

Burroughs

**B 20
Operations**

**Learning To
Use The
System**

(Relative to Release Level 5.0)

B 20
Operations

Learning To
Use The
System

(Relative to Release Level 5.0)
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INTRODUCTION

Welcome to B 20 Self-Paced Operator Training.

COURSE OVERVIEW

Self-paced operator training for B 20 systems is built upon a training diskette and two instruction manuals. The two manuals support the on-line, self-paced presentations and describe the software exercises that train someone to operate any B 20 workstation.

The course focuses on a computer-assisted instruction (CAI) course called Instructor that helps you learn by doing. CAI tutorials do not ask you to read a book but to begin using your system right away.

The Instructor program consists of:

- display pages that give students new information
- questions that help them measure what you have learned
- menus that let them select the topics they want to learn

Further, Instructor talks equally to three levels of viewers:

- beginners who have no experience using computers
- intermediates who have some hands-on experience
- advanced users who know other computer systems, but not the B 20 series of Burroughs systems

COURSE OBJECTIVES

The purpose of this course is to train B 20 workstation operators at three skill levels (beginner, intermediate, and advanced) as efficiently as possible. The course is structured to address three levels of skill through computer-assisted instruction (CAI). We believe that CAI is an excellent medium for training operators.

REQUIRED REFERENCE DOCUMENTS

Two manuals are required to support the Instructor program. The organization of each manual and the major points of each section are summarized below:

B 20 Operations: Learning to Use the System

- Section One: The Instructor Program. This section introduces CAI and explains the organization and objectives of each instruction block.
- Section Two: B 20 Hardware. This section describes the correct procedures for identifying and using various types of hardware found on B 20 systems.
- Section Three: B 20 Software. This section provides step-by-step instructions for using B 20 system commands to set up and control all aspects of B 20 operations.
- Appendixes. Four appendixes are provided for reference during or after the course:
 - A. An alphabetical list (by first word) of error messages and suggested action
 - B. An alphabetical list of commands included in this course
 - C. A description of the mass storage unit and 8-inch disks for the B 22 Workstation
 - D. An alphabetical list of terms used in the manual.
- Index

B 20 Operations: Quick Reference Guide

- Section 1: Hardware. Figures showing various B 20 configurations.
- Section 2: Setting Up Files. Reference to all commands used to initialize volumes, create directories, and open files.
- Section 3: Managing Existing Files. Summaries of commands for handling files.
- Section 4: Printing Files. Summaries on direct and spooled printing.
- Section 5: Archiving Files. Synopsis of archive and backup processes.
- Section 6: Error Messages. Lists system error messages and suggests actions to correct error.
- Section 7: Command Index. Alphabetical listing of all commands discussed in this guide.

ADDITIONAL REFERENCE MANUALS

Additional manuals that may be helpful for B 20 operations are:

B 20 Systems Standard Software Operations Guide

B 20 Systems Custom Installation and Reference Manual

SECTION 1:

THE INSTRUCTOR PROGRAM

INTRODUCTION TO COMPUTER-ASSISTED INSTRUCTION

In the past, new operators were required either to sit with experienced system operators who went through various system function step-by-step or to read various manuals and learn by their mistakes.

The Burroughs Instructor program takes the place of both the experienced operator and the manuals, since it provides structured hands-on training based upon system documentation.

The advantages of "on-line" instruction are numerous:

- **Allows students to learn at their own pace.**

Students may take whatever time is they need to view or re-view the material.

- **Meets the needs of both experienced and novice operators.**

Because of sectional organization (beginning to advanced), students are able to select levels appropriate to their experience.

- **Instills confidence and independence in new operators.**

Hands-on experience enables users to become comfortable with the system even if they have never worked on a computer before. By directing and acknowledging each response, the system encourages advancement among novice users.

- **Provides simultaneous training for as many operators as there are workstations available.**

All you need are installed copies of the Instructor program on whatever B 20 workstations are available to be used for training. Clustered workstations can operate off the single master copy of Instructor.

The Instructor Program

- **Familiarizes users with reference materials.**

During training, operators will use two B 20 Operations manuals:

Learning to Use the System

Quick Reference Guide

When computer-assisted training has been completed, operators can use these and other Burroughs manuals to review procedures covered in the CAI or to expand their knowledge of the B 20.

- **Allows production work and training to exist on the same clustered system.**

The Instructor program can increase productivity by keeping your experienced operators at their jobs while at the same time new operators get systematic, standardized, and, we hope, comprehensive instruction.

PROGRAM MATERIALS

The Burroughs Instructor program consists of two training diskettes and two required supporting manuals.

Required Training Materials

- Instructor CAI Learning Disk (1 of 2)
- Instructor CAI Learning Disk (2 of 2)
- *B 20 Operations: Learning to Use the System*
- *B 20 Operations: Quick Reference Guide*

Suggested Reference Materials

- *B 20 Standard Software Operations Guide*
- *B 20 Systems Custom Installation and Reference Manual*

ROLE OF COURSE ADMINISTRATOR

Preparation

As a course administrator, you should make the following preparations before conducting the Instructor training program.

- **Read Section 1** of this manual in order to understand the overall flow of the instruction blocks and the specific objectives of each lesson.
- **Preview Instructor.** At the very least, you should look at Instruction Block 1, Introduction, to familiarize yourself with the basic concepts of this program. Previewing the diskette will help you answer questions and provide assistance to novice operators going through on-line training.
- **Set up the workstation(s)** as described in **Workstation Set Up** so that students can begin on their own whenever they are ready. Be sure to remove Learning Disk 2 as directed.
- **Ensure** that the required training manuals (see **Required Training Materials**) are present at the workstation. The suggested reference manuals (see **Suggested Reference Materials**) should also be within easy reach of the student(s).
- **Require** all students to read **GUIDELINES FOR STUDENTS** and know where the **LIST OF FRAMES** display is located. (Both are located in section one of this manual.)

Workstation Set Up

The following procedures should be followed to prepare your system for the Instructor program. Your operating system (BTOS) software should be installed and you should be signed on to the Executive.

1. Set your path by entering: **path** (press RETURN)
[Volume] by entering: **f0** (press RETURN)
<Directory> enter: **sys** (press GO)
2. Install Instructor CAI software by mounting Learning Disk 1 (1 of 2) in floppy disk drive zero and using the software installation command:
Enter: **software installation** (press GO)
(can be abbreviated: **s i**)
3. Remove Disk 1 and mount Learning Disk 2 (2 of 2) in floppy disk drive zero. Use the software installation command again:
Enter: **software installation** (press GO)
(can be abbreviated: **s i**)
4. Change your path to the Educator directory by entering:
path (press RETURN)
[Volume]: **sys** (press RETURN)
<Directory>: **educator** (press GO)
5. Use the Run File command to execute Instructor by entering:
run file (press RETURN)
[File Name] **instructor** (press GO)
6. The first frame of the Instructor program (Frame 10) will appear on the workstation screen, as illustrated in Fig 1-1. If Frame 10 does not appear on your screen, repeat steps 4 and 5.
7. Remove Learning Disk 2 from floppy disk drive zero and store in a safe place.

NOTE

Learning Disk 2 is required for Instruction Blocks 6 and 7. Mount Disk 2 in a floppy disk drive at that time.

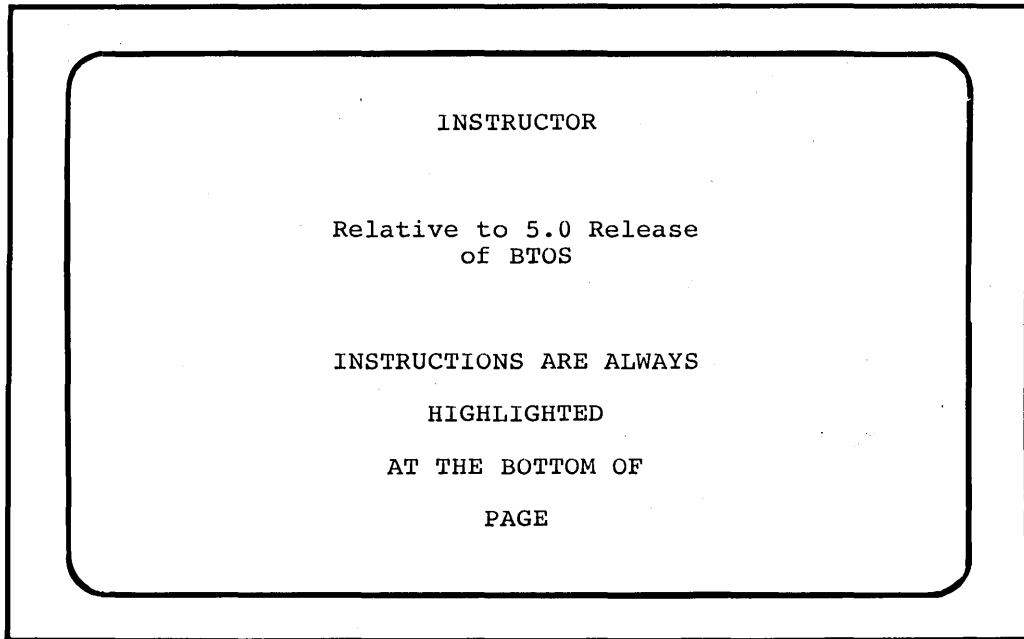


Figure 1-1. Instructor CAI Sample Screen

Training Time Estimates

Although all students work at their own pace, the following time estimates will give you a general idea of how long each instruction block should take.

Keep in mind that this program is geared toward several levels of computer knowledge and rates of learning. Thus, it is important to give students sufficient time to review and test their knowledge.

The times required to complete each instruction block are estimated in Table 1-1.

Table 1-1. Instruction Block Completion Times

Instruction Block 1	30 minutes
Instruction Block 2	60 minutes
Instruction Block 3	60 minutes
Instruction Block 4	60 minutes
Instruction Block 5	30 minutes
Instruction Block 6	30 minutes
Instruction Block 7	45 minutes

Our rule-of-thumb estimate is that each lesson should take about 15 minutes. Instruction Block 2, for example, contains four lessons.

The Instructor Program

The Course Administrator's Role During Training

During the time that students are running the Instructor program, course administrators should assist them only when necessary. You should:

- Allow students to solve problems and discover ways of working with the system
- Provide assistance only after students have made sufficient efforts on their own.

The Course Administrator's Role After Training

After students have completed their work sessions in the Instructor program, you should reinforce what they have learned by:

- Allowing them the system time to practice the new skills that they have just learned
- Informing them of any office procedures involving your B 20 systems, such as when to power their workstations down or types of file names to use.

KEY WORDS

The following terms are used throughout this section. You may already be familiar with some of them. Review them now and refer back to them if necessary during this course. (They are also included alphabetically in appendix D, Glossary of Terms.)

Branching	The flow of frames within a program (also called paths). Each path from a decision point is called a branch.
Frame	One screen display of information on a workstation terminal. Frames are numbered so that students can estimate their progress in a lesson or an instruction block.
Instruction Block	A series of lessons organized around a particular topic or set of skills.
Menu	A list of choices where the choice is usually made by pressing one key on the keyboard.
Tutorial	A training program, such as the Instructor, composed of modules designed to produce definable, practical results. Often, the training documents contain materials that can be used as reference to newly trained students.

PREVIEW OF INSTRUCTION BLOCKS

Instruction Block 1: Introduction

Overview

This first instruction block introduces students to computer-assisted instruction. It briefly explores some theories of learning and the role the Instructor program plays in the learning process.

Instruction Block 1 can be divided into the following sections:

Lesson 1: Getting Started

- a. What Is Instructor?
- b. Setting Your Own Pace
- c. Further Path Options

Lesson 2: The Learning Environment

Review

Option: Advanced Exercises and Concepts

Objectives

Upon completion of this instruction block, all students will be able to:

- Understand what makes up a good learning environment
- Use the PREV PAGE and NEXT PAGE to move around within the Instructor program
- Use menu options to make selections of learning paths
- Use the GO key to change (interrupt) a learning path if a change of direction is desired

Intermediate and advanced operators will be shown some system functions that will increase their productivity and efficiency.

Instruction Block 2: Non-Technical Definitions

Overview

This instruction block introduces students to basic hardware and software devices and terms. It explains the basic structure of the computer system and how each part of the system interacts to store and use information.

Instruction Block 2 can be divided into the following sections:

Lesson 1: Hardware Concepts

- a. Your Workstation as a Machine
- b. Useful Things Your Workstation Can Do
- c. Magnetic Recording Surfaces

Lesson 2: Definitions of Hardware Terms

- a. Your Workstation's Parts
- b. Screen Terminology
- c. Keyboard Terminology
- d. Disk Terminology
- e. Printer Terminology
- f. Lights and Indicators

Lesson 3: Software Concepts

- a. Operating Systems
- b. Jobs
- c. Files
- d. Security

Lesson 4: Software Definitions

- a. Operating System Terminology
 - 1) Screen Terminology
 - 2) Command Terminology
 - Parameters
 - Defaults
 - 3) Job Concepts
 - Realtime Jobs
 - Batch Jobs
 - Spooled Jobs

The Instructor Program

Operating System Terminology (Cont.)

- b. File Structure
 - 1) File Naming Concepts
 - 2) File Manipulation
 - 3) Archiving Process

- c. Initialization
 - 1) For Use of Winchester Disks
 - 2) For Use of Floppy Disks

- d. Security
 - 1) File Level
 - 2) Directory Level
 - 3) Volume Level

- e. Review of Lesson 2

Objectives

Upon completion of this instruction block, operators will be able to:

- Recognize the various parts of a computer system
- Understand the differences in the storage capacities of various recording surfaces
- Understand the functions of a computer keyboard and screen
- Locate and define each section of the keyboard
- Distinguish between the two types of disks and explain their function in the system
- Recognize the parts of a printer
- Explain what operating systems are
- Define programs, commands, and files
- List the different levels of security and their purpose

Comparison Chart

Instructor CAI Table 1 is used to compare different recording surfaces and shown here for the student's convenience.

Instructor CAI Table 1. Recording Surfaces

<u>Type</u>	<u>Record Speed/Method</u>	<u>Access/Display</u>	<u>Reuse</u>	<u>Perm</u>
Typewritten Page	Slow: mechanical and prone to human error	Slow: search in sequence	No	Yes
Phonograph Record	Slow: mechanical-- sound on wax surface	Slow: search in sequence	No	Yes
Magnetic or Cassette Tape	Fast: data or sound on electromagnetic surface	Slow: search in sequence	Y/N	Yes
Videotape	Fast: light on magnetic surface	Slow: search in sequence	Y/N	Y/N
CRT Screen & Keyboard	Slow: electro-mechanical, but prone to human error	Fast: realtime search	Yes	No
Disk	Fast: electromagnetic under machine control	Fast: random search/access	Y/N	Y/N

Figure 1-2. Instructor CAI Table 1: Recording Surfaces

Instruction Block 3: B 20 System Hardware

Overview

This instruction block provides detailed definitions and descriptions of the B 20 system hardware, including workstation terminals and keyboards, disks, and printer types.

Instruction Block 3 can be divided into the following sections:

Lesson 1: Models of B 20 Workstations

Lesson 2: Workstation Terminals

Lesson 3: Workstation Keyboards

- a. Typewriter Pad
- b. Screen Control Pad
- c. System Control Pad
- d. Cursor Control Pad
- e. Number Pad
- f. Function Key Pad

Lesson 4: Disk Subsystem

- a. Floppy Diskettes
- b. Winchester Disk

Lesson 5: Printer (Option) Models

- a. Serial Printers
- b. Parallel Printers

Review of Introduction to Workstation Hardware

Objectives

Upon completion of this instruction block, operators will be able to:

- Recognize different workstation models and their purpose
- Understand what a CRT terminal is used for and how
- Recognize different keyboard models
- Define and use each section of a keyboard
- Define and use floppy and Winchester disks
- Recognize the different types of optional printers

Instruction Block 4: B 20 System Software

Overview

This instruction block provides detailed definitions and descriptions of the B 20 system software, including the operating system and command manager. It explains how to use commands to initialize disks, create and manipulate files, and maintain system security.

Instruction Block 4 can be divided into the following sections:

Lesson 1: Your Operating System

Lesson 2: Command Manager

- a. Sign On/Log Off
- b. Date and Time
- c. Password
- d. Help Process

Lesson 3: Commands

- a. Parameters
- b. Defaults
- c. Command List
- d. Function Keys

Lesson 4: Initialization

- a. Floppy Diskettes
- b. Winchester Disks

Lesson 5: File Handling

- a. Volume
- b. Directory
- c. Name
 - 1) Prefix
 - 2) Suffix
 - 3) Wild Card

Review of Introduction to Software

The Instructor Program

Objectives

Upon completion of this instruction block, operators will be able to understand the functions and purpose of the following B 20 software terms:

- B 20 Operating System
- Sign-on Structures
 - user name
 - password
 - date and time
- HELP Function
- System Commands
 - default values
 - variable entries
- Disk Initialization and Archive Process
- System Security

Instruction Block 5: System (Intermediate) Training

Overview

This instruction block covers the B 20 system-level skills required of an operator. Intermediate-level operator training is currently conducted in section three of this manual. Instruct your students to read that section and to perform the exercises recommended in section three of *Learning to Use the System*.

Instruction Block 5 can be divided into the following lessons:

Lesson 1: Executive Level Operation

- a. Command Forms
- b. Turning Your System On and Off
- c. Exercise 1 - System Sign On and Log Out
- d. Exercise 2 - Help

Lesson 2: Set Up Files

- a. Data Organization in Your B 20
- b. Set Up Files Overview
- c. Exercise 3 - Initialize Volumes

Lesson 3: Set Up Files Continued

- a. Exercise 4 - Create Directories
- b. Exercise 5 - Create Files

Objectives

After completing the exercises in section three of *Learning to Use the System*, intermediate-level operators will be able to:

- Work within the executive level of the B 20 system
- Use the command manager to sign on and log off the system
- Use the Help function
- Initialize floppy disks
- Create new files, directories and file names

Instruction Block 6: File Management Training

Overview

This instruction block covers the B 20 system-level skills required of an operator. Intermediate level operators should continue their system-level training in section three of this manual. Perform the exercises recommended section three of their manual *Learning to Use the System*.

Instruction Block 6 can be divided into the following lessons:

Lesson 1: Locate Existing Files

- a. Exercise 1 - Check the Disk Contents
- b. Exercise 2 - List the File Names
- c. Exercise 3 - View a File's Contents

Lesson 2: Copy Existing Files

- a. Exercise 4 - Copy Files
- b. Additional Copy Activities

Lesson 3: Changing Existing Files

- a. Exercise 5 - Change Names
- b. Exercise 6 - Delete Files

Objectives

Upon completion of Instruction Block 6 and the corresponding exercises in section 3, operators will be able to:

- Check disk and file contents
- Copy, change and delete files

Instruction Block 7: Print and Archive Training

Overview

This instruction block covers the B 20 system-level skills required of an operator. Intermediate level operators should continue their system-level training in section three of this manual. Perform the exercises recommended in section three of *Learning to Use the System*.

Instruction Block 7 can be divided into the following lessons:

Lesson 1: Print Files

- a. Exercise 1 - Direct Printing
- b. Exercise 2 - Spooled Printing

Lesson 2: Archive Files

- a. Exercise 3 - Initialize Archive Volumes
- b. Exercise 4 - Selective Backup
- c. Exercise 5 - Replace Lost or Damaged Files

Objectives

Upon completion of Instruction Block 7 and the corresponding exercises in section 3, operators will be able to:

- Print and spool files
- Archive, backup and restore files

GUIDELINES FOR STUDENTS

The following suggestions should help you get the most out of your computer-assisted instruction:

- **Complete** each section in the order presented, on your first time through.

If you are an intermediate or advanced student, you may choose to skip the instruction blocks one through four that deal with basic concepts. You will want to review those sections, however, if you are involved with training new operators.

- **Review** lessons or procedures that you do not understand.

Do not be discouraged if you do not fully understand a particular lesson at first or have difficulty performing an exercise your first time through a lesson.

- **Perform** each step of the Instructor program to your best ability; complete understanding and skill will come with practice and review of the documentation that came with your system.
- **Keep** this manual and your quick reference guide handy since occasionally, during the course of the program, you will be asked to refer to sections of those manuals.

Once you are comfortable with the basic operations of the system, your quick reference guide should be sufficient today to refresh your memory on the syntax of the command you fully understood yesterday.

Required texts for this course are:

B 20 Operations: Learning to Use the System

B 20 Operations: Quick Reference Guide

LIST OF FRAMES

Use this listing as a guide to tell you where you are in the lesson. Instructor will show the number of the current frame in the lower left-hand corner. Most frames increment by 10.

<u>Title</u>	<u>Frame Numbers</u>
INSTRUCTION BLOCK 1: INTRODUCTION	
Introduction	10 through 100
Lesson 1: Getting Started	110 through 220
Lesson 2: The Learning Environment	300 through 380
Review: Introduction to Instructor	400 through 500
Advanced Exercises and Concepts	600 through 670

INSTRUCTION BLOCK 2: NON-TECHNICAL DEFINITIONS

Main Menu	Frame 900
Introduction	1000 through 1050
Lesson 1: Hardware Concepts	1100 through 1190
Lesson 2: Hardware Terminology	1200 through 1290
Lesson 3: Software Concepts	1300 through 1390
Lesson 4: Software Terminology	1400 through 1560
Review of Instruction Block 2	1600 through 1690

INSTRUCTION BLOCK 3: B 20 SYSTEMS HARDWARE

Menu	Frame 2000
Lesson 1: Models of B 20 Workstations	2100 through 2130
Lesson 2: Workstation Terminals	2200 through 2210
Lesson 3: Workstation Keyboards	2300 through 2380
Lesson 4: Disk Subsystems	2400 through 2420
Lesson 5: Printer (Option) Models	2500 through 2530
Review of Instruction Block 3	Frame 2900

The Instructor Program

<u>Title</u>	<u>Frame Numbers</u>
INSTRUCTION BLOCK 4: B 20 SYSTEMS SOFTWARE	
Menu	Frame 3000
Lesson 1: Your Operating System	3100 through 3150
Lesson 2: The Executive	3200 through 3240
Lesson 3: Commands	3300 through 3350
Lesson 4: Initialization	3400 through 3420
Lesson 5: File Handling	3500 through 3680
Lesson 6: Security	3700 through 3740
Review of Instruction Block 4	Frame 3800

Review: Summaries and Quizzes Only	Frame 4100
Return to Advanced Exercise 1	Frame 650
Exit to Instruction Blocks 5 Through 7	Frame 5000

STATE OF TEXAS

COUNTY OF DALLAS

KEY WORDS

The following terms are used in the Instructor CAI program and in this manual. They are listed below in the order in which they appear within the Instructor CAI program.

You may already be familiar with some of the terms. Review them now and refer back to them as necessary. They are also listed alphabetically in Appendix D, Glossary of Terms, of this manual.

Hardware The physical parts of a computer (keyboard, screen, disk drive units) are called hardware.

Software A computer's operating instructions and programs are called software.

Disks Disks are recording devices that use magnetic surfaces to store information. The information stored on disks includes system software (B 20 operating instructions), your B 20 files, and B 20 programs (optional software).

Floppy Disks Floppy Disks are thin flexible disks covered with magnetic recording material. Your B 20 uses one of the following sizes of floppy disks:

- 5-1/4 inch
- 8-inch

Write Enable All 5-1/4 inch floppy disks contain a notch on one side called a Write Enable Notch that determines whether the contents of a disk can be changed or deleted.

Write Protect All 8-inch floppy disks contain a notch on one side called a Write Protect Notch that determines whether the contents of a disk can be changed or deleted.

B 20 Hardware

Winchester Disk	A Winchester disk is a hard disk inside some B 20s. This disk is not removable except by Burroughs service technicians.
Disk Drive	The disk drive is the piece of hardware that saves the information you enter into the computer for your future retrieval and use. There are two basic types of disk drives: dual floppy and hard disk drive (also called a Winchester disk drive).
Indicator Lights	The small red lights adjacent to the disk drives are called indicator lights. These lights go on when the disk is in use.
Keyboard	The B 20 keyboard is much like a typewriter. It is used to enter information into your computer.
Cursor	The cursor is a flashing line that marks the position of your next entry. If you type a character, it appears in that place.
Printer	A printer allows you to obtain a hard copy of information stored on the computer (documents, files, programs).

HARDWARE OVERVIEW

This section describes your B 20 hardware and provides step-by-step instructions for inserting and removing floppy disks. When you complete the section, you should be familiar with:

- the different models of B 20 workstations
- your B 20 keyboard
- the B 20 screen and how to adjust it
- the proper handling of floppy disks
- types of optional printers

Your Workstation

Your B 20 is one of a family of computers that can perform as standalone (independent) systems or as clustered (linked) systems.

B 20s come in different models, as shown in figure 2-1. Look at your B 20 and compare it to those shown.

NOTE

If you have a B 20 that uses 8-inch disks (B 22), refer to Appendix C for the hardware configuration.

B 20 Hardware

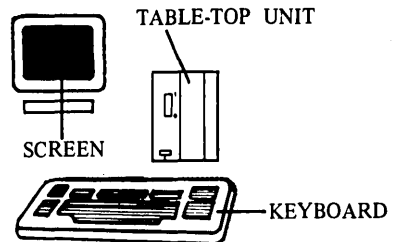
Equipment Required

You must have the following equipment at your workstation:

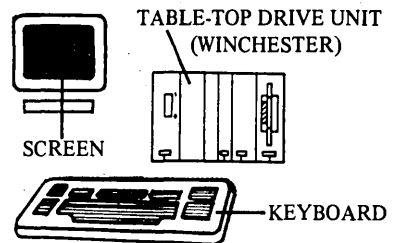
- a B 20 computer
- a floppy disk

COMPONENTS

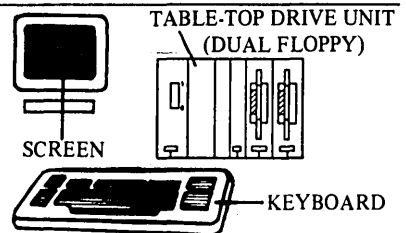
This B 20 (B 25) is a clustered workstation with no local file storage (no floppy disk and no Winchester disk.) The processor is inside the table-top unit.



This B 20 (B 25) has a single floppy drive that uses 5-1/4 inch floppy disks. The processor, 5-1/4 inch floppy disk drive, Winchester disk and drive are inside the table-top drive unit.



This B 20 (B 25) has a dual floppy drive that uses 5-1/4 inch floppy disks. The processor and dual floppy drives are inside the table-top drive unit.



This B 20 (B 21) has a single floppy disk drive that uses 5-1/4 inch floppy disks. The processor, 5-1/4 inch floppy disk drive, Winchester disk and drive are inside the lectern.

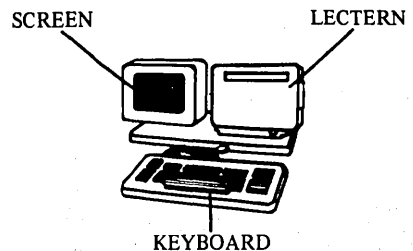


Figure 2-1. Burroughs B 20 Workstations

SCREEN

You can adjust your B 20 screen in two ways:

- **Location.** You can tilt your B 20 screen up or down and turn it right or left. Use both hands to move the screen to a comfortable position.
- **Brightness.** The brightness control is located under the screen on the left side (as you face the screen). Rotate the control toward you to increase brightness.

B 20 DISKS AND DISK DRIVES

B 20 workstations with floppy disk drives use either 5-1/4 inch or 8-inch floppy disks depending on the drive unit. Insertion and removal instructions also differ by unit.

The B 21 and B 25 disk drives are illustrated in figure 2-2. Both of these drives use 5-1/4 inch disks.

The B 22 disk drive is illustrated in Appendix C, Figure C-2. This drive uses 8-inch disks.

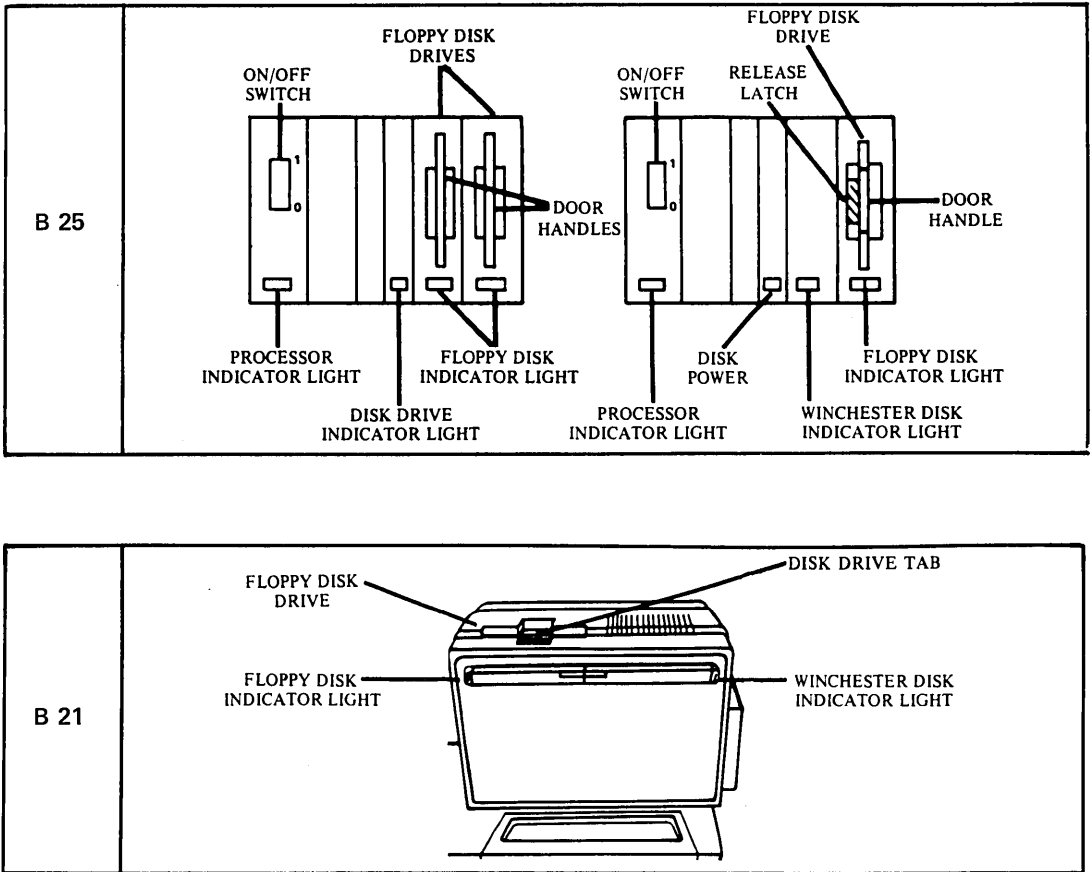


Figure 2-2. B 20 Disk Drives

Handling Floppy Disks

Figure 2-3 illustrates the two types of floppy disks (5-1/4 inch and 8-inch).

When handling floppy disks:

- Grasp only the label area. Do not touch exposed magnetic material. (See figure 2-3.)
- Store floppy disks upright in dust covers. Keep them out of direct sunlight, away from magnetic material, and in a dry area at normal room temperature.
- Do not use floppy disks that have recently been in a hot or cold environment. Wait for them to adjust to room temperature.
- Write on floppy disk labels **before** attaching them to the floppy disks. Writing directly on a floppy disk can damage the magnetic material (and your data).
- Do not fasten paper clips to the floppy disks.

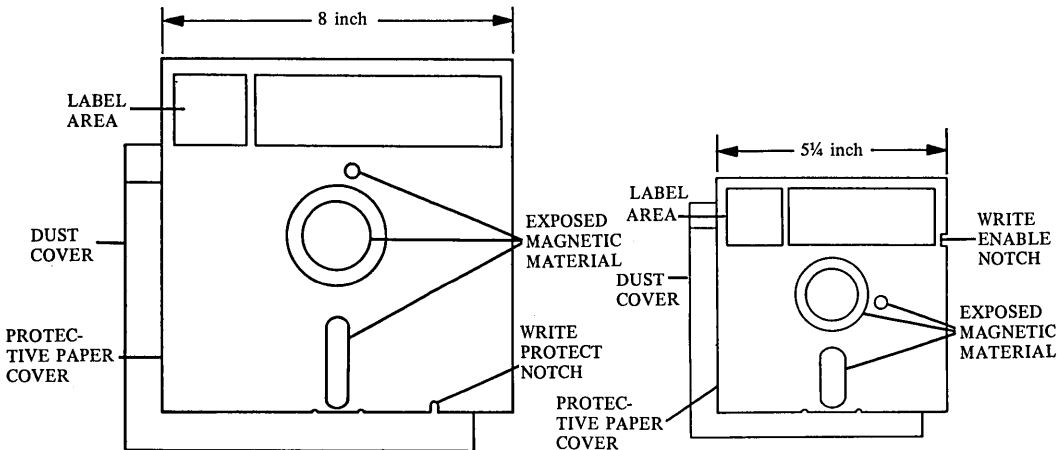


Figure 2-3. Floppy Disks

The Write Enable Notch

If you have a B 22, refer to Appendix C, Figure C-4 for an explanation of the Write Protect Notch.

The 5-1/4 inch floppy disks used on B 25s and B 21s have a notch on them that determines whether or not information can be changed. When the notch is visible as shown in Figure 2-3, the diskette is "write enabled" and the contents can be changed.

When the notch is covered with a write tab (as shown in Figure 2-4), you **cannot add to or change** information on the floppy disk; the floppy disk contents are therefore protected.

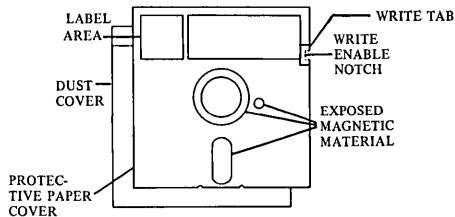


Figure 2-4. Write Tab Applied Over Notch

Inserting Floppy Disks

NOTE

Your workstation should be turned on before you insert a floppy disk. Refer to turn on instructions in Section 3, if necessary.

CAUTION

Never open a drive door (or tab) when the indicator lights are on. Damage to the disk or drive could result.

To insert a floppy disk, refer to the following figures:

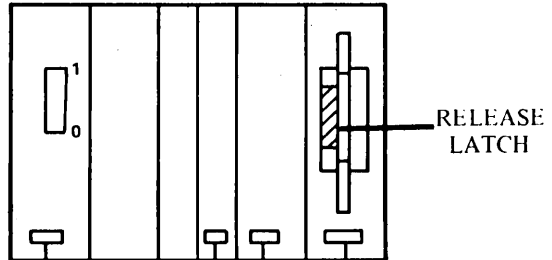
B 25 procedures are described and shown in Figure 2-5.

B 21 procedures are described and shown in Figure 2-6.

B 22 procedures are described and shown in Appendix C, Figure C-5.

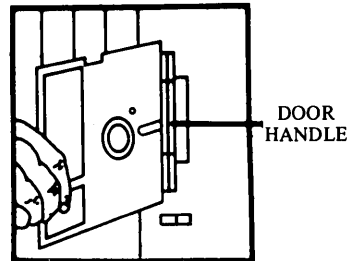
B 20 Hardware

1. Remove the floppy disk from its dust cover.
2. Open the floppy disk drive door by pressing the release latch.



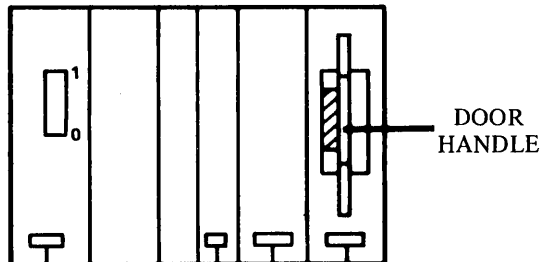
Step 2

3. Position the floppy disk as illustrated, then slide the floppy disk into the drive until it stops. The floppy disk label must face the door handle. If you insert the floppy disk properly, it will not come out when you release it.



Step 3

4. Close the floppy disk drive door by sliding the door handle to the left until you hear a click. The door should remain closed. (The door must be closed for your B 25 to use the floppy disk.)

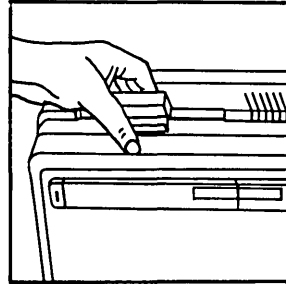


Step 4

Figure 2-5. Inserting B 25 floppy disk.

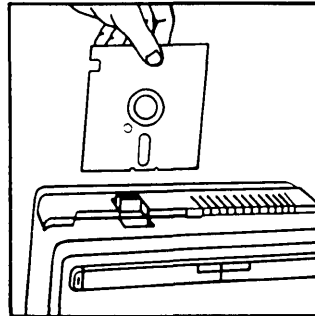
1. Remove the floppy disk from its dust cover.

2. Open the floppy disk drive door as illustrated. Press down on the back part of the tab.



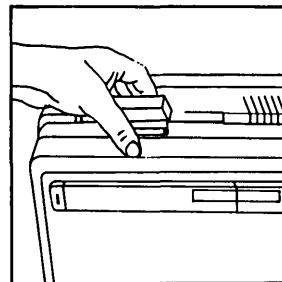
Step 2

3. Position the floppy disk as illustrated, then slide the disk into the drive until it stops. The floppy disk label should be facing away from you.



Step 3

4. Close the floppy disk drive door as illustrated (the door must be closed for your B 21 to use the floppy disk. Pull the tab forward. If you have inserted the floppy disk properly, the tab closes easily.



Step 4

Figure 2-6. Inserting B 21 floppy disk.

B 20 Hardware

Removing Floppy Disks

CAUTION

Never open a drive door (or tab) when the indicator lights are on. This could damage the disk or the drive.

To remove a floppy disk, proceed as follows:

B 25

1. Open the floppy disk drive door (Figure 2-5, step 2). The floppy disk comes partially out when you open the door.
2. Grasp the floppy disk and slide it out of the floppy disk drive.
3. Close the drive door. Store the floppy disk in its dust cover.

NOTE

When the floppy disk drive on your B 25 is not in use, keep the disk drive door shut.

B 21

1. Open the floppy disk drive tab (Figure 2-6, step 2).
2. Grasp the floppy disk and slide it out of the floppy disk drive.
3. Leave the tab open. Store the floppy disk in its dust cover.

NOTE

When the floppy disk drive on your B 21 is not in use, leave the floppy disk drive tab in the open position.

B 22

Refer to Appendix C, Removing Floppy Disks.

THE KEYBOARD

You use your B 20 keyboard to:

- enter data
- control B 20 operations

The keyboard is movable; its placement is limited by the length of the cable that connects it to your B 20.

There are two types of B 20 keyboards:

- B 25 K1/B 20 keyboards
- OFISTM keyboard (also called the OW25-OK or OK keyboard)

NOTE

The text that follows deals with the B 25 K1/B 20 keyboards (illustrated in figure 2-7). If your keyboard does not look like the one in figure 2-7, refer to the explanation of the OFISkeyboard later in this section.

B 25 K1/B 20 Keyboards

The 98 keys can be divided into six groups as shown in figure 2-7. Some keys (particularly function keys) operate differently depending on the program you are using. For example, when you perform word processing, they control word processing operations. The manuals that are supplied with each of these programs describe how the function keys are to be used.

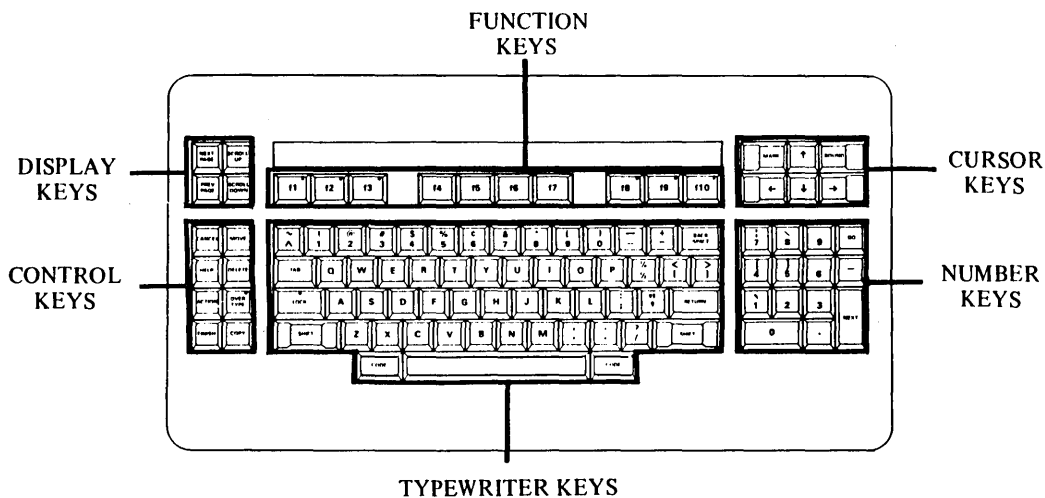


Figure 2-7. The B 25 K1 /B20 Keyboard

Typewriter Keys

Your B 25 K1/B 20 keyboard has a standard set of typewriter keys as shown in figure 2-8.

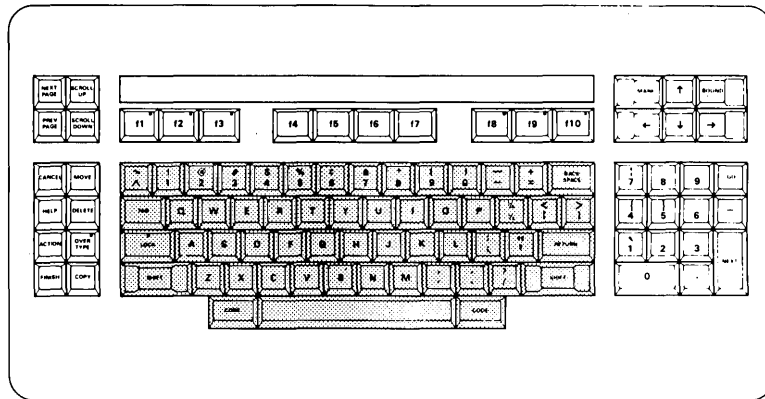
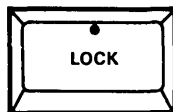


Figure 2-8. Typewriter Keys

These keys allow you to enter characters (letters, numbers, punctuation marks, and symbols). The keys that differ from standard typewriter keys are:

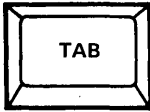


SHIFT works just as it does on a typewriter. However:

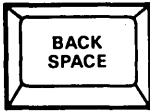


LOCK causes letters to become uppercase. A red indicator light on the **LOCK** key is illuminated when it is locked. To unlock this key, press it again (the indicator light will go off).

NOTE: The **LOCK** key affects only letters, not numbers. You must use the **SHIFT** key to enter a symbol above a number.



TAB allows you to create indentations in a word processing document (e.g., you would use the **TAB KEY** to start the first line of a paragraph five spaces in from the left margin).



BACK SPACE allows you to correct errors by deleting the previously entered character. Continue pressing the **BACK SPACE** key to delete several characters. Hold it down to delete a complete word or line.



RETURN moves the cursor to a new line. In some programs, pressing **RETURN** will cause your B 20 to display new information.

Locate the following special symbols on the keyboard:

- | | |
|---------|--------------------------|
| < and > | Angle brackets |
| [and] | Square brackets |
| ~ | Tilde |
| ^ | Exponent (or circumflex) |

Function Keys

Your B25 K1/B 20 keyboard has ten function keys (labeled f1 through f10) that you use with B 20 programs (see figure 2-9). The keys f1, f2, f3, f8, f9, and f10 have indicator lights that may come on during self-diagnostic tests. The lights do not work at other times.

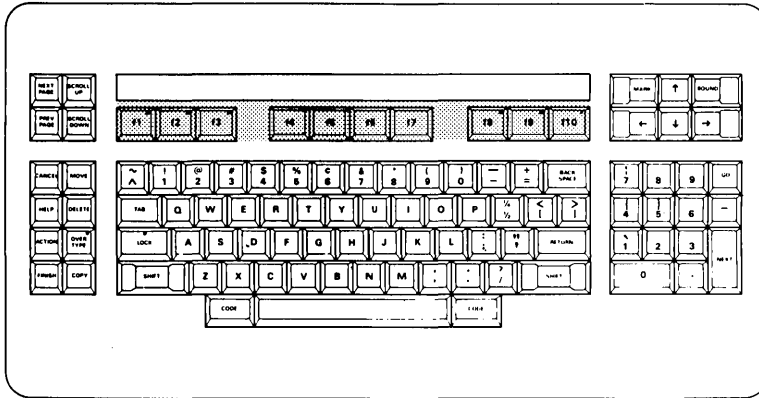


Figure 2-9. Function Keys

The function keys operate differently depending on the program you are working on. For example, when you perform word processing, they control word processing operations. The manuals that are supplied with each of these programs describe how the function keys are to be used.



Figure 2-10. Function Key Strip (Sample)

Control Keys

The control keys, shown in figure 2-11, are: **CANCEL**, **HELP**, **ACTION**, **FINISH**, **MOVE**, **DELETE**, **OVER TYPE**, and **COPY**. These keys are used to direct and control your B 20.

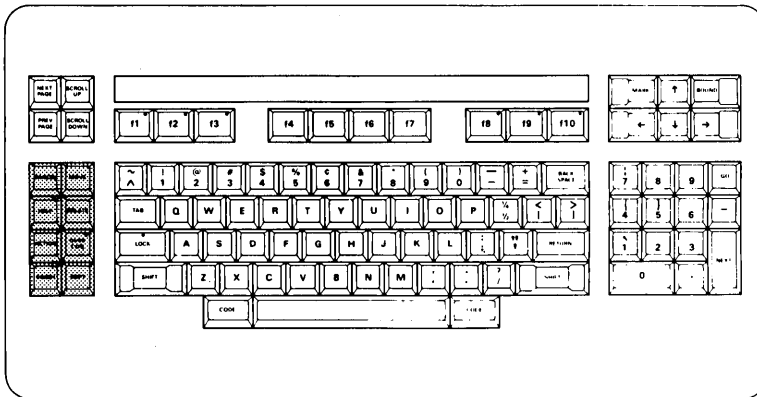


Figure 2-11. Control Keys



You press **CANCEL** to terminate a B 20 operation before it begins (i.e., during the initial setup of an operation).



You press **HELP** to display additional information on current options. **HELP** displays different information, always relevant to the options available at that point.

If there is more information than can be displayed on a single screen, you can display the remainder of the information by pressing **HELP** again.

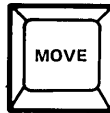
In some cases, you may be instructed to use **HELP** in conjunction with another key. These instructions are included with the B 20 program that requires this sequence.



You press **ACTION** only in conjunction with another key. For example, **ACTION** and **FINISH** terminate a B 20 operation in progress.



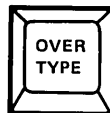
You press **FINISH** to complete an operation. Some programs call for **FINISH** as one possible response during an operation. It is also used in conjunction with **ACTION** to terminate a B 20 operation in progress.



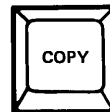
You press **MOVE** to change the placement of a previously selected character or group of characters (i.e., a word, sentence, paragraph, etc.) within word processing.



You press **DELETE** to erase screen entries. **DELETE** will erase a single character or any marked section of text.



You press **OVERTYPE** to strike over an incorrect character or symbol with the correct character or symbol. There is a light on the **OVERTYPE** key that is illuminated when **OVERTYPE** is in effect.



You press **COPY** to duplicate a previously selected character or group of characters (i.e., a word, sentence, paragraph, etc.) within word processing.

Display Keys

The four display keys, shown in figure 2-12, are: **NEXT PAGE**, **PREV PAGE**, **SCROLL UP**, and **SCROLL DOWN**.

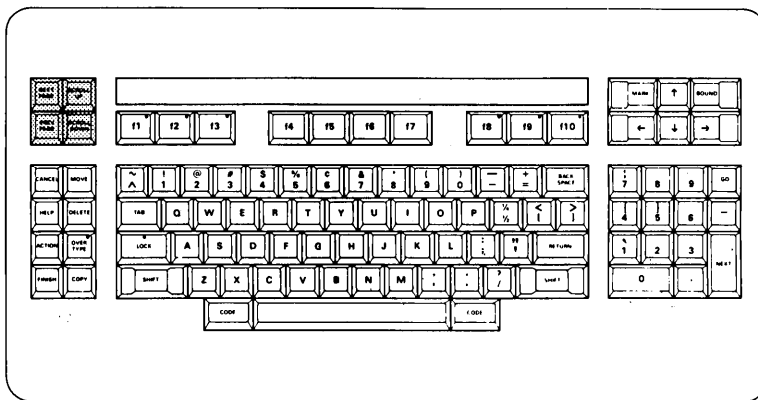


Figure 2-12. Display Keys

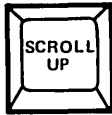
Press the display keys to move information displayed on the screen:



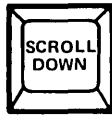
You press **NEXT PAGE** to display the next page of text.



You press **PREV PAGE** to display the previous page of text. **PREV PAGE** does not function at the executive level, but is very important for many B 20 programs, such as word processing.



You press **SCROLL UP** to display the next line of text displayed on your screen.



You press **SCROLL DOWN** to display the previous line of text. It does not function at the executive level, but is very important for many B 20 programs, such as word processing.

Cursor Keys

The six cursor keys, shown in figure 2-13, move the cursor.

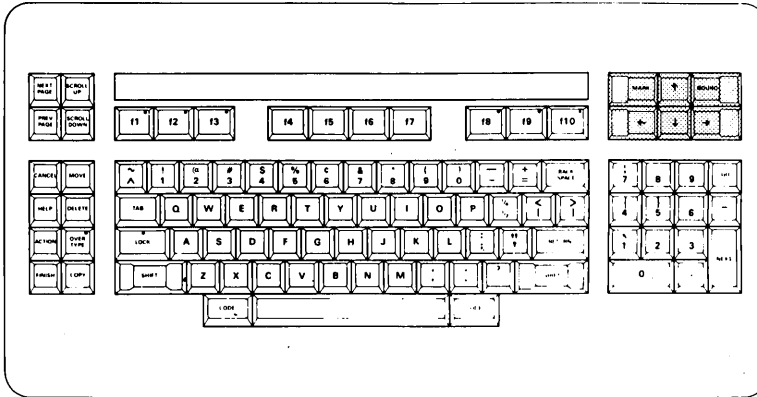
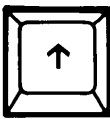
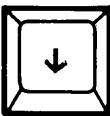


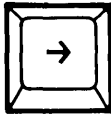
Figure 2-13. Cursor Keys



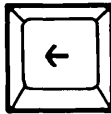
You press the **Up Arrow** key to move the cursor up one line at a time each time you press it. The cursor does not move to the right or left. If you hold the key down, it moves the cursor up continuously until you release it.



You press the **Down Arrow** key to move the cursor down one line at a time each time you press it. The cursor does not move to the right or left. If you hold the key down, it moves the cursor down continuously until you release it.



You press the **Right Arrow** key to move the cursor one space to the right along a line each time you press it. If you hold the key down, it moves the cursor right continuously until you release it.



You press the **Left Arrow** key to move the cursor one space to the left along a line each time you press it. If you hold the key down, it moves the cursor left continuously until you release it.



You press **MARK** to specify the character or the beginning of a group of characters to be changed (moved, deleted, copied, etc.) within a word processing document.



BOUND is used with **MARK** to specify the end boundary of a group of characters to be changed (moved, deleted, copied, etc.) within a word processing document.

Number Keypad

The ten number keys, shown in figure 2-14, are set up like those on a calculator. The numbers function like the typewriter number keys, but are located on a separate keypad to make entry easier. Several number keys have special symbols above them. These special symbols are accessed by using **SHIFT** plus the number. **GO** and **NEXT** are included in the keypad.

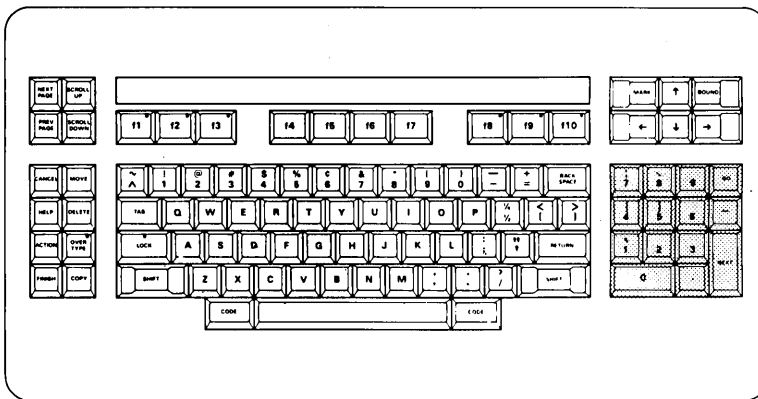


Figure 2-14. Number Keys



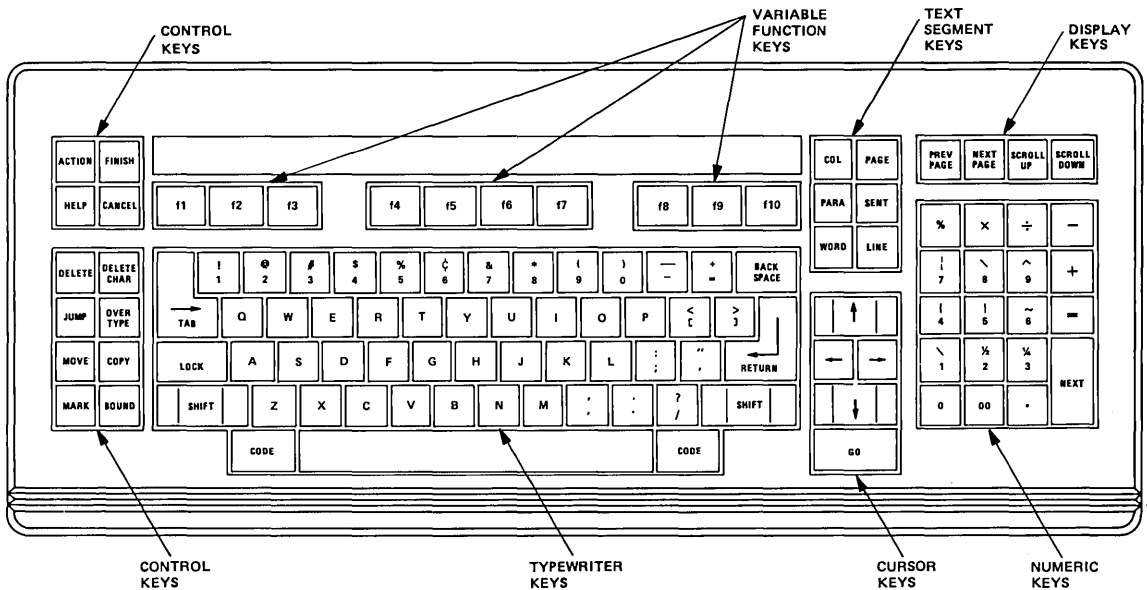
You press **GO** to execute a command (section 3 explains commands).



NEXT has the same function as **RETURN**. It is located with the number keys for ease of use when you are entering numbers.

OFISkeyboard

The OFISkeyboard can be divided into seven groups as shown in figure 2-15. Some keys (particularly function keys) operate differently depending on the particular program you are using. For example, when you perform word processing, they control word processing operations. The manuals supplied with the individual programs include instructions on how to use the keys within that specific application.



TM
Figure 2-15 The OFISkeyboard

Typewriter Keys

Your OFISkeyboard has a standard set of typewriter keys as shown in figure 2-16.

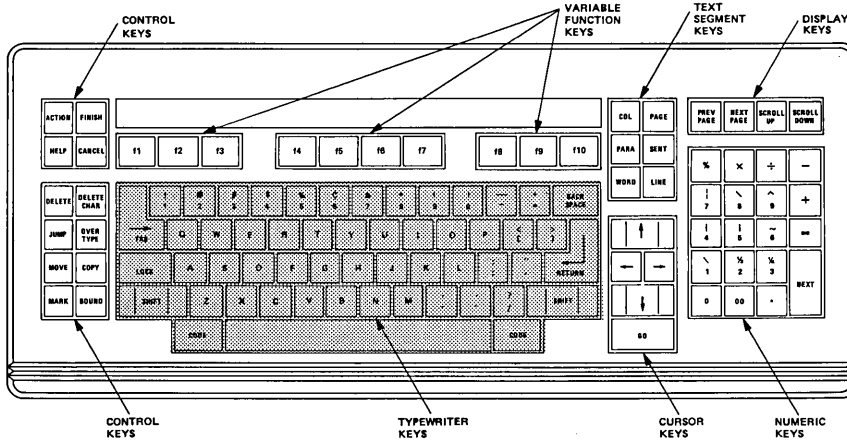
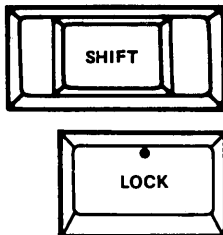


Figure 2-16. Typewriter Keys

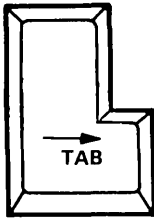
These keys allow you to enter characters (letters, numbers, punctuation marks, and symbols). The keys that differ from standard typewriter keys are:



SHIFT works just as it does on a typewriter. However:

LOCK causes letters to become uppercase. A red indicator light on the **LOCK** key is illuminated when it is locked. To unlock this key, press it again (the indicator light will go off).

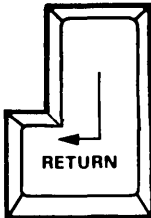
NOTE: The **LOCK** key affects only letters, not numbers. You must use the **SHIFT** key to enter a symbol above a number.



TAB allows you to create indentations in a word processing document (e.g., you would use the **TAB KEY** to start the first line of a paragraph five spaces in from the left margin).



BACK SPACE allows you to correct errors by deleting the previously entered character. Continue pressing the **BACK SPACE** key to delete several characters. Hold it down to delete a complete word or line.



RETURN moves the cursor to a new line. In some programs, pressing **RETURN** will cause your B 20 to display new information.

Locate the following special symbols on the keyboard:

- | | |
|---------|--------------------------|
| < and > | Angle brackets |
| [and] | Square brackets |
| ~ | Tilde |
| ^ | Exponent (or circumflex) |

Function Keys

Your OFISkeyboard has ten function keys (labeled f1 through f10) that you use with B 20 programs (see figure 2-17). The keys **f1**, **f2**, **f3**, **f8**, **f9**, and **f10** have indicator lights that may come on during self-diagnostic tests. The lights do not work at other times.

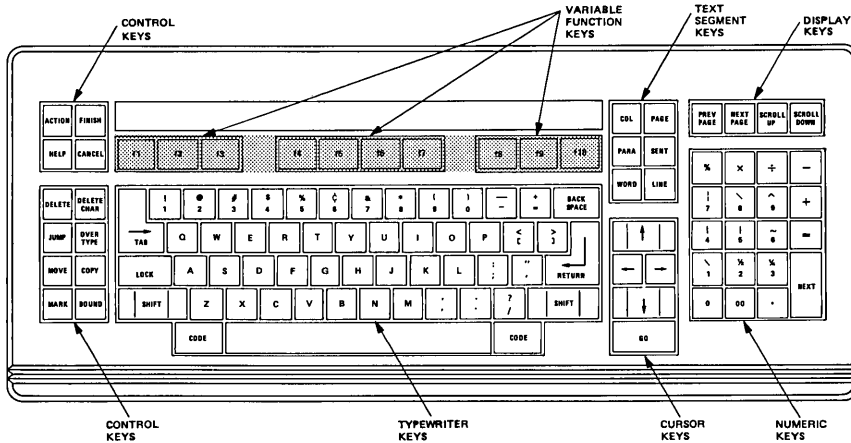


Figure 2-17. Function Keys

The function keys are defined by the program you are working on. For example, when you perform word processing, they control word processing operations. Each key performs a variety of functions. The current function of each key is displayed at the bottom of the screen. When a function key is pressed, a service is performed, or a new set of functions are displayed. The manuals that are supplied with each of these programs describe how the function keys are to be used.



Figure 2-18. Level 1 Function Key Display (Sample)

Control Keys

The control keys, shown in figure 2-19, are: **ACTION**, **FINISH**, **HELP**, **CANCEL**, **DELETE**, **DELETE CHAR**, **JUMP**, **OVERTYPE**, **MOVE**, **COPY**, **MARK**, and **BOUND**. These keys are used to direct and control your B 20.

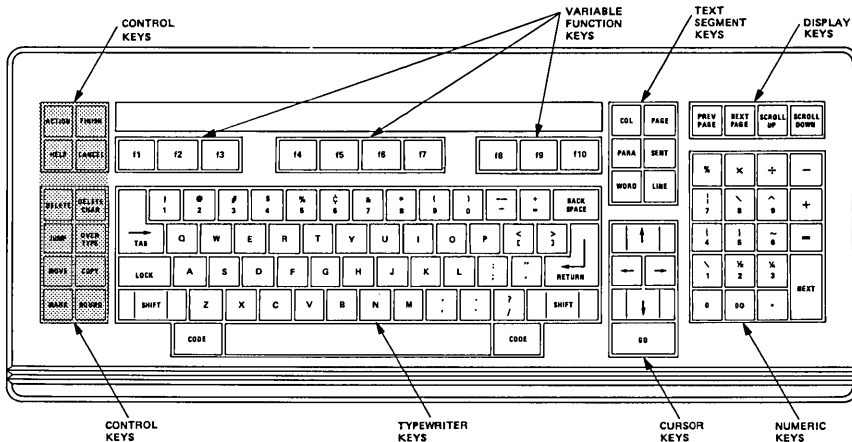


Figure 2-19. Control Keys



You press **ACTION** only in conjunction with another key. For example, **ACTION** and **FINISH** terminate a B 20 operation in progress.



You press **FINISH** to complete an operation. Some programs call for **FINISH** as one possible response during an operation. It is also used in conjunction with **ACTION** to terminate a B 20 operation in progress.



You press **HELP** to display additional information on current options. **HELP** displays different information, always relevant to the options available at that point.

If there is more information than can be displayed on a single screen, you can display the remainder of the information by pressing **HELP** again.

In some cases, you may be instructed to use **HELP** in conjunction with another key. These instructions are included with the B 20 program that requires this sequence.



You press **CANCEL** to terminate a B 20 operation before it begins (i.e., during the initial setup of an operation).



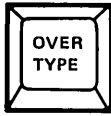
You press **DELETE** to erase screen entries.



You press **DELETE CHAR** to erase one character at a time.



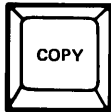
You press **JUMP** to move the cursor to a specific location (e.g. on the same page or a different page of a word processing document).



You press **OVERTYPE** to strike over an incorrect character or symbol with the correct character or symbol. There is a light on the **OVERTYPE** key that is illuminated when **OVERTYPE** is in effect.



You press **MOVE** to change the placement of a previously selected character or group of characters (i.e., a word, sentence, paragraph, etc.) within word processing.



You press **COPY** to place a duplicate of a character or group of characters (i.e., a word, sentence, paragraph, etc.) within word processing.



You press **MARK** to specify the character or the beginning of a group of characters to be changed (moved, deleted, copied, etc.) within a word processing document.



BOUND is used with **MARK** to specify the end boundary of a group of characters to be changed (moved, deleted, copied, etc.) within a word processing document.

Text Segment Keys

The text segment keys, shown in figure 2-20, are: **COL**, **PAGE**, **PARA**, **SENT**, **WORD**, and **LINE**. These keys are used to select text within a word processing document for editing or formatting operations. Each key indicates a specific portion of text. Refer to your OFIS™ Writer 25 manual for further information.

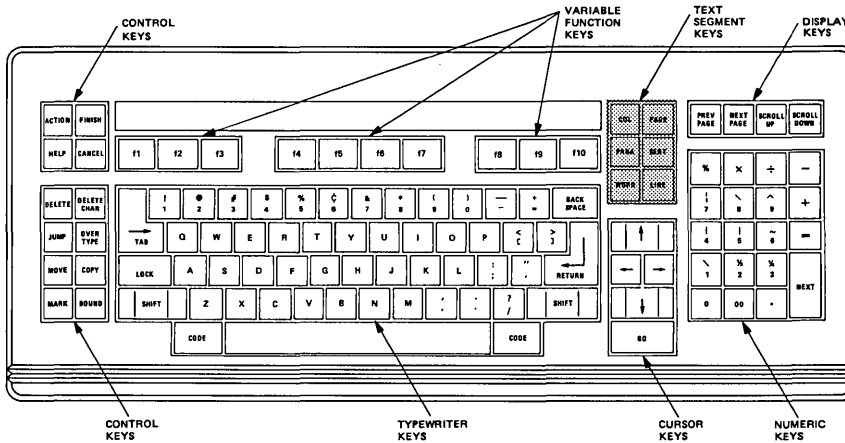


Figure 2-20. Text Segment Keys

Display Keys

The four display keys, shown in figure 2-21, are: **NEXT PAGE**, **PREV PAGE**, **SCROLL UP**, and **SCROLL DOWN**.

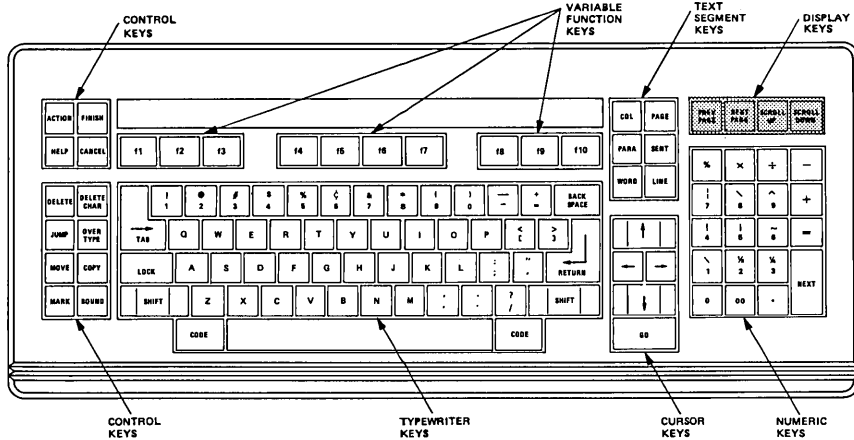


Figure 2-21. Display Keys

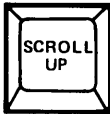
Press the display keys to move information displayed on the screen:



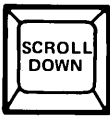
You press **NEXT PAGE** to display the next page of text.



You press **PREV PAGE** to display the previous page of text. **PREV PAGE** does not function at the executive level, but is very important for many B 20 programs, such as word processing.



You press **SCROLL UP** to display the next line of text displayed on your screen.



You press **SCROLL DOWN** to display the previous line of text. It does not function at the executive level, but is very important for many B 20 programs, such as word processing.

Cursor Keys

The four cursor keys, shown in figure 2-22, move the cursor. The GO key is also found on this portion of the keyboard.

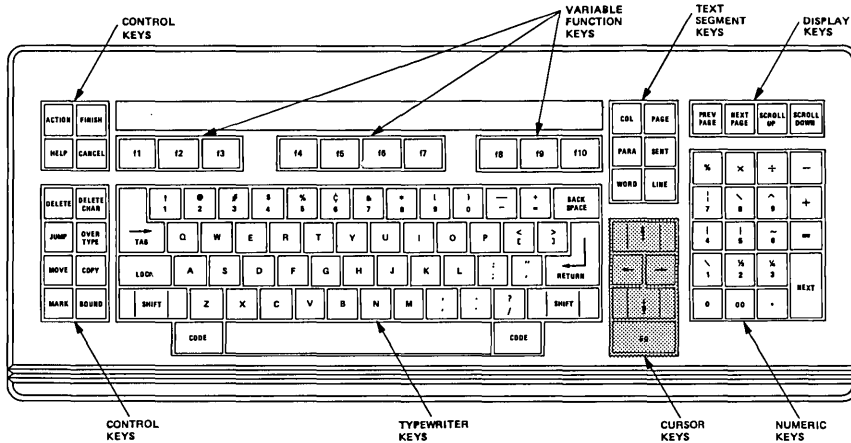
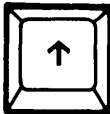
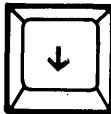


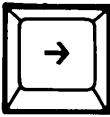
Figure 2-22. Cursor Keys



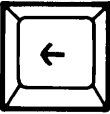
You press the **Up Arrow** key to move the cursor up one line at a time each time you press it. The cursor does not move to the right or left. If you hold the key down, it moves the cursor up continuously until you release it.



You press the **Down Arrow** key to move the cursor down one line at a time each time you press it. The cursor does not move to the right or left. If you hold the key down, it moves the cursor down continuously until you release it.



You press the **Right Arrow** key to move the cursor one space to the right along a line each time you press it. If you hold the key down, it moves the cursor right continuously until you release it.



You press the **Left Arrow** key to move the cursor one space to the left along a line each time you press it. If you hold the key down, it moves the cursor left continuously until you release it.



You press **GO** to start a command (section 3 explains commands).

Number Keypad

The number key pad, shown in figure 2-23, is set up much like a calculator. The numbers function like the typewriter number keys, but are located on a separate keypad to make entry easier. Several number keys have special symbols above them. These special symbols are accessed by using **SHIFT** plus the number. Refer to OFIS™ Writer manual for additional description of math functions. **NEXT** is included in the keypad.

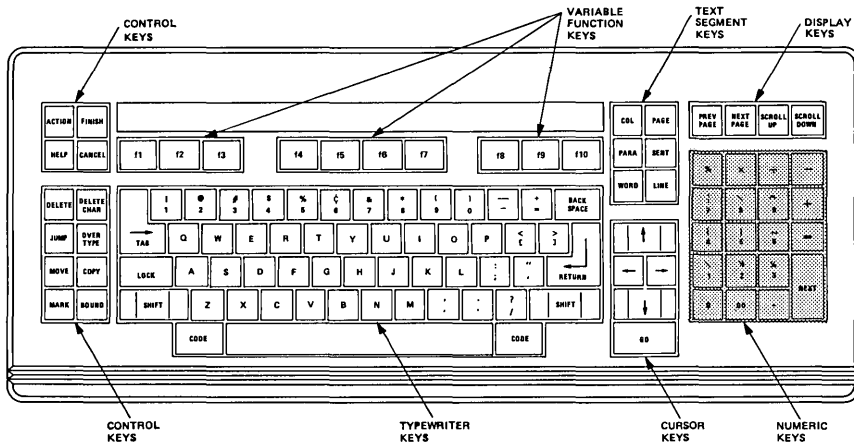
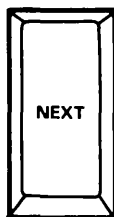


Figure 2-23. Number Keys



NEXT has the same function as **RETURN**. It is located with the number keys for ease of use when you are entering numbers.

MAINTENANCE

Your B 20 requires little maintenance. Workstation operators should, however, keep the machine surfaces and work area as clean and dust-free as possible.

Depending upon your type of workstation, keep the floppy disk drive door closed (B 25s) or open (B 21s) when not in use.

CAUTION

- Do not allow liquid to contact any internal surfaces of the disk drive unit, keyboard, or screen. Damage may result.
- Do not use scouring pads, abrasive cleaners, or chlorinated cleaners. These may damage surfaces.
- Do not move the Mass Storage Unit (if you have one). Moving the unit may damage the Winchester disk drive.

Weekly Cleaning

Clean metal and plastic parts weekly. Use a soft, clean cloth slightly dampened with water. Be careful not to get water into the disk drives or keyboard.

If the Mass Storage Unit must be moved, contact a Burroughs service representative.

As Necessary

Clean the screen when necessary. Use a soft, clean cloth dampened with glass cleaner. Do not spray the screen since this could result in liquid seeping into your B 20. Do not use scouring pads, abrasive cleaners, or chlorinated cleaners.

SERVICE

Refer to the B 20 Customer Service Information Document and Warranty Forms. It tells you how to obtain Burroughs assistance and service.

If you call for assistance, have the following information available:

- product number(s)
- serial number(s)
- options installed on each component

Forms that can be used for recording this information are printed in your *B 20 Operations: Quick Reference Guide*.

SECTION 3

B-20 SOFTWARE

Vertical line on the left side of the page.

Small mark or character.

KEY WORDS

The following terms are used throughout this section. You may already be familiar with some of them. Do not memorize them; but review them now and refer back to them if necessary during this course. (They are also included alphabetically in appendix D, Glossary of Terms.)

Data Data is information ranging in size from a single letter or number to a file of documents or a computer program.

Volume The largest data grouping. Each volume is a disk (hard or floppy). Each volume has a label (for example, "Contracts").

Directory A group of files on a volume under one heading is called a directory (for example, "Active" or "Pending").

File A document or group of documents within a directory is called a file (for example, "ABC.Corporation").

Command A command is an order from you that causes your B 20 to perform an action. Most commands require that you complete a form on the screen.

For example, if you command your B 20 to rename a file, you must fill in a form on the screen, giving the current name of the file and the new name of the file.

Executive The part of your B 20 operating system that responds to commands. The Executive is always available after sign on. It provides, at minimum, command forms and status messages.

B 20 Training Exercises

- Reset Button** A button at the back of the disk drive that allows you to bring the system back through its start-up tests without having to turn off the computer.
- Self-Diagnostic Test** The B 20 computer goes through a series of self-tests every time it is turned on. These tests check for any system problems before you start operations.
- Initialization** Initializing a disk (floppy or hard) prepares it for use on your B 20. Initialization destroys any previously-entered data residing on the disk.
- Archive** A copy of the contents of a disk for backup or storage purposes.

TRAINING EXERCISES OVERVIEW

This section contains the intermediate training exercises for Instruction Blocks 5 through 7 of the Instructor program. It reviews the turn on-off and sign on-off procedures and shows you how to use B 20 executive commands to organize files and print documents.

NOTE

Your B 20 system software must be installed in order to complete the exercises in this section. For software installation procedures, if necessary, refer to your *B 20 Systems Custom Installation and Reference Manual*.

When you complete section 3, you should be able to:

- Set up your file system on floppy disks
- List, copy, and modify files stored on the floppy disks
- Print stored documents or files
- Back up selected files (to protect information) and restore the backup files to your B 20

B 20 Training Exercises

The exercises in this section are progressive so you should complete each exercise before going on to the next. The exercises will take you through the following steps:

Executive Level Operations presents sign on and log out procedures and contains information and exercises for using command prompts. It also gives you practice using the **HELP**, **RETURN**, **NEXT PAGE**, **GO**, **BACK SPACE**, and **DELETE** keys as they relate to commands.

Set Up Files reviews information on B 20 file structure (volumes, directories, and files) and works through several exercises in which you create files.

Manage Existing Files asks you to change file names, delete them, list files on a disk, view their contents, and copy them. You also use the **ACTION** and **FINISH** keys.

Print Files contains exercises in which you print files stored on disk(s).

Archive Files takes you through backup and restoration procedures for Winchester disks.

NOTE

Full reference information on Executive commands is contained in your *B 20 Systems Standard Software Operations Guide (SOG)*.

Equipment Required

To complete this section, you need the following equipment:

- a B 20 workstation
- at least four blank floppy disks
- Learning Disk 2 that came with this manual
- System Software floppy disks (if you have a standalone dual-floppy workstation).

Before You Start This Section

Review the following before you begin B 20 training exercises:

- **DATA ENTRY.** Enter information into your B 20 exactly as it appears in the instructions.

For example, when you type f0 or f1 on your B 20, you must use the number 0 or the number 1; do not use the letter O or the letter l.

- **FLOPPY DISKS.** Properly insert floppy disks and close the disk drive door or tab. If you improperly insert a floppy disk or forget to close the door or tab, an error message appears on the screen when you try to use that floppy disk.
- **ERROR MESSAGES.** If an error message appears on your screen, refer to appendix A for instructions on how to proceed.

NOTE

To cancel (terminate) any B 20 activity, press the **ACTION** and **FINISH** keys simultaneously.

EXECUTIVE LEVEL OPERATION

When you complete the SignOn form on a powered-up workstation, your B 20 enters the executive level of operation. On the command line, you can then enter commands to direct its operations.

The B 20 family of workstations has a basic set of commands. But, the command set on your particular workstation depends on its disk and system configurations.

If you have a workstation with a single floppy drive (B 25 or B 21) or mass storage unit (B 22), your operating system software is on the hard (Winchester) disk. Table 3-1 lists the standard commands available with your system configuration.

If you have a standalone dual-floppy drive B 20 (B 25), your operating system software is on B 20 system software floppy disks numbered 1 through 4. Table 3-2 and Appendix B list the commands on each floppy disk. The appropriate system software disk must be in the left floppy disk drive before you can access those commands.

Command Forms

Commands allow you to give your B 20 orders to perform operations; however, most operations require information from you before your B 20 can perform them.

Press **RETURN** after typing a B 20 command to display the command's form. Each line of the command form is called a field. Required fields are always unbracketed. (Bracketed fields show that the information is optional.) Type in the information for each required and optional field exactly as directed in the training exercises.

When the form is complete, press **GO** to send the command and form information to your B 20. (If the command you are using does not require information, you can press **GO** after entering the command. If you do this for a command that requires information, an error message appears and you must reenter the command.)

In the exercises that follow, step-by-step instructions are given for accessing command forms, filling them out, and sending them to your B 20. Allow approximately 30 minutes to complete Instruction Block 5.

Table 3-1. Winchester Disk B 20 Commands

Append	Path
Backup Volume	Plog
Change Volume Name	Record
Copy	Remove Command
Create Configuration File	Remove Directory
Create Directory	Rename
Create File	Replay
Debug File	Restore
Delete	Run
Dump	Run File
Edit	Screen Setup
Files	Selective Backup
Floppy Copy	Set Directory Protection
Format	Set File Prefix
Ivarchive	Set Protection
Ivolume	Set Time
Login	Stop Record
Logout	Submit
Maintain File	Type
Make Translation File	User File Editor
New Command	Volume Status

Table 3-2. Dual-floppy Drive B 20 Commands

NOTE

Commands that are unique to a particular floppy disk are italicized.

DISK 1 (used during B 20 turn on and log out)

Append	Rename
Copy	Run
Create Directory	Run File
Create File	Screen Setup
Delete	Set File Prefix
Login	Set Protection
<i>Logout</i>	Stop Record
Path	Type
Record	<i>User File Editor</i>
Remove Directory	

DISK 2

Append	Record
<i>Change Volume Name</i>	<i>Remove Command</i>
Copy	Remove Directory
Create Directory	Rename
Create File	Run
Delete	Run File
<i>Files</i>	Screen Setup
<i>Floppy Copy</i>	Set File Prefix
<i>Format</i>	Set Protection
<i>Ivolume</i>	Stop Record
Login	<i>Submit</i>
<i>New Command</i>	Type
Path	<i>Volume Status</i>

Table 3-2. Dual Floppy Drive B 20 Commands (Cont)

DISK 3

Append	<i>Plog</i>
Copy	Record
<i>Create Configuration File</i>	Remove Directory
Create Directory	Rename
Create File	Run
<i>Debug</i>	Run File
Delete	Screen Setup
<i>Dump</i>	Set File Prefix
Login	Set Protection
<i>Maintain File</i>	Stop Record
<i>Make Translation File</i>	Type
Path	

DISK 4

Append	Remove Directory
Copy	<i>Replay</i>
Create Directory	Rename
Create File	Run
Delete	Run File
<i>Edit</i>	Screen Setup
<i>Files</i>	Set File Prefix
Login	Set Protection
Path	Stop Record
Record	Type

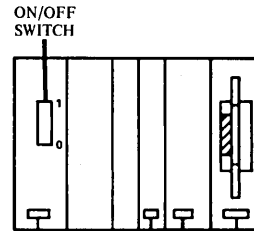
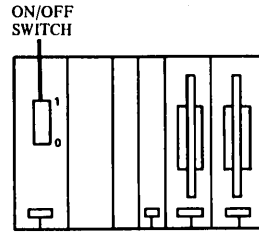
Turning Your System On and Off

Figure 3-1 shows the on/off switches for both floppy and dual disk drive systems and describes the on/off procedures.

ON/OFF DESCRIPTION

If you have a B 25 (table-top processor and disk drive unit):

- Slide the switch up (located on the left of your table-top processor unit) to turn on your B 25. This switch turns on the screen, disk drives, and the processor. Two small red lights (for the processor and drive) remain on while your B 25 is operating.
- Slide the switch down to turn your B 25 off. (Do not turn your B 25 off at this time.)



If you have a B 21 (floppy disk drive in a lectern):

- Press the right side (ON) of the red switch located in the lower right-hand corner of the lectern to turn on your B 21. This switch turns on the screen, disk drives, and the processor. The switch remains illuminated while your B 21 is operating.
- Press the left side (OFF) of the red switch to turn your B 21 off. (Do not turn your B 21 off at this time.)

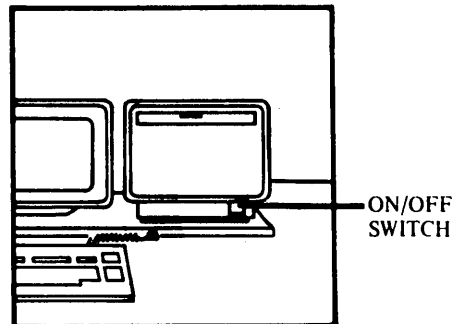


Figure 3-1. On/Off Switches

Self-Diagnostic Test

After software installation, each time you turn on your B 20 computer, it automatically performs a self-diagnostic test. The test checks that all parts of your B 20 are functioning properly.

During the test, lights on six function keys may flash on and off, and the letter T followed by asterisks displays on the lower left of the screen. If the test discovers a problem, an error message displays on the screen just below the T and asterisks. If this occurs, try the following:

1. Check that all components are properly plugged in and turned on.
2. Check that the keyboard cable is attached properly.
3. Check that the mass storage unit cable is attached properly.
4. Check that the floppy disk is inserted properly.
5. Press the RESET button at the back of your lectern or table-top drive unit (shown in figure 3-2).
6. If the error message reappears and the keys light, record the information and contact your Burroughs representative.

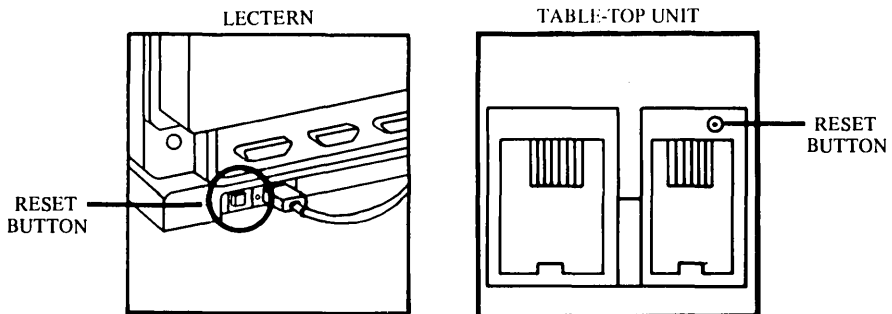


Figure 3-2. Reset Buttons

System Sign On and Log Out

In this training exercise you sign on (begin a B 20 session), use a few keys, and log out (end a B 20 session and return your B 20 to a SignOn form). All workstations except master workstations in a cluster where others are working may be powered down at this time.

STEP	ACTION	DESCRIPTION
1	Turn power on your B 20, as described in Figure 3-1. Observe self-diagnostic test procedures.	If you have a dual floppy drive B 20, insert system disk 1 before you turn on your B 20. A SignOn form appears (shown completed in figure 3-3).
2	Hold the <i>A</i> key down until several a's appear.	The keyboard characters repeat when the keys are held down.
3	Press DELETE .	The line is erased.
4	Type: <i>abcde</i>	
5	Press BACK SPACE five times.	BACK SPACE erases one character at a time.
6	Use DELETE and BACK SPACE to correct your SignOn form entries, if necessary.	
7	Press RETURN twice.	The cursor moves to the date field.

STEP	ACTION	DESCRIPTION
8	Type today's weekday, date, and time (if not already entered). The correct date and time should appear in the upper right-hand corner of the screen.	You must type the correct combination of day and date. For example: Your B 20 does not accept the entry Tues May 6, 1985 8:00 am because May 6, 1985 (or 5/6/85) is a Monday. Also, do not enter the lowercase letter L ("l") as the number 1.
9	Press GO.	A B 20 command prompt appears. (If an error message appears instead, read the message. The cursor appears on the problem field. Re-enter the field. Press GO.)
10	Type: <i>logout</i>	This logs you off the system.
11	Press GO.	The SignOn form reappears.

SignOn 5.0

Day/Date/Time Not Set

BURROUGHS B 20 OPERATING SYSTEM BTOS 5.0

User Name	Enter an application name or leave this line blank to display a Command form.
Password	Enter your assigned password (optional).
Day/Date/Time	Enter the current day, date and time (if not already set).

Then press the GO key.

User Name (e.g., Allen)

Password

Date/Time (e.g., Fri Sep 9, 1983 8:00 am) *Fri Mar 29, 1985 10:55 am*

Figure 3-3. Completed System SignOn Form (Sample)

In this training exercise, you use the **HELP** key to list your B 20 commands. Allow approximately three minutes to complete the exercise.

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears (refer to system sign on, discussed earlier in this section, if necessary).
2	Press HELP	Your B 20 lists executive level commands in alphabetical order.
3	Press NEXT PAGE , if necessary, to display a new command prompt.	If you do not have a dual floppy drive B 20, all your commands may not fit on one screen. You must then press NEXT PAGE to display the rest of the commands, followed by a command prompt.
4	Press HELP	Your B 20 again displays commands in alphabetical order, but now each command is followed by a brief description.
5	Press NEXT PAGE repeatedly until a command prompt appears	Your B 20 displays each page of commands.

SET UP FILES

In this training exercise, you will create several files. However, first you must understand the file organization in your B 20.

Data Organization In Your B 20

Your B 20 storage devices are disks. Since the disk and drive units vary on B 20s, your configuration governs file activities, as follows:

If you have a single floppy drive or a mass storage unit, you also have a *Winchester disk* or hard, permanent disk. When you sign on to your B 20, you have access to all commands on the system.

If you have a *dual floppy drive*, you do not have a Winchester disk. You use floppy disks in the right disk drive to store your records. If you have a standalone dual floppy B 20, you use floppy disks in the left disk drive for your system software (refer to table 3-2).

Using these devices, your B 20 filing system is set up as follows:

- The disks are the file cabinets of the system. They are called volumes.
- Volumes are further divided into sections. Each volume may have up to 15 sections, called directories.
- Each B 20 directory may have up to 4 files that contain documents.

Figure 3-4 illustrates this file system.

Volume, Directory, and File Names

When you enter volume, directory, or file names in your B 20, you must use special characters and formats so your B 20 can distinguish between the volume, directory and file. These formats are listed in table 3-3. Refer to this table when necessary.

Passwords

A password is a word, phrase, or group of characters that you must enter before you can access a file or directory. The password protects the file against unauthorized use.

Your B 20 allows you to set up different password security systems. When you are ready to establish passwords, refer to the *B 20 Systems Standard Operations Guide*.

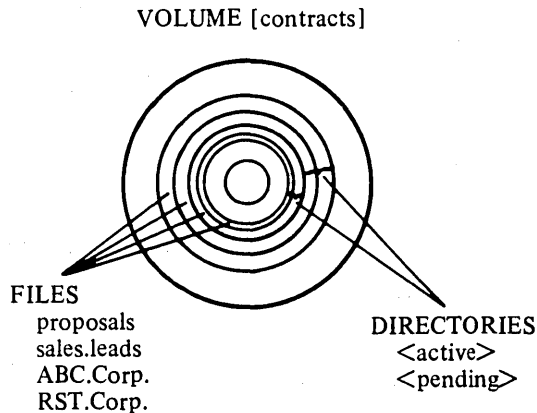


Figure 3-4. The B 20 File System

Table 3-3. Volume, Directory, and File Labels

File Level	Format	Description
VOLUME	[volume]	Enclose volumes in square brackets (maximum size: 12 characters).
DIRECTORY	<directory>	Enclose directories in angle brackets (maximum size: 12 characters).
FILE	file.name	Enter up to 50 characters. (Use a period or other symbol to separate words or to run words together; do not use blanks.)

Complete Name Examples:

[WIN]<accounting>payroll	The payroll file in the accounting directory on the Winchester disk.
[sys]<reports>May85.budget	The May 1985 budget file in the reports directory on the system disk.
[contracts]<active>ABC.Corp	The ABC Corporation file in the active directory on the contracts disk.
[f0]<learning>section1	The section 1 file on the learning directory on the floppy disk.

Set Up Files Overview

In this training exercise, you create two file volumes. The entire section should take approximately 30 minutes to complete; however, you can stop between activities and even log out (but allow extra time if you do). Creating a file on your B 20 involves three commands:

1. First you initialize a floppy disk (**IVOLUME** command). Initialization prepares the disk to receive your data by erasing data stored on the disk and checking the disk for bad spot locations (spots your B 20 skips when storing your data).
2. Then you create a directory (**CREATE DIRECTORY** command). The directory is a heading (or division) for one or more files, similar to major headings within a file cabinet.
3. Then you create a file (**CREATE FILE** command).

The three activities that follow contain step-by-step instructions for creating this sample file organization:

Two volumes with the same name: contracts;

Several directories on the volumes: pending, active, closed;

Several files in the directories: ABC Corporation, XYZ Corporation, RST Corporation, Sales Leads, Proposals.

NOTE

The system software floppy disk number for dual floppy drive B 20s is listed above each exercise. If you have a dual floppy drive, insert the appropriate system software floppy disk before typing the command.

Initialize Volumes

Allow fifteen minutes for this exercise. You need two new floppy disks. You can skip steps 3 through 5; they help you become familiar with B 20 command forms and the **RETURN** and **CANCEL** keys.

NOTE

If you have a standalone dual floppy B 20, insert system software disk 2 in your left disk drive before proceeding with the steps below.

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears (refer to system sign on, discussed earlier in this section, if necessary).
2	Type: <i>ivolume</i> Press RETURN	This commands your B 20 to prepare a disk for use. The IVOLUME form appears (shown completed in figure 3-5).
3	Press RETURN several times	The purpose of this step is to help you become familiar with moving through B 20 command forms. If you press RETURN more than 20 times, the cursor starts again at the top of the form.
4	Press CANCEL	A new command prompt appears. If you press CANCEL when your B 20 displays a form, your B 20 terminates the command and the screen displays a new command prompt.
5	Type: <i>ivolume</i> Press RETURN	This repeats the command entered in step 2. The IVOLUME form reappears (shown completed in figure 3-5). The cursor is on the Device name field. Complete the form by following steps 6 through 8.

Executive 5.0C
Path: [Sys]<sys>

Fri Mar 29, 1985 10:59 am

```
Command  ivolume
Ivolume
Device name           fl
[Device password]
Volume name          contracts
[Volume password]
[System Image (default = 384)]  0
[Log file (default = 2)]
[Crash file (default = 0)]
[Max. directories]
[Max. files on volume]
[Primary file headers only?]
[Max. files in Sys Directory]
[Sys Directory password]
[Write protect Sys Directory?]
[Suppress format of medium?]
[Surface tests]
[Debug?]
[Log file]
[Extended floppy tracks?]
[Single-sided mini floppy?]
[Bad spots (See Documentation)]
```

Figure 3-5. Completed Ivolume Form (Dual Floppy Drive Sample)

B 20 Training Exercises

STEP	ACTION	DESCRIPTION
6	Type the device name Press RETURN twice	Standalone dual-floppy drive B 20: type fl Winchester or clustered dual-floppy: type Type the number 1 or 0, not the letter 1 or 0. The device number tells your B 20 which disk to initialize. (If you type the device name for your system software disk--d0 for Winchester disk, f0 for dual floppy drive--your B 20 initializes that disk, erasing the system software. Use this command carefully.) Pressing RETURN twice moves the cursor to the third field: Volume name.
7	Type: <i>contracts</i> Press RETURN twice	Contracts will be the volume (floppy disk) name. Do not use square brackets now. The cursor moves to the fifth field: [System Image (default = 384)].
8	Type: 0 Press GO	When you initialize a floppy disk to be used for filing, you should change the syst image to 0 (zero). (System image reserves a portion of the floppy disk for program ru instructions.) GO sends the data (device name, volume name and system image) to your B 20. Your B 20 prompts you to insert a floppy disk.
9	Insert a new floppy disk Press GO	Initialization begins. If an error message appears, refer to appendix A. When initialization is complete, your B 20 screen looks similar to figure 3-6. (Initialization takes approximately five minutes.)

Executive 5.0C
Path: [Sys]<sys>

Fri Mar 29, 1985 11:01 am

Initialize Volume 5.0

Please insert diskette to be initialized
(Press GO to confirm, CANCEL to deny, or FINISH to return to Executive)

Maximum number of directories on volume: 15
Maximum number of files on volume: 63 to 95
Maximum number of files on directory SYS: 42

Initializing the disk on f0 ... all data on the disk is lost!

Formatting Disk ... done.
Surface test - Pass: 1
Writing volume structures on disk

Disk contains 0 bad sectors

Volume initialization complete.

Initialize another volume?
(Press GO to confirm, CANCEL to deny, or FINISH to return to Executive)

Figure 3-6. Ivolume Completion Message (Winchester B 20 Sample)

B 20 Training Exercises

STEP	ACTION	DESCRIPTION
10	Remove the contracts floppy disk and label it	Do not write on the floppy disk. (Refer to Handling Floppy Disks in section 1, if necessary.)
11	Insert a new floppy disk Press GO	Your B 20 initializes a second floppy disk with the same volume name, contracts. You do not need to complete a new IVOLUME form.
12	Press FINISH	This ends IVOLUME and a command prompt appears.
13	Remove the second contracts floppy disk and label it	

Create Directories

Allow five minutes for this exercise. You need the two contracts floppy disks you initialized in the previous exercise. If you have not logged out of your B 20, skip step 1 (sign on).

NOTE

If you have a standalone dual floppy B 20, insert a system software disk in your left disk drive. (System software disks 1, 2, 3, and 4 all contain create directory capabilities.)

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears (refer to system sign on, discussed earlier in this section, if necessary).
2	Type: <i>create directory</i> Press RETURN	This command directs your B 20 to create a directory. The CREATE DIRECTORY form appears (shown completed in figure 3-7). Complete the form by following step 4.
3	Type: <i>[contracts] <pending></i>	This gives your B 20 the directory name pending for the volume contracts.
4	Insert one of the contracts floppy disks Press GO	Your B 20 creates the directory pending.
5	Type: <i>create directory</i> Press RETURN	This command directs your B 20 to create another directory. The CREATE DIRECTORY form appears.
6	Type: <i>[contracts] <active></i> Press GO	This adds the directory active to the same floppy disk.

B 20 Training Exercises

STEP	ACTION	DESCRIPTION
7	Remove the floppy disk and label it	
8	Repeat steps 2 through 4 with the other contracts floppy disk; but create the directory closed.	
9	Remove the floppy disk and label it	

Command *create directory*
Create Directory
New directory name [contracts]<pending>
[Protection level (default 15)]
[Maximum number of files (default 45)]
[Password for new directory]
[Volume password]

Figure 3-7. Completed Create Directory Form (Sample)

reate Files

Allow five minutes for this exercise. You need the two contracts floppy disks. If you have not logged out of your B 20, skip step 1 (sign n).

NOTE

If you have a standalone dual floppy B 20, insert a system software disk in your left disk drive. (System software disks 1, 2, 3, and 4 all contain create files capabilities.)

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears (refer to system sign on, discussed earlier in this section, if necessary).
2	Insert the floppy disk with the directories pending and active	
3	Type: <i>create file</i> Press RETURN	This command directs your B 20 to create a file. The CREATE FILE form appears (shown completed in figure 3-8). Complete the form by performing step 4.
4	Type: <i>[contracts] <pending> sales.leads</i> Press GO	Your B 20 creates the file sales leads in the directory pending on the volume contracts.
5	Type: <i>create file</i> Press RETURN	Again, this command directs your B 20 to create a file. The CREATE FILE form appears.

STEP	ACTION	DESCRIPTION
6	Type: <i>[contracts] <active> RST.Corp</i> Press GO	Your B 20 creates the file RST.Corp for the directory active on the volume contracts
7	Repeat steps 5 and 6, but add the file proposals to the pending directory.	This contracts volume now contains: active and pending directories sales leads and proposals file on the pending directory, RST.Corp file on the active directory.
8	Repeat steps 5 and 6, but add the file ABC.Corp to the active directory.	This contracts volume now contains: active and pending directories sales.leads and proposals file on the pending directory, RST.Corp. and ABC.Corp. files the active directory.
9	Remove the floppy disk.	You will use this floppy disk more training exercises.

```

Command  create file
Create File
File name           [contracts]<pending> sales .leads
[Volume or Directory password]
[File password]
[File protection level (default = 15)]
[Size in sectors (default = 0)]
[Overwrite OK?]
    
```

Figure 3-8. Completed Create File Form (Sample)

MANAGE EXISTING FILES

In these training exercises you learn to use various B 20 commands to manage your B 20 files. You should allow approximately 30 minutes to complete them; however, you can stop between exercises and even log out (but allow extra time if you do). The functions covered in this exercise are:

1. Check the floppy disk contents (**VOLUME STATUS** command). This command is particularly helpful if your floppy disk label is out of date or incomplete. Your B 20 lists the volume name and the directories on the volume.
2. List the file names on a directory (**FILES** command). This command is helpful if you have forgotten the exact name of a file or files.
3. View the contents of a file (**TYPE** command).
4. Copy a file(s)--from a floppy disk to a system disk or copy a floppy disk to another floppy disk (**COPY** and **FLOPPY COPY** commands).
5. Change the name of a file (**CHANGE VOLUME NAME** and **RENAME** commands).
6. Delete a file (**DELETE** command). When deleting a file, your B 20 removes the file (erases its contents). The file cannot be recovered. Use this command with caution.

The six activities that follow contain step-by-step instructions for performing these operations using the files created in the Create Files exercise and your Learning Disk.

Check the Disk Contents

Allow five minutes for this exercise. You need the two contracts disks and Learning Disk 2. If you have not logged out of your B 20, step 1 (sign on).

NOTE

If you have a standalone dual-floppy B 20, insert system software disk 2 in your left disk drive before proceeding with the steps below.

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>volume status</i> Press RETURN	This commands your B 20 to list the contents of a volume. The VOLUME STATUS form appears.
3	Type: <i>contracts</i> Insert a floppy disk from the create files exercise	Contracts is the name of each floppy disk created in the create files exercise. (If you forget a floppy disk name, you can enter the device number here, telling your B 20 to display volume status for the disk in that drive.)
4	Press GO	Volume status information displays. If you inserted the floppy disk with the pending active directories, the screen should be similar to figure 3-9.

STEP	ACTION	DESCRIPTION
5	Remove the floppy disk Type: <i>volume status</i> Press RETURN	This commands your B 20 to list the contents of a volume. The VOLUME STATUS form appears.
6	Type: <i>floppy</i> Insert Learning Disk 2. Press GO .	This is the volume name of Learning Disk 2. VOLUME STATUS information displays.
7	Remove the floppy disk. Repeat this exercise for your other floppy disks.	

```

Command      volume status
Volume Status
  [Volume or device name (e.g., Accounting)      contracts

Status of volume contracts

Created              Mar 29, 1985   11:05 AM
Last Modified        Mar 29, 1985   11:29 AM
Number of free pages 1024
Number of file headers 85

Directory Name      Pages      Default Protection
SYS                  3          15
pending              3          15
active                3          15
  
```

Figure 3-9. Volume Status (Sample)

B 20 Training Exercises

List the File Names

Allow five minutes for this exercise. You need the two contracts floppy disks. If you have not logged out of your B 20, skip step 1 (on).

NOTE

If you have a standalone dual-floppy B 20, insert system software disk 2 in your left disk drive before proceeding with the steps below.

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>files</i> Press RETURN	This commands your B 20 to list a directory's files. The FILES form appears (shown completed at the top of figure 3-10). This form is optional, but if you press GO instead of RETURN , a files list from the SYS directory of your system software disk appears.
3	Type: <i>[contracts]<active>*</i>	This tells your B 20 to list all file names for the volume contracts and the directory active.
4	Insert the floppy disk with the directory <i><active></i> Press GO	A list of files displays as shown in figure 3-10.
5	Remove the floppy disk	

STEP	ACTION	DESCRIPTION
6	Repeat this exercise using Learning Disk 2 (enter [floppy]<utilities>* in the [Files list] field)	

```

Command  files
Files
[File list]                [contracts]<active>*
[Details?]
[Print file]

[contracts]<active>RST.Corp.
[contracts]<active>ABC.Corp.

```

Figure 3-10. Completed Files Form and Files List (Sample)

B 20 Training Exercises

View A File's Contents

Allow three minutes for this exercise. You need Learning Disk 2. You have not logged out of your B 20, skip step 1 (sign on).

NOTE

If you have a standalone dual-floppy B 20, insert a system software disk in your left disk drive. (System software disks 1, 2, 3, and 4 all contain the software that can show you the contents of a file.)

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>type</i> Press RETURN	This commands your B 20 to display the contents, page by page, of a file. The TYPE Form appears.
3	Type: <i>[floppy]<utilities>printC..</i>	This is the volume, directory, and file name of one of your Learning Disk files.
4	Insert your Learning Disk 2. Press GO .	The first page of the file appears.
5	Press SCROLL UP	The next line of the file displays.
6	Press NEXT PAGE	The next page of the file displays.
7	Press ACTION and FINISH	This terminates any B 20 operation. A B 20 command prompt reappears.

Copy Files

Two different commands are covered in this exercise: **COPY** and **FLOPPY COPY**. You use **COPY** (steps 1 through 6) to duplicate a file to or from the system disk. You use **FLOPPY COPY** (steps 7 through 10 for Winchester disk systems; steps 11 through 14 for dual floppy drive B 20s) to duplicate one floppy disk onto another floppy disk.

Allow ten minutes for this exercise. You need the Learning Disk. If you have not logged out of your B 20, skip step 1 (sign on).

NOTE

If you have a standalone dual floppy B 20, insert a system software disk in your left disk drive. (System software disks 1, 2, 3, and 4 all contain **copy files** capabilities, but **FLOPPY COPY** is only available on disk 2.)

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>copy</i> Press RETURN	This commands your B 20 to copy a file. The COPY form appears (shown completed in figure 3-11).
3	Type: <i>[floppy] <utilities > printA</i> Press RETURN	This is the name of the file you want to copy.
4	Type the new file's volume, directory, and filename	Winchester systems: Type <i>[win] <sys > copyprinta</i> Dual floppy systems: Type <i>[f0] <sys > copyprinta</i> This is the name for the copy of the file.

Command	<i>copy</i>
Copy	
File from	<i>[floppy]<utilities>printA</i>
File to	<i>[win]<sys>copyprintA</i>
[Overwrite O.K.?)	
[Confirm each?]	

Figure 3-11. Completed Copy Form (Winchester System Sample)

STEP	ACTION	DESCRIPTION
5	Insert your Learning Disk Press GO	The copying begins. When a new command prompt appears, you have two identical files.
6	Remove the floppy disk	
STEPS 7 THROUGH 10 FOR WINCHESTER FLOPPY DISK B 20 ONLY		
7	Type: <i>floppy copy</i> Press GO	This command directs your B 20 to copy floppy disk. Your B 20 beeps and prompts you to insert the master disk (the floppy disk to be copied).
8	Insert the Learning Disk Press GO	As the floppy disk is copied, your B 2 displays several messages, then beeps when it prompts you for a blank floppy
9	Remove the Learning Disk and insert a new floppy disk Press GO	The contents of the master floppy disk (Learning Disk) are copied onto the new floppy disk. Your B 20 beeps when copying is complete.

STEP	ACTION	DESCRIPTION
10	Press FINISH	This ends FLOPPY COPY . A new command prompt appears. Go to Additional Copy Activities (following this exercise). Do not perform steps 11-14.
STEPS 11-14 FOR STANDALONE DUAL-FLOPPY DRIVE B 20 ONLY		
11	Type: <i>floppy copy</i> Press GO	This command directs your B 20 to copy a floppy disk. Your B 20 prompts you to insert the master floppy disk (floppy disk to be copied).
12	Remove the system disk Insert the Learning Disk into the left floppy disk drive	This drive is used to copy the data from your master floppy disk (the Learning Disk).
13	Insert a new floppy disk into the right disk drive Press GO	You use this drive to write the copied data onto your new disk. This floppy disk is initialized as part of FLOPPY COPY .
14	When copying is complete, remove both floppy disks Reinsert the system disk Press FINISH	The copy is complete, but the system disk must be reinserted before your B 20 can accept FINISH and return to a command prompt.

B 20 Training Exercises

Additional Copy Activities

Winchester Disk B 20:

If you are the first person to complete the copy training exercise use **FLOPPY COPY** to make at least one copy of each System Software Disk. Store the original floppy disks in a safe place.

Dual Floppy Drive B 20:

If you are the first person to complete the copy training exercise use **FLOPPY COPY** to make several copies of each System Software Disk. Store the original floppy disks in a safe place.

Change the Names

Two different commands are covered in this exercise: **CHANGE VOLUME NAME** and **RENAME**. You use **CHANGE VOLUME NAME** (steps 1 through 6) to rename a volume; it does not rename the directories or files. You use **RENAME** (steps 7 through 9) to change the name of a file.

Allow three minutes for this exercise. If you have logged off your workstation, you must sign on before performing these exercises.

NOTE

If you have a standalone dual-floppy B 20, insert system software disk 2 in your left disk drive before proceeding with the steps below.

STEP	ACTION	DESCRIPTION
1	Enter: <i>change volume name</i> Press RETURN	This commands your B 20 to change the name of a volume. The CHANGE VOLUME NAME form appears (shown completed in figure 3-12).
2	Type your device number Press RETURN twice to move the cursor to the New volume name field.	Enter <i>f1</i> for a standalone dual-floppy system; enter <i>f0</i> for a Winchester-type or clustered dual-floppy system.
3	Type: <i>1985</i>	This is the new volume name.
4	Insert the [contracts] floppy disk. Press GO.	Your B 20 renames the floppy disk.
6	Remove the floppy disk and relabel it	

B 20 Training Exercises

```
Command      change volume name
Change Volume Name
Device name          fl
[Device password]
[Old volume password]
New volume name      1985
[New volume password]
```

Figure 3-12. Completed Change Volume Name Form (Sample for Standalone Dual-Floppy Drive B 20)

STEP	ACTION	DESCRIPTION
7	Type: <i>rename</i> Press RETURN	This commands your B 20 to rename a file. The RENAME form appears (shown completed in figure 3-13).
8	Type: <i>[1985]<active>RST.Corp</i> Move the cursor to the New file name field	This tells your B 20 which file to rename.
9	Type: <i>[1985]<active>XYZ.Corp</i> Insert the [contracts] floppy disk. Press GO	Your B 20 renames the file.

```
Command      rename
Rename
Old file name      [1985]<active>RST.Corp
New file name      [1985]<active>XYZ.Corp

[Overwrite O.K.?]
[Confirm each?]
```

Figure 3-13. Completed Rename Form (Sample)

Delete Files

Allow three minutes for this exercise. If you have not logged out of your B 20, skip step 1 (sign on).

NOTE

If you have a standalone dual-floppy B 20, insert a system software disk in your left disk drive. (System software disks 1, 2, 3, and 4 all contain the software for deleting files.)

STEP	ACTION	DESCRIPTION
1	Type: <i>delete</i> Press RETURN	This commands your B 20 to delete a file. The DELETE form appears.
2	Type the name of the file to be deleted Winchester Systems: Insert the floppy disk that contains this file	Standalone dual-floppy systems: Type <i>[f0]<sys>copyprinta</i> Winchester-type or clustered: Type <i>[1985]<active>ABC.Corp</i> (copyprinta is still needed for some Winchester system training exercises in the archiving section).
3	Press GO	Your B 20 deletes the file.
4	Remove the floppy disk.	

PRINT FILES

These training exercises teach you how to print out files using executive commands for printing. Allow approximately fifteen minutes complete the exercises.

You need Learning Disk 2 for these exercises.

The exercises below contain step-by-step instructions for either direct or spooled printing. Please note:

- o If your B 20 system is either a clustered workstation or a standalone dual-floppy drive B 20, you **must** use the direct-printing mode.
- o If you have a Winchester disk B 20 that is a master workstation, you may use **both** direct and spooled printing.

SPOOLER STATUS

This command is available on all Winchester-type and clustered B 20 workstations. Press HELP to see if the Spooler Status command is an active command on your system.

1. On the command line enter *spooler status* and press GO.
2. The main display of the Spooler Status command will appear on the screen. Enter Q for Select Queue and press GO.
3. In the display you will see both the Printer Name and the Queue Name for all printers available in your system configuration. If the Queue Name for the printer you want to use is anything other than *Lpt, Ptr, Spl, or SplB*, write it down. A device name must be entered in step 3 of the direct printing process if you have a spooler installed on your system.
4. Press FINISH to exit from the Spooler Status command unless you are the master workstation in the cluster. If you are in doubt as to whether you are the master workstation, use the DIRECT PRINTING format to print out your files.

Direct Printing: All Workstations

Your B 20 sends data to the printer for immediate printing. The printer must be ready to print. To align a page you must stop the printer.

You use the COPY command for direct printing. Have your Learning Disk available. Make sure your printer is connected and turned on. To cancel printing, press and hold the ACTION and FINISH keys.

NOTE

If you have a standalone dual-floppy B 20, insert a system software disk in your left disk drive. (System software disks 1, 2, 3, and 4 all contain direct print capabilities.)

STEP	ACTION	DESCRIPTION
1	Type: <i>copy</i> Press RETURN	This commands your B 20 to copy a file. The copy form appears.
2	Type: [FLOPPY]<utilities>printB	This is the name of the file you want to print.
3	In the File To field, type one of the printer device options: [Lpt] or [Ptr] or [Spl] or [Splb]	This tells your B 20 to copy the file to the printer. See Spooler Status on the previous page for directions.
4	Insert Learning Disk 2 Press GO	The printer prints the contents of the file print B. This message appears when printing is complete: Copying [FLOPPY]<utilities>printB to [Lpt] or [Ptr]. Done
5	Remove Learning Disk	

Spooled Printing

Your B 20 places files in a print queue (temporary storage for printing). Since the print queue is stored, the printer doesn't have to be turned on. You can make adjustments during printing. You can also store files for printing and print them later.

Before you can print, you must know if you have a parallel or serial printer. Refer to table 3-4. If your printer isn't listed, refer to your printer materials.

Some of the twelve Spooler Subcommands are used in this exercise. See table 3-5, at the end of the spooler exercise, for a complete list.

If you have not logged out of your B 20, make sure the printer is turned on and skip step 1 (sign on).

Table 3-4. Printer Types

Printer	Type
B 9251-1	parallel
B 9252	parallel
AP 1300	serial

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>spooler status</i> Press GO	The SPOOLER STATUS form appears (shown in figure 3-14).
3	Type: S	The Select Printer form appears (shown in figure 3-15).

```
Executive 5.0C
Path: [Sys]<sys>                               Fri Mar 29, 1985 2:30 pm
```

Printer Name	Queue Name	Status
Parallel	Spl	Idle
Serial	SplB	Idle

```
Commands:      <To invoke a command, enter the character
                  shown. To exit the program, press FINISH.>

N - New Printer      Q - Select Queue      S - Select Printer
```

PRINTER NAME Your printer is either parallel or serial.

QUEUE NAME The name of the print queue for each printer.

STATUS The current status of a printer can be:

Printing	Files are printing
Idle	Print queue is empty
Offline	Printer not ready
Paused	Printer has been stopped during printing (HALT)

Figure 3-14. Spooler Status Form (Sample)

```
Select Printer
Printer Name | _____ |
```

Figure 3-15. Spooler Select Printer Form

STEP	ACTION	DESCRIPTION
4	Type your printer type Press GO	Type <i>parallel</i> or <i>serial</i> (refer to table 3-4 or your printer materials). The SPOOLER command form appears (shown in figure 3-16).

Executive 5.0C

Path: [Sys]<sys>

Fri Mar 29, 1985 2:30 pm

```

Printer:           Parallel
Status:           Idle
Printer Description: Parallel, Standard print wheel, Standard forms
Configuration File: [Sys]<Sys>SPLConfig.Sys
Location:         Local at Master workstation

```

```

Queue:           SPL
Served by:       Parallel

```

```

Files Queued                                     Priority

```

```

Commands:      <To invoke a command, enter the character shown.
                To exit the program, press FINISH.>

```

```

A - Align form           F - Free printer           N - New printer
C - Cancel print         channel                   P - Print file
D - Delete print        H - Halt printer          Q - Select queue
  request               M - Main status           R - Restart printer
E - Enter password      display                   S - Select printer

```

Figure 3-16. Spooler Command Form (Sample)

B 20 Training Exercises

STEP	ACTION	DESCRIPTION
5	Type: <i>P</i>	Your B 20 displays a Print File form (shown completed in figure 3-17).
6	Type: <i>[FLOPPY] <utilities> printA</i>	This is the file name.
7	Insert the Learning Disk Press GO	The file is now in the print queue. A SPOOLER command form similar to figure 3-18 appears. COMPLETE STEPS 8 THROUGH 15 WHILE PRINTING.
8	Repeat steps 5-7 for the following: <i>[FLOPPY] <utilities> printB</i> <i>[FLOPPY] <utilities> printD</i>	A SPOOLER command form similar to the one shown in figure 3-19 appears. It may be necessary to press NEXT PAGE before continuing when using spooler subcommands. Your B 20 prompts you with the following message at the end of the file queue listing: You must press the NEXT PAGE key before entering a command. Press NEXT PAGE to continue.

```
Print
File list:
[Number of copies]
[Delete after printing?]
[Special forms name]
[Printwheel name]
[Printing mode]
[Align form?]
[After date time]
[Security mode?]
[Priority]
[Confirm each?]
```

[FLOPPY]<utilities> printA

Figure 3-17. Completed Spooler Print File Form (Sample)

Executive 5.0C
Path: [Sys]<sys>

Fri Mar 29, 1985 2:30 pm

Printer: Parallel
Status: Printing
[FLOPPY]<utilities>printA
Printer Description: Parallel, Standard print wheel, Standard forms
Configuration File: [Sys]<Sys>SPLConfig.Sys
Location: Local at Master workstation

Queue: SPL
Served by: Parallel

Files Queued Priority
[FLOPPY]<utilities>printA 5

Commands: <To invoke a command, enter the character shown.
To exit the program, press FINISH.>

A - Align form	F - Free printer	N - New printer
C - Cancel print	channel	P - Print file
D - Delete print	H - Halt printer	Q - Select queue
request	M - Main status	R - Restart printer
E - Enter password	display	S - Select printer

Figure 3-18. Spooler Command Form (Sample)

Executive 5.0C
Path: [Sys]<sys>

Fri Mar 29, 1985 2:30 pm

Printer: Parallel
Status: Printing
[FLOPPY]<utilities>printA
Printer Description: Parallel, Standard print wheel, Standard forms
Configuration File: [Sys]<Sys>SPLConfig.Sys
Location: Local at Master workstation
Queue: SPL
Served by: Parallel

Files Queued	Priority
[FLOPPY]<utilities>printA	5
[FLOPPY]<utilities>printB	5
[FLOPPY]<utilities>printD	5

Commands: <To invoke a command, enter the character shown.
To exit the program, press FINISH.>

A - Align form	F - Free printer	N - New printer
C - Cancel print	channel	P - Print file
D - Delete print	H - Halt printer	Q - Select queue
request	M - Main status	R - Restart printer
E - Enter password	display	S - Select printer

Figure 3-19. Spooler Command Form (Sample)

STEP	ACTION	DESCRIPTION
9	Type: <i>H</i> Press GO	Printing stops. The status of the printer displays as Paused .
10	Type: <i>R</i> Press GO	Printing resumes.
11	Type: <i>C</i> Press GO	The printer stops printing the current file (it has been cancelled), and starts printing the next file from the queue.
12	Type: <i>H</i> Press GO	Printing stops. You must first stop the printer to delete a file from the print queue.
13	Type: <i>D</i>	The Delete Print Request form appears (shown completed in figure 3-20).
14	Type: <i>[FLOPPY] <utilities> printD</i> Press GO	This removes the file printD from the print queue. A SPOOLER command form appears, similar to figure 3-21.
15	Type: <i>R</i> Press GO	The remaining files print.
16	Remove the Learning Disk Press FINISH	A command prompt appears.

```
Delete Print Request
File list           [FLOPPY]<utilties> printD
[Confirm each?]
```

Figure 3-20. Completed Spooler Delete Print Request Form (Sample)

```
Executive 5.0C
Path: [Sys]<sys>
```

Fri Mar 29, 1985 2:30 pm

```
Printer:           Parallel
Status:            Printing
                   [FLOPPY]<utilities>printB
Printer Description: Parallel, Standard print wheel, Standard forms
Configuration File: [Sys]<Sys>SPLConfig.Sys
Location:          Local at Master workstation
```

```
Queue:            SPL
Served by:        Parallel
```

Files Queued	Priority
[FLOPPY]<utilities>printB	5
[FLOPPY]<utilities>printC	5

```
Commands:          <To invoke a command, enter the character shown.
                   To exit the program, press FINISH.>
```

A - Align form	F - Free printer	N - New printer
C - Cancel print	channel	P - Print file
D - Delete print	H - Halt printer	Q - Select queue
request	M - Main status	R - Restart printer
E - Enter password	display	S - Select printer

Figure 3-21. Spooler Command Form (Sample)

Table 3-5. Spooler Subcommands

Command	Use	Training Exercise
Align Form (A)	After halt, allows you to check printer page alignment	Refer to the <i>B 20 Systems Standard Software Operations Guide</i>
Cancel Print (C)	Cancels printing of a file that is printing	Step 11
Delete Print Request (D)	Removes a file from the print queue (only possible before the file printing begins)	Step 13
Enter Password (E)	Requires a password before a file is printed	Refer to the <i>B 20 Systems Standard Software Operations Guide</i>
Free Printer Channel (F)	For systems with more than one printer, this command removes a printer from the control of an assigned print queue	Refer to the <i>B 20 Systems Standard Software Operations Guide</i>
Halt Printer (H)	Stops the printer. By using Restart, printing resumes	Step 9
Main Status Display (M)	Displays the Print Spooler Main Menu	Refer to the <i>B 20 Systems Standard Software Operations Guide</i>
New Printer (N)	For a system with more than one printer, this command places a printer under a print queue's control	Refer to the <i>B 20 Systems Standard Software Operations Guide</i>

B 20 Training Exercises

Command	Use	Training Exercise
Print Files (P)	Puts files into a print queue (for Master workstations only)	Step 5
Select Queue (Q)	Displays a list of files in a print queue	Refer to the <i>B 20 Systems Standard Software Operations Guide</i>
Restart Printer (R)	Starts the printer after a halt command has caused it to stop	Step 10
Select Printer (S)	Displays a printer's print queue	Step 3

ARCHIVE FILES

In these training exercises you learn to use various B 20 commands to store (back up) your B 20 files. Backup files provide protection against loss, accidental deletion or initialization, or damage.

If you have a dual floppy drive B 20, you do not have the archive (or backup) commands. You should copy any floppy disk you wish to protect. Your training exercises are now complete.

If you have a Winchester B 20, allow approximately 20 minutes to complete these exercises; however, you can stop between exercises and even log off the system (but allow extra time if you do). The activities you will perform are:

1. First you archive initialize a floppy disk (floppy disks to be used for backup must be initialized using the **IVARCHIVE** command, not **IVOLUME**).
2. Then you back up the files you wish to store (**SELECTIVE BACKUP** command).
3. Then you replace files (**RESTORE** command).

The three exercises that follow contain step-by-step instructions for performing these activities using the floppy disks you have created so far.

Initialize Archive Volumes

If you have not logged out of your B 20, skip step 1 (sign on).

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>ivarchive</i> Press GO	This commands your B 20 to initialize a floppy disk for backup. Your B 20 complete the IVOLUME form (as shown in figure 3-22) prompts for a blank floppy disk.
3	Insert a new floppy disk Press GO	Initialization begins. When initialization is complete, this message appears: Volume initialization complete.
6	Remove your floppy disk and label it Archive 1	
7	Press FINISH	

Executive 5.0C
Path: [Sys]<sys>

Fri Mar 29, 1985 3:05 pm

```
Command      ivarchive
Ivarchive
  Ivolume
    Device name                fo
    [Device password]
    Volume name                 archive
    [Volume password]
    [System Image (default = 384)]  0
    [Log file (default = 2)]
    [Crash file (default = 0)]
    [Max. directories]
    [Max. files on volume]
    [Primary file headers only?]
    [Max. files in Sys Directory]
    [Sys Directory password]
    [Write protect Sys Directory?]
    [Suppress format of medium?]
    [Surface tests]
    [Debug?]
    [Log file]
    [Extended floppy tracks?]
    [Single-sided mini floppy?]
    [Bad spots (See Documentation)]
```

Figure 3-22. Completed Ivolume Form for Ivarchive (Sample)

Selective Backup

If you have not logged out of your B 20, skip step 1 (sign on).

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>selective backup</i> Press RETURN	This commands your B 20 to copy files for SELECTIVE BACKUP . The SELECTIVE BACKUP form appears (shown completed in figure 3-23).
3	Type: <i>[win] <sys> copyprinta</i> Press GO	This tells your B 20 the name of the file to be archived.
4	Insert the archive initialized floppy disk Press GO	Your B 20 copies the file onto the archive floppy disk. When SELECTIVE BACKUP is complete, this message appears: Archiving file [win]<sys>copyprinta ... done # of files archived 1
5	Remove the floppy disk and add the file name to the label	

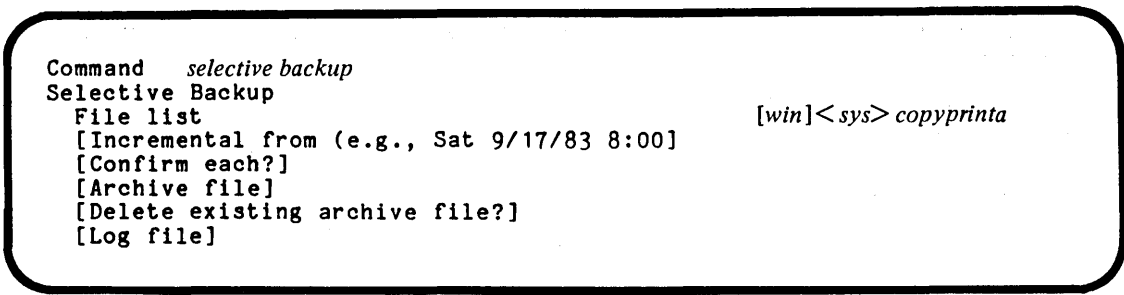


Figure 3-23. Completed Selective Backup Form (Sample)

Replace Lost or Damaged Files

In this exercise, you delete a file from the Winchester disk and then replace it using the archive floppy disk from the selective backup exercise. If you have not logged out of your B 20, skip step 1 (sign on).

STEP	ACTION	DESCRIPTION
1	Sign on to your B 20	A command prompt appears.
2	Type: <i>delete</i> Press RETURN	You use DELETE to remove the file from the system.
3	Type: <i>[win] <sys> copyprinta</i> Press GO	This is the file that was archived. It is now deleted.
4	Type: <i>files</i> Press GO	A list of system files displays. Check that you have deleted the file.
5	Type: <i>restore</i> Press GO	The RESTORE form is not needed for this activity. Your B 20 prompts for insertion of an archive floppy disk.
6	Insert the archive floppy disk Press GO	Your B 20 restores the file. A command prompt appears.
7	Remove the floppy disk	

B 20 Training Exercises

STEP	ACTION	DESCRIPTION
8	Type: <i>files</i> Press GO	A list of system files displays. Check that the file is there.
9	Remove the archive floppy disk Type: <i>delete</i> Press RETURN Type: <i>[win] <sys> copyprintA</i> Press GO	This removes the copyprintA file from your Winchester disk. Your training exercises are now complete.

APPENDIX A

ERROR MESSAGES

Your B 20 displays error messages to help you enter correct information to complete your task. The error messages are brief. The following alphabetical list contains several messages and further information that may help you resolve the problem.

Message	Description
Bad File Specification (Error 205)	The format of your entry is incorrect. You should type file names with brackets but without spaces. For example, you would format the volume contracts, directory pending, and file sales leads: [contracts]<pending>sales.leads
Cannot load exit run file, please reinsert system diskette	Your software system disk must be in the left drive (dual floppy system). Your B 20 cannot leave the command you were using and display a new command form without it.
Device name must be specified (Error 5)	The command you are using requires that you type the device name in the command form. To access the command form, type the command and then press RETURN .

Error Messages

Message	Description
Device Not Ready (Error 300)	The disk drive you requested cannot be used. Check that you inserted the floppy disk properly. Be sure you closed the drive door properly.
Disk in drive is a valid volume	Data is stored on the disk you inserted. Continuing erases that data. Press GO to continue and erase the data. Press FINISH to stop.
Disk Full (Error 230)	Your disk contains no more work space. If you are using a floppy disk, initialize a new disk or delete some files from the disk. If you are using the Winchester disk, you must remove some of the existing files to create additional space (or use a floppy). If you are using a B 20 Program, refer to the instructions provided with the program.
Medium is a valid volume	Data is stored on the disk you inserted. Continuing erases the data. If you have a dual floppy system, be sure you did not type f0 for the device name. Initializing a system software disk destroys the software. Press CANCEL to stop or press GO to continue.
No Such Command	Your B 20 system cannot find the command. Press HELP and check the command list. (If you have a dual floppy system, you may need to insert a different system software disk.)

Message	Description
No Such Directory (Error 204)	Your B 20 system cannot find the directory on the volume. If you are using a floppy disk, make sure you inserted the disk properly. Check your directory entry. If the entry is correct, use the VOLUME STATUS command to check the directory name.
No Such File (Error 203)	Your B 20 system cannot find the file on that volume and directory. If you are using a floppy disk, make sure you inserted the disk properly. Check your file entry. If the entry is correct, use the FILES command to check the file name.
No Such Volume or Device (Error 215)	Your B 20 system cannot locate the specified volume (disk) or device (disk drive). Check your entry (when using f0 or f1, be sure to use the number zero or one). If the file is on a floppy disk, make sure you inserted the disk properly.
Operator Intervention (Error 4)	Whenever you press ACTION and FINISH , your B 20 system terminates an operation and this message appears, followed by a command prompt.
Parameter on line 1 of the form is invalid or missing	The command you are using requires that you complete the first line of the command form correctly. Type the command, then press RETURN . Fill in all unbracketed lines.

Error Messages

Message	Description
Subsystem error: Operator Intervention (Error 4)	Whenever you press ACTION and FINISH , your B 20 system terminates an operation and this message appears, followed by a command form.
There is no such device name (or volume name) on the system	Your B 20 system cannot locate the specified volume (disk) or device (disk drive). Check your entry (when using f0 or f1, be sure to use the number zero or one). If the file is on a floppy disk, make sure you inserted the disk properly.
Too many characters specified for device, password, or volume	You typed too many characters for a device (disk drive), password, or volume name. Volume names cannot exceed twelve characters.
Volume Not Mounted (Error 216)	Your B 20 system cannot access the specified volume. Check your floppy disk. If you inserted it properly in the drive, make sure the door or tab is closed. Check your entry (when using f0 or f1, be sure to use the number zero or one). If you are using a new floppy disk, make sure that it was initialized using IVOLUME or IVARCHIVE .
Write Protected (Error 302)	The floppy disk is write protected. If you want to modify the contents: <ul style="list-style-type: none">• for 8-inch floppy disks: you must place a tab on the write-protect notch to store or modify data.• for 5-1/4-inch floppy disks: you must remove the tab to store or modify data.

APPENDIX B

EXECUTIVE COMMANDS

This appendix contains three tables:

- a summary of B 20 executive level commands included in this manual (table B-1)
- an alphabetical list of standard commands contained on dual floppy drive software disks (table B-2)
- an alphabetical list of standard commands contained on a Winchester disk after system software installation (table B-3)

Table B-1. Commands Used In This Course

Command	Purpose
CHANGE VOLUME NAME	Change the name of a volume (disk)
COPY	Copy an existing file to a new file Direct printing
CREATE DIRECTORY	Set up a new directory
CREATE FILE	Create a file

Table B-1. Commands Used In This Course (Cont)

Command	Purpose
DELETE	Remove (erase) a file from a volume
FILES	List the file names in a directory Check the exact name of a file
FLOPPY COPY	Duplicate information stored on a floppy disk
IVARCHIVE	Initialize new floppy disks for selective backup Erase (destroy) data on a disk and prepare the disk for selective backup
IVOLUME	Initialize new floppy disks Erase (destroy) data on a disk
RENAME	Change the name of an existing file or directory
RESTORE	Replace files on a volume from an archive volume With IVOLUME and SELECTIVE BACKUP , reorganize stored information (Refer to B 20 Systems Standard Operations Guide).
SELECTIVE BACKUP	Copy files or directories to another volume (as protection against loss)
SPOOLER STATUS	On systems with spooled printing, displays the spooler command form. Spooler subcommands are: Align Form: After HALT, align allows you to check printer page alignment Cancel Print: Cancels printing of the file currently printing <p style="text-align: right;">(Cont)</p>

Table B-1. Commands Used In This Course (Cont)

Command	Purpose
SPOOLER STATUS (Cont)	Subcommands, continued Delete Print Request: Removes a file from the print queue (only possible before printing the file begins) Enter Password: Requires a password before a file is printed Free Printer Channel: For systems with more than one printer, removes a printer from the control of an assigned print queue Halt Printer: Makes the printer stop. Main Status Display: Displays the Print Spooler Main Menu New Printer: For a system with more than one printer, puts a printer under a print queue's control Print Files: Puts files into a print spooler Select Queue: Displays a list of files in a print queue Restart Printer: Starts the printer after a halt command has caused it to stop Select Printer: Displays the print queue for a printer
TYPE	Display a file's contents
VOLUME STATUS	Check the contents of a disk. Information displayed: date created, date last modified, # of pages available, # of file headers available, directories list

Table B-2. Dual Floppy Drive Standard System Commands

Command	Disk(s)	Command	Disk(s)
Append	1,2,3,4	Make Translation File	3
Change Volume Name	2	New Command	2
Copy	1,2,3,4	Path	1,2,3,4
Create		Plog	3
Configuration File	3	Record	1,2,3,4
Create Directory	1,2,3,4	Remove Command	2
Create File	1,2,3,4	Remove Directory	1,2,3,4
Debug	3	Rename	1,2,3,4
Delete	1,2,3,4	Replay	4
Dump	3	Run	1,2,3,4
Edit	4	Run File	1,2,3,4
Files	2,4	Screen Setup	1,2,3,4
Floppy Copy	2	Set File Prefix	1,2,3,4
Format	2	Set Protection	1,2,3,4
Ivolume	2	Stop Record	1,2,3,4
Login	1,2,3,4	Submit	2
Logout	1	Type	1,2,3,4
Maintain File	3	User File Editor	1
		Volume Status	2

Table B-3. Winchester Disk Standard System Commands

Append	Path
Backup Volume	Plog
Change Volume Name	Record
Copy	Remove Command
Create Configuration File	Remove Directory
Create Directory	Rename
Create File	Replay
Debug File	Restore
Delete	Run
Dump	Run File
Edit	Screen Setup
Files	Selective Backup
Floppy Copy	Set Directory Protection
Format	Set File Prefix
Ivarchive	Set Protection
Ivolume	Set Time
Login	Stop Record
Logout	Submit
Maintain File	Type
Make Translation File	User File Editor
New Command	Volume Status

APPENDIX C

MASS STORAGE UNITS

This appendix describes the mass storage unit B 20 (B22). It includes six exhibits:

- Figure C-1 shows the B22 hardware configuration and explains the components of the mass storage unit.
- Figure C-2 illustrates the B 22 disk drive.
- Figure C-3 describes how to turn the mass storage unit disk drive on and off.
- Figure C-4 shows the 8-inch disk and its main features.
- Figure C-5 shows the write tab applied over the write protect notch.
- Figure C-6 shows the procedure for inserting the 8-inch disk.

This B 20 (B 22) has a mass storage unit that uses 8-inch floppy disks. The processor is inside the lectern. The 8-inch floppy drive, Winchester disk, and Winchester drive are inside the mass storage unit.

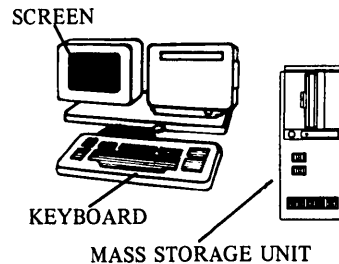


Figure C-1. Burroughs B 22 Hardware Configuration

Appendix C

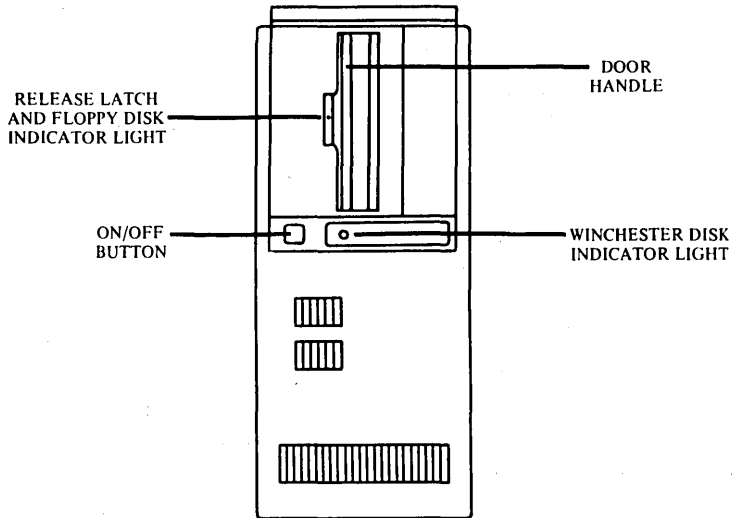


Figure C-2. B 22 Disk Drive

ON/OFF DESCRIPTION

If your B 20 has a mass storage unit:

Press the disk drive on/off button. Then press the red button on the lectern. These switches turn on the screen, disk drives, and processor. Both lights remain on while your B 20 is operating.

To turn your B 20 off, press the red button on the lectern first; then press the on/off switch on the disk drive.

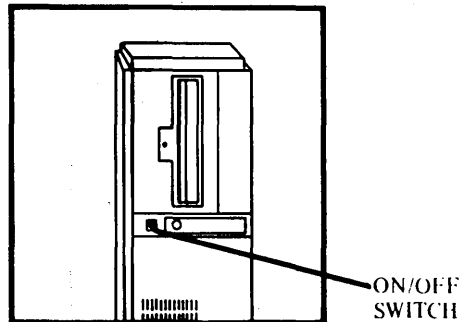


Figure C-3. On/Off Switches

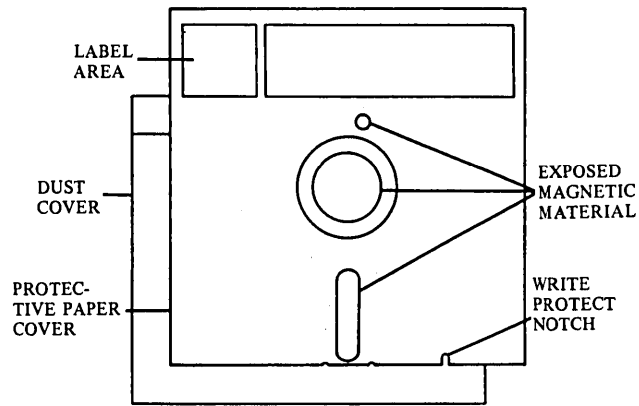


Figure C-4. 8-Inch Floppy Disk

The Write Protect Notch

The notch located on the bottom of 8-inch floppy disks is called a Write Protect Notch. When it is **uncovered**, you cannot add to or change information on the floppy disk. In order to change or add information, you must install a 'write tab' over the Write Protect Notch, as shown in Figure C-5.

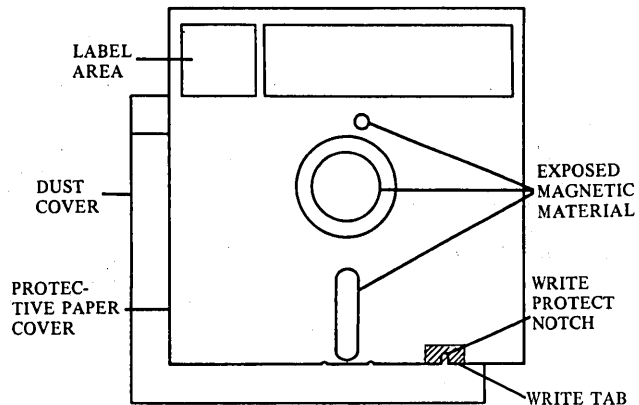


Figure C-5. Write Tab Applied Over Notch

Appendix C

Inserting Floppy Disks

NOTE

Your workstation should be turned on before you insert a floppy disk. Refer to turn on instructions in Section 3, if necessary.

CAUTION

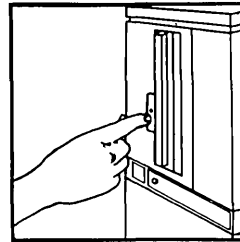
Never open a drive door (or tab) when the indicator lights are on. Damage to the disk or drive could result.

To insert a floppy disk, proceed as follows:

Refer to procedures listed and shown in Figure C-6.

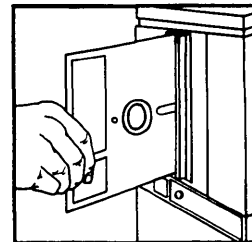
1. Remove the floppy disk from its dust cover.

2. Open the floppy disk drive door (or tab) by pressing the release latch.



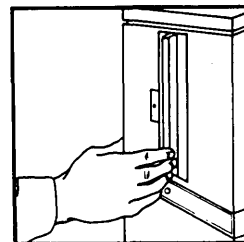
Step 2

3. Position the floppy disk as illustrated, then slide the floppy disk into the drive until it stops. The floppy disk label is next to the door handle. If you insert the floppy disk properly, it will not come out when you release it.



Step 3

4. Close the floppy disk drive door by sliding the door handle to the left until you hear a click. The door should remain closed. (The door must be closed for your B 25 to use the floppy disk.)



Step 4

Figure C-6. Inserting B 22 floppy disk.

Removing Floppy Disks

CAUTION

Never open a drive door (or tab) when the indicator lights are on. This could damage the disk or the drive.

To remove a floppy disk, proceed as follows:

1. Open the floppy disk drive door (Figure C-5, step 2). The floppy disk comes partially out when you open the door.
2. Grasp the floppy disk and slide it out of the floppy disk drive.
3. Close the floppy disk drive door.
4. Store the floppy disk in a dust cover.

APPENDIX D

GLOSSARY OF TERMS

A

APPLICATION PROGRAM

A set of instructions collected under one name that directs a computer to complete specific business activities. For example: order entry, invoicing, word processing.

ARCHIVE

A copy of the contents of a disk for backup or storage purposes.

B

BRANCHING

The flow of frames within the Instructor program.

C

CHANGE VOLUME NAME

Allows you to change the name of a disk volume (floppy or hard disk). A volume name cannot consist of more than 12 characters.

CHARACTER

A number, letter, space or symbol.

COMMAND

An order from you, causing your B 20 to perform an action. Command prompts are available at the executive level (accessed by leaving the user name blank during sign on).

COPY

A B 20 command that copies data from an existing file to a new file. **COPY** is also used for direct printing.

CREATE DIRECTORY

A B 20 command that creates a new directory on a volume.

CREATE FILE

A B 20 command that creates a new file in a directory.

CURSOR

A small flashing line that appears on your B 20 screen to mark the location of your next keyboard entry.

D

DATA

Information (letters, numbers, symbols, words, files, etc.).

DELETE

A B 20 command that removes a file from a volume.

DIRECT PRINTING

Printing can only be immediate: data is sent directly to the printer (no print queue).

DIRECTORY

A heading for a section of files on a disk (for example, accounting).

DISK DRIVE

The disk drive is the piece of hardware that saves the information you enter into the computer for your future retrieval and use. There are two basic types of disk drives: dual floppy and hard disk drive (also called a Winchester disk drive)

DISKS

Magnetic material used to store information (such as your files and B 20 software).

All B 20s can operate with two types of disks: floppy and Winchester. Standalone dual-floppy drive B 20s use one of the two floppy drives for system software. In a cluster environment dual- and single-floppy drive B 20s both operate off of the master workstation's hard (Winchester) disk.

E

ERROR MESSAGES

Messages from your B 20. Appendix A contains an error message list and suggested solutions.

EXECUTIVE

The part of your B 20 operating system that responds to commands. The Executive is always available after sign on. It provides, at minimum, command forms and status messages.

FILE

A document or group of documents within a directory (for example, accounts payable).

FILES

A B 20 command that lists the files within a volume and directory.

FLOPPY COPY

A B 20 command that copies one floppy copy disk to another floppy disk.

FLOPPY DISK

Magnetic recording surfaces used to store information (such as your files and B 20 operating instructions). Floppy disks are thin flexible disks covered with protective paper. Your B 20 uses one of the following sizes:
5-1/4 inch or 8-inch.

FORM

One or more fields displayed on your B 20.

HARDWARE

The physical parts of a computer (for example keyboard, screen, disk drive units) are called hardware.

INDICATOR LIGHTS

Small red lights adjacent to disk drives. The lights go on when the drive is in use.

INITIALIZATION

Preparation of a disk for use. This preparation destroys any data on the disk.

INSTRUCTOR PROGRAM

A computer-assisted instruction program that uses hands-on training to help an operator learn the basics of the B 20 computer system.

IVARCHIVE

A B 20 command that initializes a floppy disk for use with the **SELECTIVE BACKUP** command.

IVOLUME

A B 20 command that prepares a floppy disk for use in the B 20.

KEYBOARD

The B 20 keyboard is much like a typewriter. It is used to enter information into your computer.

LEARNING DISK

A floppy disk included in the B 20 Operations package. The disk contains files used during B 20 Training Exercises.

LECTERN

The part of some B 20 models (next to the screen) where you can clip paper.

MASS STORAGE UNIT

A floor-standing device that comes with some B 20 models. It has a built-in Winchester disk and an 8-inch floppy disk drive.

MENU

A list of options from which you may select a choice.

PERFORMANCE TRACKER

A portion of the Instructor program that records the responses given by the operator to system-generated questions. This allows the system administrator and/or individual operator to determine level of performance and need for review.

PRINTER

A printer allows you to obtain a hard copy of information stored on the computer (documents, files, programs).

PROCESSOR

Located inside a B 20 unit, the processor directs B 20 operations.

R

RENAME

A B 20 command that allows you to change the name of an existing file.

RESET BUTTON

A button at the back of the disk drive that allows you to bring the system back through its start-up tests without having to turn off the computer.

RESTORE

A B 20 command that replaces Winchester disk files with floppy disks that were produced during **SELECTIVE BACKUP**.

S

SELECTIVE BACKUP

A B 20 command that copies files from the Winchester disk to a floppy disk as protection against accidental deletion or damage.

SELF-DIAGNOSTIC TEST

An automatic B 20 test that runs each time the system is turned on.

SERVICE INFORMATION DOCUMENT

Contains information on obtaining help and service for your B 20.

SIGNAL CABLE

Carries information (not power) from one component to another.

SOFTWARE

A computer's operating instructions are called software.

SPOOLED PRINTING

Files are loaded into a queue for printing. Many files can be set up to print in sequence or by priority.

SPOOLER STATUS

A command on some B 20s that displays the status of the printers and queues and provides access to spooler subcommands.

SYSTEM SOFTWARE

Computer language and instructions used for computer operations.

T

TABLE TOP DRIVE UNIT

A rectangular drive unit included with some B 20 models. It may have a built-in Winchester disk and an 5-1/4 inch floppy drive, or it may have two 5-1/4 inch floppy drives without a built-in Winchester disk.

TUTORIAL

A training program, such as the Instructor, that is run on a computer system to allow for hands-on experience. Also referred to as computer-assisted instruction.

TYPE

A B 20 command that displays the contents of a file.

U

UTILITIES

Commands for routine operations, such as printing, filing, and initialization.

V

VOLUME

The largest B 20 data group, each volume is a disk (floppy or Winchester). Each volume has a label (for example, contracts).

VOLUME STATUS

A B 20 command that displays the date the volume was created (initialized), date the volume was last modified, number of pages available, number of file headers available, and a list of directories currently on the volume.

W

WINCHESTER DISK

A permanent, hard disk inside some B 20s. This disk is not removable except by Burroughs service technicians.

WRITE ENABLE

All 5-1/4 inch floppy disks contain a notch on one side called a Write Enable Notch that determines whether the contents of a disk can be changed or deleted.

WRITE PROTECT

All 8-inch floppy disks contain a notch on the bottom called a Write Protect Notch that protects the contents from change when it is uncovered. If that notch is covered with a write tab, the contents of the floppy disk can be changed.

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