PROFILE 4 PLUS
REFERENCE MANUAL

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How to Use the PROFILE 4 Plus Manual

This manual is divided into several sections designed to give you a complete picture of the Profile 4 Plus system.

The first section is a sample file. This file provides excellent practice for those who have read Instant Profile.

The second section of the manual is for reference. Use this section to look up answers to specific questions or as an encyclopedia for the terms and functions of Profile 4 Plus.

The final section provides the user with appendices on FORMAT, BACKUP, protecting your system, program and file names, deleting files, password protection, converting to a computerized system and a glossary of computer terms.

We suggest experimentation with Profile 4 Plus as you learn its many uses. After you finish the sample file, you will easily be able to set up your own files, configuring them to your special needs.

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Appendices and Glossary

Introduction

Profile 4 Plus is a unique program that not only transforms your TRS-80 Model 4/4P into a well-organized filing system, but offers many possibilities for manipulating the data you enter. You can store almost any type of information, then retrieve it at the touch of a key.

A data base management program such as Profile 4 Plus lets you develop your own specialized system or set of systems. Rather than purchasing a ready-made mailing list program that may be missing some of the features you need, or hiring someone to write a program for you at great expense, use Profile to create a system that meets your own specifications.

Not only that, Profile 4 Plus lets you add to and revise your system at any time. For instance, if you start out with a mailing list you might want to add invoicing functions as your company grows.

Features of Profile 4 Plus

- Lets you define and redefine your file any time you like, without losing data.

- Gets you up and running immediately with its automatic screen and report.

- Offers a variety of ways to access records: using the indexing or record-number options, or by thumbing through the file with the scanning feature.

- Sorts and selects records by any field in any segment of the file.

- Extends sorting (organizing) capacity over all available disk space instead of just the built-in memory.

- Allows indexing on indexes for quicker sorting and selection and for sorting on more than one segment.

- Lets you sort records up to five fields, in any order, to a maximum of 85 characters.

- Sorts records in either ascending or descending order.

- Selects records up to 16 different search criteria.

- Lets you print grand totals at the ends of your reports.

- Lets you break reports into subtotaled sections, with a page of grand totals at the end.

- Performs mass recalculation, hardcopy, delete, and purge operations for all records or groups of records selected with the normal selection function or with indexes.

- Lets you customize the system to your needs with user-defined menus.

- Lets you protect screens and formats with passwords.

- Separates creation from runtime functions so that file formatting and re-formatting can be controlled.

- Can create spin-off files to be used by Model 4 SuperSCRIPSIT. For instance, include Profile information in letters and reports.

- Can create DIF files to used by Model 4 VisiCalc and other programs for extended math, and spreadsheet operations.

- Indexes records for report and label printing, and SuperSCRIPSIT and VisiCalc selections.

- Lets you protect all formats with passwords.

Capacities of Profile 4 Plus

- Allows up to 99 fields in each record.

- Allows up to 255 characters in each segment.

- Per file, stores up to 2,400 255-character segments on four floppy disk drives; 65,535 records maximum on up to four hard disk drives.

- Allows up to 200 characters across and 99 print lines down for reports and labels.

- Allows up to 16 math formulas per file.

- Allows up to ten different screen formats for each file.

- Allows up to 36 SuperSCRIPSIT spin-off file formats per file.

- Allows up to 36 VisiCalc spin-off formats per file.

Software Capabilities

- Data from Profile III Plus and Profile III, Hard Disk Version, can be upgraded to Profile 4 Plus format.

- Compatible with Model 4 SuperSCRIPSIT.

- Compatible with Model 4 VisiCalc.

Required Equipment

- TRS-80 Model 4 64K computer

- At least two floppy disk drives or one floppy disk drive and a Model 4 five-megabyte hard disk drive.

- Radio Shack printer.

- Appropriate printer cable.

Optional Equipment

- External disk drives.

- Secondary hard disk drive.

Getting Started

In order to run your Profile 4 Plus system, you must do three things:

Copy the master diskettes either onto floppy diskettes or your hard disk drive.

Learn how to use Profile 4 Plus by reading Instant Profile first and then work through the sample file and the reference section.

Set up a file.
This manual shows you how to do so. When you are ready to start using Profile 4 Plus with your own records, refer to "Converting Your to Profile 4 Plus" in the reference section.

Creation and runtime diskettes. You are supplied with two Profile 4 Plus diskettes. On a floppy disk system, the creation diskette is placed in drive 0 (the lower drive) and is used only when setting up your file. During creation, a formatted data diskette (a diskette without an operating system) is placed in drive 1 (the upper drive) to store the formats you create.

When you are actually entering or using data (running the programs, in other words), the runtime diskette is placed in drive 0 (the lower drive). The other drive or drives hold the data diskette on which you stored your formats and other data diskettes.

Adding Profile 4 Plus to Your System

The Profile 4 Plus package can be used on either a floppy or hard disk system. Instructions for moving the programs onto a hard disk drive are given below. If you have a floppy disk system, simply back up the master diskettes following the instructions in Appendix B. When finished, put the original masters away and use the backups for day-to-day operations.

Hard Disk Instructions

1. Make sure that the printer and hard disk are properly connected to the computer. Turn on your system following the "Power Up Sequence" in your Model 4 Manual.

2. At TRSDOS Ready, insert the first Profile 4 Plus diskette into the lower floppy disk drive (on a floppy disk system, drive 0; a hard disk system, logical drive 4). On a floppy disk system, put the second master diskette in the upper floppy disk drive.

   Your first step is to copy the Profile 4 Plus diskettes onto the disk. The first master diskette contains a "configuration file". This file contains information on the "logical" numbers assigned to each drive.

   The hard disk is divided into four logical drives, each of which is assigned a number from 0 through 3. If you have a system with two floppy disk drives, the lower floppy disk drive is drive number 4 and the upper floppy disk drive is number 5. You must know and use the appropriate logical drive numbers when using the hard disk drive.

   You may copy the Profile information onto any of the four logical drives in your hard disk. The logical drives are numbered 0, 1, 2, and 3.

   To copy the information on the TRSDOS diskette to the hard disk, type:

       BACKUP :4 :d   ENTER

   where d is a hard disk logical drive number. This command copies the information on the master diskette (in logical drive 4) to the hard disk logical drive specified. For example, BACKUP :4 :1 ENTER copies the information on the TRSDOS diskette to logical drive 1.

3. Once the diskette is copied, as indicated by a messge on the screen, remove the diskette, and replace it with the second master diskette. Copy the programs on that diskette onto the hard disk drive using BACKUP. When finished, remove the diskettes, return to their sleeves and store them in a safe place.

The Sample File

This section is designed for those who have already read Instant Profile. Now that you understand the capabilities of Profile 4 Plus, this sample file will be a breeze. Try the sample file by working straight through without a break. If you run into any problems, use Instant Profile for reference.

In the sample file, you create and use many of the functions of Profile 4 Plus. You may wish to save it as a test File or to experiment with it before, or even after, creating your own File. When you no longer need the sample file, save it on a set of diskettes (and delete it from the hard disk drive, if you have a hard disk system) following the instructions in the appendix.

Also, a few of the examples given in the reference section refer to the sample file. If you save the File, you can use it to try out the feature or operation described.

The Sample File

The file contains information on the fictional Enrichment Encyclopedia Company's sales force. There are five sales representatives in different parts of the country, and their commissions are paid quarterly.

The File itself will include two Screens, ten Records, two Reports and a set of math formulas.

Floppy disk users, start with a newly formatted data diskette in drive 1. At TRSDOS Ready, type CM. Press **1** for Defined Files, and enter the File name SALES.

Get to the first segment and press **U**. Enter the following Fields in the same way as you did in Instant Profile. If you make a mistake, move the cursor back to the mistake and type over it.

```
1-First Name                            ٠    10٠
2-Last Name                             ٠    15٠
3-District                              ٠     3٠
4-Quarter to Date Sales                 ٠    10٠
5-Commission                            ٠    10٠
6-L Sets                                ٠     4٠
7-DH Sets                               ٠     4٠
8-H Sets                                ٠     4٠
9-Commission Rate                       ٠     2٠
```

Fields 6 through 8 use abbreviations for the three products the company markets: L Sets for Library Sets, DH Sets for Deluxe Home Sets, and H Sets for Home Sets.

The Quarter to Date Sales Field records the dollar amount the sales representative sells. The Commission Rate Field records each sales representative's commission.

After you enter the Field 9 heading and length, check for typographical errors, then press **SHIFT** **CLEAR** to record the Segment. Make sure your printer is attached, turned on and online, then press **H** for a hardcopy. When the prompt returns, press **N** for next Segment and we move on to Segment 2.

Enter the following Segment 2 Fields:

```
10-L Price                              ٠     7٠
11-DH Price                             ٠     7٠
12-H Price                              ٠     7٠
13-L Amt                                ٠     9٠
14-DH Amt                               ٠     9٠
15-H Amt                                ٠     9٠
```

After entering the Field 15 information, record and hardcopy the Segment. Move on to Segment 3.

Enter the following Segment 3 Fields.

```
16-Home Phone                           ٠    12٠
17-Date Hired                           ٠     8٠
18-Date of Last Update                  ٠     8٠
19-A) First Quarter                     ٠    10٠
20-A) Second Quarter                    ٠    10٠
21-A) Third Quarter                     ٠    10٠
22-A) Fourth Quarter                    ٠    10٠
```

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The Fields starting with A) are Associated Fields. If you ask for a Record containing sales greater than $3,000, Profile looks through Fields 19 through 22 for $3,000 or more. Later in the sample file, you'll scan the File in a way that illustrates the usefulness of these Fields.

When finished, record and hardcopy the Segment. Press **X** to exit from the Segment.

Create A Default Screen (Y/N) ?

Press **Y** and **ENTER**. Remember, when you create your own File that each format 1 (Screen 1, Report 1, Label 1, etc.) is a "default" format. When asked for the format number at Runtime, you can simply press **ENTER** (instead of **1** **ENTER**).

Your first Report is to be created automatically also. If you have a printer with a width of 14 inches, you can press **ENTER** for the number of characters per line. Otherwise, type 8Ø **ENTER**. Everything goes on Drive 1.

We don't need any additional characters at this time. Same for Segment 2 and Segment 3.

You're returned to the creation menu. The next step is to revise the new default Screen.

Revising Screen 1
You will design two Screens for SALES: the first for sales information input, the second for commission data input.

Open Screen 1.
The file name, SALES, appears at the top of the screen, the Fields and headings are lined up, in numeric order, in columns beneath the heading.

Redesign the Screen to look like the figure below:

```
                                    SALES
  _____

            Monthly report for: *1                   <2
                    District: #3
          Quarter to Date Sales: !4              Commission: !5
  ..........................................................................
  Number of Sets                  Price per set        Total Sales
        L Sets: #6                    .10                  !13
       DH Sets: #7                    .11                  !14
        H Sets: #8                    .12                  !15

             Commission Rate: !9
                 Home Phone: #16
                 Date Hired: /17
         Date of Last Update: ?18


  ....:....!....:....!....:....!....:....^....:....!....:....!....:....!....!
  1, 1              Press  SH-CLEAR  to Record,  BREAK  to Cancel
```

When you're finished, store the format by pressing **SHIFT** **CLEAR**. Once you've stored it, you can always review it, make changes, and store it again.

Hardcopy the Screen. You don't need a password for this Screen. Press **N** and the creation menu reappears.

Adding a Second Screen
You are now going to define a second Screen of sales and commission data that is protected from unauthorized access.

At the creation menu, press **2**. Enter the SALES Filename and call up Screen 2.

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Type in the information below:

```
                          SALES INFORMATION ·

Information About: !1          !2

  Commission Rate: #9     Commission to Date: !5

Quarterly Sales--
First Quarter:     .19
Second Quarter:    .20
Third Quarter:     .21
Fourth Quarter:    .22

Quarter to Date Sales: !4




. . . . : . . . . | . . . . : . . . . | . . . . : . . . . | . . . . : . . . .^. . . . : . . . . | . . . . : . . . . | . . . . : . . . . | . . . . : . . . .|

1 , 1              Press  SH-CLEAR  to Record,  BREAK  to Cancel
```

Save Screen 2 and make a hardcopy. Answer **Y** **ENTER** for a password. This prompt appears:

    Enter Password

Type TEAR*DOG **ENTER**. See "Password Protection" in the reference section for more information. You're returned to the creation menu.

Defining Math Formulas for SALES
In this part of the sample file, you set up math formulas for calculating sales figures and commission rates for the SALES file.

At the creation menu, press **7** for Define Formulas.

For a detailed description of Profiles's math functions, see "Defining Formulas" in the reference section.

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Insert the following equations:

```
13=    6*10
14=    7*11
15=    8*12
 4=    13+14+15
 5=    4*9/"100"
```

Equation 1 finds the total library set sales (field 13) by multiplying the number of library sets (field 6) by the price per set (field 10). Equation 2 finds the total deluxe set sales and equation 3 finds the total home set sales. Equation 4 sums the equation 1, 2, and 3 to get the Quarter to Date Sales. Equation 5 finds the commission on total Sales.

Record and hardcopy your formulas.

Expanding the File
Now that you've defined data Segments and created Screens, you can begin entering data in the SALES file. But first you must expand the File to make room for Records.

Change disks and bring up the Runtime menu.

Press **1** - Expand Files. Specify 10 additional records.

The program asks for the drive numbers of Segments 2, 3 and then 1. Press **1** **ENTER** in response to each question. The program expands the File and when finished, the Runtime menu reappears.

Entering Personal Data
Use 3- Inquire, Update, Add function to fill in sales representatives' names and most recent sales figures.

When asked for the Screen number, press **ENTER** for the default Screen, 1, and go to Record 1.

The prompt Enter Record Number appears. Press **ENTER** to go on. Press **ENTER** again. A Screen with the prompt Add Records (Y/N) appears. press **Y** **ENTER**.

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Your Screen 1 format appears, and the cursor is in the first name Field. Enter the following information:

```
                              SALES
_____

         Monthly report for: William   ,     Johnson        ,
                   District: 202
         Quarter to Date Sales:              ,   Commission:           ,
.....................................................................
Number of Sets                   Price per set    Total Sales
       L Sets:    5,             3000.00,                   ,
      DH Sets:    5,             1750.00,                   ,
       H Sets:   10,             1200.00,                   ,

             Commission Rate:    ,
                  Home Phone: 817/555-0402,
                  Date Hired: 02/10/81,
         Date of Last Update: /         ,



_____
#    1                   Enter Selection >               Screen 1

          D-Delete,  H-Hardcopy,  U-Update,  X-End,  ENTER-Next
```

Press SHIFT CLEAR to save the Record. A message at the bottom of the Screen indicates that Profile is CALCULATING. When the calculations are complete, the next empty Record appears in update mode.

Entering the following for Record 2 (use **SHIFT** @ for the price fields):

```
                              SALES
_____

        Monthly report for: Kelley      .                    .
                  District: 102
     Quarter to Date Sales:           .       Commission:          .
.........................................................................
Number of Sets                  Price per set    Total Sales
       L Sets:    6.                    .                    .
      DH Sets:   12.                    .                    .
       H Sets:    7                     .                    .

           Commission Rate:    .
               Home Phone: 213/926-6385.
               Date Hired: 10/01/78.
        Date of Last Update: /          .




_____
#    2                   Enter Selection >                Screen 1

      D-Delete,  H-Hardcopy,  U-Update,  X-End,  ENTER-Next
```

Press **SHIFT** **CLEAR** to save the Record. Note: Record 2 does not behave like Record 1. Instead, a highlight blinks in the last name Field and the cursor returns to the first Field on the Screen. The last name Field is a must-fill Field. Move the cursor to Field 2 and type Kilton. Press **SHIFT** **CLEAR**. Now Record 2 is accepted and you move on to Record 3.

Type in the data as follows for Record 3:

    Brenda **ENTER**
    Thomason **ENTER**
    516
    2 **ENTER**   SHIFT @
    8 **ENTER**   SHIFT @
    4 **ENTER**   SHIFT @
    203/336-8291
    12/01/84
    /

Press **SHIFT** **CLEAR**.

For Record 4, enter this data:

```
Adam ENTER
Ackerson ENTER
789
6 ENTER          SHIFT @
10 ENTER          SHIFT @
3 ENTER          SHIFT @
206/735-8888
03/01/76
/
```

Press SHIFT CLEAR.

For Record 5, enter this data:

```
Jeannie ENTER
Putman ENTER
456
2 ENTER          SHIFT @
18 ENTER          SHIFT @
3 ENTER          SHIFT @
415/335-9156
04/28/86
/
```

Press SHIFT CLEAR. You have now filled all the Records you need. When Record 6 appears, press BREAK twice. Press the up arrow to move backwards throughtout the File until you reach Record 1.

Entering Sales Data
Look over Record 1. All the protected Fields are filled except for the commission information.

Press 2 for the Screen switching option. This prompt appears:

```
Enter Screen Password
```

Type TEAR*DOG (all uppercase) and press ENTER. You may have noticed that pound signs (#) appear instead of the password.

Your second Screen appears. Note "Screen 2" at the lower right. The name Williams Johnson and the Quarter to Date sales figure is filled in, but the other Fields are empty. Press U to update.

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The cursor is now in the commission rate Field. Type 15.

Enrichment Encyclopedia is in its third quarter (the sales figures on screen 1 will be fourth quarter sales). Enter the following quarterly figures:

```
54000
75250
81600
```

You have no more sales figures for Record 1. Press **SHIFT** **CLEAR** to record the data. The program calculates the commission, then displays the result in the Commission to Date Field. If you switch to Screen 1 (press **1**), you can see that the commission Fields are filled on that Screen also.

If you've switched to Screen 1, switch back to 2 (note that you're not asked again for the password). Press the down arrow to go on to Record 2, then **U** for update. Enter the following quarterly data:

```
10

98400
101500
84000
```

Press **SHIFT** **CLEAR** to record the data and the down arrow for Record 3 (with Profile's type-ahead function, you can press the down arrow before the list of options reappears at the bottom of the screen).

For Record 3, press **U**, then fill in this data:

SHIFT @

```
72000
49000
96000
```

Press **SHIFT** **CLEAR** to record the data and the down arrow for the next Record.

For Record 4, press **U**, then fill in this data:

```
12

86400
```

```
92750
102000
```

Press **SHIFT** **CLEAR** to record the data and the down arrow for the next Record.

For Record 5, fill in this data:

```
15

42000
39600
50750
```

Press **SHIFT** **CLEAR** to record the data.

Press **X** to return to the Record number prompt. Press **BREAK** twice to return to the Runtime menu.

Building an Index

A logical choice is an index that puts Records in order alphabetically by last name.

Press **2**, Build Index, at the Runtime menu, and press **I**, Inquiry. You're going to use this index primarily for Inquire, Update, Add.

A Screen with your Fields at the top appears. You're asked for a sort Field number. Since you're using last name as the indexing key, press **2** **ENTER** (for Field 2).

Press **ENTER** when asked if you want to use the defined sort length (the entire length of field 2). Press **ENTER** to select all records. Watch the numbers change in the lower right-hand corner. You're seeing the program move through the file. The index is created and you're returned to the Runtime menu.

Next, you need to see how the index works. Press **3** for Inquire, Update, Add. Press **ENTER** for Screen 1.

Press **ENTER** at the Record Number prompt. Instead of the scan screen, this appears:

```
Index By:
Last Name
```

An index screen has been interposed between the Record number and the scan screens. This screen is added as soon as you've created an inquiry index. Type Kilton **ENTER**. Record 2 appears almost immediately. Review the Record then press the down arrow key. Any time you use an index, Index Mode appears in the lower left corner of the screen, followed by the value (e.g. Kilton, Johnson) on which the program sorted the Record.

The next Record in the index appears: number 5, Putnam. Press the down arrow key until you're returned to Enter Record Number (meaning that you've exhausted the index). All the records are in alphabetical order by last name.

To find the first Record in the index, press **ENTER** to move to the index screen. Type the wild-card symbol(=) and press **ENTER**. Record 4, Ackerson, appears on the screen.

Press **X** to return to Enter Record Number. Press **ENTER** twice to go to the scan screen.

You are now going to find the records of those sales representatives who sold more than four library sets. Type **6** **ENTER** for the L Sets field. When asked for a value, press **SHIFT** **@**, **4** and **ENTER**. In normal selection, **SHIFT** **@** tells the computer that the number should be right-justified.

The 4 must be right-justified because numbers are right-justified in the records. If you were to simply type 4 and press **ENTER**, the program would scan for a 4 in the first digit: suitable matches would be 400, 412, 456, and so on, but not 4.

You're now asked for a relationship. Type **GT** for more than 4 and press **ENTER**. Press **ENTER** when asked if you want a connective. (You don't). The program begins to scan.

The first matching Record appears; Record 1, which has five sets. Press **ENTER**, one of the options at the bottom of the screen, for the next match. Record 2 appears. There are three matches, Records 1, 2, 4. You're returned to Enter Record Number when you press **ENTER** at Record 4.

Press **BREAK** twice to exit to the Runtime menu. The next step is to create and run a Report.

Defining a Report
Return to the creation menu and select **3**, Define Reports. Let's define Report 2. This example is designed for use with an 80-column printer.

This is how your format should look:

```
                                                        *
        1         2         3         4         5         6       *** 7         8
----+----0----+----0----+----0----+----0----+----0----+----0----+*---0----+----0
████████████████████████████████████████████████████████████████████████████████
                          T I T L E - L I N E S              .
                          QUARTERLY SALES REPORT
Page #                                                                    /
████████████████████████████████████████████████████████████████████████████████
                   .      H E A D I N G - L I N E S
Quarter to Date                 Commission                 Representative
████████████████████████████████████████████████████████████████████████████████
                     .    F I E L D - L I N E S
=4                              =5                          ?



_____

           Press  ENTER  To Record Format,  BREAK  To Cancel
```

After checking your format for typographical errors and making any corrections, press **SHIFT** **CLEAR** to save it. Press **ENTER** for each of the next three prompts. Press 8Ø **ENTER** and then **Y** **ENTER** to hardcopy the format.

Press **N** **ENTER** for no password protections and the creation menu reappears.

Printing the Quarterly Sales Report
In this part of the sample file, you print the Report that you just defined. After doing so, you create and print another version of the Report that analyzes each representatives sales.

Put in the Runtime disk and bring up the menu. Select number 4, Print Reports, and enter format number 2. Press **ENTER** then **2** **ENTER** for last name field. Press **ENTER** twice and the following Report should emerge from your printer.

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Quarter to Date	Commission	Representative
39100.00	4692.00	ACKERSON
35750.00	5362.50	JOHNSON
47400.00	4740.00	KILTON
41100.00	6165.00	PUTNAM
24800.00	2480.00	THOMASON
188150.00	23439.50	

RECORDS SELECTED   5

This report provides interesting information for the quarter, such as total sales, $189,900.00, and total commissions, $23,614.50. However, it doesn't tell you how much each representative made in sales and commissions. For that, you need a slightly different format.

At the Runtime menu, press ▣ to edit to TRSDOS Ready. On the command line (the line beneath TRSDOS Ready), type:

```
COPY SALES000/PR2:1 /PR3:1 ENTER
```

The prompt TRSDOS Ready reapppears. Change to the Creation menu and press ▣, Define Reports. Enter the file name SALES, and type ▣ for format number 3.

Report format 3 appears. It is the same as Report formation 2. Change it slightly to suit your new purposes.

Your format should look like this:

```
                                                                    *
          1          2         3         4         5         6   *** 7          8
 ----+----0----+----0----+----0----+----0----+----0----+----0----+*---0----+----0
 ███████████████████████████ T I T L E - L I N E S ██████████████████████████████
                          QUARTERLY SALES REPORT
 Page #                                                                         /
 For Representative: ?                                        Record: @
 ███████████████████████████ H E A D I N G - L I N E S ███████████████████████████
 Quarter to Date                         Commission
 ███████████████████████████ F I E L D - L I N E S ██████████████████████████████
 =4                                     =5




 ───────────────────────────────────────────────────────────────────────────────
            Press  ENTER  To Record Format,  BREAK  To Cancel
```

Check the format for errors, then press **SHIFT** **CLEAR**. When prompted for a control break Field, press **2** **ENTER**.

The control break is the significant difference between the two Report formats. It tells the program to print one page per representative and total his or her sales and commission figures.

You're now asked for the number of print lines per page. These Reports should be short; rather than use an entire page for each, type 30 **ENTER** for half pages. Type 33 **ENTER** for total lines per page, and press 80 **ENTER** for characters across. Make a hardcopy. Press **N** **ENTER** in response to the password prompt.

The Creation menu reappears. Return to the Runtime menu, then press **4** to print Report 3. Press **1** **ENTER** and printing begins.

The first page, for Ackerson, is printed. You're asked if you want to print the remaining pages individually or continuously. Press the space bar if you'r using single sheets or C if you're using continuous feed paper. When all Records have been printed, you're returned to the Runtime menu.

Look over the new Reports. Once the last quarter is closed, you can run the Report again, and use the subtotals to fill in each representative's fourth quarter sales.

Note that the grand totals appear on page 6.

Using Associated Fields
In the final section of the sample file, you rebuild your inquiry index on an Associated Field.

At the Runtime menu, press the space bar for extended selection. Press **2**, Build Index. Press **I** **ENTER**.

The prompt now lets you build an index based on another index. As well as shortening sorting and selection time, an important concern in large Files, this option lets you build indexes across File Segments. In the meantime, press **ENTER**.

The Associated Fields are in Segment 3. Press **3** **ENTER**. The usual sort screen appears. However, notice that the Fields at the top of the screen are Segment 3 Fields. Type 18 and press **SHIFT** **CLEAR**. You're going to sort on date of last update. The Records will be organized from earliest to latest update. If you filled all the Records the same day, the date would be the same for all the records in the index in which case this sort would not be terribly significant.

A selection line replaces the sorting chart. Type A in the first entry area to look through the Associated Fields. Press **SHIFT** **CLEAR**.

The extended selection screen appears. Note the asterisk in front of the A), which signifies that you're using the Associative function.

Press **ENTER** until you reach the Search For Data column. Here, press the space bar twice, then type 7. By leaving the two spaces, you're right-justifying the number. You don't have to fill in any more numbers because the program assumes that after the 7 any match is acceptable. Note: that **SHIFT** @ cannot be used for right-justification in extended selection, only in normal selection. Press **SHIFT** **CLEAR**.

Two Records are selected and the index is generated. At the Runtime menu, now devoid of xs, press **3** for Inquire, Update, Add. Open Screen 2. Press **ENTER** to move to the index screen. Type = in the first space and press **ENTER**. You're asked for the screen password. Type TEAR*DOG **ENTER**.

Record 1 appears. Notice that the value used to add it to the index, 75250.00, is in field 20, Second Quarter. Press the down arrow. The second Record in the index, Record 3, appears. The match, 72000.00, is in First Quarter. When you press the down arrow again, you're returned to Enter Record Number. As you can see the program found all matches, no matter which Associated Field held them.

Press **BREAK** until you return to the Runtime menu. You have finished the sample file.

You can now either delete the sample file from your system or leave it in place while you go through the reference section. Different operations in the reference section are keyed to the sample file.

To remove SALES from a floppy disk system, use the REMOVE or PURGE command and delete all files which begin with SALES.

The Reference Section

The reference section is organized so that information can be found quickly. The first chapter contains the uses of the keys in Profile 4 Plus. The second chapter explains how to start and end the use of the Profile 4 Plus program.

The remaining chapters describe the Profile programs and their uses individually. Chapters appear in the order of the programs on the creation and runtime menus, with one extra chapter in the middle on Selecting and Organizing Records. The remaining three chapters deal with deleting files, password protection and coverting to a computerized system.

Included in some of the chapters are descriptions of new terms and functions, the steps in using the programs, examples, and technical meterail. Since some examples are keyed to the sample file, you can try out the unfamiliar functions on your sample data as you read along in the manual.

Key Usages in PROFILE 4 PLUS

Note: to repeat an operation or character, simply hold the key down for a few seconds. The key starts to repeat automatically.

ENTER   Moves the cursor to the beginning of the next line, field, input area. As a response to certain prompts, indicates to the program that the default response is to be used.

SHIFT CLEAR   Records formats and data.

SHIFT ENTER   The "tab" key. It moves the cursor eight spaces to the right on most format screens.

BREAK   Cancels changes when pressed twice. If you decide not to cancel after pressing **BREAK** once, press any other key to continue.

F3	The "home" key. It returns the cursor to the upper left-hand corner of most format screens.
◊	Moves the cursor to the left one space. If used in the first space at the beginning of a line, the cursor moves to the last space on the previous line. If used in the first space off the top line, the cursor moves to the last space of the bottom line.
◊	Moves the cursor to the right one space. If used in the last space at the end of a line, the cursor moves to the first space in the next line. If used in the last space of the bottom line, the cursor moves to the first space on the top line.
◇	Moves the cursor up one line. If used in the top line, the cursor goes to the bottom line.
◇	Moves the cursor down one line. If used in the bottom line, the cursor goes to the top line.
Space Bar	Moves the cursor to the right one space and erases any character under the cursor.
F1	Duplicates the character under the cursor and moves the remainer of the line to the right. For example, if the cursor is on the first S of "SALES," **F1** changes this to "SSALES." The right-most character in the field or line is deleted. It also duplicates blanks.
F2	Deletes the character under the cursor and moves the remainder of the field or line to the left.
CTRL D	Inserts a blank line below the cursor; on format screens, lines below it move down one line. The bottom line is then deleted.
CTRL U	Deletes the line under the cursor; on formats, all lines below the cursor move up one line. A blank line is also added to the bottom of the screen.
CAPS	Toggles between upper and lower case characters.

Special Keys:

CTRL S   The field save function in Define Files. Removes a field from the screen and stores it. The other fields move up to close the gap.

CTRL R   The field recall function in Define Files. Places a saved field at the cursor position. All other fields move down one line.

SHIFT @   The "as needed" key. In screen creation, it toggles the reverse mode. In normal record selections, it right-justifies numeric values.

Start-up To Shut-down

Profile 4 Plus Start-Up

1. Turn on the computer following the instructions in your owner's manual. If you have a floppy disk system and will be using the creation programs of Profile 4 Plus, insert a backup of the creation diskette in drive 0 and your data diskette in drive 1. If you will not be using the creation programs, insert a backup of the runtime diskette in drive 0 and your data diskettes in the appropriate drives.

2. Press the resert button on the computer. Enter the current date in the MM/DD/YY format. TRSDOS Ready appears on the screen.

3. To use the creation programs, type CM **ENTER**. The creation menu appears after the copyright notice. To run an operation -- make an inquiry, build an index or print, for example -- type RM **ENTER**. The Runtime menu appears after the copyright notice.

4. Press the number of the key corresponding to the program you wish to use. You are then prompted to enter the file name. Enter the name of the file with which you intend to work. If you're unfamiliar with Profile, turn to the section in the manual that explains the program you requested.

Exiting from Profile 4 Plus

1. All Profile operations return you to the menu from which you came when the operation is complete. You can exit from any program before it is complete, however, by pressing **BREAK** twice.

2. If you want another program, press the key corresponding to it on the menu. Otherwise, at the menu, press ▉ to exit to TRSDOS Ready.

3. If you're using a floppy disk system, back up your data diskettes. Then remove them from the drives and store them in a safe place. If you're using a hard disk system and it's time for a backup, make your backups.

4. When finished, turn off the computer, printer and the hard disk drive, as necessary.

Creation Diskette

Defining Files

Use Define Files to create and modify a file by defining fields and their lengths.

General Information

File Name. The first prompt you see when defining a file asks for a file name. Each Profile file must have its own unique name of up to eight characters, with no spaces at the beginning or in the middle of the word. Each file name should clearly identify the contents of the file. For example, MAIL is a straightforward name for a mailing list. Upper- and lowercase are interchangeable -- MAIL, Mail and mail are all the same name to the computer.

Segments. Once you're using the program, you'll notice that each file is broken into segments. You can have up to four in each file. A segment is a division of the file into manageable sections.

If you use only one segment, the first, you have an "extended key" file. See "Expanding Files" for more information.

Fields. A "field" is a category of data; company name, total, date, and so on.

A field "heading" identifies the field, and should clearly describe its expected contents. For example, "Last Name" is the heading of a field that would contain the data "Jones."

Each segment has up to 201 characters for headings. However, lengths are determined differently that you might think. First, blank spaces are counted as characters. Second, each heading uses an additional two characters for control information (information that Profile need to display it on sort and selection screens). Say that you create a field with the heading "Last Name." First remember that Last Name is nine, not eight, characters long, plus there are two

control characters. When you press ENTER to move to the field length and check the number of heading characters available at the bottom of the Define Files screen, you'll see that 11 characters were subtracted from the total.

The "field length" is the number of spaces reserved for data entry in each field. The maximum field length is the same as the maximum segment length, 255 characters. However, a field 255 characters long is both unlikely and unwieldy.

The "field number" is what the program uses to reference fields. Profile numbers the fields consecutively across the segments.

Prompts
1. At TRSDOS Ready, type CM ENTER.

2. At the creation menu, press 1, Define Files.

3. Enter a file name up to eight characters long, no leading or embedded blanks. If the file name is new, you are asked to confirm it. Note: If the file is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this files may not be in the system. Return to TRSDOS Ready and check the directory.

   This prompt appears:

   ```
   Enter Drive For Map (0-7):
   ```

   The "map" file contains the field numbers, headings and lengths, but no data. Pick a drive number and press ENTER.

4. A chart with room for 36 fields and lengths appears (please note that the chart has been condensed somewhat to fit the space available on this page):

Field Heading	Length		Field Heading	Length	
1-	.	.	19-	.	.
2-	.	.	20-	.	.
3-	.	.	21-	.	.
4-	.	.	22-	.	.
5-	.	.	23-	.	.
6-	.	.	24-	.	.
7-	.	.	25-	.	.
8-	.	.	26-	.	.
9-	.	.	27-	.	.
10-	.	.	28-	.	.
11-	.	.	29-	.	.
12-	.	.	30-	.	.
13-	.	.	31-	.	.
14-	.	.	32-	.	.
15-	.	.	33-	.	.
16-	.	.	34-	.	.
17-	.	.	35-	.	.
18-	.	.	36-	.	.

At the bottom of the screen is information about the file; file name, segment number, segment length and a line of options; hardcopy, update, exit, next segment, and previous segment.

Update: press **U** (update) when you want to define or change fields. Type field headings after the field numbers, and lengths beneath the Length heading. See the key usage features earlier in the reference section for help moving around the screen.

You can add new segments (up to four) and revise field numbers, heading, lengths and total segment lengths at any time. If you add a segment after expanding the file, *you must re-expand*. See "Expanding Files" for details.

To delete fields, use **CTRL U**. To open space for new fields, press **CTRL D**. To move fields, use the field save and restore functions, **CTRL S** and **CTRL R**, respectively.

Position the cursor on the field you wish to move. Press **CTRL S**. The field disappears and the field below it moves up and a highlighted S appears at the upper left. Position the cursor in the field to which you want the saved field to be placed. If there is a field in that position already, don't worry -- it will be moved down. Press **CTRL R**. Fields can be moved between segments.

After expanding the files, revisions involve a few extra steps and considerations. For instance, if you're moving fields in an already-expanded file, you must use the field save and restore functions. See "Advanced Operations" below.

As fields are defined, the entries at the bottom of the screen for heading and field characters remaining change.

Hardcopy: make sure the printer is turned on, online, and correctly attached to the computer. Press **H** for hardcopy. The hardcopy lists all the defined fields in the segment, their lengths, the "Disp" (for displacement, or number of characters used prior to that field's creation), the file name, segment number, total segment length and the print date.

If the file (or that particular segment) has not yet been expanded, the message "The Segment Has Not Been Expanded" appears at the bottom of the hardcopy.

Next and previous segments: use **N** and **P** to move between segments. There is one restriction; you cannot move to the segment beyond the last segment created or updated. In other words, if you've defined segment 2, you can move to segment 3, not segment 4.

5. After checking for typographical errors, press **SHIFT** **CLEAR** to record the fields. Move to another segment, if desired, or press **X** to exit the segment.

This prompt appears:

    Create A Default Screen (Y/N) ?

Press **Y** or **N** and **ENTER**. By answering yes, you create screen 1 automatically. If you revised the file format, answering **Y** also revises the default screen. Keep in mind, however, that if you have at any time revised screen 1 via the Define Screens program, Profile changes the screen back to the one= column style screen, thus eliminating the changes. *You should press **N** if you don't want this to happen.*

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If you press **Y**, another prompt appears:

    Which Drive Should It Be Placed On (0-7):

Pick an appropriate drive. On a floppy disk system, make sure you do not put the default report on the creation diskette.

6. This prompt appears:

    Create A Default Report (Y/N) ?

Press **Y** or **N** and **ENTER**. By answering yes, report format 1 is created or changed automatically. Keep in mind, however, that if you have at any time changed report 1, Profile changes it back to the original default-report style, thus eliminating the revisions. Press **N** if you don't want this to happen.

If you press **Y**, this prompt appears:

    Enter The Number Of Characters Per Line Or
    Press **ENTER** For 132:

Your answer to this prompt tells the program how to lay out the report. Type 80 **ENTER** for an 80-character-wide report; the maximum report width is 200 characters.

Another prompt appears:

    Which Drive Should It Be Placed On (0-7):

Pick an appropriate drive. On a floppy disk system, make sure you do not put the default report on the Creation diskette, which is not used daily.

7. Prompts stating the segment length and asking for any additional characters appear, one for each segment. If the segment is not new, you're told on which drive it is now. Change the drive, if desired, or press **ENTER** to keep it on the same drive.

Avoid allocating unnecessary extra space to any segment, because this slows down program operation. In Profile 4 Plus, you can always create more space later, if you need it.

You are also asked for drive numbers for each segment. On a hard disk system, logical drive numbers are 0 to 3; the first floppy disk drive is 4, a second is 5, and so on.

On a floppy disk system, make sure you put the segments on data diskettes, not the creation diskette.

Once segments are recorded, you're returned to the creation menu.

Advanced Operations

A special feature of Profile 4 Plus is the ability to create and use associated fields. Associated fields are fields that are sorted and selected as a group. Whenever one member of an associated group is specified, all members of the group are considered. See below for details.

Profile 4 Plus lets you redefine your file structure at any time without losing your data. If you find, after using your file for a while, that you need new fields, new lengths, different headings, and so on, see the section on "Revising Files" below.

Defining Associated Fields. Use associated fields whenever you have a list of items that are related, and you want to have them searched as a group. Also, they can be put into the record in no particular order.

For instance, in the smaple file fields 19-21, Quarterly Sales, are associated. If you want to find a sales representative who has sales greater than or equal to 80,000 in any of the four quarters, find the appropriate records by scanning and selecting any one of the four associated fields.

In Define Files, indicate an associated field with any single upper-case letter followed by a close-parenthesis. Then add a heading after the close-parenthesis:

```
Field 4   A) Skills
Field 5   A)
Field 6   A)
Field 7   A)
```

You can have more than one associated group -- just use a different upper-case letter (you can have up to 26 associated field groups). Groups are not associated with each other; only fields within groups are associated.

Revising Files. File formats can always be changed in Profile 4 Plus. When you use Define Files after expanding a file and putting in data, the program recognizes that the file has been used already and asks if you wish the file size to change.

In other words, are you just looking (in which case the answer is **N**) or do you

wish to revise the file (in which the answer is **Y**). When you answer **Y**, the program then knows it may have to change the size of all your records and that some of the field numbers may change.

Note: if you're going to restructure a file, it is strongly recommended that you make backups of the file and restructure the backups, not the original file. If the restructuring is aborted for any reason, you may lose some of the data. Also, if you change the length of or add a segment, you must re-expand the file before trying to use it. See "Expanding Files" for details.

Use the field save and restore functions whenever you move a field. If you simply delete or write over one field then recreate it at a different position, the program cannot tell that the recreated field is supposed to be an old field. The data in that field in your records will be lost.

If you decide that you don't want to change a segment after all, press **BREAK** to cancel the changes. If you don't want to make any changes in any segment, use **BREAK** instead of **X** to exit from Define Files.

After pressing **X** to exit, the segment length and drive number prompts re-appear. The lengths reflects the changes you've made. Answer the prompts as appropriate.

A new prompt appears:

        Rewriting Records nnnn

As each record is rewritten (restructured), its number, nnnn, appears on the screen. When the restructuring is finished, you're returned to the creation menu.

If you added segments or changed the file length in any way, you must re-expand before you can use the restructured file. If you changed field numbers, remember that the numbers must be changed on all the formats (except the default screen and report, if you let the program re-create these automatically).

Technical Information

   Maximum number of fields across all four segments: 99
   Maximum number of fields per segment: 36
   Maximum number of field characters per segment: 255
   Maximum number of heading characters per segment: 201
   Maximum number of field characters per file: 1020

Defining Screens

Use Define Screens to create the electronic record format, the empty "form" for filling with information.

Extra screens can be used to separate input functions. For instance, payment input can be separated from charge input by putting all payment fields on screen 1 and all charge fields on screen 2.

Secondary screens are often used to protect certain data from change or access by unauthorized users. For example, access to credit ratings can be restricted by password protecting the screen displaying this data.

General Information
Formats. Screen formats include two basic types of information: instructions to the program, such as field numbers, lengths and indicators and instructions to the user, such as field headings and text information.

User information can appear anywhere on the screen. It is not needed by Profile but assists users in identifying the data to be entered and at which spot on the screen. Text information can include screen headings, subdivisions of the screen, and even help messages. For instance, "No P.O. Boxes In Shipping Addresses!" Headings on screens and other formats do not have to be the same as the field headings; just be sure the heading clearly identifies the data expected.

The field information tells Profile where to display or accept field data in Inquire, Update, Add. It consists of a field indicator (described below) and a field number. To avoid overlapping fields by mistake, refer to hardcopies of the file for field lengths. Leave at least one empty space between fields or between a field and the right edge of the screen. A field end-marker (a period) will appear in this empty space later. For a better visual separation between fields, leave two empty spaces.

The field indicator and number are overwritten by the field contents when the record is displayed in Inquire, Update, Add. In other words, neither indicator nor number appear on the screen if you have created the screen correctly. The space taken up the indicator and number on the format are empty space for data in Inquire, Update, Add.

Field Indicators. Field indicators accept or modify acceptance of data into the fields. For example, if a numeric field inciator is used, the field will not accept

letters. You need an indicator for each field displayed on the screen. See the table below for the types available.

Screen Field Indicators

*	**Alphanumeric** -- accepts all alphabetic, numeric and punctuation characters.
#	**Numeric** -- accepts only numbers, decimal points and minus signs (hyphens).
.	**Decimal** -- numeric; automatically adds a decimal point and two zeros, if necessary.
!	**Protected** -- data can be displayed but not changed from the keyboard.
+	**Add** -- add to this field. See explanation under Advanced Operations.
—	**Subtract** -- subtract from the this field. See explanation under Advanced Operations.
)	**Year-First Date** -- accepts a date in YY/MM/DD format. Use this format if you expect to select records by year. Field length can be 5 for a year and month only, or 8 for the complete date. If you enter / in this field during data entry, the program enters the current date (the date set when signing on the computer) automatically.
(	**Month-First Date** -- accepts a date in MM/DD/YY format. Field length can be 5 for the month and day only, or 8 for the complete date. If you enter / in this field during data entry, the program enters the current date.
&	**Date of Last Update** -- displays the last date a record was updated in YY/MM/DD format. The field, which is filled automatically by the computer, is protected. Field length can be 5 for the year and month only, or 8 for the complete date.
<	**Must-fill Alphanumeric** -- an alphanumeric field that must contain alphanumeric data; otherwise, the program will not store the record.
>	**Must-fill Numeric** -- a field that must contain numeric data; otherwise, the program won't store the record.
"	**Must-fill Decimal** -- a field that must contain a decimal number; otherwise, the program will not store the record.
?	**Must-fill Year-First Date** -- must be filled with a valid date in YY/MM/DD format. If you enter a / in this field, the program uses the current date. Field length can be 5 for the year and month only, or 8 for the complete date.
/	**Must-fill Month-First Date** -- must be filled with a valid date in MM/DD/YY format. If you enter a / in this field during data entry,

the program uses the current date. Field length can be 5 for the month and day only, or 8 for the complete date.

Prompts

1. At the creation menu, press **2** for Define Screens.

2. The message Enter File Name appears. Type in your file name and press **ENTER**.

3. You're asked:

   Enter Screen Number (0-9)

   Type the number and press **ENTER**. For the automatically-defined screen, press **1**.

   If your screen is new, you're asked:

   New Screen (Y/N)

   If the format is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this file may not be in the system. Return to TRSDOS Ready and check the directory.

   Press **Y** **ENTER**. You're then asked:

   Which Drive Should It Be Placed On (0-7):

   Type a drive number and press **ENTER**.

4. The requested screen appears. At the bottom are a ruler and a cursor position marker. The first character in the position marker gives you the line on which the cursor rests; the second gives you its position horizontally.

5. Position your fields (indicators and numbers), headings and text information on the screen. Use the reverse mode to highlight headings or create lines to separate different sections of the screen from each other. Keep a list of field lengths at hand. You must give each field enough space, which is the defined length of the field plus on -- a small block or period appears in the last space. In other words, if a field is 10 characters long, leave 11 spaces counting from the field indicator:

   First name: *1..........

If you leave only 10, the first character of the next field is lost. You may also wish to leave a second space for visual separation between the fields.

Hint: count spaces by typing number; be sure to delete them afterwards:

```
First name: *1345678901
```

Note that the count starts with the asterisk: the 3 that begins the count falls at the third spot after the asterisk.

Line up field indicators whenever possible. When updating records, if you want the cursor to move straight down when you press the down key and straight up when yo press the up key, you have to align the field indicators. Specifically:

a) when you press the down key, the cursor goes to the first character of the field just below it; if it finds no first character, it goes to the first character of the field above and to the left of it previous position.

b) when you press the up key, the cursor goes to the first character of the field just above it; if it finds no first character, it goes to the first character of the field above and to the left of its previous position.

If the field indicators aren't lined up, the keys will seem to skip fields. Say that this is your format:

```
Company:   *1            Contact: *2
Street: *3               City: *4
```

If you update field 1 and press the down key, the cursor jumps to field 4, not field 3. If you're in field 4 and press the up key, the cursor jumps to field 1, not field 2.

If, on the other hand, you lined up the indicators:

```
Company: *1              Contact: *2
    Street: *3               City: *4
```

the cursor jumps from field 1 to field 3 when you press the down key, and from field 4 to field 2 when you press the up key.

6. When you're finished, store the format by pressing **SHIFT** **CLEAR**. (Once

you've stored it, you can always review it, make changes, and store it again).

7. The question Hardcopy This Screen (Y/N) appears. If you want a hardcopy, be sure your printer is connected, turned on, and on-line. Press █. The screen is printed.

8. This prompt appears:

    Password Protect This Screen (Y/N)

Press █ or █ and ███████. You're returned to the creation menu.

Advanced Operations
Quick Addition and Subtraction. There are two ways to do math in Profile 4 Plus; with the math formulas described in "Defining Math Formulas" or with the two special field indicators, "add to" (+) and "subtract from" (−). They work as follows.

Say that you've defined field 2 as a five-character "balance due" field. Put "Balance Due: !2" on the screen.

Then, any place to the right or below field 2 type "Adjustments: [to current balance due] +2." You can then enter any amount to be added to the current value of field 2 in the unprotected +2 entry area.

If you want to be able to subtract as well, put a −2 to the right or below +2. (You can have both types of field on the screen at the same time.)

When you save an updated record, the amount stored in field 2 is automatically adjusted by the amounts you typed into +2 and −2. These copies of the field are then reset so they are blanks.

This procedure leaves no record of the numbers put into the field. But if you don't need it -- if you're only adding bonuses, subtracting special discount incentives or running hash totals, then this method is quick and easy.

Sorting by Date. If you expect to sort records by date, decide which is more important -- the month or the year. The program can look for a month quickly if the date is in MM/DD/YY format since "month" is the first set of characters it sees. However, with this format, the program can't sort records by month and date as well as year; at least not the way you intend. A MM/DD/YY list

would be organized as follows:

```
Jan, 6, 1984
Jan 21, 1982
March 25, 1983
May 19, 1980
```

If your dates were in YY/MM/DD format, the list would be organized correctly by year:

```
May 19, 1980
Jan, 21, 1982
March 25, 1983
Jan, 6, 1984
```

Duplicating Screens. To quickly create a screen (or any other type of format) similar to an already existing one, make duplicates using the TRSDOS copy command. To do so, exit to TRSDOS Ready.

The syntax is as follows:

```
COPY filename/PMn /PMm
```

where "filename" is the name of the file, /PMn is the extension of the first screen and /PMm is the extension of the second screen. The filename must be eight characters long. Add zeros if necessary. For example, SALES000 for SALES. Replace n and m by actual screen numbers or letters.

For example, to create screen 2 from screen 1, type:

```
COPY filename/PM1 /PM2          ENTER
```

You can then return to the creation menu, press **2** for Define Screens, ask for screen 2, and make the necessary changes. You may copy any existing screen.

Technical Information

```
Maximum number of lines per screen: 20
Maximum number of characters per line: 80
Maximum number of fields per screen: 99
Maximum number of screens: 10 -- 0-9
```

Defining Reports

A report is a "file-wide" type of output. It includes data from any number of records, usually in columns, and may include subtotals or totals. Profile 4 Plus lets you define up to 36 different report formats for each file. The report format screen is divided into three sections: title lines, heading lines and field lines.

General Information

Title Lines. Three lines are available for title information such as report or company name, file name, report date, the report's audience or purpose, and so on. These lines are printed at the top of each page of the report. Fields can be listed here, if appropriate.

Profile 4 Plus includes a group of special system-maintained fields for report formats. See the table below for the fields that can be used in title lines.

Heading Lines. Two lines are available for headings. These lines identify the columns of data (balances, first name/last name, company name, etc.) that are to be printed below them in the report. These lines are also printed at the top of every page. Fields can be listed on heading lines, if appropriate.

Field Lines. Two lines are available for fields. Each field must be preceded by one of two report field indicators, as shown on the table below.

Report Field Indicators

*   **Alphanumeric** -- indicates the point at which you want data printed.

=   **Total** -- used with numeric fields only; total fields are subtotaled or totaled, depending on whether or not there is a control (subtotal) break in the format at the end of the section or report.

You don't have to use both field lines. For one-line, single-spaced reports, put all fields on the first of the two lines. For two-line reports, put fields on both lines and the program inserts a blank line between data from different records. For a one-line, double-spaced report, put all fields on the second of the two field lines.

Control Break. A control, or subtotal, break field is any field used to separate a report into sections, within which certain data can be subtotaled. Whenever the data in the subtotal field changes, the program subtotals any numeric fields preceded by the total indicator =, then starts the next section on a new page.

The break field is also the major sort field for the report -- when you use normal selection, in fact, it is the only sort field. See section on control breaks in Advanced Operations.

System-maintained Report Fields

/   **Date** -- prints a date in MM/DD/YYYY format (e.g., 11/16/1987) on the report. Use only once per report on either a title or heading line.

\#   **Page Number** -- prints page numbers consecutively on a report. Recommended: type the word "Page" before # for "Page 1", "Page 2", and so on. Leave four spaces for the field. Use only once per report on either a title or heading line.

@   **Record Number** -- prints the record number on a report. Use only once per report on field lines.

?   **Sort-Field** -- use on title, heading or field lines. On the title lines, ? prints the value of the sort field that starts the report. For instance, if the report is sorted by company name and the first record is ACME News Corp., then "ACME News Corp." is printed here. Keep in mind that control break (subtotal break) fields are sort fields. On a heading line, ? prints the heading of the sort field. On a field line, ? prints the value of the sort field per individual record. Leave enough space to accommodate any suitable sort field. See Advanced Operations for information on its use with associated fields.

!   **Suppress Line** -- on field lines, use to avoid printing details for totals-only reports; put ! at the first space of the line to be suppressed. Only subtotal or total fields (fields preceded with the = indicator) are printed. See Advanced Operations for some other uses.

Prompts

1. At the Creation menu, press **3**, Define Reports. Type your file name and press **ENTER**.

2. This appears on the screen:

```
Enter Report Format (0-9,A-Z)
```

Press the desired number or letter and **ENTER**. If you asked for the automatically-defined report in Define Files, type 1 **ENTER** to access it.

If the format is new, you're asked:

```
New Report (Y/N)
```

Press **Y** **ENTER**. You're then asked:

```
Which Drive Should It Be Placed On (0-7):
```

Type a drive number and press **ENTER**. If the format is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this file may not be in the system. Return to TRSDOS Ready and check the directory.

3. The report format screen appears. There is a rule along the top of the screen. Although report formats can be up to 200 characters, or "columns" wide, only 80 columns fit on a screen at any one time. Use the tab and home keys to scroll back and forth along the full width.

Position your titles, headings and fields where you want them to appear on the report. Keep a list of field lengths at hand, including the lengths of the system-maintained fields (page number, record number, ets.) if you intend to use them. You must give each field enough space, which is the defined length of the field plus one.

In other words, if a field is 10 characters long, leave 11 spaces counting from the field indicator:

```
First name: *1..........
```

If you leave only 10, the first character (sometimes the entire contents) of the next field is lost.

Hint: count spaces by typing numbers; be sure to delete them afterwards. For example:

```
First name: *1345678901
```

Note that the count starts with the asterisk.

If you have at least one total field (a field preceded by =) on the format, the program prints an extra page of totals at the bottom of the report, or, if the report is subtotaled, a line of subtotals in each section and a page of grand totals. The number of records selected for the report is also printed.

4. This prompt appears:

```
Enter Field Number For Control Break
Or Press ENTER For No Control Break
```

A control, or subtotal, break field is any field used to separate a report into sections, within which certain data can be subtotaled. Whenever the data in the subtotal field changes, the program subtotals any numeric fields preceded by the total indicator =, then starts the next section on a new page. See the section on control breaks in Advanced Operations.

For no control break, press ENTER.

5. A series of prompts that set up the size and shape of each page of the report appear. The first of these prompts is:

```
Enter The Number Of Print Lines Per Page
Or Press ENTER For 60 Lines Per Page
```

Type the desired number, excluding margins, up to the total number of lines per page; the maximum is 99 lines. For the default, 60 lines per page, press ENTER.

6. You're now asked for the total lines per page:

```
Enter The Total Number Of Lines Per Page
Or Press ENTER For 66 Lines Per Page
```

If the number of lines printed per page is 60, 66 lines total tells the computer to leave six lines' margin per page, three at the top and three at the bottom. For the default of 66 lines, press ENTER. The maximum number of lines is 99.

7. The last size prompt asks for the number of characters across:

```
Enter The Number Of Characters Per Line
Or Press ENTER For 132 Characters Per Line
```

If you have an 80-column printer, you must specify 80 characters. For the default of 132, press ENTER. Depending upon your printer, a maximum of 200 characters per line may be obtained.

8. When you're ready to record the format, press **SHIFT** **CLEAR**. This prompt appears:

```
Hardcopy This Format (Y/N)
```

Press **Y** or **N** **ENTER**.

9. You're asked if the report should be protected by a password:

```
Password Protect This Report (Y/N)
```

Press **Y** or **N** and **ENTER**. If you answer **Y**, this appears:

```
Enter Password
```

For more infomration on passwords, see "Password Protection" later in this manual.

Advanced Operations

Blank Line Suppression. If you leave a line blank in the title or heading areas, the program 'prints' an empty line unless you suppress it.

To suppress blank lines in title and heading lines, type an exclamation point (!) in the first space of the line. The exclamation point must be the only character on the line. However, keep in mind that the program always adds one extra line between sections of the report, between the titles and the headings, and between the headings and the detail lines. You cannot suppress these blank lines.

Summary Report. Profile lets you create summary reports: in other words, reports that summarize your data, with cumulative totals or subtotals and headings but no detail lines. To do so, create the format as usual. Put the desired fields on the detail lines; use total indicators. Then type an !, the line suppression indicator, in the first place on the line. For example:

```
BALANCE
▶▶▶▶▶▶▶▶▶▶▶▶▶▶▶▶▶ F I E L D - L I N E S ◀◀◀◀◀◀◀◀◀◀◀◀◀◀
   !              =7
```

The report printed with this format will show only the title and heading lines (including "BALANCE" in this case), the total of field 7, and the number of records selected.

Double-Spaced, One-Line Reports. The program automatically adds an empty line when printing two-line reports. For instance, if you printed the tutorial default report, which has two field lines, you'd see that an empty line appears between each record.

On one-line reports, the program does not add an empty line. You can see this on SALES report 2 -- the field lines are printed one after the other.

However, you can set up a format in such a way that you get double-spaced, single-line reports, in either of two ways. In the first case, put all the fields on the second of the two field lines. In the second case, put !, the suppress-lines indicator, on the second field line. In this instance, obviously it does not suppress the line, but it is seen as a character. The second line is used and is not printed.

If you notice a mixture of no line-spaces and extra line-spaces on the same report, it's because in some records, all the fields on your second line are blank. To avoid mixed line-spacing, put at least one field that will always have data in it on the second line.

Control Breaks. When you press **SHIFT** **CLEAR** to record the report format, the program asks you to enter a field number for a control, or subtotal, break. A control break lets you divide a report into pages, producing subtotals for each category.

When you use a control break, the program sorts the records by the chosen field and prints the report such that each time the value of the break field changes, the program subtotals all total fields on the page, moves to the top of a fresh page, and prints the group of records containing the next sort value.

To make the control break more clear, say that you want to analyze sales by region. You set up a report with a subtotal on field 12, "Region", then print the report. The program prints all the data for region 1, then subtotals the sales. It goes on to region 2, subtotals the sales for that region, jumps to region 3, and so on. At the end, you have a report broken into pages, each region on its own page or set of pages, with sales subtotaled at the bottom.

The field used for a control break must be a key-segment field; it does not have to be printed on the report. Note that your control break field becomes your major sort field. To change the major sort, you have to change the control break field via Define Reports. You can add secondary sort fields, however, using extended selection.

Since the control break option causes a new page each time the value of the control break field changes, placing a ? in the title area conveniently prints the value of the control break field for each page.

Extending the Question Mark. If you use more than one field for the sort (e.g. by using extended selection when printing or adding extra characters to the

break field length), the values or headings of the extra field(s) are also printed. For example, say that you reprint SALES report 1, this time adding three characters to the sort length. The district code is tacked to the end of the representative name after For Representative: in the heading.

Associated Fields and Reports. Use of the ? indicator on the field lines ("print sort field information") is the only way you'll know why a particular record showed up where it did in a report sorted on an associated field. For instance, although you can put associated field numbers on a field line:

```
Company: *1   Products: *10    *11    *12
```

and you print the report:

```
Company: ACME   Products: Awls     Widgets    Nails
Company: BUSH   Products: Widgets  Nails      Awls
Company: MART   Products: Awls     Gadgets
Company: MART   Products: Awls     Gadgets
Company: ACME   Products: Awls     Widgets    Nails
Company: BUSH   Products: Widgets  Nails      Awls
Company: ACME   Products: Awls     Widgets    Nails
Company: BUSH   Products: Widgets  Nails      Awls
```

you'll have trouble figuring out what the report means (**the words in bold** indicate what product was used to put the record in its particular order in the report).

If you use the 7 indicator, however, instead of the field numbers on the field line:

```
Company: *1   Products: ?
```

your report appears as follows:

```
Company: ACME   Products: Awls
Company: BUSH   Products: Awls
Company: MART   Products: Awls
Company: MART   Products: Gadgets
Company: ACME   Products: Nails
Company: BUSH   Products: Nails
Company: ACME   Products: Widgets
Company: BUSH   Products: Widgets
```

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If you use an associated field as the control (subtotal) break field, the report breaks into pages according to the associated fields' contents (the report is also sorted according to the associated field -- you can't have a subtotal without a sort).

If you then use ? in the title line:

```
Page #                Product: ?
```

the contents of the break field appear at the top of each page:

```
Page 1                Product: Awls

Company: ACME   24 E. Main St., Waterbury, CT
Company: BUSH   912 W. Elm St., Juneau, MN
Company: MART   P.O. Box 12, Ft. Worth, TX
```

```
Page 2                Product: Gadgets

Company: MART   P.O. Box 12, Ft. Worth, TX
```

```
Page 3                Product: Nails

Company: ACME   24 E. Main St., Waterbury, CT
Company: BUSH   912 W. Elm St., Juneau, MN
```

```
Page 4                Product: Widgets

Company: ACME   24 E. Main St., Waterbury, CT
Company: BUSH   912 W. Elm St., Juneau, MN
```

Technical Information
Maximum width of a report: 200 characters
Maximum depth of a report: 99 lines
Maximum number of title lines: 3
Maximum number of heading lines: 2
Maximum number of field lines: 2

Defining Labels

Profile 4 Plus lets you define up to 36 different label formats per file to handle a variety of needs. A mailing label format can be used to print Rolodex and index cards, directories and lists, pressure-sensitive or Cheshire mailing labels, addresses for individual envelopes, labels for file folders, labels for storeroom shelves, serial-number labels for office equipment -- in other words, any kind of list or series of labels.

The screen for designing labels is similar to the report format screen. It differs from the report screen in that a label has no title or headings, no totals, and one record per label.

General Information
Data Lines. A label format can be up to eight lines deep. "Data lines" here parallel "field lines" in Define Reports. When formatting, use the indicators and record-number field listed on the table below.

Label Field Indicators

*   **Alphanumeric** -- indicates the point at which you want data printed.

<   **Push-Left** -- when printing, moves field left, leaving one blank sapce between fields; use to close gaps between first and last name; or city, state and zip code; and so on.

?   **Sort-Field** -- prints the sort field value of the record on the label.

System-Maintained Field:

@   **Record Number** -- leave four blank spaces after the @.

Prompts
1. At the creation menu, press **4**, Define Labels. Type your file name and press **ENTER**.

2. This appears on the screen:

        Enter Label Format (0-9,A-Z)

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Press the desired number or letter and **ENTER**.

If the format is new, you're asked:

New Label Format (Y/N)

Press **Y** **ENTER**. You're then asked:

Which Drive Should It Be Placed On (0-7):

Type a drive number and press **ENTER**. If the format is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this file may not be in the system. Return to TRSDOS Ready and check the directory.

3. The format screen appears. There is one heading, DATA LINES, and a rule along the top of the screen. Although label formats can be up to 200 characters, or "columns" wide, only 80 columns fit on a screen at any one time. Use the tab (**SHIFT** **ENTER**) and home (**F3**) keys to scroll back and forth along the full width.

   Position your fields and literals (like "Account Number:" or "Record Number") where you want them to appear on each label. Keep a list of field lengths at hand. You must give each field enough space, which is the defined length of the field plus one.

   In other words, if a field is 10 characters long, leave 11 spaces counting from the field indicator. Use the < indicator to close up space between fields. The indicator leaves one space between fields. For example, to close up spaces between first and last name, you'd type:

   *1   <2

   You'd get this on the label:

   Brenda Thomason

4. When finished, press **SHIFT** **CLEAR** to store the format. This prompt appears:

   Hardcopy This Format (Y/N)

   Press **Y** or **N** and **ENTER**.

5. A group of size prompts appears. The first prompt asks for the number of lines per label and the second asks for the print width. The third asks for the number of labels across.

The first prompt is:

```
Enter The Number Of Lines Per Label
Or Press ENTER For 6 Lines Per Label
```

The number of lines per label is the number of lines on the format, plus extra lines if you want more than one blank line between labels. The program automatically adds one line. For the default, press ENTER. The maximum number of print lines is 8.

6. The second and third prompts work together to set up columns of labels across the page. First you're asked how wide the sheet of labels (or other paper) is; 40, 80 and 132 characters are typical widths. Then you're asked how many rows of labels are to be printed across the page. In other words, you can create one 20-character-wide label on the format screen, and have the program print it across the page and down.

The second prompt is:

```
Enter The Number Of Characters Per Line
Or Press ENTER For 132 Characters
```

For the default, press ENTER. You can print six columns across (in printer's terms, six up) a 132-column printer at 10 pitch. The maximum width which may be entered in response to this prompt is 200 characters (the maximum number of characters which may be printed per line is dependent upon your printer's capabilities).

The third prompt is:

```
Enter Number Of Labels Across (1-6)
```

Type a number and press ENTER. The maximum number of columns is 6.

7. This prompt appears:

```
Password Protect This Label Format (Y/N)
```

Press **Y** or **N** and **ENTER**. If you asked for a password, type it in and press **ENTER**. For more information, see "Password Protection" later in this manual. You're returned to the creation menu.

Advanced Operations
Eight-Line Reports. Need more than two lines per record? Create an ersatz report with Define Labels. You'll be missing page numbers, totals and subtotal breaks, but you can type headings on the format itself.

Define a one-column label format of up to eight lines deep. Adjust your format so that a whole number of records fits on each 66-line page; 11 six-line records fit perfectly.

Technical Information
> Maximum number of label formats: 36
> Maximum width of a label: 200 characters
> Maximum depth of a label: 8 lines (1-1/4 inch)
> Maximum number of columns of labels: 6

Defining SuperSCRIPSIT Selections

Profile 4 Plus allows you to input data from your data base into documents you create in SuperSCRIPSIT, Radio Shack's wordprocessor. In other words, if you have a list of clients in Profile, and you want each client to get a form letter, Profile will feed names and addresses to SuperSCRIPSIT. As with all Profile data, these names (or whatever they may be) can be sorted and selected according to your wishes.

Learning this operation will take you to three places before you're through: in this section of the Reference Manual, you'll learn how to define the data you want transferred over to SuperSCRIPSIT. Then you'll need to flip to the Runtime section (Pg. 65) to do your searching and sorting, etc. And finally, you'll have to check the SuperSCRIPSIT manual for instructions for setting up the form letter. It's really less complicated than it sounds -- all Profile operations have a Creation phase and a Runtime phase; in this instance, we're just adding SuperSCRIPSIT.

Note that data can only be transferred *from* Profile to SuperSCRIPSIT, not the other way around.

General Information

The selection format screen has two columns, the headings of which are "Field Name" and "Profile Field #". To create the format, you fill the columns with field names (the same as or different from the field headings) and corresponding field numbers.

A field name can be any suitable word -- just make sure it matches the name embedded in the SuperSCRIPSIT document.

The field number, on the other hand, MUST be a real field number, as assigned in Define Files. These fields can be from any segment of the file. You can spin off record numbers: simply list the system-maintained field indicator @ in the Profile Field # column.

Prompts

1. At the creation menu, press **5**, Define Selections **S**. Type your file name and press **ENTER**.

2. This appears on the screen:

   Enter Selector Number (0-9,A-Z)

   Press the desired number or letter and **ENTER**. If the format is new, you're asked:

   New Format (Y/N)

   Press **Y** **ENTER**. If the format is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this file may not be in the system. Return to TRSDOS Ready and check the directory. You're then asked:

   Which Drive Should It Be Placed On

   Type a drive number and press **ENTER**.

3. The format screen appears. There are two headings, Field Name and Profile Field #, and 16 entry areas. Type field names into the first column, and the corresponding field number in the second.

   For example, to pick up names from the SALES file, you could type:

   LAST   2
   FIRST   1

You can add record numbers to the file, too. Use the record number field:

```
REC                    @
```

Make sure the names given the fields on the selection format match the names in the SuperSCRIPSIT format. For instance, if the names here are all uppercase, the names in the word-processing format must be all uppercase.

4. Check for typographical errors, then press **SHIFT** **CLEAR** to record the format.

5. You're asked if you want a hardcopy. Press **Y** or **N** and **ENTER**.

6. This prompt appears:

```
Password Protect This Format (Y/N)
```

Press **Y** or **N** and **ENTER**. If you asked for a password, type it in and press **ENTER**. For more information, see "Password Protection" later in this manual. You're returned to the creation menu.

Technical Information

Maximum number of SuperSCRIPSIT selection formats: 36
Maximum number of selection lines: 16

Defining VisiCalc Selections

Profile 4 Plus allows you to input data from the data base into spreadsheet operations you are running in Visicalc. If, for instance, you run Profile for Order Entry, and keep your books on Visicalc, you can have quantities and dollar totals automatically transferred over and plugged into cells in the spreadsheet. As with all Profile data, these quantities or amounts can be sorted and selected according to your wishes.

Learning this operation will take you to three places before you're through: in this section of the Reference Manual, you'll learn how to define the data you want transferred over to Visicalc. Then you'll need to flip to the Runtime section (Pg. 65) to do your searching and sorting, etc. And finally, you'll have to check the Visicalc manual for instructions for setting up the spreadsheet. It's really less complicated than it sounds -- all Profile operations have a Creation phase and a Runtime phase; in this instance, we're just adding Visicalc.

Note that data can only be transferred *from* Profile to Visicalc, not the other way around.

General Information
The selection format screen has two columns, the headings of which are "Field Type" and "Profile Field #".

Field Types. You have two choices, label or value. To generate a label, type L in the first column. The contents of the field (as indicated by the field number) will be passed to VisiCalc in label format. These labels cannot be used for calculations, only as headings. You would usually specify fields such as sales representative's last name, account name, product name, and so on, as label fields.

To generate values, type V in the first column. The contents of the field (as indicated by the field number) can then be used in VisiCalc calculations. You would usually specify numeric fields such as commission, balance due, inventory on-hand, and so on, as value fields.

Field Numbers. As above, the fields you enter are passed to VisiCalc in either label or value format. You must also tell the program which Profile field numbers correspond to these labels or values. Type the field numbers in the Profile Field # column.

To include record numbers in the merge file, type @ in the field number column. Record numbers are considered labels; make sure you type L in the first column.

Prompts
1. At the creation menu, press ⑥, Define Selections (V). Type your file name and press **ENTER**.

2. This appears on the screen:

   Enter Selector Number (0-9,A-Z)

   Press the desired number or letter and **ENTER**.

   If the format is new, you're asked:

   New Format (Y/N)

Press **Y** **ENTER**. You're then asked:

```
Which Drive Should It Be Placed On (0-7):
```

Type a drive number and press **ENTER**. If the format is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this file may not be in the system. Return to TRSDOS Ready and check the directory.

3. The format screen appears. There are two headings, Field Type and Profile Field #, and 16 entry areas. You can type only L or V into the first column; type the number for the field from which you wish to take data in the second.

   For example, to pick up commission information from the SALES file, you could type:

   ```
   L           2
   V           9
   V           5
   ```

   where field 2 is the sales representative's last name, field 9 is the commission rate and field 5 is the commission to date.

   You can add record numbers also. Use the record number field:

   ```
   L                 @
   ```

   Note that, here, record number is a label. Since it isn't used in calculations, it isn't a value.

4. Check for typographical errors, then press **SHIFT** **CLEAR** to record the format.

5. You're asked if you want a hardcopy. Press **Y** or **N** and **ENTER**.

6. This prompt appears:

   ```
   Password Protect This Format (Y/N)
   ```

   Press **Y** or **N** and **ENTER**. If you asked for a password, type it in and press **ENTER**. For more information, see "Password Protection" later in this manual. You're returned to the creation menu.

Technical Information
    Maximum number of VisiCalc selection formats: 36
    Maximum number of selection lines: 16

Since the maximum number of columns in a VisiCalc worksheet is 255, the Profile merge file can include fields of no more than 255 records.

Defining Formulas

Profile 4 Plus lets you create math formulas to compute values in records. In general, the math formula table lets you define mathematical relationships between fields (e.g. "field 1 is equal to the contents of field 2 plus field 3").

Use Profile's math formulas for such operations as finding total prices (unit price times quantity), calculating balances due on invoices, and calculating sales commissions.

General Information
The formula screen has two sections. In the first column, you enter the field number for the computation's result. In the second column, you enter the formula. Once the table is created, Inquire, Update, Add refers to it prior to saving a record, taking the appropriate data from the numeric fields, doing the calculations, then putting the answers into the indicated result field.

Fields. To use the contents of a field in a formula, use the field number.

Literals. A literal is any set of characters representing a particular value rather than a field number. To use a number as a literal, enclose it in quotation marks. For example:

    1 = 2/"100"

meaning "field 1 is equal to field 2 divided by 100".

Operators. An operator is a character that tells the program which operation to perform. For example, + tells the program to add. See the table below.

Special Formats. The results of formulas are stored with two decimal places, unless otherwise indicated by one of two format indicators. To indicate integer

format, type an I anywhere in the right column. (An integer is a whole number without decimal places.) The result of the calculation is rounded to the nearest whole number.

For a floating decimal point, type an F anywhere in the right column. Numbers are stored with as many decimal places as the field length permits. However, note that the program truncates, rather than rounds, floating decimals.

Operators and Indicators

+ Addition
− Subtraction
* Multiplication
/ Division
I Integer
F Floating Decimal

Prompts

1. At the creation menu, press **7** for Define Formulas. The first prompt is:

   `Enter File Name`

   Type your file name and press **ENTER**.

2. This prompt appears:

   `Is This A New Format (Y/N)`

   To indicate that you are entering new formulas, type **Y** **ENTER**. If the format is not supposed to be new, you may have typed the wrong file name. Or, on a floppy diskette system, the diskettes holding this file may not be in the system. Return to TRSDOS Ready and check the directory.

   When the format is new, this prompt appears:

   `Which Drive Should It Be Placed On (0-7)`

   Type a drive number and press **ENTER**.

3. This screen appears:

```
                    D E F I N E    F O R M U L A S
_____

                          Enter Equations:

                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
                =                                              .
```

There are 16 formula entry lines. The result field must be typed in front of the equal sign, the formula after it.

The small blocks at the right of the screen mark the end of the formula column. When the cursor reaches the end, it goes to the first column in the next line. Note, however, that there is a break (useful as a tab) in the middle of each formula line. You can write formulas through the break.

In general, when the program comes to one of the operators in a formula, it uses the contents of the field just preceding the operators (which may be a subtotal of operations up to then) and the value or contents of the field immediately following the operator.

Therefore, the order of fields and operators in the formulas and the order of formulas on the math table are crucial: the math package reads formulas in strict left-to-right and top-to-bottom order. Another way to look at the math package is that it works like an inexpensive hand-held calculator -- one calculation at a time, in the order you typed the numbers.

Write your formulas, making sure that they are written correctly, as described below.

Left to Right. In regular algebra, the following two equations would be equivalent (because the rules say multiplication and division are always done before addition and subtraction):

```
3 = 1 / "12" + 2
3 = 2 + 1 / "12"
```

If the contents of field 1 were 144 and the contents of field 2 were 64, field 3 in either case would be 76.

In Profile, the result of the first equation, $(144/12)+64$, would be 76. However, the result of the second $(64+144)/12$, would be 17.333....

Top to Bottom. The order of formulas on the table is important when you want to use the result of one equation as part of another. As Inquire, Update, Add accesses the math table, it first sets all fields to zero, then fills in the correct values from the record in question. Unless the result field you wish to use is higher on the table, Inquire, Update, Add has to use zeros.

In other words, to calculate the value of field 5, which includes a new value for field 1, put two formulas in this order:

```
1 = 2+4
5 = 1*6
```

not in this:

```
5 = 1*6
1 = 2+4
```

In the second case, the value Profile uses for field 1 is 0 -- the value before it's recalculated by the second equation.

4. After entering the formulas, check that they are correct. Press `SHIFT` `CLEAR` to record them.

5. You are asked:

```
Hardcopy This Table (Y/N)
```

Press **Y** or **N** **ENTER**. If you press **Y**, the table is printed and you're returned to the creation menu. If you press **N**, you go directly to the creation menu.

6. Your final step is to verify that the formulas are correct. To do so, go to Inquire, Update, Add, and calculate the same formulas by hand (or with a calculator) in a sample group of records. Check that your answers match the program's answers.

   Profile recognizes two error conditions while running calculation -- divide-by-zero and overflow.

   If a formula attempts to divide by zero, the program substitutes /D0 for the result. If any subsequent formulas reference a calculation that has resulted in this error, they too result in /D0 errors. Check your records for blanks or zeros in numeric fields; if these fields were left blank by mistake, change field indicators on the screen from standard numeric or decimal to must-fill numeric or decimal. Also check your formulas carefully. Do any formulas logically result in zero?

   When field overflow (the number of digits in the math result exceeds the size of the field) occurs, the program substitutes /OV for the result. Fields whose formulas reference a calculation that has caused an overflow may or may not overflow themselves, depending on their size. To resolve this problem, return to Define Files and add extra characters to the field.

Advanced Operations
Temporary Fields. You can use a non-existent field number (99, say, in a file with only 45 fields) as a temporary storage location. You might want to do this for two reasons: if your formula exceeds the character or field limits then divide your formula into two parts, or if you have no suitable field to hold the result needed.

Accumulators. Profile doesn't let you do accumulation formulas. For instance, you can't define "sales equals sales plus this month's sales". The reason again is that all result fields are set to 0 before the first formula is evaluated.

Technical Information

   Maximum number of formulas per file: 16
   Maximum number of fields per formula: 20
   Maximum number of characters per formula line: 63

All operations performed to 11 digits of accuracy.

Defining User Menus

The user menu program lets you customize the entire Profile 4 Plus system to your needs. When you define a menu, the program lets you pick which Profile runtime programs and formats are to be used for each of your regular operations.

When you use the menu, pressing the key corresponding to the operation takes you into the right file and the right screen or format automatically.,

For instance, if you print a mailing list the menu selection takes the data from the correct file, uses the right format number or letter, knows whether you want regular or extended selection, and even adds a new heading at the top of the screen while the list is printed.

General Information
Menu Name. The menu name, the set of letters used to refer to the menu, can be up to eight characters long. Like file names, it cannot contain or start with spaces. Also, do not use punctutation or other special characters.

Headings. There are two types of headings in user menus: the menu heading that appears at the top of the screen whenever the menu is displayed, and the program headings that appear at the top of screen when a menu selection is used.

Prompts
1. Press **8**, Define User Menus. This is the first prompt:

> Enter Menu Name

Don't type the name of the file. You can but it's much easier to type a one or two-character name. Don't start with or include blanks in the menu name. Punctuation marks are not accepted. Press **ENTER** after typing in the name.

2. If the menu is new, this prompt appears:

> New Menu (Y/N)?

Press **Y** **ENTER**.

If the menu is not supposed to be new, you may have typed the wrong

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name. Or, on a floppy diskette system, the diskettes holding the menu may not be in the system. Return to TRSDOS Ready and check the directory.

3. The next prompt is:

   `Which Drive Should It Be Placed On`

   On a floppy disk system, you probably want to put the menu on the runtime diskette. Don't forget to take off the write protect tab! Type a drive number and press **ENTER**.

4. A new screen appears:

   ### DEFINE USER MENUS

   `Heading`   ◆

                                        ◆

   Fill in a heading you want to appear at the top of the menu (as per "Profile" that appears at the top of the creation and runtime menus). Press **ENTER** **CLEAR** to record it.

5. A screen with 24 lines and 36 dots appears; two lines are one menu entry (for a total of 12).

   The first line is the entry as it appears on the menu; the second is the "command line", on which are listed the instructions to the computer.

   The program automatically adds X - Exit and Enter Selection > to each user menu, for a maximum of 14 items per menu.

6. Fill in entries as follows: In the first space on the first line, type a selection letter or number. For example:

   `1   ◆`   ◆

                                                          ◆

   The cursor jumps past the dot. Type the heading for the entry. For instance, "Index Sales Reps".

   `1   ◆      Index Sales Reps`   ◆

                                                          ◆

Press **ENTER**

7. The second (command) line should include: program name, file name, format number, and heading. Each is described in detail below. This information lets Profile answer the file name and format number prompts for you, plus supplies a new heading for the screen. (i.e. instead of "BUILD INDEX", the heading reads "INDEX SALES REPS").

This is the syntax:

EFCn (filename,n,heading)

Don't include the program's extension (the "CMD" in "EFCB/CMD", for instance).

For program names, see the table below. Keep in mind that user menus can access not only runtime programs but other menus as well. However, it cannot access Expand Files. File expansion must always be done from the Profile runtime menu.

You must include a blank between the program name and the parentheses (except for reports and labels. See below). Within parentheses, however, blanks are allowed only in the heading.

PROFILE Program Names

EFC8 The normal sort and selection program -- generates indexes as Build Index, runtime menu option 2, and sorts and selects records for report and label printing.

EFCC The extended sort and selection program. Use either EFCA and EFCB -- see details below.

EFC9 Inquire, Update, Add, option 3.

EFCA Print Reports, option 4. Must be listed with either EFC8 or EFCC -- see details below.

EFCB Print labels, option 5. Must be listed with either EFC8 or EFCC -- see details below.

EFCF Select Records (S), option 6, for generating SuperSCRIPSIT merge files. Must be listed with either EFC8 or EFCA -- see details below.

EFCD Select Records (V), option 7, for generating a DIF file. Must be listed with either EFC8 or EFCA -- see details below.

If the file name is less than eight characters, it must be padded with zeros to a length of eight.

A format number or letter -- for example, 1 for screen 1 or A for report A -- must always appear.

The heading -- PRINT REPORTS -- can be any length, as long is it fits on the line, and can contain any type of character.

To continue with our previous example, you'd write the second line as follows:

```
1   ,        Index Sales Reps                    ,
EFC8 (SALES000,1,INDEX SALES REPS)                  ,
```

Now read on for creating other user menus.

Two-part programs. Print Reports, Print Labels, Select Records (S) and Select Records (V) are, despite appearances, two-part programs. Part 1 is the index/sort-select program and part 2 is the print or spin-off program itself.

The rule: list the desired sort-select program first, then the final letter of the runtime program name. For example, to list Print Reports, normal selection only, you'd use this format:

```
EFC8 A(SALES000,1,PRINT DEFAULT REPORT)
```

For printing labels with extended selection, use this format:

```
EFCC B(SALES000,1,PRINT MAILING LABELS)
```

There can be no blanks between the A or B and the parenthesis.

Other menus and non-Profile programs. To add other menus (user, runtime or creation) simply type their names on the second line. For instance:

```
R   ,            Runtime Menu              ,
RM                                              ,
```

8. When you've filled in as many entries as you want, press **SHIFT** **CLEAR** to record the menu. A hardcopy prompt appears. Type **Y** or **N** and then **ENTER**. A message, "Dumping m/CMD:n", appears briefly ("m" is the menu name and "n" is the drive number). The operating system puts the

new menu on the desired drive and you're returned to the creation menu.

Advanced Operations

Don't forget the Runtime Menu! Add an entry for the Profile runtime menu (or your primary user menu) so that you can go to this menu without having to exit to TRSDOS Ready.

Put Items in Order. Group functions logically, in chronological order or according to priority. Don't put "Add Records" between "Print Report 1" and "Prepare Mailing Labels", for example.

Office Politics. If a number of people in your office work on the computer but on different jobs, consider giving each one his or her own menu.

More is Better. If you've formatted many screens, reports and labels, twelve user menu choices may not be enough. Instead, create a two (or more) page menu, each page called from another menu or even from a menu of menus.

You could have one menu for inquiry options, one for reports and one for labels. This would give you enough room for "Mailing List, Four Line Labels" and "Mailing List, Five Line Labels."

Returning to the User Menu. If you want programs to return to the user menu rather than the Profile runtime menu, simply rename the menu to RM/CMD, the name of the runtime menu. (The reason is that all Profile programs return to RM is that each has a "go to the RM menu" as its last operating instruction.)

To change the menu to the default menu, first rename the runtime menu from RM/CMD to something like OLD/CMD (old menu) by typing the following:

RENAME RM/CMD OLD/CMD **ENTER**

Then (replacing "yourmenu" with an actual menu name), type:

RENAME yourmenu/CMD RM/CMD **ENTER**

This tells the computer to rename the user menu to RM. To test, switch diskettes as appropriate, type RM, and press **ENTER**; press a menu choice. Press **BREAK**. To which menu did you return?

If you want to be able to access the old runtime menu easily, add it to the user menu. Just make sure you list it as OLD, not RM, on the command line.

Automatic Menu. The TRSDOS program AUTO can be used to call a par-

ticular menu or program whenever you boot or reboot. If you want your user menu to appear automatically when you start in the morning, do the following:

If you're on a floppy disk system, make sure you have a system diskette is drive 0 and the diskette containing your menu in 1. On either a floppy or hard disk system, type this instruction:

AUTO yourmenu   **ENTER**

Don't include the extension (i.e., /CMD).

Technical Information
Maximum number of menus per file or system: limited by disk space only
Maximum menu name length: 8 characters
Maximum menu heading length: 46 characters
Maximum length of descriptions: 46 characters
Maximum length of command lines: 79 characters
Maximum number of choices per menu: 12 user-defined choices per menu, and
X - Exit and Enter Selection > added automatically
Keys available for choices: any character except a blank

Runtime Diskette

Expanding Files

Expanding a file is like adding file folders to a file cabinet. You want to put in enough folders to last for awhile, but not so many that the file cabinet becomes unwieldy. In other words, never expand a file to the maximum capacity in one step. The more records you create for a file, the longer it takes to scan, sort and select records. Only expand the file to the number of records you expect to use within a week to two weeks.

Expand Files is used for two purposes; to make room for your records when you first define a file and to incorporate size changes in records when you add to a segment.

Prompts
1. Press **1**, Expand Files, at the runtime menu. The first prompt asks for the file name; type it in and press **ENTER**.

2. This message appears:

   > This File is Currently Allocated nnnnnn Records

   where nnnnnn is the number of records already in the file. The number is 0 if the file is new.

   This prompt appears just below:

   > How Many Additional Records?

   If the file is new, type the appropriate number of records and press **ENTER**.

   If you added a new segment or more characters to an old segment, simply press **ENTER** without adding new records. The program then knows it must create enough copies of the new segment to catch it up to the number of records already in the system.

3. The following prompt appears for each segment in a newly-created file or for the new segment(s) added to an already expanded file:

```
Enter Drive Number To Hold Segment in Data
```

Make sure you have enough room for the segment in question(n) on the drive you wish to use. On a floppy diskette system, also make sure you have a diskette in the drive. Type the drive number and press **ENTER**, or just press **ENTER**. (See "Converting to a Computerized System" for information on maximizing record storage.)

Extended Key Segments. If your file has only one segment and you expand the file to the point at which the expansion no longer fits on the current diskette, Profile expands the file for additional drives. The message "Disk n is full", where n is the drive number, appears; then this message appears:

```
Extend the File to a New Pack (Y/N)?
```

If you answer Y, Profile asks for the drive number. Make sure that you have a formatted diskette in that drive. You may use any one of the drives.

4. The program expands the file; the message ** FORMAT IN PROGRESS ** appears toward the bottom of the screen, and a counter at the lower right lists record numbers as each record is generated. When the file is expanded, you're returned to the runtime menu.

Selecting and Organizing Records

Scan: Look through ("search") the file for the record holding a particular piece of information.

Select: Choose the records to be included in an operation.

Sort: Put the selected records into a particular order.

At this point in the manual, you need to understand how to both organize (sort) and select records for operations and the logic behind the choices you make. This chapter explains the two processes. It also shows, with extensive examples, how to make Profile's sorting and selection options work best for you. Sort and selection options are accessed in the Build Index program, which is the next chapter, or the Inquire, Update, Add program, which is the one following.

Overview. "Selecting" means choosing information according to specific criteria. For instance, all records with New Jersey zip codes. "Sorting" means putting information in order. For instance, alphabetically by last name. In Profile, you can both select and sort records; the same records at the same time for reports, labels and indexes.

Say you wanted a report on your company's best customers. In a manual system, you would select the customers to appear in it, and then organize the information.

Selection: Obviously you want to list the customers who bought the most. But do you want to include all customers so that the best accounts can be compared to the worst (or inactive) acounts? If not, what's your cut-off point? More than $500.00 worth of sales? More than $1,000.00?

Sorting: In what order do you want the selected records to appear? The most likely would be in order of highest to lowest sales (descending order). Other possibilities are by customer code number (so you can find each customer's record easily), in alphabetical order (as a reference list) or, if this information is available, by region or by sales representative. You may, in fact, wish to do a series of reports, each organized differently.

In a computer system, take the manual system categories, like "best clients" or "in alphabetical order," and put them into terms, like field numbers and relationship codes, which the computer understands. For instance, instead of "best clients" you'd say, "field 8, total sales, greater than or equal to $500.00."

However, the two systems are more similar than different. Both you and Profile use the same processes to pick records; you test each one to see if it meets the creteria. In other words, "Did this client buy more than $500.00 worth of goods this year? If yes, select this client; if no, reject him or her."

If you keep this testing idea in mind while using the programs (and reading the rest of this section), you'll have little difficulty setting up sort and selection operations. Remember that the logic is the same in both systems and so is the amount of intellectual organization; you have to know what you want.

Selection, in Detail
In selections, the computer tests each record according to a set of criteria, and if the record passes, adds it to the group of suitable records.

In other words, if you decided, per the example above, you wanted to select

all clients who've spent $500.00 or more, you'd set up this 'truth' test:

> IF the sales value in this record is greater than or equal to $500.00, THEN add it to the selected group.

The computer starts going through the file:

> Record 1's total sales are $395.00. Is this greater than or equal to $500.00? No. Record 1 is not selected.

> Record 2's total sales are $650.00. Is this greater than or equal to $500.00? Yes. Record 2 is selected.

And so on through the file.

How do you set up these truth tests? By answering the selection prompts, as follows:

First you pick a field number. In our example, let's say that field 8 is total sales. So you'd type "8" in response to this prompt:

```
Enter Selection Field Number
or Press ENTER To Select All Records 8
```

Then, when you see this prompt, you pick the value you want the computer to look for -- $500.00:

```
TOTAL SALES    5 0 0 . 0 0
```

Relationship Codes

EQ or ENTER	equal to
NE	not equal to
GT	greater than
LT	less than
GE	greater than or equal to
LE	less than or equal to
RG	range; from - to; in formal selection only

Note: make sure you start the number far enough to the right, either by typing blanks (**necessary in extended selection**) or by typing the number, then SHIFT @ to tell the program to right-justify the field. Since numbers are right-justified in the records, the position of the first numeral is important.

Finally you pick the relationship between the value and the desired result. In this example, not just $500.00, but $500.00 or greater.

```
Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)
or Press ENTER For Equal To
```

Type GE and press ENTER. If this entire selection sequence were written as a sentence, it would be:

```
field B greater than or equal to 500.00
```

as mentioned earlier; or, even more specifically:

```
B GE "500.00"
```

Following are some special types of selections.

Ranges. The range (RG) relationship is a powerful selection option. Range lets you specify two ends of a selection group; greater than or equal to $500.00 and less than or equal to $1,000.00. The program tests each record twice.

At $1,095.00 are record 3's total sales greater than or equal to $500.00? Yes. Are they less than or equal to $1,000.00? No. Record 3 is not selected.

In normal selections, you set up ranges using the RG relationship. For example:

```
Enter Selection Field Number
or Press ENTER To Select All Records   12

Total Sales   1000.00

Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)   RG
Or Press ENTER For Equal To

Enter Lowest Total Sales   500.00
```

Keep in mind that you must type the high end of the range first.

In extended selection, there is no RG code. Instead, set up a range by using GT or GE on one line and LT or LE on the next. The field number for both lines is the same; type the number twice on the previous screen. For example:

```
, Total Sales          , LE,       1000.00,
```

```
,  Total  Sales                    ,  GE,          500,00,
```

AND verses OR. What if, instead of a range, you wanted either one thing or another. For instance, all Virginia clients or all Maryland clients? Profile lets you set up this type of relationship too, by simply typing OR when, in normal selection, you see this prompt:

```
Enter  Connective  (AND,  OR,  ENTER)
```

In extended selection, you simply type an X in front of all selection lines that you want to be part of the same OR group:

```
X,  Total  Sales              ,  EQ,          1000,00
X,  Sales  Rep                ,  EQ,      Jones
```

If you wanted a list of clients who have offices in Maryland and bought $500.00 or more, you'd use the AND connective. The program tests each record twice:

> In record 4, are the contents of field 7, State, "MD"? Yes. Are the contents of field 8, Total Sales, "500.00" or more? Yes. This record is selected.

> In record 5, are the contents of field 7, "MD"? Yes. Are the contents of field 8, "500.00"? No. This record is not selected.

By the way, you can also select "state equal to Maryland" AND the range "sales from $500.00 to $1000.00."

Language traps. Logic in Profile (or any program) is stricter than that of a natural language such as English. This means you have to think a bit before picking AND over OR, or vice versa.

For instance, you might say to yourself, "Since I'm going to be in northern New England anyway, I might as well set up appointments with the other clients we have there. What clients do we have in New Hampshire and Maine?" If you type NH, AND, then ME, you probably won't find as many records as you expected. The reason is that you've asked for clients with offices in both New Hampshire and Maine. What you meant was, "What clients do we have in either New Hampshire or Maine?"

Sorting, in Detail
Pick the sort field according to what you want put in order. Do you want your records in zip code order? Then sort by the zip code field. Do you want the

company names alphabetized? Then sort on the company name field.

You can sort in either of two directions; from lower to higher (ascending order, as in "ants to zebras") or higher to lower (descending order, as in best-sellers to loss-leaders).

Short sort lengths. When choosing sort fields, you're asked for a field length (the number of characters in the field) as well as a field number. Profile supplies the defined length if you press ENTER to this prompt:

```
Enter Length For Sorting
or Press ENTER For Length of Field
```

If you press ENTER, you get the length of the field you chose for sorting -- if field 1, COMPANY NAME, has 20 characters, 20 is the sort length.

The sort length is how many times the computer tests the data in the records. For instance, you're sorting company names into alphabetical order; you've pressed ENTER for a field length of 20. The name in record 1 is "Jones Plumbing"; the name in record 2 is "Jonah Air Conditioning."

The computer compares record 1 to record 2:

```
J - J
o - o
n - n
e - a
```

Ah ha, it says, "a" before "e." Record 2 comes before record 1.

If, however, you gave the computer a length of 3, the computer would only compare the first three letters:

```
J - J
o - o
n - n
```

The two names are a match, as far as the computer is concerned, and it leaves them in the order it found them:

```
Jones Plumbing
Jonah Air Conditioning
```

This isn't what you had in mind. So why would you ever give the computer

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a sort length too short to completely alphabetize the list?

Only because the shorter the sort length, the less time the computer needs to test each record and rearrange the list. A longer sort length -- a longer test length -- takes more time.

Long sort lengths. You can choose a length longer than the field length. For instance, sort records by first name within last name. In other words, you want "Bob Smith" to come before "Zoltan Smith." Consecutive Profile fields are sorted together whenever the chosen field length is longer than the length of the sort field.

The easiest way to get a list alphabetized by first name within last name, therefore, is to have "first name" (minor sort key) follow "last name" (major sort key) on the list of fields. (Of any two fields, the first field will be the major sort and the next field will be the minor sort.) Then, when you go to sort the records, you simply ask for a sort on last name, but type in a longer length. In other words, if last name is 15 characters and first name is 10, ask for a length of 25.

Sorting with a length greater than the field length is also useful for sorting short fields together. For instance, a sales mailing list file coded for such items as priority level, timing, and interest. Each code is two characters long. As long as the fields are contiguous (following one another on the list of key fields), you can pick the first one as the major sort key, sort on a length of six, and the program will sort the records by all three codes.

Associated Field Notes. If you want to sort or select by a key-segment associated field and you're using normal selection, type any of the associated field numbers in response to Enter Field Number To Sort.

First of all, if you want to sort or select by a data-segment associated field, you must use extended selection. In extended selection, however, you must also use the associated group letter. If instead, you use an associated field number, the associative function is turned off and the program simply sorts or selects by whatever is in the individual field.

Rules for Sorting. Here is a quick reference to how the program thinks:

1. Numbers and letters are sorted in normal order - 1 before 9, A before Z, and so on.

2. However, in fields that contain either numbers or letters, numbers come before letters.

3. In fields that also contain spaces or blanks, spaces come before numbers and letters. For example,   12 comes before 11

4. Uppercase letters come before lowercase letters.

Building Indexes

The Build Index feature lets you pre-sort records either alphabetically or numerically, according to a specified field. An index is a quick reference chart that Profile uses to look up a desired piece of information and find the record in which it appears.

Build Index lets you sort and select records by fields in any segment of a Profile file. You can sort up to five fields in either ascending or descending, alphanumeric order and select up to 16 different criteria. You can also base new indexes on sections of a file previously indexed. In other words, build indexes from other indexes.

There are six possible indexes. The first is the inquiry index, used primarily in Inquire, Update, Add. The remaining five are print indexes, which can be used to print labels and reports, but also to organize SuperSCRIPSIT and VisiCalc merge files. The inquiry index can also be used for printing and selection operations.

General Information
The program does not rebuild the index when you add new records or change the contents of records of the field used to sort. You must rebuild the index so that it can find the new records or data.

Although you can index your files by any field, you must use the extended selection option for non-key segment fields.

Prompts
1. For normal selection, press **2**, Build Indexes, at the runtime menu. For extended selection, press the space bar first, then **2**. Enter the file name.

2. This prompt appears:

```
Index For Inquiry Or For Printing?
Enter I Or P:
```

Press **I** **ENTER** for the Inquire, Update, Add index. Press **P** **ENTER** for a print index. Keep in mind that you can use the inquiry index or printing, but you cannot print indexes for inquiries.

3. If you're using normal selection, the key fields appear at the top of the screen and this prompt appears in the middle:

```
Enter Field Number to Sort
or Press ENTER For No Sort
```

If you're using extended selection, this prompt appears:

```
Select From An Index (1-5 or I):
Or Press ENTER For Full File Selection
```

The prompt lets you build an index based on another index. As well as shortening sorting and selection time, an important coneren in large files, this option lets you build indexes across file segments.

In extended selection, you're prompted:

```
Segment Number (1-n)
```

Where "n" is the last segment defined. Use this option to sort and select records by non-key fields. Note: you can sort and select records across segment boundaries by building the current index from a previously-built index. See Advanced Operations for details.

4. The next set of prompts are sort prompts. The fields in the key segment (normal selection) or the chosen segment (extended selection) appear at the top of the screen. The program accepts only these keys.

In normal selection, these prompts appear consecutively:

```
Enter Field Number To Sort
or Press ENTER For No Sort

Enter Length For Sorting
or Press ENTER For Length of Field
```

In extended selection, you see this chart instead:

```
Enter Fields To Sort By And
Press SH-CLEAR To Continue.
```

```
Fields        •      •      •      •      •
Length        •      •      •      •      •
Descend?      •      •      •      •      •
```

Press **SHIFT** **CLEAR** to record the sort criteria.

Keep in mind, as you make your sort choices, that you can sort on associated fields, sort by a length longer or shorter than the sort field's defined length, and, in extended selection, you can organize the index in descending as well as alphanumeric (ascending) order.

5. Next are the selection prompts. In normal selection, you see these prompts:

```
Enter Selection Field Number
or Press ENTER To Select All Records
```

If you do not press **ENTER**, the next prompt asks you for a value on which to select. Then you have these choices:

```
Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)
Or Press ENTER For Equal To

Enter Connective ( AND, OR, ENTER )
```

In extended selection, you see this line of entry blanks at the bottom of the screen:

```
 •    •    •    •    •    •    •    •    •    •    •    •    •
```
──
```
Enter Field Numbers To Select By,
Press SH-CLEAR To End Selection,
```

For all records, simply press **SHIFT** **CLEAR** to record the choices. If you have made field choices, the extended selection screen appears. If you want OR selections, type an X in the first column under Group; blanks in this column indicate AND.

As you set up selection criteria, remember than you can ask for ranges. For detailed information on sorting and selecting, see "Selecting and Organizing Records."

6. Finally, you're asked for the drive on which the index should be placed. Pick a drive and press **ENTER**. Two counters at the lower right show the number of records searched and selected. A final message indicates the number of

records selected for the index. You're then returned to the runtime menu.

Advanced Operations
Building Indexes From Indexes. There are two reasons you might want to index from another index -- to shorten sort times and to build an index on more than one segment.

Building a new index from an old one runs faster when the old index doesn't list every record in the file; the program has to look only through a group of records, not all of them. However, make sure that all the records you want in your new index are in the old index. Otherwise, you may miss some important records.

An index built on more than one segment is a multi-step process. You build one index on fields from one segment, then build a second index, based on the first, using fields from the second segment, and so on.

To create the index successfully, you must decide ahead of time what field is most important, what field is next in importance, and so one, down to the least important field. The reason? You must build your indexes in reverse; first, by a field or fields in the least important segment and the final index by the most important.

For instance, say you want a SALES index organized by date of last update and sales representative's last name. Which is most important: date or name?

If it's date, build the first index on segment 1, field 2, and the second on segment 3, field 18. With this index, you can find every representative record updated on a certain date; the representatives will be in alphabetical order within each date.

If it's name, build the first index on segment 3, field 18, and the second on segment 1, field 2. All representative records in this index will be in alphabetical order; for representatives with more than one record, this set of records will be in order by date of last update.

Technical Information
Maximum numer of indexes: 6, one inquiry and 5 print

Formula to find index size (in bytes):

$$SIZE = (n + 1) * (L + 2)$$

where "n" is the number of records selected and "L" is the length of the sort field. The extra record and extra two characters represent program overhead.

Maximum possible length for sorting: 85 characters

Inquire, Update, Add

Inquire, Update, Add is the center of Profile. This is the program used to put data into and retrieve data from the system. Here you can enter, view, update, delete, and hardcopy records.

Inquire, Update, Add includes a powerful set of batch operations: mass recalculation, mass purge, mass delete and mass hardcopy. You can specify a group of records (or the entire file) using the scan and index modes, then recalculate all formulas, delete the entire group, hardcopy the group, and so on. See Advanced Operations for details.

General Information
There are four paths into the file: record number, scanning, filling in new records, and index. Each path is described below, in order of least to most complex.

Record Number. Asking for a record by its number is always the fastest way to find it. Some people even use record numbers as codes; customer codes, product codes, etc., so they can always access records by number.

Adding New Records. Use this option when you want to fill a series of records quickly. As soon as one is recorded, the next empty record appears already in update mode.

Via an Index. The second quickest way into a file is by an index, a reference table which the program uses to look up the record number of a desired piece of information. The index option doesn't appear until you've built the inquiry index.

Scanning. The scan mode lets you "thumb through" a file. Use it when you're looking for unindexed information or when you're not sure of the search value. For example, if you know the contact's name (Jon Simons) but can't remember his company's name, which is what you really want. Scanning lets you make an educated guess and find the desired record based on that guess.

Prompts

1. Press **3** at the runtime menu. Enter the file name and screen number. If the screen is password-protected, you're asked to type the password. Do so and press **ENTER**.

2. This prompt appears:

   Enter Record Number

   If you want to enter the file by record number, type the number and press **ENTER**. Once the record is displayed, pressing the down arrow displays the next record in the file; pressing the up arrow displays the previous record. If you reach either the end of the file or press **X**, you're returned to the Enter Record Number prompt.

   No Index. If you have no index and press **ENTER** to continue, the scan screen appears. Your key fields are listed on the top. To scan for a record, follow the instructions for normal selection in "Building Indexes" and "Selecting and Organizing Records."

   However, keep in mind that numbers must be right-justified, and that you can use the wild-card symbol (=) within a scan. For example, to find everything entered during September 1981, you can scan for 09/= =/81. If you select by a member of an associated group, the following rule applies. Each associated field in the record is tested for the relationship specified, then if any associated field satisfies the relationship, the record is selected.

   The first record that matches the selection criteria is displayed. Pressing **ENTER** displays the next record in the selection group. When there are no more matching records or when you press **X**, you're returned to Enter Record Number.

   Via An Index. If you have an index, the phrase Index By, followed by the major sort field's heading, appears. Type the value you wish to find; a last name if the index was built on last name, a sales amount if the index was built on a sales field, etc. and press **ENTER**. Or, use the wild-card symbol (=) to display the first indexed record.

   Once you're in the file, the **ENTER** key takes you to the next record in the index; the up and down arrows take you to the next or the previous indexed record.

   Adding Records. If you continue past the index screen (if there is one) and

the scan screen, this prompt appears:

```
Add Records (Y/N)
```

If you press **N ENTER** or simply **ENTER**, you return to the Enter Record Number prompt. However, if you press **Y** the next available empty record appears. As soon as this record is saved, the next empty record appears already in update mode. To get out of Add Records mode, you must press **BREAK**, then **X** to exit to Enter Record Number.

3. When a record appears on the screen, the options D to delete, H to hardcopy, U to update and X to exit appear at the bottom of the screen unless you entered the file via Add Records, in which case they do not appear since you're already in update mode.

To delete, press **D**. You have to confirm the deletion by pressing **Y ENTER**.

To make a hardcopy, press **H**. Make sure your printer is on and attached correctly.

To update, press **U**. You can now enter new data, add to, or alter data already in the record.

Special keys in Update Mode

SHIFT CLEAR	Saves the record.
BREAK	Restores a record to its previous state.
ENTER	Moves the cursor to the next unprotected field.
⇧	Pressed at the beginning of a field, moves the cursor to the beginning of the previous unprotected field. If used in the first field in the record, the cursor moves to the last field.
⇩	Moves the cursor down to the beginning of the field immediately below, if any. If no field is immediately below, the cursor moves to the first field in the line immediately below.
SHIFT @	Repeats data, in individual fields, from the cor-

responding field in the previous record.

Pressing ▊ returns you to the Enter Record Number prompt.

To access mass mode, press the space bar. A list of options appears at the bottom of the screen. See Advaned Operations for more information.

You can also change screens; simply press the number of the screen desired. If the screen is password-protected, you must type in the password.

To record data, simply press `SHIFT` `CLEAR`.

4. To exit from Inquire, Update, Add, press ▊ to exit fron a record, if necessary, then `BREAK` twice. You're returned to the runtime menu.

Advanced Operations

Mass Operations. There are four mass operations: mass hardcopy, mass recalculate, mass purge and mass delete. These operations are accessed via the scan or index options by pressing the space bar when the first record in the index or scan group appears.

Use mass hardcopy to make a paper backup of your system. Print all records, or batches of records, on a daily, monthly, quarterly, or other schedule. To select the proper group, at the Scan field prompt use date-of-last-update equal to today's date, the month, a range of months, and so on.

Hint: some people create a screen that looks like an invoice or bill, then use mass hardcopy to print and send them out to customers.

Use mass recalculate to recalculate all math formulas in an entire file or in selected groups of records within a file.

For instance, say that you just gave one of your sales representatives a higher commission rate, so the commissions in all his accounts have to be adjusted. You'd change the formula that calculates his commission to reflect the higher percentage, then select all records for Sales Rep #23 -- and run a mass recalculate.

Mass purge and mass delete are very similar. Mass purge makes hardcopies before it deletes the data in the selected group (or entire file, if that's what you want). Mass delete simply deletes the data.

Only the data is deleted, not the records (the option is not "expand in reverse"). After you've purged the file, you can fill it up again with new data.

To access the mass modes, press the space bar. Then, mass recalculation starts as soon as you press █. Mass hardcopy starts as soon as you press █. If you request mass purge or mass delete, this prompt appears:

    M A S S DELETION HAS BEEN REQUESTED
    Reply: Y or N

If you press █, the operation is cancelled and the usual prompt line appears.

If you press █, the program starts deleting records.

All mass operations start at the record you're in when you press the option key. Therefore, if you've been thumbing through the file, return to the beginning of the index or scan group prior to pressing █, █, █, or █.

The program returns to Enter Record Number when finished.

Use backups: with the exception of mass hardcopy, mass operations change records permanently. If you've made a mistake in a formula, or selected the wrong group of records for deletion, there's no easy way to recover the original data unless you have backups.

We suggest that you make two sets of backups. Put one set away and make the changes in the other. If the mass operation doesn't work correctly, you can always make another set of backups from the originals and try again.

To stop a mass operation before it reaches the end of the index or scan group, press BREAK twice. The program won't stop immediately -- it recognizes the break request only between records, not while it's calculating, deleting or printing.

Mass Re-Date. Say that you have all your dates in MM/DD/YY format, but now you want them in YY/MM/DD format. So you change the date indicator on your screen from (to). Fine, now all new records will be in the new format. But what do you do about the dates in the old records?

Easy. Use mass recalculation to "update" and re-record all records in the file. While the program goes through every selected record (the entire file, if that's what you want) looking for formulas to redo, it notices that the date is wrong,

and flashes a reverse bar in the offending area. Simply type / in the first space in the field. You don't have to erase the remainder of the date. Press **SHIFT CLEAR**. The date is quickly reformatted.

However, if the date was an automatic date (screen indicators & and @), the new date will be today's date, not a reformatted version of the old one.

The Wrong Records. Say that you fill in a new group of records, then leave Inquire, Update, Add. Later, you return to file and try to find the new records via the index. You can't, they're not there.

Or say that you delete a series of records, and later, as you look through the file using the index, blank records keep coming up.

The reason is that the index "remembers" only those records that were in the file when you built it. The solution is simple; rebuild it.

Start with the first record in the index by typing =, the wild card character, at the "Index By" screen, then press **ENTER**. Look through the index by pressing the down arrow. All the records in the index should be empty. Start building.

On the other hand, when you've run mass delete or mass purge from an index, you can use the index's memory to check that the operation was done correctly. Any index that includes deleted records continues to include them until you rebuild it.

Been Knocking But Can't Get In.... There are a few reasons you might have trouble entering Inquire, Update, Add. Before deciding you're in horrible trouble, check to see if you did the following:

1) Added a segment but didn't reexpand the file (see "Expanding Files" for details).

2) The program can't find the file name or the map file. If you have a floppy disk system, the right set (or the complete set) of diskettes aren't in the drives. The program can't find the file name or the map file. Use the TRSDOS directory program or open the drive doors and check.

Printing Reports

This program lets you print reports; sales reports, statements, inventory reports, and so on, based on the formats you create.

Prompts

1. For normal selection, press **4**, Print Reports, at the runtime menu. For extended selection, press the space bar first, then **4**. Enter your file name. Press a format number or letter and press **ENTER**. If the report format has a password, you're asked for it now. Type it in and press **ENTER**.

2. If you asked for normal selection, this prompt appears:

   ```
   Select Using An Index (1-5 OR I)
   Or Press ENTER For Full File Selection
   ```

   If you want to organize the report using an index, type the appropriate index number or I and press **ENTER**. The program moves directly to generating and printing the labels. If you press **ENTER**, the sorting and selection prompts described below appear instead.

   In extended selection, you're prompted:

   ```
   Segment Number (1-n)
   ```

   where "n" is the last segment defined. Use this option to sort and select records by non-key fields. Note: you can sort and select records across segment boundaries by using indexes. See "Building Indexes," Advanced Operations, for details.

3. This prompt appears if there is no control break:

   ```
   Enter Field Number To Sort
   or Press ENTER For No Sort
   ```

   If there is a control break, the next prompt is Enter Length For Sorting (see below). You aren't given a sort option because the control break field is the sort field. It cannot be changed at runtime, although its length can be changed.

4. Under normal selection, this is the next prompt:

   ```
   Enter Length For Sorting
   or Press ENTER For Length of Field
   ```

   You can lengthen or shorten the field length if desired. See "Selecting and Organizing Records" for more information. For the defined field length, press **ENTER**.

If you're using extended selection, this chart appears:

```
Enter Fields To Sort By And
Press SH-CLEAR To Continue,

 Fields:        .       .       .       .       .
 Length:        .       .       .       .       .
Descend?        .       .       .       .       .
```

Press SHIFT CLEAR to record the sort criteria.

Keep in mind as you make your sort choices that you can sort on associated fields, sort by a length longer or shorter than the sort fields's defined length, and in extended selection, organize the report in descending as well as alphanumeric (ascending) order. If there is a control break field, it appears in the first column. It cannot be changed.

Maximum sort length is 85.

5. Next are the selection prompts. In normal selection, these are the prompts:

```
Enter Selection Field Number
or Press ENTER To Select All Records
```

If you want to print all the records in a file, press ENTER. The disks will whirl and then printing will begin. Otherwise, type in the number of the field you want to select.

You're then asked for a value to select. Type it in and you are prompted with these choices:

```
Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)
Or Press ENTER For Equal To
```

and then

```
Enter Connective (AND, OR, ENTER)
```

In extended selection, this line of entry blanks appears at the bottom of the screen:

```
   .     .     .     .     .     .     .     .     .     .     .     .
```

```
       Enter Field Numbers To Select By,
       Press SH-CLEAR To End Selection,
```

For all records simply press SHIFT CLEAR to record the choices. If you've made field choices, the extended selection screen appears. If you want OR selection, type an X in the first column under Group; blanks in this column indicate AND.

As you set up selection criteria, remember that you can ask for ranges -- type the same field number twice, and use the default AND connection. For detailed information on sorting and selecting, see "Selecting and Organizing Records."

6. The program begins to generate the report. Two counters at the lower right show number of records searched and selected. A final message indicates the number of records selected for the report.

7. After the first page of the report is printed, you have three options: 1) press C for continuous printing (used with continuous feed paper); 2) press the space bar so that prining stops between pages (used with single sheets); and 3) press BREAK to stop the printing.

When the report has been printed, you're returned to the runtime menu.

Advanced Operations
Sorting Reports with Associated Fields. If a report is organized (sorted) on an associated field, each record is duplicated once for each non-blank associated field in the group. Remember that a control break field is also a sort field.

This means that certain records may be included more times in a report than you might expect. In fact, as many times as there are non-empty associated fields. In other words, you may end up with extra pages.

For example, say that you only wanted "Awls." But since the program adds a record to the report as many times as it contains non-blank associated fields, report lines are also printed for "Gadgets," "Nails" and "Widgets."

What this comes down to is: print the report and throw away the pages you don't need.

Printing Labels

This program lets you print labels; mailing labels, file-folder labels, Rolodex cards, customer lists, and so on based on the formats created.

Prompts

1. For normal selection, press **5**, Print Labels, at the runtime menu. For extended selection, press the space bar first, then **5**. Enter your file name. Press a format number or letter and press **ENTER**. If the label format has a password, you're asked for it now. Type it in and press **ENTER**.

2. If you asked for normal selection, this prompt appears:

   ```
   Select Using An Index (1-5 Or I)
   Or Press ENTER For Full File Selection
   ```

   If you want to organize the list using an index, type the appropriate index number or I and press **ENTER**. The program moves directly to generating and printing the labels. If you press **ENTER**, the sorting and selection prompts described below appear instead.

   In extended selection, you're prompted:

   ```
   Segment Number (1-n)
   ```

   where "n" is the last segment defined. Use this option to sort and select records by non-key fields. Note: you can sort and select records across segment boundaries by using indexes. See "Building Indexes," Advanced Operations, for details.

3. This prompt appears if you're using normal selection:

   ```
   Enter Field Number To Sort
   or Press ENTER For No Sort
   ```

   This is the next prompt:

   ```
   Enter Length For Sorting
   or Press ENTER For Length of Field
   ```

   You can lengthen or shorten the field length if desired. See "Selecting and Organizing Records" for more information. For the defined field length, press **ENTER**. Maximum length is 85.

If you're using extended selection, this chart appears:

```
Enter Fields To Sort By And
Press SH-CLEAR To Continue.

  Fields:      .      .      .      .      .
  Length:      .      .      .      .      .
Descend?       .      .      .      .      .
```

Press SHIFT CLEAR to record the sort criteria.

Keep in mind as you make your sort choices that you can sort on associated fields, by a length longer or shorter than the sort field's defined length, and in extended selection, organize the report in descending as well as alphanumeric (ascending) order.

4. The selection prompts are next. In normal selection, these are the prompts:

```
Enter Selection Field Number
or Press ENTER To Select All Records
```

If you want to print all the records in a file, press ENTER. Otherwise, type in the number of the field you want to select.

If you do not press ENTER, you're asked for a value to select.

Then you have these choices:

```
Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)
Or Press ENTER For Equal To

Enter Connective (AND, OR, ENTER)
```

In extended selection, this line of entry blanks appears at the bottom of the screen:

```
  .    .    .    .    .    .    .    .    .    .
```

```
Enter Field Numbers To Select By.
Press SH-CLEAR To End Selection.
```

For all records simply press SHIFT CLEAR to record the choices. If

you've made field choices, the extended selection screen appears. If you want OR selections, type an X in the first column under Group; blanks in this column indicate AND.

As you set up selection criteria, remember that you can ask for ranges. Type the same field number twice, and use the default AND connection. For detailed information on sorting and selecting, see "Selecting and Organizing Records."

5. The program begins to generate the labels. Two counters at the lower right show the number of records searched and selected. A final message indicates the number of records selected for the run.

6. Printing stops after the first row of labels is printed so you can check alignment. Press the space bar to print another row. When label alignment is correct, you can ask for continuous printing by pressing **C** or ocntinue to press the space bar for individual rows or labels. Pressing **BREAK** cancels the operation.

Advanced Operations
Associated Fields. If you sort on an associated field, each record is duplicated once for each non-blank associated field in the group.

For example, say that an associated field group consists of field 3, which usually contains a client's primary language, field 4, which usually contains a secondary language, and field 5, which usually contains a third language. Record 8 has the following values: field 3, English; field 4, German; and field 5, Spanish. A sort on field 3, 4, or 5 causes a label to be printed once for English, once for German, and once more for Spanish.

Selecting Records For SuperSCRIPSIT

Before you merge a SuperSCRIPSIT document with Profile 4 Plus information, you must select the Profile 4 Plus records that contain the data you wish to use.

Once the data file is generated, it is accessed from SuperSCRIPSIT via the "Merge Documents" operation. See Advanced Operations.

Prompts
1. For normal selection, press **6** (Select Records (S)) at the runtime menu. For extended selection, press the space bar first, then **6**. Enter the file name.

Press a format number or letter and `ENTER`. If the format has a password, you're asked for it now. Type it in and press `ENTER`.

2. If you asked for normal selection, this prompt appears:

```
Select Using An Index (1-5 or I):
or Press ENTER For Full File Selection
```

If you want to organize the file using an index, type the appropriate index number or I and press `ENTER`. The program moves directly to generating the merge file.

If you press `ENTER`, the sorting and selection prompts described below appear instead.

In extended selection, you're prompted:

```
Segment Number (1-n)
```

where "n" is the last segment defined. Use this option to sort and select records by non-key fields. Note: you can sort and select records across segment boundaries by using indexes. See "Building Indexes," Advanced Operations, for details.

3. This prompt appears if you're using normal selection:

```
Enter Field Number To Sort
or Press ENTER For No Sort
```

This is the next prompt:

```
Enter Length For Sorting
or Press ENTER For Length of Field
```

You can lengthen or shorten the field length if desired. Maximum length is 85. For the defined field length, press `ENTER`. See "Selecting and Organizing Records" for more information.

If you're using extended selection, this chart appears:

```
Enter Fields To Sort By and
Press SH-CLEAR To Continue.
```

```
Fields:      ♦     ♦     ♦     ♦     ♦
Length:      ♦     ♦     ♦     ♦     ♦
Descend?     ♦     ♦     ♦     ♦     ♦
```

Press **SHIFT** **CLEAR** to record the sort criteria.

Keep in mind as you make your sort choices that you can sort on associated fields, by a length longer or shorter than the sort fields's defined length, and in extended selection, organize the report in descending as well as alpha-numeric (ascending) order.

4. The selection prompts are next. In normal selection, these are the prompts:

```
Enter Selection Field Number
or Press ENTER To Select All Records
```

If you want to print all the records in the file, press **ENTER**. Otherwise, type in the number of the field you want to select. If you don't press **ENTER**, you're asked for a value to select. Then you have these choices:

```
Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)
Or Press ENTER For Equal To

Enter Connective (AND, OR, ENTER)
```

In extended selection, this line of entry blanks appears at the bottom of the screen:

```
♦   ♦   ♦   ♦   ♦   ♦   ♦   ♦   ♦   ♦   ♦   ♦
```

```
Enter Field Numbers To Select By,
Press SH-CLEAR To End Selection,
```

For all records simply press **SHIFT** **CLEAR** to record the choices. If you've made field choices, the extended selection screen appears. If you want OR selections, type an X in the first column under Group; blanks in this column indicate AND.

As you set up selection criteria, remember that you can ask for ranges -- type the same field number twice, and use the default AND connection. For de-tailed information on sorting and selecting, see "Selecting and Organizing Records."

5. You're asked for the drive number to save the file. Type a drive number and press **ENTER**. The program begins to generate the file. Two counters at the lower right show the number of records searched and selected. A final message indicates the number of records selected. When the program is finished, you're returned to the runtime menu.

Advanced Operations

Merging with SuperSCRIPSIT. Any merge operation needs two items -- the data to be merged and the merge document itself. Before you can use the Profile merge file, you must create a SuperSCRIPSIT master document.

To start, access SuperSCRIPSIT. At the Scripsit word processing option menu, open and write a master document following the instructions in "Form Letters," Model 4 SuperSCRIPSIT Reference Manual.

In SuperSCRIPSIT create the document to merge your Profile data, enclosing all field names with @ symbols (the "defining character" used by Profile). For example, type "Dear @FIRST@" for the first name field. Use **SHIFT 0** to type @, not the @ key. Remember to enter the field names exactly as they appear in Define Selections (S); use your print-out to be sure.

Make sure that the printer is properly connected, turned on, and on-line, then press **CTRL F**. The Print Text Options screen appears. Choose your print options or press **ENTER** for the default options.

When the prompt, "Name of file to be merged?" appears, enter the name of the Profile file. Follow this syntax: filename/SRx, where "filename" is the name of the file. If necessary, padded with zeros to a length of eight. "x" is the number or letter of the selection format. For example, SALES000/SR1 is the first selection format of the file SALES000. Press **ENTER** to start printing.

When the run is finished, press **CTRL Q** to quit and exit to the SuperSCRIPSIT menu. Press **E** to exit to TRSDOS.

Selecting Records For VisiCalc

Before you can move Profile data onto a VisiCalc electronic worksheet, you must select the Profile records containing the data you wish to use.

Once the data file is generated, it is accessed from VisiCalc. See Advanced

Operations for details.

Prompts

1. For normal selection, press **7** (Select Records (V)) at the runtime menu. For extended selection, press the space bar first, then **7**. Enter your file name. Press a format number or letter and **ENTER**. If the format has a password, you're asked for it now. Type it in and press **ENTER**.

2. If you asked for normal selection, this prompt appears:

   ```
   Select Using An Index (1-5 Or I)
   Or Press ENTER For Full File Selection
   ```

   If you want to organize the file using an index, type the appropriate index number or I and press **ENTER**. The program moves directly to generating the merge file.

   If you press **ENTER**, the sorting and selection prompts described below appear instead.

   In extended selection, you're prompted:

   ```
   Segment Number (1-n)
   ```

   where "n" is the last segment defined. Use this option to sort and select records by non-key fields. Note: you can sort and select records across segment boundaries by using indexes. See "Building Indexes," Advanced Operations, for details.

3. This prompt appears if you're using normal selection:

   ```
   Enter Field Number To Sort
   or Press ENTER For No Sort
   ```

   This is the next prompt:

   ```
   Enter Length For Sorting
   or Press ENTER For Length of Field
   ```

   You can lengthen or shorten the field length if desired. The maximum length is 85. For the defined field length, press **ENTER**. See "Selecting and Organizing Records" for more information.

If you're using extended selection, this chart appears:

```
-------------------------------------------------X

  Enter Fields To Sort By And
  Press SH-CLEAR To Continue

    Fields:      +     +     +     +     +
    Length:      +     +     +     +     +
  Descend?       +     +     +     +     +


-------------------------------------------------X
```

Press **SHIFT** **CLEAR** to record the sort criteria.

Keep in mind as you make your sort choices, that you can sort on associated fields, sort by a length longer or shorter than the sort field's defined length, and in extended selection, organizer the report in descending as well as alphanumeric (ascending) order.

4. The selection prompts are next. In normal selection, these are the prompts:

```
  Enter Selection Field Number
  or Press ENTER To Select All Records
```

If you want to use all the records in your file, press **ENTER**. Otherwise, type in the number of the field you want to select. If you do not press **ENTER**, you're asked for a value to select. Then you have these choices:

```
  Enter Relationship (EQ,NE,GT,LT,GE,LE,RG)
  Or Press ENTER For Equal To

  Enter Connective (AND, OR, ENTER)
```

In extended selection, this line of entry blanks appears at the bottom of the screen:

```
     +    +    +    +    +    +    +    +    +    +
```

```
  Enter Field Numbers To Select By.
  Press SH-CLEAR To End Selection.
```

For all records, simply press **SHIFT** **CLEAR** to record the choices. If

you've made field choices, the extended selection screen appears. If you want OR selections, type an X in the first column under Group; blanks in this column indicate AND.

As you set up selection criteria, remember that you can ask for ranges -- type the same field number twice, and use the default AND connection. For detailed information on sorting and selection, see "Selecting and Organizing Records."

5. You're asked for the drive number to save the file. Type a drive number and press **ENTER**. The program begins to generate the file. Two counters at the lower right show the number of records searched and selected. A final message indicates the number of records selected. When the program is finished, you're returned to the runtime menu.

The file generated is called filename/DIF. Unlike the SuperSCRIPSIT program, only one DIF file is created. As you change formats, the previous DIF file is overwritten with the new data.

Advanced Operations
Merging with VisiCalc. A merge operation needs two items -- the information to be merged and the electronic worksheet with which it is to be used. Refer to the Model 4 VisiCalc User's Guide for more information.

To start, access VisiCalc by typing VC **ENTER**. An electronic worksheet appears. Position the cursor where you want the Profile data to appear. Type **/**.

"Command:" appears at the top of the screen, followed by a series of letters. Type S for storage and the storage command line appears. Type < # > and the program asks if you want to save or load. Press **L** for load.

The program asks for the file name. Enter it following this syntax: filename/ DIF, where "filename" is the name of the file, padded with zeros to a length of eight, if necessary, and "DIF" is the extension. For example, to enter the VisiCalc selection file from the SALES000 file, type SALES000/DIF. Press **ENTER**.

This appears on the command line: "Data load: R, C, or ENTER." Pressing **R** loads the values across the electronic worksheet in rows (one row per record); pressing **C** loads the values in columns (one column per record) starting at the top of the worksheet. The contents of the Profile merge file appear in the appropriate spots.

Appendix A

FORMATting a Diskette

The FORMAT program places special magnetic "race tracks" on diskettes so that the Model 4/4P Computer can put information on them, and subsequently read information from them.

A big advantage of multi-drive systems is the ability to place all SYSTEM or DOS information in Drive 0, thus freeing the other drives to store programs or data.

A diskette containing the complete Disk Operating System is a SYSTEM diskette. Both the Creation and Runtime diskettes are SYSTEM diskettes. One that contains only FORMATted information will be called a DATA diskette. Before we FORMAT a diskette, it is a good idea (but not absolutely necessary) to bulk erase it with a Radio Shack #42-210 bulk eraser or the equivalent. If there are any programs or data on the diskette, they will be gone forever.

Be sure a SYSTEM diskette is in Drive 0, and a blank diskette (no write protect tab) is in Drive 1.

At TRSDOS Ready, type:

        FORMAT   `ENTER`

The Model 4/4P loads in a special program called disk formatter, which leads you through the FORMATting process.

On a two drive system, the blank diskette is in Drive 1. Answer "Which drive is to be used ?" with 1 and press `ENTER`. Use an appropriate

Model 4/4P filename with no more than eight characters. For Profile diskettes, a good name is:

PROFILE4   **ENTER**

If **ENTER** is pressed without specifying a name, the Model 4/4P automatically assigns the name DATADISK.

The "Master Password" used on all TRS-80 computer disks is simply:

PASSWORD

If **ENTER** is pressed without specifying a name, the Model 4/4P automatically assigns the password PASSWORD.

Most disks for the Model 4 are double density. Generally, on the top left of the diskette will be a designation whether it is single or double density. Press D for double density or S for single density.

If **ENTER** is pressed without specifying single or double density, the Model 4/4P automatically assigns Double density.

The next prompt asks you how many cylinders you wish to format. There are 40 cylinders on the Model 4. The directory will be placed on cylinder 20. Type:

40   **ENTER**

If **ENTER** is pressed without typing a number, the Model 4/4P automatically assigns a value of 40.

The cylinders are FORMATted and then double checked (verified) for accuracy. If there are any flaws, the Model 4/4P will let you know. In this case, bulk erase the diskette and reFORMAT. Do not use a diskette that has flawed cylinders.

If you want to answer **ENTER** to all the prompts and thus avoid them, type:

FORMAT :1(Q=N)   **ENTER**

The Model 4/4P begins FORMATting immediately. When the process is complete, you will be returned to TRSDOS Ready.

Appendix B

BACKUP for Diskettes

This procedure copies the contents of one disk to another disk. Use the BACKUP copy of any SYSTEM disk as your working master and store the original away for safe keeping. Always place a write-protect tab on the SYSTEM disk to prevent accidental erasure. This precaution may save a long drive down to the Radio Shack store to exchange a damaged original. In addition, make BACKUPS of any data diskettes you are using.

There are two different procedures for BACKUP. One is for SYSTEM diskettes and the other is for DATA diskettes:

BACKUP for SYSTEM Diskettes

As the owner of a TRS-80 you are allowed to make as many copies of the SYSTEM diskette (Creation and Runtime) as needed for your personal use, subject to any provisions stated in the factory notice.

Check again to be sure the SYSTEM diskette is protected by a write-protect tab, then insert it in Drive 0. Type:

    BACKUP   **ENTER**

Insert a FORMATted diskette in Drive 1.

The destination diskette must always be FORMATted before trying to use it for BACKUP. If it is not, the Model 4/4P will not accept it.

The source drive number prompt appears. This is of course the drive number of the disk you wish to copy from. Usually this is the lower drive, drive 0. Press **0** **ENTER**. The destination drive number appears. This is the drive number of the disk you wish to copy to. On a two drive system, this is drive 1. Press **1** **ENTER**. However, these two prompts can be bypassed by typing at TRSDOS Ready:

```
BACKUP :0 :1        ENTER
```

If the diskette name of the FORMATted diskette is different than the source diskette, then the Model 4/4P will tell you the name of the FORMATted diskette and ask whether or not you wish to use it. If you decide to use it, the destination diskette will be renamed with the name of the source disk.

Watch the screen as each cylinder worth of information is Read from Drive 0 then Written and Verified on Drive 1.

When the BACKUP operation is complete, control is returned to TRSDOS. If the source disk was write-protected, then this message appears:

```
Source disk is write protected; MOD flags not
updated
```

Just ignore the "flags" message. Your BACKUP is complete. The diskette created by BACKUP is identical to the original. Remember, put the original away in a safe location.

BACKUP of Data Diskettes

The procedure for data diskettes is only slightly different from SYSTEM diskettes, but you will avoid getting an ERROR 7 message. At TRSDOS Ready with a SYSTEM diskette in Drive 0, type:

```
BACKUP :0 :1(X)
```

The "(X)" is the trick. It tells the Model 4/4P to prompt you for the source disk and the SYSTEM disk. Remove the SYSTEM disk, and insert the source disk in drive 0 and the destination disk in drive 1. Hit **ENTER** and the BACKUP operation begins.

Watch the screen as each cylinder worth of information is Read from Drive 0, then Written and Verified on Drive 1. When BACKUP is complete, the Model 4/4P will ask you to insert the SYSTEM diskette. Insert it and press **ENTER**. If you write protected the source data diskette, the following message appears:

```
Source disk is write protected; MOD flags not
updated
```

Just ignore the message about "flags". BACKUP is complete. You are returned to TRSDOS Ready.

Appendix C

Protecting Your System

Learn to Make Backups! It may sound odd, but the process new users often find most difficult has nothing to do with Profile. It's making BACKUPs.

Unfortunately, many of these users don't take time to learn until it's too late. For instance, after they (or a trusted colleague) lost data or programs.

Take some time right now to learn about BACKUPs. Your Model 4 manual gives you detailed instructions; please refer to it.

Diskette Handling. Never insert or remove diskettes when the red lights on the drive doors are on. The red lights indicate that the drives are in operation.

Keep your diskettes away from all possible sources of electrical shocks (e.g. static from carpets) and magnetism.

Telephones, tape recorders, magnetized paper clip holders and paper clips, dictating machines, scissors, the compuuter's power supply and the top of the video monitor are all sources of magnetic fields. So are the motors in heavy-duty floor scrubbers and waxers. Therefore it would be a good idea not to keep diskettes on low shelves or in the bottom desk drawer. Think before putting diskettes away.

Keep diskettes in protective sleeves when you aren't using them. Always handle diskettes by their label edges and never touch the media through the "windows" in the diskette cover. Don't expose diskettes to liquids, heat, or dirt.

Most important, BACKUP each diskette after you've finished working with it for the day. Even if you take the best possible care of diskettes, a brown-out or black-out can still wipe out a day's work.

Also, don't expect diskettes to last forever. They last, according to manufacturers and rumor, from one year to 40 hours. Frequent updates and copies will have an effect on the duration of the disk. You should still retire diskettes at reasonable intervals, like after two or three months of steady use.

Label all diskettes clearly. Include this information, as applicable:

> Type of operating system
> Program name(s)
> File name(s)
> User's name
> Date set up
> Information on significant changes; upgrades, new programs, names
> and dates
> Name of drive (∅, 1, 2, etc.) in which the diskette is used(important
> for separating system from non-system diskettes)
> Day of week if on "rotating BACKUP method"(see below)

There are a variety of BACKUP schemes. The "rotating BACKUP method" is a good one when diskettes are used daily. You make one diskette (or one set of diskettes) for each day of computer use (e.g. Monday-Friday). At the end of Monday's data entry, copy the Monday diskette onto the Tuesday diskette. At the end of Tuesday's data entry, copy the Tuesday diskette onto the Wednesday diskette. After Wednesday's data entry, copy the data onto Monday's diskette and use it for Thursday.

Thursday's diskette will be the most recent, Wednesday the first BACKUP (next recent), and Tuesday the second BACKUP (least recent). If you continue to rotate in this manner, you will always have two BACKUPs. The advantages: If you've labeled each diskette carefully, you will know immediately if you're using the right diskette. Also, the BACKUP sequence is logical and easy to remember.

Appendix D

Program and File Names

Using the Directory Program

Use the TRSDOS directory program, DIR, to list all the programs and data files contained on the floppy diskette or hard drive, their dates of creation and the amount of space they use.

Type DIR **ENTER** at TRSDOS Ready, and the directory of all the disk drives connected are listed. THe directory for drive 0 appears first. If the entire directory doesn't fit at once, press any key except **BREAK** to see the remainder.

To see the directory of a particular drive, type DIR :d **ENTER**, where "d" is the drive number. For example, to see the directory in drive 1, type DIR :1 **ENTER**.

Program Names

Creation Programs. Following is a list of all program included on the creation diskette and the files they create.

CM/CMD The creation menu; includes the Profile kill program

EFC1/CMD Define Files; the program generates(Note: the filename must be padded with zeros, if necessary, to a length of eight characters):

    filename/MAP, the list of fields
    filename/KEY, segment 1
    filename/DAT, segment 2
    filename/DA2, segment 3
    filename/DA3, segment 4

EFC2/CMD Define Screens; the program generates:

    filename/PM0-9, screens 0-9

EFC3/CMD Define Reports; the program generates:

    filename/PR0-9, reports 0-9
    filename/PRA-Z, reports A-Z

EFC4/CMD Define Labels; the program generates:

    filename/LB0-9, labels 0-9
    filename/LBA-Z, labels A-Z

EFC5/CMD Define Selections (S); the program generates:

    SuperSCRIPSIT merge formats:
    filename/SL0-9, selection formats 0-9
    filename/SLA-Z, selection formats A-Z

EFCE/CMD Define Selections (V); the program generates:

    VisiCalc merge formats:
    filename/VC0-9, selection formats 0-9
    filename/VCA-Z, selection formats A-Z

EFC6/CMD Define Formulas; generates:

    filename/MTH

EFCM/CMD Define User Menus; after a user menu is defined, it appears as: menuname/CMD.

Runtime Programs. Following is a list of all programs included on the runtime diskette and the files and formats they use in running operations.

RM/CMD the runtime menu; this program includes the Profile kill program

EFC7/CMD Expand Files; moves new or restructured segments (filename/KEY, filename/DAT, filename/DA2, filename/DA3) from one drive to another; when single-segment files are expanded, may create extended key segments filename/ KX1 (on expanding to first external drive); filename/KX2 (on expanding to second external drive); filename/KX3 (on expanding to third external drive).

EFC8/CMD Build Index and normal sorting and selection module for all run-time programs; can generate inquiry index filename/IX1, print indexes filennname/IY1-5.

EFCC/CMD Extended selection module for all runtime programs; can generate inquiry index filename/IX1, print indexes filename/IY1-5

EFC9/CMD Inquire, Update, Add; uses screen formats filename/PM0-9; index filename/IX1; the field format filename/MAP; and the data files filename/KEY, DAT, DA2, DA3 or filename/KEY, KX1, KX2, KX3

EFCA/CMD Print Reports; uses report formats

    filename/PR0-9, PRA-Z; indexes
    filename/IX1, IY1-5; the field format
    filename/MAP; and the data files
    filename/KEY, DAT, DA2, DA3 or filename/KEY,KX1, KX2, KX3

EFCF/CMD Select Records (S); generates the SuperSCRIPSIT merge files filename/SR0-9, SRA-Z, using formats filename/SL0-9, SLA-SLZ; the field format filename/MAP; and the data files filename/KEY, DAT, DA2, DA3 or filename/KEY, KX1, KX2, KX3

EFCD/CMD Select Records (V); generates the VisiCalc merge file filename/DIF

Appendix E

Deleting Files

Profile 4 Plus includes a file-deletion program. Although it isn't listed, it is accessible from either the creation or runtime menu.

Prompts
1. At either Profile menu, press **K**. This prompt appears:

    Enter File Name To Kill

    Type the file name and press **ENTER**.

2. If you press **N** in response to this question:

    Are You Sure?

    you're returned to the menu. If you press **Y**, the file is deleted from the system. The program searches the system for every type of format and data file available in Profile -- you can watch it move through the file at the bottom right of the screen.

Appendix F

Password Protection

Finding ways to keep sensitive information private and maintain the security of data in the system is often not top priority when the computer first arrives.

However, as diskettes begin to fill up with data, it may strike you that the loss, by accident or on purpose -- of certain information may mean heavy losses to your company.

In this section of the manual, we describe password and field protection: how to define passwords and protected fields, and how to use them.

There are other issues in data security, however, that are outside the context of the program but nevertheless important. Briefly you should think about these two issues when setting up a file:

Security. What would happen to your business if your five-year plan walked out the door in a competitor's pocket? What would happen if an employee took your mailing list to a new employer? Would they be slowed down, at least, by your password scheme?

Privacy. If a salesman finds out what his boss is making, the information won't bring the business to its knees. However, the sales director could get pretty upset.

Privacy is also a legal issue. The federal laws on privacy include the Fair Credit Reporting Act of 1971 and the Privacy Act of 1974, and many states have their own privacy laws.

Security and privacy have little to do with computers per se. However, the standard office and bookkeeping procedures developed to handle these types of problems in manual, mainframe and minicomputer systems are still in flux in microcomputer systems. Be careful: ask your lawyer and other users for advice.

Protection in Profile

Profile has two security systems: separation of creation and runtime programs and password protection.

Runtime and creation programs are on separate diskettes for a reason -- by protecting the creation diskette, you can protect the passwords as well as prevent changes, accidental or purposeful, to the formats. If you're using Profile 4 Plus on a hard disk system, you may not want to copy the creation programs onto the hard disk. Instead, keep the creation diskette in a floppy drive while you create the file, then put it away in a safe place after you're done.

Profile includes password protection for all screens, reports and label formats. Passwords are especially useful in Inquire, Update, Add. If you have information only certain people should see and/or change, create a normally-accessed screen, minus the sensitive fields for general use, then put the fields that hold the sensitive data on a second screen protected with a password.

If you have information that anyone is allowed to see but only a few persons are allowed to change, again define two screens. Use !, the protected-field indicator, for the read only fields on the unprotected screen and use *, the normal field indicator, for the same fields on the protected screen.

Passwords can be up to eight characters long. Suitable characters are numbers, upper- and lowercase letters, and symbols. Don't be obvious: don't use "FILE", your spouse's name, your name, your initials, etc. CompuServe, an on-line information service, recommends a password made of two unrelated words and a symbol, such as TEAR*DOG.

Appendix G

Converting to a Computerized System

In this section, we'll help you decide exactly what you want and how to get it. We strongly suggest that you at least read the planning section before trying to set up the first file. After becoming familiar with the program and all the remarkable things it can do, you can dispense with the planning minutiae.

Reasons to Plan. Your goals are to 1) maximize usefulness, and 2) maximize storage space. These two goals conflict. Unless you plan carefully, you can end up with many useful fields but no space, or much space but nothing you can do with it.

There are four steps in reaching these goals. First, list all reports and mailing lists you're likely to want and plot them on video worksheets or graph paper. Video worksheets, which are grid or graph paper with line and character numbers along the sides, are available in computer supply stores.

Second, list all the kinds of information ("fields") you need to run these reports and labels. Organize the list by separating key fields from data fields thereby putting the key fields in order, adding fields for dates or codes, as applicable, and putting the data filed in order(optional). Key fields are simply fields in the first segment of the file; they're the set of fields available for sorting and selecting records when you use regular selection in runtime operations.

Third, plot a screen or two on the video worksheet paper.

Fourth, figure out how much space the formats and parts of the file will take and how much space is available on the disk drives. You may have to readjust field lengths to fit everything if disk space is limited. This is more likely to be a problem on a floppy drive than on a hard drive system.

With all this information in hand, you'll be ready to create your computerized filing system.

Step 1: a Good Place to Start. When you finally sit down at the computer, you'll define the data files first and the screens and printed materials second. However, for first-time planning the best place to start is with a printed form.

For one thing, mailing labels and even computer printouts, are familiar. You may even have something to work from, for example, a label from a mailing list.

For another, you can figure out how well the fields will fit on a report or label. You may find some field lengths may have to be changed to accommodate others.

If you're not sure what you want from Profile, you may have to gather some information. If you're not familiar with your company's filing system, ask the resident expert to "walk you through" it, from opening the mail in the morning to checking a record in someone's file; from collating information to starting a billing cycle.

You may want to check non-computer reference books for such items as standard abbreviations and standard formats for financial reports, public relations mailing lists, etc.

If you do know exactly what you want; i.e. you're the resident expert, use graph paper or video worksheets to roughly plot out a few typical labels and reports.

These formats can, and probably should be approximate (not finished) drafts. At this point you can only guess the length of the longest name, address, etc. and the shortest name, address, etc. Give fields tentative names, e.g. "First Name", "City", or "Transaction Code". You may have to shorten or otherwise change them placing into the computer.

Keep in mind that Profile lets you include the record number on reports and labels. Being able to access records by number is helpful, consider including this field in your formats.

Other useful report fields are date of report and page number. See "Defining Reports" for these system-maintained fields.

When thinking about reports, keep in mind that the number of records used for the report is automatically listed at the bottom of the report. If any fields are totaled, a grand total (or subtotal if there was a control break; see "Defining Reports" for more information) also appears.

Step 2: Making Lists. A field is a category of information, similar to a blank on a form in a manual filing system. Fields on an invoice might include "company name", "payment date", or "balance due". The fields in a Profile file can be a total of 1020 characters (about half a double-spaced typewritten page). Per segment, you have up to 255 characters (approximately 31 eight-character words) with which to work.

Each file can have as many as four seghments, or sections. The first, or key segment is the most important because the key fields appear when given sort and select options in all the regular versions of the runtime programs. However, you can sort and select records using fields from other segments via extended selection.

Usually in the first segment you want: a name, last name and first name; company name; address information, state or zip code; major category of interest; type of service or product; types of employee skills; and acount information, an overdue account flag or total due.

Other information can be put in the three data segments. Typical data fields are: names of particular products, employee hobbies, secondary contacts, and telephone numbers.

To separate key from data fields, look at how you find information. For instance, if you are looking for a client's address, you wouldn't use a phone number (unless you had an extraordinary memory for numbers). You'd look for the name of the company. In this case then, "phone number" is a data field, "company name" is a key field.

Note: you can define a key-segment only file if you have 36 fields or less. This type of file is called an "extended key" or "extended segment" file. The extended segments are named filename/KX1, KX2 and KX3 instead of filename/DA1, DA2, and DA3. See below for more information.

Once you've made a list of all the fields you want in the file, you should put the list in order. There are a number of considerations.

For example, probably list last name before first name. Often you'll want to alphabetize by first name within last name. In other words, you want "Bob Smith" to come before "Zoltan Smith".

Since consecutive fields can be sorted together, the easiest way to get a list alphabetized by first name within last name is to have "first name" (minor sort key) follow "last name" (major sort key). Of any two fields, the first field will

be the major sort and the next field will be the minor sort. When you go to sort the records, you can then simply ask for an extra long field length. If last name's actual length is 15 and first name's is 10, then ask for a length of 25.

The street address doesn't belong in the first segment. The same street address can be written in so many ways; 151 Seventh Ave., One-Fifty-One 7th Avenue, 151 7 Ave., etc. Trying to sort by street ultimately provides only two groups: people who use post office boxes and people who don't.

Speaking of mailing lists, you may be able to save space and increase the efficiency of your system by designing sort and selection codes.

Suppose you were setting up a public relations list which includes the names of editors or writers on newspapers, magazines, television and radio. Each name on the list might get different releases at different times. For example, magazines need more lead time than daily papers.

You need to sort the list into various categories. For instance:

1) field of interest; business products, consumer products, special services

2) timing; monthlies, weeklies, dailies, radio/TV

3) priorities; A list vs. B list (only the A list gets first-class mailings; a subset of the B list gets photographs)

One option is to set up a separate field for each category; but these fields could use up to 30 characters, all of them in the key segment. For example:

```
Editor, Business Section
The New York Times
Business  , *business products*
Daily     , *daily paper*
A list    , *high priority*
```

A second option is to reduce each category to a one-letter code, which can be defined as a separate field. For instance:

```
Editor, Business Section      ,
The New York Times            ,
B,   (for business products)
D,   (daily paper)
A,   (high priority)
```

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You could also, if you standardize the position of each code letter, string them together in one short field:

```
Editor, Business Section        ,
The New York Times              ,
BDA,
```

You don't lose the ability to sort by any one (or more) of the categories when they are put together like this, because of Profile's wild card. To include everyone in a certain category, substitute an = for that category's code letter. For example, "C = A" means "include all consumer papers, magazines, individuals, etc., on the A list only".

Unlike a phone directory, Profile doesn't ignore spaces, hyphens and apostrophes. It ranks them like anything else, and according to its rules, O'Hare comes before Ohara and Mc Donald, Martin before McDonald, Anne.

Why? Because Profile, like most microcomputer software, alphabetizes according to the ASCII character table. ASCII, or the American Standard Code for Information Interchange, is a computer industry standard in which a number is assigned to each letter, numeral, punctuation mark and blank space.

The computer organizes the names according to the codes' positions on the ASCII list. Apostrophes and blanks are lower than letters -- therefore, O'Hare is before Ohara and Mc Donald is before McDonald.

Very expensive software have a filter to catch special punctuation and other oddities. Profile doesn't have this filter, but if you really need strict alphabetization, you can make Profile follow the rules, as follows:

Create a second last name field that parallels the real last name field. After filling in the real name -- "O'Hare" (or "Mc Donald") -- in field 1, enter "OHare" ("McDonald") into field 2, the alphabetization field. Whenvever you sort by last name, sort on field 2, but print field 1 (put field 1 on the format).

You can also use this type of field to keep a name such as "The Amsterdam Daily News" under "A" rather than "T" (for "The"). The alphabetization field need not be as long as the real field -- five or six characters is usually enough for accurate alphabetization.

If you want to periodically eliminate customers who haven't responded to the catalogs for more than a year, then you'd better include a field for "date of last update". Profile has six different types of date fields, each with its own special use -- refer to "Defining Screens" for more information.

Another hint: you can create a yes/no (or other) selection flag, or code. For example, to find all customers who received a catalog, you could give field 5 a length of 1. When the user updates records, he or she types a Y if the customer was sent a catalog, N if not. To find all customers who were sent catalogs, simply scan on field 5 equal to "Y".

Once you've decided on the order of the fields, the next step is dividing them into segments. If you have less than 36 fields, you can put them all in the first segment. However, keep in mind that the program takes more time to sort a file when the key segment is long. A short first segment speeds up the process appreciably.

Files can be divided into segments and the segments spread out over as many as four drives. Each segment, however, should be of equal or proportional size. See below for details.

Step 3: Space Juggling. Before you get deeply involved in this part of the planning section, please note that you may not need it. If your file will be fairly short -- a two-hundred-record mailing list) -- or you have a hard disk drive, you don't have to worry about space limitations. You are, of course, welcome to read on.

When deciding how to handle space on your system, you have to consider two types of files: the data files and the formats.

A file can be divided into segments, but segments themselves cannot be divided -- you can't put the first half of segment 1 on one drive, and the second half on another. When one segment fills its drive, then the entire system is full as far as the computer is concerned.

Your task is to decide how best to separate the data fields into segments and then to array the segments over the drives.

The variables are: 1) the number of disk drives you have or plan to have; 2) the disk space available on each of these drives; and 3) the number and lengths of your fields.

You have to decide which diskettes will hold the screen, label and report formats, user menus and math formulas.

Hint: any Profile format or data segment can be moved at any time to any disk drive which has room for it. Profile finds the file or files it needs by scanning the directories.

In general, you can handle formats in either of two ways. One -- array your data segments across the available drives, then fit the screen, label, math formats around them like mortar around bricks. Two -- put the formats on the runtime diskette and relegate all data segments to drives 1, 2, 3, etc.

Your final decisions are: choosing where to break the list of data files into segments and choosing the drives onto which to put the segments. When you're done, you're ready to plug the file into the computer.

Figuring sizes: data and index files grow in size as you add more records, with one exception. The map file (filename/MAP), which tells the computer how many segments the file has (four at the most), takes up 1.5K.

The maximum size of any data file is calculated as follows:

$$\text{MAXIMUM K} = (L * n)/1024$$

where "K" is the standard abbreviation for kilobyte, "L" is the segment length (lengths of all fields in all segments), and "n" is the number of records (the number you expanded to, not the number filled).

A kilobyte is about a thousand bytes (1024 to be exact). A byte is composed of "bits" and is equivalent to a character in Profile. You divide by 1024 to reduce the result to K's. For example, 10K is a shorter and simpler way to write 10,240 bytes.

An example. Say that your key segment has a total of 10 fields, each 13 characters long: 10 x 13 = 130 characters (or bytes). You've expanded the file to 67 records. According to the formula,

    (130 x 67) / 1024 = 8.51K
    8.51K rounded up to the next 4K = 12K

The maximum length of the key segment is 12K.

The formula for finding the length of an index is:

$$\text{MAXIMUM K} = (L + 2) * (n + 1)/1024$$

where "K" is the standard abbreviation for kilobyte, "L" is the length of the sort field, and "n" is the number of records selected for the index. The two extra characters and the one extra record are program overhead.

Space used per format is as follows:

> Screen formats: 3K per format
> Report formats: 3K per format
> Label formats: 3K per format
> SuperSCRIPSIT selection formats: 1.5K per format
> VisiCalc selection formats: 1.5K
> Math formulas: 1.5K
> User menus: approximately 4.5K per menu.

For instance, think of the entire file as equal to 1. Say that you establish relative lengths of 1/2, 1/4 and 1/4 for three data segments, grouping the two smaller segments on drive 1 and putting the larger on drive 2 (drive 0 is reserved for the formats and runtime programs).

Drives 1 and 2 will fill up at the same rate:

> 1: ¦1/4 + 1/4¦ 2: ¦1/2¦

However, when you add a fourth drive, you cannot increase the system's capacity by moving one of the two smaller segments onto the new drive; the drive containing the larger segment fills its disk at the same rate as before.

> 1: ¦1/4¦ 2: ¦1/2¦ 3: ¦1/4¦

Instead, you should have made four segments with ratios of 1/3, 1/3, 1/6 and 1/6.

Therefore, while you still have three drives, you could group them as follows:

> 1: ¦1/3 + 1/6¦ 2: ¦1/3 + 1/6¦

After adding a fourth drive, you could then redistribute the segments as follows:

> 1: ¦1/3¦ 2: ¦1/3¦ 3: ¦1/6 + 1/6¦

The table below gives you some direction on segment distribution.

T A B L E : Segment Distribution

Segments	Number of Extra (Non-0) Drives (Formats and Programs on Drive 0, Runtime Diskette)		
	2 Drives	3 Drives	4 Drives
1 segment	Extended-key file fills disk drives as needed		
2 segments	keep segment sizes equal	put equal size segments on drives 1 & 2	not useful; segments can't be divided
3 segments	divide into thirds and sixths	keep segment sizes equal	use sixths
4 segments	two equal-size segments per drive	divide into thirds and sixths	one segment per drive; keep sizes equal

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Glossary

Access: *1*. The process of obtaining data or programs from a disk drive or from the computer's memory. *2*. The process involved in obtaining an instruction from memory and obeying it.

Associated fields: Fields that are sorted and selected as a group. Whenever one member of an associated field group is specified, all members are considered.

Backup: A duplicate copy of a program or data stored on diskette in case the original is lost or damaged.

Booting up: Getting the computer to run by having it load the operating system into its own memory. The computer reboots whenever it's turned or or reset (provided that an operating system is available).

Character: A letter, number or symbol. Empty spaces are considered characters.

Command line: The second line of a user menu element or the line below TRSDOS Ready, on which the user can type instructions to the computer.

Control break: A sorting function that separates reports into pages, one page or set of pages per name, product, etc. If you've used the total-field indicator ("="), Profile subtotals the total fields; for this reason, also called "subtotal" break.

Creation: Part 1 of Profile. All programs needed to create the file are on the creation diskette.

Cursor: A block of light that shows where the next character typed at the keyboard will appear on the screen.

Data base management system: A general purpose software tool that lets non-programmers create files, make inquiries in and update the files, and print reports and lists that they designed.

Data diskette: A "data" diskette contains information but not the programs needed to run the system.

Data field: A non-segment 1 field; it can be used to pick or organize records for a report, mailing list, etc., only with extended selection.

Delete: To erase from the diskette, to kill. Profile has its own deletion programs.

Directory: The list of programs available on a particular drive.

Diskette: The 5 inch square magnetic medium on which programs and data are saved by the computer.

Expand: Expanding a file is like adding pages to a loose leaf notebook. You're putting electronic "pages" into the system.

Extended-key file: A one-segment file of 36 fields or less.

Extended selection: A form of the selection and sorting program that gives the user access to non-key segments. It also allows indexes to be built across segments. The program is accessed by pressing the space bar at the runtime menu.

Extension: In TRSDOS, the file's "surname" identifies the file's type. For instance, the /CMD in EFCA/CMD is short for "command", indicating a program.

Field: A category of information, similar to a blank on a form in a manual filing system. Fields on an invoice might include "company name", "payment date", "balance due".

Field indicator: The symbols that allow or modify acceptance of data in the records, or that indicate the points at which data are to be printed on reports or labels.

Field number: The number of the field as assigned during file creation. These numbers run consecutively, from 1 through all segments.

Field type: The kind of data the field contains; alphanumeric, numeric only, decimal, date, etc.

File: *1.* An orderly arrangement of materials for reference. In the case of a manual system, the materials are papers or cards; in an electronic system, computer records. *2.* (tech.) A self-contained section of a data base; a group of only one type of information. For instance, the data itself, the structure of the data base, a screen format or an index.

filename: In the manual, refers to the user's own file.

Format: *1.* Preparing diskettes to hold programs and data files which includes verifying that the diskettes are undamaged and readable. The utility program which does the formatting. *2.* Defining the structure of a data file, screen, report, label or other file. The structure itself.

Hardcopy: A printed copy of whatever appears on the screen.

Index: A quick reference chart on which the computer can look up a desired piece of information and find the record in which it appears.

Key field: A segment 1 field which can easily be used to pick and organize records for a report, mailing list, etc.

Literal: A symbol which stands for itself rather than a field number or some other entity.

Master diskette: A diskette from a distributor or software house containing programs.

Menu: A list of the programs available on the system, similiar to a table of contents. Unlike a table of contents, however, a menu lets you access and run each program by pressing the key on the screen corresponding to it.

Operating system: A program that keeps track of programs, locates files, knows what drive, monitor and printer is attached where, and acts as a liaison between the computer and the user. It is the first program loaded into the computer's memory each morning, and the last to be shut down.

Record: *1.* To save the data or format on a diskette. *2.* A set of related fields and data; the information on a single person, inventory itme or transaction.

Runtime: The second part of the Profile system; the programs and formats used to expand the file, update and access data, and run reports and mailing lists.

Scan: To have the computer look through ("search") the file for the record holding a particular piece of information.

Screen: The visual display on the monitor; in Profile, the electronic record as it appears on the monitor.

Segment: Part of a file. In a manual filing system, segments would be the pages inside the file folder among which the data is divided. A Profile file can be broken into four segments.

Select: Choosing the records to be included in an operation.

Sort: Putting selected records in a particular order.

System: *1.* The computer plus the software designed to run on it. *2.* A general-purpose software package, as per the phrases "data base management system" and "operating system".

System diskette: Any diskette that has the TRSDOS operating system and can be used to run the system under floppy control.

Toggle: One key that switches between two alphabets, modes, etc.

User menu: A menu defined for a Profile system using Define Menus on the creation diskette.

Value: During record selection, the actual piece of information to be searched.

Wild card: A character, used instead of an actual value, that tells the computer to accept any match. In Profile, the wild card character is an equal sign. It brings up the first record in an index or scan group if used as the first character on the prompt line.

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