Type:      Screech
              Message:   Attempt to close a resource not owned by user
              Remarks:   FRB$CLS was called to close a resource which exists
                         but is not owned by the closing user

0054   FRB-   S$RSNOPN
              Type:      SUA
              Message:   Attempt to close an un-open resource
              Remarks:   FRB$CLS was called to close a resource which was
                         not marked open.  The problem may well be with the
                         caller, who may well be closing a closed DCB

0055   FRP-   S$NRNDWN
              Type:      Snap
              Message:   Resource released without being closed during
                         logoff
              Remarks:   When a user is being logged off, FRP$RLALL is
                         called to release any resources he may own.  This
                         screech occurs when resources are found that are
                         still marked open.  This suggests a problem in
                         running down users close, or resource management

0056   FRC-   S$AVRDCT
              Type:      Screech
              Message:   AVR passed a bad DCT index to resource management
              Remarks:   This screech occurs in any of three situations:
                         1. There is no DCT entry for the DCTX.
                         2. There is no RAT for the DCT (non-resource)
                         3. The resource type is not legal
                         4. The device does not AVR (printers,etc.)
                         Note the use of RAT$ as the DCT pointer for one
                         test

| Code | | Description |
|------|------|-------------|

**0057**  **FRC-**   **S$AVRTYP**
           Type:      Screech
           Message:  Unknown TAPE type passed to resource management
                    from AVR
           Remarks:  AVR calls FRC$AVR with a type code indicating
                    whether the tape is LABELED (ANS), LABELED SCRATCH
                    (ANSCRATCH), OR UNLABELED (SCRATCH).  This screech
                    occurs when the type passed is none of these

**0058**  **FRP-**   **S$R2MANY**
           Type:      Screech
           Message:  More resources released than were ever allocated
           Remarks:  *THIS IS THE BUDDY DOEPPEL MEMORIAL SCREECH*
                    This screech occurs when the "currently allocated"
                    count for a resource goes negative.  The screech is
                    done for memory directly above and for pseudos
                    directly below this comment.  For physical
                    resources the same screech is reported by FRZ$RRES
                    as FRZ-S$R2MANY This screech occurs as a result of
                    resource management bugs or possibly a malicious
                    user with JIT or monitor access has changed some
                    numbers

**0058**  **FRZ-**   **S$R2MANY**
           Type:      Screech
           Message:  More resources released than were ever allocated
           Remarks:  *THIS IS THE BUDDY DOEPPEL MEMORIAL SCREECH*
                    This screech occurs when the "currently allocated"
                    count for a resource goes negative.  The screech is
                    done for physical resources here and for
                    memory and pseudos in FRP$PMME (FRP-S$R2MANY).
                    This screech occurs as a result of resource
                    management bugs or possibly a malicious user with
                    JIT or monitor access has changed some numbers

**0060**  **KCL-**   **S$MONCON**
           Type:      SCREECH
           Message:  Can't connect MONKEY to the CSCG
           Remarks:  One of the monitor DCB stations on the CSCG has
                      failed to connect.

**0061**  **KQM-**   **S$BCGQRL**
           Type:      SCREECH
           Message:  Comgroup block release into bad page
           Remarks:  This SCREECH occurs when a block of memory is
                      released on behalf of a comgroup, but the page
                    on which the block lives does not belong to that
                    comgroup.  Any number of possible causes; one must
                    examine who is releasing the block and why.

**0062**  **KQS-**   **S$CGGBSN**
           Type:      SNAP
           Message:  COMGROUP garbage collection inconsistency
           Remarks:  A recoverable inconsistency has been discovered
                    during comgroup garbage collection.

| Code | | Description |
|------|------|-------------|

**0063 KUR-** S$RESUS
Type: SUA
Message: Inconsistency reading CSCG for a monitor process
Remarks: The user cannot find the message that is supposed to be waiting for him at the RESUS station on the CSCG.

**0064 KCL-** S$NLCLPP
Type: Screech
Message: Cant get physical page for local device comgroup LDCTs
Remarks: During initialization, LDCT entries are obtained for local consoles and symbiont devices to represent them on comgroups. This screech occurs if these LDCTs cannot be obtained. The only reason for this is that no memory is available, thus suspect an MM bug. It may be possible to give TIGR a number small enough to cause this screech.

**0065 KQR-** S$BCGIOF
Type: SCREECH
Message: Bad fcn code passed from IOQ to COMGROUP
Remarks: This SCREECH occurs when KQR$READ receives an IOQ packet with an unknown N$REQ.FC. The IOQ packet may be clobbered or someone is calling NIO$QUE incorrectly.

**0066 KQM-** S$BCGMRQS
Type: SNAP
Message: Recoverable inconsistency in comgroup memory request
Remarks: Same as S$BCGMRQ but the error is not irrecoverable

**0067 KCI-** S$BMDFCN
Type: SUA
Message: Illegal function code passed to comgroup
Remarks: The comgroup media layer accepts only reads and writes. This screech occurs when a formatting layer passes a file type media function. This code is also reported by NKA$DEVIO (NKA-S$BMDFCN) and KIA$UCIO (KIA-BMDFCN) in similar situations.

**0067 KIA-** S$BMDFCN
Type: SUA
Message: Illegal media function passed on timesharing I/O
Remarks: Several media layer functions which are legal for files, etc. are not legal for timesharing terminals This SUA occurs when one of these is passed to KIA$UCIO NKA$DEVIO (NKA-S$BMDFCN) and KCI$RWCG (KCI-S$BMDFCN) also report this screech code in similar situations

**0067 NKA-** S$BMDFCN
Type: SUA
Message: Illegal function passed on device I/O
Remarks: Several media layer functions which are legal for files are not legal for devices. This screech occurs when a confused formatting layer passes a file function to NKA$DEVIO. This screech code is also reported by KIA$UCIO (KIA-S$BMDFCN) AND KCI$RWCG (KCI-S$BMDFCN) in similar situations

| Code | | Description |
|------|------|-------------|

0068  KQL-    S$BCGRRC
              Type:     SCREECH
              Message:  COMGROUP read request list inconsistency
              Remarks:  A read request list has been clobbered and
                        the comgroup cannot recover from this.  Note
                        that when the comgroup is reopened special
                        care must be excercised to prevent this
                        screech from simply occuring again.  Note
                        also that messages may be lost as a result
                        of this error.

0070  FMR-    S$CFULOCK
              Type:     SNAP
              Message:  Attempt to unlock CFUS, but not locked by this user

0071  FMR-    S$CFUSBAD
              Type:     SNAP
              Message:  There is a bad name chain in the cfus

0072  FAG-    S$GPERR
              Type:     SCREECH
              Message:  Inconsistency in a free-extent list.

0073  FMR-    S$SETRES
              Type:     SUA
              Message:  Another user is using a volume of a properly
                        reserved set.

0074  FXP-    S$PIGERR
              Type:     SNAP
              Message:  PIG exit, error, or abort.
              Remarks:  PIG's exit control was entered while running as
                        a ghost not becaouse of a ZAP.  PIG unwinds (after
                        this snap) to the general error return (DPERR1).

0075  FMS-    S$LOSTCFU
              Type:     SCREECH
              Message:  Dismount entered with busy account blocks.
              Remarks:  This screech occurs if a dismount gets as far as
                        having no users left using the packset, but cannot
                        complete because some CFUs indicate otherwise.  It
                        is usually a result of some previous software or
                        hardware failure that managed to release a DCB
                        without closing it.  The packset being dismounted
                        is indicated by the DCBS display in ANLZ. A CFUs
                        display of DP#set/?,DP#SET.? will display the
                        "lost" entries.

0080  FMB-    S$FM80
              Type:     SUA
              Message:  Attempt to do real I/O to more than one page

0081  FMQ-    S$FM81
              Type:     SUA
              Message:  FD already exists but CFU block says it is new

0083  FMQ-    S$FM83
              Type:     SUA
              Message:  Account in CFU differs from DCB

| Code | | Description |
|------|------|-------------|

0084   FMD-   S$FM84
               Type:      SUA
               Message:   FMD$GETBUF called with bad args

0085   FMD-   S$FM85
               Type:      SUA
               Message:   Can't find any pool buffers

0086   FMD-   S$FM86
               Type:      SUA
               Message:   Attempt to release a pool buffer that doesn't exist

0087   FMD-   S$FM87
               Type:      SUA
               Message:   Illegal arguments to FMD$REDBUF

0089   FMD-   S$FM89
               Type:      SUA
               Message:   Error manipulating map during write-ahead

0089   FMH-   S$FM89
               Type:      SUA
               Message:   Error trying to CVM onto JRNL file page

0090   FMD-   S$FM90
               Type:      SUA
               Message:   Bad arguments to FMD$WRTBUF

0091   FMD-   S$FM91
               Type:      SUA
               Message:   Illegal disk address for pool buffer

0092   FMF-   S$FM92
               Type:      SUA
               Message:   Illegal DCB.IFMT

0094   FMQ-   S$FM94
               Type:      SUA
               Type:      SUA
               Type:      SUA
               Message:   Error attempting to ENQ or DEQ account directory

0096   FMC-   S$FM96
               Type:      SNAP
               Message:   Anomaly detected in I/O cache tables
               Remarks:   A non-fatal condition has been detected.

0098   FMF-   S$FM98
               Type:      SNAP
               Message:   ENQ/DEQ error during PMME to shared file

0099   FMH-   S$FM99
               Type:      DUMP
               Message:   Illegal translation code for symbiont write.

0100   FMD-   S$FM100
               Type:      DUMP
               Message:   An error was found in a buffer that was already
                          in core.

| Code | | Description |
|------|------|-------------|

0105    FTI-8    S$BADSEND
                 Type:     Screech.
                 Message:  Can't send queue packet.
                 Remarks:  An attempt by tape file management to send a
                           queue packet failed.


0106    FTR-8    S$BADSYSID
                 Type:     Screech.
                 Message:  RAT table contains bad sysid.
                 Remarks:  A keyin for a device for which the RAT contains
                           an invalid sysid was received.


0107    FTR-8    S$BADDDT
                 Type:     Screech.
                 Message:  DDt table contains bad information.
                 Remarks:  An expected keyin was received but there
                           is no tape mounted and open.


0115    FSA-     S$FSBADRO
                 Type:     SNAP
                 Message:  Read-Only Segment Space Foulup.


0115    GFS-     S$FSBADRO
                 Type:     SNAP
                 Message:  Read-Only Segment Space Fou'up.


0116    FSE-     S$FSBADDCB
                 Type:     SUA
                 Message:  Bad I/O Medium code detected in a DCB.


0120    SSR-     S$EVENTERR
                 Type:     SCREECH
                 Message:  EVENT INCONSISTANT WITH STATE


0121    JSP-     S$DTCB
                 Type:     SUA
                 Message:  DELTA's TCB is full (JSP$PMME)
                 Remarks:  Cannot get space in DELTA's TCB for one of
                           the following conditions:

                           a)  The user has hit Control-Y and asked
                           for DELTA when DELTA is in control.

                           b)  Restoring a SAVEd file (GET) when the
                           program that had been saved was running
                           under DELTA.


0121    SSU-     S$DTCB
                 Type:     SUA
                 Message:  DELTA'S TCB is full (SSU$DELTAGO)


0122    JSN-     S$SSLIMIT
                 Message:  JSN$FIXSS-Top frame is not the user's


0123    SSV-     S$DOLIST
                 Type:     SCREECH
                 Message:  NO FREE DO LIST ENTRIES AVAILABLE

| Code | | Description |
|------|--|-------------|

**0124**  SSQ—   S$UTIMER
Type:     SCREECH
Message:  UTIMER RUNOUT WITHOUT USER TIMER SERVICE REQUEST

**0125**  SSR—   S$ASSOC
Type:     SUA
Message:  SCTRL nonzero on a associate processor.
Remarks:  The software control bits for a page
          in a processor procedure is nonzero
          which means MM thinks the page either
          belongs to the user or is CVM'ed.

**0126**  SSR—   S$RESSUBQ
Type:     SCREECH
Message:  SCHEDULER RESOURCE QUEUE ERROR

**0128**  SSC—   S$MONTIMR
Type:     SCREECH
Message:  MONITOR TIMER TABLE OVERFLOW

**0129**  HFA—   S$SLAVE
Type:     SCREECH
Message:  CPU Won't Respone To Connect
Remarks:  This SCREECH occurs because a CPU did not respond
          to a connect from another CPU requesting that the
          first CPU go from the pause state to run or from
          the run state to pause.  The CPU that did not
          respond is set to the stopped state and therefore,
          if it was a slave CPU, no attempt will be made
          by the master CPU to restart the slave CPU after
          the SCREECH.  After corrective action, the slave
          CPU can be restarted by depressing the INITIALIZE
          & CLEAR pushbutton on the CPU configuration panel
          and then issuing a START CPU keyin.  If the CPU
          that did not respond is a master CPU, the system
          will probably not recover automatically and a
          manually initiated disk boot will be required.

**0130**  UQC—   S$MMERR
Type:     SCREECH
Message:  Unexpected memory menagement error in ENQ/DEQ.

**0131**  UQB—   S$FSERR
Type:     SUA
Message:  File management ENQ altreturn.

**0133**  UQB—   S$EQERR
Type:     SCREECH
Message:  UQB$ENQ_EVENT got an uneventful QENTRY passed,
          or SSV$XXDO altreturned on a DEQ.

**0140**  KIN—   S$BADRCD
Type:     Screech
Message:  Bad resource code in remote LDCT (at message input)
Remarks:  This screech occurs when the LDCT for a remote
          device has an impossible RESCOD for remote devices.
          Either we have dual LDCT allocation or the LDCT has
          been clobbered.  This code is also reported by
          KIQ$FEINIT (KIS—S$BADRCD) when this condition is
          discovered on an FEP crash.

| Code | | Description |
|---|---|---|

0140   KIS-   S$BADRCD
                Type:      Screech
                Message:   Bad resource code in remote LDCT (at FEP down)
                           /              /*
                Remarks:   When an FEP goes down the entire list of LDCTs is
                           run to find and disconnect those of the lost FEP.
                           This presents an opportunity to check their
                           validity. This screech occurs when a remote LDCT
                           has an impossible resource code (RESCOD).  The same
                           code is also reported by KIN$ISCAN (KIN-S$BADRCD)
                           when it finds this condition in a recieving LDCT.

0141   KIA-   S$NTSDCT
                Type:      SUA
                Message:   LDCT for timesharing users terminal lost (during
                           I/O)
                Remarks:   This SUA occurs when LDCTX in a timesharing user's
                           M$UC DCB does not point to a valid LDCT entry.
                           This suggests that either the DCB is clobbered or
                           KIA$UCIO has been incorrectly called.  The same
                           screech code is reported by NKU$UCCLS
                           (NKU-S$NTSDCT) when it detects the same problem.

0141   NKU-   S$NTSDCT
                Type:      SUA
                Message:   LDCT for timesharing users terminal lost (at
                           disconnect)
                Remarks:   NKU$UCCLS is called by step when running down
                           timesharing users.  This SUA occurs when the LDCT
                           that should be pointed to by the users M$UC DCB
                           does not exist. This has happened in the past
                           because the disconnect occured before the user was
                           fully started, and this timing hole could reappear.
                            This code is also reported by KIA$UCIO
                           (KIA-S$NTSDCT) when the LDCT disappears during I/O

0143   KIS-   S$NCOMPP
                Type:      Screech
                Message:   Cant get physical pages to initialize FEPs
                Remarks:   This screech occurs when physical pages cannot be
                           obtained for the following FEP initialization uses:
                           1. The page table for a communication WSQ
                           2. The primary LDCT for an FEP
                           3. The FEPs input or output circular queue
                           Since these pages are obtained at initialization
                           this screech should only occur as a result of
                           memory management bugs.

0144   KCD-   S$ICQLDT
                Type:      Screech
                Message:   FEP input circular queue data inconsistancy
                           (comgroup)
                Remarks:   When comgroup input data is recieved into the
                           ICQ at interrupt time it is sometimes left there
                           to be picked up later.  This occurs when the queue
                           must go to disk to get a buffer.  This screech
                           occurs when the data disappears during this time.
                           If LDCT. PPND is reset, blame the queue, otherwise
                           it is the FEP or the frontend interface.

| Code | | Description |
|------|---|-------------|

**0144   KIA—**   S$ICQLDT
Type:      Screech
Message:   FEP input circular queue data inconsistancy
Remarks:   When timesharing input data is recieved into the
ICQ at interrupt time it is left there to be picked
up in this code while running on behalf of the
user. This screech occurs when the user is unREGed
for other than asynchronous (break,etc.) reasons
and his data cannot be found.  This suggests that
the ICQ has been clobbered in some way or the
scheduler is sick.  Experience suggests checking
SCHED first.

**0146   KLM—**   S$NTRMCN
Type:      Screech
Message:   Bad terminal type passed on M$PATHCON
Remarks:   KLM$PATHCON is called as a result of an M$PATHCON
PMME issued by SLUG (HLP).  This screech occurs
when the information passed claims that the
terminal being connected is not a terminal at all.
The problem is almost certainly in SLUG.

**0147   KIF—**   S$FPRG
Type:      SNAP
Message:   Unexpected condition in loading FPRG

**0148   KNS—**   S$ILSTRAN
Type:      SCREECH
Message:   Illegal state transition.

**0149   KNT—**   S$PRTCLERR
Type:      SCREECH
Message:   Transport protocol error.
Remarks:   Something that the protocol could not handled
happened.

**0151   KFM—**   S$FRGXCON
Type:      Snap
Message:   Frog abort

**0154   KNA—**   S$UNEXPRESP
Type:      SCREECH
Message:   Unexpected respone from lower layers.
Remarks:   The session layer returned something we did not
expect.

**0154   KNB—**   S$UNEXPRESP
Type:      Screech
Message:   Baboon received somthing unexpected.

**0155   KFD—**   S$FEDUMP_TIMEOUT
Message:   FEP does not respond to dump request.

**0156   KJF—**   S$HOST_REQUEST
Type:      SCREECH
Message:   Host requested Screech
Remarks:   The host reqested a screech

| | | |
|---|---|---|
| | | Table D-1.  SCREECH Codes (cont.) |

| Code | | Description |
|---|---|---|
| 0157 | GJA- | S$HOST_KEYIN |
| | | Type:    SCREECH |
| | | Message:  Host KEYIN request. |
| | | Remarks:  Somebody asked us to DIE |
| 0171 | NIS-7 | S$NOTIOINT |
| | | Type:    SCREECH |
| | | Message:  The Interrupt Handler was entered with |
| | | the Fault/Interrupt bit in the Safe-Store |
| | | Frame set to zero. |
| 0172 | NID-5 | S$BADINTLVL |
| | | Type:    SNAP |
| | | Message:  Invalid interrupt level. |
| 0172 | NIW-7 | S$BADINTLVL |
| | | Type:    SCREECH |
| | | Message:  The interrupt level is invalid. |
| 0173 | ELF- | S$ELFABORT |
| | | Type:    SNAP |
| | | Message:  ELF ABORT |
| 0178 | NIO-7 | S$INVDLA |
| | | Type:    SCREECH |
| | | Message:  BAD DCT INDEX |
| 0191 | NIW-7 | S$BADSTATE |
| | | Type:    SCREECH |
| | | Message:  Inconsistency in MPC I/O tables |
| 0196 | NIO-7 | S$NRD |
| | | Type:    SCREECH |
| | | Message:  I/O TO REMOTE DEVICES IS NOT IMPLEMENTED |
| 0200 | JLS- | S$BADNF |
| | | Type:    SNAP |
| | | Message:  Unexpected record type encountered in image  file. |
| 0201 | JLS- | S$SYSIDNF |
| | | Type:    SNAP |
| | | Message:  SYSID in image file  not same as current user's. |
| 0202 | JLS- | S$INFONF |
| | | Type:    SNAP |
| | | Message:  Inconsistancy in image file information. |
| 0203 | JLL- | S$IOERRNF |
| | | Type:    SNAP |
| | | Message:  Irrecoverable I/O error on *N or *S file. |
| 0203 | JLS- | S$IOERRNF |
| | | Type:    SNAP |
| | | Message:  I/O error reading or writing the image file. |
| 0203 | JQS- | S$IOERRNF |
| | | Type:    SNAP |
| | | Message:  Irrecoverable I/O error on image file. |

| Code | | Description |
|------|------|-------------|
| 0204 | JLS- | S$LDLNK<br>Type:      SNAP<br>Message:  Error occurred during attempted LDLNK cleanup. |
| 0204 | JLU- | S$LDLNK<br>Type:      SNAP<br>Message:  Error deleting a set of M$LINK records from *N. |
| 0205 | JSA- | S$SSPDS<br>Type:      SNAP<br>Message:  Unable to initialize shared processor data<br>segments. |
| 0208 | JZB- | S$ASAVE<br>Type:      SNAP<br>Message:  Unexpected MM error while in autosave. |
| 0209 | JDS- | S$SEGLD<br>Type:      SUA<br>Message:  Internal error installing shared overlay. |
| 0211 | GJS- | S$DELUSR<br>Type:      SUA<br>Message:  The REG to delete user returned. |
| 0212 | PHA- | S$SC212<br>Type:      SCREECH<br>Message:  Unexpected ALTRET by MME$CVM |
| 0213 | PHA- | S$SC213<br>Type:      SCREECH<br>Message:  Unexpected ALTRET by MMD$RSPP |
| 0215 | PHP- | S$SC215<br>Type:      SNAP<br>Message:  A seemingly valid PMME was issued, and was passed<br>to PHP$PMME for performance analysis, which is<br>outside of the range of PMME FCGs and/or FPT codes<br>known to PHP$PMME.  Either a new FCG has been added<br>to UD_MAXTAB, or the performance monitor's data<br>pages have been clobbered.  In the prior case, the<br>PHA$ERS module must be recompiled with the new<br>UD_EQU_E %INCLUDE file.  In any case, PMME<br>monitoring is turned off (by zeroing the<br>"monitoring in progress" cell;  the pages used by<br>the monitoring feature are not returned to the free<br>page pool, and can if desired be dumped via XDELTA. |
| 0216 | PHA- | S$SC216<br>Type:      SCREECH<br>Message:  MOUSE tables exceed available space.<br>Remarks:  The space required for the MOUSE data exceeds the<br>space available in the stolen pages.  Recompile the<br>PH modules with a higher stolen-page limit. |
| 0225 | JMJ- | S$JM225<br>Type:      SCREECH<br>Message:  Can't get memory for batch scheduler data segments |

| Table D-1. SCREECH Codes (cont.) |
| :-- |

| Code | | Description |
| :-- | :-- | :-- |
| 0225 | JMU- | S$JM225<br>Type:    SCREECH<br>Message: MBS can't get data segment space for packsets<br>         or resources |
| 0226 | JMM- | S$JM226<br>Type:    SNAP<br>Message: MBS error reading CSCG<br>Remarks: When MBS gets an error on his no-wait read to<br>         the CSCG, this SNAP occurs and another read<br>         is issued. |
| 0227 | JMU- | S$JM227<br>Type:    SCREECH<br>Message: Queue inconsistancy in JMU - can't find entry. |
| 0228 | JMJ- | S$JM228<br>Type:    SNAP<br>Message: FIT information not present in new job file. |
| 0229 | JMJ- | S$JM229<br>Type:    SNAP<br>Message: Input file information in FIT is incorrect size.<br>Remarks: This SNAP occurs when the JM$IF in the FIT isn't<br>         the correct size.  This problem has occurred<br>         historically when PRESCAN somehow manages to<br>         scan the job twice before sending it.  Such action<br>         is always a bug since the second scan occurs after<br>         an error on the first scan, and is only done to<br>         produce the LP listing not to send the job.  The<br>         second pass results in the JM$IF part of the FIT<br>         being given the wrong size.  PRESCAN has been left<br>         that way since MBS really doesn't want to accept<br>         a twice-scanned job.  Hence if this SNAP occurs,<br>         look for that bug in PRESCAN. |
| 0230 | JMJ- | S$JM230<br>Type:    SNAP<br>Message: I/O error occurred on test open of new job file. |
| 0231 | JMJ- | S$JM231<br>Type:    SNAP<br>Message: Can't find terminated job in partitions job list. |
| 0232 | JMJ- | S$JM232<br>Type:    SNAP<br>Message: Can't find terminated job in running job queue. |
| 0233 | JMM- | S$JM233<br>Type:    SNAP<br>Message: Unknown event code passed to MBS<br>Remarks: This SNAP occurs when MBS is passed an unknown<br>         event code from JCE$EVNT. |
| 0234 | JMM- | S$JM234<br>Type:    SNAP<br>Message: Illegal event code passed in MBS citation. |
| 0235 | JMJ- | S$JM235<br>Type:    SNAP<br>Message: I/O error while opening/closing job file |

| Code | | Description |
|------|------|-------------|

0236   JMM-   S$JM236
           Type:     SCREECH
           Message:   I/O error creating Job Status File.

0238   JMS-   S$JM238
           Type:     SCREECH
           Message:   Can't get free resource list for job scheduling.

0239   JMM-   S$JM239
           Type:     SCREECH
           Message:   Error mapping MBS queue headers on M$JOBSTATS

0239   JMU-   S$JM239
           Type:     SCREECH
           Message:   MBS can't remap packset or resource data segment
                     for M$JOBSTATS

0240   JMR-   S$JM240
           Type:     SNAP
           Message:   Error on M$MBS requesting current mounted packsets.

0240   JMU-   S$JM240
           Type:     SNAP
           Message:   Error on M$MBS requesting current mounted packsets.

0241   JCE-   S$SLUGX
           Type:     SCREECH
           Message:   SLUG has aborted
           Remarks:   Reported when the SLUG ghost receives
                     ex t control, indicating that he aborted.
                     The reason for the abort will be found in
                     the XCON frame in SLUG's TCB.

0242   JMR-   S$JM242
           Type:     SNAP
           Message:   The :JOBSTATS file has been managed improperly.
           Remarks:   Well, this can probably be taken out in a
                     release or so, since it's really just a diagnostic
                     check. The call to JMR$FIND above checks to see
                     if a job which is logged in the :JOBSTATS file as
                     having been run also appears in the input queue.
                     If this is the case, then (historically) the SYSID
                     record, in :JOBSTATS, of that job was not deleted
                     when the SYSID was re-used for its current
                     incarnation. Before this snap, the symptom was
                     for FOLLOW jobs to "jump on" without waiting for
                     their leader to complete, or even to run. These
                     poor, misguided jobs were actually following a
                     previous version of that SYSID, at least one
                     recovery ago. Sheesh (C00).

0243   JMR-   S$JM243
           Type:     SNAP
           Message:   The :JOBSTATS file contains an unknown final
                     status.
           Remarks:   If and when a processor adds a new final status
                     code to XSJ_SUBS_C, that status should be taken
                     account of by all processors which check for that

| Code | | Description |
|------|------|-------------|

kind of stuff.  I guess this is as good a place as
any to make sure of that.  We'll assume it's a
really awful status (like a new PRESCAN error)
and delete this job.  Also, in case it's a real
popular status, we'll only SNAP once per boot.

0244   JMR-   S$JM244
              Type:     SNAP
              Message:  MBS received an unknown CANCEL subcode.
              Remarks:  There once was a time when a CANCEL subcode
                        ~= JMEC_CID# was an indication to CANCEL a
                        dependency-queue name.  No longer.

0250   IGL-   S$NOSLUG
              Type:     Screech
              Message:  GHOST1 unable to start SLUG
              Remarks:  At the end of SYSMAK GHOST1 attempts to replace
                        itself with SLUG via M$LDTRC.  The failure of this
                        PMME results in a screech IGL-250-7.

0251   JCM-   S$BDCVM
              Type:     Screech
              Message:  SLUG M$CVM failed trying to create new user
              Remarks:  When SLUG makes a new user he steals three physical
                        pages and M$CVMs onto them to make JIT, HJIT, and
                        ROSEG.  If the pages can be gotten but the M$CVM
                        fails, this screech occurs.

0252   JCM-   S$NOMAKU
              Type:     Screech
              Message:  SLUG got altreturn from M$MAKUSER
              Remarks:  SLUG makes a new user by issuing an M$MAKUSER PMME
                        passing it 3 physical pages it has set up as a JIT,
                        HJIT, AND ROSEG. If the PMME altrets, SLUG has
                        malformed one or more of these.  It is also
                        possible that SLUG and the monitor are different
                        versions.

0253   JGI-   S$NGUSR
              Type:     Screech
              Message:  SLUG can't get user slots to start ghosts
              Remarks:  After starting the system ghosts, SLUG starts
                        others based on the state of the system.  This
                        screech occurs when he cannot get user numbers to
                        accomplish this

0254   JGI-   S$NGPP
              Type:     Screech
              Message:  SLUG cant get pages to start initial ghosts
              Remarks:  After SLUG starts the system ghosts he starts other
                        initial ghosts either from his tables or the file
                        GHOSTS.:SYS. This screech occurs if sufficient
                        physical pages are not available for this purpose.

0255   KLI-   S$NOPHLP
              Type:     Screech
              Message:  SLUG unable to open the HLPCG comgroup
              Remarks:  SLUG communicates with the administrators of FEPs
                        via the HLPCG comgroup.  This screech occurs when
                        he gets an ALTRET on his M$OPEN to that CG.

| Table D-1.   SCREECH Codes (cont.) |
|---|

| Code | Description |
|---|---|
| 0257 JCS- | S$NRDHLP<br>Type:      Screech<br>Message:   SLUG got ALTRET reading HLPCG<br>Remarks:   Due to the nature of comgroups, SLUG should never<br>           get an ALTRET on his anonomous M$READ to HLPCG.<br>           This screech occurs on the exception to that rule. |
| 0257 KLI- | S$NRDHLP<br>Type:      Screech<br>Message:   SLUG got ALTRET reading HLPCG<br>Remarks:   Due to the nature of comgroups, SLUG should never<br>           get an ALTRET on his anonomous M$READ to HLPCG.<br>           This screech occurs on the exception to that rule. |
| 0259 JCS- | S$NOPCS<br>Type:      Screech<br>Message:   SLUG unable to open CSCG<br>Remarks:   SLUG must open the central system comgroup (CSCG)<br>           in order to communicate with KEYIN and other parts<br>           of the system.  This screech results when this<br>           cannot be done. |
| 0260 JCS- | S$NOPACCT<br>Type:      Screech<br>Message:   SLUG could not open :ACCTLG.:SYS<br>Remarks:   Before any other users can be run, SLUG must open<br>           the accounting journal :ACCTLG.:SYS.  This screech<br>           occurs when this open fails, with the ALTRET code<br>           printed as JIT.ERR. |
| 0275 FOO- | S$BADEXTEV<br>Type:      SCREECH<br>Message:   OUTSYM - unknown external event code from FOE$EVNT<br>Remarks:   The event queue used to communicate from FOE$EVNT<br>           to the OUTSYM main routine contains an event code<br>           unknown to OUTSYM.  This can only occur if one<br>           of OUTSYM, FOE$EVNT, and the event queue has been<br>           clobbered. |
| 0278 FOD- | S$BADEVS<br>Type:      SNAP<br>Message:   Bad event/state in OUTSYM device scheduler<br>Remarks:   This SNAP occurs when<br>           1) an invalid event-state combination occurs<br>           2) an invalid internal event subcode is reported<br>           (e.g. bad quit code to DEV_QUIT)<br><br>           The cause can be determined by examining who called<br>           FOD$EVENT and why, and also which part of FOD$EVENT<br>           called the SNAP issuing routine - DEV_EVSCREECH. |
| 0279 FOF- | S$DELACTFIL<br>Type:      SCREECH<br>Message:   OUTSYM tried to delete a file which was printing<br>Remarks:   The cleanup code which removes files from the<br>           file lists in OUTSYM has discovered that the<br>           file is still active on a device.  The cause<br>           can be determined by finding out who called<br>           DEL_FILE and why he thought the file was<br>           finished. |

| Code | | Description |
|------|------|-------------|

**0283   FOM-**   S$BADSYMBDA
           Type:      SNAP
           Message:   Bad disk address in MOOS
           Remarks:   The disk address of the disk granule about to
                      be read does not pass FAF$SRTODR check.  This
                      may be because the SETX in the context block is
                      clobbered, or because the disk address itself is
                      illegal, or because the data bases used by
                      FAF$SRTODR are smashed.  Note that all disk ext-
                      ents are checked (via FAF$SRTODR) when OUTSYM
                      gets them, hence something has definitely been
                      smashed since OUTSYM constructed this extent.
                      A SNAP dump is taken and the file jerked off
                      the device & removed from OUTSYM's tables,
                      to be printed next time the system is booted.

**0285   FOO-**   S$DBLCON
           Type:      SNAP
           Message:   Device connected to OS CG twice
           Remarks:   OUTSYM received a device connect as OSCG
                      admin user, but the named device is already
                      listed in his tables, implying the device
                      connect has been received twice.

**0286   FOO-**   S$NODEV
           Type:      SNAP
           Message:   Event reported on non-existant device
           Remarks:   A disconnect, break, or similar event has
                      been reported, but the named device
                      cannot be found.

**0287   FOE-**   S$XCON
           Type:      SCREECH
           Message:   OUTSYM has aborted
           Remarks:   If OUTSYM aborts then we must SCREECH due
                      to possible symbiont activity ongoing in
                      the monitor, which cannot be synched with
                      an LDTRCed copy of the ghost.

**0289   FOM-**   S$BADSYMBINFCN
           Type:      SNAP
           Message:   Bad FCN passed to FOM$SYMBIN
           Remarks:   Input circular FEP queue management has
                      decided that this message belongs to
                      FOM$SYMBIN,  who does not know the function
                      code.

**0290   FOM-**   S$BADSYMBEVST
           Type:      SCREECH
           Message:   Bad event-state combination in FOM$EVENT
           Remarks:   The event being reported to FOM$EVENT, and
                      the current state/flag-settings of the
                      symbiont involved, should never occur sim-
                      ultaneously.  The cause can be elicited by
                      determining the recent history of the symbiont
                      involved.

|  | Table D-1. SCREECH Codes (cont.) |
|---|---|

| Code | Description |
|------|-------------|
| 0291 FOE- | **S$BADEV**<br>Type:      SNAP<br>Message:   Unknown          event passed to OUTSYM<br>Remarks:   OUTSYM's event receiver routine has encountered<br>an unknown event code. |
| 0292 FOM- | **S$BADSYMBEVENT**<br>Type:      SCREECH<br>Message:   Bad event passed to FOM$EVENT<br>Remarks:   Either the event code passed to FOM$EVENT,<br>or the qualifier (e.g. HLTRSN) thereof,<br>was unknown.  Monitor auto being clobbered<br>is a possible culprit, but essentially this<br>screech should never occur. |
| 0293 FOM- | **S$BADSYMBSTATE**<br>Type:      SCREECH<br>Message:   FOM$EVENT found a symbiont in an unknown state<br>Remarks:   This screech occurs when FOM$EVENT finds a<br>symbiont in an unknown state.  This probably<br>is due to the LDCT containing the symbiont's<br>context having been clobbered. |
| 0294 FOD- | **S$BADSYMBIO**<br>Type:      SNAP<br>Message:   OUTSYM received impossible altret on M$SYMBIO<br>Remarks:   The error code received from an M$SYMBIO PMME<br>should not have occurred.  The bad status was<br>given to the caller of BAD_SYMBIO. |
| 0295 FOC- | **S$BADOSAUEV**<br>Type:      SNAP<br>Message:   Unknown OSAU event passed to OUTSYM<br>Remarks:   OUTSYM has received an OUTSYM COMGROUP<br>administrative user event which he does not<br>recognize.  This sug- gests that the path between<br>he and the event issuer has been clobbered<br>somewhere, or that someone has added a new event<br>OUTSYM does not know about and was not expected to<br>get. |
| 0296 FOF- | **S$BADEXTCHN**<br>Type:      SCREECH<br>Message:   Bad extent chain found in an OUTSYM file<br>Remarks:   The number of extent frames linked to a file<br>does not match the extent frame count in the<br>file frame. |
| 0299 FOF- | **S$BADCNUM**<br>Type:      SNAP<br>Message:   OUTSYM received bad commode file segment<br>Remarks:   This SCREECH occurs when OUTSYM is handed<br>a segment of a commode file such that the<br>CNUM (chunk/segment number) is out of order,<br>or illegal.  This<br>suggests that either OUTSYM or the output<br>COOP is very confused. |

| Table D-1. SCREECH Codes (cont.) | |
|---|---|
| **Code** | **Description** |

0300 OCI-   S$OCOPERRECOV
            Type:     SCREECH
            Message:  The operator requested automatic system recovery.
            Remarks:  The operator should have some reason for typing in
                      the !DIE! keyin.

0301 OCK-   S$OCDROPLOOP
            Type:     SCREECH
            Message:  KEYIN somehow left its main wait loop.
            Remarks:  KEYIN managed to evade its DO FOREVER
                      loop which waits for events to occur
                      on ComGroups, or a wake-up event from
                      the main M$WAIT which causes pending
                      timed console writes to occur.  In
                      theory, this SCREECH should never
                      occur.

0304 OCK-   S$NOOPENCSCG
            Type:     SCREECH
            Message:  KEYIN failed to open CSCG
            Remarks:  KEYIN requires use of the Central System
                      ComGroup to perform its inter-task
                      communication.
                      console log

0305 OCK-   S$NOOPENOCCG
            Type:     SCREECH
            Message:  KEYIN failed to open OCCG
            Remarks:  If KEYIN cant open the ComGroup, no consoles
                      can be activated

0306 OCK-   S$NOREADOCCG
            Type:     SCREECH
            Message:  KEYIN cannot read the OC ComGroup
            Remarks:

0307 OCK-   S$NOREADCSCG
            Type:     SCREECH
            Message:  KEYIN could not read the Central System
                      ComGroup
            Remarks:

0308 OCK-   S$OCCANTEVENT
            Type:     SCREECH
            Message:  KEYIN could not perform M$EVENT PMME
            Remarks:

0309 OCK-   S$OCCANTGDS
            Type:     SCREECH
            Message:  KEYIN could not acquire memory to perform
                      internal table builds
            Remarks:

0310 OCI-   S$OCZAP
            Type:     ZAP
            Message:  OPERATOR ZAPPED THE SYSTEM
            Remarks:  NONE

| Code | | Description |
|------|------|-------------|

**0315   OCK-   S$KEYINTRAP**
Type:        SCREECH
Message:    KEYIN is exiting, probably for unexpected trap.
Remarks:    KEYIN must screech instead of exiting, as noone
            can access CSCG without him.

**0320   OCP-   S$OCCANTFINDU**
Type:        SCREECH
Message:    KEYIN got a direct-addressed message for a
            non-existent console.
Remarks:    An internal routine in KEYIN has not set the flag
            which would indicate it was O.K. to ignore this
            message.

**0325   OCI-   S$OCBADDCTX**
Type:        SCREECH
Message:    Someone asked MONKEY to print a message about a
            non-existant device.
Remarks:    The system configuration may be wrong or confused,
            or MONKEY may have lost track of where the DCT
            tables are, or someone may have indeed passed an
            invalid DCTX to OCI$MK_WR or OCI$MK_WRTM.

**0326   TOC-   S$TOLTSABORT**
Type:        SNAP
Message:    TOLTS test control does not agree with the COLTS
            subexecutive that it is interfacing with.
Remarks:    The problem can occur either from an internal error
            on the part of TOLTS or from an executive / subexec
            interface error.

**0326   TOD-   S$TOLTSABORT**
Type:        SNAP
Message:    An error related to the TOLTS Dispatcher has been
            encountered.
Remarks:    The problem occurs from an internal error on the
            part of TOLTS.

**0326   TOE-   S$TOLTSABORT**
Type:        SNAP
Message:    An error related to the TOLTS Event Handler has
            been encountered.
Remarks:    The problem occurs from an internal error on the
            part of TOLTS.

**0326   TOF-   S$TOLTSABORT**
Type:        SNAP
Message:    An irrecoverable and unexpected fault has occurred
            during TOLTS processing.
Remarks:    The problem can occur either from an internal error
            on the part of TOLTS, an executive / subexec
            interface error, or an executive / CP-6 operating
            system interface error.

| Code | Description |
|------|-------------|

0326    TOG-    S$TOLTSABORT
                      Type:      SNAP
                      Message:  An error or inconsistency has been encountered by TOLTS during the processing of a GCOS Master Mode Entry.
                      Remarks:  The problem can occur either from an internal error on the part of TOLTS or from an executive / subexec interface error.

0326    TOL-    S$TOLTSABORT
                      Type:      SNAP
                      Message:  An inconsistency or error has been encountered by the TOLTS Loader program.
                      Remarks:  The problem can occur either from an internal error on the part of TOLTS or from an executive / CP-6 operating system interface error.

0326    TOM-   S$TOLTSABORT
                      Type:      SNAP
                      Message:  TOLTS test control does not agree with the MOLTS subexecutive that it is interfacing with.
                      Remarks:  The problem can occur either from an internal error on the part of TOLTS or from an executive / subexec interface error.

0326    TOO-   S$TOLTSABORT
                      Type:      SNAP
                      Message:  An error or inconsistency has been encountered by TOLTS during the processing of a TOLTS Master Mode Entry.
                      Remarks:  The problem can occur either from an internal error on the part of TOLTS or from an executive / subexec interface error.

0326    TOP-   S$TOLTSABORT
                      Type:      SNAP
                      Message:  TOLTS test control does not agree with the POLTS subexecutive that it is interfacing with.
                      Remarks:  The problem can occur either from an internal error on the part of TOLTS or from an executive / subexec interface error.

0326    TOT-    S$TOLTSABORT
                      Type:      SNAP
                      Message:  An unexpected TOLTS processing error has been encountered.
                      Remarks:  The problem occurs from an internal accounting error on the part of TOLTS or an interface error between TOLTS and the CP-6 operating system.

0420    UDE-   S$MPMMEFLT
                      Type:      SUA
                      Message:  Monitor fault while in PMME processing.
                      Remarks:  The monitor has trapped while in PMME processing and the FPT Checker (UDE$FPTCHK) has detected no errors in the parameters supplied by the user via the Parameter Stack.

| Code | | Description |
|------|---|-------------|

Note that the S$MPMMEFLT code will have been
replaced by the Fault Handler screech code.
If the actual S$MPMMEFLT Screech Code (420)
is ever reported the system is in real trouble
and a full screech is imminent.

0421    UDB-    S$MPMMERR
                Type:       SUA
                Message:    Monitor PMME error and no ALTRET

0425    GFM-    S$MCL_TABLE
                Type:       SNAP
                Message:    Unknown MCL code passed to GMF$MCL.

0425    GUD-    S$MCL_TABLE
                Type:       SUA
                Message:    Internal error in GUD_MCL_TABLE
                Remarks:    The number of FPT parameters specified via the
                            V option of the GUD_MCL_INFO macro is greater than
                            the maximum allowed (16).

0429    SSQ-    S$NOASLEVNT
                Type:       SUA
                Message:    NO EVENT PROCEDURE IN ASL, ACP OR DB FOR THIS
                            EVENT.

0430    GJS-    S$BAD_LCP6_FCN
                Type:       SUA
                Message:    Message read by GJS$STEP was not SETFP or PROFILE.

0430    UEP-    S$BAD_LCP6_FCN
                Type:       SNAP
                Message:    Unknown FCN code in response to GJ_GETDB request.

0450    JPB-    S$JPABORT
                Type:       SNAP
                Message:    PRESCAN has aborted
                Remarks:    PRESCAN will write the offending input file
                            (if any) from :SYMI to :SYSTAC under the name
                            :JPVERNNN where VERNNN is from the name of
                            the SNAP dump file :DFVERNNN.  The :SYMI file
                            will be deleted, and PRESCAN will LDTRC to
                            itself.

0451    JPP-    S$JPNOUSRS
                Type:       SCREECH
                Message:    PRESCAN cannot open :USERS.:SYS
                Remarks:    If :USERS is busted, SLUG will re-create
                            it on the way up after the crash.

0452    JPB-    S$JPCSCG
                Type:       SNAP
                Message:    PRESCAN error reading CSCG
                Remarks:    When PRESCAN gets an error in his no-wait I/O
                            event from a read of CSCG, he just issues this
                            snap and marches on.

| Table D-1. SCREECH Codes (cont.) |
|---|

| Code | Description |
|---|---|

**0453 JPB–** S$JPBACK
Type: SNAP
Message: MBS acked unknown SYSID to PRESCAN
Remarks: MBS is acnowleging receipt of a job which PRESCAN cannot find in his tables.

**0454 JPB–** S$JPNJFR
Type: SNAP
Message: PRESCAN can't get dynamic space for this job
Remarks: PRESCAN's job data segment cannot be expanded sufficiently to hold this job. The job is lost until the next boot. This should not happen unless there is something wrong with PRESCAN.

This snap happens only once per boot. Thereafter we just throw away the jobs. Each occurance of this is accompanied by a message on the SYS console(s), identifying the job which has been ignored.

**0455 JPP–** S$JPNOHLP
Type: SCREECH
Message: PRESCAN cannot open :HLP.:SYS
Remarks: If :HLP is busted, SLUG will re-create it on the way up after the crash.

**0456 JPP–** S$JPNOJS
Type: SCREECH
Message: PRESCAN cannot open :JOBSTATS.:SYS
Remarks: If :JOBSTATS is busted, SLUG will re-create it on the way up after the crash.

**0457 JPB–** S$JPBDEV
Type: SNAP
Message: Unknown event passed to PRESCAN
Remarks: PRESCAN's event routine has been passed an unknown external event. It has been ignored.

**0458 JPP–** S$JPINIT
Type: SCREECH
Message: PRESCAN cannot initialize itself
Remarks: JPS$INIT has ALTRETURNed to JPP$PRESCAN, indicating that it cannot perform its required initialization tasks.

**0500 HFA–** S$SDOWN
Message: Shutdown fault

**0501 HFA–** S$MEMORY
Message: Memory fault

**0502 HFA–** S$MME
Message: MME fault

**0503 HFA–** S$FLTAG
Message: Fault Tag fault

**0504 HFA–** S$TIMER
Message: Timer runout fault (Fault Handler Error)

| Code | | Description |
|---|---|---|
| 0505 | HFA- | S$CMMD<br>Message:   Command fault |
| 0506 | HFA- | S$DERAIL<br>Message:   Derail fault |
| 0507 | HFA- | S$LOCKUP<br>Message:   Lockup fault |
| 0508 | HFA- | S$CONCT<br>Message:   Connect Fault (Fault Handler Error) |
| 0509 | HFA- | S$PRTY<br>Message:   Parity Error Fault |
| 0510 | HFA- | S$IPR<br>Message:   Illegal Procedure fault |
| 0511 | HFA- | S$OPNC<br>Message:   OP Not Complete Fault |
| 0512 | HFA- | S$STUP<br>Message:   Startup fault |
| 0513 | HFA- | S$OVRF<br>Message:   Overflow fault |
| 0514 | HFA- | S$DVCHK<br>Message:   Divide Check fault |
| 0515 | HFA- | S$EXU<br>Message:   Execute fault |
| 0516 | HFA- | S$SCL1<br>Message:   Security 1 fault |
| 0517 | HFA- | S$DLNK<br>Message:   Dynamic Link fault |
| 0518 | HFA- | S$MSEG<br>Message:   Missing Segment fault |
| 0519 | HFA- | S$MWSP<br>Message:   Missing Work Space fault |
| 0520 | HFA- | S$MPAGE<br>Message:   Missing Page fault |
| 0521 | HFA- | S$SCL2<br>Message:   Security 2 fault |
| 0523 | HFA- | S$SSFULL<br>Message:   The Monitors Safe Store Stack is full |
| 0523 | NIS-7 | S$SSFULL<br>Type:       SCREECH<br>Message:   The monitor's Safe-Store Stack is full<br>on entry to the Interrupt Handler. |
| 0524 | HFA- | S$MTSTK<br>Message:   The Monitors Tstack is full |

| Code | | Description |
|------|------|-------------|

0525   HFA-   S$UTSTK
              Message:   The Users Tstack is full

0526   HFA-   S$HFERROR
              Message:   Internal Fault Handler Error

0526   HFB-   S$HFERROR
              Type:      SCREECH
              Message:   Internal Fault Handler error

0527   HFA-   S$CNCTERR
              Message:   Connect Fault Error

0530   HFC-   S$TOOLONG
              Type:      SCREECH
              Message:   Processor Waited Too Long For Gate To Be Unlocked
              Remarks:   This screech indicates that the screeching
                         processor had to wait too long for a locked gate to
                         be unlocked. Since the screeching processor has
                         waited about one second, the gate was probably left
                         locked due to a software bug or, in a
                         multiprocessing system, one of the other processors
                         may have hung up with this gate locked.  $PR1
                         points at the offending gate.

0531   HFC-   S$NEGDIS
              Type:      SCREECH
              Message:   Interrupt Disable Count Is Negative
              Remarks:   This screech indicates that the interrupt disable
                         count, NI$DS, is negative.  The only valid values
                         for this count are zero or positive numbers.

0532   HFC-   S$NOTLOCKED
              Type:      SCREECH
              Message:   Attempt To Unlock a Gate That Is Not Locked
              Remarks:   This screech indicates that the screeching
                         processor attempted to unlock a gate that was not
                         locked. $PR1 points at the offending gate.

0533   HFC-   S$WRONGUSER
              Type:      SCREECH
              Message:   Attempt To Unlock a Gate Not Locked By This User
              Remarks:   This screech indicates that the screeching
                         processor attempted to unlock a gate that was
                         either locked by a different user or locked on a
                         different processor. $PR1 points at the offending
                         gate.

0534   HFC-   S$NEGGATECNT
              Type:      SCREECH
              Message:   Count Of Locked Gates On This Processor Is Negative
              Remarks:   This screech indicates that the locked gate count
                         for this processor, H_GATECNT, became negative
                         during the process of unlocking a gate.  The only
                         valid values for this count are zero or positive
                         numbers.  $PR1 points at the gate that was being
                         unlocked.

| Code | | Description |
|------|---|-------------|

0535 HFC— **S$BADSTIMR**
Type: SCREECH
Message: Invalid Timer Mode While Unlocking Gate
Remarks: This screech indicates that the timer mode flag for this processor, S_TIMR, was set to an invalid state. This condition was detected during the unlocking of the gate pointed at by $PR1. The only valid states of the timer mode at this time are monitor service and monitor execution.

0548 HFA— **S$DIAGSNAP**
Type: SNAP
Message: Diagnostic Snap From Fault Handler

0549 HFA— **S$HARDWARE**
Type: SCREECH
Message: Hardware Error
Remarks: This screech indicates that a hardware fault has occurred which probably was not caused by software. The following faults are included in this category:

1) Any PARITY FAULT, OP NOT COMPLETE FAULT, DYNAMIC LINKING FAULT, OR MISSING WORKING SPACE FAULT.

2) A MEMORY FAULT (STR FAULT) due to either a non-existent address (fault register bit 4) or a non-zero illegal action code (fault register bits 16—31) received from the system controller.

3) A COMMAND FAULT that was not caused by an illegal slave procedure (fault register bit 2) and was not caused by an illegal system controller command (illegal action code of 12 octal) received from the system controller.

A procerror error log entry is created for each hardware error. The specific fault type causing the hardware error can be determined by looking at the procerror errors entries (ERROR PROCERR) in the error log (ELAN processor). The fault code that caused the hardware error can also be determined by examining word 5 of the safe store frame that was created by the fault.

0550 HFA— **S$QXDELTA**
Message: Quit to XDELTA

0551 ISI— **S$QAARDVRK**
Type: SCREECH
Message: Operator Recovery Via AArdvark

0552 RVA— **S$SUA**
Type: SCREECH
Message: Return to SCREECH after a call to JSD$DELUSR.

| Code | | | Description |
|------|--|--|-------------|

**0602  FOF-  S$DBLADD**
Type:     SNAP
Message:  The same file was added twice to OUTSYM
Remarks:  OUTSYM receives an event whenever an output
          symbiont file in :SYMO is finally closed off.
          This SNAP occurs when OUTSYM receives such a
          notification for a file which he already has
          listed in his internal tables. This means that
          either the output COOP is very confused, or
          the algorithm which enables OUTSYM recovery to
          determine (at boot time) which :SYMO files are
          left over from before the last crash has failed.
          In this latter case, OUTSYM has probably picked
          up (in his recovery) a file which was currently
          being built, and the SCREECH has occurred when
          that file was finally handed to OUTSYM.

**0604  FOF-  S$OFFADD**
Type:     SNAP
Message:  A batch job added a file to OUTSYM after going OFF
Remarks:  OUTSYM receives an event from MONKEY whenever a
          batch job leaves the system. This SCREECH occurs
          when OUTSYM receives an output file add from a
          batch job which has been marked off. This means
          that OUTSYM or the monitor is very confused about
          that job.

**0605  FOF-  S$BADGLC**
Type:     SNAP
Message:  COMMODE chunk added to ended file
Remarks:  This SCREECH occurs when OUTSYM receives an
          ADD for a file, wherein the file being added
          is allegedly a chunk of a commode file (not the
          first chunk), and the existing entry for the
          file says that the last chunk has already
          arrived. This means that the output COOP, or
          OUTSYM, is very confused about the file.

**0606  FOE-  S$CSCGERR**
Type:     SNAP
Message:  OUTSYM - error reading CSCG
Remarks:  This SCREECH occurs when OUTSYM receives notif-
          ication that his no-wait read on the CSCG
          is complete, but that an error occurred. This
          implies that the CSCG is blotto.

**0608  FOR-  S$FOBFORM**
Type:     SCREECH
Message:  OUTSYM - :FORM.:SYS is broken
Remarks:  OUTSYM has tried to open :FORM.:SYS and has got
          an error other than busy/nofile. This SCREECH
          should result in SLUG deleting the appropriate
          files on the way up, and causing them to be
          rebuilt.

| Table D-1. SCREECH Codes (cont.) |
| --- |

| Code | Description |
| --- | --- |
| 0650 FIE- | S$FIXCON<br>Type: SNAP<br>Message: INSYM has aborted<br>Remarks: INSYM should never trap or abort. If it does, this indicates that something is drastically wrong with INSYM. A SNAP dump is taken, and INSYM starts a new copy of himself. |
| 0651 FII- | S$FIDBLCON<br>Type: SNAP<br>Message: Device connected to IS CG twice<br>Remarks: INSYM received a device-connect event as IS CG admin user, but the named device is already listed in his tables, implying the device connect event has been received twice. |
| 0653 FIE- | S$FICSCGERR<br>Type: SNAP<br>Message: INSYM - error reading CSCG<br>Remarks: This SNAP occurs when INSYM receives notification that his no-wait read on the CSCG has completed with an error. |
| 0655 FIE- | S$FIUEV<br>Type: SNAP<br>Message: Unknown event passed to INSYM<br>Remarks: INSYM's event receiver has encountered an unknown event code. |
| 0656 FII- | S$FIUAUEV<br>Type: SNAP<br>Message: Unknown ISAU event passed to INSYM<br>Remarks: INSYM has received an INSYM COMGROUP administrative user event which he does not recognize. This sug- gests that the path between he and the event issuer has been clobbered somewhere, or that someone has added a new event INSYM does not know about and was not expected to get. |
| 0657 FII- | S$FIUEXTEV<br>Type: SNAP<br>Message: INSYM - unknown external event code from FIE$EVNT<br>Remarks: The event queue used to communicate from FIE$EVNT to the INSYM main routine contains an event code unknown to INSYM. This can only occur if one of INSYM, FIE$EVNT, and the event queue has been clobbered. A SNAP is taken, then INSYM LDTRCs to itself. |
| 0659 FII- | S$FINODEV<br>Type: SNAP<br>Message: INSYM cannot find evented device<br>Remarks: INSYM has received an ISCG administrative user event or ISCG read-complete event for a device not listed in its tables. |

| Code | | Description |
|------|------|-------------|
| 0660 | FII- | S$FIDACTR<br>Type: SNAP<br>Message: INSYM DEACTIVATEd on ICSG<br>Remarks: INSYM has received a "you are deactivated"<br>error on an ISCG read. This should never<br>really happen, but if it does, this snap<br>is intended to keep our buddy, user 5,<br>from tying up the system by looping forever.<br>Can't think of any better way to recover. |
| 0661 | FIA- | S$APLSV<br>Type: SNAP<br>Message: INSYM's APLCG tables have gone bad<br>Remarks: This SNAP occurs when INSYM discovers an incon-<br>sistency in the internal tables which govern the<br>APL comgroup. INSYM LDTRCs to a new copy of<br>himself after taking the snap. APLCG users get<br>deactivated. |
| 0675 | ODE- | S$ODXCON<br>Type: SNAP<br>Message: DOG has aborted<br>Remarks: Following this SNAP, DOG will LDTRC to itself |
| 0700 | CPC- | S$CPABORT<br>Type: SNAP<br>Message: IBEX abort<br>Remarks: The reason for this snap is contained in JIT.ERR |
| 0726 | DEX- | S$DUXCON<br>Type: SNAP<br>Message: DELTA is aborting.<br>Remarks: Just before DELTA aborts, it issues an M$SCREECH so<br>that a snap dump is taken. |
| 0726 | DUX- | S$DUXCON<br>Type: SNAP<br>Message: DELTA is aborting.<br>Remarks: Just before DELTA aborts, it issues an M$SCREECH so<br>that a snap dump is taken. |
| 0727 | DEX- | S$DUTRAPDS<br>Type: SNAP<br>Message: DELTA trapped during DO-SCAN phase<br>Remarks: This trap is ignored, i.e., we unwind back into<br>DCA$DELTA even though out internal tables could<br>have been clobbered. The assumption is that someone<br>forgot to set S_D.ACCESS and that's why we trapped.<br>Hopefully, this SCREECH dump will allow us to find<br>and correct the problem. |
| 0727 | DUX- | S$DUTRAPDS<br>Type: SNAP<br>Message: DELTA trapped during DO-SCAN phase<br>Remarks: This trap is ignored, i.e., we unwind back into<br>DDA$DELTA even though out internal tables could<br>have been clobbered. The assumption is that someone<br>forgot to set S_D.ACCESS and that's why we trapped.<br>Hopefully, this SCREECH dump will allow us to find<br>and correct the problem. |

| Code | | Description |
|------|--|-------------|

0728   DEX-   S$DUTRAP
              Type:      SNAP
              Message:   Unknown reason for trap in DELTA
              Remarks:   Just before DELTA does an M$XXX in its M$TRAP
                         control routine, it issues an M$SCREECH so that a
                         snap dump is is taken.

0728   DUX-   S$DUTRAP
              Type:      SNAP
              Message:   Unknown reason for trap in DELTA
              Remarks:   Just before DELTA does an M$XXX in its M$TRAP
                         control routine, it issues an M$SCREECH so that a
                         snap dump is is taken.

0729   DUX-   S$DUEVENT
              Type:      SNAP
              Message:   Unexpected event reported to DELTA.
              Remarks:   Currently, DELTA only expects a communications I/O
                         event to indicate that there is a message to be
                         read from DELTA_F on the FEP.

0730   DUX-   S$DUMESSAGE
              Type:      SNAP
              Message:   Unexpected message received from DELTA_F on the FEP
              Remarks:   A message other than the one expected was received

0731   GDI-   S$USRREQSCR
              Type:      SCREECH
              Message:   An LCP-6 XDELTA user requested a SCREECH.

0750   QXA-   S$MON_ALT
              Type:      SNAP

              Message:   An unexpected monitor ALTRET was received by
                         TPCP.
              Remarks:   Any unexpected monitor ALTRET received by TPCP
                         will cause a SNAP screech.

0751   QXA-   S$QXXCON
              Type:      SNAP

              Message:   TPCP Unexpected entry to XCON

              Remarks:   For some reason TPCP was entered at its
                         XCON handler.  See B$JIT.USRERR for further info

0752   QQC-   S$TPA_ERR
              Type:      SNAP

              Message:   An unexpected condition was encountered by TPA.
              Remarks:   For some reason TPA received control at its error
                         processing routine.

0775   ZIM-   775
              Type:      SNAP
              Message:   IDS is aborting.
              Remarks:   IDS takes a snapshot dump just prior to
                         issuing an M$ERR.

| Code | Description |
|------|-------------|

0786   ZJE—   786
                Type:      SNAP
                Message:   ARES is aborting.
                Remarks:   ARES takes a snapshot dump just prior to
                           issuing an M$ERR.


0801   KQM—   S$BCGBAP
                Type:      SCREECH
                Message:   A comgroup block-allocation page has a bad free
                           chain
                Remarks:   This SCREECH occurs during the merge of the
                           unordered free chain into the ordered free chain of
                           a specific comgroup block-allocation page, when two
                           free blocks are discovered to overlap.  This is
                           most likely to be due to a bad block release,
                           however, the SCREECH occurs during allocation, not
                           release, so it may be rather difficult to discover
                           who released the block (or even which block is the
                           bad one).

0802   KQM—   S$CGBLTB
                Type:      SCREECH
                Message:   Request for too-big comgroup memory block
                Remarks:   This SCREECH occurs when comgroup memory management
                           receives a request for a block of memory bigger
                           than the max possible (a bit smaller than a page).
                           This should never happen since the various types
                           of blocks (and their sizes) are known.

0803   KQM—   S$BCGPRL
                Type:      SCREECH
                Message:   Bad release of comgroup page
                Remarks:   A comgroup has released a page twice, or
                           SELF$ in the header of a page to release does
                           not match the page.

0804   KQW—   S$CGNOTIMP
                Type:      SCREECH
                Message:   Unimplemented comgroup condition encountered
                Remarks:   An unknown or unimplemented comgroup condition
                           has been encountered.  This is almost always
                           an unknown condition that should not happen.

0805   KQR—   S$BCGRBS
                Type:      SCREECH
                Message:   Bad COMGROUP RBLK state
                Remarks:   This screech occurs when KQR$READ discovers that
                           a station has a read in an impossible state given
                           the way in which he was entered.  The mode of
                           entry and RBLK state must be investigated to
                           discover why the inconsistency occurred.

| Table D-1. SCREECH Codes (cont.) |
|---|

| Code | Description |
|---|---|

**0806 KQM—** S$DCGBRL
Type: SCREECH
Message: Double comgroup block release
Remarks: A block of comgroup memory is or has been doubly released. This SCREECH occurs when a block allocation page freecount exceeds the max possible, or when comgroup debugging is turned on (KQ_DEBUG) and a block is being released when the free chain in its page says it is already free.

**0807 KQU—** S$CGLRKL
Type: SCREECH
Message: COMGROUP LATCHed read key lost
Remarks: This SCREECH occurs when an input message that came from the queue is unlatched, but the Q-tree node it came from is not there. If the Q-tree is the msg type tree, then most likely the message MBLK (which contains the key) has been clobbered, for T-tree nodes rarely get deleted. If the Q-tree is the station tree, then someone has deleted a station when current number active was nonzero (either that or current number active was incorrectly zero).

**0808 KQU—** S$CGCALZ
Type: SCREECH
Message: COMGROUP QUEUE active count negative
Remarks: This SCREECH occurs when an input message that came from the queue is unlatched, and the current number active count for the Q-tree node it came from was zero.

**0809 KQL—** S$CGSUPR
Type: SCREECH
Message: Inconsistency in COMGROUP super MBLK
Remarks: An inconsistency has been encountered while processing a super MBLK. The nature of the error depends upon the place from which the SCREECH was called.

**0810 KQP—** S$BCGPUT
Type: SCREECH
Message: Event—state conflict during PUT to COMGROUP
Remarks: KQP$PUT has been entered to start or continue a terminal PUT to COMGROUP, and the state of that terminal's PUT is not consistent with the way KQP$PUT was entered. Examples are KQP$PUT called when the terminal has an MBLK, KQP$DONE called when the terminal has no PUT or it does but the PUT is not in the right state. One must examine the way KQP$PUT was entered, in order to determine what the inconsistency was, and why it occured.

**0811 KQD—** S$CGCACHE
Type: SNAP
Message: Error in comgroup data cache

| Code | Description |
|------|-------------|

0812    KQP-    S$BCGPSC
                Type:       SCREECH
                Message:    Bad COMGROUP PUT size change
                Remarks:    When TERMINALs PUT to a COMGROUP, they may not
                            know how big the record will be (e.g. local card
                            readers hooked up to INSYM).  Thus they call PUT
                            asking for a buffer big enough to hold the max
                            size record, and then pass the actual size read
                            to KQP$DONET.  This screech occurs when the size
                            passed to KQP$DONET is larger than that asked for
                            originally.  Note that if the passed size is
                            real, then the device has clobbered something by
                            storing outside of the allocated data block.

0813    KQG-    S$BCGGET
                Type:       SCREECH
                Message:    Event-state conflict during GET from COMGROUP
                Remarks:    KQG$GET has been entered to start or continue
                            a terminal GET to COMGROUP, and the state of
                            that terminal's GET is not consistent with
                            the way KQG$GET was entered.  Examples are
                            KQG$GET being called while another GET is
                            being processed.  One must examine how KQG$GET
                            was called, and the current GET state, to determine
                            what the inconsistency was and how it occurred.

0814    KQL-    S$BCGMLH
                Type:       SNAP
                Message:    MBLK list inconsistency
                Remarks:    An inconsistency has been discovered in an
                            MBLK list.
                            The possible reasons are:
                            - HEAD$ = ADDR(NIL) and COUNT ~= 0

0815    KQM-    S$BCGMMQ
                Type:       SCREECH
                Message:    MMQ error in KQM$MM
                Remarks:    MMQ$CGQ has returned an error to KQM$MM indicating
                            that the latter has done something wrong.  MMQERR
                            contains the error code generated by MMQ$CGQ,
                            which explains the exact nature of the error.

0816    KCA-    S$CGAUERR
                Type:       SCREECH
                Message:    Error reporting an event to the AU of a comgroup

0817    KQQ-    S$CGCANZ
                Type:       SNAP
                Message:    The comgroup queue has active messages after
                            recovery
                Remarks:    This SNAP occurs when a comgroup is being opened
                            after having been closed by RECOVER.  It is caused
                            by CNACT in some Q-tree node being > 0 after all
                            cleanup has been performed.
                            This implies something was lost during the crash.
                            CNACT is zeroed in all the nodes and the open
                            continues.

| Table D-1. SCREECH Codes (cont.) | |
|---|---|
| **Code** | **Description** |

0818 KQT- S$CGCRCT
Type: SNAP
Message: Cannot recover comgroup – bad tree
Remarks: This SNAP occurs when a comgroup is being opened
after having been closed by RECOVER. One of the
comgroup's trees has a duplicate key and thus
cannot be reliably rebuilt. The snap is for
information only (to provide a picture of the
comgroup); the user will get an error and the
open will not be performed.

0819 KQT- S$BCGXRL
Type: SNAP
Message: Bad release of comgroup station, msgtype, or MBLK
list
Remarks: A station or MBLK list or message type node that
was still active in some way has been released.
A SNAP dump is taken and the item not released.

0820 KQM- S$BCGMRQ
Type: SCREECH
Message: COMGROUP memory request inconsistency
Remarks: An inconsistency has been found in a delayed
memory request. The system cannot continue.

0821 KQS- S$CGGARB
Type: SCREECH
Message: COMGROUP garbage collection error
Remarks: An irrecoverable inconsistency has occurred
during comgroup garbage collection.

0822 KQD- S$CGCACHESCR
Type: SCREECH
Message: Fatal error in comgroup data cache

0823 KQE- S$CGKQE
Type: SCREECH
Message: Error processing I/O end-action for comgroup

0824 KQL- S$CGSUSN
Type: SNAP
Message: COMGROUP super MBLK inconsistency
Remarks: This SNAP occurs when a recoverable inconsistency
is discovered in an MLH containing super MBLKs.

0825 KCO- S$BCGDSC
Type: SCREECH
Message: COMGROUP terminal disconnect error
Remarks: An inconsistency has been found when attempting
to disconnect a terminal.

0826 KQF- S$CGFWST
Type: SCREECH
Message: Inconsistency while processing M$FWCG.

| Code | | Description |
|------|---|-------------|
| 0827 | KCO- | S$CGREOPEN<br>Type:     SNAP<br>Message:  Error in re-opening a COMGROUP<br>Remarks:  A COMGROUP being re-opened was found to contain<br>a recovery page of PTYP not equal to one of the<br>following: KQ_PTYP_BAP, KQ_PTYP_DATA,<br>KQ_PTYP_SPARE. |
| 0850 | FJJ- | S$JXCON<br>Type      SNAP<br>Message:  JAYS has aborted<br>Remarks:  Following the snap JAYS will LDTRC to itself. |
| 0855 | GHS- | S$AFDERR<br>Type:     SCREECH<br>Message:  Incorrect parameters given on ALIBFD event. |
| 0856 | GHS- | S$REGDMN<br>Type:     SCREECH<br>Message:  REG from incorrect domain. Not user or debugger<br>service. |
| 0857 | GHS- | S$NATSAP<br>Type:     SCREECH<br>Message:  NATSAP1 incorrect at execution schedule. |
| 0861 | KAO- | S$KA_IO_NAK<br>Message:  Irrecoverable IO NAK |
| 0862 | KAV- | S$KA_ILGEVTID<br>Message:  ASYNC got KV$USR_EVT.ID that it didn't understand |
| 0863 | KAV- | S$KA_ILGINPPRCID<br>Message:  ASYNC got a KV$USR_INPPRC.ID it didn't understand |
| 0864 | KAV- | S$KA_ILGSCHRSN<br>Message:  ASYNC got unrecognized %KV_SCHRSN on<br>%KV_USR_EVT_ID_SCH |
| 0865 | KAV- | S$KA_ILGSETPRM<br>Message:  ASYNC got a KV$USR_SETPRM it couldn't decode |
| 0866 | KAV- | S$KA_ILGUSRFNC<br>Message:  ASYNC got K V$USR_..._FNC that it didn't understand |
| 0867 | KAV- | S$KA_NO_MMROTPBFR<br>Message:  No memory for an async output buffer |
| 0900 | KVB- | S$KV_BADBDY<br>Message:  Buddy manager mismanagement detected.<br>Remarks:  The chain-checker or bitmap logic has detected a<br>bad chain or multiple release. |
| 0901 | KVB- | S$KV_BDYARGS<br>Message:  Buddy manager called with invalid arguments.<br>Remarks:  Release must be called with a properly bounded<br>address and, if 2N, a power-of-two size.  Any size<br>must be below the maximum. |
| 0902 | KVI- | S$KV_PRMTRN<br>Message:  Error in primary input translate table. |

| Code | | Description |
|------|---|-------------|
| 0903 | KVI- | S$KV_SCNTRN<br>Message:  Error in secondary input translate table. |
| 0904 | KVI- | S$KV_INPFNC<br>Message:  Bad INPPRC value in an input function table. |
| 0905 | KVP- | S$KV_PRMID<br>Message:  VDH's parameter tables are messed up. |
| 0906 | KVM- | S$KV_BADLDCT<br>Message:  LDCTXs in KNH$MESS and KV_SSN don't match. |
| 0907 | KVS- | S$KV_NOMMR<br>Message:  VDH ran out of memory. |
| 0908 | KVS- | S$KV_SHRCHN<br>Message:  Shared buffer release not found in its chain. |
| 0909 | KVV- | S$KV_MRKTYP<br>Message:  VDH got a marker whose type was invalid. |
| 0910 | KVV- | S$KV_VDHFNC<br>Message:  VDH got a KV$VDH_FNC.FNC it didn't understand |
| 0911 | KVV- | S$KV_VDHEVT<br>Message:  VDH got a KV$VDH_EVT.ID it didn't understand |
| 0912 | KVS- | S$KV_VDOSTR<br>Message:  VDH got a VDO for a non-existent stream. |
| 0913 | KVS- | S$KV_VDHSTR<br>Message:  VDH tried to switch to a non-existent stream. |
| 0950 | KYV- | S$KY_ILGUSRFNC<br>Message:  UNITREC encountered a kv$usr.fnc it did not<br>          acknowledge |
| 0951 | KYV- | S$KY_ILGEVTID<br>Message:  UNITREC encountered a kv$usr_evt.id it did not<br>          acknowledge |
| 0952 | KYV- | S$KY_ILGPOS<br>Message:  UNITREC got a bad position message from VDH |
| 0953 | KYC- | S$KY_BADMEM<br>Message:  UNITREC has encountered some bad memory |
| 0954 | KYN- | S$KY_ILGINTCNT<br>Message:  something is wrong with UNITRECs int count |
| 0955 | KYD- | S$KY_WRGCTX<br>Message:  UNITREC has encountered a discrpency between its<br>          context and vdhs |
| 0956 | KYM- | S$KY_BADCLK<br>Message:  Clock services has failed<br>        %KH$SCREECH(COD=BADCLK);<br>        END; |
| 0960 | KXA- | S$KX_KHAALTRET#<br>Message:  Never expect KHA$DVCADM to altreturn. |

| Code | | Description |
|------|---|-------------|
| 0961 | KXA– | S$KX_VC_SGNRJC#<br>Message:   Sign-on reject meaningless for virtual circuits. |
| 0962 | KXC– | S$KX_NO_PMCTX#<br>Message:   The connection manager received a call from packet<br>which did not have the protocol manager's context<br>address and was not for events DCL/RMTDCL. |
| 0963 | KXC– | S$KX_ILG_CQMSG#<br>Message:   Read a illegal message from the circular queue. |
| 0965 | KXF– | S$KX_NO_PRMCLK#<br>Message:   Unable to set the 1-second permanent clock. |
| 0966 | KXF– | S$KX_FRM_UNKEVT#<br>Message:   Frame received an unknown event. |
| 0967 | KXF– | S$KX_FRM_ACTSCR#<br>Message:   KXF internal transition error<br>Remarks:   The state / transition table specifies that the<br>event just received is supposedly impossible<br>to receive when in this state. |
| 0968 | KXF– | S$KX_FRM_UNKACT#<br>Message:   Unknown action type<br>Remarks:   Either the action tables are clobbered,  or an<br>action was added without adding the code to<br>handle it. |
| 0969 | KXF– | S$KX_FRM_BADOTPQ#<br>Message:   The count of unacknowledged frames does not match<br>the buffer chain. |
| 0970 | KXH– | S$KX_NO_LINSGNCLK#<br>Message:   Unable to set the lost-line-signal clock. |
| 0971 | KXH– | S$KX_UNKTRNSTT#<br>Message:   An unknown transmitter state was read from the LCT. |
| 0972 | KXI– | S$KX_NO_INIT#<br>Message:   Problems in setting up the handler. |
| 0973 | KXM– | S$KX_NO_MLCTX#<br>Message:   ML received a call not for event DCL and without<br>the context address. |
| 0974 | KXM– | S$KX_NO_CTXMEM#<br>Message:   Cannot get memory for ML/MLC context. |
| 0975 | KXM– | S$KX_BADCON_ACK#<br>Message:   The .REASON field of FPT_CONNECT_ACK is non-zero. |
| 0976 | KXM– | S$KX_ML_BADOTPQ#<br>Message:   A time-out occured but the ML transmit queue is<br>empty. |
| 0977 | KXM– | S$KX_ML_UNKEVT#<br>Message:   ML received a call with an unknown event. |

| Code | | Description |
|---|---|---|
| 0978 | KXM- | S$KX_LNGNDU#<br>Message:  We get a Network Data Unit which is longer than 3060 bytes. |
| 0979 | KXM- | S$KX_NO_RLS#<br>Message:  KVB$RLS(SYS) altret. |
| 0981 | KXM- | S$KX_ML_ACTSCR#<br>Message:  ML received an illegal event in current state. |
| 0982 | KXM- | S$KX_BADMLLIST#<br>Message:  The chain of ML contexts is corrupted. |
| 0983 | KXM- | S$KX_BADRMTDCL#<br>Message:  A RMTDCL event was received for a circuit that already exists. |
| 0984 | KXM- | S$KX_MLC_BADOTPQ#<br>Message:  An ack/nak received by MLC for a buffer that is not at MLC's transmit queue head. |
| 0985 | KXM- | S$KX_MLC_ACTSCR#<br>Message:  MLC received an illegal event for the current state. |
| 0986 | KXM- | S$KX_MLC_UNKACT#<br>Message:  MLC unknown action type. |
| 0987 | KXN- | S$KX_NO_DWNLODCCP#<br>Message:  Cannot download the CCP. |
| 0988 | KXN- | S$KX_NO_DWNLODLCT#<br>Message:  Cannot download the LCTs. |
| 0989 | KXN- | S$KX_BADKXNFNC#<br>Message:  KXN$CMND received an unknown order. |
| 0990 | KXP- | S$KX_NO_L3CTX#<br>Message:  Have problem creating a new L3 context. |
| 0991 | KXP- | S$KX_NO_CHNMEM#<br>Message:  No memory for L3 channel table. |
| 0992 | KXP- | S$KX_BADCTXPTR#<br>Message:  L3's pointer to MLC does not match MLC's pointer to L3. |
| 0993 | KXP- | S$KX_PCK_UNKEVT#<br>Message:  KXP$PACKET received a call with an unknown event type. |
| 0994 | KXP- | S$KX_PCK_ACTSCR#<br>Message:  KXP$PACKET received a call with an illegal event type for the current state. |
| 0995 | KXP- | S$KX_VCLST_LCL#<br>Message:  We are initiating a clear procedure for a local (SUPER- defined) virtual circuit. |
| 0996 | KXP- | S$KX_PCK_UNKACT#<br>Message.  Unknown action type for KXP$PACKET |

| Table D-1. SCREECH Codes (cont.) | |
|---|---|
| Code | Description |

0997 KXP-  S$KX_PCK_BADACKQ#
Message: The acknowledgement queue of this L3 is corrupted.

0998 KXS-  S$KX_TOOBIGBFR#
Message: The buffer is larger than is allowed.

0999 KXS-  S$KX_NO_GET#
Message: KVB$GET(SYS) altreturned.

1000 KXS-  S$KX_BADL2LIST#
Message: The chain of L2 contexts was corrupted.

1001 KXS-  S$KX_BADL3LIST#
Message: The chain of L3 contexts was corrupted.

1002 KXX-  S$KX_UNKSNDX29RQS#
Message: The X.29 message requested to be sent is bad.

1003 KXX-  S$KX_UNKSCHRSN#
Message: KXX$VDI called by VDH for an unknown schedule
reason.

1004 KXX-  S$KX_UNKVDIEVT#
Message: KXX$VDI called by VDH with an unknown user event.

1005 KXX-  S$KX_UNKINPPRC#
Message: KXX$VDI called by VDH with unknown INPPRC.

1006 KXX-  S$KX_UNKPRMID#
Message: KXX$VDI called by VDH with unknown PRMID.

1007 KXX-  S$KX_UNKUSRFNC#
Message: KXX$VDI called by VDH with unknown user function
code.

1008 KXX-  S$KX_X29_BADOTPQ#
Message: X29's output queue was corrupted.

1009 KXX-  S$KX_BADX29STT#
Message: X29 should not be in this state with the current
event.

1010 KXX-  S$KX_X29_UNKEVT#
Message: Packet called X29 with an unknown event.

1011 KXX-  S$KX_NO_X29CTX#
Message: The only call without passing X29 context address
allowed is for RMTDCL. Any other events are
illegal.

# Appendix E

# Rules for Tape and Disk Usage

## Tape Usage

In the CP-6 system, there are two basic types of tape: free (unlabeled) tapes and ANS (labeled) volumes. Depending on the ANS protection level of the particular CP-6 system, a free tape can be made into an ANS volume and vice versa by any user.

ANS volumes have expiration dates coded on the tape itself. This date defines when the volume "expires" and may be reused (which means "written over"). Depending on expiration status the CP-6 system requires certain keyins for volumes and limits access to volumes.

The type of tape is recognized by the AVR (Automatic Volume Recognition) process and is displayed to the operator in the AVR message.

There are three levels of ANS volume protection: unprotected, semi-protected, and fully-protected. The protection level of a particular system may be set by the system manager, using the CONTROL processor to set the ANSPROT parameter, or by TIGR at boot time.

In an unprotected system, users may freely change volume type from free to ANS and vice versa without verification from the operator. The operator must use a MOUNT keyin to specify a serial number in order to connect a free tape or expired ANS volume to a user. In addition, the operator may use a MOUNT keyin to change a particular volume's serial number any number of times until a user is connected to the volume. Users may make scratch requests for free tapes and ANS volumes.

In a semi-protected system, users may change volume type from free to ANS and vice versa only if the operator issues an OVER keyin after receipt of the message warning of volume type change. Also, a user may only write an unexpired ANS volume if the operator issues an OVER keyin after receipt of the message warning of unexpired ANS volume overwrite. The operator must use a MOUNT keyin and specify a serial number to connect a free tape of expired ANS volume to a user. Users may make scratch requests for free tapes and ANS volumes.

In a fully-protected system, users may never change volume type from free to ANS and vice versa, operator keyin notwithstanding. Users may never write an unexpired ANS volume. The operator must use a MOUNT keyin to specify a serial number in order to connect a free tape to a user. Users are not allowed to make scratch requests for any type of tape. Neither expired or unexpired ANS volumes require MOUNT keyins, but a MOUNT keyin may be issued for an expired ANS volume.

Note: A user with FMSEC privilege can override certain restrictions.

Use of the various buttons on a tape drive is dictated by the current state of the tape drive:

TAPE DRIVE IN USE:
_____

A tape drive is in use if a tape volume has been mounted and recognized via Automatic

Volume Recognition (AVR) or the volume was made recognizable via the issuing of a MOUNT, ANSSCRATCH, or SCRATCH keyin. You can determine if a particular tape drive is in use by issuing the TAPE MTnn keyin (where nn is the number of the tape drive in question). Note that a tape drive is considered to be in use if a volume is mounted on it and has a specific label recognized for it, even if no user is associated with that tape volume.

In the case of a requirement to remove a tape volume from a tape drive that is in use that has no user associated with it, an operator must use the REQUEST MTnn keyin (where nn is the number of the tape drive in question) to dismount the unassociated volume.

For a tape that is in use the following table describes the use of each of the buttons on the tape drive:

REWIND: Use of the REWIND button is prohibited if the tape drive is in use.

START: Use of the START button is limited to correction of a "not ready" condition as reported by CP-6. After CP-6 reports the "not ready" condition:

    a. push the START button

    b. keyin the appropriate device keyin (RETRY, ERROR, etc.)

STOP: Use of the STOP button is prohibited, if the tape drive is in use.

UNLOAD: Use of the UNLOAD button is prohibited, if the tape drive is in use.

## TAPE DRIVE IDLE:

A tape drive is idle if it has no tape volume mounted on it and the CP-6 system is not requesting that a tape volume be mounted on it. If the tape drive is idle, the following table describes the use of each of the buttons:

REWIND: Use of the REWIND button is not necessary, if the tape drive is idle.

START: Use of the START button is not necessary, if the tape drive is idle.

STOP: Use of the STOP button on a tape drive that is idle will allow the operator to close the tape drive door.

UNLOAD: Use of the UNLOAD button on a tape drive that is idle will allow the operator to open the tape drive door.

## TAPE DRIVE SOLICITED:

A tape drive is in the solicited state when the CP-6 system is requesting that a specific tape volume or a scratch tape volume be mounted for use by a CP-6 system user. This solicitation takes the form of a message, printed on the operator's console, to MOUNT a tape volume for the user, or SCRATCH a tape volume for the user.

It is the operator's duty to supply the user with the requested volume by placing a tape reel on the requested tape drive and perform the tape load operation, which will place the tape at beginning-of-tape (B.O.T.) and thus make the tape accessible to the user.

The tape load operation may be initiated by pushing the START button on the requested tape drive (after the tape volume is mounted and poised for automatic threading) or it may be initiated by using the LOAD MTnn keyin. The end result of a tape load operation is to place the tape drive in the IN USE state.

In the case of a labeled tape volume, the tape's label will automatically be recognized when the tape reaches B.O.T. and the READY light comes on. In the case of an unlabeled tape volume (free tape), the tape's label is recognized when the operator keys in a MOUNT, SCRATCH or ANSSCRATCH keyin. In either case, the drive is considered IN USE once the label is recognized, and rules applying to IN USE tape drives apply from that point on.

When a tape drive is being solicited, the use of the front panel buttons is as follows:

REWIND: The use of the REWIND button on a solicited drive may be necessary to correct a tape loading error.

START: The START button on a solicited drive is used to initiate the tape load operation. It may also be used to retry the tape load operation should an error occur during the tape load operation.

STOP: The STOP button on a solicited drive may be used to aid in the correction of a tape load operation error. However, once the tape reaches B.O.T. and the READY light comes on, the tape drive is IN USE, and use of the STOP button is therefore prohibited.

UNLOAD: The UNLOAD button on a solicited tape drive may be used in conjunction with the stop button to correct a tape load operation error.

## Disk Usage

Under some circumstances, there may be a need to exchange a disk from a non-functioning to a functioning drive. The following rules describe the procedure for exchanging disk packs on MSU0451 or MSU0402 drives. Both drives must be on the same sub-system and be of the same type.

Assuming DP01 is the broken drive and DP02 is the functioning one proceed with the following:

1. DP01 should be waiting for keyin or for the operator to prepare the drive. DP02 should be not be in use.

2. Move the pack from DP01 to DP02. Do not spin DP02 up.

3. Switch the address plugs between DP01 and DP02.

4. Reload the firmware on all MPCs which are on the sub-system (e.g., FIRMLOAD DC01). Now the drive that was DP02 is DP01 and vice-versa.

5. Spin up the "new" DP01. (The functioning one.)

6. If necessary, key in RETRY DP01.

When SYSCON is used to PARTITION a disk spindle which contains multiple packsets, a REQUEST keyin must be issued before the PARTITION command is issued to SYSCON.

# Appendix F

# Related Publications for Peripheral Devices

For information on peripheral operations, refer to the following manuals:

MODEL NUMBER          MANUAL/ORDER NUMBER

### Tapes

MTU0610               Levels 66  68 MTU0610 Magnetic Tape Unit Operation
MTU0611
MTU0612
MTU0400               Order Number CB64
MTU0500               Levels 64, 66, 68 MTU0400/0500/0600 Operation
                      Order Number AM46

### Disks

MSU0402               L64 MSU0402/0452 Mass Storage Unit
MSU0451               Operations Manual — Order Number CC91
MSU0501               Levels 66/68 MSU0500 Mass Storage Unit
                      Operations Manual — Order Number AY03

### Diskettes

DIM9101               Single-sided Diskette
                      Order Number FL16

### Printers

PRU1200               Series 60 PRU1200/1600 Printer Operation
PRU1600               Order Number AP88
PRU9117/9118          Honeywell Level 6 PRU9117/9118
PRF9118               Band Printer Operation
PRU9617/9618          Order Number CP52-00
PRF9618

PRU9109               Honeywell Level 6 Hardware
PRU9609               PRU9103/9104/9105/9106/9108/9109
                      Line Printer Operation
                      Order Number CB66A, Rev. 1

### Readers

CRU0501               L64/66/68 CRU0301/0501 Card Reader Operation Ref.
                      Manual Order Number AY83
CRU1050               Series 60 CRU0600/1050 Card Reader Operation
                      Order Number AN37
CRM9111/9611          500 CPM Card Reader Operation
                      Order Number CF17

### Punch

PCU0121               PCU0121 Card Punch Operation
                      Order Number AY01
PCU9101               100-400 CPM Card Punch Operation
                      Order Number CC17

# Appendix G

# FEP-Connected Unit Record Peripherals

FEP-connected devices may be controlled from the operators console using the same keyins as for IOM-connected devices (with the exception of the ERROR keyin). These keyins are only valid from consoles of the workstation to which the devices are connected.

If the site desires to use a Vertical Formatting Unit (VFU) on a line printer, then it is necessary to define a VFU paper tape that uses channel number 1 as the top-of-form indicator. All other channels should be left unpunched, since all skip-to-channel commands will be software simulated except for the top-of-form.

Please note that a VFU will be required for any site that desires to use non-standard size paper (i.e., not 11 inches in height). Note also that the VFU paper tape need only be changed when the height of a form changes, not necessarily when the form changes.

As a last note, the forms that work on the IOM-connected Line Printers will continue to work on the FEP line printers even if channel number 1 has been used for things other than a top-of-form. Forms which specify a skip to a channel number greater than 12 will work on the FEP line printers even though the printer itself only understands channel numbers 1 to 12. This is due to software simulation of skip-to-channel commands.

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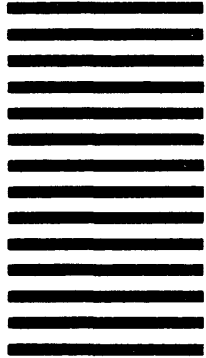
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