*Hyperion*™
*Aladin*™ *Guide*

The first two pages (sheet) contain a list, referenced by page number, of detected errors. We recommend that you enter the corrections into the manual in ink.

The 8 pages that follow *replace* pages III-127 through III-134 of the Tutorial. Please remove those pages from your copy of the *Hyperion Aladin Guide* and replace them with the pages numbered III-127 through III-134 in this package.

| *PAGE* | *CORRECTION* |
|---|---|
| III-3 | Note that drive C must be 100K before SETUPRAM can be performed. |
| III-27 | Disregard step 44. |
| III-33 | As the cursor is already at CITY, step 68 is not necessary. |
| III-34 | As the cursor is already at CITY, step 74 is not necessary. |
| III-46 | In step 102, **F5** (<) should be **F6** (<). |
| III-51 | In step 109, **F1** (Cancel) should be **F1** (Aladin). |
| III-55 | After step 111, Aladin does not display the soft key line in Fig. III-8, but the one described in Table III-I. |
| III-66 | If Aladin prompts "**Extend definition?**", see the top of III-167. |
| III-83 | After step 171, the "street sign" and the prompt should be transposed. |
| III-91 | In step 188, **F7 (Group)** should be **F6 (Group)**. |
| III-92 | You must use the Jump facility to make SPECS the current file. |
| III-95 | In step 201, "right arrow key" should be "left arrow key". |
| III-101 | After step 215, Aladin prompts "Evaluate". |
| III-105 | Aladin retabulates in the last display mode selected, and, depending on that mode, the display may not match Fig. III-19. |
| III-126 | In step 23, **F5 (NO)** should be **F8 (NO)**. |
| III-126 | Note that if you did not set up CLIENT exactly as it is laid out in the manual, the number of blocks Aladin assigns to your data and key files will not match the figures printed in the manual. |

| *PAGE* | *CORRECTION* |
|--------|--------------|
| III-129 | Replace pages III-129 to III-134 with attached pages. |
| III-154 | In step 101, **F3 (YES)** should be **F6 (YES)**. |
| III-163 | Reverse steps 11 and 12. |
| III-164 | In steps 18 and 19, **F2 (STORE)** should be **F5 (STORE)**. |
| III-165 | In steps 24, **F2 (STORE)** should be **F5 (STORE)**. |
| III-169 | In step 36, **F8 (SORT)** should be **F7 (SORT)**. |
| III-179 | In step 86, press **F8 (Others)** first, then **F5 (DIRSRT)**. |
| III-179 | In step 87, **F1 (Srvice)** should read **F1 (Aladin)**. |
| III-181 | In step 97, **F1 (FINISH)** should read **F9 (FINISH)**. |

# HYPERION ALADIN GUIDE

This manual is a non-technical user's guide to the Aladin relational data base system for the Hyperion personal business computer. The manual is broken into sections on preparing to use Aladin, a tutorial on Aladin's functions, and a reference section on Aladin's modules and their components.

## Trademarks

| | |
|---|---|
| **Hyperion** | is a trademark of Bytec Management Corporation. |
| **MS-DOS** | is a trademark of Microsoft Corporation |
| **Microsoft** | is a trademark of Microsoft Corporation |
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| **Aladin** | is a trademark of Advanced Data Institute America Inc. |

## Disclaimer

## Service Requirements

In the event of equipment malfunction, all repairs must be performed by Bytec Management Corporation, an authorized agent (dealer) of Bytec Management Corporation or any other organization authorized by your warranty agreement.

## Avoiding Radio-Television Interference

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. Although everything possible has been done to limit the likelihood of interference, there is no guarantee that interference will not occur in a particular installation. If this happens the user is encouraged to try one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the computer with respect to the receiver.
- Move the computer away from the receiver.
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, consult your dealer or an experienced radio/television technician.

If the Hyperion is malfunctioning, it may be causing harm to the telephone network. The Hyperion should, therefore, be disconnected until the source of the problem can be determined and repair has been made.

Before installing the Hyperion to the telephone network, you should check with your dealer to determine any government regulations which may be applicable.

# TABLE OF CONTENTS

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When installing your Aladin system, DOS loads Aladin into drive C (the RAMdisk). Drive C must therefore have enough room to accommodate the Aladin program. There must be at least 100 K bytes of **free** space available in drive C. To change the size of drive C to 100 K bytes, you must use the MODE command in DOS (found on the Master User Diskette) and reboot the system. The MODE command is described in the **Hyperion User Guide**.

The system can automatically be made to empty the contents of drive C by including the appropriate command line into the SETUPRAM.BAT file on the **Aladin System Diskette** and **Aladin Install Diskette**:

**STEP**

1)   Use the EDLIN or IN:SCRIBE text editors to add the following command line to the beginning of the SETUPRAM.BAT batch file:

**ERASE C:\*.\***

on both **Aladin System Diskettes** and the **Aladin Install Diskette**.

When using the **SETUPRAM** command to access Aladin, as described in the **Hyperion Aladin Guide**, the system will automatically erase all existing files from drive C and make the space available for the Aladin programs.

The EDLIN text editor is described in the **Hyperion User Guide**. IN:SCRIBE is described in the **Hyperion IN:SCRIBE Guide**.

\* Aladin is a trademark of Advanced Data Institute America Inc.

# INTRODUCTION

The *Hyperion Aladin Guide* is composed of Startup, Tutorial, and Reference sections. It is the main source of information on Aladin and its functions. To locate information within the manual, check the following areas:

- **The Table of Contents**. This gives you an overview of the manual's contents.

- **The Index**. This gives you an alphabetical listing of significant words and phrases (referenced to page numbers).

- **Appendix B, The Glossary**. This lists Aladin terms and their definitions.

The *Hyperion Aladin Guide* is divided into four parts.

**Part I - Getting Started**, is your entrance to the Aladin Relational Data Base System. Operating a software package is more than just pushing keys: you must first understand what forces you are putting into motion. *Getting Started* is preparing you to handle these forces.

**Part II - Aladin & You**. This part covers some basic concepts of using Aladin on the Hyperion. It discusses the "hardware" of the Hyperion, and how it is used by Aladin. This is an overview on what you can expect from the system during your lessons on its use.

**Part III - The Tutorial**. Aladin's tutorial provides a logical, step-by-step, method on how to use each of Aladin's modules. Once you master the basics of entering data, activating soft keys, issuing commands, etc., you will be able to begin using Aladin as a part of your daily routine.

**Part IV - The Reference Section**. The reference provides a module-by-module, function-by-function guide to Aladin. In addition to command syntax and concise explanations, the reference section also provides examples for both reference and learning purposes.

This reference is not meant to be read sequentially from beginning to end. It is organized to enable a user to quickly access only the information being looked for. Once this location in the manual is found, all the information necessary to accomplish the given task is presented.

**The Appendices** provide information on a variety of Aladin items: keys, terms, error messages, etc.

The Hyperion Aladin Guide is one of eight available Hyperion manuals:

1) The *Hyperion Setup Guide*, which was the first book you read about the Hyperion, describes first-time setup procedures.

2) The *Hyperion User Guide* is the second in the series. It describes how to use the Disk Operating System (DOS), and the single-line text editing system EDLIN.

3) A *Hyperion Programmer Guide*. This is a BASIC and Assembler reference manual and explains these sophisticated programming languages which you may wish to use when you become more familiar with your Hyperion.

4) Then there is a user guide written for each software system available for the Hyperion: **IN:SCRIBE**, the text editing system; **IN:TOUCH**, the communications system; **MULTIPLAN**, the worksheet system; **1-2-3**, a spreadsheet, graphics and data base management system; and **Aladin**.

# Part I

# GETTING STARTED

The first fifteen minutes you spend with Aladin may well be the most significant time spent with this package, as it will lay the groundwork for all future use with your Hyperion. Then, as you learn more about Aladin's capabilities and how to use them, there will certainly be hours of important work ahead of you.

The short procedures that follow are designed to take the guesswork out of installation, preparation and startup. They should be read carefully before proceeding to the hands-on tutorial in Part III.

In any event, you should take the time to read this manual and the other Hyperion documentation available to you: the *Hyperion Setup Guide*, and the *Hyperion User Guide*. What follows are the initial steps required to use Aladin on your Hyperion.

## 1.    THE STARTUP PROCEDURES

This is what you will do in this section:

1) Check to make sure you have received everything.

2) Prepare your Aladin System and Aladin Install diskettes for use with your DOS and Hyperion.

3) Copy the Aladin Install Diskette.

4) Prepare some data diskettes on which to store your relational data bases.

## 1.1   CHECK TO MAKE SURE YOU HAVE RECEIVED EVERYTHING

The Aladin assembly, as shipped with your Hyperion, is made up of several parts. Make sure that you have each of the following:

a)  **Hyperion Aladin Guide**. The manual is loose-leaf, three-hole punched, and shrink-wrapped; it is enclosed in a linen binder and slipcase. Remove the shrink-wrapping and insert the manual into the binder. Check the manual against the table of contents to make sure that your copy is complete.

b)  **Diskettes**. Aladin's software comes on three diskettes: Aladin Demo & Examples Diskette, Aladin System Diskette and Aladin Install Diskette. You should also have a fourth diskette, a copy of the Aladin System Diskette for backup.

## 1.2   INSTALL UTILITIES ON YOUR ALADIN DISKETTES

The Aladin System Diskette and the Aladin Install Diskette were shipped from the factory with their programs, but without the MS-DOS utilities in place. This means that as they stand, these diskettes cannot be used to start the Hyperion.

The Hyperion has two possible hardware configurations: a double-drive version with two diskette drives, and a single-drive version with only one. Please follow the instructions for the type of Hyperion which you have.

## For a Double-Drive Hyperion

### STEP

1) Insert your Hyperion Master User Diskette into drive A, and start the Hyperion by pressing the amber power button.

2) After the system startup is complete (about 30 to 45 seconds), remove the Aladin System Diskette from its pocket in the rear of the **Hyperion Aladin Guide**, and insert it into drive B.

3) Enter the command **B:SETUP**, then press **Rtn**.

When this command is entered, the automatic installation program will transfer a copy of two DOS utilities to the Aladin System Diskette in drive B.

Putting these utilities onto the Aladin diskettes will enable you, in future, to start up Aladin after booting with a DOS or user diskette.

When the utilities have been transferred to the Aladin System Diskette:

### STEP

4) Remove the Aladin System Diskette from drive B, and return it to its envelope at the back of the manual.

5) Remove the Aladin Install Diskette from its protective envelope, and place it in drive B.

6) Repeat steps 3 to 4 for the Aladin Install Diskette.

Your Aladin System Diskette and Aladin Install Diskette now carry your current version of the MS-DOS utilities and can be used to start up Aladin after the Hyperion has been booted with a user disk.

The Aladin Demo & Examples Diskette contains only the necessary data base file for the tutorial in Part III, and does not require any utilities.

## For a Single-Drive Hyperion

Aladin will work as well on a single-drive version of the Hyperion as it does on a double-drive version. However, it does require a slightly different procedure to transfer the DOS utilities than that for the double-drive Hyperion.

**STEP**

> 1) Place your Hyperion User Diskette in drive A.
>
> 2) Enter the command **B:SETUP**, then press **Rtn**.

Although the setup procedure is the same as that for the double-drive Hyperion, you must swap the Hyperion Master Diskette with the Aladin System or Install Diskette when and as the system prompts you.

**STEP**

> 3) When the transfer is finished for the Aladin System Diskette, remove it from drive A:, and place it in its protective envelope at the back of the manual.
>
> 4) Repeat steps 2 to 3 for the Aladin Install Diskette.

## 1.3    PREPARE DATA DISKETTES ON WHICH TO
## STORE YOUR FUTURE RELATIONAL
## DATA BASES

The three diskettes shipped with Aladin (Aladin System Diskette, Aladin Install Diskette, and Aladin Demo & Examples Diskette) contain the system files, the files necessary to modify and create a data base, and the tutorial examples respectively.

You should purchase at least ten 5-1/4" floppy diskettes, and prepare them for future data storage. The preparation is described below.

As Aladin is based on the MS-DOS operating system, it is recommended that you read over the *Hyperion User Guide,* paying particular attention to the following commands:

> FORMAT
> COPY
> DISKCOPY
> DISKCOMP
> CHKDSK
> DIR

**For a Double-Drive Hyperion**

**STEP**

> 1)  Following the instructions in the *Hyperion User Guide,* format several blank diskettes.
>
> 2)  Using a felt-tipped pen, label the blank diskettes.

## For a Single-Drive Hyperion

Using Aladin with a single-drive requires that certain system files be present on the data diskettes. While this does limit the space available for your relational system, it is necessary in order for the system to operate correctly.

The Aladin System and Aladin Install diskettes contain slightly different programs, therefore it will be necessary to follow the instructions below once for each diskette.

**STEP**

---

1) Start up the Hyperion, with your Hyperion Master Diskette.

2) Remove the Hyperion Master Diskette from drive A, and insert your Aladin System Diskette.

3) Enter the command **COPY A:ALADINE.PC  B:**.

4) Follow the screen prompts to switch diskettes, until the file transfer is complete.

5) Enter the command **COPY A:ALADINI.PC  B:**.

6) Again, follow the prompts to swap diskettes, until the procedure is complete. This creates a diskette which cannot boot the Hyperion, but can be used to store Aladin files in a single-drive Hyperion.

7) Repeat steps 2 to 6 above, using your Aladin Install Diskette.

---

## 1.4    COPYING YOUR DISKETTES

The Aladin System Diskette is copy-protected. This means that it cannot be copied. This is why you have been given two Aladin System Diskettes.

The Aladin Install Diskette, however, is not copy-protected, and should be copied onto a blank formated diskette as soon as possible. When using the Aladin Install program, you should use the copy. Keep the original Aladin Install Diskette only to generate future copies from.

## 2.    ADDITIONAL ALADIN FEATURES

### Graphing Facilities

Aladin can display statistical facts as a bar-chart, making the information contained in masses of numbers much more accessible.

### Speed of Operation

Aladin is the fastest data base program currently available for the Hyperion.

### On-line HELP

Wherever you are in Aladin, pressing **F10** (the HELP soft key) displays a screenful (or more) of information on the commands available from where you are in Aladin. For your reference needs, each screen of information is cross-referenced to the *Hyperion Aladin Guide*.

### Soft Keys

Aladin is completely driven by soft keys. This means that the menu items you are used to seeing on your screen are also displayed in the 10 soft key labels on the 25th line of the Hyperion screen. These labels correspond to the 10 soft keys (labelled F1 through F10) at the top left of the Hyperion keyboard. Pressing a soft key selects the appropriate menu item.

### Printer Control

Aladin can select different printer widths, allowing you to change the format of a printed report.

### Script Files

With Aladin, you can create a "script" of commands, which Aladin will follow, just as an actor follows his script. Using this facility, repetitive tasks can be generated by a single keystroke. This feature not only saves time but reduces the chances of entry error.

### Exchange of Information

Aladin is compatible with other software packages. This means that Aladin enhances the scope and abilities of other Hyperion software packages, i.e., IN:SCRIBE and IN:TOUCH.

# Part II

# ALADIN & YOU

With the team of Aladin & Hyperion, you have an enormously powerful and flexible data management tool at your fingertips. Now its time to look under the surface, and examine the different parts of the Hyperion as they relate to Aladin.

## 1.    THE HYPERION KEYBOARD

The keyboard (see Fig. II-1) is your primary communication device with Aladin. While the entry of commands and data ("input" in computerese) may sometimes occur from other sources (i.e., Aladin input files), 90 to 99% of your input will be entered via the keyboard.

So, let's take a closer look.

The Hyperion's keyboard has four distinct sections:

a)    the soft keys,
b)    the special keys,
c)    the alphabetical keys,
d)    the cursor control/numeric keypad.

### Soft Keys

The soft keys (sometimes called "function" keys) are "soft" because their meanings change as you move through Aladin. There are 10 of these keys, at the upper left corner of the keyboard, each key corresponding to a label which is displayed on the 25th line of the screen (see Fig. II-2). Part IV, Reference, provides a complete map of these different labels.

The 24th line of the screen displays the name of the soft key line. The 25th line displays the soft key line itself.
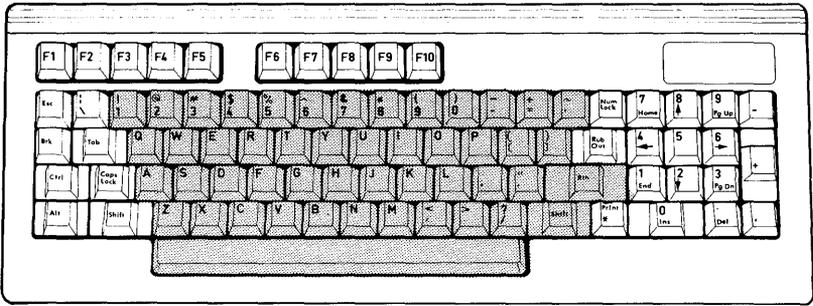
**Fig. II-1** - The Hyperion keyboard, with the special keys.

**Special Keys**

The special keys have independent meanings, which stay the same throughout Aladin.

**Table II-A**
**SPECIAL KEYS AND THEIR FUNCTIONS**

| KEY | FUNCTION |
|---|---|
| **Home** | Moves the cursor to the top field in the current screen form. |
| **End** | Moves the cursor to the bottom field in the current screen form. |
| **←, ↑** | Moves the cursor to the previous field in the form. |
| **→, ↓** | Moves the cursor to the next field in the form. |
| **Ins** | Inserts a blank with the field at the cursor position. |
| **Del** | Deletes a character within a field at the cursor position. |
| **Caps Lock** | Locks the alphabetical portion of the keyboard so that all characters are displayed in upper case. When **Caps Lock** is on, an up arrow is displayed in the middle of the screen, next to the clock. |
| **Shift** | Changes the meaning of alphabetical and cursor control/numeric keypad keys. When **Shift** is held down, any key that is struck has its meaning reversed, i.e., lower case characters become upper case, and cursor control movements are translated into numbers. |
| **Num Lock** | **Num Lock** has the same effect on the cursor control/numeric keypad as **Caps Lock** has on the alphabetical portion of the keyboard. When **Num Lock** is on, an octothorpe is displayed beside the clock: striking one of these keys will produce a number. When **Num Lock** is off, striking one of these keys will produce a cursor movement. |

```
 CAR.SPECS (CON',CON) (---)                          Data.View
 =============================================================================
                      Manufacturer:>_____

                      Model:_____

        Horse_Power_in_PS: ____          Volume_of_Engine_in_CM: ____

        Maximum_Speed_in_MPH: ___     Acceleration_time_from_0_to_60: ____

        Fuel_Consumption_City_Highway_HS: ___ ___ ___     Gasoline_Type: .

        Five_Gear_Model_Available: .     Automatic_Transmission_Available: .

        Number_of_Doors: .                     Sun_Roof_Available: .

        Colors_Available: .......... .......... .......... ..........
                          .......... .......... .......... ..........
                          .......... ..........


                      List_Price: _____
 =============================================================================

 [CANCEL][     ][PRINT][CALC][     ]  12:11  [Jump][     ][SORT][FINISH][FIELD]
```

**Fig. II-2** - The Hyperion display screen, with a typical
            Aladin screen form. The 29th line contains the soft
            key labels.

**The Alphabetical Keys**

These keys function just like a typewriter. When the key marked "W" is pressed, a "W" is displayed on the screen. When the **Shift** key is held and an alphabetical key is struck, it will be displayed in upper case; or in the case of a number, the symbol displayed over the number will be entered and displayed on the screen.

**The Cursor Control/Numeric Keypad**

On the right-hand side of the keyboard is a cluster of 14 keys (see Fig. II-1). These keys provide both numeric entry and cursor control, depending on whether or not **Num Lock** is on or off, and whether or not the **Shift** key is depressed.

When **Num Lock** is on (or the **Shift** key is depressed) it is possible to enter the digits displayed on the upper left corner of the keys.

When **Num Lock** is off (and the **Shift** key is not depressed), then the cursor control actions (cursor up, cursor down, cursor left, cursor right, **Home**, **End**, **Ins** and **Del**) are activated.

**2.     THE DISPLAY SCREEN**

The Hyperion's screen is where Aladin displays prompts (messages) for you, as well as the masks and forms you define to hold the data in your relational data base.

These masks and forms are the physical layout of fields into which you may enter or extract data. During the tutorial, you will be using the CAR Relational Data Base system, so we have chosen one of those forms (for the SPEC file) to display in Fig. II-2.

In the upper left corner of the screen is a "street-sign", showing where you are within the CAR system, i.e., which file, whether you are entering or changing data, or if calculation is active.

### 3.    RELATIONAL DATA BASES

A relational data base consists of independent files, which may or may not be related to each other. Depending on how you set up your relational data base, you can create reports or queries which draw on similar (related) information contained in many different files.

Each file within the relational system is composed of fields, and may contain up to 571 fields. Each field is defined by a number of constraints. These constraints include: type of field; number of times to repeat the field; length of field (this is related to type of field); protected field; key field.

The meaning and assignment of each of these constraints is shown in the tutorial.

### 4.    THE RELATIONAL PROBLEM SOLVER

What is a "Relational Problem"? When the data in your file is more than just a list of information but is interrelated in some way then you have a relational problem which most data base management systems cannot solve. If, for example, you are an automobile dealer, you might maintain a file that contains specific information on many different autos. You may also keep a file of the various auto manufacturers, their distributors and other pertinent information.

In this case, there is an obvious relationship between each automobile and a particular manufacturer, every car has a single manufacturer.

With paper files, if you want to look up a car, and then find out some information about its manufacturer, you would either have to keep a copy of the manufacturer's record with each automobile record or refer to the separate manufacturers file.

With Aladin, things are much easier. You can establish a relational system which solves your relational problem. In this case, you would maintain the two files, one for the cars and one for the manufacturers, within a single database. Then, when you want to find the manufacturer's information for a given car, Aladin will automatically take you to the correct record with only two keystrokes.

This "relational" approach can be applied to many problems in the real world, not only to speed up your work, but also to accomplish tasks that would have been very difficult with a manual system.

## 5.    OPERATION

Aladin is an interactive, soft-key driven program with on-line HELP. This means that a session with Aladin resembles a conversation. The program suggests some things that you may wish to do, and you make a reply. At most stages, your replies are really selections from a "menu" of possible choices, displayed on the Hyperion's soft key line.

Help information is available throughout Aladin to guide you in the meanings of the various choices. To get help at any time, just press **F10** (**HELP**).

## 6.    RECORDS, FILES AND FIELDS

Aladin is a data base management system that you can use to model and solve most of the information processing problems you encounter.

Aladin takes advantage of the fact that most of these tasks involve information "records". Records can describe people, machines, books, inventory, customers, reservations, contracts or even research experiments.

A group of similar records, such as the card catalogue in a library, is referred to as a *file*. So, if you need to process information about 5000 books, you will need 5000 records, all part of the same file.

If you examine the individual cards in a card catalog, you can see that they each contain the same types of information: Author, Title, Call Number, etc. For collecting this type of information, people often create a written form with a number of boxes or blanks that are then filled in with the appropriate data.

Each card may be considered to be a record. Within this record, the fields are the equivalent of the boxes on the library record card. The boxes, or fields, contain specific pieces of data, which are elements of a record. Aladin stores these fields together as a record, and the records together in files.

One of the basic applications of Aladin, therefore, is to serve as an "electronic filing cabinet". However, with Aladin you can create your own forms and organize them into various files without ever touching a piece of paper. Aladin can also look up a record, add a new record or delete an old one.

For further explanation of this and other terminology refer to Appendix B - Glossary, at the rear of this manual.


## 7.    REPORTS AND OTHER MODULES

Aladin is much more than an electronic file clerk. You can perform statistical analysis on the data in your records with Aladin's built-in STATISTICS module. The REPORT module is also available to automatically produce the reports and lists that you design. In addition, Aladin's CALCULATOR module can perform a variety of computations with your data.

# Part III

# THE TUTORIAL

## 1.   INTRODUCTION

The purpose of this tutorial is to give you hands-on experience with your Aladin system. The lessons that follow take a minimum of time and will fully demonstrate the power, versatility and user friendliness of Aladin.

The TUTORIAL is broken into three lessons:

A)   ***Working with an Existing Data Base*** uses a factory-installed relational data base to demonstrate the Aladin modules used to manipulate your data. The **Aladin System Diskette** is used for this section.

B)   ***Creating and Modifying Data Bases*** demonstrates the planning and implementation of a relational data base customized to your needs. After you have created a new relational system, you are shown how to modify it, in order to adapt to growing business needs. The **Aladin Install Diskette** is used for this section.

C)   ***Problem Solving with Aladin*** gives practical examples of how Aladin's modules can be linked together to perform calculations, sort data, or move data from one file to another. Aladin's ability to perform repetitive tasks with a single keystroke is also demonstrated here. This section requires the **Aladin System Diskette**.

### Single- and Double-Drive Considerations

For this tutorial, it is assumed that you will be using a double-drive Hyperion.

If your Hyperion is a single-drive system, use drive A whenever drive B is required. The system will prompt you when to change diskettes.

# A

# WORKING WITH AN EXISTING DATA BASE

# Section 2

# STARTING AND STOPPING ALADIN

The most crucial, and often overlooked, part of any software package is how to start and stop the system. For this reason, we have put this vital information front and center for you.

Before continuing, however, make sure that you have read **Part I - Getting Started**, copied your Aladin Install Diskette, and formatted some blank diskettes. For Section A of the tutorial, you will also be using the Aladin Demo & Examples diskette, or, more accurately, the relational data base contained on that diskette.

## 2.1   STARTING ALADIN

**STEP**

> 1)   Insert your MS-DOS operating system diskette into drive A and power on your Hyperion.
>
> 2)   After your operating system is in place, remove the MS-DOS diskette from drive A, and insert the *Aladin System Diskette* into drive A, and the *Aladin Demo & Example Diskette* into drive B.
>
> 3)   Enter the words **SETUPRAM** and press **Rtn**.

...continued

SETUPRAM is a DOS batch file which transfers certain system files to C:, for faster operation. *Drive C must be 100 K* for SETUPRAM to have room for all the files.

While Aladin can operate without drive C, it is recommended that you use SETUPRAM to take advantage of the Hyperion RAM. Without RAM, Aladin uses the disk drives much more, and is consequently much slower.

**STEP**

> 4)  If you have a double-drive Hyperion, enter the command **A:ALADIN A:S,**
>
>      **OR**
>
>  If you have a single-drive Hyperion, enter the command **A:ALADIN B:S**
>
> 5)  Press **Rtn.**

## 2.2   ACCESS A RELATIONAL DATA BASE

In a few seconds Aladin will prompt you as follows:

### Enter Relational System Name:

**STEP**

---

6)   Type in the word **CAR** and press **Rtn**.

Aladin will prompt:

### Userid:

7)   Type: **ADI** and press **Rtn**.

Aladin will prompt:

### Passwd:

8)   Type: **ADI** and press **Rtn**.

---

...continued

**NOTE:** ALADIN scrambles the password for your security, so do not be dismayed when you type "ADI" and it is displayed on the screen as "RTM" or something else.

When you have completed the logon procedure, Aladin will display the screen shown in Fig. III-1.

The three names listed under the **Userid** and **Passwd** are the files within the CAR relational data base. There are three files: SPECS, DEALER, and CUSTOMER.

At the bottom of the screen, the last two lines are reserved for the soft key line title, and the soft key labels. As you can see, this soft key line is called ALADIN. It is the main soft key line, from which you may activate any of Aladin's main system manipulation modules.

```
 CAR
 ================================================================================

       A.D.I. --- ALADIN.EXEC v2.6      09/17/83

       A.D.I. GmbH Karlsruhe, West Germany,  Relational System : ALADIN
       ----------------------------------------------------------------
       (c) Copyright by A.D.I.  GmbH Karlsruhe, West Germany 1983

       Enter Relational System name (<return> exits) = car  ..

       Userid = adi
       Passwd = REX ........


       SPECS            DEALER           CUSTOMER



 ================================================================================
                                                                       ALADIN
   ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐        ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
   │ Done │ │ Data │ │Report│ │Query │ │ Calc │  09:23 │Group │ │ Stats│ │Others│ │Srvice│ │ HELP │
   └──────┘ └──────┘ └──────┘ └──────┘ └──────┘        └──────┘ └──────┘ └──────┘ └──────┘ └──────┘
```
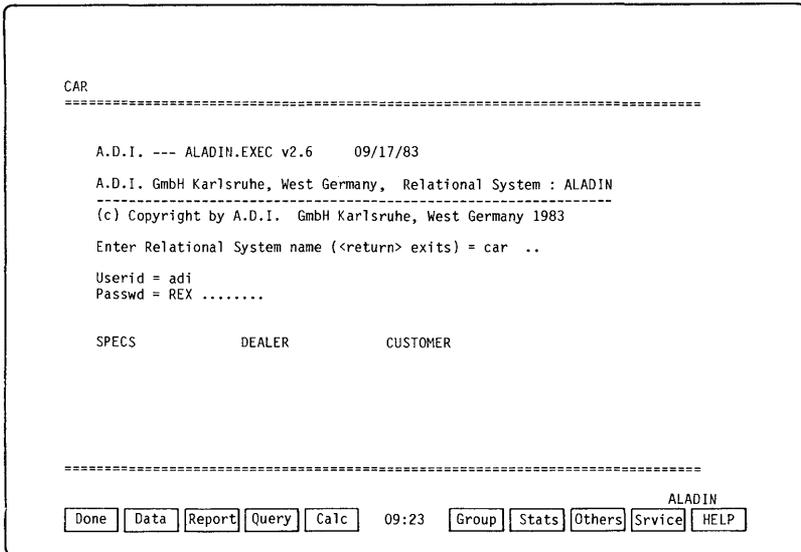
**Fig. III-1** - After logon, the Main Aladin Menu is displayed
on the bottom two lines of the screen. The screen
shows that you have logged on and selected the
CAR relational data base.

The 10 labels correspond to the 10 soft keys at the upper left of the Hyperion's keyboard. Striking one of these keys enters the command shown on the soft key label.

When you have defined other data bases, entering their name(s) in response to the **Enter Relational System name** prompt will cause Aladin to access them, and display them on the screen.

## 2.3   STOPPING AND EXITING FROM ALADIN (RETURN TO DOS)

To exit from Aladin, you must "back out" from wherever you are within the relational system. At this point in the tutorial, you have just accessed the CAR relational system, so we will exit from here.

**STEP**

---

9)   Press **F1** (Done).

The screen clears, and the system prompts:

**Enter Relational System name (<Rtn> exits):**

10)   Press **F1** (Cancel).

---

...continued

The Aladin program is ended, and you are returned to DOS.

The soft key **F1** is always a "backing-up" key. Wherever you are within Aladin, pressing **F1** returns you to the previous level: either by quitting the present level, or by ending a process.

Pressing **F1** repeatedly will eventually take you to the Main Aladin Menu soft key line, from which you exit by pressing **F1** (Done), then **F1** (Cancel).

## Section 3

## PRESSING SOFT KEYS TO ENTER
## ALADIN COMMANDS

**STEP**

| |
|---|
| 11) Repeat steps 1 to 8. The display in Fig. III-1 should be redisplayed on your screen. |

Each relational data base, created using Aladin, can be divided into its own classifications and categories. As indicated by Fig. III-1, the CAR relational system consists of the following files:

a) **SPECS file:** A "filing cabinet" containing information about a car's specifications, i.e.,

- manufacturer,
- model,
- list price,
- maximum speed,
- fuel consumption,
- etc.

b) **DEALER file:** A "filing cabinet" containing information about the car dealers, i.e.,

- name,
- address,
- cars they sell,
- etc.

c) **CUSTOMER file:** A "filing cabinet" containing information about the customer who bought the car, i.e.,

- name,
- age,
- sex,
- address,
- manufacturer of car purchased,
- etc.

## Table III-A
## THE MAIN *ALADIN* MENU SELECTIONS

| SELECTION | FUNCTION |
|-----------|----------|
| **Done** | This command tells Aladin that you are finished, for the time being, with the current relational data base; and exits you to the first screen from which you can select another data base. |
| **Data** | This command lets you enter, change, find, display or remove information within your relational data base. |
| **Report** | This command lets you generate reports and lists. |
| **Query** | This command lets you select groups of records from your data base that meet certain criteria. |
| **Calc** | This command lets you set up calculations to be performed on your data. |
| **Group** | This command lets you organize your data into groups for use with the STATISTICS module. |
| **Stats** | This command lets you perform statistical evaluations of data. |
| **Word** | This command lets you fill in "forms" from your data base to combine Aladin files with word processing. |
| **Info** | This command helps you perform "housekeeping" on your relational data base. |

These files are related to each other.

The specifications (SPECS file) are related to the dealer (DEALER file) who sells that model of car and to the customer (CUSTOMER file) who buys that kind of car.

These types of relationships illustrate the basic building blocks of relational data bases in Aladin and the more complex relational system data bases you can generate in the future.

Currently, the soft key line at the bottom of your screen is labelled ALADIN. Note that **F8** is labelled **Others**.

**STEP**

> 12)   Press **F8** (Others).

Notice that the **F6** label has changed from **Group** to **Word**, and the **F7** label from **Stats** to **Info**. The other keys have retained the same labels.

The number of selections offered by the Main Aladin Menu exceed the number of soft key labels (10) that can be displayed at one time on the screen. The **Other** key causes the soft key line to change to display other possible commands available through the Main Aladin Menu.

Table III-A lists and describes the selections offered by the Main Aladin Menu.

**F9** (Srvice) is not actually a command. Rather, it accesses a soft key line which allows you to set certain system parameters. We will be covering **Srvice** in Section 9 of the tutorial.

```
CAR.SPECS (CON,CON) (---)
=================================================================================
```

```
                                                                          Data
┌──────┐┌─────┐┌──────┐┌──────┐┌────┐        ┌────┐┌────┐┌────┐  ┌──────┐┌────┐
│Aladin││Enter││Change││Remove││View│  11:49 │    ││    ││    │  │Srvice││HELP│
└──────┘└─────┘└──────┘└──────┘└────┘        └────┘└────┘└────┘  └──────┘└────┘
```
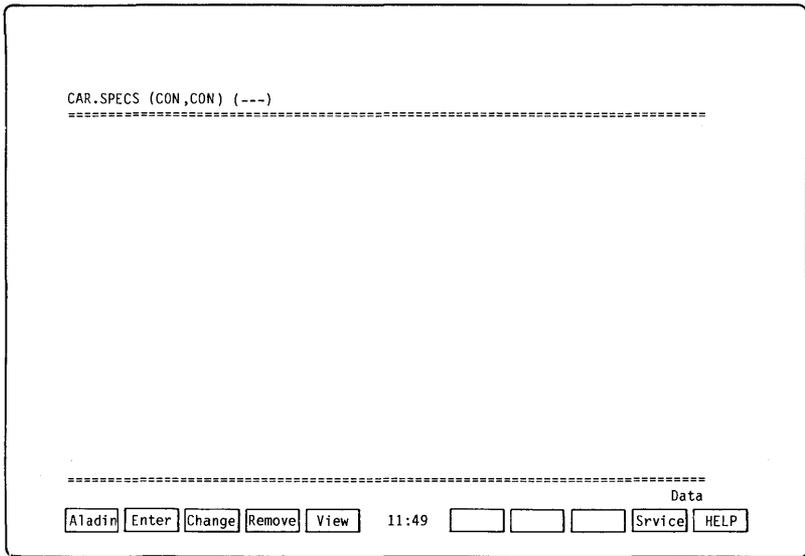
**Fig. III-2**  -  The display screen showing the Main DATA
                   Menu soft key line.

**STEP**

| |
|---|
| 13)    Press **F2** (Data) |

...continued

Aladin will call up the DATA module. The Main DATA Menu and soft key line are displayed as in Fig. III-2.

At the top left-hand side of your computer screen is a prompt line. This is a "street sign" and indicates that you are in the CAR relational data base, in the SPECS file. This street sign tells you the status of your session with Aladin. The sign should read:

<div align="center">

**CAR.SPECS (CON:,CON:) (---)**

</div>

where:

a)    **(CON:,CON:)** tells you that you are using the keyboard for data input and the screen for data output, i.e., you are working with the console.

b)    **(---)** is a status indicator: a minus sign (-) means OFF; and a plus sign ( + ) means ON.

-    the first dash "-" tells you whether or not the QUERY module of Aladin is OFF or ON for this data *input.*

-    the second dash "-" tells you whether or not the QUERY module is OFF or ON for data *output.*

-    the third dash "-" tells you whether or not the CALCULATOR module is OFF or ON.

The display screen should now be showing the Main DATA Menu and soft key line. Table III-B lists and describes each selection from this menu.

```
CAR.SPECS (CONSOLE:,CONSOLE:) (---)                    Data.View
===============================================================================

                    Manufacturer:>_____

                    Model:_____

       Horse_Power_in_PS: ____              Volume_of_Engine_in_CM: ____

       Maximum_Speed_in_MPH: ___       Acceleration_time_from_0_to_60: ____

       Fuel_Consumption_City_Highway_HS: ___  ___  ___      Gasoline_Type: .

       Five_Gear_Model_Available: .     Automatic_Transmission_Available: .

       Number_of_Doors: .                       Sun_Roof_Available: .

       Colors_Available: .......... .......... .......... ..........
                         .......... .......... .......... ..........
                         .......... ..........


                    List_Price: _____
===============================================================================

 CANCEL       PRINT  CALC          12:11   Jump        SORT  FINISH  FIELD
```

**Fig. III-3**  -  The blank screen form for the SPECS file.

**Table III-B**
**THE MAIN *DATA* MENU SELECTIONS**

| COMMAND | DESCRIPTION |
|---------|-------------|
| **Aladin** | Leave the DATA module and return to the Main Aladin Menu and soft key line. |
| **Enter** | Enter a new record into the current data base file. |
| **Change** | Change an existing record. |
| **Remove** | Remove an existing record from the data base file. |
| **View** | View the contents of an existing record in the file. |

**STEP**

> 14)   Press **F5** (View).

...continued

A blank screen form for the SPECS file is displayed (see Fig. III-3). This blank record shows how each record of that file is formatted. A record displayed in this manner is also called "screen form". A blank screen form is also called a "mask".

Notice that the street sign now has an additional element. The street sign reads:

**CAR.SPECS (CON:,CON:) (---) Data.View**

The additional element "Data.View" informs you that you are in the DATA module, and are using the View function.

The cursor will now be resting on the first field in the form.

**STEP**

---

15) Press **Rtn**.

The first record from the SPECS file in sort order by Manufacturer is displayed.

16) Press **Rtn** five or six times in rapid succession.

---

...continued

Aladin will display succeeding records in ascending order, i.e., A,B,C,D,..., or 1,2,3,4,... This exercise will show you how rapidly Aladin can recall data from the system.

Aladin displays records, sorted by the field in which the cursor is positioned. As the cursor was in the MANUFACTUR-ER field, the records are displayed in ascending alphabetical order by the Manufacturer's name. If the cursor were positioned on the LIST-PRICE field, the records for each car would be displayed in ascending order of cost.

# Section 4

## MOVING THE CURSOR ABOUT
## THE SCREEN FORM

In order to move to different fields within the SPECS screen, you will use the cursor control keys. These are located on the right-hand side of the Hyperion keyboard.

### STEP

17) Press the **right arrow** key once.

The cursor should now be resting on the field labelled MODEL.

18) Press **Rtn** five or six times rapidly.

Notice how Aladin now searches for records in the CAR data base by model. Aladin displays a new record each time the **Rtn** key is pressed. These records now, however, are presented in ascending order *by model number* rather than by manufacturer.

### STEP

19) Press the **End** key once.

The cursor moves to the last field in the record: LIST PRICE.

20) Press the **Home** key once.

The cursor is now at the MANUFACTURER field.

**STEP**

| |
|---|
| 21)  Move to the LIST PRICE field, then press **Rtn** several times. |

**NOTE:** This fast access to data can only be made on any "underlined" field. Underlined fields are called *key fields*.

**STEP**

| |
|---|
| 22)  Move the cursor to the MANUFACTURER field, by pressing the **Home** key once. |
| 23)  Type in: **Mit?**, then press **Rtn**. |

This entry may be in upper or lower case letters. Don't be afraid to type over existing data. As you enter new data in the selected field, it will replace whatever was previously typed in that field.

The data record for MITSUBISHI will be displayed.

**STEP**

| |
|---|
| 24)  Enter **de?** in the MANUFACTURER field, then press **Rtn**. The data record for DE LOREAN will be displayed. |
| 25)  Move to the LIST PRICE field, enter **15?**, then press **Rtn**. |

The first data record for cars costing between $15,000.00 and $15,999.99 will be displayed.

Look at the bottom left-hand side of your computer screen. You will see:

### 1 : 3 -> List_Price: 15?

The number 1:3 means that there are 3 data records in the file which meet the criteria of "15?", and that the first record (1) is being currently displayed.

**STEP**

---

26) Press **Rtn**.

The prompt at the bottom of the screen now displays:

### 2 : 3 -> List Price: 15?

The second data record for cars costing more than $15,000 but less than $16,000.

27) Press **Rtn**.

The prompt at the bottom of the screen will now display:

### 3 : 3 -> List Price: 15?

The third and final data record for cars costing $15,000 but less than $16,000.

---

```
CAR.DEALER(CON,CON) (---)                              Data.View
================================================================================
                    Manufacturer:>FERRARI_____

                    Name: THE TOY SHOP_____

                    City: BEVERLY HILLS. . . . . .

                    Street: SUNSET BLVD. . . . . .

                    State: CA     Zip_Code: 9069

                    Telephone: (213) 265-1232. . .

                    Service: Y




================================================================================
    1 :    3 -> Manufacturer: Fer?
 CANCEL         PRINT  CALC              Jump           SORT FINISH FIELD
```

**Fig. III-4** - The car DEALER file record displayed with the
           DATA.View soft key line.

# Section 5

# JUMPING TO DIFFERENT FILES

As was mentioned in the introduction, the SPECS file is related to both the CUSTOMER and DEALER files. The record currently being displayed is from the SPECS file. By moving the cursor to fields that are common to both the SPECS file and to other files, you can "jump" from one file to another.

**STEP**

28) Move the cursor to the MANUFACTURER field.

29) Enter **Fer?**, then press **Rtn**.

The first Ferrari entry is displayed.

The Hyperion is currently displaying the DATA.View soft key line, as in Fig. III-4. **F6** is labelled **Jump**.

**STEP**

30) Press **F6** (Jump).

The line above the soft key labels displays:

**Data File: 1: SPECS, 2: DEALER, 3: CUSTOMER**

...continued

These are the Files which are available to us to "jump" into from the MANUFACTURER field.

**STEP**

| |
|---|
| 31)   Enter the number **2**. |

Aladin will now access the DEALER file and place the record form for that file on the screen. Because you jumped from the MANUFACTURER field with **Fer?** as the entry in that field, the DEALER file record displayed is that for the first Ferrari dealer in the system.

**NOTE:** The "Street Sign" at the top of the screen now reads:

**CAR.DEALER (CONSOLE:,CONSOLE:) (---) Data.View**

**STEP**

| |
|---|
| 32)   Press **Rtn** four or five times in succession. |
| As you can see, it does not matter what file you are in; access time to your data is very quick. |
| 33)   Enter **roll?**, then press **Rtn**. |
| The first Rolls Royce dealer in the DEALER file will be displayed. |
| 34)   Press **F6** (Jump). |

...continued

At the bottom of the screen, you can see the following:

**Data_File: 1:SPECS, 2:DEALER**

These are the files which are available for us to "jump" into from the MANUFACTURER field in the DEALER file.

**STEP**

35) Enter the number **1**.

Aladin will move us back into the SPECS file. The record displayed shows the specifications for the first Rolls Royce in the SPECS file.

36) Press **F6** (Jump).

At the bottom of your screen you should now see the following:

**Data_File: 1:SPECS, 2:DEALER, 3:CUSTOMER**

**STEP**

37) Enter **3**.

Aladin will move us into the CUSTOMER file and we will see the record for the first customer who owns a Rolls Royce.

**STEP**

38) Move the cursor to the CUSTOMER NAME field, using the **Home** or **left arrow** key.

39) Type **?Carson?** and press **Rtn**.

...continued

One of the cars Johnny Carson drives will be displayed.

# Section 6

# USING HELP

Within Aladin, there is an on-line HELP feature, designed to provide information at all times when you are using the Aladin relational data base.

In keeping with the other Hyperion systems, the key **F10** is reserved for HELP, and bears that label when HELP is available.

Your screen is currently displaying an entry for one of Johnny Carson's automobiles.

**STEP**

---

40)   Press **F1** (CANCEL).

This moves you from the Data View soft key line to the Main DATA Menu soft key line.

41)   Press **F10** (HELP).

---

The screen now displays a screenful of information about the DATA module.

The HELP provided by Aladin is frequently more than one screen will hold. Therefore, there are additional commands which can be used only in HELP. They are displayed as soft key labels and are described in Table III-C.

### Table III-C
### THE HELP SOFT KEY LABEL COMMANDS

| COMMAND· | EFFECT |
|---|---|
| **PREV** | Displays the previous page of HELP information which was displayed on the Hyperion's screen. |
| **NEXT** | Displays the next page of HELP information available. |
| **CANCEL** | Exits from the HELP file, and returns to the previous position within the program. |

**STEP**

> 42)  Press **F3** (NEXT) to display the next page of HELP information.

As per the prompt at the bottom of the page, you may also use the **spacebar** to move to the next page of the current HELP file.

**STEP**

> 43)  Press **F1** (CANCEL).

# Section 7

# ENTERING, CHANGING AND REMOVING DATA

Between sixty and seventy percent of your computer's time will be spent just entering and changing data in the relational data base.

Almost forty percent of all the information typed from one data entry record is the same (or with minor changes) as most other data entry records. Because there is so much repetition involved, it is important to know how to enter, change and remove data efficiently.

Redundant data entries cost time, money and may also increase the error rate.

If, for instance, you run a retail business that has a fairly regular clientele, you are constantly preparing records that reflect new purchases, credit limits, payments, etc.

In addition, there are changes in names, addresses and telephone numbers, as well as additions and deletions as new clients discover your store and former clients move out of town. The ability to add, substitute, or remove only selected items from your files reduces the chances for error.

## 7.1    ENTER DATA

### STEP

44)  Press **F1** (CANCEL).

The Hyperion's screen should now be displaying the Main DATA Menu soft key line (Fig. III-2).

45)  Press **F2** (Enter).

The entries in the current CUSTOMER screen form are erased. The cursor is positioned at the CUSTOMER NAME field.

The "Street Sign" should now read:

**CAR.CUSTOMER (CON:,CON:) (---)   Data.Enter**

**STEP**

> 46)   Enter **your name,** then press **Rtn**.

**NOTE:** If you make an error when entering data, use the **Rub Out** key to erase the mistake, or use the cursor control keys to edit the entry.

**STEP**

> 47)   Type in the city where you live, then press **Rtn**.
>
> 48)   Type in your two-letter state or province code.
>
> 49)   Type in your age.
>
> 50)   Type in your sex.
>
> 51)   Type in the manufacturer of your car, then press **Rtn**.

When you reach the last character of a field, the system automatically advances to the next field - this allows for rapid data entry.

In the bottom right-hand side of your screen, Aladin will prompt:

**Enter the record in this way?**

Note that the soft key line changed when this prompt appeared. **F6** is now labelled "YES", and **F8** is labelled "NO".

**STEP**

> 52) Press **F8** (NO).
>
> The cursor is positioned at the MANUFAC-
> TURER field.

You may now use the cursor control keys to move through the screen form, and make any changes you feel are necessary.

Changes are entered by pressing **Rtn** after you have made the corrections. You may skip over fields which are all right by using the cursor control keys.

When you have finished making changes, you may exit the form by moving the cursor to the bottom field, which in this case is MANUFACTURER, and then pressing either the **down arrow** key, or **F9** (FINISH) from anywhere in the system.

**STEP**

> 53) When you have finished making corrections, press **F9** (FINISH), Aladin prompts:
>
> **Enter the record in this way?**
>
> 54) As everything is correct, press **F6** (YES).

...continued

Aladin will now automatically save this record on the disk. This is an important safety feature of the ADI software, and is unequaled in most other types of computer software, from mainframe to micro.

After a new record is entered into the system, it is immediately stored. This ensures that, in case of a power or other hardware failure, you can never lose more than one data item. This feature is controlled by the SV software switch.

Aladin has one of the most sophisticated, built-in auto-recovery systems offered on computer. In case of a power or hardware failure, Aladin will automatically scan all your records and files, make necessary reconstructions and ensure the total integrity of your data and the entire relational system.

## 7.2    USE ANOTHER RECORD TO ENTER DATA

The blank customer file record is currently displayed. The cursor is resting in the CUSTOMER NAME field again.

**STEP**

| |
|---|
| 55)   Press **Rtn**. |

The first customer record in the CUSTOMER file is displayed. In the bottom right-hand side of your screen Aladin will prompt:

### Use This Record?

As with the "Enter This Record" prompt, **F6** is YES and **F8** is NO.

**STEP**

| |
|---|
| 56)   Press **F8** (NO). |
| The screen form blanks out, except for the NAME field. |
| 57)   Type **Bo?**, then press **Rtn**. |

Aladin will display the customer record information for BO DEREK. The "counter" at the bottom left-hand side of the screen keeps track of the "question" that was used and the number of data records that fit that pattern.

Again Aladin will prompt:

**Use This Record?:**

**STEP**

---

58) Press **F6** (YES).

59) Move the cursor to the CUSTOMER NAME field, and enter **John Derek**, and press **Rtn.**

60) Using the **right arrow** key, move the cursor to the AGE field, and enter **47**.

61) Aladin automatically positions the cursor at the SEX field. Enter **M**.

The cursor is automatically positioned at the MANUFACTURER field.

62) Press **F9** (FINISH). Aladin will prompt:

**Enter the Record in This Way?**

63) Press **F6** (YES).

---

...continued

The new record, for John Derek, has been entered into the CAR relational data base. Further data entries for any relational system data base are made exactly the same way.

### 7.3   CHANGE AN EXISTING RECORD

The CUSTOMER file record is on the screen again, and the cursor will rest on the CUSTOMER NAME field.

**STEP**

---
64)   Press **F1** (CANCEL).

The soft key line changes to display the Main DATA Menu soft key line.

65)   Press **F3** (Change).

---

The "Street Sign" will now read:

**CAR.CUSTOMER (CON:,CON:) (---)   Data.Change**

**STEP**

---
66) Type: **Jerry?** and press **Rtn**.

---

...continued

The customer data record for former California governor Jerry Brown will be displayed. Aladin will prompt:

**Use this Record?**

**STEP**

---

67)  Press **F6** (YES).

68)  Move the cursor to the CITY field.

69)  Replace Sacramento, by typing **Los Angeles**, and press **Rtn**.

70)  Press **F9** (FINISH).

Aladin will prompt:

**Change the record in this way?**

71)  Press **F6** (YES).

---

The CUSTOMER screen will appear and the cursor will rest on the CUSTOMER NAME field again.

**STEP**

---

72)  Type: **Deu?**, then press **Rtn**.

The customer data record for California Governor George "Duke" Deukmejian will be displayed.

73)  Press **F6** (YES).

---

**STEP**

| |
|---|
| 74)   Use the **right arrow** key to move to the CITY field. |
| 75)   Enter **Sacramento**, then press **Rtn**. |
| 76)   Press the **F9** (FINISH). Aladin prompts: |
|        **Change the record in this way?** |
| 77)   Press **F6** (YES). |

Changes or modifications to already existing data records within any relational system data base are made exactly the same way.

**STEP**

| |
|---|
| 78)   Press **F1** (CANCEL). |
|        You are turned to the Main DATA Menu and soft key line. |

## 7.4   REMOVE A RECORD

Removing a record from a relational data base file is as easy as entry or modification of that record was.

### STEP

79)   Press **F4** (Remove).

The "Street Sign" will now read:

**CAR.CUSTOMER (CON:, CON:) (---)   Data.Remove**

### STEP

80)   Type **Fon?**, then press **Rtn**.

The customer data record for the late Henry Fonda will be displayed.

81)   Press **F9** (FINISH). Aladin prompts:

**Remove record(s)?**

**STEP**

---

82)   Press **F6** (YES).

The data record for Mr. Fonda is removed from the system.

83)   Press **F9** (FINISH).

This returns you to the Main DATA Menu and soft key line.

84)   Press **F1** (Aladin).

---

...continued

You are now returned to the Main Aladin Menu and soft key line.

# Section 8

# BUILDING A QUERY

While using the DATA module of Aladin, we learned how to recall data records based on our requirements on an individual field. For example, when we typed "Mit?" in the MANUFACTURER field, we were looking for any record that met the pattern "Mit" plus any other characters.

Our criteria for selecting records was limited to a single variable.

At that time we were unable to make multiple level selections in the DATA module. For example, we could not find cars that cost less than ten thousand dollars AND go faster than 120 miles per hour.

However, the QUERY module of Aladin is designed to make use of multilevel selections, not only within an individual file, but to other files as well.

For example: display all cars that are Mercedes-Benz (SPECS file) that are sold in California (DEALER file) and list all the female customers who purchased them (CUSTOMER file).

Each time you make a selection on a field, Aladin will prompt for the type of comparison you want to make. There is no software limit on the number of questions you ask the system in one query. Your computer hardware (disk space, etc.) which stores the query, will be the only limitation.

Unlike the DATA module, QUERY will not display the records immediately after you have finished defining your questionnaire. QUERY is designed to store your criteria to enable you to work with other Aladin modules before asking to see the records that meet the criteria in the query.

This means that you can return to the DATA module and call up individual records that meet your selection criteria, or you can design a report using the REPORT module and get a complete listing of all qualifying data records.

```
CAR.SPECS (CON ,CON ) (---)
================================================================================





                                                                      Query
Aladin Define  Save  Recall  View   12:12                          Srvice  HELP
```
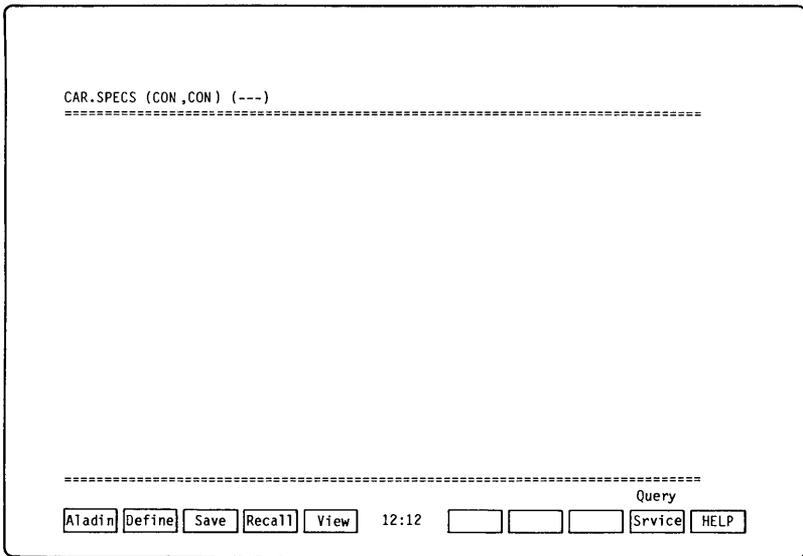
**Fig. III-5**  -  The Main QUERY Menu and soft key line.

In addition, QUERY works not only as a "filter" on data output, but also as a "net" in data entry, change or removal: those data records that do not meet your selection criteria can not be entered into the system. For example, you can set up the query as a protection against spelling errors, format errors for engineering part numbers, etc.

Using QUERY, you can ensure that those data records which do not meet your selection criteria can not be changed or removed from the system either.

You can set up the query as protection against unintentional modifications or removals, ensuring that only data records for a particular range of dates or times are changed or deleted, etc.

Your screen should currently be displaying the Main Aladin Menu and soft key line:

**STEP**

| |
|---|
| 85) Press **F9** (Srvice). |
| 86) Press **F6** (Jump). |
| 87) Press **1** for SPECS. |
| 88) Press **F4** (Query). |

...continued

This accesses the QUERY module. The Main QUERY Menu and soft key line are displayed as shown in Fig. III-5. Table III-D lists and describes each QUERY function.

**Table III-D**
**THE MAIN *QUERY* MENU SELECTIONS**

| SELECTION | FUNCTION |
|---|---|
| **Aladin** | Leave the QUERY module and return to the main Aladin soft key line. |
| **Define** | Define a new query, to be used for screening and filtering data. |
| **Save** | Save your current query to a diskette file so that it can be used later. Aladin will prompt for a name to save it under. |
| **Recall** | Recall a query that has been saved to diskette |
| **View** | Display the current query on the screen. |

**Table III-E**
**QUERY COMPARISON OPERATORS**

| OPERATOR | FUNCTION |
|---|---|
| **SKIP** | Defer placing a comparison operator. |
| = | The expression is satisfied when the value of the field is EQUAL to the value you entered. |
| <> | The expression is satisfied when the value of the field is NOT EQUAL to the value you entered. |
| < | The expression is satisfied when the value of the field is LESS THAN the value you entered. |
| <= | The expression is satisfied when the value of the field is LESS THAN OR EQUAL TO the value you entered. |
| => | The expression is satisfied when the value of the field is GREATER THAN OR EQUAL TO to value you entered. |
| > | The expression is satisfied when the value of the field is GREATER THAN the value you entered. |

## 8.1 DEFINE THE QUERY

### STEP

> 89)   Press **F2** (Define).

Notice that the street sign has changed:

**CAR.SPECS (CON:,CON:) (---)        Query.Define**

A blank screen form for the SPECS file is displayed with the cursor resting on the MANUFACTURER field.

We now want to set up the following definition for this query: We want all cars EXCEPT Hondas and Toyotas. We also want all cars capable of speeds of at least 100 miles per hour. In addition, we want all these cars to cost less than $15,000.00.

### STEP

> 90)   Enter **Honda**, then press **Rtn**.

...continued

Aladin now displays the prompt: **.Compare** at the bottom right of the screen, and a series of comparison operators as soft key labels in the soft key line. These "comparison operators" define the way the query will handle the criterion you have just entered into the field. The comparison operators are described in Table III-E.

The comparison operator you choose will be applied to the data value that you have just entered. The two together will form an "expression" as part of your Query. In general, records which satisfy the resulting expression will be selected by Aladin. If you press the spacebar, no action is taken, and the information entered in the field is discarded.

```
CAR.SPECS (CON,CON) (---)                              Query.Define
==============================================================================
                     Manufacturer: Toyota_____

                     Model: _____

     Horse_Power_in_PS: ___            Volume_of_Engine_in_CM: ____

     Maximum_Speed_in_MPH: ___     Acceleration_time_from_0_to_60: ____

     Fuel_Consumption_City_Highway_HS: ____ ____ ____    Gasoline_Type: .

     Five_Gear_Model_Available: .    Automatic_Transmission_Available: .

     Number_of_Doors: .                        Sun_Roof_Available: .

     Colors_Available: ..........  ..........  ..........  ..........
                       ..........  ..........  ..........  ..........
                       ..........  ..........


                     List_Price: _____
==============================================================================
                                                    .Connectors
   [    ][ DEFER ][    ][ AND ][ OR ]  12:14  [ XOR ][    ][    ][    ][ HELP ]
```
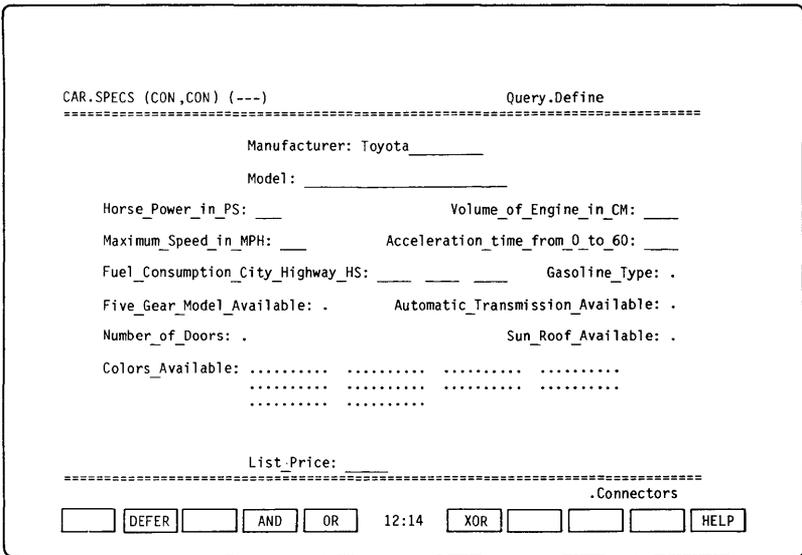
**Fig. III-6**  -  The QUERY connectors displayed on the soft key
line.

**STEP**

---

91)  Press **F5** (<>), since you want all cars except
     Honda.

     The cursor is automatically moved to the next
     Field.

92)  Move the cursor back to the MANUFACTUR-
     ER field.

---

As before, use the the arrow keys to control the location of
the cursor on the screen. Be careful with the right arrow and up
arrow keys. If you press them when you're at the bottom of the
screen, Aladin will return to the Main QUERY Menu and soft
key line and you'll have to return via **Define** in order to set up
your query again.

**STEP**

---

93)  Enter **Toyota**, and press **Rtn**.

     Aladin again prompts for a comparison
     operator.

94)  Press **F5** (<>), for NOT EQUAL.

---

You have defined two conditions: that the query not select
Hondas, and it not select Toyotas.

Now Aladin will ask you how to join the two questions.
The soft key line changes to display the query connectors
described in Table III-F. The command line is displayed in Fig.
III-6.

**Table III-F**
**QUERY CONNECTORS**

| CONNECTOR | ACTION |
|-----------|--------|
| **DEFER** | Defers the logical connection until later, overriding the normal "left-to-right" expression grouping. This has the effect of "parenthesizing" the most recent expression with an expression yet to follow. |
| **AND** | An expression built with the AND connector is satisfied when the two connected expressions are both true, |
| | e.g., select cars costing less than $30,000 and more than $20,000 |
| **OR** | An expression built with the OR connector is satisfied when ONE or BOTH of the two connected expressions are true, |
| | e.g., select cars with 5-speed transmissions or overdrive transmissions or both. |
| **XOR** | An expression built with the XOR (exclusive OR) is satisfied when one, but not both, of the two connected expressions is true, |
| | e.g., select cars with 5-speed or overdrive transmissions, but not both. |
| **NOT** | Sometimes available, depending on the status of the GL (Global) software switch. The expression must be false. |

We want to exclude both Hondas AND Toyotas from the list.

**STEP**

---

95)  Press **F4** (AND).

     The cursor is positioned at the MODEL field.

96)  Move the cursor to the MAXIMUM SPEED field.

97)  Enter **100**.

     Aladin will make the **Rtn** automatically.

98)  Press **F8** ( = >).

---

We are interested in cars that go at least 100 miles per hour.

Aladin will now ask how this new "question" fits in with the other two just asked. Up to now we have selected cars which are NOT EQUAL to Honda AND cars that are NOT EQUAL to Toyota. But we also want cars which go at least 100 miles per hour.

Is OR the correct expression? No, it is not, because it would allow cars which were either Hondas AND/OR Toyotas that went 100 miles per hour or more to be included in the selection criteria.

Since we still want to exclude Hondas AND Toyotas from the list, the correct response is AND.

**STEP**

> 99)   Press **F4** (AND).
>
> 100)   Move the cursor to the LIST PRICE field.
>
> 101)   Enter **15000**.
>
>    Aladin makes the **Rtn** automatically.

Since we want cars which cost less than $15,000:

**STEP**

> 102)   Press **F5** (<).

Aladin will now ask you how to compare this additional question to the others.

Is OR the correct response? No, it is not. It would allow cars with maximum speeds of less than 100 miles per hour, cost less than $15,000, and Hondas or Toyotas to be included into our selection list.

The correct response is AND:

**STEP**

---

103)   Press **F4** (AND).

Because LIST PRICE is the last field in the form, Aladin now prompts:

**Is Your Definition Complete?**

---

...continued

When a connector is applied to a field other than the last field, the cursor returns to the screen form.

If you haven't finished your query, press **F8** (NO) and Aladin will return you to the screen.

When you want to end your query session, press the **FINISH** key. Aladin presents you with the prompt:

**Is your definition complete?**

The allowed answers (Yes, No, File) are displayed on the soft key line. **F6** (YES) and **F8** (NO) extend or terminate the query session respectively. If you want to "jump" or "branch" to another file within your relational system, press **F5** (FILE). Aladin will prompt you for the name of the file to jump to. You may then use elements of the second file in your query.

```
Select records meeting the following criteria

SPECS:

            Manufacturer <> 'honda'
        AND Manufacturer <> 'toyota'
    AND Maximum Speed in MPH >= 100
 AND List_Price <  '15000'




                                                    Query
Aladin Define  Save  Recall  View    12:12                  Srvice  HELP
```
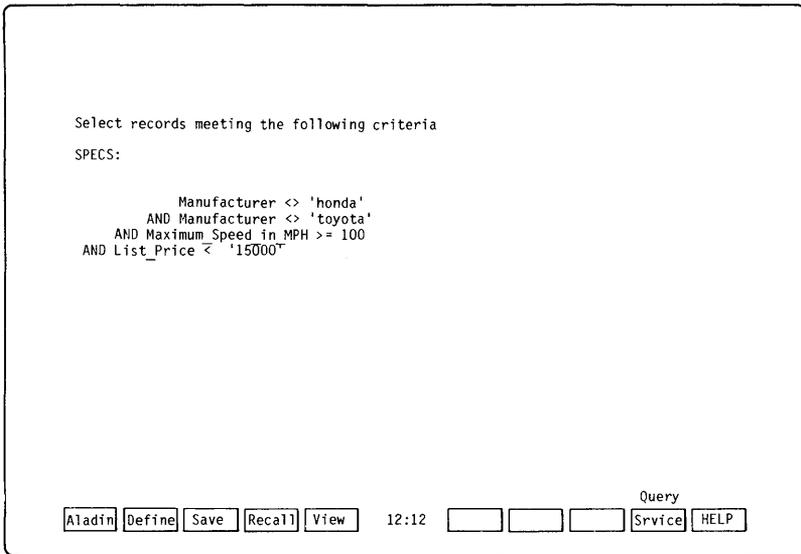
**Fig. III-7** - A typical query.

Because we have finished our query:

**STEP**

> 104)   Press **F6** (YES).

Your screen should now resemble that in Fig. III-7, displaying the query constraints you have just set up.

**STEP**

> 105)   Press the **space bar** to clear the screen.

                                                       ...continued

Aladin is now displaying the Main QUERY Menu and soft key line (Fig. III-5).

Once you have defined a query, it is stored in your Hyperion internal memory (RAM). As you enter other modules of Aladin, you will be asked whether you wish this selection critieria query to be activated.

If you wish to save the selection criteria for later use, it must first be stored on a diskette using the SAVE function.

You can bring back a query that has been saved by using the RECALL function.

You can view the query that is active in the system by using the VIEW function.

These functions are discussed in Part IV - Reference. For the moment though, we will just save the current query.

## 8.2    SAVE THE QUERY FOR FUTURE USE

**STEP**

---

106)   Press **F3** (SAVE).

Aladin prompts for a three-character name for this query file.

107)   Enter **Q1**, then press **Rtn**.

---

You can have up to three letters in the name of your query.

**NOTE:** When setting-up new queries, if there is another query in memory, Aladin may prompt:

### Discard previous selection criteria?

If Aladin does not display this prompt, continue with step 109.

**STEP**

---

108)   If there is nothing in system memory (therefore nothing to discard) press **F8** (NO).

*OR*

If this is your second time through the tutorial, you may have a previous query stored in memory. In that case, press **F6** (Yes).

---

...continued

**STEP**

109)   Press **F1** (Cancel).

This returns you to the Main Aladin Menu
and soft key line.

## 8.3   REMEMBER THE FOLLOWING POINTS

*   Use the arrow keys to control the location of the cursor
    on the screen. Be careful with the **right arrow** and
    **down arrow** keys. If you press them when you're at
    the top of the screen Aladin will return to the Main
    QUERY Menu and soft key line and you'll have to
    return to **Define** in order to set up your query again.

*   If you haven't finished your query, press **F8**, for NO and
    Aladin will return you to the screen.

*   When you want to end your query session, press **F9**
    (FINISH). Aladin presents you with the prompt: **Is
    your definition complete?**

*   If you want to "jump" or "branch" to another file within
    your relational system, press **F5** (File). Aladin will
    prompt for the file you wish.

*   Once you have defined a query, it is stored in your
    computers internal memory (RAM). As you enter other
    modules of Aladin you will be asked whether you wish
    this selection critieria query to be activated.

*   If you wish to save the selection criteria for later use, it
    must first be stored on the disk, using the SAVE
    function.

*   You can bring back a query that has been saved, by
    using the RECALL function.

*   You can view the query that is active in the system, by
    using the VIEW function.

**Table III-G**
**SERVICE (Srvice) FUNCTIONS**

| SERVICE | FUNCTION |
|---------|----------|
| **Input** | Redefines the Input source for data. |
| **Output** | Redirects Aladin's output to a device or file. |
| **Jump** | Lets you "jump" between the relational files of your data base. |
| **CALC** | Lets you "tabulate", i.e., activate an Aladin Calculation. |
| **Vars** | Lets you change any of several control switches. |
| **FIELD** | Gives you information on field definitions in your system. |
| **UNIV** | Redefines the "statistical universe" (when using statistics), i.e., 100% equals "X" number of units. |
| **Screen** | Controls the screen "contrast" between forms and data (if available). |

# Section 9

## THE SRVICE SOFT KEY LINES
## (CONTROL FUNCTIONS)


This section will show you how to use the SRVICE control functions that are built into Aladin. These functions are not all grouped in one menu or soft key line, as they vary for different modules within Aladin.

The control functions in Aladin mean that you're not likely to "outgrow" your software. With such a variety of commands at your fingertips to redefine input/output sources, jump between files and activate global switches, Aladin gives you more power and flexibility than software programs that operate only in one realm.

The control functions are accessed by pressing the soft key labelled **Srvice**. Depending on which module you are in, the control functions available to you may vary. Table III-G lists all available functions.

In addition, the following Hyperion keyboard keys can also be used, after beginning to enter data within a field in a screen form.


## Table III-H
## HYPERION KEYBOARD CONTROL KEYS

| HYPERION KEY | ACTION |
|---|---|
| **Ins** | Add or Insert a blank within a field. |
| **Del** | Delete a character. |
| ← | Move 1 character left. |
| → | Move 1 character right. |
| **Rtn** | End field definition at cursor position. |

```
CAR.SPECS (CON,CON ) (++-)
================================================================================

================================================================================
Aladin  Screen        Input Output   12:18   Jump             Vars   HELP
```
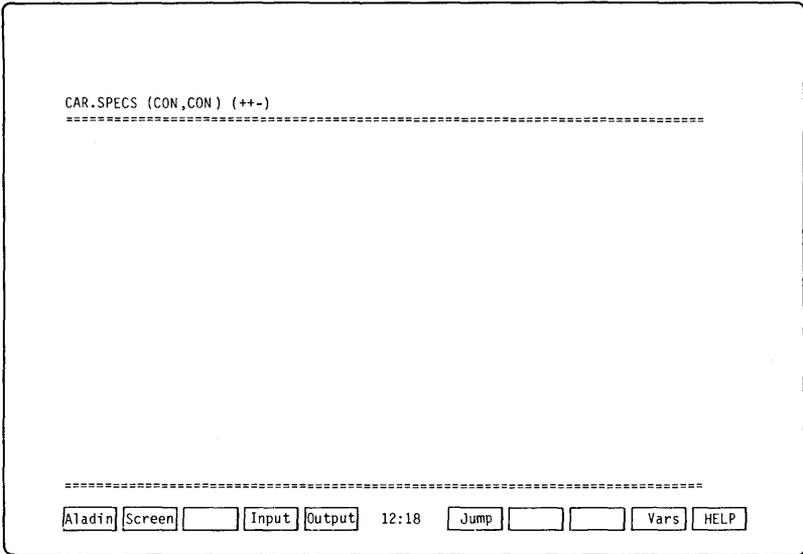
**Fig. III-8** - The Service Menu and soft key line that are
accessed from the Main Aladin Menu.

**STEP**

<div style="border:1px solid;">

110)   Press **F9** (Srvice).

111)   Press **F4** (Input).

Aladin will prompt:

**Input Source**

and display the soft key line shown in Fig.
III-8.

</div>

...continued

Aladin is asking you to define where it will take its
information from. You have the following choices.

**Table III-I**
**INPUT SOURCE CHOICES**

| CHOICE | ACTION |
| --- | --- |
| <**Spacebar**> or **Menu** | No action is taken. Aladin returns to the previous menu line. |
| **CON** | Console. All input is simply taken from your keyboard as you type it. This is the usual way of doing business with Aladin. |
| **File** | Aladin still takes commands from your keyboard, but certain data is taken from the file that you specify. Aladin will prompt for the location and name of the file. Exactly how this works will depend on what Aladin operation you activate, and on the contents of your file. |
| **Script** | Aladin will take commands from a "script" command file that has been previously defined, executing such commands just as if they were being entered from the keyboard.When you press **F4**, Aladin will prompt you for the location and name of the file. |

For practice, you will now have the chance to experiment with the service and control commands and get used to recognizing the corresponding menu lines that will appear. To escape from each selection, press **F1** (Menu).

**STEP**

---

112)   Press **F1** (Menu).

---

The screen blanks, and you are returned to the Main Aladin Menu and soft key line. You can recognize this line by the title ALADIN in the lower right-hand corner of the screen.

**STEP**

---

113)   Press **F9** (Srvice).

114)   Press **F4** (Input).

115)   Press **F3** (File).

Aladin will prompt:

**Input Source File: Enter file reference name:**

---

...continued

Aladin will take data from the file that you specify.

By selecting **File**, you are able to perform batch data entry into Aladin, by directing Aladin to take the data from a previously prepared file. The input source file should present data in the same order that the record is organized. If you had entered a valid file name in answer to the prompt, Aladin would have displayed the following soft keys:

a)   **F2** (CON): Data is entered from the keyboard in the usual manner.

*OR*

b)   **F3** (File): Aladin will take data from the input file that you have specified.

Note that the layout of the input file must match the layout of the input data that Aladin expects.

**STEP**

---

116)   Press **Rtn**.

You are returned to the Main Aladin Menu and soft key line.

117)   Press **F9** (Srvice).

118)   Press **F4** (Input).

119)   Press **F4** (Script).

---

...continued

```
CAR.SPECS (CON ,CON ) (++-)
==================================================================================




                                                                          Output Destination
  Menu    CON    File  Script  PRN      12:19                                          HELP
```
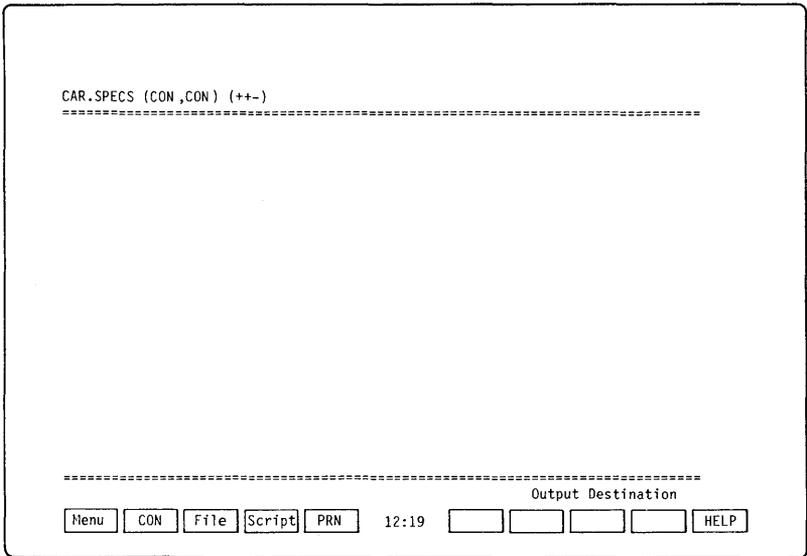
**Fig. III-9** - Output destination soft key line.

Aladin will prompt for the name of a script file. In this mode, Aladin would then carry out a series of commands, as if they were being entered from the keyboard.

**STEP**

---

120)   Press **F1** (Cancel).

121)   Press **F9** (Srvice).

122)   Press **F5** (Output).

Aladin prompts:

**Output Destination:**

and displays the soft key line shown in Fig. III-9.

---

...continued

With the **Output** command, you can change the place where Aladin displays or stores certain information. **Output** is used when you wish to print or save a report, or a listing of your data; or to generate a script input file. The output options (displayed as soft key labels), are listed and described in Table III-J.

**Table III-J**
**OUTPUT DESTINATION SOFT KEY COMMANDS**

| OUTPUT DESTINATIONS | ACTION |
|---|---|
| **Menu** | No action is taken. You are returned to the Main Aladin Menu soft key line. |
| **CON** | Console. All output appears on your screen. This is Aladin's usual method of dealing with output. |
| **File** | Certain output is directed to the file that you specify. While all command menu lines, forms and messages continue to appear on your screen, the output of, say, a report will be sent to the file. |
| **Script** | The output is directed into a script file. You may then "replay" the script file at a another time, in order to avoid repetitive tasks. |
| **PRN** | Printer. Like "**File**", the output is sent automatically to your printer. Make sure your printer is hooked up to the Hyperion and turned on. |

**STEP**

> 123) Press **Rtn**, without pressing any of the soft
>       keys.

**Rtn**, when used before any characters are entered in
response to a prompt, also functions as a backing-up key. In
effect, you are telling Aladin that you do not want to make an
entry or use a particular command; and to return you to the
main soft key line.

**STEP**

> 124) Press **F9** (Srvice).
>
> 125) Press **F2** (Screen).
>
>       Aladin prompts:
>
>                    **Screen Forms**

With this function you can control the brightness of the
data record and the screen form. This allows you to establish a
contrast between the field names and the data you enter. The
choices are shown in Table III-K.

**Table III-K**
**SCREEN BRIGHTNESS SELECTIONS**

| CHOICE | EFFECT |
|--------|--------|
| **CONT** | No change in the intensity of the display . |
| **BRIGHT** | Brightest intensity. |
| **NORMAL** | Normal intensity. |

**STEP**

126)   Press **F8** (NORMAL).

Aladin now prompts:

**Data**

127)   Press **F6** (BRIGHT).

The data which will fill the form will be displayed in a higher intensity.

### 9.1   "JUMPING" BETWEEN THE FILES IN YOUR DATA BASE

**STEP**

128)   Press **F9** (Srvice).

129)   Press **F6** (Jump).

...continued

Aladin displays the three available files you may branch to:

**1:SPECS, 2:DEALER, 3:CUSTOMER**

This function allows you to "jump" between the various relational files that make up your Aladin relational data base. Simply select the number of the file that you wish to use and enter that number.

Pressing **F1** (CANCEL) causes no action to be taken.

## 9.2 USING THE CONTROL FUNCTIONS

This "second level" of switches allows you to fine tune many of the operations within your relational system. For example, you can use the sort key to prioritize or alphabetize mailing lists to customers. Use of the global switch permits you to update designated files automatically for sales forcasting, inventory changes, market changes, or many other purposes. With practice, you will find a number of ways to "tailor" your individual data bases using "soft keys".

### STEP

---

130) Press **Rtn**.

131) Press **F9** (Srvice).

132) Press **F9** (Vars).

---

Aladin displays a menu of 10 control functions on the second last line of the screen. Each function is also placed on a soft key label.

These control functions let you activate or deactivate various features of Aladin. Each "switch" may be turned ON (" +") or OFF ("-") by typing the number that precedes it, or by pressing the soft key with a matching label.

The ten control functions are described in Table III-L.

### STEP

---

133) Press **F1** (Menu).

No action is taken. You are returned to the Main Aladin Menu and soft key line.

---

...continued

## Table III-L
## THE TEN CONTROL FUNCTIONS ACCESSED BY THE
## *VARS* OPTION OF THE MAIN ALADIN MENU

| NAME | PURPOSE |
|------|---------|
| **OUTPUT SELECTION** (OQ) | Allows the use of a query when Aladin is selecting records from your system. If ON, only records matching the query are displayed. |
| **INPUT SELECTION** (IQ) | Uses the query as a "filter" when entering new data. If this switch is ON, only those records that match the query can be saved or updated. |
| **DUPLICATE KEYS** (DK) | When ON, duplicate key values are allowed when entering data. Otherwise, a warning message appears. |
| **SORT DIRECTION** (DIR) | When ON, sorting of records is in ASCENDING order (i.e., 1,2,3, A,B,C,D) When OFF, sorting is DESCENDING order (10,9,8, Z,Y,X) |
| **ABSOLUTE PO-SITIONING** (AB) | When on, all fields in reports are filled with blanks to the full field length. |
| **GLOBAL SWITCH** (GL) | Performs global operations while engaged. |
| **"NOT" CON-NECTOR** (NOT) | Allows "not" to be used within a query. |
| **SAVE RECORD NOW** (SV) | Records are saved immediately on the diskette after an insert or update. |
| **INFORMATION** (INFO) | Allows all functions to be displayed on the screen. |
| **CALCULATE** (CAL) | Controls whether or not a calculation will be applied automatically to global data operations. When the switch is OFF, calculations can only be applied by pressing CALC from the Srvice soft key line. |

# Section 10

# CREATING A REPORT

In the DATA module of Aladin, we learned how to recall data records based on our requirements for an individual field. However, we were unable to view the contents of other files at the same time, or to select the individual fields that we wanted to appear. We used the DATA module much as we would a filing cabinet. The screen forms were the electronic file folders.

We will use the REPORT module to arrange our data from several files in a logical way.

In this section we will tailor a report to our needs, ensuring that only pertinent information is listed. We will also learn how to mix the contents of different files in our reports.

The REPORT module of Aladin allows you to access selected information from individual fields and to set up reports in a visually understandable form.

Suppose you wanted to print a report that would reflect women and minority hirings over a three-month period in each of the six departments of your company.

Because the DATA module of Aladin does not allow us to see information from multiple files all at the same time, or to select individual fields for review, it would be a time-consuming process to view each of our files separately. The chances for error would also increase with this process, as the person extracting data for the report might accidentally set up a query for one field that is inconsistent with queries established for related fields.

Even if all the figures from each of the departments were tabulated by hand and submitted to a coordinator for inclusion in the report, imagine the time that it would take to set up margins, measure columns and enter the data under the right categories. Again, the chances of entry error are high.

The REPORT module not only scans the files for the information you wish to include and allows you to "jump" between files in your data base, but generates an easy-to-read visual display on the screen as well which, if you desire, can be directed to a printer for hard copy and distribution.

## 10.1  SET UP THE QUERY

### STEP

| |
|---|
| 134)   Press **F4** (Query). |

In Section 6, you used QUERY to ask Aladin to select groups of records that satisfy the "query" or selection criteria that you established. You then saved the Query under a special name.

### STEP

| |
|---|
| 135)   Press **F4** (Recall). |
| Aladin prompts: |
| **Query.Recall: Enter file reference name:** |
| 136)   Enter **Q1**, then press **Rtn**. |

Aladin will display the selection criteria defined in "Q1". Q1 has now been loaded, and is the "current" query.

### STEP

| |
|---|
| 137)   Press **F1** (Aladin). |
| 138)   Press **F3** (Report). |
| Aladin will call up the REPORT module, and prompt: |
| **Do you want to use your Query?: Yes, No** |
| 139)   Press **F6** (YES). |

As you use Aladin, you may use different queries during a single session. Or, you may wish to link two or more queries together, to create a new query.

Aladin always keeps the most recent query in RAM, and considers it to be the current query.

When you start to recall a query, while one is currently in RAM, Aladin prompts:

**Extend definition?**

If you select Yes, the query definition which is recalled from a diskette file will be appended to the query definition in RAM. If you select NO, the query definition in RAM is discarded, and replaced by the query that is being recalled.

The REPORT module allows you to create reports and listings from the information stored within your data base. You will choose one of the following commands by pressing the appropriate soft key.

**Table III-M**
**THE MAIN *REPORT* MENU SELECTIONS**

| SELECTION | FUNCTION |
|---|---|
| **Aladin** | Leave the REPORT module and return to the Main Aladin Menu and soft key line. |
| **Define** | Define the layout of your report. |
| **Save** | Save a report format for later recall. |
| **Recall** | Recall a report format that has been previously saved. |
| **View** | Display the currently defined report. |
| **GENER** | Create a report, using the current report format. The report will be sent to the current output. |

**STEP**

140)  Press **F2** (Define).

...continued

Aladin now displays the screen form for the SPECS file. The cursor is resting on the MANUFACTURER field. The top line now reads:

**CAR.SPECS (CON:,CON:) ( + +-) Report.Define**

We are going to create a simple double-spaced report that includes the Manufacturer, Maximum Speed and List Price.

Use the arrow keys to control the location of the cursor on the screen. Be careful with the **right arrow** and **down arrow** keys. If you press them when you're at the bottom of the screen, Aladin will return to the Main REPORT Menu and soft key line and you'll have to return to the **Define** command in order to set up your report format again.

**STEP**

---

141) Press **F5** (SELECT).

The bottom of your screen will now display the number of characters the MANUFAC-TURER field will take up in your report. The ending number is the column number across the page.

142) Position the cursor at the MODEL field, if it is not already there.

143) Press the **spacebar** five times.

---

The position on the bottom of the screen moves too. We've now made a five-space margin between the MANUFACTURER field and the MODEL field so we can read the final report more easily.

If a "?" appears before the cursor at the current field, that field would overlap the current printer width, if selected. If you press SELECT, a new line is forced.

**STEP**

---

144)   Press **F5** (SELECT).

145)   Press the **spacebar** five times.

146)   Position the cursor at the MAXIMUM SPEED field.

147)   Press **F5** (SELECT).

148)   Press the **spacebar** five times.

149)   Move the cursor to the LIST PRICE field.

150)   Press **F5** (SELECT).

151)   Press **F9** (FINISH).

---

Aladin prompts:

### .Is your definition complete?

**STEP**

---

152)   Press **F8** (NO).

---

We have not yet completed defining the report. As it currently stands, it will be printed or stored in a single-spaced format. We will change this to make a double-spaced report.

Aladin has returned you to the SPECS screen form, with the cursor positioned at the LIST PRICE field.

**STEP**

---

153)   Press **Rtn** twice.

---

```
CAR.SPECS (CON ,CON ) (---)                                Report.Define
================================================================================

                        Manufacturer: ^_____

                        Model: ^_____

   Horse_Power_in_PS: ___               Volume_of_Engine_in_CM: ___

   Maximum_Speed_in_MPH: ^__      Acceleration_time_from_0_to_60: ___

   Fuel_Consumption_City_Highway_HS: ___ ___ ___      Gasoline_Type: .

   Five_Gear_Model_Available: .      Automatic_Transmission_Available: .

   Number_of_Doors: .                       Sun_Roof_Available: .

   Colors_Available: .......... .......... .......... ..........
                     .......... .......... .......... ..........
                     .......... ..........


                        List_Price: ^___
================================================================================
                                                        .Connectors
┌──────┐┌────┐┌────┐┌────┐┌──────┐  12:14  ┌────┐┌────┐┌────┐  ┌────┐┌──────┐┌─────┐
│CANCEL││    ││    ││    ││SELECT│         │Jump││    ││    │  │SORT││FINISH││FIELD│
└──────┘└────┘└────┘└────┘└──────┘         └────┘└────┘└────┘  └────┘└──────┘└─────┘
```

**Fig. III-10** - The report format line. Note the carets (^).

After the first **Rtn**, Aladin displayed a clear report format line at the bottom of the screen. Pressing **Rtn** the second time, caused the line to flicker. You have been "scrolling" through report format lines. Your lines currently look like those shown in Fig. III-10.

To receive a sorted output from your report, move the cursor to the desired key field (any underlined field) and press **F8** on the main REPORT soft key line. Only one field per report can be a "sort" field.

**STEP**

154) Press the **Home** key. The cursor is moved to the MANUFACTURER field.

155) Press **F8** (SORT). Then press **Rtn** to define no grouping.

Pressing spaces will define the grouping based on common starting characters.

You have selected the MANUFACTURER field as the field that Aladin will sort all the records which match the query, i.e., alphabetically and ascending.

If you want to include other fields from other files in your report, move the cursor to the key field which "jumps" or "branches" to the file you want. Use the soft key labelled "**Jump**" to move to other files, then use **F5** (SELECT) to select fields within those files.

**STEP**

156) Press **F9** (FINISH). Aladin will prompt:

   **.Is your definition complete?**

157) Press **F6** (YES).

   Aladin displays the report format and returns to the Main REPORT Menu and soft key line.

```
VW                    RABBIT DIESEL              91      07989

VW                    RABBIT GT                 115      08569

VW                    DASHER GL                  93      08850

VW                    BUG                        85      08999

VW                    DASHER DIESEL              89      09875

VW                    QUANTUM                   120      11230

VW                    JETTA CL                   97      08945

VW                    SCIROCCO GT               105      12589

VW                    VANAGON                    91      12365


Number of Data Records : 124 ( 125 )

                                                      Report

Aladin Define  Save   Recall  View      12:10    GENER              Srvice  HELP
```

**Fig. III-11**  -  A sample report.

## 10.2  SAVING A REPORT FOR LATER USE

It is possible to save a report in a diskette file so that you can use it again at a later date.

**STEP**

| |
|---|
| 158)   Press **F3** (Save). |
|        Aladin prompts: |
|        **Report. Save: Enter file reference name:** |
| 159)   Enter **R1**, then press **Rtn**. |

The diskette in drive B now contains a file called **CARR.R1**, which contains the report layout that you defined earlier.

## 10.3  GENERATING A REPORT

**STEP**

| |
|---|
| 160)   Press **F6** (GENER). |

Aladin takes the current report, formats it and sends it to the current output selected (screen, printer, or file). Part of the report that is produced is shown in Fig. III-11.

**STEP**

| |
|---|
| 161)   Press **F1** (Aladin) to return to the Main Aladin Menu soft key line. |

# Section 11

# CHECK THE STATUS OF YOUR RELATIONAL DATA BASE

The INFORMATION module of Aladin gives you a complete status report of the entire relational system. In this lesson you will learn how to activate the functions of the INFORMATION module.

## 11.1  THE INFORMATION MODULE

### STEP

| |
|---|
| 162)  Press **F8** (others), then **F7** (Info), from the Main Aladin soft key line. |

### Table III-N
### THE MAIN *INFORMATION* MENU SELECTIONS

| SELECTION | FUNCTION |
|---|---|
| **Aladin** | Returns you to the Main Aladin Menu and soft key line. |
| **Info** | Displays the current status of your data base, informing you how much data has been entered, how much room is left on your diskette, etc. |
| **Map** | Displays the layout of your relational data base, either on the screen or to the printer. |
| **Format** | Define the printer page format. |

```
    CAR.SPECS (CON,CON) (---)
    ================================================================================
    ADI: CAR

    Your ALADIN Relational System is filled to this extent
    -------------------------------------------------------

    Keys              =   78.99 %
    Data Records      =   63.03 %
    Available Storage =   35.59 %


    A.D.I.  ALADIN v2.6 (6)




    ================================================================================
                                                                    Info
    Aladin Info   Map   Files  PRN    12:14                      Srvice  HELP
```
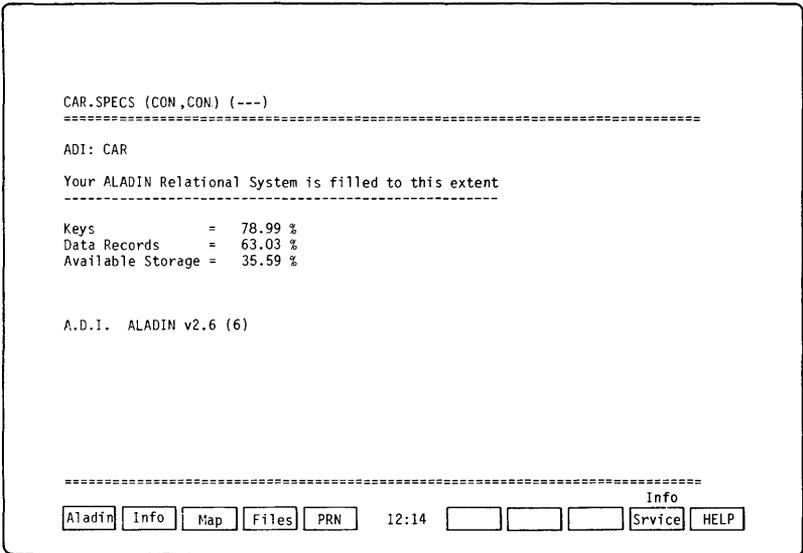
**Fig. III-12** - Storage information, displayed using the Aladin
INFORMATION module.

**STEP**

---

163)    Press **F2** (Info).

---

...continued

Aladin will display a table showing how much room you have used for the CAR relational data base. This table is displayed in Fig. III-12.

The information above tells us exactly how much room has been used to store information in the relational system as well as how much mass storage is remaining for future data entry. The individual elements of the table are:

a)  **KEYS**: Keys are the "road map" Aladin uses to track down your data. Often called the "data index", the Keys are loaded into your internal memory (RAM) and account for the extremely fast access speeds the system is able to develop.

b)  **DATA RECORDS**: This is the data that has been entered into the system.

c)  **AVAILABLE STORAGE**: This is how much storage remains for the system. This is not necessarily the amount mass storage remaining on the disk. Since you can have many relational systems residing on a single diskette, the Available Storage information is telling you how much mass storage remains for that individual system. This is based on the amount originally allocated during the relational system's installation.

d)  **A.D.I. ALadiN v2.6 (6):** This tells us that there are six components which comprise the relational system: (6). Although these are transparent to the user they are listed below:

**Car data base components**

| COMPONENT NAME | DESCRIPTION |
| --- | --- |
| #1 : "CAR".TXT | The original relational system definition. |
| #2 : "CAR".REC | The data files for the relational system. |
| #3 : "CAR".INX | The relational system's B-Star-Plus Trees. |
| #4 : "CAR".DCL | The relational system's declarations. |
| #5 : "CAR".DFN | This file contains information as to the relational system's configuration and design - the "base-plate" of the system. |
| #6 : "CAR".ACC | This file contains the relational system's security access information. |

**STEP**

> 164)  Press **F4** (Format).
>
> Aladin now displays the Format soft key line.
>
> 165)  Press **F5** (View).

Aladin is now displaying the current Printer Initialization Image on your screen. The values in this form determine the length and width of your printed output. You may also choose to number your pages, and send any special characters required by your printer at the end of each page.

**STEP**

> 166)  Press **F1** twice, to return to the Main Aladin Menu soft key line.

# Section 12

# USING ALADIN WITH A WORD PROCESSOR

One facet of Aladin's power and flexibility comes from its ability to integrate with other application software packages.

In this example, you will learn how to combine query selections to isolate a group of address records from the relational system and then send them letters.

You will also learn the correct format to use in letters, mailing labels, forms, etc. when you want to combine word processing with Aladin.

The WORD module in Aladin acts as a bridge between a stand-alone word processing system and your relational system data base.

For our purposes, we will use IN:SCRIBE, the Hyperion's text editor, as our word processor. However, you may also use other word processors.

The larger your business and clientele, the less attention can be paid to the "personal" approach, whether it is a response to complaints, notice of a special sale, or concern about overdue payments. The fact of the matter is that no one enjoys going through life being addressed as "Occupant" or receiving you-have-been-personally-selected-letters in which the ink and type-face of the salutation are worlds apart from the recipient's first name. Word processing puts the personal touch back into business correspondence. And, with Aladin, the job is even easier.

Suppose you are having a mid-season clearance and want to target, say, those customers in a specific mailing area. By using the QUERY module of Aladin, you can define your target population (in this example, it would be by Zip Code), choose a comparison operator (those records that satisfy your definition), and generate a "personalized" letter to your customers.

In personnel administration, you might wish to generate an action memo to a specific classification of employees, i.e., all secretaries, office managers and administrative assistants.

Even local "talent pools" could be streamlined with the Aladin word processing function. From day-care centers to senior meals-on-wheels, from theater tryouts to shovel-wielding, ground-breaking volunteers, any agency that needs not only to contact a lot of people, but people with specific areas of expertise, will find this function time-saving and invaluable.


## 12.1  USING QUERY TO PREPARE INFORMATION


**STEP**

---

167)  Press **F4** (Query).

Aladin calls up the QUERY module.

168)  Press **F9** (Srvice).

169)  Press **F6** (Jump).

Aladin displays the three choices:

**1:SPECS, 2:DEALER, 3:CUSTOMER**

170)  Enter **3**.

---

...continued

With the QUERY module you can ask Aladin to select groups of records that satisfy the "query" or selection criteria that you establish. The QUERY module is used to define your "query", which will then affect the other modules of Aladin.

**STEP**

---

171). Press **F2** (Define).

The "Street Sign" should read:

**CAR.CUSTOMER (CON:,CON:) (---) Query.Define**

Aladin will prompt:

**Discard old definition?**

172) Press **F6** (YES).

---

The CUSTOMER record should be displayed with the cursor resting on the CUSTOMER NAME field.

We want to set up a selection criteria query that will pick only women who have purchased cars in the State of California. Once we have the selection established we will send them a letter.

**STEP**

---

173) Move the cursor to the SEX field.

174) Enter **F**.

Aladin will display the comparison operators (see Table III-E).

172) Press **F4** ( = ).

176) Move the cursor to the STATE field.

---

Use the arrow keys to control the location of the cursor on the screen. Be careful with the **right arrow** and **down arrow** keys. If you press them when you're at the bottom of the screen, Aladin will return to the Main QUERY Menu and soft key line and you'll have to return to the **Define** command in order to set up your query again.

**STEP**

---

177)   Enter **CA**.

.  Aladin will prompt for the comparison.

178)   Press **F4** ( = ).

Aladin now prompts for the connector.

---

We want to select women car buyers AND we want to ensure they are from California.

**STEP**

---

179)   Press **F4** (AND).

180)   Press **F9** (FINISH).

Aladin will prompt:

**Is your definition complete?**

181)   Press **F6** (YES).

182)   Press **F1** (Aladin).

---

...continued

You have created a query which looks for all data records which have a female customer who lives in California. The next step is to merge the results of this query with a previously prepared letter.

## 12.2  MERGING INFORMATION INTO
## A REPORT/LETTER

For the purposes of our tutorial, we have created a letter which is already in place (Fig. III-13). To insert your own letter, refer to Part IV, Section 7, the Word Processing Module).

### STEP

---

183)  Press **F8** (Others).

184)  Press **F6** (Word).

Aladin will prompt:

**Do you want to use your Query?**

185)  Press **F6** (YES).

Aladin now prompts:

**Aladin. WORD.PROC Enter file reference name:**

186)  Type **FM**, then press **Rtn**.

---

Aladin prompts for today's date. You may enter the date in any format you wish:

January 12th, 1983
12/01/83
12-01-83

### STEP

---

187)  Press **Rtn** after entering the.current date.

---

```
                                    @?Date@



        Big Al's Easy Finance
        (Or Repossession)
        44 Magnum Drive
        Chicago, Illinois


        Mrs. @Customer_Name@
        @City@, @State@ @Zip@

        Dear Mrs. @Customer_Name@,

        We hope you are enjoying your new @Manufacturer@.

        But haven't you forgotten something? Like the last three car
        payments!!  Do you think that @Manufacturer@'s grow on trees?

        If we don't get your payment, we may have to break your
        husband's other leg too.

        Hope the kids are doing fine.

        Best wishes,

        BIG Al
```

**Fig. III-13** - A sample word processed letter, containing information taken from the appropriate Aladin relational data base.

Aladin will begin processing the letters.

You can halt the processing by pressing the STOP soft key. You may also interrupt the processing by pressing the spacebar.

Aladin processes "Big Al's" letter by making substitutions from the data within the relational system and the text.

Note that the "@" signs in the sample letter in Fig. III-13 are used to indicate where information from the relational data base is to be included in the letter.

Every field name that is to be substituted must have an "@" sign both preceding and following it. Field names must be typed *exactly* as they are used in the relational data base.

The "@" sign followed by a question mark (?), a word and another "@" sign, allows you to enter variable information not included in the relational data base. Aladin uses the word "?Date" to prompt you for the current date when creating the letters.

# Section 13

# USING THE ALADIN STATISTICS MODULE

Statistics are a part of our daily lives. From the sports news to the latest report on the bank rate, we hear about statistics daily. Most business people recognize the importance of statistics, but until now the tools to apply statistical information to small and medium sized businesses have not been available except at great cost. In addition, the results of costly analyses have sometimes been difficult to interpret, or the results have lagged behind the changing circumstances of the business.

Aladin's statistical package is a powerful, yet easy-to-use tool for small and medium sized businesses. The package is divided into two distinct operations: **Grouping** and **Statistical Analysis** (i.e., computation).

To begin a statistical analysis, you must first organize the basis for your data comparisons. This is the **Grouping** operation.

Suppose, for example, we want to see whether there is a correlation between the maximum speed of a car and its list price. Although we have a hunch that we pay more for faster cars, the hunch can be proved using a statistical analysis.

The first step is to divide the maximum speeds into convenient groups:

| GROUP | MAXIMUM SPEED RANGE |
|-------|---------------------|
| 1 | 0 to 145 MPH |
| 2 | 146 to 160 MPH |
| 3 | 161 to 175 MPH |
| 4 | 176 to 240 MPH |
| 5 | 240 to 999 MPH |

```
CAR.SPECS (CONSOLE:,CONSOLE:) (---)
================================================================================

















================================================================================
                                                           Group
 Aladin  Define  Save   Recall  View    12:12                      Srvice  HELP
```
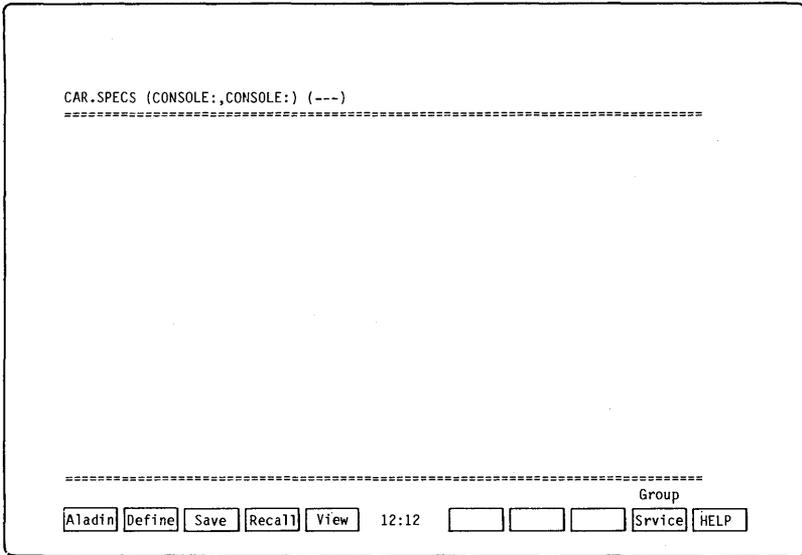
**Fig. III-14**  -  The Main GROUP Menu and soft key line.

The next step is to divide the list prices into convenient groups:

| GROUP | LIST PRICE RANGE |
|:-----:|:-----------------|
| 1 | 0 to 5,000 dollars |
| 2 | 5,001 to 9,000 dollars |
| 3 | 9,001 to 15,000 dollars |
| 4 | 15,001 to 20,000 dollars |
| 5 | 20,001 to 30,000 dollars |
| 6 | 30,001 to 100,000 dollars |

The ranges defined for both the MAXIMUM SPEED and LIST PRICE groups may be a little too broad to generate an accurate statistical analysis. Better statistical results are obtained by making ranges within groups small. However, the groups shown above are a reasonable starting point for our example. Note that the number of groups in the first category (maximum speed) does not have to match the number of groups in the second category (list price). Once the groups are defined, we can use these groups in generating statistical analysis charts and reports.

You access both the grouping and statistical analysis operations from the Main Aladin Menu and soft key line.

**STEP**

> 188)  Press **F7** (Group).
>
> Aladin displays the Main GROUP Menu and soft key line (as shown in Fig. III-14).

The Main GROUP Menu and soft key line contains the commands which are used to create and manage statistical groups. Table III-O describes the function of each of the commands.

**Table III-O**
**THE MAIN *GROUP* MENU SELECTIONS**

| SELECTION | FUNCTION |
|-----------|----------|
| **Aladin** | Returns you to the Main Aladin Menu and soft key line. |
| **Define** | Used to create a new group table. |
| **Save** | Used to save a defined group table. |
| **Recall** | Used to recall a previously S(aved) group table. |
| **View** | Displays the current group table (if any) on the current output device (terminal or printer). |

Before you begin this section of the tutorial, make sure that your current file (check the street sign) is the SPECS file. If another file is current, use the Jump control function to make SPECS the current file.

**STEP**

189)   To begin defining the groups for our current statistical example, press **F2** (Define).

Aladin displays the first record in the first file (the SPECS file) of the data base.

...continued

In addition to speed and price, let us assume that we are also particularly interested in German-manufactured cars.

**STEP**

---

190) Position the cursor at the MANUFACTUR-
ER field and press **F5** (SELECT). The screen
clears, and Aladin displays a prompt for the
group definition for manufacturers:

   **Group 1:** _____

   The cursor is positioned in the first field.

191) Type **Audi** and press **Rtn**. The cursor moves
to the second field:

   **Group 1: Audi** _____ **to** .............

   In this group, we require individual Manu-
facturers, not ranges of Manufacturers. Press
the **left arrow** key twice to skip the second
field. Aladin displays a prompt for the next
group:

   **Group 1: Audi** _____ **to** _____
   **Group 2:** _____

192) Type **BMW**, then press **Rtn** and the **left
arrow** key twice.

   **Group 1: Audi** _____ **to** _____
   **Group 2: BMW** _____ **to** _____
   **Group 3:** _____ **to** _____

193) Repeat Step 192 for **Porsche** and **Mercedes-
Benz**.

   **Group 1: Audi** _____ **to** _____
   **Group 2: BMW** _____ **to** _____
   **Group 3: Porsche** __ **to** _____
   **Group 4: Mercedes-Benz** _ **to** _____
   **Group 5:** .............

---

**STEP**

194) Groups can contain more than one member or range. Type **Opel** and press **Rtn**. Press the **left arrow**, then type **VW**, then press **Rtn** and the **left arrow** key twice.

**Group 1: Audi** \_\_\_\_\_ **to** _____
**Group 2: BMW** \_\_\_\_ **to** _____
**Group 3: Porsche** \_\_ **to** _____
**Group 4: Mercedes-Benz**\_ **to**_____
**Group 5: Opel** \_\_\_\_\_ **to** _____
**Group 5: VW** _____ **to** _____
**Group 6:** .........

195) To end the Manufacturer group, press the **left arrow** key once more. Aladin returns you to the SPECS screen. The letter "R" (for "reference point") appears in the MANU-FACTURER field.

196) Move the cursor to the MAXIMUM SPEED field and and press **F5** (SELECT). The screen clears, and Aladin displays a prompt for the group definition for maximum speed:

**Group 1:** ............

The cursor is positioned in the first field.

197) Type **0** and press **Rtn**. The cursor moves to the second field. Type **145**, then press the **left** arrow key once.

**Group 1: 0** _____ **to 145** _____
**Group 2:** _____

198) Repeat step 197 for the remaining speed ranges.

**Group 1: 0** _____ **to 145** _____
**Group 2: 146** _____ **to 160** _____
**Group 3: 161** _____ **to 175** _____
**Group 4: 176** _____ **to 240** _____
**Group 5: 241** _____ **to 999** _____
**Group 6:** ............

**STEP**

199) To end the Maximum Speed group, press the **left arrow** key. Aladin returns you to the SPECS screen. The letter "R" now appears in both the MANUFACTURER and MAX-IMUM SPEED fields.

200) Move the cursor to the LIST PRICE field and and press **F5** (SELECT). The screen clears, and Aladin displays a prompt for the group definition for list price. Enter the list price ranges, using the same technique as that described for maximum speed.

Group 1: 0 _____ to 5000 _____
Group 2: 5001 _____ to 9000 _____
Group 3: 9001 _____ to 15000 _____
Group 4: 15001 _____ to 20000 _____
Group 5: 20001 _____ to 30000 _____
Group 6: 30001 _____ to 99999 _____
Group 7: .............

201) To end the List Price group, press the **right arrow** key. Three "R"s now appear on the SPECS screen: one in MANUFACTURER field, one in the MAXIMUM SPEED field, and one in the LIST PRICE field. Press **F9** (FINISH). Aladin prompts:

**Is your definition complete?:**

202) Press **F6** for YES. Aladin returns to the Main GROUP Menu and soft key line.

...continued

```
CAR.SPECS (CON,CON.) (---)
===============================================================================





                                                              Statistics
Aladin Define Save  Recall View   12:12  Eval          Srvice HELP
```
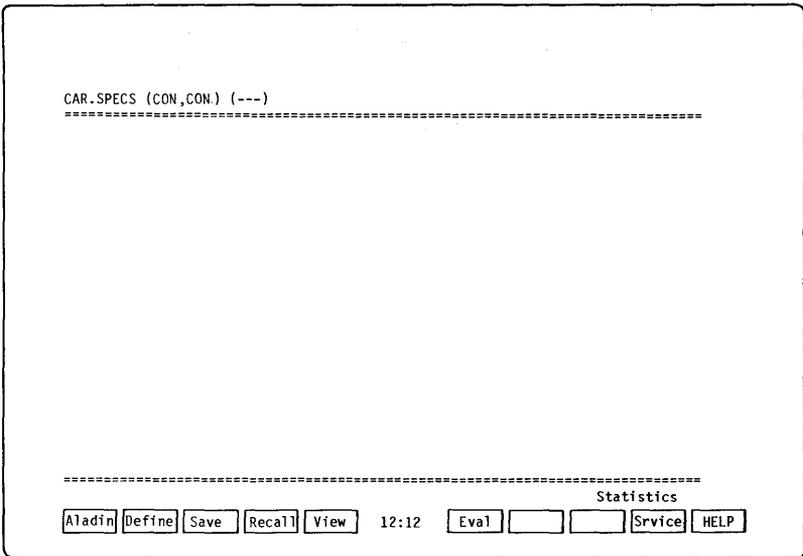
**Fig. III-15**  -  The Main STATISTICS Menu and soft key line.

**STEP**

203) Press **F3** for Save. Aladin prompts for the name under which you wish to save this group table:

**Enter file reference name:**

204) Type **G1** and press **Rtn**. Aladin saves the group table and assigns it the name G1.

205) Press **F1** (Aladin). Aladin returns to the Main Aladin Menu and soft key line.

206) Now that the necessary groups have been defined, we can generate statistics. Press **F7** (Stats).

207) If you have a query or selection criteria currently defined in memory, Aladin prompts:

**Do you want to use your Query?**

This permits you to perform your statistical analysis on selected parts of your data base. In this example, we require an analysis of the entire data base. Press **F8** (NO). Aladin displays the Main STATISTICS Menu and soft key line (see Fig. III-15).

The Main STATISTICS Menu and soft key line displays the commands which are used to perform the statistical calculations. Table III-P describes each command.

## Table III-P
## MAIN *STATISTICS* MENU SELECTIONS

| SELECTION | FUNCTION |
|-----------|----------|
| **Aladin** | Returns you to the Main Aladin Menu and soft key line. |
| **Define** | Used to define the type of evaluation to be performed. You may select either one- or two-dimensional evaluations which show frequency of occurrences or totals (summations), with data grouped or not grouped according to your group definitions. |
| **Save** | Used to save a defined statistical evaluation. |
| **Recall** | Retrieves a previously D(efined) and S(aved) statistical evaluation. |
| **View** | Displays the statistical evaluation. |
| **Eval** | Causes Aladin to perform the statistical evaluation. |

**STEP**

208) Press **F2** (Define). Aladin displays the SPECS screen.

209) Move the cursor to the MANUFACTURER field. Press **F6** (Single) for a one-dimensional (i.e., single) statistical analysis. Repeat for the MAXIMUM SPEED and LIST PRICE fields. At the bottom of the screen, Aladin tracks the number and types of analyses that you are defining.

**STEP**

210) To define a two-dimensional analysis, move the cursor to the LIST PRICE field. Press **F7** (HORIZ) to indicate the horizontal dimension. Move the cursor to the MAXIMUM SPEED field and press **F8** (VERT) to indicate the vertical dimension.

211) Press **F9** (FINISH).

Aladin prompts:

**Is your definition complete?**

212) Press **F6** for YES. Aladin returns to the Main STATISTICS Menu and soft key line.

213) Press **F6** (Eval). Aladin prompts:

**Group. Table Enter file reference name:**

214) Enter **G1** and press **Rtn**.

...continued

Aladin immediately begins the statistical computations. During this process,, Aladin displays the "Key" of each record being analysed at the bottom of the terminal screen. A "beep" signals when the computations are complete, and the evaluation is ready to be viewed.

Evaluations may either be viewed on the terminal screen, sent to the printer, or stored in a text file which can later be accessed by a text-editing system. Aladin also gives you a choice of three formats in which your data can be displayed: absolute terms, percentages, or graphically (using histograms, bar charts and scattergrams). You use the soft key to select each particular evaluation you wish to view.

```
                    SPECS : ADI  : 25.09.83

        Table #  1  (125:29)    Mvh = 3.3  SDh = 1.5

                Manufacturer         (1..5)

   ( 1-> Audi |2-> Porsche |3-> BMW |4-> Mercedes- Benz |5->VW )

       %
      50  | ,
          |
      45  |
          |
      40  |
          |
      35  |                    *****
          |                    *****
      30  |                    *****
          |          *****     *****
      25  |          *****     *****
          |          *****     *****
      20  |          *****     *****
          |          *****     *****
      15  |***** *****         ***** *****
          |***** *****         ***** *****
      10  |***** ***** ***** ***** *****
          |***** ***** ***** ***** *****
       5  |***** ***** ***** ***** *****
          |***** ***** ***** ***** *****
          +--------------------------->
          29    4     8     3     4    10
   Groupings: Audi Porsche BMW  M-Benz VW
             (1)   (2)   (3)   (4)   (5)
```

**Fig. III-16** - The first statistical analysis, a one-dimensional analysis of German car manufacturers by percentage of sample.

**STEP**

215) Aladin prompts for your choice of display format:

**Table:**

216) Press **F6** (ABS).

Aladin displays the first statistical analysis in absolute terms.

217) Press **F8** (GRAPH). The same analysis is re-displayed, this time graphically. (See Fig. III-16 for the graph produced.)

218) Press **F7** (PRCENT). This time, the same analysis is displayed using percentages.

219) To move to the next analysis (the one-dimensional Maximum Speed evaluation), press **F3** (NEXT). The Maximum Speed analysis is displayed using percentages.

...continued

You can continue to display the analyses in order by pressing the space bar and the appropriate soft key for the desired display format. To return to a previous analysis: press **F1** (CANCEL) and press **F6** (Eval) to restart the display. To direct an analysis to the printer or a text file, use **F5** (Output).

```
                    SPECS : ADI   : 25.09.83


         Table #  1  (125:29)     Mvh = ?/?  SDh = 1.5

               Manufacturer          (1..5)

  ( 1-> Audi ¦2-> Porsche ¦3-> BMW ¦4-> Mercedes- Benz ¦5->VW )

       %   ⁻
      10  ¦

       9  ¦

       8  ¦                        *****
          ¦                        *****
       7  ¦                        *****
          ¦         *****          *****
       6  ¦         *****          *****
          ¦         *****          *****
       5  ¦         *****          *****
          ¦         *****          *****
       4  ¦         *****          *****
          ¦         *****          *****
       3  ¦***** *****       ***** *****
          ¦***** ***** ***** ***** *****
       2  ¦***** ***** ***** ***** *****
          ¦***** ***** ***** ***** *****
       1  ¦***** ***** ***** ***** *****
          ¦***** ***** ***** ***** *****
          +------------------------------>
       125    4    8    3    4    10
    Groupings: Audi Porsche BMW  M-Benz VW
             (1)   (2)   (3)   (4)   (5)
```

| PREV | NEXT | | | 09:39 | ABS | PRCENT | GRAPH | UNIV | |

**Fig. III-17** - The one-dimensional analysis of German car manufacturers by percentage of the data base.

## 13.1 SOME EXAMPLES OF STATISTICAL EVALUATIONS

The example shown in Fig. III-17 is a one-dimensional analysis of German car manufacturers. This bar chart shows the percentage each manufacturer represents in the sample (not the entire data base).

At the top of the analysis, the first line shows the data base from which the statistics were drawn (SPECS). The date the analysis was tabulated is also shown. On the next line, **Eval # 1** shows that this analysis was the first one defined during the current tabulation, while **125:29** shows the total number of cars in the data base (125), versus the number made by German manufacturers (29). **MVh** and **SDh** represent the Mean Value and Standard Deviation for the horizontal axis. The remaining two lines indicate the field of the data base which was grouped for this analysis (**Manufacturer**), how many groups were defined (**1 through 5**), and which manufacturers were included in each group.

Below the horizontal axis of the bar chart, Aladin again shows the total number of cars in the sample, as well as the absolute number in each manufacturer group. The bar chart itself shows what percentage of the sample the cars in each manufacturer group represent. For example, Audi represents four of the 29 cars in the sample, or 13.79% (approaching the 15% the graph is capable of showing).

```
                    SPECS : ADI  : 25.09.83


            Table #  2  (125:125)     Mvh = 4/1  SDh = 2.2

              Maximum_Speed_in_KMPH    (1..5)

   1-> 0..145 ¦2-> 146..160 ¦3-> 161..175 ¦4-> 176..240 ¦5->241..1600 )

        %  ^
        50 ¦
                                     *****
        45 ¦                         *****
                                     *****
        40 ¦                         *****
                                     *****
        35 ¦                         *****
                                     *****
        30 ¦                         *****
                                     *****
        25 ¦                         *****
                                     *****
        20 ¦           *****         *****
                       *****         *****
        15 ¦           *****         *****
                       *****  *****  *****
        10 ¦ *****     *****  *****  *****  *****
            *****     *****  *****  *****  *****
         5 ¦ *****     *****  *****  *****  *****
            *****     *****  *****  *****  *****
           +------------------------------------->
           125     13     27     16     55     14
        Groupings:0..145 146..160 161..175 176..240 241..1600
              (1)      (2)      (3)      (4)      (5)
```

**Fig. III-18** - A one-dimensional analysis of the maximum speed of cars in the entire data base.

This chart could be modified to show what percentage of the entire data base the cars in each manufacturer group represent. This is called resetting the "universe" (the base number for the comparison).

**STEP**

220)   Press **F9** (UNIV). Aladin prompts:

**Base 100%** >

221)   Type **125** (the number of cars in the entire data base), then press **Rtn**.

...continued

Aladin retabulates the graph to reflect the new "universe" (Fig. III-18).

```
                    SPECS : ADI  : 25.09.83


   Table # 1  (125:46)  Mvh = 6.4  SDH = 2.8  MVh = 4.5  SDv = 1.9
    ChiQ = 64.1  DegFree = 56  Sign = 78.6 %  Rg =-0.37  Ck = 0.81


           Horizontal:    List Price    (1..10)

( 1-> 6000..8000  |2-> 80001..9000  |3-> 9001..10000
   |4-> 10001..11000  |5->  11001..12000  |6-> 12001..13000
    |7-> 13001..14000  |8->  14001..16000  |9-> 16001..18000
     |10-> 18001..20000 )


           Vertical: Maximum_Speed_in_KMPH  (1..8)

( 1-> 0..145 |2-> 146..160 |3-> 161..175 |4-> 176..190
   |5->  191..205 |6-> 206..220 |7-> 221..235 |8-> 235..1600 )


                    46|   5   1   -   3   7   7   4   7   4   8
               ----------------------------------------------------
Group No:   (1)    1|   -   -   -   -   1   -   -   -   -   -
            (2)    5|   -   -   -   -   2   1   -   1   1   -
            (3)    6|   -   -   -   1   2   1   1   -   1
            (4)   15|   -   -   -   1   2   3   1   2   1   5
            (5)    8|   -   -   -   1   1   1   1   2   1   1
            (6)    3|   -   -   -   1   -   -   1   1   -   -
            (7)    2|   2   -   -   -   -   -   -   -   -   -
            (8)    6|   3   1   -   -   -   -   -   -   1   1

     Group No:       (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
```

**Fig. III-19** -  The two-dimensional analysis of German car
manufacturers by percentage of the data base.

The next table (Fig. III-19) makes it evident that the Maximum Speed group definition will not produce an adequate two-dimensional analysis. The Standard Deviation and Mean Value figures are too large. There are too many cars whose maximum speed falls between 176 and 240 KMPH. The analysis will, therefore, be somewhat inaccurate. A better result can be obtained by redefining the Maximum Speed group ranges and creating a new groups table which includes those new ranges.

If we looked at the List Price analysis, we would probably discover that its group definition could also be improved. Assuming that the new groups table has been defined, Fig. III-20 shows the resulting two-dimensional analysis.

The new analysis indicates that 46 out of the 125 records in the data base are included in the sample. On the same line, **MVh** gives the Mean Value (horizontal), **SDh** gives the Standard Deviation (horizontal), **MVv** gives the Mean Value (vertical), and **SDv** gives the Standard Deviation (vertical). The next line shows the result of the Chi Square test (**ChiQ**), the degree of freedom in the analysis (**DegFree**), the significance percentage (**Sign**), and the Pearson Co-efficients for linear regression (**Rg**) and linearity (**Ck**).

Next, the groups used for the horizontal and vertical axes are shown; and, finally, a scattergram plot of the analysis is displayed. The total number of records used in the sample and the number falling into each horizontal (List Price) group is shown across the top of the scattergram. For example, there were five cars in horizontal group one (costing between $6,000 and $8,000). Of these, two were in vertical group seven and three were in vertical group eight. The remainder of the analysis is read in the same way.

```
      100.0%   10.9  2.2     -  6.5 15.2 15.2  8.7 15.2  8.7 17.4

      ----------------------------------------------------------------
GROUP     %       -    -     -    - 14.3    -    -    -    -    -
  (1)  2.2%       -    -     -    -100.0    -    -    -    -    -
               -0.1 -0.0     - -0.1  0.8 -0.2 -0.1 -0.2 -0.1 -0.2

          %       -    -     -    - 28.6 14.3    - 14.3 25.0    -
  (2) 10.9%       -    -     -    - 40.0 20.0    - 20.0 20.0    -
               -0.5 -0.1     - -0.3  1.2  0.2 -0.4  0.2  0.6 -0.9
            ⁄
          %       -    -     -    - 14.3 28.6 25.0 14.3 25.0    -
  (3) 13.0%       -    -     -    - 16.7 33.3 16.7 16.7    - 16.7
               -0.7 -0.1     - -0.4  0.1  1.1  0.5  0.1 -0.5 -0.0

          %       -    -     - 33.3 28.6 42.9 25.0 28.6 25.0 62.5
  (4) 32.6%       -    -     -  6.7 13.3 20.0  6.7 13.3  6.7 33.3
               -1.6 -0.3     -  0.0 -0.3  0.7 -0.3 -0.3 -0.3  2.4

          %       -    -     - 33.3 14.3 14.3 25.0 28.6 25.0 12.5
  (5) 17.4%       -    -     - 12.5 12.5 12.5 12.5 25.0 12.5 12.5
               -0.9 -0.2     -  0.5 -0.2 -0.2  0.3  0.8  0.3 -0.4

          %       -    -     - 33.3    -    - 25.0 14.3    -    -
  (6)  6.5%       -    -     - 33.3    -    - 33.3 33.3    -    -
               -0.3 -0.1     -  0.8 -0.5 -0.5  0.7  0.5 -0.3 -0.5

          %    40.0    -     -    -    -    -    -    -    -    -
  (7)  4.3% 100.0     -     -    -    -    -    -    -    -    -
                1.8 -0.-     - -0.1 -0.3 -0.3 -0.2 -0.3 -0.2 -0.3

          %    60.0100.0     -    -    -    -    -    - 25.0 12.5
  (8) 13.0%  50.0 16.7       -    -    -    -    -    - 16.7 16.7
                2.3  0.9     - -0.4 -0.9 -0.9 -0.5 -0.9  0.5 -0.0

Group No:     (1)  (2)   (3)  (4)  (5)  (6)  (7)  (8)  (9) (10)
```

**Fig. III-20** - Two-dimensional percentage format display of
Maximum Speed versus List Price.

Fig. III-20 shows the same two-dimensional analysis as Fig. III-19, but in the "P", or percentage, display format. This format not only gives the statistics in terms of percentages, but also shows the contribution of each item to the *linearity* ("related-ness") or the *regression* ("un-related-ness") of the two factors (Maximum Speed and List Price). If the weight factors and percentages are large, the group table definitions may need further refinement in order to produce an accurate analysis.

## LAST STEPS

222) Press **F1** three times to return to the Main Aladin Menu and soft key line.

223) Press **F1** (Done) to exit from the CAR data base.

224) Press **F1** (CANCEL).

You are now back in the DOS.

**B**

# CREATING AND MODIFYING DATA BASES

# Section 14

# CREATING A NEW
# RELATIONAL DATA BASE SYSTEM

We want to install a simple relational system data base that will keep track of a list of clients for us. We will call the system data base: CLIENT.

In this particular example there will be only one file ("filing cabinet") which we will call the ADDRESS file.

## 14.1  ELEMENTS OF A RELATIONAL DATA BASE

We want the ADDRESS file in the CLIENT data base to include the following information:

> Name
> First Name
> Company
> Title or Position
> Street
> City
> State/Province
> Zip/Postal Code
> Telephone
> Name of additional contact
> Comments

The first step is to lay out the system on paper. Use underlines to help identify Key fields.

Also indicate "Protected" Fields - those fields in the data base that you want to restrict later access to through the Aladin security system.

Since there is only one file in this example, there will be no secondary key fields for "jumping" or "branching".

```
Relational System Name:  CLIENT

FILE : address


Name:      KEY Field (Protected)
First Name: ................

Company:   KEY Field
Title or Position: _____ KEY Field
Street: ......................
City:            KEY Field                    State: KEY Field
Zip Code: _____ KEY Field

Telephone:  ..............

Name of additional contact: ..........................

Comments:
.................................
.................................
.................................
.................................
.................................
```

**Fig. III-21** - The CLIENT data base ADDRESS file record, as
we would like it to look when displayed on the
screen or printed out on hard copy.

## 14.2  SELECT YOUR FIELDS AND SCREEN FORMAT

### STEP

> 1)  On paper, list the fields you want each record
>     to contain, and the property. For this example,
>     the fields and properties have already been
>     selected as shown in Table III-Q below.

### Table III-Q
### FIELDS SELECTED FOR THIS EXAMPLE
### AND THE FIELD PROPERTIES

| NO. | NAME | ITEMS | TYPE | LENGTH | PRO-TECT | KEY | BRANCH |
|-----|------|-------|------|--------|----------|-----|--------|
| 1 | Name | 1 | C | 30 | yes | yes | no |
| 2 | First Name | 1 | C | 30 | no | no | no |
| 3 | Company | 1 | C | 40 | no | yes | no |
| 4 | Title or Pos'n | 1 | C | 40 | no | yes | no |
| 5 | Street | 1 | C | 40 | no | no | no |
| 6 | City | 1 | C | 40 | no | no | no |
| 7 | State | 1 | C | 2 | no | yes | no |
| 8 | Zip Code | 1 | N | 9 | no | yes | no |
| 9 | Telephone | 1 | C | 15 | no | no | no |
| 10 | Name of Contact | 1 | C | 40 | no | no | no |
| 11 | Comments | 5 | C | 50 | no | no | no |

The meaning of each property will be explained on the
following pages, as you install this new data base.

### STEP

> 2)  Still on paper, arrange these fields as you
>     would like to see them displayed or printed out.
>     The sample display that we are going to use is
>     shown in Fig. III-21 at left.

...continued

We are now ready to transfer this "model" into Aladin.

```
   CLIENT    (CON ,CON ) (---)
   ==========================================================================


















   ================================================================
                                                    ALADIN-INIT
   [ Done ] [Instal][Change][ Forms ][Access]   11:49  [ File ][      ][      ][Srvice][      ]
```
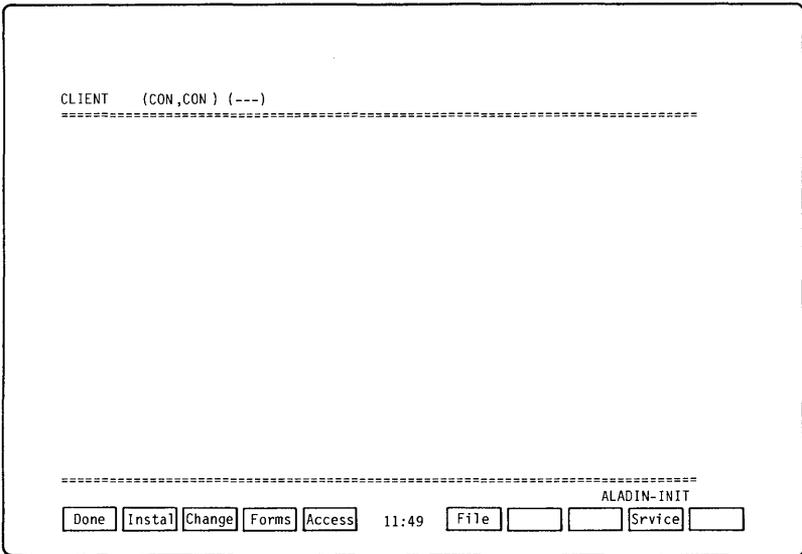
**Fig. III-22**  -  The Main Aladin Install Menu and soft key line.

## 14.3  ACCESS THE *INSTALL* PROGRAM

### STEP

> 3)  Insert your MS-DOS operating system diskette into drive A and power on the Hyperion.
>
> 4)  After your operating system is in place, remove the MS-DOS diskette from drive A, and replace it with the ***Aladin Install Diskette***. Put a blank formatted diskette into drive B. Make sure Drive C is 100 K, then enter the words **SETUPRAM** and press **Rtn**.
>
> 5)  Enter **A: ALADIN A:I**, then press **Rtn**.
>
> 6)  Enter the word **CLIENT** and press **Rtn**. This will be the name of your new data base.

When ready, the Main Aladin Install Menu and soft key line are displayed on the screen, as shown in Fig. III-22. The menu selections and their purpose are described in Table III-R.

### Table III-R
### MAIN ALADIN *INSTALL* MENU SELECTIONS

| SELECTION | FUNCTION |
|---|---|
| **Done** | Exits from the INSTALL module, and returns you to the initial Aladin display and prompt. |
| **Instal** | Used to set up a new data base. |
| **Change** | Used to change or modify an existing data base |
| **Forms** | Screen forms. Allows you to view or change the data base screen forms. |
| **Access** | Allows you to set up or change the data base security functions. |
| **Disk** | Tells you how much room has been allocated for the relational system data base. |

**STEP**

| |
|---|
| 7)    Press **F2** (Install). |

Aladin prompts:

**No Relational System with that name exists.**

**STEP**

| |
|---|
| 8)    Press **F1** (CONT). |
|      Aladin then prompts: |
|        **Enter name of file (max 16 chars)** |
|        = = = = = = = = = = = = = = = = |
|        **.BASE CLIENT** = . . . . . . . . . . . . . .; |
| 9)    Enter **Address**, then press **Rtn**. |
|      Aladin will prompt for the name of the next file. In this example, we are using one file only. |
| 10)   Press **Rtn**. |

Pressing **Rtn** is the equivalent of entering a null response, or an empty field. Whenever Aladin receives this input from you during a system installation, the program takes that input as a signal to go to the next procedure.

Aladin prompts:

**Please estimate the maximum number of records in this file.**

**STEP**

| |
|---|
| 11)    Enter **20**, then press **Rtn**. |

                                                      ...continued

This means that you anticipate using 20 different data records in the file called Address.

You can have up to 16 different files (filing cabinets) on line with Aladin. Some versions of Aladin can manipulate up to 10 million records in an individual file. However, to utilize this capacity, the Hyperion Ex, with a hard disk, must be used with your Hyperion.

For a floppy based system here are some guidelines:

| TYPES OF FLOPPY DISKETTE | ESTIMATED MAX NO OF RECORDS |
|---|---|
| Single-sided, single-density | 300-1000 |
| Single-sided, double-density | 1000-2000 |
| Double-sided, single-density | 1000-2000 |
| Double-sided, double-density | 2000-4000 |

Aladin is asking for the number of records for that one file. For floppy systems with more than one file, be sure there is sufficient storage capacity to accommodate all files.

Floppy diskette based systems are more efficient when a separate diskette is used for each relational system data base.

## 14.4  ENTERING EACH FIELD AND FIELD PROPERTY

Aladin is now prompting you to:

### Enter name of field (max 32 chars)

**STEP**

| |
|---|
| 12)   Enter the word **Name**, then press **Rtn**. |
|      This is the name of your first field. |

The system prompts you to enter the "repeat factor". Enter number of times to repeat this item: (max 31, default is once)

**STEP**

| |
|---|
| 13)   Press **Rtn**. |

...continued

By pressing **Rtn**, you have entered the default value of 1 (one). The repeat factor allows us to set up blocks of text or to segment parts of our data in an individual field. These are called "arrays." Here are some examples.

Suppose you define a field called "Comments" like this:

> **Field Name**          = > **Comments**
> **Repeat factor**       = > **5**
> **Type of Field**       = > **Character**
> **Length**              = > **40**

This sets up the following:

**Comments:** ......................................
.......................................
.......................................
.......................................
.......................................

Suppose you define a field called "Telephone" like this:

**Field Name** = > **Telephone**
**Repeat factor** = > **3**
**Type of Field** = > **Character**
**Length** = > **4**

This sets up the following:

**Telephone: .... .... ....**

Aladin now prompts for the type of field:

**Enter data type:**

Aladin recognizes data in many different forms:

| DATA TYPE | MEANING |
|-----------|---------|
| N | Accepts numbers only. |
| C | Accepts all characters. |
| T | Future entries must all be entered as MM/DD/YY. |
| M | Money. Future entries will be automatically preceded by a dollar sign. |
| D | Decimal. |

**STEP**

14) Enter **C**. Aladin automatically enters the **Rtn**.

Aladin now prompts:

**Enter length of field:**
**(max. N12, C80, T8, M15, D159)**

**STEP**

---

15)   Enter **30**, then press **Rtn**.

Aladin now prompts for security:

**Restrict access into this field?:**

16)   Enter **P**, to make this a protected field.

Aladin prompts:

**Do you want this to be a Key Field?**

17)   Enter **K**.

---

...continued

Since we want to have fast access to this field we want this to be a Primary Key.

The first field defined in any file must be a key field. It is best to make this a character field.

Since there is no other File to "branch" or "jump" into, Aladin will skip the "branching" question and bring up a new Field for you to name.

For relational systems with more than one file, Aladin would display the following prompt:

**Do you want this to be a "branching" field?**

You would then:

1)   Enter **B** (for *B*ranching), then press **Rtn**.

     Aladin now prompts:

     **Enter the name of a File to which you want
     this Field to branch:**

2)   Enter the name of the data base file, then press **Rtn**.
     Aladin will then display another line and ask if there
     is another field to "branch" into.

3)   When there are no more files to branch to, press **Rtn**.

Aladin will now display a new field definition line and
prompt:

**Enter name of field (max 32 chars)**

**STEP**

| |
|---|
| 18)   Repeat steps 12 to 17 and continue entering each field for this Address file, according to the criteria set out in Table III-Q. |

                                                    ...continued

```
Enter name of field (max 32 chars)
========================================================================
.BASE CLIENT=Address........;
.FILE Address......... (20...);
      Name............................. (1.)=C 30. P K . ;
      First Name....................... (1.)=C 30. . . . ;
      Company.......................... (1.)=C 40. . K . ;
      Title or Position................ (1.)=C 40. . K . ;
      Street........................... (1.)=C 40. . . . ;
      City............................. (1.)=C 40. . . . ;
      State............................ (1.)=C 2.. . K . ;
      Zip Code......................... (1.)=N 9.. . K . ;
      Telephone........................ (1.)=C 15. . . . ;
      Name of Contact.................. (1.)=C 40. . . . ;
```

```
CANCEL |    | SAVE |INSLIN|DELLIN  16:04   | TOP || PROT ||    ||    ||-HELP+|
```

**Fig. III-23** - The newly entered fields for the Address file.

When you have finished defining the system according to the table above, you can check for correctness, before you proceed to the next step. Your screen should look as shown in Fig. III-23.

Use the arrow keys, and the **Home** and **End** keys, to move the cursor about the newly entered field properties. You can change any item at the cursor position. The prompt at the top of the screen changes accordingly.

Once you are satisfied that the information is correct:

**STEP**

> 19)   Press **F3** (Save).

```
Required space   !                    ! Mass Storage Requirements !
File             ! # of Records  ! Length  ! Data      ! Keys      !
========================================================================
Address          !       20 !      562 !       23 !      15 !
========================================================================
                 !          !          !       23 !          !



Number of disk blocks for data (  100) >100
Number of disk blocks for keys (  100) >100




┌──────┐┌──┐┌───┐┌───┐┌───┐         ┌───┐┌───┐┌───┐┌───┐┌──────┐
│ CONT ││  ││   ││   ││   │  16:09  │   ││   ││   ││   ││ HELP │
└──────┘└──┘└───┘└───┘└───┘         └───┘└───┘└───┘└───┘└──────┘
```

**Fig. III-24** - Display that advises you of the number of disk
blocks (i.e., diskette space: 1 block = 512 bytes)
required for the new relational data base.

## 14.5  ALLOCATING SPACE FOR YOUR
##        NEW DATA BASE

Aladin will now "proofread" your system definition. If there are errors, Aladin will return you to the definition session and tell you how to correct the problem.

If your definition is error free, Aladin will then advise you of the amount of external mass storage (disk or diskette space) that will be required to save and then operate your relational system. The resultant display is shown in Fig. II-24.

You must tell Aladin how much space to allow for the data contained in the file, and how much space is required for the framework of the relational system.

Check your diskettes or your ***Hyperion User Guide*** if you are not sure how many "blocks" are on your floppies. A block is equal to 512 bytes.

Aladin bases its management decisions on your estimate of the maximum number of records for each file. Aladin then computes the amount of room necessary to store and operate the system effectively assuming EVERY record and space was used. Remember, Aladin uses variable length record storage.

This "worst case" view of your system ensures that mass storage limitations will not limit or handicap system operations.

This disk management operation will tell you whether or not you need additional disk space to install the system. Further, you are not limited to the recommendation that Aladin displays. You may select a lower limit if you wish, or a higher limit if you have the mass storage available.

Aladin will prompt with the default (how much room should be available on a blank formatted diskette.

**Number of disk blocks for data ( 104) >**

**STEP**

---

20)  Press **Rtn**.

Aladin will prompt:

**Number of disk blocks for keys (96) >**

21)  Press **Rtn**.

Aladin will prompt:

**Create a description as a document (text file)?**

22)  Press **F8** (NO).

Aladin will prompt:

**Create a description as a
Pascal Interface Program?**

23)  Press **F5** (NO).

Aladin now prompts:

**Generate screen forms?**

24)  Press **F6** (YES).

---

The screen form is the display layout in which Aladin displays the data records that you have stored in your Files. The layout applies not only to the screen display, but also to copies which you send to the printer.

If, for example, you are planning to use Aladin to print cheques, it would prove useful to have a screen form which duplicated the physical layout of your cheque. When you were ready to print cheques each month, each one would be preformatted, requiring only the data for each field.

Even for the purposes of displaying information on the Hyperion's screen, it is useful to consider the benefits and advantages of different layouts. Duplicating a familiar form will make the transition from paper-based system to Hyperion that much more easier.

## 14.6    FORMATTING YOUR SCREEN (RECORD LAYOUT)

Aladin displays the first data field, NAME, in the upper right hand corner of the screen. The soft key line has changed to that shown in Fig. III-25, although the display does not yet match.

**STEP**

| |
|---|
| 25)    Press **F8** (Others). |

The soft key line has changed, and now displays the commands **CANCEL**, **LINE**, **SCREEN**, **PAGE**, **HORIZ**, **VERT**, **SETUP** and **Others**. When defining a screen form, use **F8** (Others) to give you access to all the commands described in Table III-S below.

**Table III-S**
**SCREEN FORMAT COMMANDS**

| COMMAND | MEANING |
|---|---|
| **CANCEL** | Cancels the screen form display and returns to the Main Aladin Menu soft key line. *Note that this command is the same as not choosing to create a screen form after installing a data base: the new base is destroyed.* |
| **NEWLIN** | Moves the current field to a new row, in the first column. |
| **LEFT** | Moves the current field one column to the left. |
| **RIGHT** | Moves the current field one column to the right. |
| **UP** | Moves the current field up one row, in the same column. |
| **DOWN** | Moves the current field down one row, in the same column. |

```
     CLIENT.Address  (CONSOLE:,CONSOLE:)
     ==============================================================================
      Name:_____

      First Name: ..............................

      Company: _____
      Title or Position:_____
      Street: .......................................
      City: ......................................    State: ___

      Zip Code: _____ Telephone:  .................

      Name of Contact: ....................................

      Comments: ...............................................
                ...............................................
                ...............................................
                ...............................................




     ==============================================================================
      11: 11 * 1  (  1, 15)
     [CANCEL][     ][NEWLIN][LEFT ][RIGHT]  13:03     [ UP ][DOWN][Others][    ][    ]
```

**Fig. III-25** - The screen form as it is being formatted, and one of
the corresponding soft key lines.

### Table III-S (cont)
### SCREEN FORMAT COMMANDS

| COMMAND | MEANING |
|---------|---------|
| LINE | "Repaints" the current line, if overwritten. |
| SCREEN | "Repaints" the screen, after fields have been overwritten. |
| PAGE | Moves the current field to the next page in the form. |
| HORIZ | Causes the data field(s) to be displayed on the same row as the field name. |
| VERT | Causes the data field(s) to be displayed vertically, below the field name. |
| SETUP | Allows you to define the edges of the screen display form. |

**STEP**

26)  Press **F8** (Others) again.

27)  Press **F3** (NEWLIN).

The NAME field is now displayed on the next line down.

At the lower left hand corner of the screen is a display like this:

**1:22\*  1 (1,20)**

The combination **1:11** indicates that you are in field 1, of the 11 fields in your data base. The second **1**, separated by a asterisk from the current field indicator, is the screen page number. **(1,2)** indicates that the field is positioned in column 1, row 2 of the screen form.

**STEP**

---

28) Press the **spacebar**.

The **First Name** field appears on the right of **Name**.

29) Press **F3** (NEWLIN).

**First Name** is now positioned on the line under **Name**.

30) Press the **spacebar** six times.

---

...continued

All of the data fields which are part of the address (COMPANY, TITLE OR POSITION, STREET, CITY, STATE, and ZIP CODE) are now displayed. Aladin places the fields "one after the other", and when a line is filled, places the next field on the second line down.

When defining your screen form, the **spacebar** becomes a "next field" key. Pressing the spacebar moves the cursor to the next field after the current field. If the next field hasn't been put on the screen form yet, Aladin displays it two lines below the current cursor position. When all fields have been displayed, the spacebar can be used as a cursor control key, moving the cursor to the next displayed field.

The other cursor control keys have the same effect as in the system modules, i.e., **Home** places the cursor at the first field on the screen, **End** at the last field on the screen, and the cursor movement keys move the cursor in the indicated direction.

**STEP**

> 31) Using the screen format commands, position
>     the address fields so that they correspond to
>     Fig. III-25.

As you move fields to their new positions, and use the
spacebar or right arrow key to move to the next field, you will see
how easy it is to start overwriting other fields and causing a
confusing double display of some fields. Two fields may occupy the
same space on the screen form, with the second field "overwriting"
the first.

In addition, Aladin monitors the screen form as you are
creating it. After you move a fields to new positions, the space
available for the following fields changes. When you press the
spacebar or the right arrow key to move to the next field (which
may already be displayed on the screen), the cursor does not
automatically move to the display field. Aladin may redisplay the
field in a new location.

After you have edited the screen form, it is likely to become
filled with bits of overwritten field names. The **SCREEN** com-
mand is used to clear the display. Pressing **SCREEN** tells Aladin
to clear the screen, and then redisplay the fields. The **LINE** com-
mand has a similar effect, but only for the current line. Pressing
**LINE** repaints the current data field.

After you have formatted the address to match Fig. III-25:

**STEP**

> 32) Use the **spacebar**, and/or the **right arrow**
>     key to display the other 3 fields in the
>     CLIENT data base.

...continued

The signal to Aladin that you have finished defining the
screen form is moving the cursor off the end of the data base, i.e.,
"right" or "down" from the last field, in this case **Comments**.

When you move off the bottom of the form, the fields are displayed in one of two states: a) they are all within the screen boundary, and don't overlap each other; or b) some fields would display data over the boundaries of the screen and/or overlap other fields.

When all the data fields are within the screen form's boundaries and separate from each other, the screen form can be saved and used to display data. Aladin assumes that you may have finished with the screen form and prompts:

**Have you finished with this screen form?**

You may answer **YES** or **NO** to this question, by pressing the appropriately labelled soft key.

If the forms are not properly aligned, Aladin warns you:

**Fix your screen layout:**
**Fields interfere or Margins Exceeded.**

The screen form which generates this error message can't be saved, as it can't be used to display data. The soft key line changes so that the only key available is **F1** (CONT). Pressing **F1** places the cursor back in the screen form at the last field, and removes the error message.

**STEP**

33) If necessary, press **F8** (Others), then press **F9** (SETUP).

The display line at the bottom of the screen clears, and changes to:

**xmax=79:**

34) Press **F1** (CONT) five times.

This displays the default values for the screen border (xmax, ymax, xrel, yrel, and dist). These values define the boundaries of the screen form, how far the data is displayed from the field name, and the default spacing. Pressing **F1** (CONT) accepts the default setting for each parameter. You can display within the boundaries only.

The final **F1** (CONT) from step 34 returns the cursor to the screen form.

**STEP**

35) Using the cursor control keys and the screen format commands, arrange the last three fields to match Fig. III-25.

When all fields are in place:

36) Press the **End** key twice.

This has the effect of moving the cursor "off the end" of the screen form. This same action could be accomplished by repeatedly pressing the **right arrow key**, the **down arrow key**, the **spacebar**, the **End** key, or any combination of these keys.

If all fields are within the boundaries and do not overlap, Aladin prompts:

**Have you finished with this Screen Form?**

**STEP**

37) Press **F6** (YES).

Aladin prompts:

**Do you want to save your Relational System?**

38) Press **F6** (YES).

You must answer "yes" to this question. If you select **F8**
(NO), *The entire installation procedure is aborted*, and cannot be
recalled.

After you have pressed **F6** (YES) Aladin completes the
installation of the CLIENT data base. This procedure takes about
60 seconds.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

You may now proceed to **section 14.7, SECURE YOUR
DATA BASE FROM UNWANTED INTRUSION**, beginning
on page III-135. Although the last step you performed was num-
ber 38, the next step will be number 63, on page III-136. Steps 39
to 62 are now non-existent.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 14.7 SECURE YOUR DATA BASE FROM UNWANTED INTRUSION

Because Aladin has six main levels of security with more than 40 options, you can be assured that confidential data will remain intact and that inadvertant or unauthorized modification of the system or data will not occur.

Aladin has six principal levels of security, as shown in Table III-T.

### Table III-T
### ALADIN SECURITY LEVELS

| SECURITY LEVEL | RESTRICTIONS |
| --- | --- |
| **Device** | Restricted use and access to disk, modem printer, computer, etc. |
| **Operations** | Restricted use and access to specific Aladin operations, functions and modules. |
| **Control** | Restricted use and access to control, function keys and software switches. |
| **Systems** | Restricted use and access to specific relational systems. |
| **File** | Restricted use and access to specific relational system files. |
| **Field & Record** | Restricted use and access to specific Fields and Records. |

After having saved your relational system data base, Aladin will prompt:

**Userid >**

If you wish Security features to be installed, type the name of the Manager or DP security officer who will have the authority to maintain, change, and update the security system.

**STEP**

> 63) Enter a 6-character user name, then press **Rtn**.
>
> Aladin prompts for a three-letter password:
>
> **Passwd >**
>
> 64) Enter **ABCDEF**, then press **Rtn**.

Aladin will now initialize the security functions for your relational system.

A series of prompt lines will appear. By typing the first letter of the Device or System Function, you restrict access to that function.

Aladin prompts:

**Input Source: CON, File, Script,?**

**STEP**

> 65) Press **Rtn**.

...continued

If you typed **F** you would be restricted from using a disk file, modem or external device other than the keyboard. Entering the first letter C, F, or S restricts you from using the corresponding input device.

By pressing **Rtn**, you allowed yourself total and complete access to all input devices.

Aladin now prompts:

**Output Destination: File, Script, PRN, CON ?**

If you typed both **P** and **F** you would be restricted from using both the printer and the file. By pressing **Rtn**, you have total access to all output destinations.

**STEP**

> 66) Press **Rtn**.

Aladin prompts:

**ALADIN: Data, Report, Query, Calc,
WordProc, Group, Stats, Info, Exit,?**

To restrict access to any of these modules, type their first letter, or press the corresponding soft key. To grant yourself total and complete access do not type anything, just Press **Rtn**.

**STEP**

> 67) Press **Rtn**.
>
> Aladin will prompt:
>
> **Data: Enter, Change, Remove, View, Aladin, ?>**

...continued

If you wish to restrict your access to any of these modules type their first letter, then press **Rtn**. To grant yourself total and complete access do not type anything, just press **Rtn**.

Aladin will prompt:

**Query: Define, Save, Recall, View, Aladin,?>**

**STEP**

> 68)   Press **Rtn**.

Aladin prompts:

> **Vars: 1OQ?, 2IQ?, 3DK?, 4DIR?, 5AB?,**
> **6GL?, 7NOT?, 8SV?, 9INFO?, 0CAL?**

**STEP**

> 69)   Press **Rtn**.

Aladin prompts:

**Srvice: 1 Input, 2 Output, 3 Screen 4 Print ,,,, 8 VARS**

Aladin will now prompt you for the access restrictions for the fields you defined as "protected":

**Name: Read, Write, Update**

**STEP**

> 70)   Press **Rtn**.

If you type **W** and **U** this will become a READ-ONLY field. In other words, you will no longer be able to enter or change information in this field.

The system prompts:

**Userid >**

**STEP**

> 71) If you have finished entering security access
> for other users, or if you have no other users
> you want to define system access for, press
> **Rtn**.

Aladin will return to the Main INSTALL Menu and soft
key line. Your system is now installed and is ready to be used.

**STEP**

> 72) Press **F1** (Done) to exit from the CLIENT data
> base.
>
> 73) Proceed with Section 15 which shows you how
> to make changes to an existing data base.

...continued

# Section 15

# CHANGING AN EXISTING DATA BASE

One of Aladin's most powerful features is its capability to change an already existing and fully operational data base without having to regenerate the entire system. This process preserves all the data that was in the original system.

This means that Aladin provides you with one of the most important benefits a software system can provide - a flexible solution that can grow and change as your needs and business changes.

## 15.2  PLANNING YOUR CHANGES

We want to change the CLIENT relational system data base that we established in the last section.

As it stands now, the Client System contains only one file (Address) which keeps track of our list of customers and some information about them.

We now want to add some additional information (fields) in the Address file and then add an additional filing cabinet (file) that will keep track of the orders those customers have placed with us.

We want the Address file in the Client system to include these new fields to provide us with more information about our clients. This way the Address file can not only be used to print mailing lists, it can be a valuable tool - a computerized "black book" for a sales department.

As a client calls in to make an order or check on the status of an existing order, the salesperson can have "on-line" information concerning the customer's company, and personal background in addition to current sales order data.

```
Field   Type    Items  Length  Key  Branch  Name
-------------------------------------------------------------

ADDRESS FILE
   1    Char      1     30    Yes           Name
   2    Char      1     30    No            First Name
   3    Char      1     40    Yes O/E,O/S   Company
   4    Char      1     10    Yes O/E,O/S   Customer Number
   5    Char      1     40    Yes           Title or Position
   6    Char      1     40    No            Street
   7    Char      1     40    No            City
   8    Char      1      2    Yes           State
   9    Num '     1      9    Yes           Zip Code
  10    Char      1     15    No            Telephone
  11    Char      1     40    No            Name of additional cotact
  12    Char      5     50    No            Company Background & Information
  17    Char      1     10    No            Company Size-Small, Medm, Lrg
  18    Num       1      7    No            Approximate Number of Employees
  19    Char      1     40    Yes           Type of Business
  20    Char      5     50    No            Comments

ORDER-ENTER FILE
   1    Char      1     40    Yes Add,O/S   Company
   2    Char      1     10    Yes Add,O/S   Customer Number
   3    Num       1      5    Yes O/S       Invoice Number
   4    T(date)   1      8    No            Date Ordered
   5    Char      1     40    Yes           Product Ordered
   6    Char      3     40    No            Product Description
   9    Num       1      8    Yes           Number Ordered
  10    Sum       1     10    No            Price
  11    Char      2     40    No            Special Notes or Comments

ORDER STATUS FILE
   1    Char      1     40    Yes Add,O/E   Company
   2    Char      1     10    Yes Add,O/E   Customer Number
   3    Num       1      5    Yes O/E       Invoice Number
   4    Char      1      1    Yes           Status-W(rking, B(ck/ordr, S(hpd
   5    T(date)   1      8    Yes           Date Shipped or Will Ship
   6    Char      2     40    No            Special Notes or Comments
```

**Fig. III-26** - The changed list of fields for the CLIENT data base, including those for the two new files to be generated.

```
              Relational System Name:   CLIENT

FILE : Address
              (* This is Page #1 of the Address File *)
         (* It contains basic client and company information *)


Name: _____
First Name: ....................

Company: _____ Branching ==> Order Entry, & Status _____
Customer Number : _____ Branching ==> Order  Entry, &  Status
Title or Position:_____

Street: .......................
City: _____ State: _____ Zip Code: _____


Telephone: ...............
Name of additional contact: .......................

              (*  This is "Page" #2 of the Address File Screen *)
                (* It contains more detailed information *)
Company Background & Information
...............................
...............................
...............................
...............................
...............................

Company Size-Small, Medm, Lrg   : ..........

Approximate Number of Employees:  .......

Type of Business: _____

Comments: ..................................
          ..................................
          ..................................
          ..................................
          ..................................
```

**Fig. III-27** - The new Address file record layout.

```
FILE : Order_Entry

Company: ____Branching ==> Order Status & Address____

Customer Number : _____Branching ==>  Order  Status & Address

Invoice Number: _____    Date Ordered: ........

Product Ordered: _____

Product Description: ........................
                     ........................
                     ........................

Number Ordered: _____    Price: .........

Special Notes or Comments:  ..........................
                            ..........................
```

**Fig. III-28** - The new ORDER_ENTRY file record layout.

```
FILE : Order_Entry

Company: ____Branching ==> Order Status & Address____

Customer Number : _____Branching ==>  Order  Status & Address

Invoice Number: _____

Status-W(rking, B(ck/ordr, S(hpd: _    Date Shipped or Will Ship: _____

Special Notes or Comments ..........................
                          ..........................
```

**Fig. III-29** - The new ORDER_STATUS file record layout.

**STEP**

> 74)   The first step is to lay out the changes to the
>       system on paper. This has already been done
>       for this example.
>
>       Fig. III-26 shows the fields that have been
>       added for the existing, and for the two new
>       files.
>
>       Fig. III-27, III-28 and III-29 show the record
>       format (screen forms) for each file in the data
>       base.

We are now ready to transfer this new "model" into Aladin
and change the "old" Client System. Aladin is currently
prompting you with:

**Please enter the name of your
relational system:**

**STEP**

> 75)   Type in the word **CLIENT**, and press **Rtn**.

Your computer screen should display the Main INSTALL
Menu and soft key line.

**STEP**

> 76)   Press **F3** (Change).

Aladin will then display the current definition for the
CLIENT data base, as shown in Fig. III-30.

```
    Enter name of field (max 32 chars)
    =========================================================================
    .BASE CLIENT=Address.........;
    .FILE Address......... (20...);
        Name..........................  (1.)=C 30. P K . ;
        First Name....................  (1.)=C 30. . . . ;
        Company.......................  (1.)=C 40. . K . ;
        Title or Position.............  (1.)=C 40. . K . ;
        Street........................  (1.)=C 40. . . . ;
        City..........................  (1.)=C 40. . . . ;
        State.........................  (1.)=C 2.. . K . ;
        Zip Code......................  (1.)=N 9.. . K . ;
        Telephone.....................  (1.)=C 15. . . . ;
        Name of Contact...............  (1.)=C 40. . . . ;




    CANCEL        SAVE  INSLIN DELLIN   16:04    TOP   PROT             -HELP+
```

**Fig. III-30** - The current CLIENT data base configuration.

## 15.2  ADDING A NEW FILE

### STEP

---

77) Using the cursor control keys, move the cursor
    to the "A" in Address.

78) Press **Rtn**.

---

Aladin will display a new line under the Address file and
prompt:

### Enter name of file (max 16 chars)

### STEP

---

79) Type in the words: **Order_Entry**, and press
    **Rtn**.

    Another line will appear under Order_Entry.

80) Type in: **Order_Status**, and press **Rtn** twice.

---

...continued

The second **Rtn** will exit you from the file entry mode, and
position the cursor at the beginning of the first field.

You have now added two new files to your original
CLIENT data base.

## 15.3  BRANCHING FIELDS

The next thing to do is make the COMPANY field a "branching" field since we want to have access to both the Order_Entry and Order_Status files from this field.

### STEP

---

81)  Using the **End** key, move the cursor to the COMPANY field.

82)  Using the **right arrow** key, move the cursor to the fourth field definition.

83)  Press **P** to make this a protected field.

84)  Press **right arrow** to advance the cursor.

85)  Enter **B** to signal that this is a "branching" field.

---

...continued

A set of periods appears under the cursor, then the cursor is repositioned at the beginning of this new space. Aladin is waiting for you to enter the name of the file the field is to branch to.

**STEP**

---

86) Enter the word: **Order_Entry** and press **Rtn**.

Another space appears below the first.

Aladin prompts:

> **Insert item ->name<- in File ->Order_Entry<-**

87) Press **F6** (YES). A prompt line for another file to branch to appears.

88) Enter the word: **Order_Status** and press **Rtn**

Aladin prompts:

> **Insert item ->name<- in File ->Order_Status<-**

89) Press **F6** (YES).

90) Since there are no more files to branch to, press **Rtn** again.

---

...continued

The NAME field will automatically be written to the Order_Entry and Order_Status files. The cursor is repositioned at the beginning of the next field.

**15.4  ADDING NEW FIELDS**

The current soft key line shows the commands described in Table III-U. These commands control the "editing" of fields in the files of the data base.

**Table III-U
SOFT KEY LINE FOR EDITING FIELDS
IN A DATA BASE
(INSTALL EDITOR COMMANDS)**

| SOFT KEY LABEL | FUNCTION |
| --- | --- |
| CANCEL | Returns you to the Main INSTALL Menu and soft key line. |
| SAVE | Saves the newly edited fields in the data base. |
| INSLIN | Inserts a new line after the cursor position, in preparation for the entry of a new field. |
| DELLIN | Deletes the field at the cursor position. |
| TOP | Moves the cursor to the top of the screen. |
| PROT | Indicates that the field currently shown on the screen is frozen. |

These soft key commands are used when adding new fields to a data base file.

**STEP**

91)  Use the arrow keys to move the cursor to the NAME OF CONTACT field.

**STEP**

92) Press **F4** (INSLIN) to insert a new line after the field.

93) Use the list of new fields (see Fig. III-26), and the soft keys to add the new fields, in their proper positions, into the Address file. This procedure has been described in Section 14.

94) When you are satisfied by the fields as they are displayed on the screen (shown in Fig. III-26), then press the **END** key.

 This moves the cursor to the beginning of the next file, the Order_Entry file. The cursor waits within the parentheses following the name, for you to enter the number of records for this file.

95) Enter the number **20** and press **Rtn**. The cursor is positioned at the company field. Press **Rtn** 7 times for next blank field.

96) Proceed to add all the remaining fields to the two new files.

 Again, these fields and their properties, are listed in Fig. III-26.

```
Enter name of field (max 32 chars)
===============================================================================
        Invoice Number..................  (1.)=N 5.. . K B :
                                                 Order_status....;
        Date Ordered....................  (1.)=T 8..    .  ;
        Product Ordered.................  (1.)=C 40. .  . .  ;
        Product Description.............  (3.)=C 40. . K . ;
        Price...........................  (1.)=M 10. . . . ;
        Special Notes or Comments.......  (2.)=C 40. . . . ;
.FILE Order_status.... (20...);
        Company.........................  (1.)=C 40. . K B :
                                                 address.........;
                                                 order_entry.....
        Customer Number.................  (1.)=C 10.‾. K B :
                                                 order_entry.....;
        Invoice Number..................  (1.)=N 5..‾. K B :
                                                 order_entry.....;
        Status - W(rking,B(ckorder,S(hpd  (1.)=C 1..‾. K . ;
        Date Shipped or Will Ship.......  (1.)=T 8.. . K . ;
        Special Notes or Comments.......  (2.)=C 40. . . . ;



  CANCEL        SAVE  INSLIN DELLIN   10:06    TOP   PROT          -HELP+
```

**Fig. III-31**  -  The screen after you have entered all the new
fields for the existing Address file.

## 15.5  SAVING YOUR ADDITIONS AND CHANGES

**STEP**

> 97)  When you have finished with the system definition, press the **down arrow** key until Aladin prompts:
>
> > **Have you finished defining your Aladin Relational System?**
>
> 98)  Press **F6** for yes.

Aladin will now "proofread" your system definition. If there are errors, Aladin will return you to the definition session and tell you how to correct the problem.

If your definition is error free, Aladin will then advise you of the amount of external mass storage (disk or diskette space) that will be required to save and then operate your relational system.

Aladin will display a table, summarizing your data base and prompt:

**Create a description as a document (textfile)?**

**STEP**

> 99)  Press **F8** for no.
>
> Aladin prompts:
>
> > **Create a description as a Pascal interface program?**
>
> 100)  Press **F8** for no.
>
> Aladin will prompt:
>
> > **Generate Screen Format?**

## 15.6  CREATING AND MODIFYING THE
      RECORD FORMATS

### STEP

| |
|---|
| 101)   Press **F3** for yes since we must redefine the screen layout. |

The first field in the Address file record is positioned on the screen, and the soft key labels change to: Left, Right, Up, Down, Newline, Page, Horiz, Vertic, Setup, as described in Section 14.

### STEP

| |
|---|
| 102)   Using the arrow keys, the spacebar, and the soft keys, call up and move the fields for this record. |
| The procedure is described in Section 14. Arrange the screen forms to resemble those in Fig. III-27 and III-28. |
| 103)   When you are satisfied with the format on the screen, press the **End** key until the following prompt appears: |
| **Have you finished the screen form?:** |

If you do not like the layout, you would press **F8** (NO).

**STEP**

---
104) Press **F6** for yes. Aladin will accept this screen layout definition.

105) Repeat steps 91 to 104 for the remaining two files Order_Entry and Order_Status.

---

After the last record format has been accepted, the system prompts for the security restrictions:

**Userid? >**

To enter the security restrictions, repeat steps 63 to 71 described in Section 14.7. For the moment, however:

**STEP**

---
106) Press **F1** (Cancel).

This returns you to the Main INSTALL Menu and soft key line.

107) Press **F1** twice.

This returns you to DOS.

---

# C

# PROBLEM SOLVING WITH ALADIN

# Section 16

# THE ALADIN CALCULATOR

The calculator module of Aladion - CALC - is the most powerful, yet easy to use, free form spread-sheet. CALC is as different from a typical 1-2-3™ or Multiplan™ electronic spread-sheets as they were from the days when accountants used to prepare spread-sheets by hand.

Any calculator can subtract 4 from 9 and get a result of 5, but only CALC can subtract Benz from Mercedes-Benz and get a result of Mercedes.

CALC works with all other modules of Aladin. You can set up CALCulations between many different files in your data base or relational system. You can temporarily store your calculations in other data fields without destroying the data in those fields.

You can set up a query, perform an CALCulation, send a report formated the way you want out to a text file. You can edit that text file with a word processor or text editor make a letter and do a mail-merge with Aladin and send the whole thing out of your customers.

CALC can be used to help in the sorting of data under multiple criteria, i.e., sort a client report first alphabetically by last name, second by amount of payment due, third by date due, and fourth by products purchased.

You can use CALC to automatically enter or change any type of data in your relational system.

```
            AAAA   L                    d    N    N
            A    A  L                    d    Nn   N
            A    A  L                   d ii N n   N
            A    A  L                    d    N nn  N
            AAAAAA  L        aaaa  ddddd ii N  nn N
            A    A  L        a    a d    d ii N  nn N
            A    A  L        a    a d    d ii N   nnN
            A    A  L        a    a d    d ii N    nN
            A      A  LLLLL aaaaaa  dddd  ii N     N


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                 Date : 09/17/83 ?



  ┌──────┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐        ┌───┐ ┌───┐ ┌────┐ ┌───┐ ┌────┐
  │ CONT │ └───┘ └───┘ └───┘ └───┘  16:11 └───┘ └───┘ └────┘ └───┘ └────┘
  └──────┘
```
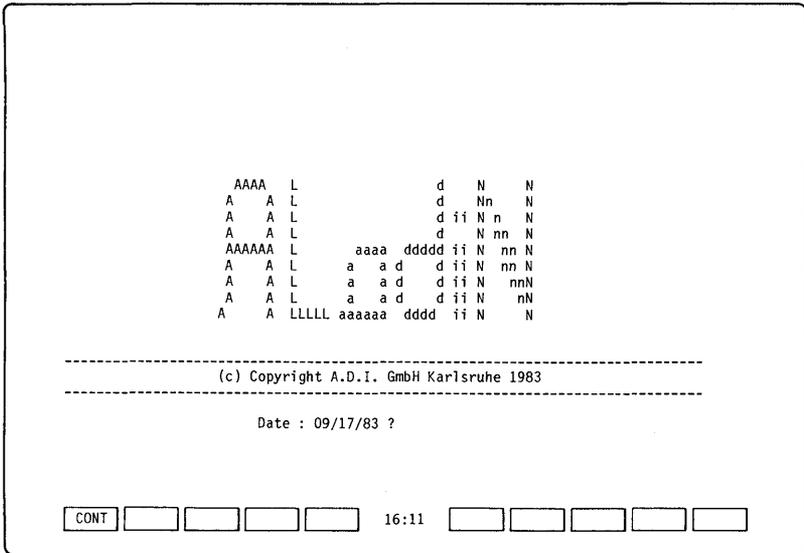
**Fig. III-32** - The Aladin display obtained after logging on to
the Aladin system.

**STEP**

| |
|---|
| 1) Start your Hyperion with your DOS diskette in drive A:, then remove it, and put your Aladin Install diskette in drive A, and the Aladin Demo & Examples diskette in drive B.

2) Make sure Drive C is 100 K, then enter SETUPRAM, and press **Rtn**. When the batch file has finished:

3) Enter **Aladin A:I**, and press **Rtn**. |

In a few moments, the Hyperion will display the welcoming message from Aladin (see Fig. III-32).

We will use the CAR relational system again. Follow the steps in section 14, to reach the Main Aladin Install Menu.

## 16.1 CHANGING THE CAR DATA BASE

The first step is to enter a new field into the existing CAR data base. This field will be used to calculate and sort certain information taken from the data base.

The new field and its properties are:

- Name                Calculate and Sort
- Repeat Factor        1
- Type                C
- Length              35
- Other               none

**STEP**

| |
|---|
| 4) Use the CHANGE module to insert this new field into the SPECS file.

The field is to go right after the COLORS AVAILABLE field.

The procedure for adding a new field to an existing data base is described in Section 15. |

...continued

```
Please estimate the maximum number of records in this file.
==============================================================================
.FILE SPECS.......... (250..);                                       *
         Manufacturer.................... (1.)=C 15. . K B :          *
                                          DEALER.........,
                                          CUSTOMER........,
         Model........................... (1.)=C 25. . K . ;          *
         Horse_Power_in_PS............... (1.)=I 3... K . ;           *
         Volume_of_Engine_in_CM.......... (1.)=I 4... K . ;           *
         Maximum_Speed_in_MPH............ (1.)=I 3... K . ;           *
         Acceleration_time_from_0_to_60.. (1.)=C 4... K . ;           *
         Fuel_Consumption_City_Highway_HS (3.)=C 4... K . ;           *
         Gasoline_Type................... (1.)=C 1.... . ;            *
         Five_Gear_Model_Available....... (1.)=C 1.... . ;            *
         Automatic_Transmission_Available (1.)=C 1.... . ;            *
         Number_of_Doors................. (1.)=N 1.... . ;            *
         List_Price...................... (1.)=C 5... K . ;           *
         Sun_Roof_Available.............. (1.)=C 1.... . ;            *
         Colors_Available................ (10)=C 10. . . ;            *
         Calculate_and_Sort.............. (1.)=C 35. . . ;            *
.FILE DEALER.......... (50...);                                       *
         Manufacturer.................... (1.)=C 15. . K B :          *
```

```
CANCEL        SAVE  INSLIN DELLIN   16:04    TOP   PROT              -HELP+
```

**Fig. III-33** - The SPECS file record format, after the
                   CALCULATE AND SORT field has been
                   entered.

The SPECS file record format should look like that shown in Fig. III-33 at left.

**STEP**

> 5)   Return to DOS (by pressing **F1**) 4 times.
>
> 6)   Remove the Aladin Install Diskette from drive A, and replace it with the Aladin System diskette. Enter **A:ALADIN A:S**, then press **Rtn**.

## 16.2 DEFINE YOUR CALCULATION

**STEP**

> 7)   Press **F5** (Calc). This calls up the CALC module.

...continued

The Hyperion screen will now display the Main CALC Menu and soft key line. The corresponding commands are described in Table III-V.

**Table III-V**
**MAIN *CALC* MENU COMMANDS**

| COMMAND | FUNCTION |
| --- | --- |
| Define | Defines a new calculation. |
| Save | Saves the current calculation for later Recall. |
| Recall | Recall a calculation that had been defined and previously saved. |
| View | Display the current calculation. |
| Quit | Leave the CALC module and return to the command menu line. |

**STEP**

| 8)   Press **F2** (Define). |
| --- |

The "street sign" should now read:

**CAR.SPECS (CON:,CON:)(---)   Calculate.Define**

and the cursor should be resting on the MANUFACTURER field.

<div align="center">

**Table III-W**
**THE OPERATION MENU SELECTIONS**

</div>

| SELECTION | FUNCTION |
| --- | --- |
| **DEFER** | Has the effect of enclosing all previous calculations in parentheses, and applying the whole item to any future calculation. |
| **ADD** | Adds the previously entered number, or result of a calculation, to the one about to be entered. |
| **SUBTRACT** | Subtracts the previously entered number, or result of a calculation, to the one about to be entered. |
| **MULT** | Multiplies the previously entered number, or result of a calculation, with the one about to be entered. |
| **DIVIDE** | Divides the previously entered number, or result of a calculation, by the one about to be entered. |

**STEP**

> 9)   Use the **right arrow** key and move the cursor
>      to the MAXIMUM SPEED IN MPH field.
>
> 10)  Enter **F5** (SELECT) to show that this is the
>      field you want to work with. If the cursor
>      moves to the next field, reposition it back on
>      the MAXIMUM SPEED field with the **left
>      arrow** key.

If we press **F10** (FIELD), the definition of this field will be
displayed:

**Maximum_Speed_in_MPH = N3:SPECS**

This tells us that the MAXIMUM SPEED field is a numeric field
and only whole numbers are allowed.

**STEP**

> 11)  Press **Rtn**.
>
>      We know that MPH multiplied by 1.6 equals
>      kilometers per hour. Because we can only use
>      whole numbers, we will multiply MPH by 16
>      and divide by 10.
>
> 12)  Type in **16** and press **Rtn**.
>
> 13)  Press **F8**, for MULTIPLY.
>
> 14)  Return the cursor to the MAXIMUM SPEED
>      field with the **left arrow** key.

...continued

**STEP**

| 15) Type in **10** and press **Rtn**. |
| --- |

This is the first calculation: the field value is to be multiplied by 16 and the result divided by 10.

**STEP**

| 16) Press **F9** for DIVIDE. |
| --- |

Aladin presents us with two choices: First, we can store the value of our calculation in the new field we defined called CALCULATE AND SORT, or we can temporarily store this calculation in another field without disturbing the actual data in that field.

This example will demonstrate both these choices:

**STEP**

| 17) Move the cursor to the VOLUME OF ENGINE IN CM field |
| --- |
| 18) Select this field by pressing **F5** (SELECT). The soft key line recognizes that a calculation has been entered and displays a new soft key **F2** (STORE). You have the option of storing this result in a field of the record. |
| 19) Press **F2** (STORE). |

...continued

**NOTE:** Although we are storing our calculation in the VOLUME_OF_ENGINE field, we are not destroying or changing the data in that field.

**STEP**

20) Again move the cursor to the VOLUME OF ENGINE IN CM field.

21) Again, select this field by pressing **F5** (SELECT).

22) Now move the cursor to the CALCULATE AND SORT field.

23) Select this field by pressing **F5** (SELECT).

24) Press **F2** for STORE.

...continued

What you have done is taken the result that was stored temporarily in the VOLUME OF ENGINE IN CM field and copied it into the CALCULATE AND SORT field.

This should illustrate the power and flexibility at your disposal with CALC. You can add, subtract, multiply, divide and store fields by fields, by constants, by numbers or by words, letters or pictures.

**STEP**

> 25)   Press **F9** (FINISH).

Aladin will ask you if you are finished with your definition or whether you want to carry your calculation to another file by branching:

**.Is your definition complete?**

**STEP**

> 26)   Press **F6** for Yes.
>
> Your calculation is finished and stored. The Main CALC Menu and soft key line are redisplayed.
>
> 27)   Press **F3** for Save.
>
> Aladin will prompt you for the name you want to store your calculation by.
>
> 28)   Type: **C1** then press **Rtn**.
>
> 29)   Press **F1** (Aladin).

...continued

The Main Aladin Menu and soft key line are displayed.

The "street sign" now indicates that the calculation you defined is now active:

**CAR.SPECS (CON:,CON) (-- + )**

## 16.3  DEFINING A REPORT

We will now define a report that uses your calculation. Refer back to Section 10, Generating a Report.

You are currently displaying the Main Aladin Menu and soft key line.

**STEP**

---

30)  Press **F3** for Report.

Aladin will call up the REPORT module and will then ask if you want to use your calculation.

**Do you want to use your calculation?**

31)  Press **F6** for Yes.

The Main REPORT Menu and soft key line will then be displayed.

32)  Press **F2** for Define.

---

...continued

The software switch AB (for absolute positioning) should be on " + ".

Entering a YES would mean that any field data selected for the report would be left justified in columns. Entering a NO would mean that any data in the report would come immediately after any data preceeding it, i.e., the report would not line up neatly in columns. In some cases, this later "un-columned" format can be desirable.

For example, a **YES** would result in:

**Manufacturer: Audi**    **List Price: 15,350**
**Manufacturer: BMW**    **List Price: 18,450**
**Manufacturer: Ford**    **List Price: 10,235**
**Manufacturer: Mercedes-Benz** **List Price: 46,570**
**Manufacturer: Toyota**   **List Price: 11,780**

whereas a **NO** would result in:

**Manufacturer: Audi List Price: 15,350**
**Manufacturer: BMW List Price: 18,450**
**Manufacturer: Ford List Price: 10,235**
**Manufacturer: Mercedes-Benz List Price: 46,570**
**Manufacturer: Toyota List Price: 11,780**

Usually, when you want to set up a report you will say yes, fill fields with blanks. When you want to send out envelopes or mailing labels, you should say no, don't fill fields with blanks.

The SPECS file record will appear. The cursor will be resting in the MANUFACTURER field.

**STEP**

---

33) Type in the word **Manufacturer** and press the **spacebar**.

34) Press **F5** (SELECT).

35) Return the cursor to the MANUFACTURER field.

36) Press **F8** (SORT) then press **Rtn**. This will set up an alphabetical sort, with no grouping.

The cursor should now be positioned on the Model field.

37) Press the **spacebar** five times.

38) Type in the word **Model** and press the **spacebar**.

39) Press **F5** (SELECT).

40) Move the Cursor to the MAXIMUM SPEED IN MPH field.

41) Type in the words **Fastest Speed in MPH** and press the **spacebar**.

---

...continued

**STEP**

42) Press **F5** (SELECT).

43) Move the cursor to the VOLUME OF EN-GINE IN CM field.

44) Press the **spacebar** nine times.

45) Type in the words **Equivalent Speed in Kilometers** and press the **spacebar**.

46) Press **F5** (SELECT).

47) Move the cursor to the CALCULATE AND SORT field.

48) Type in the words **The same speed in KPH** again, and press the spacebar.

49) Press **F5** (SELECT).

50) Press the **Rtn** key.

51) Type **60** and then press the * key. This will set up a border.

52) Press the **Rtn** key twice.

**STEP**

> 53) Now press **F9** (FINISH). Aladin prompts:
>
> **Is your definition complete?: Yes, No**
>
> 54) Press **F6** for Yes.
>
> Aladin will display the layout of your report.
>
> 55) Press **F6** for Generate.

Aladin will quickly sort through the data, perform the CALCulation, then write out the report to the screen. You can of course send any of your reports to a printer or to a text file by changing the output with **Output.**

After the report is finished the Main REPORT Menu and soft key line will appear.

**STEP**

> 56) Press **F1** (Aladin) for Quit.

You have now had a basic introduction into one of the most powerful modules of Aladin. Subsequent lessons will teach you how to get the maximum benefit from this useful business tool.

# Section 17

# MULTILEVEL SORTING WITH ALADIN

This lesson demonstrates how you can use the Aladin CALCULATION module to perform multilevel sorting of data for your use with the Aladin Report Generator.

Using the CAR relational system data base, we will see how to create a report that will be sorted according to three different criteria: first by the price of the car, second by the maximum speed, and third alphabetically by manufacturer.

This lesson will give you the basic skills and confidence for you to sort your own reports for increased productivity. For example, you can create a query that will give you all accounts receivable over sixty days. Set up a sort that will print a report giving you: largest payment due, longest overdue, alphabetical by client, and by zip code for bulk mailing.

This lesson requires approximately one hour to complete.

You are currently displaying the Main Aladin Menu and soft key line.

**STEP**

---

57)    Press **F5** for Calc.

---

...continued

We are going to set up an Aladin calculation that we can use with the report generator.

We want to order a report that will provide us with the following information:

>  Manufacturer of Car:
>  Model of Car:
>  Maximum Speed:
>  List Price:

We want the list first sorted backwards alphabetically (Z to A, rather than A to Z) by manufacturer, second by the fastest to the slowest maximum speeds, and third by the highest to the lowest selling price.

By adding fields together and sorting on the result we will get the report we desire.

NOTE: To accomplish the above, you will need to set up your calculations in reverse order.

For example: MANUFACTURER plus MAXIMUM SPEED plus LIST PRICE equals the CALCULATE AND SORT field. We then sort on this field:

| Manufacturer | + | Speed | + | Price | = Calc & Sort |
|---|---|---|---|---|---|
| Audi | | 126 | | 15236 | Audi12615236 |
| Audi | | 126 | | 24566 | Audi12624566 |
| Audi | | 117 | | 21036 | Audi11721036 |
| BMW | | 132 | | 38235 | BMW13238235 |
| BMW | | 113 | | 18235 | BMW11318235 |

If we sort on the result field, the list will be ordered as follows:

| Manufacturer | Speed | Price |
|---|---|---|
| Audi | 126 | 24566 |
| Audi | 126 | 15236 |
| Audi | 117 | 21036 |
| BMW | 132 | 38235 |
| BMW | 113 | 18235 |

**STEP**

58) Press **F2** for Define. The CAR SPECS file screen will appear and the cursor will be resting on the MANUFACTURER field.

59) Use the arrow keys to move to the LIST PRICE field,

60) Select this field by pressing **F5** (SELECT).

**STEP**

---

61) Now move the cursor to the CALCULATE AND SORT field.

62) Select that field by pressing **F5** (SELECT).

   Aladin will display the Operation soft key, as described in Table III-X.

63) Press **F5** for STORE.

64) Now move the cursor up to the MAXIMUM SPEED field. Select that field by pressing the **F5** (SELECT). Move back down to the CALCULATE AND SORT field. Again select that field by pressing **F5** (SELECT).

65) Press **F6** for ADD.

---

We must now store this result back into the field.

**STEP**

---

66) Put the cursor back on the CALCULATE AND SORT field; press the **F5** (SELECT).

67) Press **F5** for STORE.

68) With the cursor on the MANUFACTURER field, press **F5** (SELECT).

---

**STEP**

69) Move back up to the CALCULATE AND
SORT field, and select it.

70) ADD these two fields together by pressing **F6**
for ADD.

We have finished the calculation and all that is necessary
is to store the result back into the field.

**STEP**

71) Move the cursor to the CALCULATE AND
SORT field and again select it using the **F5**
(SELECT). Press **F5** for STORE.

72) Now press the **F9** (FINISH). Aladin asks:

**Is your definition complete?**

73) Press **F6** for YES. This displays the Main
CALC Menu and soft key line.

74) Press **F1** (Aladin).

This redisplays the Main Aladin Menu and
soft key line.

Now we must have Aladin process our request. However, let's also activate a Query and have Aladin sort on only those cars which are not Hondas or Toyotas, cost less than $15,000 but go at least 100 miles per hour. You should already have stored this Query in the CAR system as "Q1" from lesson 4.

**STEP**

---

75) Press **F4** for Query. This displays the Main QUERY Menu and soft key line.

76) Press **F4** for Recall.

77) Recall Q1.

78) Press F1 (Aladin) for Quit.

---

## 17.1  PROCESSING THE CALCULATION

Now that we have set up the framework for the calculation we want to have Aladin automatically process it.

**STEP**

79)  Press **F2** for Data.

Aladin will first ask if you want to use your Query.

80   Answer **F6** for yes.

Then you will be asked if you want to use your calculation.

81)  Press **F6** for Yes.

The DATA module menu and soft key line are displayed.

To set up the automatic processing feature you must first activate some soft switches.

**STEP**

82)  Press**F9** (Srvice).

83)  Press **F9** (Vars). The Main VARS Menu and soft key line will appear.

**STEP**

---

84) Press **F8** (Others), then **F2** (Global), to turn the GLOBAL switch on.

85) Press **F5** to turn the INFO switch off.

86) Press **F5** to turn the DIR switch off, so that the sort will be in descending order.

87) Press **F1** (Srvice). This will redisplay the Main DATA Menu and soft key line.

88) Now press **F3** for Change. Aladin will prompt:

   **Do you want to (globally) change ALL such records?**

89) Press **F6** for Yes.

---

Aladin will display the first record for you to verify if all the calculations are correct.

**STEP**

---

90) If everything is OK, press **F6** (YES) in response to the prompt:

   **Change the record in this way?**

---

...continued

Aladin will then automatically compute the new sorted field value and enter it into the CALCULATE AND SORT field.

When Aladin has completed the change you will be returned to the Main DATA Menu.


## 17.2  GENERATING THE REPORT


**STEP**

---

91)  Press **F1** for Quit. This returns you to the Main Aladin Menu and soft key line.

92)  Press **F3** (Report).

> **Do you want to use your Query?**

93)  Answer **F6** for Yes. You will then be asked

> **Do you want to use your calculation?**

94)  Answer **F8** for No.

95)  Define the following report, as described in Section 10:

---

**Name of the Car (Model):**
**Manufacturer:**
**Fastest Speed:**
**List Price:**

---

**STEP**

> 96) Sort the list on the CALCULATE AND SORT field, by moving the cursor to that field and pressing **F8** (SORT).
>
> 97) Press **F1** (FINISH). Aladin prompts.
>
> **Is your definition complete?**
>
> 98) Press **F6** (YES).
>
> 99) Press **F6** (GENER).
>
> 100) Press **F9** (Srvice), then **F9** (Vars).

We need to return the switches back to their original status.

**STEP**

> 101) Press **F5** (DIR) to turn DIR on ("+").
>
> 102) Press **F8** (Others), then **F2** (GLOBAL) to turn GL off ("-").
>
> 103) Press **F5** (Info) to turn INFO on ("+").
>
> 104) Press **F1** (Srvice), to return to the Main REPORT Menu soft key line.

...continued

# Section 18

# USING THE BATCH MODE FACILITY (SCRIPT)

Aladin is a menu-driven system, however you can "teach" the system to perform a series of tasks automatically using the SCRIPT (batching) module.

This lesson will give you the basic skills and confidence to use the Aladin SCRIPT module to give you even greater productivity. Reports, calculations, statistical evaluations you require Aladin to process on a regular basis can now be run automatically.

Using the CAR Relational System, we will "teach" Aladin to activate some of our queries and reports from previous lessons and then have these tasks executed automatically.

You are currently displaying the Main Aladin Menu and soft key line.

**STEP**

| |
|---|
| 105) Press **F9** (Srvice) to display the Service soft key line. |
| 106) Press **F5** (Output). |

...continued

Aladin will display an output destination menu and soft key line. The selections are described in Table III-X.

The Aladin script commands and their numerical equivalent are shown in Appendix A.

## Table III-X
## OUTPUT DESTINATION MENU COMMANDS

| COMMAND | FUNCTION |
|---------|----------|
| Menu | Returns you to the previously accessed menu. |
| CON | Terminal. Indicates that all output is to be directed to the CONsole, i.e., the display screen. |
| File | Data output is to be stored in a file on diskette. |
| Script | Command output is to be stored in an Aladin script file. |
| PRN | Printer. Data output is to be sent to the attached printer. |

**STEP**

> 107)  Select **F4** for Script.
>
> Aladin will prompt you for the name you wish to use to save this set of batch commands.
>
> 108)  Type: **SC1**, and press **Rtn**.

...continued

In place of the Aladin Command Menu Line, you will now see:

-->

This is the "script" prompt for you to enter a command.

## 18.1  TYPES OF COMMANDS IN SCRIPT

There are three types of commands you can use in Script: Menu Selections, Control Keys, "string" -- user reference file names. You will enter each command on a separate line. The following example will take you step-by-step, however, here is a roadmap:

**     All menu selections must be "prefixed" by a "." For example:

    --> .2            (Enter the Report Module)
    --> .3            (Recall a Report)

**     Control keys can be entered by prefixing the number with a "!" key. For example, to direct a report be sent to a printer:

    --> !8            (Redirect Output)
    --> .4            (Send Aladin output to printer)
    --> .2            (Enter the Report Module)
    --> .3            (Recall a Report)

**     Strings are used when you need to enter a file reference name. You enter them as you normally would. Strings do not require a prefix character. For example, to recall and view a Query called Q1.

    --> .3            (Enter the Query Module)
    --> .3            (Recall a Query)
    -->              (The name of the query file)
    --> .4            (Display that Query)

** You will use the screen-oriented input of Aladin modules to build reference files which you will then ask the system to execute with Script. You cannot directly enter Screen-oriented input into a Script file. From the examples above you can see it would be difficult to tell the system where to move the cursor and what field to select. For this reason, you cannot directly enter the Data Module with Script or use the Define functions in other modules.

**NOTE:** To transfer large sets of data into a relational system or from one Aladin system to another you will utilize other automatic facilities within Aladin other than Script.

** You should always finish your Script "program" with the input being redirected from the Script operation to the keyboard. For example:

| | |
|---|---|
| --> .2 | (Enter the Report Module) |
| --> .3 | (Recall a Report) |
| --> S1 | (The Name of the Report File) |
| --> .5 | (Generate that Report) |
| --> .1 | (End the Statistics Session) |
| --> !7 | (Redirect Input) |
| --> .1 | (Change Input from Script back to the Keyboard) |
| --> . | (Tells the System this is the last command) |
| --> [Rtn] | (Ends the Script "program") |

Here's another example to show you what's happening:

| | |
|---|---|
| --> .7 | (Enter the Statistics Module) |
| --> .3 | (Recall a Previously Saved Statistics Definition) |
| --> .YTD | (The name of that definition) |
| --> .5 | (Now begin the statistical evaluation) |
| --> G1 | (The name of the group table to be used) |
| --> !8 | (Redirect the Output) |
| --> .4 | (Direct Output to the Printer) |
| --> .3 | (Display the evaluation Graphically) |
| --> .2 | (Display all evaluations) |
| --> .4 | (End the graphic display) |
| --> .6 | (End the Statistics session) |
| --> !7 | (Redirect Input) |
| --> .1 | (Change Input from Script back to Keyboard) |
| --> . | (Tells the system that this is the last command) |
| --> [Rtn] | (Ends the Script "program") |

## 18.2 GENERATING A SCRIPT FILE

**STEP**

109) Recall the Q1 query which you created in Section 8.

110) Recall the report R1 which you created in Section 10.

111) Enter the following information:

| | | | |
|---|---|---|---|
| Type: | **.3** | and press **Rtn** | (.Query) |
| Type: | **.3** | and press **Rtn** | (.Recall) |
| Type: | **Q1** | and press **Rtn** | |
| Type: | **.5** | and press **Rtn** | (.Quit) |
| Type: | **.2** | and press **Rtn** | (.Report) |
| Type: | **.3** | and press **Rtn** | (.Recall) |
| Type: | **R1** | and press **Rtn** | |
| Type: | **.5** | and press **Rtn** | (.Generate) |
| Type: | **.6** | and press **Rtn** | (.Aladin) |
| Type: | **!7** | and press **Rtn** | (ˆInput) |
| Type: | **.1** | and press **Rtn** | (.CON) |
| Type: | | and press **Rtn** | |
| Type: | | **[Rtn]** | |

...continued

The Main Aladin Menu and soft key line are displayed.

You must now tell Aladin to accept commands not from the keyboard (Input), but from your newly created Script file: SC1.

**STEP**

> 112) You may do this by typing **F4** (Input). Aladin will now ask you which Input Source you want to use.
>
> 113) Press **S** for Script.
>
> Now you will be prompted for the file name you chose.
>
> 114) Type in **SC1** and press **Rtn.**

Aladin will display your "program" commands on the screen, then execute your Script program.

**LAST STEP**

> 115) Press **F1** twice to exit from Aladin and return to DOS.

# Part IV

# REFERENCE

## 1.    INTRODUCTION

This part of the Hyperion Aladin Guide provides a module-by-module, function-by-function reference to the Aladin Relational Data Base System.

It is organized in the following manner:

A)  **System Maintenance Modules** are accessed from the Main Aladin Menu by pressing soft keys. Each module enables you to do a specific task such as, entering data, producing reports, setting up queries, etc. The modules are:

- the DATA module                    (see Section 3),
- the REPORT module                  (see Section 4),
- the QUERY module                   (see Section 5),
- the CALCULATOR module              (see Section 6),
- the WORD PROCESSING module   (see Section 7),
- the GROUP module                   (see Section 8),
- the STATISTICS module              (see Section 9),
- the CONTROL module                 (see Section 10),
- the INFO module                    (see Section 11).

B)  **System Installation**. These sections describe procedures, rather than modules. They explain how to install a new data base, change an existing data base, assign passwords, etc. The procedures are:

- Install a Relational Data Base    (see Section 13),
- Change a Relational Data Base     (see Section 14),
- Screen Forms                      (see Section 15),
- Access Rights                     (see Section 16),

C)  **Advanced Procedures** describe how to combine modules and procedures to do advanced but useful tasks. The procedures are:

- Disk Housekeeping                 (see Section 17).
- Global Operations                 (see Section 18),
- Merging Files                     (see Section 19),
- Script Files                      (see Section 20).

# A

# SYSTEM MAINTENANCE

```
AAAA    L                   d     N       N
A     A L                   d     Nn      N
A     A L                   d ii  N  n    N
A     A L                   d     N  nn   N
AAAAAA  L         aaaa  ddddd ii  N   nn  N
A     A L         a   a d   d ii  N   nn  N
A     A L         a   a d   d ii  N    nnN
A     A L         a   a d   d ii  N     nN
A       A LLLLL aaaaaa  dddd  ii  N      N


-------------------------------------------------------------------------
                 (c) Copyright A.D.I. GmbH Karlsruhe 1983
-------------------------------------------------------------------------
```

```
[   ][   ][   ][   ][   ]  16:11  [   ][   ][   ][   ][   ]
```

**Fig. IV-1** - The first screen displayed after logging on:
showing the Aladin logo.

## Section 2

## ACCESS THE ALADIN SYSTEM MAINTENANCE MODULES

Before you can begin to use the system maintenance modules with your relational data base system, you must start your Hyperion, and load in the MS:DOS operating system.

**STEP**

> 1) Put your Aladin System Diskette in drive A, and the diskette containing your data base in drive B. Make sure Drive C is 100K.
>
> 2) Enter **SETUPRAM**, then press **Rtn**.
>
> 3) Enter the words **A:ALADIN A:S** and press **Rtn**.

For a single-drive system, insert the Aladin System Diskette into drive A, enter **A:ALADIN B:S** and press **Rtn**.

The Hyperion takes about 30 seconds to load in the Aladin MAINTENANCE program. When it is finished, it will display the Aladin screen showing in Fig IV-1, and prompt for a date.

**STEP**

> 4) Enter the name of your relational system, then press **Rtn**. If the system has controlled access, you will be prompted for user ID and password.
>
> 5) Enter your **User ID**, then press **Rtn**.
>
> 6) Enter your **Password**, then press **Rtn**.

Provided that you have entered a valid data base name, and the proper combination of User ID and Password, Aladin will then display the screen in Fig. IV-2 on the next page.

### 2.1   THE MAIN ALADIN MENU

The Aladin maintenance system is composed of modules which are used to enter, modify, or use data in a relational data base.

```
CAR
================================================================================

    A.D.I. --- ALADIN.EXEC v2.6y    00/00/00

    A.D.I. GmbH Karlsruhe, West Germany,  Relational System : ALADIN
    --------------------------------------------------------------
    (c) Copyright by A.D.I.  GmbH Karlsruhe, West Germany 1983

    Enter Relational System name (<return> exits) = car  ..

    Userid = adi
    Passwd = REX ........


    SPECS            DEALER            CUSTOMER




================================================================================
                                                              ALADIN

    [ Done ] [ Data ] [Report] [Query] [ Calc ]  09:23  [Group] [Stats] [Others] [Srvce] [ HELP ]
```
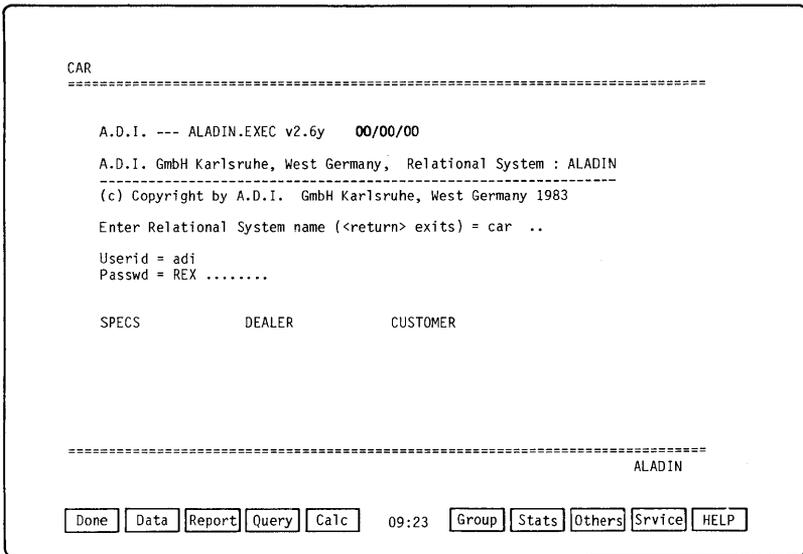
**Fig. IV-2** - The first MAINTENANCE screen showing the CAR
data base name in the upper left corner, and the
Main Aladin Menu soft key line.

These modules can be accessed individually from the Main Aladin Menu soft key line. Note that soft key **F8** is labelled **Others**. This is because there are more selections than the eight the soft key line has space for. Pressing **F8** brings up the other selections.

* Pressing **F2** (Data) calls up the DATA module that allows you to enter or change data stored in the data base.

* Pressing **F3** (Report) allows you to take data from the data base and format it into reports that can be stored, displayed, or printed.

* Pressing **F4** (Query) allows you to specify the types and categories of data. These specifications are used when generating reports, performing calculations, or gathering statistics. These query specifications can also be stored for later use.

* Pressing **F5** (Calc) allows you to compare the data stored in two or more fields or perform calculations on data. These comparisons can be mathematical (addition, subtraction, etc.) or logical (AND, OR, etc.).

* Pressing **F6** (Group) calls up the GROUP module. GROUP is used before generating statistics to group the data, stored in a given field, into categories. These categories would then be used by the STATISTICS module to generate statistics.

* Pressing **F7** (Stats) is used to produce statistical evaluations. These can be displayed immediately on the screen, or stored as files, or printed.

* Pressing **F6** (Word) on the alternate Aladin soft key line enables you to connect to a word processing system. Text, stored by word processing, could in this way contain variables that would be substituted by the data stored in the Aladin data base.

* Pressing **F7** (Info) on the alternate Aladin soft key line displays information, usually about how the Hyperion is storing your data base. Such information aids in using the Aladin and Hyperion to their maximum capacity.

* Pressing **F9** (Srvice) accesses control options that are called up by the various modules, such as sort direction, input sources, output destinations, screen intensities, etc.

* Pressing **F10** (HELP) displays help information about the Main Aladin Menu selections.

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc | | Group | Stats | Others | Srvice | HELP |

**Main DATA soft key line**

| Aladin | Enter Change Remove | View | | Srvice | HELP |

**DATA.Enter/Change soft key line**

| CANCEL | PRINT | CALC | | SORT | FINISH | FIELD |

**The DATA.Remove soft key line**

| CANCEL | PRINT | | SORT | FINISH | FIELD |

**The DATA.View soft key line**

| CANCEL | PRINT | CALC | Jump | SORT | FINISH | FIELD |

**The DATA.Srvice soft key line**

| Data | Screen | Input Output | Jump | Vars | HELP |

**Fig. IV-3**  -  The DATA module soft key line tree.

# Section 3

# THE *DATA* MODULE

When the DATA module of Aladin is called up by pressing **F2** (Data) from the Main Aladin Menu, a new soft key line appears at the bottom of your screen.

If a Query or Calculation is current in memory, Aladin will ask if you wish to use them while you are in the DATA module.

Each of the command names in this menu describes an important function of Aladin that may be activated by pressing the corresponding soft key. While they are all discussed in detail in the sections that follow, they are, briefly:

* Pressing **F2** (Enter) allows you to enter new data into your Aladin relational data base. Do not confuse this with CHANGE.

* Pressing **F3** (Change) allows you to change or update some existing data within your data base. You should use CHANGE whenever you wish to modify any record that is already part of an Aladin data base. Use ENTER to enter a new record.

* Pressing **F4** (Remove) allows you to discard a data record which is no longer needed.

* Pressing **F5** (View) allows you to look at (but not change) the information within your data base.

There are three other soft keys available on the Main Data Menu:

* Pressing **F1** (Aladin) returns you to the Main Aladin Menu.

* Pressing **F9** (Srvice) displays the Data Service soft key line (see Section 10 - The CONTROL Functions).

* Pressing **F10** (HELP) display a screenful of information about the DATA Module.

ENTER - Enter Data into an Existing
            Relational System Data Base


## Command Description

ENTER is used to enter new records into your Aladin data base.

Each new record is usually entered via the keyboard into the screen forms that were defined when your relational system was installed. The only exception to this is when data is being entered from an external file.


## User Interaction

When the Enter function is activated, the screen form for your current file is displayed on your screen. The form is "empty" at this point; that is, none of the fields have any data in them. They are all blank. At the upper right corner of the screen, the words "Data.Enter" are visible as a "street sign" to tell you which function you are using. Aladin will place the cursor at the very first field of your screen form.


**STEP**

---

1)   Press **F2** (Enter) from the Main Data Menu soft key line.

     The cursor is positioned at the first field of the form, which is blank.

2)   Enter some data, via the keyboard, into the current field.

3)   Press **Rtn**.

---

Aladin uses key fields (primary and secondary) to search for data records. Key fields are indicated by the solid underline next to the field name.

Aladin tries to minimize the labour involved in data entry. To do this, it tries to avoid unnecessary duplication of information in your data. This both saves storage space and save your time when entering data.

When you pressed **Rtn**, after entering data, Aladin searches your data base for the record(s) which match this entry. The first record is displayed in the screen form.

Aladin then prompts:

### Use this record?

**STEP** (cont)

---

4)   Press **F8** (NO).

Aladin removes the record from the screen and waits for your input, so that it may select a new record with the same key.

*OR*

Press **F6** (YES).

Aladin repositions your cursor at the second field, and waits for you to enter data.

---

If you select **Yes**, Aladin uses the current record as a template, into which you will enter new values.

The soft key line changes during data entry, offering the following commands:

## Table IV-A
## DATA ENTRY COMMANDS

| COMMAND. | EFFECT |
| --- | --- |
| **F1** (CANCEL) | End the current data entry session, without saving the current entry. |
| **F3** (PRINT) | Send a copy of the current record to the printer. |
| **F4** (CALC) | Use the current calculation for data entry. |
| **F8** (SORT) | Change the order in which Aladin displays data records, i.e., ascending or descending. The direction of sort is indicated by the arrow before the cursor. |
| **F9** (FINISH) | Return to the Main DATA Menu, saving the data record |
| **F10** (FIELD) | Display the description of the current field. |

**STEP** (cont)

> 5) Enter new data into each field, pressing **Rtn** to complete each entry.

...continued

Pressing **Rtn** saves all data to the left of the cursor as an entry into that field. When the form has been filled to your satisfaction, it will become a record within the file.

The cursor shows which field you are in. You can move between the fields by using the cursor control keypad. You can skip fields, back-up to make corrections, or abort the data entry process simply by controlling the position of your cursor on the screen.

When you enter a value into the field, you are really just typing a sequence of keys that Aladin recognizes as appropriate for that field. If you type an entry that is not valid for that field, Aladin will react by giving you a warning message:

## Invalid character

at the bottom of the screen. An example would be accidentally pressing a "&" instead of a "7" when in a number field.

**STEP** (cont)

> 6) Press **F1** (CONT), to return to the program operation.

When you press the **Rtn** key or one of the cursor control keys, Aladin will consider that you have finished with this field, and automatically skips to the next field.

Aladin also keeps track of the number of keys you press so that it can jump automatically to the next field when the current field is full. If you press one of the cursor movement keys, Aladin will assume that you wanted to skip over this field without making a change to it, and will move the cursor up or down according to the key you pressed.

**Table IV-B
CURSOR CONTROL KEYS
FOR SCREEN FORMS**

| KEY | EFFECT |
|---|---|
| ➜ ▼ | Move to the next field in the screen form. |
| ◄ ▲ | Move to the previous field in the screen form. If the cursor is at the first field in the screen form, leave the screen form without entering changes. |
| **Home** | Move to the first field in the screen form. |
| **End** | Move to the last field in the screen form. If the cursor is positioned at the last field, leave the screen form. |
| **Rtn** | Enter the data to the left of the cursor, ignoring all characters to the right of the cursor. |
| **Ins** | Insert a space before cursor. |
| **Del** | Delete character at cursor. |

**STEP** (cont)

7)   Press **F9** (FINISH).

Aladin prompts

**Enter the record in this way?**

8)   Press **F6** (YES)

*OR*

Press **F8** (NO) to continue entry for this record.

## CHANGE - Change the Existing Data in a Field

### Command Description

Change allows you to manipulate or replace data that is already present in a field within a relational system file.

### User Interaction

**STEP**

---

1) Press **F3** (Change) from the Main DATA Menu.

---

The screen form for whatever file is currently selected will appear, with the cursor located at the first field. The "street-sign" at the upper right corner of the screen will say:

### Data.Change

The next thing you need to do is "call up" or locate the particular data record you wish to change. This works in the same way as the Enter function. Likewise, when you have found the record you want to change, you can make the changes the same way you entered and modified the data fields while in Enter.

**STEP**

---

2) Place the cursor on the field you wish to change.

3) Enter the data entry you wish to change;

*OR*

Using the wildcards, make a partial entry, then press **Rtn**.

Aladin prompts:

**Change this record?**

4) Press **F6** (YES)

*OR*

Press **F8** (NO)

---

The record which matches your entry, (exactly or according to the wildcards) is placed in the field, with the cursor at the first character.

**STEP** (cont)

---

5)  Use the cursor control keys to move to the field you want to change.

6)  Enter the changed data, then press **Rtn**.

7)  Press **F9** (FINISH).

    Aladin will prompt:

    **Change the record in this way?**

8)  Press **F8** (NO).

    You are returned to the screen form.

    *OR*

    Press **F6** (YES).

    The changed record is saved, and you are returned to the first field in the form.

---

Note that the value will be truncated wherever the cursor happens to be when you press **Rtn**. This is useful when there are extra characters that you would like to dispose of.

Be careful, however, that you do not press **Rtn** without first moving the cursor to the end of your entry, otherwise part of your data will be lost.

If you want to remove the entire contents of a field, just move the cursor to it and press **Rtn**. Note however, that the contents of a key field cannot be deleted. Although the screen form may show a blank field, the key has not been deleted. If you wish to change such a field, the best way is to enter a new record (using the wild-card matching discussed below to avoid retyping the whole thing) and remove the old record.

## Using Key Fields to Locate Existing Records

Normally a data record is identified through a particular field called the **primary key field** which describes the "primary category" into which that record falls. This could be a person's name or social insurance number, or it could be the manufacturer of a particular automobile. *The primary key field should always be the very first field of a record*.

With Aladin, it is also possible to name a large number of **secondary** key fields. A second key field is any key field other than the first or **primary** key. All key fields are designated in the same way. The system assumes that the first key field in a record is the primary key field, and that all others are secondary key fields.

Any of the keys (either primary or secondary) may be used with equal ease to find a data record within your relational system. There is little difference between them.

The key fields are used within the DATA module to locate a given record or group of records that have already been entered into your data base. For the Change, Remove and View functions, the need for this may be obvious, since you must first find the record you want before you can perform these operations. But key fields are also useful within the Enter function.

Aladin makes it possible to minimize much of the tedium of data entry by "capturing" the contents of existing records and using them to get a head start on a new record. This not only speeds things up, it also reduces the probability for error.

To locate all records matching a particular key:

### STEP

---

1) Move the cursor to the desired key field.

2) Type in the data you would like to match, then press **Rtn**.

---

Aladin will now search the data base and locate all the records that have matching keys (e.g., all cars manufactured by Mitsubishi). The first of these records will be displayed on your screen, with the cursor still at the key field. Any other records that matched that key will be displayed in turn when you press **Rtn**.

To reduce the possibility of error, and for speedy access to your data, Aladin also supports "wildcard" matches. In a wildcard match, you only enter part of the key value you want, along with one or more wildcard symbols. These symbols are called wildcards because they can be interpreted as matching a number of different data values, instead of only one.

Aladin's wildcard characters are as follows:

### Table IV-C
### WILDCARD CHARACTERS
### FOR KEY FIELD SEARCHES

| WILDCARD | EFFECT |
|---|---|
| ? | Matches any character sequence. For example, MIT? matches MITSUBISHI, MITCHELL, and MIT. |
| ! | Matches any *single* character. For example !NIX matches UNIX, ONIX and 6NIX, but not EUNIX. |
| $ | Matches any *single alphabetic* character (upper or lower case) For example: $NIX matches UNIT, but not 6NIX. |
| # | Matches a *single numeric* (0...9 only). For example: #NIX matches 6NIX, but not UNIX. |

## REMOVE - Delete Existing Data from a Record

### Command Description

Within the DATA module of Aladin, the Remove function is used to rid your relational system of unwanted records. The information stored in the records is thus permanently lost, so be careful about what you throw away.

### User Interaction

#### STEP

1) Press **F4** (Remove) from the Main DATA Menu.

   An empty form appears on the screen.

2) Place the cursor at the desired field.

3) Enter the record (using wildcards if necessary) that you wish to remove.

4) When the record appears, press the **F9** (FINISH).

   Aladin will prompt:

   **Remove record(s)?**

5) Press **F6** (YES) to remove the data in the field from your data record.

   *OR*

   Press **F8** (NO) to return the cursor to the field, without removing the data.

If you decide not to remove any records:

**STEP** (cont)

---
6)  Press **F1** (CANCEL) to return to the Main
    DATA Menu.
---

**VIEW - Examine Existing Data Records without Modifying Them**

## Command Description

Aladin's View function supplements the other DATA module functions by letting you look at your data records without modifying them in any way.

## User Interaction

### STEP

1) Press **F5** (View) from the Main DATA Menu.

   The screen form for the selected file is displayed on the screen.

2) Move the cursor to a key field.

3) To view the first record in any key: press **Rtn**.

   *OR*

   To view a specific record, enter the data for the field (using wildcards if necessary), then press **Rtn**.

4) Press **F6** (Jump) to use a key field to branch to another file.

### Branching (Jumping) between Files

If your relational system data base is made up of more than one file, then you need to be able to "branch" from one file to another. Within the DATA module, this can be done in either of two ways:

- you can simply skip to the other data file, and use any of the DATA functions; or

- you can branch along a relationship or connection that may exist between similar fields in different files. In this case, Aladin can automatically connect you to records in the second file that match the data value in the branching field of the first file.

In either case, the branching is activated by pressing **Jump** from the Srvice soft key lines.

Suppose, for example, that your relational system contains information describing a product, its supplier and perhaps a customer who has purchased this product. It is simple to get this information when all the fields are in the same data file, but what about when they are in separate files? This is where "branching" comes in.

### STEP

1) Position the cursor at the field you wish to use to branch via, with an entry as the reference to find in the second file.

2) Press **F6** (Jump).

   Aladin displays a list of available files, with a number preceding each one.

3) Press the number which matches the file you wish to branch to.

The screen form of the file you selected will appear on the screen, with the cursor positioned at the branching field.

**SRVICE - Access Software Switches and
Control Functions**

## Command Description

SRVICE moves you to the DATA.Srvice soft key line, where you may set the software switches, and redirect the output generated while using the DATA module. Refer to Section 10 -- The CONTROL Functions.

## User Interaction

### STEP

> 1)   Press **F9** (Srvice).

The DATA.Srvice soft key line offers you the following choices:

* Pressing **F1** (Data) returns you to the Main DATA soft key line.

* Pressing **F2** (Screen) allows you to adjust the contrast between screen form and data.

* Pressing **F4** (Input) allows you to redirect Aladin's input source.

* Pressing **F5** (Output) allows you to redirect Aladin's output to a different device.

* Pressing **F6** (Jump) allows you to use a key field to move to another file within your relational system.

* Pressing **F9** (Vars) allows you to set the software switches.

* Pressing **F10** (HELP) displays a screenful of information about the DATA module.

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc | | Group | Stats | Others | Srvice | HELP |

**Main REPORT soft key line**

| Aladin | Define | Save | Recall | View | | GENER | | Srvice | HELP |

**REPORT.Define soft key line**

| CANCEL | | SELECT | | Jump | | SORT | FINISH | FIELD |

**REPORT.Save soft key line**

| CANCEL |

**REPORT.Recall soft key line**

| CANCEL |

**REPORT.Srvice soft key line**

| Report | | Input Output | | Jump | | Vars | HELP |
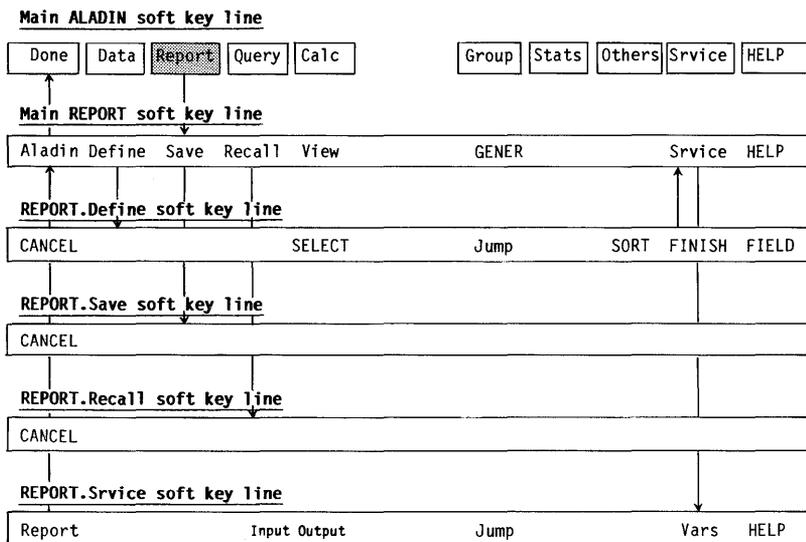
**Fig. IV-4** - The REPORT module's soft key line tree.

# Section 4

## THE *REPORT* MODULE

Aladin's REPORT module may be used to create reports and listings based on the information stored within your relational system's data base.

It provides an important alternative to the display of data in screen forms offered by the DATA module's View function. It may be reached from the Aladin command line by pressing **F3** (Report).

This displays the Main REPORT Menu and soft key line, with the following options:

*   Pressing **F2** (Define) allows you to define a new report, using any of the records in your data base.

*   Pressing **F3** (Save) saves the report definition to a diskette file.

*   Pressing **F4** (Recall) recalls a saved report definition, and makes it the current report.

*   Pressing **F5** (View) displays the report definition on your screen, or any other output device.

*   Pressing **F6** (GENER) generates the report, sending it to the screen, printer, or to a diskette file.

The following options are also available from the Main REPORT Menu:

*   Pressing **F1** (Aladin) returns you to the Main Aladin Menu.

*   Pressing **F9** (Srvice) moves you to the Report Srvice soft key line.

*   Pressing **F10** (HELP) displays a screenful of information on the REPORT module.

## 4.1   ACCESSING A PREVIOUSLY ENTERED QUERY

After you have pressed **F3** (Report) to call up the REPORT module, Aladin may prompt:

### Do you want to use your Query?

This prompt appears if you have previously defined a query which is now stored in memory. Aladin is asking whether or not you wish to use this query in conjunction with your report. This prompt may also appear while you are entering the DATA or WORD PROCESSING module.

### STEP

---

1a)   Press **F6** (YES).

The two switches **IQ** and **OQ** are set on. This means your query will be applied to any data input or output. Note that "flags" for each of these switches in the upper left corner of the screen are set on " + ".

*OR*

1b)   Press **F8** (NO).

The switches are left off, and the query will be ignored when data is being entered or taken out by a report.

The switches can, of course, be set manually using the Srvice soft key line (Section 10 - The CONTROL Functions).

---

### 4.2   ACCESSING A PREVIOUSLY ENTERED CALCULATION

If a calculation has been previously defined, the REPORT module will ask:

### .Do you want to use your calculation?

As in the case of a query, you have a chance to control whether or not your calculation will be active during the report generation process by affecting the "CAL" switch (see Section 10 on the Aladin CONTROL Functions). If you answer yes, the "CAL" switch will be set on, thereby enabling your calculation. Otherwise, the "CAL" switch is set off.

You may also wish to use a current calculation while working in the DATA or WORD PROCESSING module.

## DEFINE - Define a New Report.

### Command Description

In this function you can define your reports by determining which data fields are to be included and how they are to be laid out on the screen or paper.

### User Interaction

#### STEP

| |
|---|
| 1)    Press **F2** (Define) on the Main REPORT Menu. |

Aladin will display the Report Define soft key line.

| KEY LABEL | EFFECT |
|---|---|
| **F1** (CANCEL) | Cancel the definition in progress. |
| **F5** (SELECT) | Choose a field to be included in the report. |
| **F6** (Jump) | Move to another file within the relational system. |
| **F7** (SUM) | Produce the total of a column of numerical fields produced by a report. |
| **F8** (FINISH) | Complete and save the report definition. |
| **F9** (SORT) | Choose a field to sort the report, and define the sorted grouping. |
| **F10** (FIELD) | Display a description of the type and size of the current field. |

If you have already defined a report during this Aladin session or have "recalled" a report definition that was saved on disk, then Aladin will prompt:

### Discard old definition?

Since Aladin keeps your report definitions stored within the Hyperion's internal memory (RAM), discarding the old definition makes room for the new one.

If the old report definition is one that you want to save and it has not been saved already:

**STEP** (cont)

+---------------------------------------------------------------+
| 2a)  Press **F8** (NO).                                        |
|                                                               |
|      This will return you to the REPORT soft key              |
|      line, from which you can use the SAVE                     |
|      function to save your report definition.                 |
|                             *OR*                              |
|                                                               |
| 2b)  Press **F6** (YES).                                       |
|                                                               |
|      This discards the current report defined in the          |
|      Hyperion's memory. You can discard a defini-             |
|      tion if the report has been saved to diskette, or        |
|      if you no longer require that definition.                |
+---------------------------------------------------------------+

...continued

If you press **Yes** to discard, the screen form of the currently selected file will be displayed. Initially your cursor will be at the first field of the form.

To incorporate a field into your report:

**STEP** (cont)

---

3)   Using the cursor control keys, place the cursor at the desired field.

4)   Press **F5** (SELECT).

     This causes the indicated field to be included in your report.

---

### The Layout Line

As you were choosing fields from the screen form for your report, Aladin was displaying a layout line at the bottom of the screen, on the 24th line.

As you select a field by pressing **F5** (SELECT), you are controlling an invisible "report cursor" which controls the position in your report at which these fields will appear. This "report cursor" is similar to the "screen cursor" which shows you your screen position.

When you select a field, it appears in your report at the current location of the report cursor, indicated by a string of X's. The report cursor will then be moved automatically to the right by a sufficient number of spaces to allow room for the field.

The report cursor displays a column counter, which displays the column number that the report cursor is positioned in. You can control the position of the report cursor (and hence the layout of your report) by using the **Rtn** and **spacebar** keys.

Pressing either key will insert that character into your report format. Pressing **Rtn** once moves the report cursor to the start of a new line. Pressing it again will leave a blank line in your report. Pressing the **spacebar** places blank spaces between the fields which are included in the report.

You can also place special characters and text into your report layout simply by typing them in. They will appear in your report at the current location of the report cursor, which then moves to the right.

Alphabetic characters may be used as headers, but digits may not. Aladin interprets digits as a repeat factor. For instance, "20 = ", will add 20 consecutive equal signs to the report.

If there is not room for a field to fit on the current line of the report, Aladin will warn you by displaying a question mark ("?") by that field. You should then press **Rtn** to start off a new line.

If you do not start a new line by pressing **Rtn**, Aladin's REPORT module will start one for you if you select a field that is marked by the "?". Aladin determines whether a field will fit or not on the basis of an 80 column report width. This is the standard width of a display screen and also the standard width of most report paper.

If you want to produce a report with more columns, you can do this quite easily through the INFO module. Please refer to the section on INFO for further details.

**Sorting**

You can sort your report by a single field. Note that this field does not have to be selected for inclusion in the report.

To select a field to sort by:

**STEP** (cont)

---

5)  Position the cursor at the field you wish to sort by.

6)  Press **F7** (SORT). An exclamation mark (!) is entered in the field, and the soft key line blanks except for **F1** (CANCEL).

---

...continued

**STEP**

> 7)  Press the space bar once, then press **Rtn**.
>
>     The cursor moves one space to the right in the field.

This has the effect of "grouping" the data by the first character in the field. If you pressed the space bar twice, the report would be grouped by the first *two* characters in the field.

**Exiting**

When you have finished selecting fields for your report:

**STEP** (cont)

> 8)  Press **F9** (FINISH).
>
>     This moves the cursor off the bottom of the screen form.
>
>     Aladin prompts:
>
>     **Is your report definition complete?**
>
> 9)  Selecting **F6** (YES) causes Aladin to save the fields to be included in the report.
>
>     *OR*
>
>     Selecting **F8** (NO) returns you to the screen form, with the cursor positioned at the first field.

The screen will clear and Aladin will display the report format that you have defined. The names of these fields are displayed for verification.

The Main REPORT Menu is redisplayed. You must now save the report format for future use, or press **F6** (GENER) to generate it on the currently selected output device.

### Defining a REPORT that Branches between Files

To get full use out of Aladin, it is necessary to produce reports that reflect the relational structure of your data. For example, if you are listing automobile dealers you may also wish to make a list of all the cars that each dealer can sell.

### STEP

1) Position the cursor at a branching field (primary key or secondary key field).

2) Press **F6** (Jump).

   Aladin will display a list of the files that the current field can branch to.

3) Select the number which corresponds to the file you wish to jump to.

Within this new file, you can select fields to be included in your report, as you did in the first field you started defining your report in. When you have finished selecting fields from the second file:

### STEP

4) Press **F9** (FINISH).

**SAVE - Save a Report Which Has Previously Been Defined**

### Command Definition

Once you have defined a report, you can save it for later use with the Save function.

### User Interaction

After you have defined your report by answering **Yes** to the prompt **"Is your definition complete?"**:

#### STEP

> 1)   Press **F3** (Save) from the Main REPORT Menu. Aladin prompts:
>
> **Enter file reference name >**

(If no report has been defined, then pressing **F3** will have no effect.)

#### STEP

> 2)   Enter the name you wish to use, then press **Rtn**.

The filename used should follow these conventions. A report filename cannot have more than 3 characters, and should use only the following characters:

**A-Z, 0-9, $ & # @ ! % ' ( ) - < > { } _  ^ '**

The filename on disk uses this as the filename extension to the name <**Base**>R, where <**Base**> is the data base name.

If a report has already been saved under that reference name, Aladin will ask:

**File by that name exists.**
**Remove it?:**

This gives you a chance to say whether or not you wish to get rid of the old definition saved under this name.


**STEP** (cont)

---

3)  Press **F6** (YES);

    If you answer "yes" the old one will be removed and this new definition will be saved.

    *OR*

    Press **F8** (NO).

    If you answer "no" you will return to the Main REPORT Menu. You may save the report under a different name if you wish.

---


The report headings are displayed as defined and the Main REPORT Menu soft key line reappears.

Aladin will create a diskette file which contains your report with a name based upon the reference name you give, as well as the data base name. In other words, if you look at your diskette contents after saving a report, you will not see exactly the same name that you gave as a reference name, but rather something of the form:

**<data base name>R.<reference name>**

## RECALL - Make a Previously Saved Report Definition the Current Definition

### Command Description

Recall takes a file from diskette, and makes it the current report definition. You may use GENER to generate a report using this definition.

### User Interaction

#### STEP

---

1) Press **F4** (Recall) from the Main REPORT Menu.

   Aladin will ask:

   **Enter file reference name:**

2) Enter the reference name that was given when the report was saved, followed by **Rtn**.

---

Aladin will display the layout of the report definition which has been RECALLed, and redisplay the Main REPORT Menu.

## VIEW - Display the Current Report Definition

### Command Description

View allows you to inspect your current report definition.

### User Interaction

#### STEP

> 1) Press **F5** (View).
>
> Aladin will display the layout of the current report definition.

There are two distinct parts to a listing of the report definition. The first part is present if you have performed relational branches within your report definition.

The list will show each branch and return. Every branch or return is specified by a number shown within angle brackets, for example "<1>". The listing will show the branch from a field in one file to a field in another file. Usually the fields will have the same name but the file names will differ. When a return is shown, no field needs to be specified since it is understood that the return refers to the preceeding branch.

In the second part of the report format listing, you will see the actual layout of the report. The presence of a field is indicated by the name of the field and the sequence of branches and returns will be indicated by the numeric indicator.

The report definition may be listed on a printer or in a disk file through use of Aladin's output redirection capability. (Please refer to Section 10 - describing the CONTROL functions.)

## GENER - Create a Report Using the Current Definition

### Command Description

The REPORT module's Gener function is used to actually create the desired report, using the current report definition. If no report has been defined, GENER will not work.

### User Interaction

**STEP**

---

1)  Press **F6** (**GENER**) from the Main Report Menu soft key line.

---

Aladin will first display a listing of the report layout that you have defined and will then begin to generate the report.

However, since you will probably want to print the report, you can use the output redirection function to send the report to the printer. To do this you should set the output device as the printer before you begin to generate the report. For further information, please refer Section 10, The CONTROL Functions.

You can make your report pause at any time by pressing PAUSE. To make the report resume press PAUSE again.

If you want to abort the report, press **F1** (CANCEL).

At the end of your report, whether it runs to completion or if you abort it early, Aladin will print a message something like:

### Number of data records: 57(125)

This means, that out of 125 records within your data base, the report generator printed 57 of them. The number printed will be less than the total if the report is interrupted early, or if a query is active thereby restricting the number of records that will be printed.

**SRVICE - Access Software Switches and Control Functions**

## Command Description

SRVICE moves you to the REPORT.Srvice soft key line, where you may set the software switches, and redirect the output generated while using the REPORT module. Refer to Section 10 -- The CONTROL Functions.

## User Interaction

### STEP

| |
|---|
| 1)   Press **F9** (Srvice). |

The DATA.Srvice soft key line offers you the following choices:

*   Pressing **F1** (Report) returns you to the Main DATA soft key line.

*   Pressing **F4** (Input) allows you to select Aladin's input device.

*   Pressing **F5** (Output) allows you to redirect Aladin's output to a different device.

*   Pressing **F6** (Jump) allows you to use a key field to move to another file within your relational system.

*   Pressing **F9** (Vars) allows you to set the software switches.

*   Pressing **F10** (HELP) displays a screenful of information about the DATA module.

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc |

| Group | Stats | Others | Srvice | HELP |

**Main QUERY soft key line**

| Aladin Define  Save  Recall  View                           Srvice  HELP |

**QUERY.Define soft key line**

| CANCEL                    SELECT                    FINISH  HELP |

**QUERY.Save soft key line**

| CANCEL |

**QUERY.Recall soft key line**

| CANCEL |

**QUERY.Srvice soft key line**

| Query                Output          Jump                Vars  HELP |
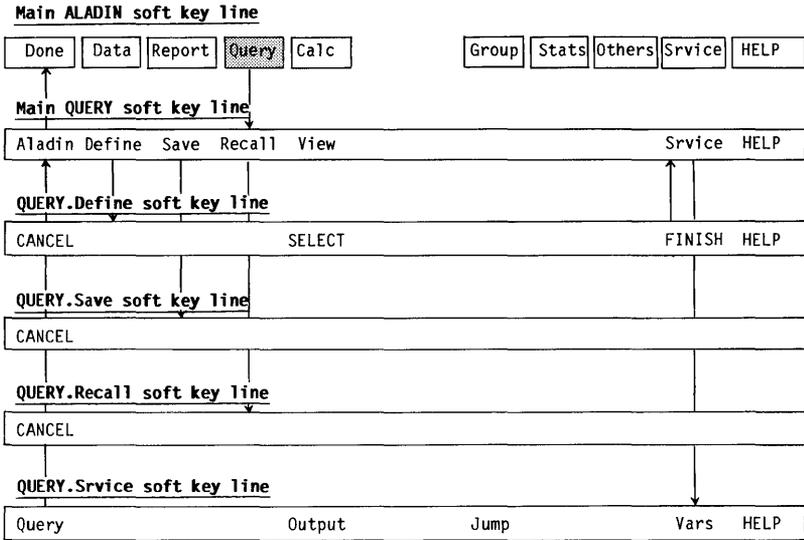
**Fig. IV-5** - The QUERY module soft key line tree.

# Section 5

# THE *QUERY* MODULE

The QUERY module of Aladin lets you set up a "filter" through which data records are screened so that only those matching criteria you select are used. This means that you can ask complicated questions, drawing on information from several fields or files.

The query can be used to screen data going out, i.e., as when generating a report; or when inputting data to make sure that false values are not entered into any field.

Call up the QUERY module by selecting **F4** (Query) from the Main Aladin Menu. The Main QUERY Menu has the following options:

*    Pressing **F2** (Define) allows you to define a query.

*    Pressing **F3** (Save) allows you to save your current query for future use.

*    Pressing **F4** (Recall) allows you to recall a query that was saved to disk, and make it the current query.

*    Pressing **F5** (View) displays a listing of the current query on your screen or printer, or in a diskette file; depending on your Output setting.

As well, you have these options:

*    Pressing **F1** (Aladin) returns you to the Main Aladin Menu soft key line.

*    Pressing **F9** (Srvice) moves you to the Query Service soft key line.

*    Pressing **F10** (HELP) displays a screenful of information on the QUERY module.

## DEFINE - Construct a New Query

### Command Description

Define is the function used to construct a query. Using comparison operators to use the values in each field, and connectors to define how the field will be linked, you build a "filter" through which the data you are entering or taking out is passed.

### User Interaction

**STEP**

> 1)   Press **F2** (Define).

If there is a current definition in memory, Aladin will prompt:

### Discard old definition

After selecting **Define**, the screen will clear and Aladin will display the screen form for your current file. Now you can move the cursor, using the cursor control keys, to a field which you wish to use as part of your query.

**STEP**

> 2)   Place the cursor at the first field you want to include in your definition.
>
> 3)   Press **F5** (SELECT), at two fields to create a comparison.
>
>      Aladin places a caret ( ^ ) in each field and moves to the next field.
>
>                          *OR*
>
>      Enter a value, then press **Rtn**.
>
>      This compares the field to the constant value entered.

On the soft key line appears a list of comparison operators. Please refer to Table IV-D, for a list of these operators and their meanings. Aladin is waiting for you to choose one of the six comparison operators presented.

### Table IV-D
### QUERY COMPARISON OPERATORS

| OPERATOR | EFFECT |
|----------|--------|
| **SKIP** | Cancel the current comparison. |
| = | This tells the query to select **all values** which are equal to the value in the field where the cursor is positioned. |
| <> | This selects all values which are greater or less than the value in the current field. Only the exact value in the current field will not be matched. |
| > | This operator selects all values which are greater than the value in the current field. |
| => | This operator selects all values which are greater than, or equal to, the value in the current field. |
| < | This operator selects all values which are less than the value in the current field. |
| =< | This operator selects all values which are less than or equal to the value in the current field. |

If you press SKIP, the comparison will not take place and it will be as if you had not entered a value in the current field.

You may press **F10** (HELP) to display a summary of the information presented here.

**STEP** (cont)

| |
|---|
| 4) Move the cursor to the next field you want in your query. |
| 5) Press **F5** (SELECT). |
| 6) Select a comparison operator. |
| Aladin now prompts for a definition connector. |

### Table IV-E
### DEFINITION CONNECTORS

| CONNECTOR | EFFECT |
|---|---|
| **AND** | The last two conditions are linked with "and". This means that it is "true" if both conditions are simultaneously met in a data record. |
| **OR** | The last two conditions are linked with "or". This means it is "true" if at least one of the two conditions are met, although both can be met. |
| **XOR** | The last two conditons are linked through the operator "either or". This means it is true when one, but not both, of the two conditions are met. |
| **NOT** | Optional (depending on GL flag). The previous condition must be false. |
| **DEFER** | Groups the value immediately preceeding to the value immediately following, i.e., makes the two values equivalent to a single value. For example, X AND (Y OR Z) is entered: X, Y, DEFER, Z, OR, AND |

**STEP** (cont)

---

7) Choose a definition connector to define the relationship between the two fields in your query.

   If you are on the last field in the screen,

   Aladin will prompt:

   ### Is your definition complete?:

   Otherwise, press **F9** (FINISH).

8) Press **F6** (YES).

   You are returned to the Main QUERY Menu.

   *OR*

   Press **F8** (NO).

   You are returned to the screen form, with the cursor positioned at the next field.

   *OR*

   Press **F7** (File).

   You are given a choice of files to branch to, so that you can continue defining your query using fields from other files.

---

You can define as many comparisons as you wish within the selection criteria before you quit. But if you do use more than one, you must declare how you want them "connected".

Each of the comparisons is known as an "expression", and after you connect two expressions, the resulting combined comparison is also called an "expression". This means that you can continue to connect these expressions to just about any level.

**Parenthesizing Expressions (DEFER)**

If, instead of selecting a connector, you simply press DEFER, Aladin will defer the connection until later. This has the effect of "parenthesizing" the expression that you are building or, in other words, overriding the normal left-to-right expression grouping.

The result is that, after you define your next expression, Aladin will ask twice about how to connect the expressions. Your first answer will refer to the last two expressions and the following answer will refer to the first expression - the one you deferred.

**Using Wildcards within Queries**

Aladin allows you to use the same wildcard characters that were described in the "DATA.Enter" section within a query.

### Table IV-F
### QUERY DEFINITION WILDCARD SYMBOLS

| SYMBOL | MEANING |
|--------|---------|
| ! | Match any single character. |
| # | Match any numeral. |
| $ | Match any alphabetic letter. |
| ? | Match any single or multiple character. |

Thus, if you wanted to find all the car manufacturers whose names begin with "M" you could enter "M?" as your comparison value. This would, if you selected the comparison operator "equal", match any string beginning with the letter M.

Here are some other examples:

**?pin**      key field entry begins with any character order and ends with "pin";

**?a?ri?**    matches a key field entry such as "Ferrari";

**?###?**     key field entry begins and ends any way but must contain three consecutive numerals;

**!###$**     key field entry begins with any character, followed by three numerals and a letter;

If the value that you enter includes a "?", or if it consists only of wildcard symbols, Aladin will allow only the comparisons EQUAL and NOT EQUAL.

Aladin will normally convert all strings into upper case and eliminate blanks when making a string comparison. Thus, "Smithson Ian" is equivalent to "SMITHSONIAN".

### Comparing Fields within a File

The query function offers also the ability to compare two fields within a data record to see, for example, if they are the same or different.

**STEP**

---

1) Position the cursor at the first field to be
   compared.

2) Press **F5** (SELECT).

   Aladin will prompt for a comparison operator.

3) Select an operator.

4) Move the cursor to the next field to be
   compared.

5) Press **F5** (SELECT).

   Aladin will prompt for a comparison operator.

6) Press **Rtn**.

---

### Using the NOT Operator

When you are constructing complex expressions, you may
wish to use an additional operator that is actually "hidden" from
inexperienced users: the NOT operator. This operator has the
effect of "negating" the expression over which it is applied.

For example, if you select cars where the "Manufacturer =
'PORSCHE' " OR "Manufacturer = 'AUDI' ", you could apply
the NOT operator to the combined expression to obtain all cars
that matched the query *except* Porsches and Audis.

You cannot use NOT unless you have first turned on its
"switch" from the Main VARS Menu (see Section 10 - The
CONTROL Functions).

**Using a Query on Input**

Since query definitions can be used either for input or output, you can set them up to restrict the data values that can be entered, if you wish. This will help to avoid certain kinds of input errors.

You can ensure that a "Part Number", for example, must have one of the following formats:

|  |  |
|---|---|
| **$?** | 1st space = letter<br>remainder = any character order (or one character or none) |
| **?#** | the 1st spaces accept every character, the last character must be a numeral. |

$$\$\$/\#\#.\#\#\#$$ 1st & 2nd = letters
  3rd      = /
  4th & 5th = numerals
  6th space = .
  7,8,9th    = numerals

You can also use this technique to ensure that certain data fields are always filled in.

QUERY will then display its main menu.

The selections that you define within QUERY will remain active until you either turn off the IS and OS switches, define a new query, or leave the Aladin system.

**SAVE - Save a Query to a Diskette File for Later Use**

### Command Description

Aladin provides a means for saving a query definition, in case it may be needed in the future. This is done through the Save function, after you have finished creating a query with the Define function.

### User Interaction

#### STEP

```
1)  Press F3 (Save).

    Aladin will prompt:

            Enter file reference name:

2)  Enter a filename of up to 3 characters, then
    press Rtn.
```

Aladin returns to the Main QUERY Menu. The name that you enter will be used in creating the disk filename under which your query will be saved. The exact disk filename depends on the name of your data base as well.

Aladin will create a diskette file which contains your query with a name based upon the reference name you give, as well as the data base name. In other words, if you look at your diskette contents after saving a query, you will not see exactly the same name that you gave as a reference name, but rather something of the form:

<data base name>Q.<reference name>

## RECALL - Retrieve a Query That Was Saved to Diskette

### Command Description

Recall takes a query definition that was saved to a diskette file and makes it the current query.

### User Interaction

#### STEP

> 1) Press **F4** (Recall) from the Main QUERY Menu.
>
> Aladin prompts:
>
> ### Enter file reference name:
>
> 2) Enter the filename, then press **Rtn**.

If you can't remember the filename, use the INFO module to get a list of all the queries you have saved.

If the filename you enter does not correspond to a query that has been saved, Aladin prompts:

### Input file cannot be opened.

#### STEP

> 3) Press **F1** (CONT).
>
> You are returned to the Main QUERY Menu.

If a query was found which matched the filename you entered, it will be loaded into RAM, and the listing of the query definition will be displayed on the screen.

After a query has been loaded into RAM, it is active throughout the system, as if you had just defined it.

## Extending the Current Query

A special case arises if you attempt to recall a query definition when you already have an active query in your system.

Aladiń will prompt:

### Extend definition?

Aladin is asking whether or not you want to add the query definition that you are recalling to the query definition that is already loaded into your computer. If you answer No, the current definition will be discarded, and Aladin wll load the new definition that you specified.

If you answer Yes, Aladin will ask for a connector to join the two definitions.

The ability to extend a query definition is very useful in that it allows you to define several small queries, save them on your diskette, and then put them together in a variety of ways to form more complicated queries. While you could form the complex queries all at once, this is more difficult and increases the possibility for error.

## VIEW - Display the Definition of the Current Query

### Command Description

When Aladin has an active query, you can use View to get a detailed listing of its exact nature. This is useful when you want to check for mistaken, or when you don't remember the contents of a query that has been saved.

### User Interaction

To display the current query:

### STEP

> 1)   Press **F5** (View) on the Main QUERY Menu.

A typical query would be:

> **SPECS:**
> **Manufacturer = 'Volvo'**
> **AND Model = 'DL 145'**
> **AND List Price > '5000'**

## SRVICE - Access Service Control Functions

### Command Description

SRVICE moves you to the QUERY.Srvice soft key line, where you may set the software switches, and redirect the output generated while using the QUERY module.

The commands available are: **Output, Jump, Vars.**

Main ALADIN soft key line

| Done | Data | Report | Query | Calc | | Group | Stats | Others | Srvice | HELP |

Main CALC soft key line

| Aladin Define  Save  Recall  View | Srvice  HELP |

CALC.Define soft key line

| CANCEL | SELECT | FINISH  FIELD |

CALC.Save soft key line

| CANCEL |

CALC.Recall soft key line

| CANCEL |

CALC.Srvice soft key line

| CALC | Input Output | Jump | Vars  HELP |
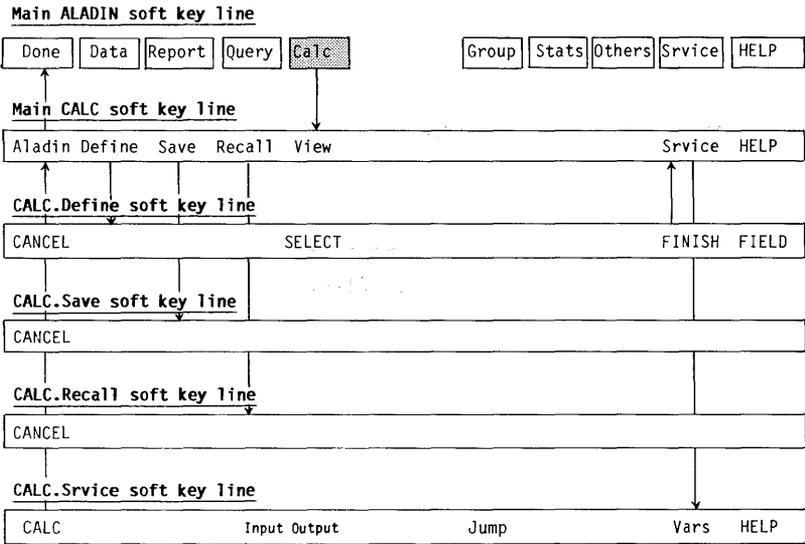
**Fig. IV-6**  -  The CALC soft key line tree.

# Section 6

# THE *CALCULATOR* MODULE

The CALCULATOR module allows you to create your own Aladin "programs" to modify the data within your data base. It may be used in conjunction with the other Aladin modules such as QUERY and REPORT to perform sophisticated manipulations of your data base. To enter the calculator module, press **F5** (Calc) from the Main Aladin Menu soft key line:

Once you have a calculation defined, whether or not it is used at a given point within Aladin, depends upon the "CAL" switch (see Section 10 -- Aladin CONTROL Functions). The "CAL" stands for calculator switch. When it is on the calculation will be used. If it is off the calculation will not be used. From the Main CALC Menu:

* Pressing **F2** (Define) allows you to define a calculation.

* Pressing **F3** (Save) allows you to save the current calculation definition to a diskette file.

* Pressing **F4** (Recall) allows you take a calculation definition from a diskette file and make it the current calculation.

* Pressing **F5** (View) allows you to display a listing of the current calculation

You also have the following options available:

* Pressing **F1** (Aladin) allows you to return to the Main Aladin Menu.

* Pressing **F9** (Srvice) allows you go to go the Calculation Service soft key line.

* Pressing **F10** (HELP) displays a screenful of HELP about the CALCULATION module.

**DEFINE - Define a Calculation**

### Command Definition

Using the Define function, you can create a calculation which can be used to manipulate data which is already present within your relational data base, or to manipulate data which is being entered into the data base.

### User Interaction

To define a calculation:

**STEP**

| |
|---|
| 1) Press **F2** (Define) from the Main CALC Menu soft key line. |

Aladin displays the following commands:

### Table IV-G
### CALC DEFINE COMMANDS

| KEY/LABEL | EFFECT |
|---|---|
| **F1** (CANCEL) | Leave the CALC.Define soft key line and return to the Main CALC Menu. |
| **F5** (SELECT) | Choose a field to be included in your calculation. |
| **F9** (FINISH) | Ends the definition of your calculation. |
| **F10** (FIELD) | Displays the definition of the current field. |

If you have already defined a calculation, then Aladin will ask whether or nor you wish to:

### Discard old definition?

**STEP**

| |
|---|
| 1)   Press **F6** (YES); |
|     This discards the current definition. |
|                   *OR* |
| 2)   Press **F8** (NO). |
|     This would return you to the Main CALC Menu soft key line, from where you could SAVE the current calculation definition. |

Normally, you would answer "yes" and proceed to define a new calculation.

Assuming that you either had no old calculation, or that you wish to discard it if you did, the screen will now clear and Aladin will display the screen form for your current file. The cursor will be positioned at the first field. You are now ready to begin defining your calculation.

This is done in almost the same way as a query. That is, you must select the desired fields from within the screen form or enter constants to be used as operands, then select the operations that you wish to perform.

**STEP**

| |
|---|
| 3)   Position the cursor at a field upon which you wish to calculate. |
| 4)   Press **F5** (SELECT). |
|     Aladin places a caret ( ^ ) in that field. |

Enter a "second operand" by either (a) selecting another field, or (b) entering a constant value such as "25" or "Evelyn". The constant value that you enter must be of the same data type as the field in which you enter it. In other words, you couldn't enter a string such as "Aladin" if the cursor is positioned at a numeric field.

**STEP** (cont)

---

5)   Select a second field by pressing **F5** (SELECT).

Aladin places a caret in the field.

*OR*

enter a constant (and press **Rtn** if constant is shorter than field length).

---

**Table IV-H**
**CALC OPERANDS**

| KEY/OPERAND | FUNCTION |
|---|---|
| **F2** (DEFER) | Groups the value immediately preceeding DEFER to the value immediately following it. This key is used to "parenthesize" formulas. |
| **F5** (STORE) | Save your calculation definition in a disk file. |
| **F6** (ADD) | Add the value in the second field to those in the first field.* |
| **F7** (SUBT) | Subtract the value in the second field from those in the first field.* |
| **F8** (MULT) | Multiply the value in the second field by those in the first field.* |
| **F9** (DIVIDE) | Divide the value in the second field by those in the first field.* |
| **F10** (HELP) | Display a screenful of information on this feature. |

---

\* By "second" and "first" fields, we mean the "field preceeding the operand" and the "field preceeding that field', respectively.

You can repeat these three steps as many times as you wish in order to complete the calculation that you wish to perform upon this file. When you are finished:

**STEP** (cont)

---

6)  Press **F9** (STORE)

Aladin will prompt:

**Is your definition complete?**

---

Note that Aladin will not leave the screen form if there is an intermediate (incomplete) calculation defined.

Aladin is offering you three options:

### Table IV-I
### CALC DEFINITION SOFT KEYS

| KEY/OPTION | EFFECT |
|---|---|
| **F5** (FILE) | The calculation is not complete, but requires fields from another file in your relational data base. You will be given a choice of files to move to, and the definition will continue. |
| **F6** (YES) | The calculation is complete as defined. You will be prompted for a filename to save the definition under. |
| **F8** (NO) | The calculation is not complete. You will be returned to the screen form to continue the definition. |

If you define the calculation over more than one file, this does not mean that using the calculation will always affect both files. It simply means that whichever file you are using will be affected by the appropriate calculation.

**SAVE - Save a Calculation Definition to a Diskette File**

### Command Description

Aladin provides a means to save a calculation for future use through the Save function.

### User Interaction

#### STEP'

---

1) Press **F3** (Save) from the Main CALC Menu soft key line.

   Aladin will prompt:

   **Enter file reference name:**

2) Enter a filename of up to 3 characters, then press **Rtn**.

---

Aladin will create a diskette file which contains your calculation with a name based upon the reference name you give, as well as the data base name. In other words, if you look at your diskette contents after saving a calculation, you will not see exactly the same name that you gave as a reference name, but rather something of the form:

**<data base name>C.<reference name>**

## RECALL - Make a Saved Calculation Definition the Current Definition

### Command Definition

When you want to retrieve a calculation that you have previously defined and saved, you can use the Recall function.

### User Interaction

#### STEP

> 1) Press **F4** (Recall) from the Main CALC Menu.
>
>    Aladin will prompt:
>
>    **Enter file reference name:**
>
> 2) Enter the calculation name, then press **Rtn**.

If you change your mind and don't want to recall a file, just press **Rtn** or **Cancel**.

If you can't recall the filename, use the INFO module to list the names of saved calculations.

When you enter a valid reference name for a calculation, Aladin will display the format of that calculation.

If you entered an incorrect reference name you will be given the message:

**Input file cannot be opened.**

If a calculation is defined when you press **Recall**, Aladin will first ask:

## .Extend definition?

Aladin is asking whether or not you want to add the new calculation that you are going to recall to the current calculation. If you answer yes, you will see that the resulting calculation includes both the original one and the new one.

The ability to build calculations from smaller calculations is very useful. With it you can define a number of smaller operations and combine them in a variety of ways to produce new and larger operations. The new calculations can, of course, be saved and recalled just like their component parts.

## VIEW - Display the Listing of the Current Calculation.

### Command Description

When you have defined a calculation you can use the View function to get a detailed listing of the calculation. If no calculation has been defined, then View will do nothing. Otherwise you will see a list of the statements within the calculation.

### User Interaction

#### STEP

> 1)   Press **F5** (View).

Aladin will display the listing for the current calculation definition.

### SRVICE - Access Service Control Functions

The CALC.Srvice soft key line allows you to redirect Aladin's output, jump to other files, and set the software switches. Refer to Section 10 - The Control Functions, for more information.

The commands available are: **Input, Output, Jump, Vars.**

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc |  | Word | Info | Others | Srvice | HELP |

**Main WORD soft key line**

| CANCEL |
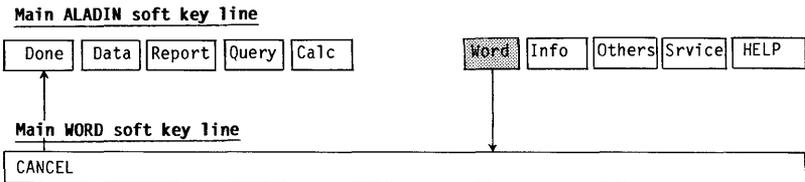
**Fig. IV-7** - The WORD module soft key line tree.

# Section 7

# THE *WORD PROCESSING* MODULE

## 7.1    BRIDGE TO WORD PROCESSING SYSTEMS

Aladin's WORD PROCESSING module is provided as a bridge between your relational data bases and IN:SCRIBE, or any other word processor you may have. It allows you to prepare form letters, reports, even mailing labels, on a mass production basis.

It is in many ways similar to the REPORT module. The main difference is that whereas you define report formats interactively, you must use an external word processor to create the files for the WORD PROCESSING module.

This is most convenient for form letters, of course. You can continue to use REPORT for generating most kinds of reports from your data base.

## 7.2    FILE AND FILENAME CONVENTIONS

In order for Aladin to match its data to your word-processed documents, it looks for a significant character in the document which tells Aladin that the next word is the field name from which data is to be taken. Following the field name is a second occurance of the same character, which ends the definition of where the data from the field should go.

```
                          @?Date@



@First  Name@ @Last_Name@
@Street Address@
@City@, @State/Prov@
@Zip/Postal_Code@

Dear Mr. @Last_Name@,

        Thank you for your order of @Date_Ordered@ for
@Quantity@ @Product_Description@s.  Due to the unexpected
demand for the @Product_Description@, we regret that we will
be unable to ship your order until @Ship_Date@.

        Please let us know if this present any undue
difficulties.
                        Sincerely,



                        R. Beck
```

**Fig. IV-8** -  A sample letter, ready to be used by the WORD
PROCESSING module.

The significant character is the "at sign" (@). Each pair of "@" 's delimits the area into which data is to be entered:

**@name@**

will be processed as:

**Nihmey**
**Peterson**
**Vasdi**

plus the other "name" 's from within the NAME field in the current Aladin file.

Fig. IV-8 displays a sample letter, showing the placement of data from a file.

Note the space occupied by the "@" is not used when Aladin inserts data. Therefore, you must account for the extra 2 characters for each pair of "@" 's.

After you have created your text file, you must use a particular filename extension when you save it. When the file is called up via the WORD PROCESSING module, Aladin will look for this particular extension.

The file format for WORD PROC is **??.???** which gets appended to the data base name. Avoid using **G.???, S.???, R.???** or **Q.???** to avoid conflicts with other Aladin files.

Entering @?prompt@ in a word-processed document allows you to enter other information which may not be in your data base. For example, @?Date of letter@ will prompt "Date of letter>" and wait for a character string to substitute for the prompt.

## 7.3    COMBINING TEXT FILES WITH ALADIN DATA

### User Interaction

Before actually merging your data and the word processed document, you must perform these tasks:

In addition, you may

a)   define the current file from which Aladin will pull the data required by the document.

b)   define a query (Section 5),

c)   direct the output to your printer (Section 10),

**STEP**

---

1)   Press **F3** (Query), from the Main Aladin soft key line.

2)   Press **F2** (Define).

---

...continued

Following the procedures outlined in Part IV, Section 5, define a query which produces the records you require for your word processed document. That is to say, your query will produce a set of records which conform to the audience for your document.

When you have finished defining the query, you will be returned to the Main Aladin Menu and soft key line.

**STEP** (cont)

---

3) From the Main Aladin Menu soft key line, press **F9** (Srvice).

4) Press **F5** (Output).

   A choice of output directions is displayed on the soft key line.

5) Press **F5** (PRN).

---

**PRN** is the Hyperion DOS convention for the line printer. Your printer should be hooked up to the Hyperion, and turned on. If required, a print filter should be in place. (See the **Hyperion User Guide**).

Aladin returns to the Main Aladin Menu and soft key line.

**STEP** (cont)

| |
|---|
| 6) Press **F9** (Others) from the Main Aladin Menu soft key line. |
| 7) Press **F6** (Word).<br><br>Aladin will prompt:<br><br>**Enter file reference name:** |

The filename which you enter here should follow the convention described in the previous section. If it does not follow the convention, or if it is not present on your data diskette, Aladin displays this error message:

**Input file cannot be opened**

**STEP**

| |
|---|
| 8) Enter the filename you have assigned, then press **Rtn**. If you have included a prompt string, Aladin will ask for the required information. |
| 9) Enter the data required for the prompt, then press **Rtn**. |

Aladin now processes the word processed document, matching each set of fields produced by the query to the fields delimited by "@" 's in the document.

You can halt the processing by pressing **F1** (CANCEL). You may also interrupt the processing with the **F9** (PAUSE) and resume by pressing **F9** a second time.

While it is possible to run your word processing file directly to your printer, you may wish to send it to another diskette file. This allows you to create pages which you can insert into other reports or documents you may be creating.

When you are selecting your output direction, instead of choosing **CON**:

**STEP** (cont)

| |
|---|
| 10)   Press **F3** (File). |
|         Aladin will prompt: |
|                 **Output destination.file:** |
|                 **enter file reference name** |
| 11)   Enter a filename, then press **Rtn**. |

Choose a name that is no more than eight (8) characters in length.

When Aladin creates a file for output, it automatically adds the drive designation. Note that this file will be created and saved on the data diskette.

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc | | Group | Stats | Others | Srvice | HELP |

**Main GROUP soft key line**

| Aladin Define  Save  Recall  View | Srvice  HELP |

**GROUP.Define soft key line**

| CANCEL | SELECT | SHOW  FINISH  FIELD |

**GROUP.Save soft key line**

| CANCEL |

**GROUP.Recall soft key line**

| CANCEL |

**GROUP.Srvice soft key line**

| Group | Output | Jump | Vars  HELP |
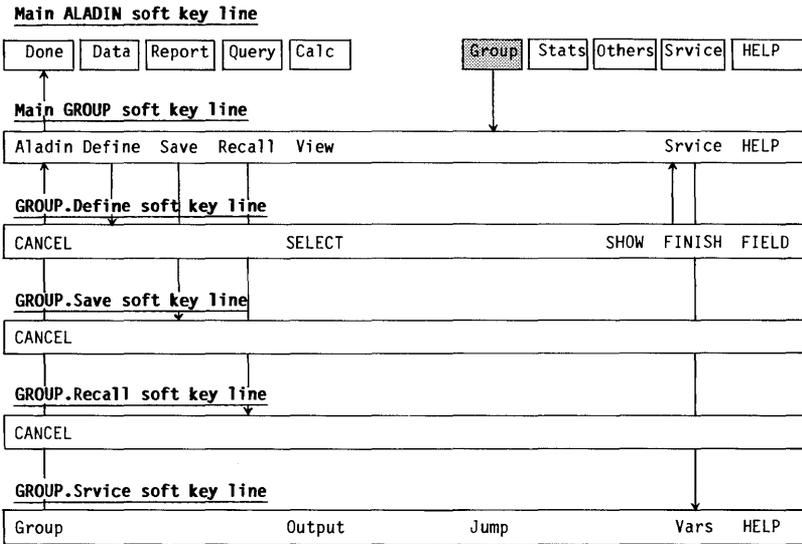
**Fig. IV-9**  -  The GROUP module soft key line tree.

# Section 8

## THE *GROUP* MODULE

Aladin's GROUP module is used with the STATISTICS module to prepare statistical reports based upon whatever grouping of the records in your data base that you desire.

Enter the GROUP module by pressing **F6** (Group) from the Main Aladin menu and soft key line.

The GROUP module has 4 commands:

*   Pressing **F2** (Define) enables you to define a group for statistical evaluation purposes.

*   Pressing **F3** (Save) enables you to save a defined group to a diskette file.

*   Pressing **F4** (Recall) enables you to recall a saved group definition from diskette, and make it the current group.

*   Pressing **F5** (View) enables you to display a listing of the current group.

The GROUP soft key line also offers these choices:

*   Pressing **F1** (Aladin) returns you to the Main Aladin Menu soft key line.

*   Pressing **F9** (Srvice) display the Group Service soft key line.

*   Pressing **F10** (HELP) displays a screenful (or more) of information on the GROUP module.

Suppose, for example, you have a data base containing information about various companies, and you wish to prepare a statistical report on the distribution of these companies by number of employees. You will need to define a classification scheme (or "grouping table") that establishes some categories for the companies, such as "10 or fewer", "11 to 25", "26 to 50", etc. With the GROUP module, you can establish up to 128 such categories, which are then used by the STATISTICS module to classify your data records.

You will find it easier to use the GROUP module if you keep in mind the following strategy. Define your groups first. A group table may consist of several groups and each group can consist of several ranges of values or sets of values. A group can apply to one or more fields and a field may have zero or more groups.

**Note:** Since the STATISTICS module requires group definitions, the groups which you define should be saved for future use.

## DEFINE - Create a Group (Table) Format for the Statistical Evaluation of Data

### Command Definition

If your data is "pre-grouped", then you may not need to use the GROUP module. However, most data should be divided into certain classifications or "groups" for convenient statistical analysis. The Define function allows you to create these groups.

### User Interaction

**STEP**

1) Press **F2** (Define) from the Main GROUP Menu.

   If a grouping table has already been defined, Aladin will prompt:

   **Discard old definition?:**

2) Press **F6** (YES).

   The old definition is discarded, and the new grouping table you define will supersede it.

   *OR*

   Press **F8** (NO).

   The old definition is preserved, and you can add to it by defining additional groupings.

Aladin will display the screen form for the current file, within which you can move the cursor to the field or fields on which you wish to define your groups.

**STEP**

3) Move the cursor to the field you wish to use as a grouping field.

**STEP** (cont)

| |
|---|
| 4)    Select the field by pressing **F5** (SELECT). |

You have chosen the first field that you wish to group your data by. The next step is tell Aladin how to break down the data within that field.

There are two types of values that Aladin can group by: discrete values, and ranged values. A discrete value which can be expressed alphabetically, e.g., a name or part number which uses characters.

Aladin is now prompting:

> **Grouptable: <field name>**
> **Group 1: .............**

**STEP**

| |
|---|
| 5)    Enter a discrete value, or the minimum value for the first range of values, and press **Rtn** if value does not fill field. |
| 6)    Aladin prompts: |
| **to .............** |
| 7)    Enter the maximum numeric value for this range, or, for discrete values, press the **left arrow** key to continue and leave this field blank. |

**NOTE:** It is important, while entering a group table, to pay attention to which keys you press, since they will have quite different effects.

### Skipping a Field

For example, if you wish to skip entering an item into a group do NOT press **Rtn**. That would cause a blank item to be entered into the group table.

Instead you must use the left arrow key. The left arrow key will skip to the next item but keep you within the same group, unless you do it to the first item of an interval (range), in which case it will skip automatically to the next group.

Aladin will ask again for a base value for Group 1, since a group can be made up of several discrete values or of several intervals.

When you are finished defining a particular group:

**STEP**

| |
|---|
| 1)   Press the **left arrow** key. |

Aladin will move on to the next group. When you have no more groups to define, press the left arrow key again and Aladin will return to the screen form so that you can specify additional fields for grouping.

Notice that there is an 'R' visible within the field contents for the last field defined.

This means that a **"reference grouping"** has been assigned to this field. A reference grouping is simply a means whereby the same groupings can be shared between several fields, instead of having to be redefined. If, now, you wish to define a grouping to be the same as the grouping just defined, all you need to do is to move the cursor to the new field and press **F3** (SETREF) instead of **F5** (SELECT).

If you wish to refer to a previously grouped field that is no longer designated by "R" because it has been SETREF, simply move the cursor to that field and press **F4** (REFER) to make that group the reference for the next SETREF request. You have now manually designated that field to be the reference grouping. You can now proceed to another field and use the reference by pressing S.

For a reference grouping to work properly it is important that the two fields be of the same data type. If they are not, you will see this message on the bottom of the screen:

**Reference is for wrong data type:**

When you have finished defining your groupings, leave the screen form by pressing FINISH.

## SAVE - Save a Defined Group

### Command Description

When you have defined a grouping that seems satisfactory, you should save it for use by the STATISTICS module. This is accomplished through the Save function.

### User Interaction

**STEP**

1) Press **F3** (Save), from the Main GROUP Menu soft key line.

   Aladin prompts:

   **Enter file reference name >**

2) Enter a filename of up the 3 characters, then press **Rtn**.

This name is for use both by the STATISTICS module and for recall of the group definition by the GROUP module. It is used to construct a disk file name when Aladin saves the definition on your disk.

The disk file thus created will be of the form:

**<Database name>G.<reference name>**

For example, if your data base is "CAR" and you saved your group definition as "GAG" then the resulting disk file will be called "CARG.GAG".

**NOTE:** It is very important to save your group definitions. Unlike the REPORT, CALC and QUERY modules which can keep their definitions in your computer's memory, the group definition must be recalled from disk when it is used by the STATISTICS module.

## RECALL - Retrieve a Saved Group Definition

### Command Description

If you wish to change or examine a grouping that you have already defined and saved, you can use the Recall function.

### User Interaction

#### STEP

1) Press **F4** (Recall).

   Aladin will prompt:

   **Enter file reference name:**

2) Enter the reference name, then press **Rtn**.

   (The reference name must be a maximum of 3 characters.)

Aladin will recall the group definition, just as you defined it.

## VIEW - Display the Definition of a Group

### Command Description

Use View when you wish to review the grouping that you have defined. The View function will cause the currently defined grouping to be displayed on your output device (usually the screen).

### User Interaction

#### STEP

> 1)  Press **F5** (View).

Aladin displays the current group definition.

This is useful if you cannot remember the precise nature of a grouping that has been saved, or to check your definition for correctness.

## SRVICE - Access Service Control Functions

### Command Description

SRVICE moves you to the GROUP.Srvice soft key line, where you may set the software switches, and redirect the output generated while using the GROUP module. Refer to Section 10 -- The Control Functions.

The commands available are: **Input, Output, Jump, Vars.**

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc | | Group | Stats | Others | Srvice | HELP |

**Main STATISTICS soft key line**

| Aladin | Define | Save | Recall | View | | Eval | | | Srvice | HELP |

**STATISTICS.Define soft key line**

| CANCEL | ACCUM | FREQ | GROUP | UGROUP | | SINGLE | HORIZ | VERT | FINISH | FIELD |

**STATISTICS.Save soft key line**

| CANCEL |

**STATISTICS.Recall soft key line**

| CANCEL |

**STATISTICS.Srvice soft key line**

| Stats | | Output | | Jump | | Vars | HELP |

**Fig. IV-10** - The STATISTICS module soft key line tree.

# Section 9

# THE *STATISTICS* MODULE

Aladin's STATISTICS module enables you to derive a number of standard statistical measures from your data base. It even allows you to perform certain arithmetic calculations.

Enter the STATISTICS module by pressing **F7** (Stats) from the Main Aladin Menu.

The STATISTICS soft key line has the following commands:

\*      Pressing **F2** (Define) allows you to define the statistical evaluations you wish to perform.

\*      Pressing **F3** (Save) allows you save the definition of the statistical evaluation.

\*      Pressing **F4** (Recall) allows to recall an evaluation which had been previously defined and saved.

\*      Pressing **F5** (View) allows you to display on your output device the listing of the statistical evaluation.

\*      Pressing **F6** (Eval) allows you to perform the actual statistical evaluation of your data.

The following soft key functions are also available:

\*      Pressing **F1** (Aladin) returns you to the Main Aladin Menu soft key line.

\*      Pressing **F9** (Srvice) moves you to the Statistical Service soft key line.

\*      Pressing **F10** (HELP) displays information on the STATISTICS module.

## 9.1   STATISTICAL EVALUATIONS

The statistical evaluations available include frequency distributions in several dimensions, as well as the standard correlation and significance tests.

These can be used to determine, for example, if there is a correlation between the price of a car and how fast it goes. Or if there is a relationship between someone's age, income, and the car they purchase.

In businesses, Aladin's STATISTICS module could be used for evaluating returns on investment or to produce marketing and sales analysis reports.

Each of these functions is described in their respective sections following the usage section below.

### Usage of the STATISTICS Module

The basic strategy for Aladin's STATISTICS module is to first define a statistical evaluation using the Define command and then to actually perform the evaluation using the Evalulate command.

When you evaluate your data, Aladin will ask you for the reference name for a predefined group table (see Section 8). The difference between grouped and ungrouped data is described below. In general you will need to use a group table with your statistical evaluations.

When the results of the statistical evaluations are displayed on your screen you can, if you choose, direct them to your printer or to a disk file using the Output Srvice control option.

Note that the results of the evaluation can only be displayed following an evaluation request.

### "Grouped" vs. "Ungrouped" Data

Aladin can perform these statistical evaluations either with or without grouping the data. This "grouping" process is described in detail in Section 8. Briefly, it means that you can set up "categories" for your data, and then look at your statistics in terms of these categories.

For example, suppose you want to look at the prices of automobiles. If you want to produce, say, a histogram, it would make the most sense if the data were organized into groups that each cover a particular price range: say $1-5000, $5001-8000, $8001-$10000, $10001-$15000, etc.

But if, instead of actual prices, your data contains a "price code" that already specifies what price range the car falls into, you do not need make a group table: your data has been grouped already.

When you define your statistical analysis, Aladin allows you to specify whether or not you wish to use groups. Just remember that before you can use groups, you must first define a grouping table using the GROUP module.

### Frequency vs. Summation

The usual "evaluation mode" for producing statistics is called "frequency analysis". This means that Aladin evaluates the number of occurrences (frequency) of each distinct value within a field. Usually, a range of values or several distinct values are grouped together to make the results easier to interpret. The result could be, say, a histogram showing the number of automobiles in each of several categories.

However, Aladin also offers the summation evaluation mode. In this mode, Aladin will simply examine all the values in a particular field and report the total, the maximum and minimum values, and the mean value.

For example, you use summation analysis to find out the total value of a number of invoices.

Note: the summation mode should be used only with ungrouped data, otherwise the results will be difficult to interpret.

### Single and Multi-Dimensional Statistics

With Aladin it is possible to produce statistics based upon either the evaluation of a single data field (a "single-dimensional" statistic) or the correlation of two or more fields (a "multi-dimensional" statistic).

Note: These statistics are for use with Aladin's "frequency analysis" evaluation mode, not with the "summation analysis" mode.

The single-dimensional evaluation will give you simply an analysis of how your data is distributed over the various categories (either with or without groups, as you prefer). In other words, Aladin will show you "how many" of the records that were checked fall into each category. Graphically, this will produce a histogram.

Aladin can also correlate one field against another: a "two-dimensional" evaluation. In this case, Aladin will show you the distribution of records according to two different sets of categories.

For example, out of, say, 15 automobiles in the price category $5000-8000, we might find that 5 of them had less than 90 Horsepower, 8 of them had 90 to 120 Horsepower, and 2 of them were capable of more than 120 Horsepower. Graphically, this would produce a table showing price category along one axis and Horsepower category along the other axis.

But Aladin is also capable of producing "n-dimensional" evaluations, where the distribution of records is evaluated between three or more sets of categories. While this is harder to visualize, it is simply a continuation of the idea of a "distribution table".

**DEFINE - Define the Statistical Evaluation
to be Performed**

## Command Description

The Define function is used to establish just what statistical evaluations you wish to perform.

## User Interaction

### STEP

> 1)  Press **F2** (Define), from the Main STATISTICS Menu.
>
> Aladin will display the screen form for the current file.

If you have activated a query selection criteria, Aladin will ask you whether or not you want it to be used while performing the statistical evaluation.

### Do you want to use your QUERY?

If you answer **F6** (Yes), the data being used by the chosen evaluation will be screened by the current query. If you answer **F8** (No), the evaluation will use all the data in your relational system.

### Grouped and Unngrouped Modes

During the definition of your statistical evaluation, you can switch back and forth between "grouped" and "ungrouped" evaluation modes. This may be done at any time simply by pressing the **F4** (GROUP) or **F5** (UGROUP).

The current mode will then be shown in the lower left corner of your screen. The default mode is shown as "(**F,G**)" for "frequency, grouped".

```
CAR.SPECS (CONSOLE:,CONSOLE:) (---)                    Data.View
================================================================================
                    Manufacturer: _____

                    Model:_____

    Horse_Power_in_PS: ____                Volume_of_Engine_in_CM: ____

    Maximum_Speed_in_MPH: ___      Acceleration_time_from_0_to_60: ____

    Fuel_Consumption_City_Highway_HS: ___  ___  ___        Gasoline_Type: .

    Five_Gear_Model_Available: .    Automatic_Transmission_Available: .

    Number_of_Doors: .                       Sun_Roof_Available: .

    Colors_Available: ..........  ..........  ..........  ..........
                      ..........  ..........  ..........  ..........
                      ..........  ..........


                    List_Price: _____
================================================================================

CANCEL  ACCUM  FREQ   GROUP  UGROUP   12:11  SINGLE HORIZ  VERT  FINISH FIELD
```

**Fig. IV-11**  -  Sample screen for a statistical definition.

For a **one-dimensional evaluation** of a field:

**STEP**

---

1) Move the cursor to the desired field.

2) Press **F6** (SINGLE).

---

This tells Aladin to evaluate the frequency distribution of the values in this field, according to the grouping table, which you will specify later. Remember that Aladin's default modes are "frequency, grouped".

Fig. IV-10 shows what the screen might look like after pressing SINGLE for a single dimensional statistic. Note the figures on the bottom of the line after the "(F,G)".

The number 1 to the left of the colon indicates that this is the first statistic that you have requested. As you press SINGLE, HORIZ or VERT repeatedly, you will see that the number increases by one for each instance.

The number to the right of the $ is an indication of your available memory space within the Hyperion. You will see it decrease as you define additional statistical evaluations.

For a **two-dimensional evaluation**:

**STEP**

> 1)  Move the cursor to the desired field.
>
> 2)  Press **F7** (HORIZ) to make the field your horizontal axis;
>
> <div align="center">*OR*</div>
>
> Press **F8** (VERT) to make the field a vertical axis.

Remember that you can control whether or not the data is to be grouped by pressing **F4** (GROUP) or **F5** (UGROUP) at any time. Also, the evaluation may be done by **F3** (FREQ) or by (ACCUM).

To do an **accumulation analysis** on a field:

**STEP**

> 1)  Move the cursor to the desired field.
>
> 2)  Press **F5** (UGROUP).
>
> 3)  Press **F2** (ACCUM).

When a field is selected for accumulation evaluation, Aladin will switch from the "frequency" to the accumulation evaluation mode. This is reflected in the symbols at the lower left of the screen where the "A" will now appear instead of the "F".

If you want to produce multi-dimensional evaluations, there are a number of ways to do it. Basically, all you need to do is to combine several fields of one axis with one or more fields of the other axis. Of course, the notions of "horizontal" and "vertical" are no longer apt when we are speaking of three or more axes. Nevertheless, to display the resulting information graphically, it is necessary to consider some of these axes as being "horizontal" and some as "vertical".

For example, "HVVV" (on four different fields) will evaluate three fields vertically against one field horizontally.

Another method is to first define several fields for a particular axis, followed by some number of fields for the other axis. For example, you could specify three different fields for the horizontal (by typing "HHH" as you move the cursor to the fields you want) and four different fields for the vertical (with "VVVV"). This would produce twelve separate analyses (3 "H" times 4 "V") in addition to a multi-dimensional correlation report. Define horizontal axes before vertical axes.

To complete your statistical evaluation definition:

**STEP**

```
1)   Press F9 (FINISH).

     Aladin will prompt:

            Is your definition complete?

2)   Enter F6 (YES) or F8 (NO).
```

Aladin will return you to the Main STATISTICS Menu soft key line.

**SAVE - Save a Defined Statistical Evaluation to
a Diskette File**

## Command Definition

After you have defined a statistical evaluation (as de-
scribed in the preceding section) you can save it for later use
through use of the Save function.

## User Interaction

### STEP

| |
|---|
| 1) Press **F3** (SAVE).<br><br>Aladin will prompt:<br><br>       **Enter file reference name:**<br><br>2) Enter a filename (3 or fewer characters), then press **Rtn**. |

Aladin will save your evaluation in a file on your data
disk. The file name will be constructed from the name of the
relational system and the filename you gave. The disk file name
will be of the form:

**<data base name>S.<reference name>**

So, if you wish to give a reference name of "Pen", Aladin
will save your statistical analysis definition as CARS.PEN.

**RECALL - Take a Defined Statistical Evaluation
and Make it the Current Evaluation**

## Command Description

Use the Recall function when you wish to recall an evaluation that has been previously defined and saved.

## User Interaction

### STEP

---

1) Press **F4** (Recall) from the Main STATISTICS Menu.

Aladin prompts:

**Enter file reference name:**

2) Enter the name you specified when the evaluation was saved (3 characters or less), then press **Rtn**.

---

The named evaluation becomes the current evaluation. Notice how the monitors at the corners of the screen change as the new evaluation becomes current.

**VIEW - Display the Listing for the Current Statistical Evaluation**

## Command Description

This function simply displays the currently defined statistical evaluation.

## User Interaction

### STEP

> 1) Press **F5** (View) from the Main STATISTICS Menu.

The current statistical evaluation is displayed on the Hyperion's screen, or on the printer, or into a diskette file; depending on the output direction.

## EVAL - Perform the Current Statistical Evaluation

### Command Description

When you have completed the definition of your statistical evaluation, the Evaluate function will perform the actual processing of your data and generate your reports.

### User Interaction

#### STEP

---

1) Press **F6** (Eval) from the Main STATISTICS Menu.

   Aladin will prompt:

   **Grouptable: Enter File reference name>**

2) Enter the Group Table name that you had defined in the GROUP Module (3 characters or less), then press **Rtn**.

---

...continued

Your grouping table must match the data file that you are attempting to evaluate, otherwise Aladin will not perform the evaluation.

Normally, all fields that you are evaluating must be defined in the group table, whether the evaluations are grouped or not.

If all your evaluations are for numeric fields and are ungrouped, you do not have to specify a grouping table. Simply press **Rtn** when asked for the group table.

After you give the name of the grouping table, Aladin will examine the records in your data base and tabulate the data values according to whatever evaluations you defined. During this process, which can take some time if your data base is large, Aladin will display at the bottom of the screen the names of the records as they are examined.

When the tabulation of your data is completed, Aladin will ask you to choose one of the display modes:


### Table IV-J
### STATISTICS DISPLAY MODES

| DISPLAY MODE | EFFECT |
|---|---|
| **F6** (ABS) | The evaluation results are displayed in terms of numerical absolutes, i.e., the aggregate numbers of records that have fallen into the various categories. |
| **F7** (PRCENT) | The evaluation results are displayed as percentages of the "statistical universe", i.e., a percentage of the total number of records evaluated. |
| **F8** (GRAPH) | Your results will be displayed in various graphic forms. The graph used depends on the nature of the evaluation. For example, a single-dimensional evaluation produces a histogram, a two-dimensional evaluation produces a scatter-gram, and multi-dimensional evaluations produce certain bar charts. |


When the first table is complete, three soft key labels are added to the soft key line: **F2** (PREV), **F3** (NEXT) and **F9** (UNIV). Press **F3** (NEXT) or **Rtn** to continue with the next table, or press **F2** (PREV) to redo the previous table.


**Percentage Base Value**

It is possible to change this base value through use of the **F9** (UNIV) function key.

For example, suppose that there are 200 records in a data base, but only 117 of them were evaluated (the others either had no data in the relevant field, or were excluded by a query selection). Aladin will use this 117 as the "statistical universe" or base when it computes the percentages that fall into each category. But you may wish to express the percentages in terms of your entire data base, that is, over the full 200 records.

**STEP** (cont)

> 3)   Press **F9** (UNIV).
>
>      Aladin prompts:
>
>      **Base 100 Percent >**

The system is asking you to redefine the current statistical universe.

**STEP**

> 4)   Enter the number of records you wish to use for the new base, then press **Rtn**.

...continued

You can use this procedure to restore the original base value, or to use yet another value.

Note that you must enter some numeric quantity in response to this question. Simply pressing **Rtn** will not suffice.

### Printing Your Statistics

You can print your statistical evaluation (or direct it to a disk file) by redirecting Aladin's output.

If the output is redirected, Aladin will prompt:

### Table Selection?

**STEP** (cont)

---

6) Press **F6** (YES)

Aladin will pause between tables.

7) Press the **spacebar**.

Aladin will print the next table, then wait for you to press the spacebar again.

*OR*

Press **F8** (NO).

All tables are printed at once.

---

## SRVICE - Access Service Control Functions

### Command Description

SRVICE moves you to the STATISTICS.Srvice soft key line, where you may set the software switches, and redirect the output generated while using the STATISTICS module. Refer to Section 10 - The Control Functions.

### User Interaction

#### STEP

> 6)    Press **F9** (SRVICE)

The STATISTICS.Srvice soft key line offers you the following choices:

*       Pressing **F1** (Stats) returns you to the Main STATIS-TICS Menu soft key line.

*       Pressing **F5** (Output) allows you to direct Aladin's output to a different device.

*       Pressing **F6** (Jump) allows you a key field to move to another file within your relational system.

*       Pressing **F9** (Vars) allows you to set the software switches.

*       Pressing **F10** (HELP) displays a screenful of information about the STATISTICS module.

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc | | Group | Stats | Others | Srvice | HELP |

**ALADIN.Srvice soft key line**

| Aladin Screen | Input Output | Jump | Vars | HELP |

**DATA.Srvice soft key line**

| Data | Screen | Input | Output | Jump | Vars | HELP |

**REPORT.Srvice soft key line**

| Report | Output | Jump | Vars | HELP |

**QUERY.Srvice soft key line**

| Query | Output | Jump | Vars | HELP |

**CALC.Srvice soft key line**

| Calc | Output | Jump | Vars | HELP |

**GROUP.Srvice soft key line**

| Group | Output | Jump | Vars | HELP |

**STATISTICS.Srvice soft key line**

| Stats | Output | Jump | Vars | HELP |

**INFO.Srvice soft key line**

| Info | Output | Vars | HELP |

**VARS Software Switches soft key lines**

| Menu | OUTQU | INQU | DUPKEY | DIRSRT | ABSPOS | Others | HELP |
| Menu | GLOBAL | NOTQU | SAVE | INFO | CALC | Others | HELP |

**Fig. IV-12** - The CONTROL function soft key lines.

# Section 10

# THE CONTROL FUNCTIONS AND SWITCHES

At any given time during the execution of Aladin, there are two soft key labels: **Srvice** and **Vars**, which may or may not be present on the soft key line.

These are Aladin's "hidden" commands, called CONTROL functions. They are called CONTROL functions, because they help you to "control" your Aladin session.

## 10.1 THE CONTROL FUNCTIONS

When accessed by pressing the Srvice soft key, the control functions are:

* **Output** controls the destination to which Aladin's output is sent.

* **Input** controls the source from which Aladin receives data and commands.

* **Screen** sets the contrast between the screen form and the data displayed in the form.

* **Jump** allows you to branch to another file within your relational system data base.

* **Vars** allows you to set Aladin's software switches.

### Table IV-K
### SOFTWARE CONTROL FUNCTIONS

| FUNCTION | EFFECT |
|---|---|

**Output**    Select the Aladin output device. Aladin will offer the choices:

|  |  |  |  |  |
|---|---|---|---|---|
| **F1** | **F2** | **F3** | **F4** | **F5** |
| **Menu** | **CON** | **File** | **Script** | **PRN** |

This function allows you to choose whether Aladin's reports and certain other output will be simply shown on your terminal's screen, saved in a disk file or printed.

**Input**    Select the Aladin input device. In this case, Aladin will offer the choices:

|  |  |  |  |
|---|---|---|---|
| **F1** | **F2** | **F3** | **F4** |
| **Menu** | **CON** | **File** | **Script** |

The normal way of entering information into Aladin is simply through your terminal's keyboard, but you may have information saved in a disk file that you wish to use.

**Screen**    Set the contrast between the forms that Aladin uses and the data within the forms.

**Jump**    "Cross-Over" to another data file. This can be used either from a menu line within the DATA routine or from a key field within a screen form. Note that if more data files exist than can be printed in a single menu line, Aladin will show as many as it can. You can view the additional files by pressing **F3** (MORE). If MORE is pressed, and there are no additional files to be viewed, the request is cancelled.

## Table IV-K (cont)
## SOFTWARE CONTROL FUNCTION

| FUNCTION | EFFECT |
|----------|--------|
| **Vars** | Set any of Aladin's "software switches". There are a number of these "switches" that can be turned on or off. Aladin will display them all, along with with their current value, in a menu line. See Section 10.2 |

## OUTPUT - Select the Output Device

### Command Description

Output defines where Aladin will send its commands and data to.

### User Interaction

#### STEP

> 1) Press **F9** (Srvice).
>
> 2) Press **F5** (Output).
>    Aladin will prompt:
>
>    ### Output Destination

This function allows you to choose whether Aladin's reports and certain other output will be simply shown on your terminal's screen, saved in a disk file or printed.

#### STEP

> 3) Press **F2** (CON).
>    Aladin's output is displayed on the Hyperion's screen. This is the normal mode of operation.
>
>    *OR*
>
>    Press **F3** (File).
>    Aladin's output will be sent to a diskette file.

**STEP** (cont)

---

Aladin prompts:

**Enter file reference name:**

Enter a three character file reference name, then press **Rtn**.

*OR*

Press **F4** (Script).

Like File, Aladin's output will be sent to a diskette file, but this file can be used as a "script" to program Aladin to repeat certain tasks.

Aladin prompts:

**Enter file reference name:**

Enter a filename, then press **Rtn**.

---

The Output function can be used where Aladin is producing information, i.e., REPORT, STATISTICS, CALCULATE. The Output direction can be set and reset many times during the operation of Aladin.

## INPUT - Select the Input Device

### Command Description

Input allows Aladin to accept commands and data from other sources besides the keyboard.

### User Interaction

#### STEP

---

1) Press **F9** (Srvice).

2) Press the soft key labelled **Input**.

Aladin prompts:

**Input Source**

---

The soft key line changes, presenting you with a choice of possible source for input to Aladin.

#### STEP

---

3a) Press **F2** (CON).

*OR*

---

Aladin will accept input only from the keyboard of your Hyperion. This is the method of input which you will be using most often.

**STEP** (cont)

---

   3b)   Press **F3** (File).

       Aladin prompts:

           **Enter file reference name:**

       Enter a name which you have saved an input
       source file under, and press **Rtn**.
                  *OR*

---

Aladin will now accept input from the named text file. As mentioned in Section 19 - Merging Data Files, this file must be properly setup, i.e., the data in the file must be arranged in the same way that the data is laid out in the data base. Read Section 17 for more information on this subject.

**STEP**

---

   3c)   Press **F4** (Script).

       Aladin will prompt:

           **Enter file reference name:**

       Enter a name which you have saved a script
       file under, and press **Rtn**.

---

Aladin will begin to follow the script file, stopping when it encounters a blank line. See Section 20 for more information on Script files.

### The "Street Sign"

In the upper left corner of the Hyperion's screen, the street sign displays the current status of the Input and Output functions. It usually looks like this:

### . (CONSOLE:, CONSOLE:)

indicating that both input and output source is the console, i.e., the Hyperion's keyboard and screen.

As you change the Input or Output source, by following the steps above, you will see the street sign change.

If you are using a batch file to enter data, or a script file to perform a sequence of commands, Aladin displays the filename that the information is coming from.

For example, should you choose to send a report directly to a disk file, Aladin will display the name of the file that is receiving the data:

### (CONSOLE:, TST)

## SCREEN - Set the Contrast between Screen Forms and Data

### Command Description

The Screen function allows you to vary the brightness of the screen form and the data displayed in that form.

### User Interaction

#### STEP

---

1) Press **F9** (Srvice).

2) Press **F2** (SCREEN).

Aladin will prompt:

**.Screen forms**

---

Aladin is asking you to decide whether your Screen Forms will be displayed brightly or at normal intensity.

#### STEP

---

3) Press **F1** (CONT) for no change.

*OR*

Press **F6** (BRIGHT).

*OR*

Press **F8** (NORMAL).

Aladin now prompts:

**.Data**

---

...continued

You are being asked to determine the brightness of the data that is being displayed in the screen form.

**STEP** (cont)

---

4)  Press **F1** (CONT) for no change.

*OR*

Press **F61** (BRIGHT).

*OR*

Press **F8** (NORMAL).

---

Generally, you should contrast your screen form and data, i.e., select NORMAL for the screen form, and BRIGHT for the data.

**JUMP - Branch from One File to Another in Your Relational System Data Base**

## Command Description

The Jump function allows you to use your key fields to move to other files sharing those fields.

## User Interaction

### STEP

---

1) Position the cursor at the field you wish to access in the other file.

2) Press **F9** (Srvice).

3) Press the soft key labelled **Jump**.

   Aladin displays a list of the files that you may branch to:

   **1:FILE A, 2:FILE B, 3:FILE C**

4) If there are more files in your system than can be displayed on the single prompt line, press **F5** (MORE) to display the other files.

5) Press the number corresponding to the file you wish to branch to.

6) The screen will clear, and then display the screen form for the new file, with the cursor positioned at the branching field.

---

Jump may be used when viewing data, or when defining a query, or a statistical evaluation, or a report. Because your data base can cover many files, Jump gives you the ability to move to each file, so that you may work with the resources of each file.

**VARS Software Switches soft key lines**

| Menu | OUTQU | INQU | DUPKEY DIRSRT | ABSPOS | Others | HELP |
|------|-------|------|---------------|--------|--------|------|

| Menu | GLOBAL | NOTQU | SAVE | INFO | CALC | Others | HELP |
|------|--------|-------|------|------|------|--------|------|

**Fig. IV-13** - The Variable Switches soft key lines.

## 10.2  VARIABLES (SWITCHES)

As described above, there are a number of "software switches" built into the Aladin system that you can use to tailor Aladin to your particular requirements at any time. These switches, or **Variables**, may be set by first pressing the soft key labelled **Vars** and then the soft key which corresponds to the switch in the menu line. The switches and their meanings are presented below:

As the switches are shown, the character "+" means "on" and "-" means "off". To change the state of a switch, just press the soft key that corresponds to that switch.

### Table IV-L
### SOFTWARE SWITCHES/VARIABLES

| VARIABLE | EFFECT |
|----------|--------|
| **OQ** | ***Output Selection.*** Determines whether or not a query is active while Aladin is producing output from your relational system. If this switch is on, only records matching the query will be displayed. |
| **IQ** | ***Input Selection.*** Determines whether or not a query is active you are entering data into your Relational System. If this switch is on and you have defined a query, then any data that is entered must meet the query selection criteria. |

### Table IV-L (cont)
### SOFTWARE SWITCHES/VARIABLES

| VARIABLE | EFFECT |
|----------|--------|
| **DK** | ***Duplicate Keys.*** Controls whether or not Aladin will allow you to enter multiple records with the same key values. For some applications, it may be necessary to have several records with the same key, but in other applications, this may be undesirable. Turning this variable on implies that multiple records with the same key value are alright. When DK is off, Aladin will prevent you from entering duplicate keys. |
| **DIR** | ***Direction of Sort.*** You can control whether Aladin sorts your data records in ascending or descending order through use of this switch. If the switch is on, the records will be sorted in ascending order (the normal mode). Turning it off will cause them to be sorted in descending order. |
| | It is also possible to change the DS switch while you are within a screen form in the data module by pressing SORT. You will in this case, observe that the small arrow at the cursor position will reverse its direction. Pressing SORT will simply toggle the direction, so that if it was forward it will become backward and vice-versa. |
| **AB** | ***Absolute positioning.*** This switch controls the display of records by inserting blanks to fill the field. When on, all spaces between the fields are removed. |

...continued

## Table IV-L (cont)
## SOFTWARE SWITCHES/VARIABLES

| VARIABLE | EFFECT |
|---|---|
| **GL** | ***Global Switch.*** The global switch controls the use of global operations within the data module, especially DATA.Remove and DATA.Change. For details on its use please refer to Section 18 on performing global operations. When on, it is possible to make changes to an entire file. |
| **NOT** | ***Enable NOT operator.*** The NOT controls the availability of the NOT operator in the construction of queries. If the switch is on, then NOT is available for use, otherwise, the NOT operator cannot be used. |
| **SV** | ***Save Record Now.*** To ensure against data loss, Aladin normally saves a new or changed record as soon as you are finished with it. However, to save time on computers that have very slow floppy disks, you can turn this switch off. When off, records will not normally be saved until you leave a function entirely. |
| **INFO** | ***Information Switch.*** This switch controls the display of various lists, choices, etc. that you may define. When it is on, they are shown automatically. When it is off, they will only be shown if you request it. While this makes little difference normally, it can be useful when your output is being sent to a disk file or to the printer, or when using the GL switch. |
| **CAL** | ***Calculation Switch.*** The calculator switch controls whether or not a calculation will be applied automatically to global data operation. When the switch is off, calculations can only be applied by pressing the soft key labelled Calc, which limits their use effectively to interactive data manipulations. When the calculator switch is on, interactive data manipulations continue to require the use of CALC, but global operations will now be effected automatically by the calculator. This switch is only relevant when a calculation has been defined. |

**Main ALADIN soft key line**

| Done | Data | Report | Query | Calc | | Word | Info | Others | Srvice | HELP |

**Main INFO soft key line**

| Aladin | Info | Map | Format | | Srvice | HELP |

**Main INFO soft key line**

| Done | Define | Save | Recall | View | |

**INFO.Srvice soft key line**

| Info | Output | Vars | HELP |
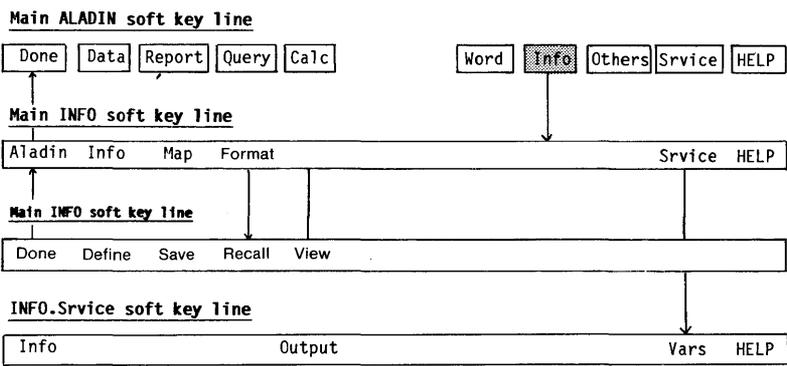
**Fig. IV-14**  -  The INFO modules's soft key line tree.

## Section 11

## THE INFO MODULE

The INFO module is Aladin's "reference module". It provides quick access to reports on the size and layout of your relational system, as well as a listing of saved queries, reports, and statistical evaluations.

As well, Aladin uses INFO to receive information on the printer attached to the Hyperion. You access INFO by pressing **F9** (Info) from the Main Aladin Menu soft key line. Then:

* Pressing **F2** (Info) provides you with information on how much room you have left in your data base.

* Pressing **F3** (Map) displays the fields for each file in your relational system, with the files that each field branches to indicated.

* Pressing **F4** (FORMAT) allows you to define the size and positioning of printed output.

As well, the Main INFO Menu soft key line also offers these options:

* Pressing **F1** (Aladin) returns you to the Main Áladin Menu.

* Pressing **F9** (Srvice) moves you to the INFO Service soft key line.

* Pressing **F10** (HELP) provides a screenful of information on the INFO Module.

```
CAR.SPECS (CONSOLE:,CONSOLE:) (---)
================================================================================
ADI: CAR

Your ALADILN Relational System is filled to this extent

-------------------------------------------------------

Keys            =  81.51 %
Data Records    =  64.09 %
Available Storage =  34.32 %


A.D.I.        ALADIN v2.6 (6)




================================================================================
                                                                   Info
```

[Aladin] [Info] [Map] [**Format**] [    ]   12:11   [    ][    ][    ] [Srvice] [HELP]

**Fig. IV-15** - The available storage space report.

## INFO - Display a Report on Available Diskette Storage Space

### Command Description

INFO provides information on how much space you have left for data file storage and for tree file storage.

### User Interaction

#### STEP

1)    Press **F2** (Info) from the Main INFO Menu.

Aladin will create a display similar to that in Fig. IV-14, for your current relational system.

**NOTE:** The amount of storage allocated to data files and tree files is set when you are installing the system. (See Section 13 - The INSTALL Module. If you want to allocate more or less space for data and tree files, use the INSTALL module. These numbers do not reflect percentages of physical disk space, only of preallocated disk space.

```
     .Data file SPECS (126:250)
       Manufacturer -> SPECS,DEALER,CUSTOMER;
       Model -> SPECS;
       Horse_Power_in_PS -> SPECS;
       Volume_of_Engine_in_CM -> SPECS;
       Maximum_Speed_in_MPH -> SPECS;
       Acceleration_time_from_0_to_60 -> SPECS;
       Fuel_Consumption_City_Highway_HS(1) -> SPECS;
       Fuel_Consumption_City_Highway_HS(2) -> SPECS;
       Fuel_Consumption_City_Highway_HS(3) -> SPECS;
       List_Price -> SPECS;


     .Data file DEALER (47:50)
       Manufacturer -> SPECS,DEALER;
       Name -> DEALER;
       Zip_Code -> DEALERLER;


     .Data file CUSTOMER (95:150)
       Customer_Name -> CUSTOMER;
       State -> CUSTOMER;
       Age -> CUSTOMER;
       Sex -> CUSTOMER;
       Manufacturer -> SPECS,DEALER,CUSTOMER;

                                                        Info
      [Aladin][ Info ][ Map ][Format][      ]   12:11  [     ][     ][     ][Srvice][ HELP ]
```

**Fig. IV-16** - A relational system "Map", showing the field in
each file, and where they branch to.

## MAP - Display the Relationships between Files in Your Data Base

## Command Description

MAP gives you a list of the fields within each file in your relational system. Each field is followed by a list of the files it is available in.

## User Interaction

### STEP

> 1)   Press **F3** (Map).

Aladin will send to the current output device (usually the screen) a listing of files, fields, and the branches.

**NOTE:** If you send this listing to the screen, it may be larger than a single screenful. Aladin will automatically scroll the map until it has been completely displayed on the screen.

To save a copy of this map, direct the output (using the Output control function) to either a diskette file, or the printer.

```
CAR (CON:,CON:) (---)
=====================================================================================
                         Printer Initialization Image

   PageLength> 72<                        PageWidth   > 80<

   Headlines >  3<                        LeftMargin  >  4<

   TextLength> 66<                        TextWidth   > 72<

   Footlines >  3<                        RightMargin >  4<

   Pagination > No<

   InitString>^L                    <

        Header
   >                                               <
        Footer
   >                                               <

=====================================================================================


  CANCEL                            17:31                             FINISH
```
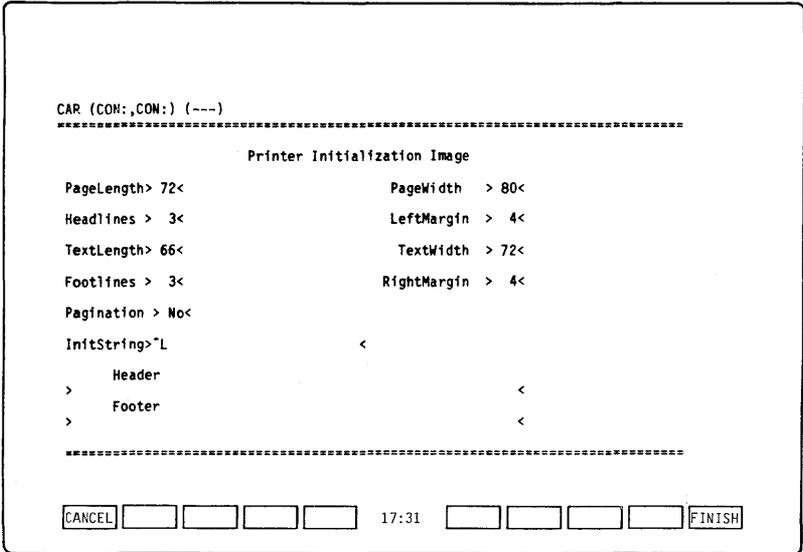
**Fig. IV-17** - The report format screen.

## FORMAT - Set Up the Report Format

### Command Description

Format provides formatting specifications for a page layout, and is available from the Main INFO Menu. Within Format, you are given four choices: Define, Save, Recall, and View.

### User Interaction

#### STEP

---

1)  Press **F4** (Format).

2)  Press **F2** (Define).

    Aladin displays the screen shown in Fig. IV-17.

---

The PageLength field is the length of the paper you are using. The Top Margin and Bottom Margin are subtracted from the PageLength to produce the TextLength, which is the number of lines of printed text. Notice how the TextLength changes automatically depending on the Top Margin and Bottom Margin.

The PageWidth is the number of characters wide your page is. The LeftMargin and RightMargin are subtracted from this figure to produce the TextWidth, i.e. the length of your printed line.

The Paginate? option allows you to have automatic page numbering in the upper right hand corner of your page. The InitString send control characters to your printer before printing the next page of text. The Head and Footer strings are printed automatically at the top and bottom of each page, if you insert any text.

#### STEP

---

3)  Enter a value for each field, pressing **Rtn** after each entry.

---

When you have pressed **Rtn** from the Footer field to complete the form, Aladin prompts:

## Is your definition complete?

**STEP** (cont)

---

4) Press **F6** (YES).

*OR*

Press **F8** (NO).

Aladin now prompts:

### Use this new FORMAT?

5) Press **F6** (YES).

*OR*

Press **F8** (NO).

If you answer NO to this question, your definition will be discarded by Aladin, and can not be saved.

6) Press **F3** (Save). Aladin prompts:

**Format.Save: Enter file reference name>**

7) Enter a 3-character file name and press **Rtn**.

To recall a previously saved format:

8) Press **F4** (Recall). Aladin prompts:

**Format.Recall: Enter file reference file**

9) Enter a file name, and press **Rtn**.

To view the current format definition:

10) Press **F5** (View). A screen similar to the one in Fig. IV-17 will be displayed, showing your current values in each field.

---

## Part B

## CREATING AND MODIFYING DATA BASES

```
          AAAA   L                    d    N      N
          A    A L                    d     Nn    N
          A    A L                    d ii N n    N
          A    A L                    d    N nn   N
          AAAAAA L        aaaa  ddddd ii N   nn N
          A    A L      a    a d      d ii N   nn N
          A    A L      a    a d      d ii N    nnN
          A    A L      a    a d      d ii N     nN
          A      A LLLLL aaaaaa  dddd  ii N      N


      ----------------------------------------------------------------
                    (c) Copyright A.D.I. GmbH Karlsruhe 1983
      ----------------------------------------------------------------


      CONT                          16:11
```
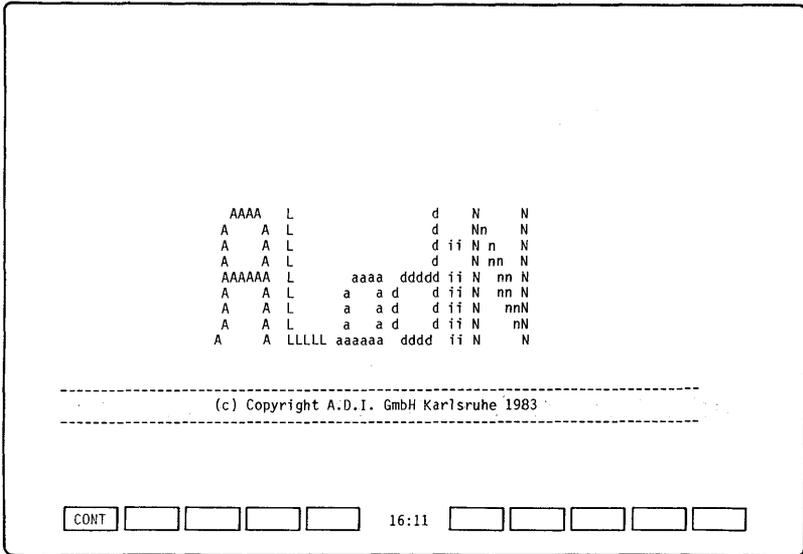
**Fig. IV-18**  -  The first screen displayed after logging on:
showing the Aladin logo.

# Section 12

## ACCESS THE ALADIN SYSTEM
## *INSTALL* MODULES

Before you can create a new relational system data base, or modify an existing one, you must access Aladin's system installation modules, which are shipped on the Aladin Install Diskette.

### STEP

---

1) Insert your Aladin Install Diskette in drive A, and a blank formatted diskette (if you are going to create a new data base), or an existing data diskette (containing the data base to be modified), into drive B.

2) Make sure drive C is 100K, then enter the command **SETUPRAM** and press **Rtn**.

3) Enter **A:ALADIN A:I**, and press **Rtn**.

   The screen changes, and you are prompted for a data base name.

4) Enter the name for the data base you wish to create or modify, then press **Rtn**.

---

The data base name cannot be longer than 6 characters. Aladin will display this name in the upper left corner of the screen, and the Main Aladin INSTALL Menu on the soft key line. See Fig. IV-19. If you are entering an existing data base, then you will also have to be the data base manager for that data base and enter the User ID and the Password.

```
    abc
    ================================================================================

        A.D.I. --- ALADIN.EXEC v2.6y    00/00/00

        A.D.I. GmbH Karlsruhe, West Germany,  Relational System : ALADIN
        ----------------------------------------------------------------
        (c) Copyright by A.D.I.  GmbH Karlsruhe, West Germany 1983

        Enter Relational System name (<return> exits) = abc  ..




    ================================================================================
                                                                    ALADIN-INIT
      Done  Instal Change Forms Access   09:23   File              Srvice
```
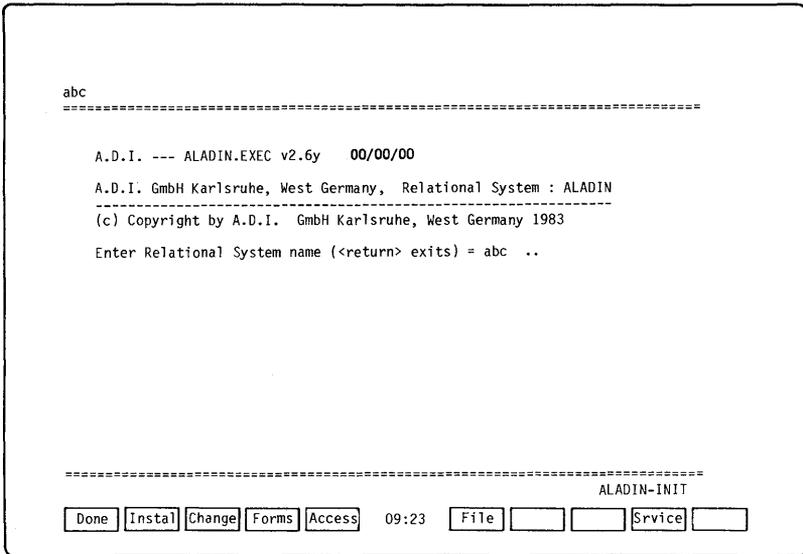
**Fig. IV-19** - The first INSTALL screen showing a sample
data base name in the upper left corner, and the
Main Aladin Install Menu soft key line.

## 12.1  THE MAIN ALADIN INSTALL MENU

The Aladin Install Diskette contains 5 modules which are used to create a new relational data base, or to modify an existing one.

These five modules - INSTALL, CHANGE, SCREEN, ACCESS, and FILE - are linked together when you create a new relational system. After your data base has been defined and saved, you may use any of the modules independantly to modify the existing base.

These five modules can be accessed individually from the Main Aladin Install Menu soft key line:

*   Pressing **F2** (Install) allows you to install a new relational system data base. This function calls up each of the other modules in turn since you will need to be able to change information, modify screen forms, add access restrictions, and check the status of your relational system all during the initial installation of a new data base.

*   Pressing **F3** (Change) allows you to modify an existing data base, using a relational system created with the INSTALL module.

*   Pressing **F4** (Screen) allows you to modify the screen form which displays the records in your data base.

*   Pressing **F5** (Access) allows you to add, delete and modify user's access rights to the data base.

*   Pressing **F6** (File) accesses a "housekeeping" utility, where you may compress or rebuild files, and redistribute storage allocations.

In addition: Pressing **F1** (Done) returns you to DOS.

Main Aladin Install soft key line

```
 ┌──────┐ ┌──────┐┌──────┐┌──────┐┌──────┐   ┌──────┐┌──────┐┌──────┐┌──────┐┌──────┐
 │ Done │ │Instal││Change││Forms ││Access│   │ File ││      ││      ││Srvice││      │
 └──────┘ └──────┘└──────┘└──────┘└──────┘   └──────┘└──────┘└──────┘└──────┘└──────┘
    ↑         │
Main INSTALL soft key line
    │         ↓
 ┌────────────────────────────────────────────────────────────────────────────────┐
 │ CANCEL       SAVE   INSLIN DELLIN         TOP    PROT            -HELP+           │
 └────────────────────────────────────────────────────────────────────────────────┘
```
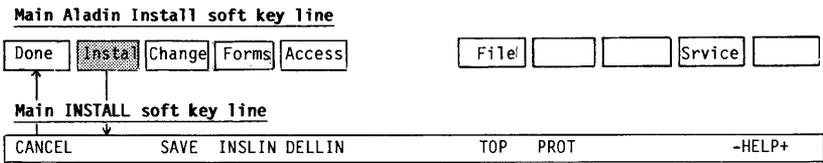
**Fig. IV-20** - The INSTALL module's soft key line tree.

# Section 13

# THE *INSTALL* MODULE

Aladin's INSTALL module is the means by which you may create a new data base. INSTALL is essentially an editing package: enabling you to enter and edit information - files, fields, and field parameters - that will make up your new relational data base.

Using INSTALL, you will:

1)   Name the data files of the data base.
2)   Estimate the number of records in each file.
3)   Name the fields for each file.
4)   Fill in the parameters (field types) for each field.

Then you will arrange the fields for each new file into a screen form (see SCREEN module), establish the access restrictions for the data base (see ACCESS module), and perhaps do some "housekeeping" (see FILES module) to check how the system is going to store the new information.

**STEP**

---

1)   Press **F2** (Install) from the Main Aladin Install Menu.

Aladin will prompt:

**No relational system with that name exists.**

This is a reference to the name you entered earlier.

2)   Press **F1** (CONT).

---

Aladin now clears the screen, and presents the first line of what will be your data base layout. The **top line** of the screen has become a help line - displaying a message which tells you what input is expected from you. The display of this prompt may be turned on or off by pressing the **F10** (-HELP+) key. The **soft key** and **cursor control keypad** are used to move the cursor about the screen.

## 13.1  ENTERING THE FILES

**STEP** (cont)

> 3)  Enter the name of the first file in your data base, then press **Rtn**.
>
> Aladin presents you with a blank line, where you may enter another filename.
>
> 4)  Enter the names for the other files, following each by **Rtn**.
>
> 5)  To begin defining the first file, press **Rtn** from a blank file-name line.

Aladin now positions the cursor within the parentheses and prompts for the estimated number of records in this file:

**Please estimate the maximum number of records in this file:**

**STEP**

> 6)  Enter the estimated number of records for this file.

## 13.2  ENTERING FIELDS

Aladin automatically moves the cursor to the next field, as each field is filled in, or as the end of an entry is signalled by pressing **Rtn**. Pressing a cursor control key tells Aladin to "skip" from the current field to the next field.

Aladin prompts:

### Enter name of field (max 32 chars)

Field names may contain blank characters. You may also create a field with no name by pressing the spacebar twice, instead of typing in a name.

**STEP** (cont)

```
7)   Enter a field name, then press Rtn.

     Aladin now prompts:

     Enter number of times to repeat this item
     (max 31, default is once).
```

...continued

The repeat count allows you to create a field that consists of multiple parts, up to 31 of them. For example, suppose you define a field of 20 characters and give it a repeat count of 5. This will result in a single field that consists of five lines of twenty characters each. Typically, you will only have one such repeat for each field. Press **Rtn** to automatically default the repeat count to one.

The first field in any file must be a character field, with a maximum of 32 characters. The first field is also the primary key.

**Table IV-M**
**DATA FIELD TYPES**

| FIELD TYPE | CONTENTS |
|---|---|
| **N** (numeric field) | Numerals, whole numbers |
| **C** (character field) | Alphanumeric character |
| **T** (date field) | Dates, e.g., 6/26/82 |
| **M** (money field) | Totals, e.g., 1,200.45 |
| **D** (decimal field) | Decimal numbers, e.g., 23.456 |

**Table IV-N**
**AVILABLE SPACE FOR DATA FIELD TYPES**

| FIELD TYPE | SPACE |
|---|---|
| **N** (numeric) | 1-12 |
| **C** (character) | 1-80 |
| **T** (date) | 8 |
| **M** (money) | 4-15 |
| **D** (decimal) | 3,0 to 15,9 |

## 13.3  FIELD TYPE AND FIELD LENGTH

The field data type is specified by a single character chosen from the prompt on the first line.

Aladin prompts:

**Enter data type: Number(integer), Character, Term(date), Money, Decimal**

**STEP** (cont)

---

10) Enter **C**, to make the first field's data type "Character".

Aladin then prompts:

**Enter field length:**

11) Enter a field length, to match the data you wish to enter into the field.

---

...continued

The meaning of the field length entry is to define the maximum number of character positions your data will occupy on the screen. For example, if you have a number which you wish to display, and you define the field as N5, then you have five digits in which to display the integer.

This space will accommodate integers from 0 to 99,999. In the case of a **date** field (type T) a field length of 8 should always be used, in order to allow for two separator characters. For example, 02/22/56 requires 8 characters to represent the date of February 22, 1956.

The **money** field (type M) allows for a maximum of 15 characters. The largest sum of money you can have is 999,999,999.99. Note that the commas are counted, and must be keyed in when entering data into a money field.

The **decimal** field (type D) actually has its field definition composed of two parts, separated by a point, i.e., **D15.9**. The first number following the D is the full field size, and the second number specified defines the number of decimal places.

For example, if we enter **63**, that will give us a field that is six characters wide, with two characters before the decimal point, the decimal point itself, and three characters to the right of the decimal point. The largest number that can be represented by the description **63** is 99.999. The number **159** represents a field 15 characters wide with 9 decimal places.

## 13.3  FIELD ACCESS PROTECTION

Aladin prompts:

### P(rotect this field?

**STEP** (cont)

| |
|---|
| 11)  Enter **P** to make this a protected field. |
| *OR* |
| Press **Rtn** or **spacebar** to skip this field, and leave it "unprotected". |

Aladin's INSTALL editor allows you to restrict user access to certain fields. For example, if your data base includes a field which contains the salary for each employee in the company, you may not want every user to have access to this information. By protecting a field now, you can later deny certain users access to that field. Access rights are described in Section 16.

## 13.5  KEY FIELDS

Aladin now prompts:

### Is this a K(ey) Field?

**STEP** (cont)

---

12)  Press K to make this a key field.

*OR*

Press **Rtn** or the **spacebar** to move to the next field.

---

...continued

Key fields are used to quickly "look up" records with a file in your relational system. Key fields can also be to create relationships between separate files. In other words, a key field within a file can "branch" to other files with the same key field. However, these files must be defined as part of the same relational system data base.

## 13.6  BRANCHING FIELDS

When more than one file has been defined within your relational system, the INSTALL editor will ask you if you want to make each field a branching field. A branching field is one which forms part of the relationship with other files.

Aladin prompts:

### Make this a B(ranching) Field?

**STEP** (cont)

---

13)   Press **B** to make it a branching field.

*OR*

Press **Rtn** or the **spacebar** to move to the next field.

---

If you declare a field as branching, a new line appears underneath the field description, and you are asked for the name of the file to which you want this field to branch. At this time, you must enter one of the other file names in your relational system.

Aladin prompts:

### Name of file:

**STEP**

---

14)   Enter the name of the file you wish to branch to, then press **Rtn**.

---

Aladin now prompts:

## Insert <fieldname> in File <filename>

**STEP** (cont)

| |
|---|
| 15)   Press **F8** (NO). |
| *OR* |
| Press **F6** (YES). |

...continued

If you answer Yes, a copy of the current field description will be added to the second file. If you say No, the field won't be added.

However, as branching relationships can only occur between identical fields, it is a good idea to let Aladin automatically insert a copy of your field into the other file.

It is possible to branch to another field within the same file. However, the two fields involved must be identical in type and size, and must both be key fields. For example, if you have two fields (order date, and ship date) which are located in the same file, they must both be the same size and type (e.g., T8), and both be key fields. You could then use the Jump function to branch from order date to ship date within the same file.

When you use Jump in this manner, you will be presented with a list of fields that you can branch to. Simply press the number corresponding to the field you want to branch to, and the new record will appear.

```
Enter name of data base or relational system (max 6 chars)
===============================================================================
.BASE ABCDEF=SUPPORT.........,
            MARKETING.......,
            ENGINEERING.....,
.FILE SUPPORT......... (20...);
      NAME........................    (1.)=C 40. P K B :
                                           MARKETING........,
                                           MARKETING.......;
      RESPONSIBILITY...............    (2.)=C 40. . K B :
                                           MARKETING.......;
      BUDGET......................    (1.)=M 7.. P K . ;
      EQUIPMENT...................    (5.)=C 20. . K . ;
.FILE MARKETING....... (20...);
      NAME........................    (1.)=C 40. P K B :
                                           SUPPORT..........;
      RESPONSIBILITY...............    (2.)=C 40. . I B :
                                           SUPPORT.........;
.FILE ENGINEERING..... (20...);
      NAME........................    (1.)=C 40. P K . ;
      REPONSIBILITY................    (2.)=C 40. . K . ;
      BUDGET......................    (1.)=M 7.. P K . ;



 CANCEL       SAVE  INSLIN DELLIN  18:42    TOP   PROT            -HELP+
```

**Fig. IV-21** - A sample system description, generated after using INSTALL.

## 13.7  ESTABLISHING STORAGE REQUIREMENTS

Repeat the steps above as many times as are necessary to fill all files with fields, and all fields with parameters.

When you wish to exit a field with entering a parameter, press **Rtn**. When you have exited the final field in your system description, and exited from the INSTALL editor, Aladin will display a system description. A sample system description is shown in Fig. IV-21.

You may exit abnormally by pressing **F1** (CANCEL) or normally by pressing **F3** (SAVE), or by using the **arrow** or **End** keys to move off the screen.

Pressing **F3** (SAVE) displays the system description.

The **arrow** or **End** keys cause the system to prompt:

### Have you finished defining your ALADIN relational system?

Pressing **F6** (YES) is the same as a SAVE. Pressing **F8** (NO) returns you to the original screen.

The information in the system description is presented in five columns for each file:

- The first column gives the name of the file.

- The second column repeats the number of records that you estimated would be in that file.

- The third column gives the number of bytes of data required for one record in that file.

- The fourth column specifies the maximum number of disk blocks that would be required for that file if all the records you specified were completely full.

- Finally, the fifth column shows the number of blocks that you have specified as keys within this file. At the bottom of the table, totals are printed for the data file and tree file sizes.

These totals are simply estimates based upon your guess of how many records may be in each file, and the assumption that each record will be 100% full. Since Aladin uses a variable length record storage and since a record within a typical data base may be only 50% full, you will find that these figures are quite liberal. That is, you can usually get by with less disk storage that is called for here.

Aladin will now ask you for the number of blocks to set aside for data files and tree files:

Aladin prompts:

### Number of disk blocks for data (nn)

**STEP** (cont)

---

19) Press **Rtn** or **F1** (CONT) to select the default value.

*OR*

Enter a value, then press **Rtn** or **F1** (CONT).

Aladin will prompt:

### Number of disk blocks for keys (nnn)

20) Press **Rtn** or **F1** (CONT) to accept the default value.

*OR*

Enter a value of your own, then press **Rtn** or **F1** (CONT).

---

...continued

If Aladin complains about the size specified, either there is not enough room on the disk, or you have specified a size which is too small.

**13.8  STORING YOUR DATA BASE DEFINITION
FOR FUTURE USE**

Now that you have specified your storage values, Aladin prompts:

**Create a description as a document (textfile)?**

**STEP** (cont)

```
21)   Press F8 (NO),

                        OR

      Press F6 (YES).
```

A Yes answer to this prompt causes Aladin to create a text file (name = <BASE>.TXT), which contains the definition of your new relational system. The end of this section describes how to use this textfile to install a new system.

We recommend that you create a text file of your relational system, as a backup measure.

Aladin now prompts:

**Create a description as a Pascal interface program?**

**STEP**

```
22)   Press F8 (NO),

                        OR

      Press F6 (YES).
```

...continued

Aladin is asking if you will be using this data base with the optional Genie Programmer's Tool Kit. If so, you should answer Yes, if not, you may answer No.

## 13.9  SCREEN FORMS

The next step in installing your new relational system is to create the screen forms for each file in your system. The screen form is the means by which you can view your data base. A detailed description of the screen forms editor, and how it is used can be found in Section 15 - Screen Forms.

Aladin prompts:

### Generate screen forms?

**IMPORTANT:** If you answer No to this question, *your relational system will not be saved*! Answering Yes will take you into the Screen Forms editor to create your screen forms.

### STEP

24)  Press **F6** (YES).

25)  Proceed to Section 15, for a more detailed description of altering screen forms.

...continued

## 13.10  ACCESS RIGHTS

Aladin offers you the opportunity to protect your data base by limiting the access rights of certain users. Defining the access rights is part of installing your new system. Section 16 offers more information on installing new users, and on changing the access rights of existing users.

Aladin prompts:

### Userid>

The first User ID that you enter after creating a data base is by default the data base manager. This user, and no other, will be able to subsequently use the modules on the Install diskette to alter the format of the data base.

**LAST STEP**

26) Enter the name of your data base administrator, then press **Rtn**.

Aladin prompts:

**Passwd>**

26) Enter a password, then press **Rtn**.

The User ID and Password are linked together to provide the security feature of Aladin. After you have identified your data base administrator, and given his/her password, Aladin will prompt:

**Userid>**

You may contain to define as many users (with passwords) as you require for your data base. See Section 16 on access rights.

## 13.11  INSTALLING YOUR SYSTEM USING A
##        PREVIOUSLY STORED DATA BASE DEFINITION

Earlier in this section, we discussed the fact that Aladin can create a text file which contains the definition of your relational data base. This text file can be used to install a new system with the same schema description.

If you have installed a relational system, and you now wish to install a new system using the same description, several factors should be considered. In order to preserve the old relational system, the name of the new system must be different.

This means that the name of the old system's text file, e.g., CAR.TXT, will need to be changed to the new system's name, e.g., AUTO.TXT.

**IMPORTANT**: If you choose to install the new system using the old name, the old relational system will be reinstalled. *Reinstallation of an existing system destroys the data in the existing system*.

To begin the text file installation of a new system, using an existing name:

**STEP**

1)  Place your Aladin Install Diskette in drive A and a blank diskette in drive B.

2)  Enter **SETUPRAM** and press **Rtn**.

3)  Enter **A:ALADIN A:I** and press **Rtn**.

4)  Enter the name of the new system.

**STEP** (cont)

---

5)   From the Main Aladin Install Menu soft key
     line, press **F9** (SRVICE).

6)   Press **F3** (Input).

7)   Press **F3** (File).

8)   Enter the filename for the text file containing
     the system description, then press **Rtn**.

9)   Press **F2** (Instal).

---

Aladin will automatically execute the installation process
up until the point where the following prompt is displayed:

**Create a description as a document (textfile)?**

You may now continue with the installation process as
described previously.

**Main Aladin Install soft key line**

| Done | Instal | Change | Forms | Access |   | File |   |   | Srvice |   |

**Main CHANGE soft key line**

| CANCEL |   | SAVE | INSLIN | DELLIN |   | TOP | PROT |   | −HELP+ |
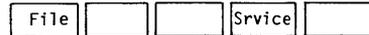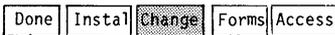
**Fig. IV-22** - The CHANGE module soft key line tree.

# Section 14

# THE *CHANGE* MODULE

Once you have installed a relational system, there are two ways in which you can change it. You can use the INSTALL module to enter the new changes that you wish to make. However, as this destroys any data that was already present in the existing data base, you should generate a report which holds all the data which was in the relational system.

Or, you can use the CHANGE module. This allows you to make certain limited changes to the relational system , such as adding fields and new files, and changing the existing relationships between files.

## 14.1  USING *INSTALL* TO CHANGE A DATA BASE

If you wish to delete fields, or change the data type or size of a field, you must reinstall your relational system. To do this:

**STEP**

> 1)  Press **F2** (Instal) from the Main Aladin Install Menu soft key line.
>
> Aladin will prompt:
>
> **Use existing specifications?**
>
> 2)  Press **F6** (YES).

Aladin will use the specifications that you had already defined for this data base. You will be able to change it using the INSTALL editor as you wish.

If you answer **No**, you will be starting from scratch. Normally, to make changes to an existing data base that requires reinstallation, you should answer **Yes** to this question.

Whether you answer Yes or No you will enter the INSTALL editor, from which you can create or modify your current data base definition. Proceed as described in Section 13, Installing a Data Base.

## 14.2  USING *CHANGE* TO MODIFY A DATA BASE

For less drastic changes, use the CHANGE module:

**STEP** (cont)

| |
|---|
| 3)  Press **F3** (Change) from the Main Aladin Install Menu soft key line. |

...continued

You will go immediately into the schema editor with the existing schema for your data base shown. Note that on the right hand side of the screen will be a number of asterisks (*). These show you which fields are "protected", i.e., cannot be changed significantly.

With the CHANGE module, you can:

1)  Change the name of a file
2)  Change the name of a field
3)  Change whether or not a field is a key field
4)  Change whether or not a field is a branching field
5)  Change the files that a field branches to
6)  Insert new files
7)  Insert new fields

Within these constraints make the changes that you can make any changes you wish, then leave the INSTALL editor. The change process is very similar to installing a new system. Note that the soft key line is the same as that for the INSTALL module: The following schema editing commands are available to alter the description of a data base in front of you:

\*      Pressing **F1** (CANCEL) ends the change session with
       out saving any changes, and return to the Main
       Aladin Install Menu.

\*      Pressing **F3** (SAVE) incorporates the changes made
       to the data base, and continues to ask if the Forms
       are to be changed.

\*      Pressing **F4** (INSLIN) inserts a blank line into the
       data base schema. Depending on the location with the
       schema this line may be for a filename or a
       fieldname. Lines are not inserted between two pro-
       tected fields of the same type.

\*      Pressing **F5** (DELLIN) deletes an existing line from
       the data base schema. This step cannot be reversed.
       Protected fields cannot be deleted.

\*      Pressing **F6** (TOP) moves the cursor to the top field in
       the current screen form.

\*      Pressing **F7** (PROT) allows you to protect the data
       type of a field. Once a field is protected, only
       reinstalling the data base can alter those conditions.
       The length, protect, key, branching may be changed.

\*      Pressing **F10** (-HELP + ) allows you turn the prompts
       on the first line of the Hyperion's screen on and off.

## 14.3  EXITING FROM THE CHANGE MODULE

After having had the system accept your changes, Aladin will display the table of mass storage requirements for your revised description, but will not ask you to specify the sizes of the data or tree files, since they have already been created.

Aladin will prompt:

### Create a description as a document (textfile)

Pressing **F6** (YES) stores the description under the file-name <BASE>.TXT. Aladin will then prompt:

### Create a Pascal interface program?

Pressing **F6** (YES) stores the description under the file-name <BASE>PS.TXT

Aladin then prompts:

### Change screen forms?

**STEP** (cont)

---

4)  Press **F8** (NO).

Aladin will use the existing screen form.

*OR*

Press **F6** (YES).

Aladin will call up the SCREEN FORMS module.

---

If you have changed your data base description in such a way as to render your screen forms obsolete (if you have added fields or files), instead of being asked whether you want to "change" your screen forms, you will be asked whether you want to "**generate**" your screen forms.

If you answer No to this prompt, your changes will be thrown away as you must generate new screen forms to go with the new description. If you answer Yes, you will be in the SCREEN FORMS module ready to create the new screen forms that you need. (see Section 15).

### Changing Your Screen Forms Only

If you wish to adjust the screen forms within your data base, without actually changing the data base description, select the FORMS module from the Main Aladin Install Menu soft key line. See Section 15 - Screen Forms, for more information.

### Changing the Access Rights Only

If you wish to change the access rights for your relational system, use the ACCESS module from the Main Aladin Install Menu soft key line. See Section 16 - Access Rights, for more information.

**CANCEL - Ends a Change Session without Saving any Modifications**

**Command Description**

    Cancel allows you to halt a Change session and return to the Main Aladin Install Menu soft key line, without saving any modifications you may have made to an existing data base.

**User Interaction**

    **STEP**

    | |
    |---|
    | 1)   Press **F1** (CANCEL). |

    Without prompting, Aladin ends the Change session and returns you to the Main Aladin Install Menu.

**SAVE - Ends a Change Session, Saving any Modifications to an Existing Data Base**

### Command Description

SAVE is the final step in the successful modification of an existing data base: returning you to the Main Aladin Install Menu soft key line and incorporating the changes you have made to the data base.

### User Interaction

#### STEP

1)  Press **F3** (SAVE).

Aladin prompts you to store your data base description as described in Section 14.3.

**INSLIN - Insert a Blank Line into the Data Base
Description**

## Command Description

INSLIN creates a blank line below the cursor. Depending on the location of the blank line, you are able to enter additional files and fields into your relational system.

## User Interaction

### STEP

> 1) Press **F4** (INSLIN).

Aladin creates the blank line on the line below the cursor position. Depending on the location, the line will be for a filename or a fieldname. The prompt line will tell you what type of entry is expected.

If the cursor is in a protected field, the system will insert a blank line *above* the next unprotected field.

## DELLIN - Deletes an Existing Line from the Data Base Description

### Command Description

DELLIN removes the line at the current cursor position from the data base schema.

### User Interaction

#### STEP

```
1)  Press F5 (DELLIN).
```

Aladin removes the line which the cursor is on.

You cannot delete a protected field.

### Warning

DELLIN is not reversable. Once you have deleted a line, there is no way to get it back, short of recreating it as if it were a new entry, or pressing F1 (CANCEL) and restarting the changes.

**TOP - Moves the Cursor to the First Field in the Data Base Description Screen**

## Command Description

TOP returns the cursor to the first field in the screen form, i.e., the top of the data base description form. Larger data base specifications may be several pages long and the page, where filenames are entered, will often be unavailable from your current position.

## User Interaction

### STEP

1)   Press F6 (TOP).

Aladin automatically positions the cursor at the top of your description of the data base, in the FILE NAME field.

## PROT - Freeze the Current Definition Parameters

### Command Description

Fields which are "protected" are marked by an asterisk (*) at the right and may not be changed or deleted.

The only things that can be changed in a protected field are: the field name, protect designation, key and branch designations. In addition, if the field type is I (integer) or N (numeric), the length can also be changed.

### User Interaction

#### STEP

| |
|---|
| 1)   Press **F7** (PROT). |

Main Aladin Install soft key line

| Done | Instal | Change | Forms | Access |

| File | | | Srvice | |

Main SCREEN FORMS soft key line

| CANCEL | NEWLIN LEFT RIGHT | UP DOWN Others |

| CANCEL | LINE SCREEN PAGE | HORIZ VERT Others SETUP |

**Fig. IV-23**  -  The SCREEN module soft key line tree.

Section 15

# SCREEN FORMS

Aladin's screen form editor allows you to arrange the fields in the files of your data base in any manner you wish. The SCREEN FORMS module and editor is immediately accessible through the Main Aladin Install Menu. As well, the INSTALL module and the CHANGE module access the screen forms editor as you install or change a data base.

The screen forms you create when you install your relational system are not permanently fixed. They can always be changed by using this SCREEN FORMS module. The following is a discussion of how the module works.

## 14.1 ACCESS THE DESIRED FILE

**STEP**

---

1) Press **F4** (Forms) from the Main Aladin Install Menu.

   Aladin will prompt:

   **Change screen forms?**

2) Press **F6** (YES).

   Aladin now prompts for a specific file:

   **<filename>: Change screen forms?**

---

```
ABC.SUPPORT (CONSOLE:,CONSOLE:)
==================================================================================
NAME:  _____        BUDGET:  _____


      RESPONSIBILITY:  _____
                       _____



                            EQUIPMENT:
                                       _____
                                       _____
                                       _____
                                       _____



==================================================================================
 4:  4 *  1 (28,11)
 CANCEL        NEWLIN  LEFT  RIGHT    09:23      UP    DOWN  Others  SETUP
```

**Fig. IV-24** - A typical screen form.

**STEP** (cont)

---

3) Press **F8** (NO).

Aladin will display the same prompt, with the next filename.

*OR*

Press **F6** (YES).

---

Aladin displays the current screen form for the file you selected. It should appear in a similar format to that in Fig. IV-24.

## 14.2  SCREEN DESCRIPTION

Across the top of your screen you will see the name of your relational system, then the filename, followed by the input and output sources in parentheses.

At the bottom left corner of the screen is a group of numbers:

### X: YY * Z (W,T)

The first number (X) indicates the field number where you are within your relational system. Note that as you go through different files, every field has a unique field number. After the field is a colon, followed by a number (YY) which indicates the last field in this file.

In other words, if 1:4 were displayed, it would be indicating that the cursor is positioned at the first field in the relational system, and that four fields are displayed on the screen.

- Following the "last field number", there is an aster-isk, followed by a number (Z). The number (Z) indicates the page number of the screen form you are in. The fields of a file may be positioned on different pages or screens, if desired.

- After the screen number, within the parentheses, are two numbers (W,T). The left number (W) represents your column position on the screen, the right number (T) indicates the row number you are in. Number 1 is the leftmost column, and top row. The Hyperion's screen has 79 columns and 20 rows (rows 2 to 21) available for Aladin screen forms.

## 14.3  MOVING FIELDS ABOUT THE SCREEN

In order to move any field on your screen, you must first have your cursor positioned on that field.

There are several commands available for moving the field within the screen form. Each command is placed on the soft key line.

### Table IV-O
### SCREEN FORM EDITOR COMMANDS

| COMMAND | EFFECT |
|---|---|
| LEFT | Moves current field to the left one space. |
| RIGHT | Moves current field to the right one space. |
| UP | Moves current field up one line. |
| DOWN | Moves current field down one line. |
| NEWLIN | Moves current field to new line. |
| PAGE | Moves field to new page. |
| HORIZ | Formats field horizontally. |
| VERT | Formats field vertically. |
| LINE | Refreshes (cleans up) current line. |
| SCREEN | Refreshes (cleans up) current screen. |
| SETUP | Sets up the page layout parameters. |

If you are going to move several steps in any direction, you can use what is called a "repeat count". A repeat count allows you to move more than one space or line at a time. For example:

**STEP** (cont)

> 4) Position the cursor at the desired field.
>
> 5) Enter the number **5**, then press **F7** (DOWN).

The current field moves down 5 lines. Note that you may not move a field beyond the screen boundaries. The repeat count may be used with the following commands: LEFT, RIGHT, UP, DOWN, and NEWLIN.

It is possible for a field to have several parts, e.g., a character field of 10 may be repeated 5 times, producing 5 lines each 10 characters long. The HORIZ and VERT commands control the layout of these types of fields.

**STEP**

> 6) Position the cursor at a field with multiple parts.
>
> 7) Press **F8** (Others).
>
> 8) Press **F7** (VERT).
>
>    The lines within the field are arranged vertically, as if it were a list.
>
> 9) Press **F6** (HORIZ).

...continued

The lines within the field are now arranged horizontally again. If there is not enough room on the screen to accomodate them, the field will be broken and displayed on two screen rows instead of one.

## 14.4  RESTORING THE ORIGINAL SCREEN FORM

Often, when you have rearranged the fields on the screen, the screen form may be distorted or destroyed.

**STEP** (cont)

> 10)  Press **F3** (LINE).
>
> The field is "re-painted"
>
> 11)  Press **F4** (SCREEN).
>
> The screen is "re-painted".

For example, if you have three fields (Field 1, Field 2, Field 3), and you wish Field 3 positioned at the top of the screen, ahead of Fields 1 and 2:

**STEP**

> 12)  Move Field 3 to the top of the screen, using a repeat factor and the **F6** (UP) key.
>
> 13)  Press **F4** (SCREEN).

This procedure positions Field 3 in such a way so that when you press the **spacebar**, to move your cursor to the next field, the cursor moves to Field 1.

When you are installing a relational system, you should define your fields in the order in which you wish them to appear on the screen. This will save time when you are using the screen forms editor.

## 14.5 THE *SETUP* COMMAND

There is one more command used in the screen forms editor: the Setup command. Selecting SETUP from the screen forms editor soft key line displays the first in a series of setup parameters at the bottom left of the screen.

### Table IV-P
### SCREEN FORM EDITOR PARAMETERS

| PARAMETER | DEFINITION |
|---|---|
| XMAX | Allows you to set the number of columns across the screen. |
| YMAX | Allows you to set the number of row reserved for the screen form. |
| XREL | Allows you to set the horizontal spacing between fields. |
| YREL | Allows you to set the vertical spacing between fields. |
| DIST | Allows you to set the distance between the fieldname and the field itself. |

**STEP** (cont)

14) Press **F9** (SETUP).

Aladin displays the first parameter:

**XMAX = 79:**

You may change this parameter by entering a new number.

**STEP** (cont)

---

15)   Press **F1** (CONT).

The second parameter is displayed:

**YMAX = 23:**

16)   Repeat steps 14 and 15 until all parameters
are displayed on the screen.

---

When the first field is displayed on the screen, it is automatically placed in the upper left corner of the screen. The space between the field name and the dotted or straight line is determined by the DIST parameter. Increasing the value of DIST will increase the space between the name of the field and the field itself.

When you move to the next field, by using the right arrow key or the spacebar, it is separated from the first field by the value of XREL or YREL. YREL's value is used if the field is on a different row than the previous field. XREL's value is used if the field begins in another column on the same row.

## 14.6  SAVING THE SCREEN FORM

When you have finished rearranging your screen form, use the **End** key to walk off the end of the screen and indicate completeness.

### Have you finished with your screen form?

Entering **F6** (YES) enables you to continue formating subsequent screens untill all have been adjusted. Then Aladin prompts:

### Save screen forms?

**STEP** (cont)

---

17)  Press **F8** (NO).

You will be returned to the screen form editor.

*OR*

Press **F6** (YES).

Aladin now prompts:

### Display screen forms?

18)  Press **F8** (NO).

You are returned to the Main Install menu.

*OR*

Press **F6** (YES).

Aladin prompts:

### Number the Field Items to use with the Program Genie?

---

If you are not using the Genie Programmer's Tool Kit, then you would answer No to this question. However, if you want to have your field items numbered for use with a Genie application, answer yes to this question. The screen form will be displayed with numbers for each field item.

After Aladin displays the screen form, you are returned to the Main Aladin Install Menu.

## 14.7  COMMON ERRORS

### Interfering Fields

After you have finished arranging your fields on the screen, you may try to exit from the screen forms editor and receive the prompt:

**Fix your screen layout: Fields interfere or Margins Exceed**

This means that you have positioned a field beyond the boundary of the screen; or that you have two or more fields overlapping.

For example, if you have a field composed of 78 alpha-numeric characters repeated 5 times which is arranged horizontally, it will exceed your screen margins and cause an error. Arrange the field vertically to remove the error:

### STEP

| |
|---|
| 1) Press **F1** (CONT).<br><br>The cursor is positioned at the field which is causing the error.<br><br>2) Correct the error by repositioning the field. |

### Not Enough Diskette Space

You may receive the prompt:

### Your disk seems to be full

This message may occur while you are changing a relational system. If you are changing the screen form after you have added files to a data base, your disk may not have enough room to store this new information.

Your change procedure is interrupted, and you will not be able to complete the change. The solution to this problem is to copy the system you are changing onto another diskette with more room. You will then be able to extend the definition of your relational system.

**Main Aladin Install soft key line**

| Done | Instal | Change | Forms | Access |  | File |  |  | Srvice |  |
|------|--------|--------|-------|--------|--|------|--|--|--------|--|

**Main ACCESS soft key line**

| CONT |
|------|

**All other ACCESS soft key lines**

|  | YES | NO |  |
|--|-----|----|--|

**Fig. IV-25**  -  The ACCESS module soft key line.

# Section 16

# THE *ACCESS* MODULE

## 16.1 PURPOSE AND SCOPE

The ACCESS module of Aladin's Install program is used to set access rights for all the users of your relational data base system. For any particular user, you may restrict access to various Aladin modules.

You may also define user access rights when using INSTALL or CHANGE modules.

The only person who should have access to the Aladin Install program is the Data Base Manager.

The last step in installing a new data base is to enter a Userid and Password for the Data Base Manager. After installation, the only person allowed access to the data base - for the purposes of modification - will be one who knows and can enter this Userid and Password.

The ACCESS module can also establish user IDs and passwords for people who are allowed access to a data base - for the purposes of retrieving information only. The ACCESS module can also restrict any of these users from using certain data base files or Aladin functions.

If no users are defined, including no data base manager, then there is no userid/password question asked when accessing the data base for either maintenance or installation.

## 16.2  CALLING UP THE *ACCESS* MODULE

For the purposes of this section, it is assumed that you are the Data Base Manager.

To call up the ACCESS module:

**STEP**

---

1)  Press **F5** (Access) from the Main Aladin Install Menu.

---

Aladin reads through the list of authorized users for the current data base, and prompts:

**System User access controlled by Aladin DP Manager**

**Userid>**

**STEP**

---

2)  Enter your user ID, then press **Rtn**.

3)  Enter your password, then press **Rtn**.

---

...continued

If you make an error in entry, or enter the wrong combination of user ID and password, Aladin will prompt:

**Unauthorized user -**
**You are not allowed to make changes.**

and you will be returned to the Main Aladin Install menu.

After entering the correct combination of user ID and password, you are free to enter the user IDs and passwords, and access restrictions for the data base you are currently in.

## 16.3  ALLOWING EXISTING USERS TO STAY

Aladin prompts for each user which has been allowed access to the data base:

**Userid> [Name] Passwd> [Word] Save?**

**STEP** (cont)

---

4)  Press **F6** (YES).

This saves the displayed User ID and Password, at its current level of authorization.

*OR*

Press **F8** (NO).

The User ID and Password are removed from the system

---

When Aladin has finished prompting for each of the existing users, it will prompt:

**Userid>**

This is a request for any new users to be added to the system.

## 16.4  ADDING NEW USERS

The procedure for adding new users to a data base is the same for any user.

**STEP** (cont)

> 5)   Enter the User ID name, then press **Rtn**.

This name can be a maximum of 24 characters long, but Aladin only reads the first six characters of each name.

**STEP**

> 6)   Enter the Password, then press **Rtn**.

Again, this word can be a maximum of 24 characters long, but Aladin will only read the first six characters.

## 16.5  DATA BASE FILE RESTRICTIONS

Once you have entered the User ID and Password combination for a user, Aladin prompts you for the access rights for this user. Access rights may be specified differently for each file within your relational system, i.e., a user may be able to generate a report from one file, but not another within the CAR relational data base.

Aladin will prompt:

### Access rights:

followed by the name of the first file within your data base. Aladin will then proceed to ask you a series of questions.

### Restricting the Use of Certain Aladin Modules

In each question, the program will display the names of the modules from the Aladin Maintenance Program (see Part A). To restrict access to any module, enter the first letter of that module's name. By doing this, you restrict the user from activating that module while he or she is using this data base file.

For example, if you do not want a user to be able to use the change option in the DATA module for File 1, when the Access funtion asks:

### DATA: Enter, Change, Remove, View, Aladin

you would type a **C**, followed by a **Rtn**. Note that you must use an upper case C. Aladin will not recognize lower case characters in this situation. When this particular user tries to access the Change function in the DATA module, he/she will receive a message that this option is not available.

**STEP** (cont)

---

7) For each file, select the modules and module functions that are to be restricted for that particular user;

*OR*

To leave the access rights unrestricted, press **Rtn**.

---

The same series of questions will be asked for each file within your relational system.

The option to restrict access to the Aladin soft key is available for several of the modules. However, restricting access to the Aladin soft key will lock the user within a module, with no escape.

## 16.6 PROTECTED FIELDS

During the installation of your data base, you may have protected certain fields withgin a file. This was done by pressing P when entering the field description. If you have any protected fields within your relational system, Aladin gives you the option of restricitng access to that particular field.

Aladin prompts by field name for each protected field within the file. You have the option to prevent a user from reading, writing, or updating the information within the protected field.

Read is the most powerful restriction. the user will not be able to view the data that would normally be displayed in this field.

**STEP**

---

8) For each protected field, enter **R** (for a NO READ), **W** (for a NO WRITE), or U (for a NO UPDATE, i.e., cannot change but can read or write new fields).

---

## 16.7  EXITING FROM THE ACCESS MODE

When you have finished defining access rights for a user, you will be asked to enter another user ID. You may enter as many new users as you wish.

**STEP** (cont)

---

9)  After the last restriction, press **Rtn**.

The system prompts you to enter a new user ID.

10)  Repeat steps 5 to 9 for each new user.

11)  When you have finished, press **Rtn** instead of entering a new user ID.

You will be returned to the Main Aladin Install Menu and soft key line.

---

# Part C

# ADVANCED PROCEDURES

**Main Aladin Install soft key line**

| Done | Instal | Change | Forms | Access | File | Srvice |
|------|--------|--------|-------|--------|------|--------|

**Main Files soft key line**

| | | | YES | NO | |
|---|---|---|-----|----|---|

**Fig. IV-26** - The FILES module soft key line tree.

# Section 17

# DISK HOUSEKEEPING

Aladin's FILE module allows you to check the status of your relational system, i.e., how much room it occupies on the diskette and how much room is left to allow the data base to expand in.

**STEP**

> 1) Press **F7** (File) on the Main Aladin Install Menu soft key line.
>
> Aladin will display the current status of your relational system and prompt:
>
> **Change storage allocation for keys?**

## 17.1 KEY INDEX FILE

Aladin is asking if you want to change the amount of space allocated on the disk for storing your key index files. These files hold the relationships between the different files in your relational system. You create these relationships by designating key fields during the installation of a system.

**STEP**

> 2) Press **F8** (NO).
>
> *OR*
>
> Press **F6** (YES).
>
> Aladin will prompt:
>
> **Number of disk blocks for keys:**
>
> 3) Enter the new number of blocks, then press **Rtn**.

```
CAR (CONSOLE:,CONSOLE:)
==============================================================================



                    Keyfile               120 Blocks on disk
                                  98:   98 blocks in use



                    Datafile               60 Blocks on disk
                                  40:   38 blocks in use





==============================================================================
                                    Change storage allocation for keys?
 [    ][    ][    ][    ][    ]   09:23  [ YES ][    ][ NO ][    ][    ]
```
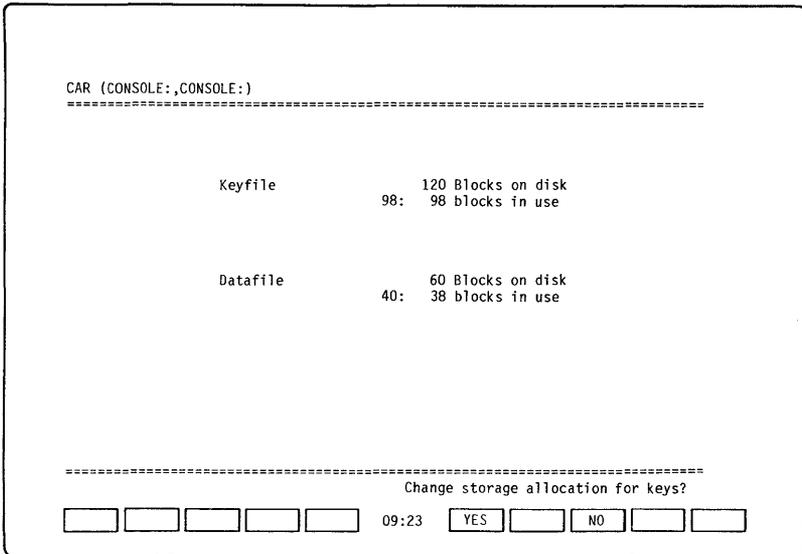
**Fig. IV-27** - A sample FILES screen.

If you are shrinking your key file, there should be no problem (although your key file should never be smaller than 10 blocks). However, if you are enlarging your files, there may be some complications.

Aladin may prompt:

**Not enough free disk space.**

This message means that there is no room available on your disk for the key file. In order to make room, you must copy the files onto a new diskette using the MS-DOS command "**COPY \*.\***". This rearranges the files of your data base in a manner which allows for expansion of the key file.

## 17.2  DATA STORAGE ALLOCATIONS

Aladin now prompts:

**Change storage allocation for data?**

**STEP** (cont)

---

4) Press **F8** (NO).

*OR*

Press **F6** (YES).

Aladin will prompt:

**Number of disk blocks for data:**

5) Enter the number of blocks required, then press **Rtn**.

---

...continued

As in key file allocation, you may receive a warning message. To overcome this problem, perform a **COPY \*.\*** as you would for the key file.

## 17.3  REORGANIZING YOUR DATA BASE

Occasionally, Aladin will tell you that your system needs reorganizing.

Aladin will prompt:

**Do you want to reorganize your Relational System?**

There are two ways in which Aladin reorganizes your relational system: by compressing your data file and rebuilding the key file, or simply by rebuilding the key file.

**STEP** (cont)

---

6)  Press **F6** (YES).

Aladin will prompt:

**Do you want to compress your Data file?**

7)  Press **F8** (NO).

*OR*

Press **F6** (YES).

Aladin now prompts:

**Do you want to rebuild your Tree file?**

8)  Press **F6** (YES).

---

...continued

You must answer Yes to this question in order for reorganization to occur. If you also answered Yes to the question on compressing data files, you are returned to the Main Install menu.

When you access your data base using the Aladin System Diskette, Aladin will prompt:

**Your keys need reorganizing:**

**STEP** (cont)

---

9)   Press the **spacebar** or **F1** (CONT)

     Aladin prompts:

**Reorganization?**

10)  Press **F6** (YES).

---

This process may take some time, depending on the size and complexity of your data base.

If you answer No, you can look at but not change information in the file.

After Aladin has reorganized your relational system, you can continue with your use of the Aladin System Maintenance modules.

**STEP**

---

11)  To exit, press **F1** (CANCEL).

     This will return you to the Main Aladin Install Menu and soft key line.

---

CHANGE IS COMPLETE
AFTER 1 RECORD

QUERY/
CALC

OFF(-)

GL
SWITCH

*IN*

ON(+)

DATA
BASE

RECORDS BEING
CHANGED AS PER
THE CURRENT
QUERY/CALCULATION.
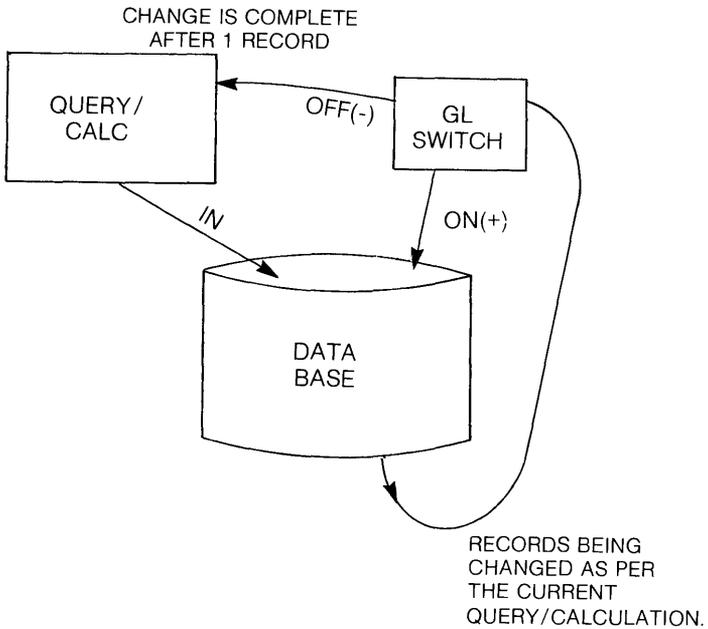
**Fig. IV-28** - Conceptual depiction of a global operation. If the GL switch is on, a Query/Calc operation is completed only after all the records in a file have been read.

Section 18

# GLOBAL OPERATIONS

## 18.1 THE *GL* SWITCH

Often when you are manipulating your data, you will wish to operate upon a group of records in the same way. For example, you may wish to remove all the records that were entered at a certain time. Or, you may wish to change a certain field in a portion of your records.

Suppose you wanted to change all the records in the SPECS file of the CAR data base (see the Aladin Demo & Examples Diskette) so that the price of cars costing more than $50,000.00 would increase by 20%: the CALCULATOR module would be used to define a calculation that increases prices by 20% on a given car; the QUERY module would define a query that would select only cars costing more than $50,000.00.

The missing piece here is knowing how to do all the cars that fit the query with only one procedure.

The "GL" (for *GL*obal) switch allows you to perform an operation, while in the DATA module, on all the records within files. These records would possibly be the object of a single query or, a query/calculation combination. Normally the "GL" switch is "off" and the DATA module operations apply to only one record at a time.

For example, once you have activated the query and calculation, and have entered the Change function of the DATA module, you could update records individually.

This would require a sequence of several keystrokes. You must first move the cursor to a key field, say MANUFACTUR-ER and press **Rtn**. Aladin will then go through the data base and find all the records that match your query and will display the first one in the screen form. Aladin then asks "**Use this record?**" to which you must answer **Yes**. Finally, to complete the change, you must press **F9** (FINISH). Aladin responds by asking a question of whether or not you really want to "**Change the record in this way?**" to which you should answer **F6** (YES).

This sequence of 5 keystrokes would have to be performed for each record to be changed. If your data base is large this can become very time consuming.

## 18.2  THE GLOBAL UPDATE

The global switch allows you to perform the entire update operation automatically. To enter the global operation mode:

**STEP**

---

1)   Press **F9** (Srvice) from the Main Aladin Menu.

2)   Press **F9** (Vars).

3)   Press **F8** (Others), then **F2** (GLOBAL).

You have set the Global switch to on (" + ")

4)   Press **F1** (Menu).

5)   Press **F3** (Change).

Aladin will prompt:

**Do you want to (globally) change ALL such records?**

---

If you answer no, then the change operation would behave as if the "GL" switch were set off.

**STEP**

---

6)   Press **F6** (YES).

---

Aladin will automatically search through the data base and call up the first record that matches your query, and automatically apply the calculation.

Aladin will prompt:

### Change the record in this way?

Whether you answer yes or no the process of applying the query and calculation will continue until the data base is complete. Thus you need only one keystroke to change each record instead of five.

### 18.3 THE *INFO* SWITCH

While this represents a considerable saving in time, you may not want to be prompted at each record. To suppress this prompting:

**STEP** (cont)

---

7) Press **F9** (Srvice) from the Main Aladin Menu.

8) Press **F9** (Vars).

9) Press **F8** (Others), then **F5** (Info).

You have turned the Info switch off ("-").

10) Press **F1** (Menu).

---

**STEP** (cont)

---

11) Press **F3** (Change).

Aladin will prompt:

**Do you want to (globally) change ALL such records?**

12) Press **F6** (YES).

Aladin will proceed with the process of changing your data base. For the first record found, Aladin will prompt:

**Change the record in this way?**

13) Press **F8** (NO).

The entire operation will be cancelled.

*OR*

Press **F6** (YES).

---

Aladin will proceed with the operation and change all the records that match the query without asking again.

**CAUTION:** The global switch is a powerful tool for speeding up certain Aladin operations. It must be used with caution since by using it you can change a large number of records with a few keystrokes. You should be certain that the calculation is what you really want to do and that the query accurately selects the records you want to changed.

## 18.4  REMOVING RECORDS

While the global switch has no effect on the Enter or View functions of the DATA module, it can be used in Remove in a manner similar to that shown for Change. The only difference is that you are removing, rather than changing, all records which match your query.

# Section 19

# MERGING DATA FILES

It is often the case when working with a data base management system such as Aladin, that you wish to incorporate data from another source into your data base. Or, sometimes you may wish to merge the contents of two data bases.

If the data bases are not identical then you may only want to merge certain information. Or, you may wish to update your data base with information from another source. Still another possibility would be where you wish to create a new data base which requires features from an old data base. In this case you would like to copy some or all of the data from the old data base into the new one. All these things are possible with Aladin through use of the input redirection facility.

### STEP

---

1) Press **F9** (Srvice) from the Main Aladin Menu and soft key line.

2) Press **F3** (Input).

3) Press **F4** (File).

---

## 19.1 CHANGING YOUR INPUT SOURCE TO "FILE"

Normally your input source is the keyboard of your terminal. We have seen in a different section how it is possible for the input source to be a batch script file. Now we are going to describe a different kind of input source, namely the "file" option. After you select File, Aladin will ask you:

**Input source.file : enter file reference name**
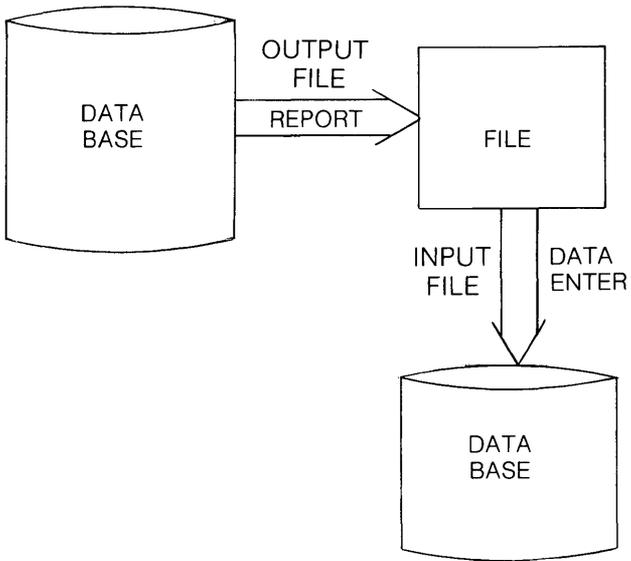
**Fig. IV-29**  -  Conceptual illustration of merging files.

The name that you type should correspond to a file of data that has been saved on your system disk.

If the file is found, then you will observe that the status line is changed. The first of the two names within the parenthesis, which usually reads "CONSOLE:" , now becomes the name of the input file. If you entered the reference name of a file that could not be found on the user disk, Aladin will respond with the message:

### Input file cannot be opened.

If Aladin displays this error message: Press **F1** (CONT) to return to the Main Aladin Menu.

Setting the input source to a file, however, is only a small part of the procedure for merging files. The two other considerations are the format of the file itself and how its contents can be used once you have made it your input source. Leaving the format consideration for last, let us consider how you can use a file as your input source.

The first thing to point out is that changing the input source to a file is not at all the same as setting the input source to a script file. While script files take the place of keyboard commands, input files take the place of data that might be entered from the terminal in response to those commands. In other words, when you have your input set to a file, you still enter all commands from the terminal only the data comes from the file.

## 19.2  ENTERING DATA FROM A FILE

If you want to enter new records from an input file, first select a file as your input source, then:

**STEP** (cont)

> 4)  Press **F2** (Data) from the Main Aladin Menu soft key line.
>
> 5)  Press **F2** (Enter) from the Main DATA Menu soft key line.
>
>     Aladin will prompt:
>
>     **CON, file?**

Aladin is asking if you want to enter data from the terminal keyboard, or from the input file.

**STEP**

> 6)  Press **F3** (File).

...continued

After selecting entry from a file you will see that the screen form for the current relational system file is displayed on your screen. The "street sign" at the upper right corner of your screen will say "DATA.Enter".

The cursor will be positioned at the first field of the screen form. You are now ready to indicate to Aladin which fields will be receiving data from the input file.

In other words, suppose you are entering some cars into a data base and you have in the file "OldDB" a list of manufacturers and models. But, how will Aladin know that you want the data from the input file to go into those particular fields, especially since the CAR.SPECS file contains many more fields than those two?

**Selecting the Fields to Transfer**

This is the problem you about to address. When Aladin displays the screen form for CAR.SPECS it is asking you to specify which fields are represented within the input source file and in what order. If the input source file contains MANUFAC-TURER followed by MODEL, you will choose the two fields, MANUFACTURER and MODEL, from the screen form in that order. You choose fields by pressing the soft key labelled SELECT.

**STEP** (cont)

---

7)  Position the cursor at the field which matches the first field in your input source file.

8)  Press **F4** (SELECT).

---

...continued

The order in which you select the fields is quite important. It must correspond to the order in which the fields appear within your input source file, i.e., if the input file contains MODEL followed by MANUFACTURER you would have to select MODEL first, and then MANUFACTURER. It is very important that the fields you select, match exactly the fields within the input source file. This is the only way Aladin can tell where to put the information from the file.

It is also important that you do something with all the information in the field. In other words, it is not possible to have fields within the input source file that do not correspond to a field within the screen form. Aladin would then have no way or knowing what and how much information to skip when it reads the input source file.

**STEP** (cont)

---

8) Repeat steps 6 and 7, until you have selected fields to match the field in your input source file.

---

As you specify the fields to match the input source file, you will notice at the lower left corner or your screen some numbers within parenthesis. The first number tells you how many fields you have selected, the second number tells you the maximum number of fields it is possible for you to select.

When you have finished specifying the fields:

**STEP**

---

9) Press **F9** (FINISH).

Aladin will prompt:

**Is your definition complete?**

10) Press **F8** (NO).

Aladin returns you to the screen form.

*OR*

Press **F6** (YES)

Aladin will prompt:

**Enter the record in this way?**

---

Aladin is double-checking that this is really what you want to do.

**STEP** (cont)

---

11) Press **F8** (NO).

The DATA module terminates, and you are returned to the Main Aladin Menu and soft key line.

*OR*

Press **F6** (YES).

---

The file entry process will begin. You will notice at the bottom of the screen a prompt like this:

**1 : SAAB**

This is an indicator to you of the last record that Aladin has processed for entry into the database. The first number is a count telling you how many have been done. The word after the colon is the contents of the first field that you have selected for data entry.

Normally the data entry process will continue until the data within your input source file is exhausted . However, you can interrupt the process at any time using two different methods.

You can temporarily suspend it by pressing **F9** (PAUSE) and then resume processing by pressing **F9** (PAUSE) a second time.

You can abort the entry process by pressing **F1** (CANCEL). In any case, when the data entry process is complete you are returned to the Main DATA Menu.

Some of the errors that can occur during this process arise primarily from a mismatch between the way you have defined the fields in the screen form and the fields as they are actually represented within your input source file.

When this occurs you are apt to get a message like:

**Invalid character: : SAAB -> HON**

This means that under the key "SAAB" the data "HON" is the wrong data type for the field for which it is to be inserted. In this case, this is exactly what would occur if the input source file contained manufacturers and models only, but you specified the manufacturer, model and horsepower fields when defining how the data was to be inserted into the data base.

The result is that the second manufacturer value, Honda, is applied to the three-digit horsepower field of the first car, SAAB. And since HON is not a numeric data type, Aladin responds with the message "invalid character".

### 19.3  UPDATING A DATA BASE FROM AN EXTERNAL FILE

We have seen above how to enter data from an external file, but suppose you want to update records that are already within your database. You can do this through the Change function of the DATA module.

The procedure is similar to entering data from an external file. You first must re-define the input source to be a file, then access the DATA module, and select the Change function. Aladin will prompt:

**CON, file**

As with DATA.Enter:

**STEP**

| |
|---|
| 1)    Press **F3** (File). |

Now a screen form will appear and, as in entering data, you must choose the correct fields, in the correct order, to match the contents of your input source file.

The remainder of the process is also the same as for entering data. However, as your input source file is read, instead of entering new records, the first data field within the input source file will be transferred into the specified fields of the matching record. Old data in those fields will be destroyed.

The data in other fields of that record, that is, data fields that do not correspond to anything in the input source file will be unchanged. In this way it is possible to only update a few fields if you wish.

If the record in the input source file does not match the requirement for data in the screen form field, the warning message will be displayed.

## 19.4  REMOVING RECORDS

Just as it is possible to selectively change records throughout input from an external file, it is also possible to selectively remove records in the same way. In this situation, the external file contains the names of records which will be removed.

Take for example, the case where you have an external file containing the manufacturer and model names for the CAR database and that file is a used as a input source file for a "Remove". Aladin will use the manufacturer name as the key by which to locate a record for removal. The sequence of steps to effect this type of removal is exactly the same as for a Change or Enter.
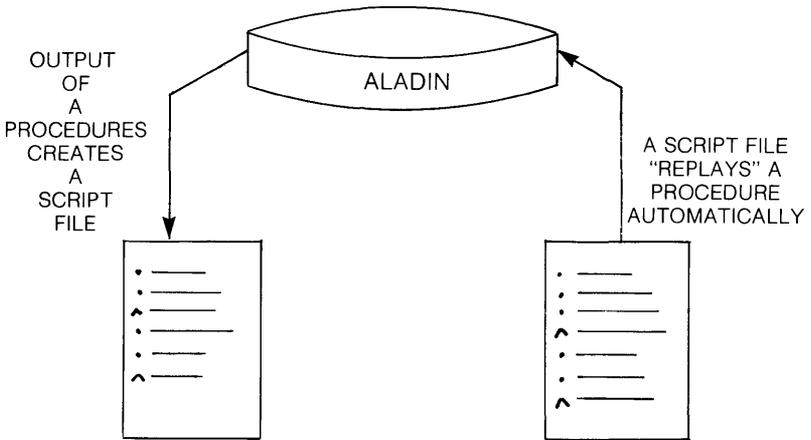
**Fig. IV-30** - A script file, and how it works.

# Section 20

# SCRIPT FILES

Aladin is designed to be an interactive system. This means that you "interact" with it as you use it: responding to the questions it asks. You give it commands to which it responds. All of this interaction is shown on your computer screen step by step. This makes the system very easy to learn and use.

There are times, however, when you would like to preserve a sequence of Aladin operations and run them as a batch. That is, run them all at once without having to enter them one at a time. This is particularly true with routine activities that will be prepared by relatively unskilled operators.

Aladin allows you to prepare a "script" of operations in advance which the Aladin system can then perform all at once without interacting with an operator. The ability to prepare batch scripts puts you in the role of an author preparing a script which the players will act out.

Using Aladin scripts can be considered in two phases. In the first phase you prepare the batch script. In the second phase Aladin performs the script by following the instructions contained within it.

## 20.1 PREPARE A SCRIPT FILE

To prepare an Aladin script, start at the Main Aladin Menu:

**STEP**

1) Press **F9** (Srvice) from the Main Aladin Menu soft key line.

2) Press **F5** (Output).

**STEP** (cont)

---

3) Press **F4** (Script).

   Aladin prompts:

   ### Enter file reference name:

4) Enter a filename, then press **Rtn**.

---

...continued

If you specify a reference name that corresponds to an existing file, Aladin will say:

### File by that name exists. Remove it?

Aladin is telling you that a file has already been saved under that name and it wants to know whether you wish to remove this old file or not.

If you select **F6** (YES), old file will be removed. If you select **F8** (NO), the old file will be preserved and you will be back at the command menu again. This gives you a chance to try again with a new reference name.

When Aladin has accepted your reference name you will see the symbol "->" at the bottom of your screen. Aladin is prompting you to begin entering your script. The Aladin commands that you place within your script should follow the following rules:

a)   Each command must be entered on a separate line.

b)   Module and function selections must be prefixed by a
     period ("."). For example, to enter the report module,
     your script file should contain the command **.2** for
     Report.

c)   Control functions can be entered by prefixing the letter
     with an explamation mark (!). For example, **!7** allows
     you to change the input source. See Appendix A
     (Aladin Script Commands), for a list of module and
     function equivalents.

d)   When you enter a string such as a file reference name,
     enter them exactly as you would normally. They
     require no prefix character. For example, "JUNK"
     after a **!7** followed by **.2** for file would mean the user
     file with the reference name JUNK. Thus there are
     three different types of commands that can be part or
     your script: module and function selections, control
     functions and "strings".

e)   Screen oriented input cannot be entered from a batch
     file, since it would have little meaning. Therefore, you
     cannot enter the DATA module at all nor can you use
     the Define function within the other modules when
     Aladin is running a batch script.

### *Script Rules (cont)*

f)   You should always finish your batch sequence with the
two lines

!7

.1

This will insure that Aladin input is restored to the
keyboard.

g)   It is wise to always use the Aladin command menu as
a common starting and ending point for all your
scripts. This is not required but it is very helpful to
know that all scripts start and end at a certain point.

When entering a batch script you can tell Aladin when you
have finished by entering a blank line.

In other words, instead of entering a command, if you just
press **Rtn**, the output to a script file will cease.

An example of a small batch script would be as follows:

| SCRIPT | ALADIN | MEANING |
|--------|--------|---------|
| .3 | .Query | |
| .3 | .Recall | |
| Fst | Fst | (This assumes you have saved a |
| .5 | .Quit | Query under the name "Fst") |
| .2 | .Report | |
| .1 | .Yes | (Answering the question: |
| .3 | .Recall | Activate Query?) |
| Lst | Lst | (This assumes you have a Report |
| .5 | .Generate | saved under the name Lst) |
| .6 | Aladin | |
| !7 | Input | |
| .1 | .CON | |

This simple script will retrieve a query and generate a
report using that query using files that have been saved on the
disk. If such a report were to be generated regularly it would be
convenient to set it up as a script in this way, rather than
performing the interactive sequence of steps each time the
report is required.

## 20.2 RUNNING A SCRIPT FILE

To run this script file:

**STEP** (cont)

| |
|---|
| 5) Press **F9** (Srvice) from the Main Aladin Menu soft key line. |
| 6) Press **F3** (Input). |
| 7) Press **F4** (Script). Aladin will prompt: |
| **Enter file reference name:** |
| 8) Enter the file reference name, then press **Rtn**. |

If the batch script file can be found, then Aladin will immediately begin to execute the commands found in the script. The control will return to the interactive menus either when the script operation is completed or when an error occurs.

**NOTE**: If an error occurs during script processing be sure to switch the input source back to the keyboard using the Input function.

## 20.3 SCRIPT COMMANDS

All Aladin soft key commands have an equivalent script coding. The Aladin commands, and their equivalent script file codes, are listed in Appendix A.

# Appendix A

# ALADIN SCRIPT COMMANDS

# Appendix A

# ALADIN SCRIPT COMMANDS

The Aladin system is meant to be controlled by commands that are entered by pressing soft keys. The commands, however, can also be entered into a "script" file to make repeated command sequences more automatic.

The following tables list all the Aladin commands and and the way they are represented when entered into script files.

### Table A-A
### ALADIN MAINTENANCE COMMANDS

| COMMAND | SCRIPT FILE |
|---|---|
| ***Main Aladin Menu*** | |
| Data | .1 |
| Report | .2 |
| Query | .3 |
| Calc | .4 |
| Word | .5 |
| Group | .6 |
| Stats | .7 |
| Info | .8 |
| ***Main DATA Menu*** | |
| Enter | .1 |
| Change | .2 |
| Remove | .3 |
| View | .4 |
| Aladin | .5 |

## Table A-A (cont)
## ALADIN MAINTENANCE COMMANDS

| COMMAND | SCRIPT FILE |
|---|---|
| ***Main QUERY Menu*** | |
| Define | .1 |
| Save | .2 |
| Recall | .3 |
| View | .4 |
| Aladin | .5 |
| 1:Equal | N/A |
| 2:NotEql | N/A |
| 3:Greater | N/A |
| 4:GtrOrEql | N/A |
| 5:Less | N/A |
| 6:EqlOrLess | N/A |
| DEFER | N/A |
| 1:AND | N/A |
| 2:OR | N/A |
| 3:XOR | N/A |
| 4:NOT | N/A |
| ***Main VARS Menu*** | |
| OQ? | .1 |
| IQ? | .2 |
| DK? | .3 |
| DIR? | .4 |
| AB? | .5 |
| GL? | .6 |
| NOT? | .7 |
| SV? | .8 |
| INFO? | .9 |
| CAL? | .0 |
| ***Main STATS Menu*** | |
| Define | .1 |
| Save | .2 |
| Recall | .3 |
| View | .4 |
| Evaluate | .5 |
| Aladin | .6 |

**Table A-A** (cont)
**ALADIN MAINTENANCE COMMANDS**

| COMMAND | SCRIPT FILE |
|---|---|
| *STATS (cont)* | |
| Absolute | .1 |
| Percent | .2 |
| Graphics | .3 |
| Stats | .4 |
| *Main INFO Menu* | |
| Info | N/A |
| Map | N/A |
| Files | N/A |
| Prn | N/A |
| *Main REPORT Menu* | |
| Define | .1 |
| Save | .2 |
| Recall | .3 |
| View | .4 |
| Generate | .5 |
| Aladin | .6 |
| *Main GROUP Menu* | |
| Define | .1 |
| Save | .2 |
| Recall | .3 |
| View | .4 |
| Aladin | .5 |
| *Main CALC Menu* | |
| Define | .1 |
| Save | .2 |
| Recall | .3 |
| View | .4 |
| Aladin | .5 |
| 1:ADD | N/A |
| 2:SUBTRACT | N/A |
| 3:MULTIPLY | N/A |
| 4:DIVIDE | N/A |
| 5:STORE | N/A |
| DEFER | N/A |

**Table A-A** (cont)
**ALADIN MAINTENANCE COMMANDS**

| COMMAND | SCRIPT FILE |
|---|---|
| *YES* | *.1* |
| *NO* | *.2* |
| | |
| *Service Menu* | |
| | |
| Screen | N/A |
| Input | !7 |
| Output | !8 |
| Jump | N/A |
| Vars | !2 |
| | |
| Bright | N/A |
| Normal | N/A |
| Dark | N/A |
| | |
| *Printer Width* | |
| | |
| A:40 | N/A |
| B:80 | N/A |
| C:132 | N/A |
| D:196 | N/A |
| E:255 | N/A |
| | |
| *Input Menu* | |
| | |
| CON | .1 |
| File | .2 |
| Script | .3 |
| | |
| *Output Menu* | |
| | |
| CON | .1 |
| File | .2 |
| Script | .3 |
| PRN | .4 |

### Table A-B
### ALADIN INSTALL COMMANDS

| COMMAND | SCRIPT FILE |
| --- | --- |
| *Main Aladin Install Menu* | |
| Install | N/A |
| Change | N/A |
| Screen | N/A |
| Access | N/A |
| File | N/A |
| Quit | N/A |
| *Input* | |
| Menu | N/A |
| CON | N/A |
| File | N/A |
| *Output* | |
| Menu | N/A |
| CON | N/A |
| File | N/A |
| PRN | N/A |
| *Input* | |
| LEFT | N/A |
| RIGHT | N/A |
| UP | N/A |
| DOWN | N/A |
| NEWLIN | N/A |
| PAGE | N/A |
| HORIZ | N/A |
| VERT | N/A |
| LINE | N/A |
| SCREEN | N/A |
| SETUP | N/A |
| *Main CHANGE Menu* | |
| Save | N/A |
| INSLIN | N/A |
| DELLIN | N/A |
| TOP | N/A |
| PROT | N/A |

**Appendix B**

**GLOSSARY**

# Appendix B

# GLOSSARY

In this section we will present, with examples, some of the terminology and concepts fundamental to the Aladin Relational Problem Solver.

**Bootstrap**   –   The process of starting the Aladin software on the Hyperion.

**Object**   –   Something in the "real world" about which we wish to collect information. Objects can be cars, people, books, research experiments, etc.

**Field**   –   A single item of information that makes up part of what we want to know about an object. A field may be represented as a blank to be filled in on a form.

**Form**   –   A collection of information fields that describe an object. We create forms as a convenience to help standardize the kinds of information we collect about our objects. When a form has been filled out, we can say that we have a record of that object.

**Record**   –   A "filled-out" form. In other words a number of data items that describe one particular object. A record differs from a form primarily in that the former is "filled-out" and the latter is "empty".

**File**   –   A collection of similar records. This similarity is based on the records having the same form. Note that a file will typically consist of many different records, but only a single form. The records in a file should be ordered according to one or more of their fields so that individual records are easy to retrieve. Fields that are used for this ordering are called key fields.

**Key Field**  –  An otherwise ordinary field within a form that is used for ordering the records that use that form. A particular record within a file can be found be "looking it up" according to a key field. ALADIN will perform this look-up automatically. Key fields can also be used to create relations between separate files.

**Relation**  –  A connection or "access-path" between two or more separate files that share a key field. These files must be defined as part of the same Relational System.

**Relational System**  –  A group of files that, together, provide a solution to a real-world problem.

In this example, and those that follow, each line depicts a single record. The headers in the examples show you what the fields are. And an entire "box" represents a file.

Here is a depiction of a single file, showing multiple records, each of the same form:

```
==================================================================
¦Part-Nr¦Part-Description¦Supplier¦Price¦Stock¦Order    ¦
¦-------¦----------------¦--------¦-----¦-----¦---------¦
¦F00123 ¦ Screws,SM, 0.5 ¦ABC Tool¦ 0.70¦ 9000¦ 30000   ¦
¦F12345 ¦ Nuts, 5-40     ¦ABC Tool¦ 0.23¦ 5000¦ 10000   ¦
¦X1220  ¦ Lag Bolts,1.00 ¦Erf Mach¦ 0.05¦ 1000¦ 2000    ¦
¦  ..   ¦    ..          ¦  ..    ¦  .. ¦  .. ¦  ..     ¦
¦  ..   ¦    ..          ¦  ..    ¦  .. ¦  .. ¦  ..     ¦
¦                                                       ¦
==================================================================
```

The next examples depict the various kinds of relations or access paths that are possible between files within a Relational System.

a)  1 : 1 - Relationship
b)  1 : n - Relationship
c)  n : 1 - Relationship
d)  n : n - Relationship

**a)   "1 : 1" Relationship**

In this type of relationship between files, there is exactly one record in each of the files that has a particular key value. For most practical purposes, this is no different from having all the fields incorporated into a single record in a single file.

```
File: ARTICLE                               File: DESCRIPTION

==================================       ==============================
!Part-NR! Part-Desc!Supplier!...!        !Part-Nr! Mass ! Unit!......!
!-------!----------!--------!---!         !-------!------!-----!------!
!\F00123\ !Area X   !   XXXX !...!  !->!\F00123! 7x3  !Piece!.      !
!.. !    !   ...    !  ...   !.. !   ! !!..      !  ... ! ... ! ...  !
!   !    !          !        !    !  ! ! !                           !
====!=============================!       ==============================
 !----------------------------!
```

## b)    "1 : n" Relationship

A more useful case is the "1 to n" relationship.
In this situation, a record having a unique key
value in one file could lead to a number of
records sharing that key value in another file.
This could be used, say, to relate a particular
article with all its distributors,

```
File: ARTICLE                          File:  SUPPLIER

==========================          ==================================
!Part-NR ! Part-Desc!...!           !Supplier!Address! Part-NR!...!
!--------!----------!---!            !--------!-------!--------!---!
!\F00224\!resistor  !...!  !--->!ABC Elec!xxxxx !\F00224\!...!
!   !     !          !   !         !B       !xxxxx !F00226  !...!
!   !     !          !   !  !--->!Chapin A!xxxxx !\F00224\!...!
!   !     !          !   !         !  ...                      !
===!====================!           ==================================
  !----------------------!
```

**c) "n : 1" Relationship**

The "n to 1" relationship describes the "mirror-image" of the "1 to n" case examined above. This time, there will be a number of records within a file that share a key value which leads to a single record in another file. An example would be an inventory file containing records of many articles, some of which come from the same supplier.

```
File: ARTICLE                           File: SUPPLIER

===========================      ================================
!Part-Nr!  ...   !Supplier!      !Supplier!Address!  ...        !
!-------!-------!---------!      !--------!-------!---------!
!F00123 !        !\XXX\ --+----+-->!\XXX\  !   ,   ! ,        !
!F00124 !    ,   !YYY      !  !   !YYY     !   ,   ! ,        !
!F00125 !    ,   !\XXX\ --+----!   !ZZZ    !   ,   ! ,        !
!F00126 !    ,   !\XXX\ --+----      !   ,                     !
!F00127 !    ,   !YYY      !         !   ,                     !
===========================      ================================
```

**d) "n : n" Relationship**

In this most general case, we can see the "1 to n" and "n to n" relationships combined. For example, in a real inventory system each article could have several suppliers, and each supplier would be likely to supply many articles.

```
File: ARTICLE                        File: SUPPLIER
===========================      ================================
!Part-Nr!  ...  !Supplier !      !Supplier!Part-Nr  !  ...      !
!-------!------!----------!      !--------!---------!--------!
!12     !   ,  !  X,Z     !      !X       !12,13,15 !   ,     !
!13     !   ,  !  X,Y     !      !Y       !13,14    !   ,     !
!14     !   ,  !  Y,Z     !      !Z       !12,14    !   ,     !
!15     !   ,  !  X       !      !  ,               !         !
!       !      !          !      !  ,               !         !
===========================      ================================
```

Imagine the arrows tracing the connections between the two files.

# Appendix C

# ALADIN ERROR MESSAGES

# Appendix C

# ALADIN ERROR MESSAGES

The mistakes and disturbances that occur in the operation of Aladin can be categorized into various types.

1) Mistakes in operating the machine, for example:

   -- trying to insert invalid data types.
   -- trying to implement invalid operations.
   -- incorrect or blank contents from definitions (defines) (with Query or Statistics).

2) Mistakes in the logic of the data base definition, for example:

   -- impractical interconnection of data files through key fields.
   -- contradictory field definitions.

3) Incorrect system peripherals, for example:

   -- wrong floppy disks.
   -- printer not ready to receive
   -- disk data files not acceptable or not correctly named.
   -- diskettes are full.

4) Device and/or operating system disturbance.

5) Disturbance in the mass storage area (diskettes, disks, Bad- Blocks).

6) Errors in program packet.

Device errors and computer operational system errors are recognized this way – the system after being turned on, doesn't perform in the same manner. Check if the correct diskettes are laid in, if this is the case and the system still doesn't work, then use a substitute diskette for the operational system.

Error messages (in English) come from the computer's operational system. In such cases the system is to be started anew.

A new start is also necessary, when the system, after an input, isn't called up again and doesn't react when **Rtn** or **spacebar** are pushed.

If the program, at the time of a system stop, is in the data insert routine, not all of the inserted data in the run is lost, because the system automatically transfers the data to the diskette.

After the new start of the system check to see which input the system received.

Mistakes in operating the machine and mistaken data input are intercepted by Aladin without an automatic system stop.

In such a case the program brings a corresponding mistake call that first must be answered with the **spacebar**, with that a corrected input can be made.

With the entry of data in the screen mask the system checks automatically to see whether the entered characters and values are compatable with those from the operator arranged character type and value limits.

If this is not the case the system refuses to accept the entry and demands corrected values.

**IMPORTANT:** During the working of a function module no diskettes are to be exchanged.

| ERROR MESSAGE | MEANING |
|---|---|

### Cannot find all the files for that relational system.

### Cannot find specified record.

Aladin cannot find the data record that meets your specifications. Some possibilities and suggestions are:

a)  The record you are looking for is not present.

b)  You may be at the end of the data file.

c)  If you have not tried using a wild card or fragment search, you may wish to try again using either or both.

### Data base unusable: implementation restriction.

### Fields are not comparable.

You have tried to compare two fields which contain different data types. You have literally tried to compare apples with oranges. For example, you cannot compare date fields with text fields, or numeric fields with non-numeric fields.

### File name is longer than 6 chars.

This is the limit of a database name. Some files use the database name as a prefix for their filenames.

| ERROR MESSAGE | MEANING |
| --- | --- |

## Input file cannot be opened.

Aladin has been unable to open an input file. Please check the following possibilities:

1) The file is not on this diskette. Make sure that you typed the correct name, and that you have the correct diskette volume.

2) The file name contains invalid characters. Only the letters "A...Z", numbers "0...9", and the period "." are allowed.

3) There is a problem reading from the disk.

## Input value out of bounds.

An input specification has been established using the QUERY filter and the value you have entered is outside the allowable bounds.

Suggestions:

1) Reenter the correct value.

2) Modify the input specification in the QUERY module.

3) Turn OFF the query selection filter by using Ctrl + V, i.e., select option #2 (INPUT SELECTION) and ensure it is off (-).

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| ERROR MESSAGE | MEANING |
| --- | --- |

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### Invalid character.

Aladin recognizes assorted data types within data fields. The value you have typed into the system is not allowed. Only the following characters are valid:

| DATA TYPE | VALID CHARACTERS | EXAMPLES |
| --- | --- | --- |
| Numeric ($<=255$) | 0 to 9 | 12 |
| Numeric ($>255$) | + - 0 to 9 | 12, -34 |
| Dates | . 0 to 9 | 1/1/82 |
| Decimals | . + - 0 to 9 | 25.6 |
| Sums | . , + - 0 to 9 | 1,200.34 |
| Character | all | ab#2,9 |
| Money | . , 0 to 9 | 2,000.00 |

You may also receive this error message if you try to insert data into a field at a time when only special characters are being requested, i.e., GROUPING, STATISTICS, etc.

### Invalid date.

You have tried to insert or update a date field with an incorrect value. The proper format is: month/day/year, i.e., 5/20/83 means May 20, 1983.

### Invalid decimal number.

You have tried to insert or update a decimal field and the value you have typed has:

1) more than one decimal point,
2) the sign in the wrong place,
3) an incorrect number of spaces before or after the decimal point.

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| ERROR MESSAGE | MEANING |
| --- | --- |

### Invalid "statistics" character.

While defining a statistical evaluation table you have the following soft keys available:

SINGLE

For a single or one-dimensional evaluation, position the cursor to the desired field and press F2 (SINGLE).

HORIZ and VERT

For two or multidimensional evaluations, position the cursor on the field to be used as the horizontal axis, and press F6 (HORIZ); move to the next field to be used as the corresponding vertical axis, and press F7 (VERT).

For example: correct input: S S S S H H H H V V V S S S H V H V H V V;

incorrect input: S S V , S S H S V , S S X H V

### Invalid sum or money.

You have made an insert or update in a Sum or Money field which is incorrect. Ensure that you have not made any of these errors:

a)  misplaced comma: i.e., 12,24,678.00
b)  misplaced decimal: i.e., 123,457.878
c)  transpose commas and decimals, i.e., 123.456.456,00

### Item not in current Aladin file.

You have tried to use fields in a form letter which are not available in the data base. Please check the following possibilities:

a)  field name is misspelled,
b)  field does not exist,
c)  you are in the wrong data base file.

| ERROR MESSAGE | MEANING |
| --- | --- |

**Multiple data records filed under this key.**

**No blanks in numeric fields, please.**

>During the input or update of numeric fields or numeric dependent fields, you are not allowed to leave spaces between the numbers. For example: 12 345 is not allowed; 12345 is correct.

**No group table.**

>You must provide Aladin with the name of an active group or map table prior to using the Evaluate function.

**No memory for CONTROL functions.**

>You have exceeded the available memory to continue: pressing spacebar will attempt to retry this task. Call the Vars functions from the Main Aladin Menu.

**No record has a key fitting your pattern.**

**No records meet query criteria.**

| ERROR MESSAGE | MEANING |
| --- | --- |

**Not enough memory.**

> Aladin has attempted to perform a task which required more memory than is currently available. You may still be able to have Aladin process the task by breaking it up into smaller segments: for example, run selections or perform statistical evaluations in smaller groups.

> If your request simply must be this complex, it will be necessary to increase the memory of your computer (i.e., expand to a hard disk).

**Not enough memory for keys.**

> Your relational system requires more internal (RAM) memory for key storage than is available.

> The system will not fail, however, a degradation in overall performance may be noticed and you may be unable to locate records within the data base.

> You should reconfigure your system with the INSTALL module.

> You should NOT enter more records into the system, as this will only aggravate the problem.

**Not enough room left in Data file.**

**Not enough room left in Tree file.**

> Aladin requires that there be at least nine free blocks within your Tree file. You must enlarge the file using the INSTALL module.

**Number too large.**

> A maximum value for this numeric field has been fixed. This limit is checked during data input or updating. You have exceeded the established numeric limit.

> 1)   Ensure that the input value is correct.

> 2)   If a query is active on input, and affects this field, you may need to turn off the IQ switch (with Vars) or modify the query itself.

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**ERROR MESSAGE**         **MEANING**

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### Output file cannot be opened.

Aladin has been unable to open an output file for you. Please check the following possibilities:

1) The file name contains invalid characters. Only the letters "A...Z", number "0...9", and the period "." are allowed.

2) There is no more space in your diskette.

3) There is a problem reading or writing to or from your diskette.

### Reference is for wrong data type.

You can use a previously defined grouping on a field only if the two fields are of the same data type. For example, group tables dealing with dates in one field can be compared only to fields which are also dates

### Relational system incompatibility.

You have tried to use a relational system from one computer system that is not compatible with the computer system you are now using.

### The disk is full.

There is room for no more records in this data base. To enter more data, you must increase the data base capacity.

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| ERROR MESSAGE | MEANING |
| --- | --- |

**The data record cannot be read.**

**The data record cannot be written.**

**This field is not a key field.**

In order to be accessible through Aladin's B Star Plus Trees, a field must have been defined as a key field. The field that you have selected is not such a field.

NOTE: You may define a query to assist you in finding the required record(s). This will take longer than using key fields, but it will work with any field or combination of fields.

**Too many specifications.**

Aladin has attempted to perform a task which required more memory than is currently available. You may still be able to have Aladin process the task by breaking it up into smaller segments: for example, run selections or perform statistical evaluations in smaller groups.

If your request simply must be this complex, it will be necessary to increase the memory of your computer (i.e., expand to a hard disk).

**User name/password unrecognizable.**

**Your key index needs reorganizing.**

**This function is not available.**

**This function is not allowed.**

**Finish the definition, no more available memory.**

# INDEX

# INDEX (cont)

# INDEX (cont)

# INDEX (cont)