

MODEL I / MODEL III

PROFILE

**CAT. NO.
26-1562**

Radio Shack

TRS-80

SOFTWARE

TM

CUSTOM MANUFACTURED IN USA BY RADIO SHACK, A DIVISION OF TANDY CORP.

PROFILE

Radio Shack

A DIVISION OF TANDY CORPORATION
FORT WORTH, TEXAS 76102

TRSDOS™ Operating System:

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Profile Program:

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Introduction

Profile is designed to store information of any kind. Since it is a computerized filing system, you may use it for anything at all. Profile can keep track of names and addresses, accounts, records, or even personal references. Specialized businesses could find many different uses:

1. List of customers or accounts.
2. Personnel records.
3. Prospective employees or accounts.
4. General information referral.

Profile can also serve many personal uses. It can be used as an address book, recipe file, or grocery inventory. You can even create your own personalized encyclopedia. Because of the program's versatility, the possible uses are endless.

This manual has been written to guide you step-by-step through Profile's capabilities. We will give you examples that will give you a feel for the system. Once you understand the simple methods of the program's operation, there are no limits to Profile's applications.

Minimum System Requirements

Model I:

- TRS-80 16K Level II
- TRS-80 Expansion Interface with at least 16K RAM
- TRS-80 Disk Drive

Model III:

- TRS-80 32K Model III
- TRS-80 Disk Drive

Note: Two TRS-80 Disk Drives Required for Conversion from Model I to Model III.

Options:

- TRS-80 Line Printer
(132 Column Printer is Recommended)
- TRS-80 Disk Drives

Features

1. User-created form for records.
2. Up to four Drives may be used to store data.
3. Easy editing features.
4. Versatile printing operations.
5. Repeating keys for easy typing.
6. Sorting by any item in ascending or descending order.
7. Easily retrieves specified groups of records.
8. Data files can be read by DISK BASIC.

Some Things You Must Know Before Using Profile

Before you begin running the program, there are a few terms that should be defined:

- Record —** A record is like a piece of paper with information on it. It is, literally, a unit of data, placed in a specified form.
- File —** A file is a place where data is kept. If a record is like a piece of paper with information, then a file is like a folder that holds many such pieces of paper.
- Field —** A field is a movable line that contains information. Think of a field as a line on the paper that will be filled with information, a blank to be filled in.
- Field Name —** This is the name of a line. It is simply an identifier.
- Field Data —** This is the information that will go into a specific line or “field”.

Note: Do not use the Lower Case Driver for Model I. Profile has its own built-in Lower Case Driver.

Setting Up Your Form

Diskettes can be damaged through contact with magnetic fields, mishandling, etc. To insure against loss of your program, before you begin running Profile, you should make a copy (Backup) of your Program Diskette, and file it in a safe place. If you are using more than one Drive, you must also prepare (Format) a blank diskette(s) which will be used to store your data. If you are not familiar with Format and Backup functions, refer to Appendices 1 and 2 in the back of this manual for detailed instructions.

Follow these steps in exact order for Model I:

1. Turn on the Disk Drives, Printer, Video Display, and the Expansion Interface.
2. Insert the Backup copy of Profile in Drive #0. (This diskette should not have a tab over the write protect notch.)
3. Insert your Data diskette(s) in Drive(s) # 1-3 (if used).
4. Turn on the TRS-80 keyboard.

Follow these steps in exact order for Model III:

1. Turn on the Model III computer (the switch is located underneath the right corner of the keyboard.)
2. Insert the Backup copy of Profile in Drive 0. (This disk should not have a tab over the "write protect" notch.)
3. Insert your Data disk(s) in Drive(s) #1-3 (if used).
4. Press the Reset button (in the upper right corner of the keyboard).

On the Model I the screen will show:

TRSDOS-DISK OPERATING SYSTEM-VER 2.3

DOS READY

On the Model III the screen will show: Enter Date (MM/DD/YY)? Type today's date and press **ENTER** . **The screen will show:** Enter Time (HH:MM:SS)? Press **ENTER** . **The screen will show:** TRSDOS READY.

You type:

PROFILE and press **ENTER** .

Setting Up Your Form (continued)

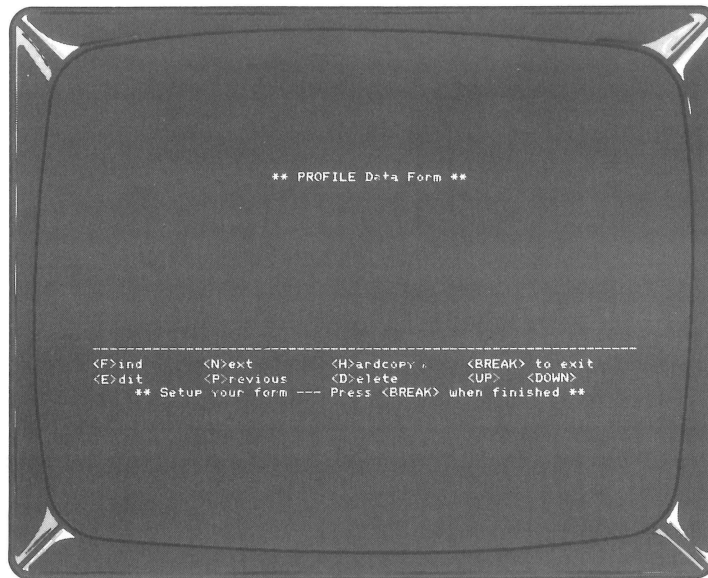
The screen will show:

```
**Initialization**
```

How many drives will you use (1-4)?—

Press the number of Drives you will be using.

The screen will show:



Notice the blinking cursor, near the upper left-hand corner; this is what you will use to organize what you write on the screen. Type your name on the keyboard. Notice how the cursor moves along the screen as your name is printed. Press the **↵** key and you will see that the cursor moves to the right. If you keep the **↵** key held down, the cursor will keep moving. Now use the **←** arrow to move the cursor to the left. Any of the arrows, if held down, will keep the cursor moving in that direction until they are released.

Use the arrows to move the cursor to the first letter of your name. Depress the **SHIFT** **↓** keys and press **S**. Your name moved to the right on the screen because you just Inserted a space. Depress the **SHIFT** **↑** key again and hold down **S**, so that your name moves to the center of the screen. Now hold down the **SHIFT** **↓** keys and press **D**. This will Delete spaces between the cursor and your name. Keep the **SHIFT** **↑** **D** held down until your name is deleted.

All of the keys are repeating keys. Press any key and keep it held down. See how the key repeats on the screen? Now go back and delete the string of characters you have just typed, using the arrows, and **SHIFT** **↑** **D**

Before we go on, you might want to practice using these tools — the **←** and **→** keys, **SHIFT**+**↑**/**↓** and **↵**, and the repeating keys, just so you get used to using them. After you have finished, delete all of the characters you have typed, by pressing **CLEAR**. The **CLEAR** key is always used to restore the original contents of the screen.

Now you are ready to set up the form — the way you want your records to appear. We will give you an example. You can do your own records in any manner you wish. For practice, though, follow along with us.

For our sample, we will do a list of club members, their addresses, etc. We will use seven fields (remember — a place for storing information): Member, Address, City, State, Birthdate, Dues Per Year, and Dues Paid.

Note: Remember you can use whatever fields you want when you create your own data file. However, each field must have a unique name.

Bring the cursor to the first line after the title line. Type the first field name **MEMBER**. Immediately after the word, place a colon **:** and a space. Then hold down the period key **.** to make a string of periods. The number of periods determine how many characters the program will accept for a member's name. This is the field space itself — it is here that you will eventually place your field data. Be sure to make the line long enough to fit everything you will need. (Later on, you will enter the actual field data — the person's name.)

Note: You can have several fields on the same line. You must have continuous periods with at least one space between each field. The maximum number of fields allowed for one record is 32.

The whole thing should look like this:

MEMBER:

Once you have finished, press **ENTER**. This will take you to the next line on the screen.

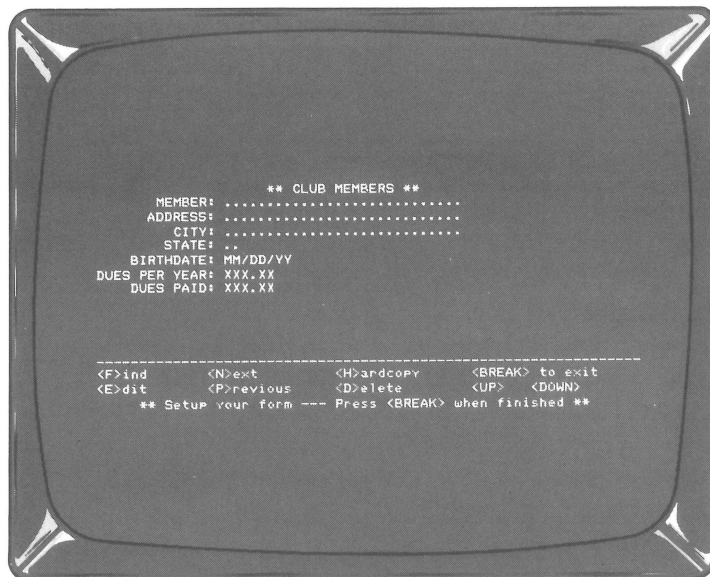
Now type in the other fields in the same manner. For state you will need only two periods. For Birthdate, it is usually better to put **MM/DD/YY** (month, day, year) instead of the periods. This makes it easier to read. Remember the colon and the space after each field name. For Dues Per Year and Dues Paid, you might want to use XXX.XX, for the amount. (We used periods before, because they are easy to see, but any character can be used.)

Setting Up Your Form (continued)

You can now arrange the lines to make them look neater. Use the **SHIFT** **↑** **S** and **↓** to line up the colons.

If you wish, you may change the title in the same manner. Move the cursor to the beginning of the title **** PROFILE DATA FORM **** and type in the new title. Now use the **SHIFT** **↑** **S** and **↓** to adjust the new title to the middle of the screen. The top line is used for title only. Do not try to enter fields on the first line or they will be ignored.

The screen should look something like this:



Press the **BREAK** key. The computer will now store the form you have just typed. When you add records (the actual names, etc.) this is the form that will be used. You only have to do this once.

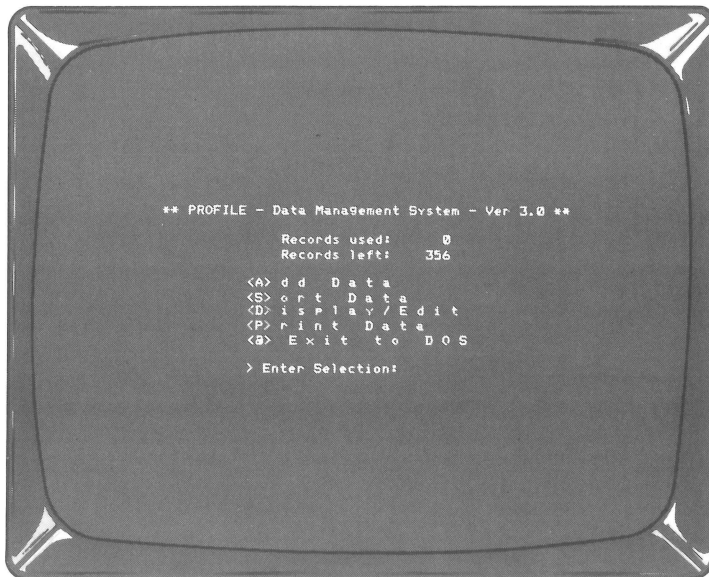
If you notice a mistake in the form after you have already started it, use the following procedure to re-enter the form.

Note: This procedure will reset the data files. **DO NOT** perform this procedure after you have entered data or it will be lost.

1. Press **@** to return to TRSDOS.
2. Type: **KILLINFOFILE** and press **ENTER** .
3. Follow the instructions beginning on page 5 to re-enter the form.

The Computer's Table of Contents

The computer's Table of Contents is called a "Main Menu". This is how it appears on your screen:



This is what each function does:

- | | |
|-----------------|---|
| (A)DD DATA | This is where you will enter the field data (names, etc.) for your "records". |
| (S)ORT DATA | This option allows you to put your records in alphabetical or numerical order, ascending or descending, by specified field. |
| (D)ISPLAY/EDIT | This will allow you to find any of your records, as well as change, or delete them. |
| (P)RINT DATA | This will print your records, completely or partially, depending on which you choose. |
| (@) EXIT TO DOS | This lets you stop the program at any time. |

Adding Data

Press **A** at the Main Menu for Add Data.

This is where you fill in all the information for your records. Notice that the blinking cursor is now located at the beginning of your first field. Go ahead and type in your name. The name you just typed in is called the field data. After you have typed in the name, press **ENTER**. The cursor will move to the next field.

There are a few other editing features we should mention here. Pressing the **CLEAR** key erases all field data and allows you to start over again. If you would like to erase the information in only one field, hold down the **SHIFT** key and press **←** key. The **↑** and **↓** keys can be used to move between fields, allowing you to make corrections.

Fill in the rest of the fields in the record, in the same manner. When you finish, you will see the question, ARE ALL ENTRIES CORRECT (Y/N)?_. If they are correct, press **Y**. If you press **N**, the cursor will return to the first field. Once you press **Y**, the form (record) is stored, and you may begin filling in a new record.

Now go ahead and do several more. Use any names, addresses, cities, etc. that you like. This is only for practice. Fill in about ten records. When you have finished, press the **BREAK** key. You will return to the Main Menu.

The screen will show:

RECORDS USED:

RECORDS LEFT:

When you add names, the RECORDS USED will increase, while the RECORDS LEFT will decrease. This lets you keep track of how much information you have entered and how many more records you may add before you fill up your disk.

Sorting Records

Press **S** at the Main Menu for Sort Data.

The screen will show:

SORT ACCORDING TO WHICH FIELD?
NAME OF FIELD: _ _ _ _ _

The computer will automatically place your records in alphabetical or numerical order, according to whichever field you specify. Pick a field to Sort by. You can sort by Member, Address, City, State, etc. Type in one of these items and press **ENTER**.

The question <A> SCENDING OR <D> ESCENDING SORT (A/D)?— will appear. This simply means, “do you want to start with A and go to Z, or start with Z and go to A?”. Press **A** or **D**.

The computer will do a number of passes (depending on how many records you have) through the records, refining the order on each pass. The screen will show the number of passes that remain before the computer has completed. If you have a large number of records, this may take some time. When the sorting has finished, you will automatically return to the Main Menu. Your records are now in the order specified.

A word or two should be said about sorting dates and number values or prices.

Enter your dates with the information most critical to you in front. If you wish to sort by the months, a date format of **MM/DD/YY** is best. But if you wish to sort item into chronological order you would use a date format of **YY/MM/DD** or possibly **YYYY/MM/DD** if the century is important. If you need to sort by both the month and the year, then you must have them be individual fields:

MONTH: . . . DAY: . . . YEAR: . . .
YEAR: . . . MONTH: . . . DAY: . . .

In order to sort and find numbers and prices correctly you will need to be sure that the decimal point (either actual or implied) is always in the same place. If you had the field **\$\$\$.** and entered the values **234.34** and **734.57**, the sort would place 734.57 first, because in one of the fields, the blank comes before the 7. To keep this from happening, you must enter **234.34** and **734.57**. This always puts the decimal point as the fifth character.

A 23__ is greater than a __ 99 so enter them as __23 and __99. This way you “imply” that a decimal point follows the field as the fifth character.

Editing Records

Press **D** at the Main Menu for Display/Edit.

At the bottom of the screen you will see that there are a number of options that you may use to display, edit, or delete any of the information on file.

Options

(F)IND	Lets you find a specific record or group of records. Press F , and then you will be asked which record(s) you wish to see.
(N)EXT	After you Find a group of records, this option lets you step through the records, one at a time.
(P)REVIOUS	The same function as Next, but in reverse. It lets you step backwards, from the current position, through the records.
(E)DIT	Allows you to change the field data in a particular record.
(D)ELETE	Allows you to erase a particular record in the file.
(H)ARDCOPY	This will let you have a printout of any particular record in the file.
(↑) and (↓)	These arrows move you from the first record in the file to the last, and last to first, respectively.
BREAK	Pressing the BREAK key will return you to the Main Menu.

The Find option uses a simple formula to find records quickly:

FIND

(everything that is stored)

(that has a relationship to)

(something).

In other words, the computer looks for certain records that have a field that contains field data equal to, less than, greater than, etc., a particular field data.

Editing Records (continued)

If you wanted to find a member's name beginning with a B, the method would be: NAME OF FIELD: **M E M B E R**

RELATION: **E Q** (for Equal To)

SEARCH FOR: **B**

All Relations use two-letter symbols:

EQ — equal to; NE — not equal to; GT — greater than; LT — less than;
GE — greater than, or equal to; LE — less than, or equal to.

To find names beginning with C, and everything greater than C, you would say, **G E** (greater than, or equal to) **C**. If you wanted to find all of the records from A-Z, you type something like **N E** (not equal to) **@**. This would give you every record on the file, from A to Z.

Press **F** for Find. Type in the field name, then the relation. Do several of these, so that you understand them. Press **N** for Next and go through them. Use **P** for Previous to go back.

Note: When using the Next and Previous selections, remember that they work only for records which meet the search (FIND) criteria you have specified.

Now we are going to edit a record. You edit records, one at a time. Press **E** for Edit. The cursor will be at the beginning of the first field. Change the data by typing in new information, and press **ENTER**. The cursor has moved to the second field. Press **ENTER** and the information will remain the same. Press **ENTER** for every other field in the record. You can use all of the editing features we have talked about earlier.

Now we are going to delete a record. As in editing, you only delete one record at a time, the one on the screen. Press **D** for Ddelete.

The screen will show:

ARE YOU SURE (Y/N)?_

Press **Y**. The record will now be deleted.

If you would like a hardcopy printout of the records, first Find the record you want to print. When the record you want is on the screen, simply press **H** for Hardcopy.

Press **BREAK**. You will return to the Main Menu.

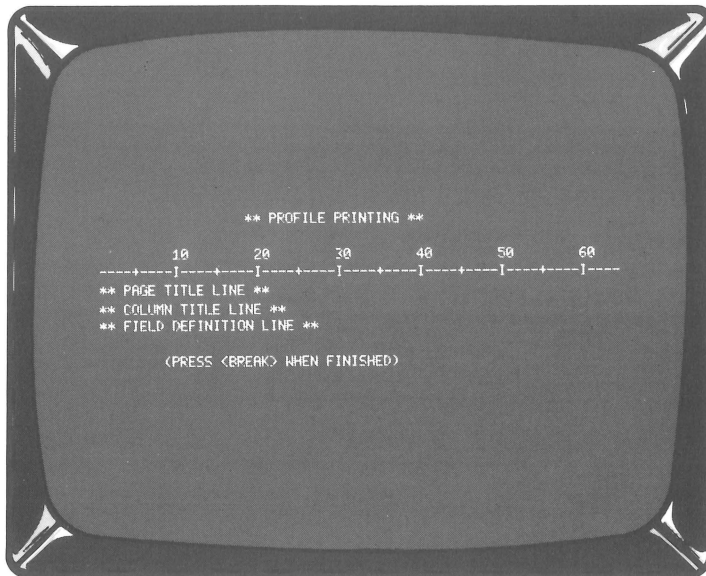
Note: Records counter will not be corrected for the deletion until you sort.

Printing Records

Just as you set up the form for your records, you may design your own form for printing.

Press **[P]** for Print.

The screen will show:



This is a graph that represents the paper on the line printer. There are 132 characters spaces on which you can print. You can see that there are three lines that you may use. The first line is the title line. The second line is the column name line. The third line is the field data line.

You may be thinking that the screen is not showing 132 characters. Press the **[→]** key and follow it across the screen. See how it shifts. Once you reach the end, press the **[←]** key and go back to the beginning of the line.

The first line is the title line. You can call the printout anything you wish. You simply write with the cursor, as you did with setting up the form. Type **CLUB MEMBERS** in the Page Title Line.

The second line is the label you are using for the fields. You may use as many of the fields as you wish. You must be careful to space them properly, as the field data should fit underneath them. Put all seven fields on the screen.

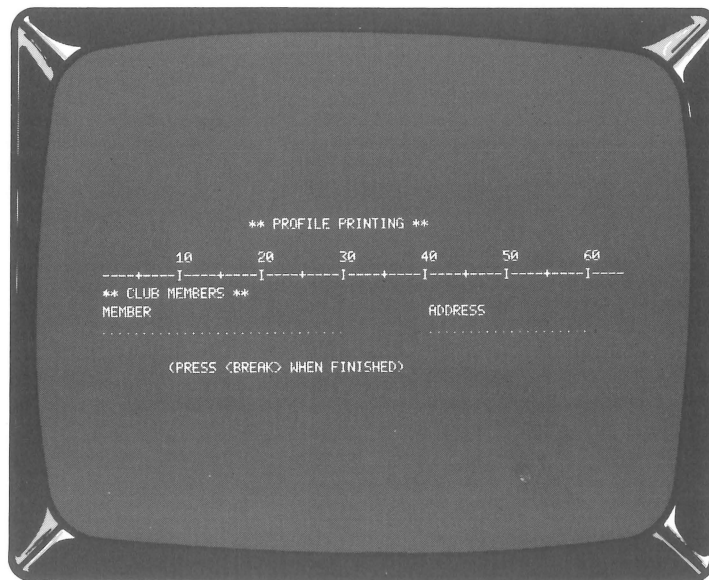
The third line simply needs periods as in the field space itself.

Put as many periods as you will need for each field.

Printing Records (continued)

If there is not enough room for the fields, you may adjust the names. Use the **SHIFT** **F** **S** and **D**.

Your printer form should look something like this:



Press **BREAK** .

The screen will show:

ARE ALL CORRECT (Y/N)?_ Press **Y** .

The computer will ask for the Field Names. Give each name as it appears on the records. The computer places the field it wishes you to name at the left margin and asks you to give the field name of the data you wish to be placed in each field. The column titles need not correspond to the actual field names.

You will now be asked how you want to print. You will be given the same kind of formula as for Find:

NAME OF FIELD:

RELATION:

SEARCH FOR:

Printing will begin immediately. In order to stop, hold down the @key. The printer will move up to the next page and stop. You will now return to the formula again and may print the previously sorted information in a different style. If you allow it to complete the printing, it will move up to the next page and return to the printing criteria. Press **BREAK** and you will return to the Main Menu.

Ending the Program

Once you have finished, press **@** to exit. You will now be in TRSDOS.

Starting All Over

Now you will want to clear it all out and start over with your own records and information. Once you are in DOS, look at the Directory by typing **DIR** and pressing **ENTER**. You will see listed four data files:

PRODAT	The large file containing all the data.
INFOFILE	The file containing the fields.
FORMFILE	The file containing the form for the records.
LPFORM	The file containing the form for your printing.

In order to start over, you must kill each of these files. Type:

KILL PRODAT and press **ENTER**.

KILL INFOFILE and press **ENTER**.

KILL FORMFILE and press **ENTER**.

KILL LPFORM and press **ENTER**.

Now type **DIR** and press **ENTER** — the files are gone. Once again, you have a clean slate and may start over with your own records.

How to Format Your Data Diskettes

This process prepares blank diskettes for use on the disk system. All data diskettes must be formatted before being used. Here's how you do it:

1. Turn on your system. If you are not familiar with the equipment, please refer to your Disk Owners Manual for System Start-Up (Power Up Sequence).
2. Insert a diskette containing TRSDOS in Drive 0 and close the door. (The Program diskette in this package contains TRSDOS.)
3. Insert a blank diskette in Drive 1 and close the door.
4. Press the Reset button.

Model I:

The screen will show:

DOS READY
WHICH DRIVE IS TO BE USED?
DISKETTE NAME?
CREATION DATE (MM/DD/YY)?
MASTER PASSWORD?
DO YOU WANT TO LOCK OUT
ANY TRACKS?
HIT "ENTER" TO CONTINUE

You type:

FORMAT press **ENTER**
1 press **ENTER**
DATA82 press **ENTER**
01/01/82 press **ENTER**
PASSWORD press **ENTER**
NO press **ENTER**
Press **ENTER**

Model III:

The screen will show:

TRSDOS Ready
Format Which Drive?
Diskette Name?
Master Password?

You type:

FORMAT press **ENTER**
1 press **ENTER**
DATA82 press **ENTER**
PASSWORD press **ENTER**

If you are re-using an old disk, the computer may show: DISKETTE contains DATA. Use Disk or not? If this question appears, type **Y** and press **ENTER**. The computer will start formatting the disk in Drive 1.

After the disk is formatted, you will return to TRSDOS Ready. Remove the formatted disk from Drive 1, and mark the disk with the name you've chosen. Always use a felt-tip marking pen. Pencils and ball point pens can damage the disk surface.

How to Backup Your Diskettes — Single Drive

Use this procedure **exactly**:

1. Turn on your system. If this is the first time you've ever used the Radio Shack Disk System, refer to the Disk Operating System Manual for detailed instructions.
2. Insert the diskette to be Backed Up in Drive 0. (This diskette must contain TRSDOS.)
3. Close the Drive 0 Door.
4. Press the Reset Button on your computer.

Model I:

The screen will show:

DOS READY

BACKUP DATE (MM/DD/YY)?

You type:

BACKUP 0:0:0

and press **ENTER**

01/01/82

(Example for January 1, 1982)

From this point, the screen will indicate which diskette to insert. Be sure to wait until the drive has stopped running before swapping diskettes.

After this process has been completed, the screen will show: BACKUP COMPLETE.

HIT 'ENTER' TO CONTINUE

Press **ENTER**. (If your Backup was not successful, go back to (Step 2.)

Model III:

The screen will show:

TRSDOS READY

SOURCE Disk Master
Password?

Insert Destination Diskette

You type:

BACKUP 0:0:0

and press **ENTER**

PASSWORD and press **ENTER**

Press **ENTER**. (Make sure to "swap" your disks, and close the drive door before pressing **ENTER**.)

Appendix 2 — How to Backup Your Diskettes (continued)

Note: If you are using a new disk, the system will format the disk for you.

If you are re-using an old disk, one or two additional questions may appear, depending on the previous contents of the disk. You may see:

Diskette contains DATA. Use Disk or not?

or:

Do you wish to RE-FORMAT the diskette?

If the questions appear, type **Y** and press **ENTER** for each question.

From this point, the screen will indicate which diskette to insert. Be sure to wait until the drive has stopped running before swapping diskettes.

After this process has been completed, the screen will show: ** Backup Complete ** and it will ask you to insert a System Diskette. To check to see if the "Backup" procedure was successful, leave your Destination Disk in the drive and press **ENTER**. The screen should show: TRSDOS Ready.

If something went wrong, go back to Step 2.

How to Backup Your Diskettes — Multi Drive

Use this procedure exactly:

1. Turn on your system. If this is the first time you've ever used the Radio Shack Disk System, refer to the Disk Operating System Manual for detailed instructions.
2. Insert a new, blank diskette in Drive 1 and close the door.
3. Insert the diskette you wish to copy in Drive 0, and close the door.
4. Press the Reset button.

Model I:

The screen will show:

DOS READY
SOURCE DRIVE NUMBER?
DESTINATION DRIVE NUMBER?
BACKUP DATE (MM/DD/YY)?

HIT 'ENTER' TO CONTINUE

You type:

B A C K U P and press **ENTER**
0 and press **ENTER**
1 and press **ENTER**
0 1 / 0 1 / 8 2
(Example for January 1, 1982)
Press **ENTER** and you will
be returned to DOS READY.

Appendix 2 — How to Backup Your Diskettes (continued)

Model III:

The screen will show:

TRSDOS Ready

SOURCE Disk Master
Password?

You type:

BACKUP and press **ENTER**

and press **ENTER**

PASSWORD and press **ENTER**

Note: If you are using a new disk, the system will format the disk for you.

If you are re-using an old disk, one or two additional questions may appear, depending on the previous contents of the disk. You may see:

Diskette contains DATA. Use Disk or not?

or:

Do you wish to RE—FORMAT the diskette?

If the questions appear, type **Y** and press **ENTER** for each question. When the process is done, the screen will show:

****Backup Complete****

Model I/III

Now we can check to see if the “BACKUP” procedure was successful:

1. Remove the original diskette from Drive 0.
2. Take the Backup Diskette out of Drive 1. Place the Backup copy in Drive 0 and close the door.
3. Press the Reset button. If the screen shows: TRSDOS Ready (Model III) or DOS READY (Model I), your Backup was successful.

Using Disk BASIC With Profile

If you are experienced in using Disk BASIC and data files, you can write Disk BASIC programs to access the data files created with Profile. The Profile program was not designed to perform any mathematical calculations on numeric data. However, you may write your own programs to do calculations, comparisons and processing on the data that Profile creates.

Profile was designed so that its data files could be read by BASIC using either Random or Sequential Access methods. All the data you enter is stored in the file(s) named PRODAT. If you are using more than one disk, each disk will contain a PRODAT file. Profile always stores data in “Fixed Length Records” which are terminated with a single carriage return (0D Hex). Deleted records are filled with ‘C0’ Hexidecimal (192 decimal) characters. Deleted records should be ignored when found.

Note: Profile program and data diskettes should always be used in their assigned drives. You will need to load BASIC and your programs from another diskette. If you do not have an extra drive, you can load BASIC and your program from a TRSDOS diskette in Drive 0. Then place the Profile diskettes in their assigned drives before running your program. Do not swap diskettes while the Profile data files are open.

Random Access

The length of the Profile data records is determined during Setup when the Fields are defined. In order for BASIC to accommodate record lengths other than 256, you must use the “Variable file mode” in Disk BASIC. This mode allows you to assign the record length when the file is opened. When reading records in the file, only the number of bytes specified will be read into the buffer.

The assignment of record lengths using the “Variable” mode is a two step process. When you enter Disk BASIC, the question ‘HOW MANY FILES?’ will appear. Answer this question with the maximum number of files open at any one time followed by a “V” (example: 3[V]). The next step is to specify the record length of the file in the OPEN statement. This is done by adding a comma and the length to the end of the normal OPEN statement (This applies to Random Access files only). For example, if the Profile data file PRODAT had a record length of 108, the OPEN statement might look like this: OPEN “R”, 1, “PRODAT”, 108.

The record length for the PRODAT file is stored in the INFOFILE. Reading INFOFILE is covered in the next section.

Sequential Access

When using Sequential file access, the files may be read as any other data file with one exception. The records should be read using a LINEINPUT. This will eliminate the possibility of reading only parts of a record if there are commas or other delimiters in the record.

The Profile Control File

INFOFILE

The Profile program creates a file called INFOFILE on Drive 0 of your Profile system. This file contains all the information you will need to know about the system. To read the information in INFOFILE, the following program can be used.

```
10 REM ** PROGRAM TO ACCESS PROFILE DATA
20 CLEAR2000
30 DEFINT A-Z: DIM D(4), NM$(32), CU(32), LN(32), R$(32,4)
40 REM ** READ 'INFOFILE' **
50 OPEN "R", 1, "INFOFILE", 128
60 REM ** NOTE THAT THIS IS A VARIABLE LENGTH FILE **
70 FIELD 1,2 AS NR$, 2 AS MX$, 1 AS MD$, 2 AS DR$, 1 AS RL$,
   1 AS NF$, 2 AS D$(1), 2 AS D$(2), 2 AS D$(3), 2 AS D$(4)
80 GET 1, 1: REM ** GET THE CONTROL INFORMATION **
90 NR = CVI(NR$): REM ** TOTAL NUMBER OF RECORDS IN THE 'PRODAT'
   FILE(S), INCLUDING DELETED RECORDS **
100 MX = CVI(MX$): REM ** MAXIMUM NUMBER OF RECORDS ALLOWED **
110 MD = ASC(MD$): REM ** MAXIMUM DRIVE NUMBER USED **
120 DR = CVI(DR$): REM ** TOTAL NUMBER OF DELETED RECORDS **
130 RL = ASC(RL$): REM ** TOTAL LENGTH OF 'PRODAT' RECORDS
   INCLUDING ALL DELIMITERS **
140 NF = ASC(NF$): REM ** NUMBER OF FIELDS (DATA ITEMS) DEFINED **
150 FOR I = 1 TO 4: D(I) = CVI(D$(I)) + 1: NEXT I
160 REM ** D(I) IS THE HIGHEST RECORD NUMBER ON EACH DRIVE.
   D(1) CONTAINS THE HIGHEST RECORD FOR THE FIRST
   DRIVE (DRIVE 0), D(2) FOR THE SECOND, ETC **
170 FOR I = 0 TO 3: GET 1, I + 3
180 REM ** GET DATA FIELD INFORMATION -
   (FIELD NAME, PRINT POSITION, LENGTH OF FIELD) **
190 FOR J = 0 TO 7: K = I * 8 + J + 1
200 REM ** THERE ARE 8 FIELDS PER RECORD. THE FIELD NUMBER IS
   CALCULATED AS THE NUMBER OF RECORDS ALREADY READ,
   (I * 8), PLUS THE NUMBER OF THE FIELD CURRENTLY BEING
   READ (J + 1) **
210 FIELD 1, (J * 16) AS D$, 13 AS N$, 2 AS CU$, 1 AS L$
220 REM ** D$ IS A DUMMY FIELD USED TO READ ALL 8 FIELDS
   (N$, CU$, L$) IN THE RECORD **
230 NM$(K) = N$: REM ** NM$(K) IS THE NAME OF DATA FIELD
   NUMBER (K) (FROM 1 TO 32) **
240 CU(K) = CVI(CU$) - 15374
250 REM ** CU(K) IS THE PRINT POSITION (PRINT@) FOR DATA
   ITEM NUMBER (K). 15374 IS SUBTRACTED BECAUSE THE
   NUMBER IS STORED AS A MEMORY LOCATION, RATHER THAN
   AS A 'PRINT@' NUMBER **
260 LN(K) = ASC(L$): REM ** THE LENGTH OF DATA FIELD NUMBER (K) **
270 NEXT J, I: CLOSE
```

Examples of Using Disk BASIC

Let's use the Club Member list which was used previously in this manual. We will set up the data form with 63 characters, for a total record length of 64. The data fields have the following lengths:

Field Name	Length of Data Field
NAME	16
ADDRESS	15
CITY	10
STATE	2
BIRTHDATE	8
DUES/YEAR	6
PAID DUES	6

The form would look something like this:

** PROFILE DATA FORM **

NAME OF MEMBER:

ADDRESS:

CITY:

STATE: ..

BIRTHDATE: MM/DD/YY

DUES/YEAR: \$\$\$.*cc*

PAID DUES: \$\$\$.*cc*

Random File Example

The following program will read any record from disk and display it on the video display:

```

10 REM ** PROGRAM TO ACCESS PROFILE DATA
20 CLEAR2000
30 DEFINT A-Z: DIM D(4), NM$(32), CU(32), LN(32), R$(32,4)
50 OPEN "R", 1, "INFOFILE", 128
70 FIELD 1,2 AS NR$, 2 AS MX$, 1 AS MD$, 2 AS DR$, 1 AS RL$,
  1 AS NF$, 2 AS D$(1), 2 AS D$(2), 2 AS D$(3), 2 AS D$(4)
80 GET 1, 1
90 NR = CVI(NR$)
100 MX = CVI(MX$)
110 MD = ASC(MD$)
120 DR = CVI(DR$)
130 RL = ASC(RL$)
140 NF = ASC(NF$)
150 FOR I = 1 TO 4: D(I) = CVI(D$(I)) + 1: NEXT I
170 FOR I = 0 TO 3: GET 1, I + 3
190 FOR J = 0 TO 7: K = I * 8 + J + 1
210 FIELD 1, (J * 16) AS D$, 13 AS N$, 2 AS CU$, 1 AS L$
230 NM$(K) = N$
240 CU(K) = CVI(CU$) - 15374
260 LN(K) = ASC(L$)
270 NEXT J, I: CLOSE
300 REM ** READ 'PRODAT' DATA RECORDS - RANDOM ACCESS **
310 FOR I = 1 TO MD + 1: REM ** OPEN A FILE FOR EACH DISK USED **
320 D = 0: OPEN "R", I, "PRODAT:" + CHR$(47 + I), RL
330 REM ** FILE ON DRIVE 0 WILL BE OPENED AS FILE 1, WITH
  A RECORD LENGTH OF (RL); FILE ON DRIVE 1 WILL BE
  OPENED AS FILE 2, ETC **
340 FOR J = 1 TO NF: FIELD I, (D) AS D$, LN(J) AS R$(J, I)
350 REM ** SET UP EACH DATA ITEM'S FIELD, FOR EACH DRIVE **
360 D = D + LN(J): REM ** INCREMENT THE LENGTH OF THE DUMMY FIELD,
  (D$) FOR THE NEXT ITEM'S FIELD POSITION **
370 NEXT J, I: REM ** CONTINUE THROUGH ALL FILES AND DATA FIELDS **
380 REM ** BY NOW, ALL FILES ARE OPEN, AND ALL FIELDS ARE SET **
390 REM ** ALL DATA ITEMS ARE NOW IN THE R$(J, I) MATRIX,
  IN THE FORM R$(ITEM NUMBER, DRIVE NUMBER) **
400 CLS: INPUT "ENTER RECORD NUMBER (OR 0 TO END): "; N
410 IF N < 1 THEN 570: REM ** CLOSE FILES AND END PROGRAM **
420 IF N > NR THEN PRINT "** OUT OF RANGE **": GOTO 550
430 REM ** THERE ARE ONLY (NR) RECORDS. A HIGHER NUMBER
  WILL CAUSE AN ERROR **
440 DN = 1: FOR I = 1 TO MD: IF N > D(I) THEN DN = I + 1
450 REM ** FIND WHICH DRIVE THE RECORD IS ON **
460 NEXT I: NN = N - D(DN - 1): GET DN, NN
470 REM ** SUBTRACT ALL RECORDS ON LOWER DISKS TO GET RECORD
  NUMBER IN DISK NUMBER (DN) **
480 IF ASC(R$(1, DN)) = 192 THEN PRINT "** DELETED **": GOTO 550
490 REM ** DELETED RECORDS ARE MARKED BY CHR$(192) **
500 CLS: PRINT @ 896, "RECORD #:"; N
510 FOR I = 1 TO NF: REM ** PRINT ALL DEFINED FIELDS **
520 PRINT @ CU(I), NM$(I); ": "; R$(I, DN);
530 REM ** AT THE PROFILE DEFINED SCREEN POSITION -CU(I)-,
  PRINT THE ITEM NAME -NM$(I)-, AND THE DATA -R$(I, DN)-
540 NEXT I
550 PRINT @ 960, "PRESS <ENTER> TO CONTINUE";
560 A$ = INKEY$: IF A$ = "" THEN 560 ELSE 400
570 CLOSE: END

```

Example Using Sequential Access

The following program prints out a list of all Club Members that still owe any dues for this year. Disk BASIC sequentially reads in each Club Member, performs some arithmetic, and prints their name and the amount owed to the line printer. This program was designed for use with the example format provided in Appendix 4.

```

10 REM ** PROGRAM TO ACCESS PROFILE DATA
20 CLEAR2000
30 DEFINT A-Z: DIM D(4), NM$(32), CU(32), LN(32), R$(32, 4)
50 OPEN "R", 1, "INFOFILE", 128
70 FIELD 1, 2 AS NR$, 2 AS MX$, 1 AS MD$, 2 AS DR$, 1 AS RL$,
   1 AS NF$, 2 AS D$(1), 2 AS D$(2), 2 AS D$(3), 2 AS D$(4)
80 GET 1, 1
90 NR = CVI(NR$)
100 MX = CVI(MX$)
110 MD = ASC(MD$)
120 DR = CVI(DR$)
130 RL = ASC(RL$)
140 NF = ASC(NF$)
150 FOR I = 1 TO 4: D(I) = CVI(D$(I)) + 1: NEXT I
170 FOR I = 0 TO 3: GET 1, I + 3
190 FOR J = 0 TO 7: K = I * 8 + J + 1
210 FIELD 1, (J * 16) AS D$, 13 AS N$, 2 AS CU$, 1 AS L$
230 NM$(K) = N$
240 CU(K) = CVI(CU$) - 15374
260 LN(K) = ASC(L$)
270 NEXT J, I: CLOSE
300 REM ** READ 'PRODAT' DATA RECORDS - SEQUENTIAL ACCESS **
310 REM ** OPEN A FILE FOR EACH DISK TO BE USED **
320 FOR I = 1 TO MD + 1: OPEN "I", I, "PRODAT:" + CHR$(47 + I): NEXT I
330 REM ** FILE ON DRIVE 0 WILL BE OPENED AS FILE 1,
   FILE ON DRIVE 1 WILL BE OPENED AS FILE 2, ETC **
340 BN = 1: FOR J = 1 TO NR
350 REM ** START WITH BN (BUFFER NUMBER) 1 AND READ ALL
   RECORDS FROM 1 TO NR (NUMBER OF RECORDS) **
360 IF J > D(BN) THEN BN = BN + 1
370 REM ** CHECK TO SEE IF ALL RECORDS IN THE CURRENT FILE
   HAVE BEEN READ, AND GO ON TO THE NEXT IF SO **
380 LINE INPUT # BN, B$
390 REM ** LINE INPUT IGNORES ALL CONTROL CHARACTERS EXCEPT
   THE CARRIAGE RETURN AT THE END OF THE BUFFER (B$) **
400 IF LEN(B$) = 0 THEN 380: REM ** DIDN'T FIND A VALID RECORD **
410 IF ASC(B$) = 192 THEN 520
420 REM ** CHR$(192) MEANS THE RECORD HAS BEEN DELETED **
430 CLS: FS = 1: FOR I = 1 TO NF
440 R$(I, 1) = MID$(B$, FS, LN(I)): FS = FS + LN(I)
450 REM ** SPLIT THE INPUT BUFFER (B$) INTO USABLE FIELDS, AND
   PUT INTO R$(I, 1), SINCE IT'S ALREADY DIMENSIONED
   IN THE 'INFOFILE' MODULE **
460 PRINT @CU(I), NM$(I); ": "; R$(I, 1);
470 REM ** PRINT THE ITEM NAME -NM$(I)-, AND THE DATA -R$(I, 1)-
   AT THE PROFILE DEFINED SCREEN POSITION -CU(I)- **
480 NEXT I: REM ** GET AND PRINT THE NEXT FIELD **
490 PRINT @B96, "RECORD #:" J
500 PRINT @960, "PRESS <ENTER> TO CONTINUE":
510 A$ = INKEY$: IF A$ = "" THEN 510
520 NEXT J: REM ** GET THE NEXT RECORD **
530 CLOSE: END

```


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