



CRDFIL

A CARD FILE DATABASE SYSTEM FOR  
THE TANDY/RADIO SHACK PORTABLE  
COMPUTERS; THE MODEL 100, THE  
TANDY 102, AND THE TANDY 200

EPROM VERSION 5.0

CRDFIL (tm)

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LIABILITY NOTICE    JUNE 1, 1989

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Physical Product Warranty: CRDFIL(tm) is distributed in the form of EPROM-based software, and operation of the EPROM is warranted to the original purchaser only, for a period of ninety days.

Copyright, Acknowledgements and Credits

CRDFIL.100.ROM

CRDFIL.200.ROM

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This program, in the form of EPROM software, is based on the original program CRDFIL.BAS, Copyright 1987 Tony B. Anderson, and additional enhancements by the author and others, including code from CRDFIL.TMP, CRDFIL.TOT, CRDFIL.PRI and CRDFIL.PR3, all of which were copyrighted in 1988 by the author.

The editing portion of the program is extracted and revised from the program CRDFIL.EDT by Charles Lewis, Copyright 1988.

The "extract a new datafile from an old datafile" section is extracted and revised from the program CRDFIL.PR4 by Bob Craft, Copyright 1988.

Additional enhancement suggestions incorporated in the program from the suggestions of George Sherman, without whose assistance as beta tester, the completed program would not have been possible. - Thanks, George.

This manual is updated and current with ROM version 5.06, October 1989.

This manual and software is self-published by  
Tony Anderson; Post Office Box 60925, Reno Nv 89506

QUICK START:

If you're the type of person who hates to read manuals, and who wants to get it running right away, to see what you've bought, this page will tell you how to get it installed and running without reading through the manual first.

1. Save all important files in RAM, just in case.
2. Turn off the computer
3. Turn it over and open the ROM compartment on the bottom. If you're not sure, see the instructions on page 13.
4. Match the pin 1 designation on the EPROM label to the pin 1 mark on the printed circuit board next to the Molex socket, and plug the EPROM into the socket.
5. Close the compartment door, turn the computer over, and turn it back on.
6. Go into BASIC and if you have a Model 100 or Tandy 102, type CALL 63012 and press the ENTER key.

Tandy 200 owners, type CALL 61167,2 and press the ENTER key.

7. The screen should clear, and the CRDFIL opening banner should appear, followed by the CRDFIL opening menu, within a couple of seconds. Once there, you can type the letter "M" to get back to the computer's main menu, or press the F8 button, where the CRDFIL name will appear on the computer's menu. At any time you wish to use CRDFIL, just move the wide-bar cursor over the CRDFIL name and press the ENTER key. Then just follow the menus.

If the screen did not clear, CRDFIL did not run, and the computer appeared to "lock up", then press the reset button on the back panel of the computer and try again. If CRDFIL will still not run, then turn off the computer, and recheck how you've mounted the EPROM in the socket. It may not be firmly seated, or may not be installed correctly. Read page 13 carefully and try again. If it STILL will not run, read the page at the back of the manual marked ADDENA - PROBLEM REPORTS.

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EPROM UPGRADE POLICY:

I've tried to make CRDFIL as bug-free, and as useful, as possible, but occasionally a minor bug may be discovered by other users, or yourself. If you find and report a bug, and I can locate the problem and fix it, I'll send you an updated copy of the EPROM with the fix, and will provide a postage-paid envelope for you to return the old version after you have received the update.

I will not advise all previous buyers of minor bugs, nor provide them with automatic updates unless that bug affects them, too, and they report it, as you did.

In the event I make any major changes in the program, or revisions, or add new features, I will provide each current owner with a copy of the revised program, for up to two major revisions, not including the original purchase. So you are entitled to free fixes of program bugs, and two major revisions, along with your original purchase. In each case, I will pay for shipping both ways, so there will be no additional cost to you. However, should you fail to return the older version of the EPROM when updated, you will not get any further updates or upgrades.

Beyond the first two automatic upgrades, you may elect to be placed on a special mailing list to be advised of upgrades, and each additional upgrade will cost you \$20.00 plus the return of the old version, after you have received the replacement.

VERSION HISTORY:

The initial release of the EPROM was version 5.0.

The first major upgrade, which all previous purchasers were entitled to, was version 5.06, dated October, 1989. This version updated the manual, and added a "kill the ROM for removal" function available at the main menu, to deal with an undocumented system "Kill" bug, and documented access of the perpetual calendar. See pages 12 and 19 of the manual.

CRDFIL OVERVIEW  
-----

CRDFIL is a card file program for the Model 100/102 and Tandy 200. The program creates custom-prompted screens and data files in response to prompted input which resemble "card files". A "card" consists of a screen-full of data. Files can be displayed completely, "card after card", or selectively with a "Search" mode. Data can be added to existing files in the same prompted mode, or by simply entering it in the proper form in the data file. Because it is an open datafile structure, other programs can also append data to the file, to be read back or displayed with the original template. The only consideration being that the second program append data to the file in the proper sequence, in accord with the file's "template".

The original program, CRDFIL.BAS was written in BASIC, and operated interchangeably in the Model 100, 102 and Tandy 200. Originally written in 1987, it was distributed to hundreds of users via the Model 100 Forum on CompuServe. Several authors contributed enhancements to the original program, as did the original author, as well as other support programs that offered features not provided in the original program. The original program underwent four distinct revisions, leading up to the current EPROM version. The original program is no longer available on CompuServe, but several of the additional support programs are still available there, and may be useful to those with CompuServe accounts.

Data files created by the program can be moved from machine to machine without problems, except that files created on the 200 which utilize more than 8 lines for display, will not display properly on the Model 100/102 screen due to the differences in display capability.

The EPROM-based version, developed in 1989, was written in BASIC, then compiled, assembled and burned into the EPROM's, which can then be inserted into the portable's optional ROM socket. It is also available in models which plug into "standard" EPROM sockets, as found in P.G. Design's SAFE ROM bank, P.C.S.G's 6-ROM BANK, and Traveling Software's BOOSTER PAK expansion unit.

The program is developed as a sort-of "universal" card file program, which will create datafiles with almost any specification you need, input and display data according to the specs saved with each file. You can thus have one program and several data files, all of which can be displayed in a uniform way, using the single program approach, and with differing "formats", depending on what is required by the data in any particular file.

CRDFIL CONCEPT:

The program simulates a "card file", where a screenful of data represents a "card". It can be set up in any format the user chooses, based on a "template" that is stored in the file with the data. CRDFIL reads that template back from the datafile, and knows how to display the data, to get the original card display ordered by the user. Since the templates can be different, based on the type of data in the file, each datafile is unique, and is displayed in the manner that is most appropriate for that information, and becomes a specialized database.

Additionally, specialized datafiles can be extracted from any other file, the information edited, sorted or rearranged on the display, to make an entirely new datafile. For example, suppose you have a name/address file, which includes names of each person's children, birthdays, etc. You can extract a new datafile, listing just the children's names and birthdays, or just the birthdays which happen next month, or whatever. This becomes a new file, which can also be used by the program. Commercial users can extract different datafiles out of a larger file, perhaps a list of all products purchased from a single supplier, from a larger inventory file.

The program provides several common printed output forms; mailing labels, index or Rolodex cards, columnar listings of selected fields, as well as specialized output forms to new datafiles, or RAM, Disk, or Cassette files where the data might be imported into other programs, such as word processors, boilerplate letter programs, or report generators. Additionally, output can be sent to the COM port (RS-232), so you could send the results of a search or sort to another computer for further processing.



#### DATA FILE STRUCTURE:

The data file is constructed from your keyboard input, and is straight-forward. The first line in the file tells how many entries make up each "card". The following two-times the number of entries give the actual entry prompts, (field names) and the PRINT@ location for screen display. Ten entries would have 20 lines; two per entry. See the sample templates, starting on page 57, for examples.

Following this initialization group, the rest of the file contains the card data, one line per entry. If you have specified 10 entries per card, each data group will consist of ten lines. There is no physical indication in the file where each data group starts or ends, so be careful if you do any manual editing in the data file.

You can add or delete data directly from the datafile, if it will fit in RAM, using the TEXT program to find the data desired, and F7-F6 to cut material to be deleted, or just type in changes. Useful for updating file data, as long as you're sure you know where you are when you do it, and as long as you don't accidentally delete lines in the process which would throw your entries out of sync with the field name template, and cause datafile errors when the program is trying to access data later.

#### DATA STORAGE:

Datafiles which fit in available RAM, can be stored in RAM, or saved to external disk or cassette, as well as any of the popular RAMdisk products. The program can access files on an external device without bringing them into RAM if you include the device specifier in the filename when asked for the name of the file. Disk access assumes the user has an appropriate DOS loaded in the computer which provides direct access to disk files from BASIC. Such DOS's for the Tandy-Brother Portable Disk Drive include TS-DOS, Power-Disk, Power-DOS, and Disk Power. The "disk specifier" is a colon before the filename.

The Chipmunk's CDOS, and Tandy's Disk/Video Interface are supported. The disk specifier is the number 0, followed by a colon in the form: 0:(filename). If the Disk/Video Interface has a second drive installed, then using "1:" as the specifier is accepted for access of the second disk drive.

FLOPPY, FLOPPY.CO and DSKMGR do not allow direct file access.

Power-Disk and POWR-DOS are now in the public domain, and are downloadable from several sources, including CompuServe's Model 100 Forum. Power-Disk uses less RAM space, about 2100 bytes, but POWR-DOS is much more powerful, and includes several useful disk utilities, including a file recovery program for problem disks.

## VERSIONS

Because EPROM software is unique to each machine, working with ROM routines and assembly language, EPROM's are not interchangeable from one machine type to another. Consequently CRDFIL is available in two versions; CRDFIL.100.ROM for the Model 100 and Tandy 102, and CRDFIL.200.ROM for the Tandy 200. Each is adapted to best use the capabilities of the machine in which it runs, to take advantage of screen display size, and other machine-specific features.

The initial "Release Version" of CRDFIL as EPROM-based software is Version 5.0. The current version of your particular EPROM may be determined by typing the letter "V" or "v" at the "Choose one:" prompt on the opening menu. (Type the letter only, without quotation marks.)

Both the 100/102 and 200 versions of the software work identically, except that the 200 version allows full use of the larger screen available on that machine. Datafiles created on a 100/102 may be displayed without problem on the 200, but datafiles created on the 200 may not display properly on the 100/102, given it's smaller screen size, and the absolute addressing required for placement of screen prompts and displays. However, a 200 user can create a datafile that can be displayed on the 100/102, by simply confining his prompts and displays to the top half of the 200 screen, which has the same screen addresses as those in the 100/102. In order to facilitate such use, the 200 version of the program has some special commands and displays that will assist the owner to create 100/102 datafiles. (see Appendix "B", page 55)

## Program Operation

### MENUS:

CRDFIL is menu and prompt-operated, and requires very little in the way of operating instructions. At each menu, you are given several choices, or asked a question, which the program checks before proceeding. If you are asked for a yes or no answer (Y/N) and you type in anything that is not translatable to a Y or an N, then the program will beep at you, and won't allow you to go further until you enter what the program is expecting.

At all option menus, you can type a single letter or number, indicating your choice. Immediately after typing the letter or number, the program proceeds, without waiting for you to press the ENTER key. It is only necessary to press ENTER after typing in a multiple-character response, or where indicated by the program as a way to "continue".

Menu selections are made by typing the number of your selection, or the capitalized letter in the menu description; you can type it in either upper or lower-case. For example, to "create" new cards, on the opening menu, you can type "1", "C", or "c", because the letter C in Create is capitalized. No where else on that menu is a letter C capitalized. On some menus, there is no number selection, and the acceptable letters are indicated by "<>" marks, as in "<A>11" or "<S>elected". You can respond with either an upper or lower-case letter A or S.

Later in this manual, you'll see actual reproductions of the various menus, and descriptions of what each option is, what it does, and will be referred to another page to see what takes place next. Sort of "stepping through the menus".

### KEYBOARD RESPONSE:

On all keyboard input, you can type in upper or lower-case letters. Responding to a "Y" or "N" question can be in the form of a capital Y or N, or lower-case y or n.

In creating your datafield names, referred to as "prompts", the name is stored exactly as you type it in; upper and lower-case is always preserved. You can use any graphic or code characters needed, if you are working with foreign language characters.

Your data is stored exactly as you type it, and again, you can use the graphics or code characters as needed.

SOUND:

There are three types of sounds provided by the program. A short "beep", which is the standard BEEP available in BASIC, signifies a program problem of some sort; usually something like "I can't do that, for some reason or other". Such problems include trying to use a non-existent file, opening an empty file (no entries), or a datafile error, such as not having enough entries in the file to make a complete "card" for display. In other words, "program problems", as opposed to "user problems".

Second, there is a low-pitched, vibrating tone, sort of a BRR-R-R-R, that signifies what you typed is not what the program wanted at that point; like if you typed "A" to a "Y" or "N" question.

Third, a three-note, rising sound, sort of like "deedle-deet" with an upward inflection. This is just to get your attention, so you don't goof at the next prompt. -- You hear that during the opening copyright display.

If you'd like to hear all three sounds, simply type the letter "Z" or "z" at the opening menu, and they will be reproduced for you, with a slight pause between each one. You can also operate CRDFIL in a "Quiet mode", without the sounds and beeps. At the opening menu, just type the letter "Q" or "q", and the sounds will be eliminated, for this session, anyway. ("Q" = "Quiet mode")

Each time you return to the opening menu, sound has been reenabled, so you have to type Q again, if you are going to perform another operation, and want the program to operate in quiet mode again. If you type the letter "Q" before the program completes drawing the copyright notice box, sound will be disabled before you reach the opening menu.

## EPROM Installation

The EPROM software chip comes in two versions; 1) the single chip, which plugs directly into a standard 28-pin EPROM socket, and 2), mounted on a "translator board" which allows a standard EPROM chip to be plugged into the non-standard MOLEX socket in the Tandy portables. The translator board rearranges the standard EPROM pin designations to match the non-standard arrangement in the Molex socket.

For those with a ROM bank of some kind that accepts a standard EPROM, it's only necessary to match the pin 1 designation on the EPROM label with the matching pin 1 designation on the socket or board, and plug the EPROM into the socket.

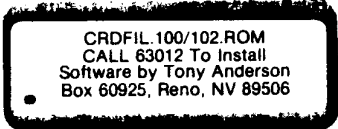
For those who intend to plug the EPROM directly into the option ROM socket in the computer, we have chosen to use the EME Systems Bendflex translator board. It has several advantages over the older printed circuit board mount provided for this application by Tandy Corp.

The following pages are provided by EME Systems to instruct users how to use their translator with standard EPROM's, and should need no further explanation. If you ordered your EPROM mounted on the carrier, there is nothing more to do than locate the pin 1 designation on the printed circuit board next to the Molex socket, match it with the pin 1 designation on the EPROM label, and plug the unit into the socket.

If you ordered the EPROM and carrier separately, then you'll be interested in the sheet that provides information on soldering the EPROM to the carrier, although it is also possible to use the EPROM and carrier without soldering by just matching up the EPROM legs with the appropriate circuit pads, and pressing the whole assembly into the Molex socket.

We are grateful to EME Systems for allowing us to reproduce these sheets in this manual.

This is a reproduction of a typical label as used on my EPROM Software:



CRDFIL100/102.ROM  
CALL 63012 To Install  
Software by Tony Anderson  
Box 60925, Reno, NV 89506

↖  
This corner is  
pin number 1

It's usually marked  
with a red dot.

SOME GOOD ADVICE:

Before Installing your new EPROM, ANY EPROM, save all valuable files in RAM, disconnect the computer from any other devices, disk drives, cassette recorders, printers, etc., and turn off the computer. Follow the directions; lay the computer face down on a soft surface - a towel or pillow, so you don't scratch the screen. Look for the matching pin numbers, don't assume you can just push the EPROM into the socket and have it work.

LOADING THE EPROM:

Once the EPROM is physically installed in the machine, close the access door, turn the computer over, turn it on, and go into BASIC. At the "Ok" prompt, type CALL 63012 and press the ENTER key. (For the Tandy 200, it's CALL 61167,2 and press ENTER)

This will "load" the EPROM's name into the directory, tell the computer you have it installed, and place the name of the ROM on the main menu. From that point on, whenever you want to run the EPROM software, simply move the wide cursor over the ROM's name on the main menu, and press the ENTER key.

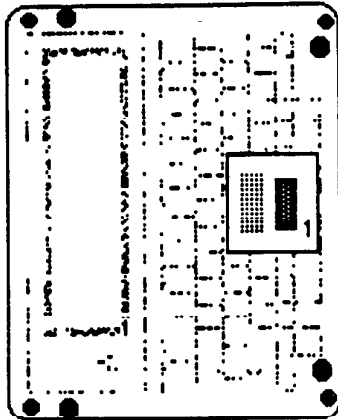
REMOVING THE EPROM:

Should you ever wish to remove the EPROM from the computer, the normal way would be to go into BASIC and type KILL"(ROM's name)" and press the ENTER key. This will remove the ROM's name from the menu, but unfortunately, we have discovered a system bug with that method. In this case, when you return to the menu, you will find an incorrect report of the amount of free RAM available, often up around 45,000 or 65,000 Bytes Free, and the next program you try to run will cause a cold start. This is apparently a computer bug, because the system stores 65535 as CRDFIL's address in the RAM directory, and when you "Kill" a program the rest of the programs and files in RAM move down in RAM to fill that space. 65535 is used by the operating system to call a ROM start-up routine, and killing the filename causes an error as the operating system tries to restructure the files in RAM and update the RAM directory. The bug is not in CRDFIL or in the compiler.

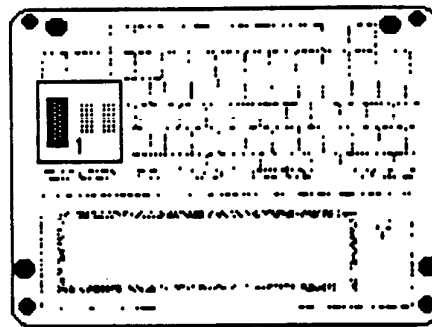
Instead, type "K" or "k" at CRDFIL's opening menu. and the ROM will deinstall itself, after which you can remove it.

These EPROM's have been compiled and assembled with a professional software compiler and assembler, and do not modify or use any of the system's "hooks". So they do not present hook conflicts with other programs, and will not cause unexpected cold-starts after use or removal. You could, in fact, remove one of my EPROM's and insert another, using the same menu name to call the second one, if desired. But of course, the second EPROM would not normally have the same name. However, that's useful for those who have switch-selected EPROM banks; you can use the name "RomBnk" on the main menu, and switch-select the actual EPROM you want active.

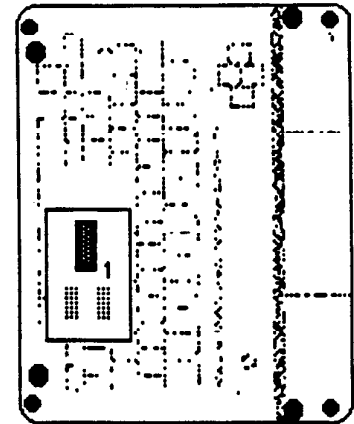
## How to insert the option ROM into its socket.



model 100  
bottom view



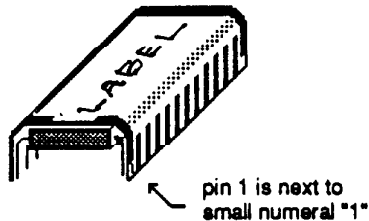
model 102  
bottom view



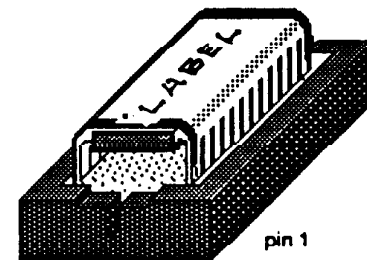
model 200  
bottom view

- 1** Turn off the power to your computer. Turn it upside down on a soft surface, oriented as shown, depending on whether you have a model 100, 102 or 200. Use a dime or a screwdriver to snap off the protective plastic cover from the options compartment. Locate the option ROM socket and pin 1 on that socket. Pin 1 will be at the corner illustrated. Also, you will find a numeral "1" printed on the circuit board by the corner.

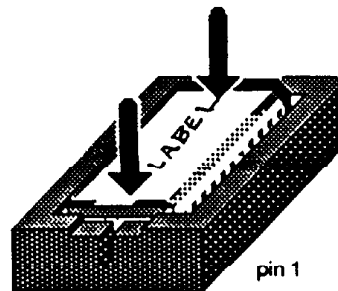
- 2** Locate pin 1 on the eprom carrier.



- 3** Line up eprom carrier pin 1 with socket pin 1, and set the carrier gently on top of the opening in the socket.



- 4** Press straight down firmly and evenly with two thumbs, until the carrier is seated as deep as it can go inside the socket.



- 5** Replace the cover on the options compartment, and proceed to test your new option ROM.

To remove the carrier, pry up gently at the two ends.



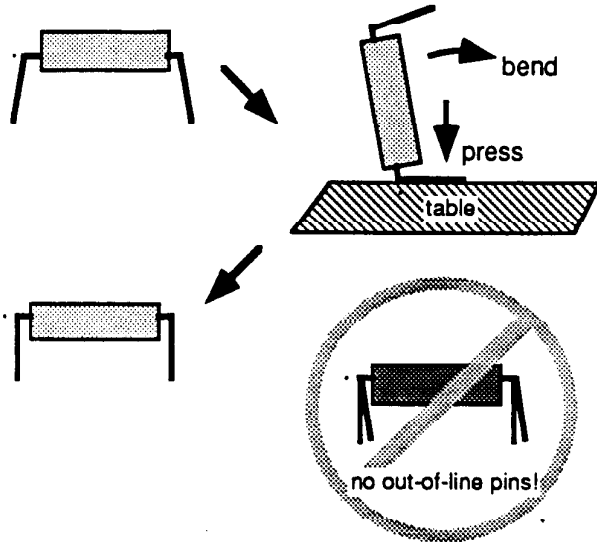
carrier manufactured by :  
eme systems (415) 848-5725  
2018 Parker St., Berkeley, CA 94704

EPROM SOFTWARE  
From  
Tony B. Anderson

Tony Anderson  
P. O. Box 60925  
Reno, NV 89506

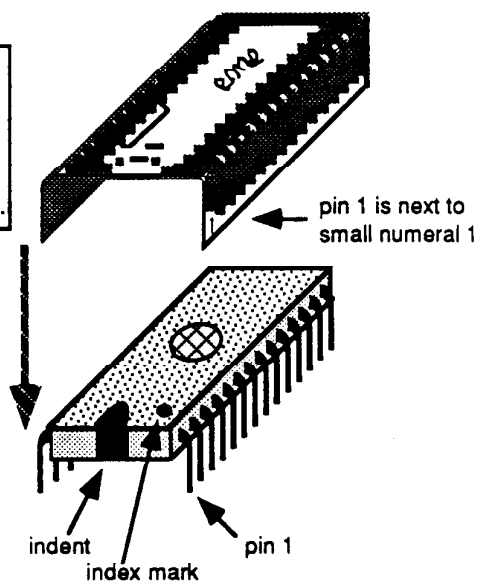
## How to attach the 27C256 EPROM to the bendflex carrier board

1) Bend the eprom pins so they stick straight down rather than at an angle. Bend them uniformly by pressing the line of pins on a table. Protect against static electricity: no wool carpet, avoid touching the pins, but do work on a grounded metal table.



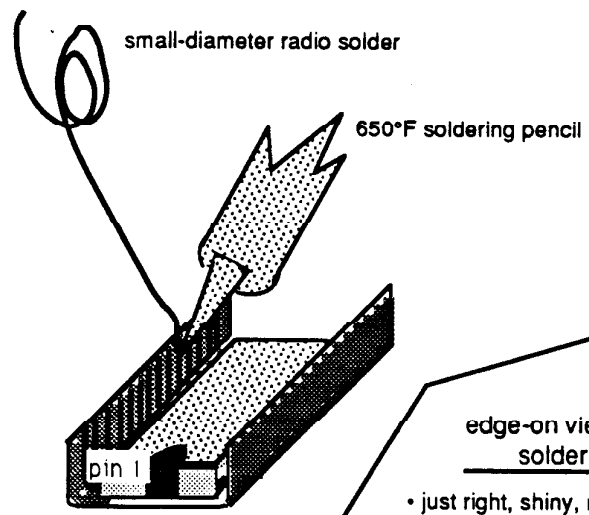
2) • Line up pin 1 on the EPROM with pin 1 on the carrier board. • Slip the carrier board over the eprom. Center the EPROM end-to-end, so the pins are aligned with the central 14 metal traces. • If desired, use a drop of glue to secure the parts.

Check that the sides of the bendflex board are at a 90° angle to the top. Bend if not.



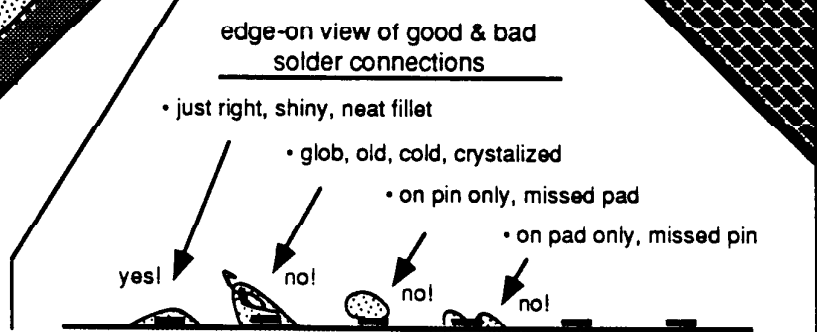
EPROM may have indent and/or index mark to identify pin 1.

3) • Use a soldering pencil, with a clean, bright tip; 350°C (650°F), 25-35 watts, with small (<0.05") rosin-core, 60-40, tin-lead solder. • Solder each pin of the EPROM lightly to the corresponding foil trace. Avoid excess heat.



EPROM pins centered on central 14 metal traces! Don't solder pins to the two end traces!

4) Inspect your work carefully with a magnifier.  
 • orientation--pin 1?  
 • solder joints--no open or short circuits?  
 • clean?



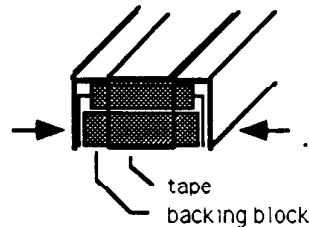
eme systems  
 2018 Parker St.  
 Berkeley, CA 94704  
 (415) 848-5725



### Additional information:

- It is also possible to use the carrier/eprom *sans* soldering. This is advantageous to experimentors and in situations where the eprom will have to be taken in and out of the carrier for reprogramming.

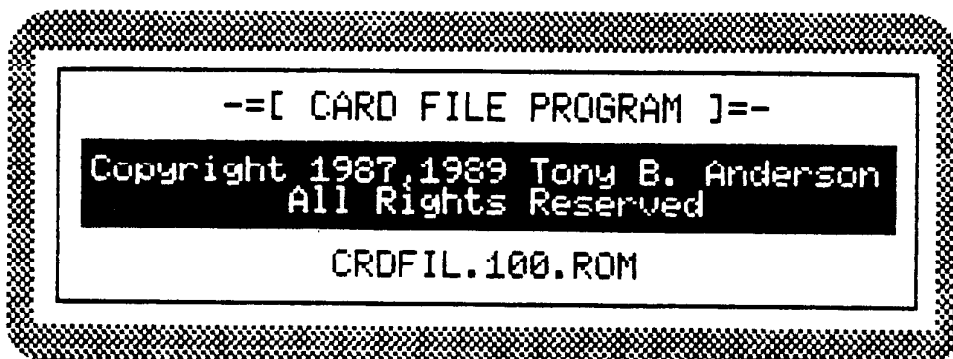
The eprom pins don't have much springiness, so you must be sure that none of them are out of line with the others. Insert the assembly straight down into the Molex socket with even pressure. You may want to insert a 0.6" by 1.5" by 3/16" block of material such as wood or matte in the space between the eprom pins to act as a rigid backing. This backing block has to have straight, parallel sides. The eprom pins have to line up with the central 14 metal traces. A strip of tape can pass around the top of the carrier to hold everything in place. These are preliminary suggestions, and at this time I cannot vouch for the reliability of the unsoldered assembly. But it may turn out to be quite satisfactory.



- For soldering, a jig made of wood is helpful to hold the carrier while soldering in the eprom:



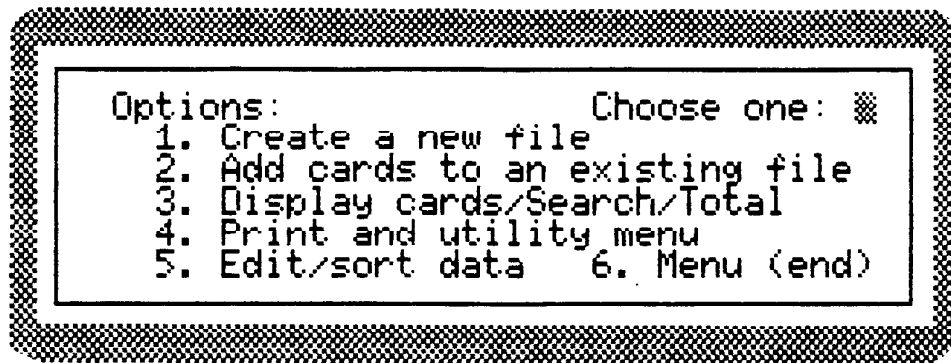
CRDFIL OPENING BANNER



This banner is displayed each time the program runs or restarts. There is no way to avoid or bypass it. After display, it automatically leads into the opening menu on the next page.

If you wish to disable sound before you reach the main menu, type the letter "Q" or "q" while the program is drawing the copyright notice box.

## OPENING MENU



To create a new file, type the number "1", the letter "C" or "c". Go to page 21

To Add cards to an existing file, type the number "2", the letter "A" or "a". Go to page 25

To Display cards, type the number "3", the letter "D" or "d". Go to page 27

To Search the datafile for a specified card or cards, type the number "3", the letter "S" or "s". Go to page 30

To gather totals from various fields on cards in a file, type the number "3", the letter "T" or "t". Go to page 31

To print in several user-selected formats, or to extract data from the file, type the number "4", the letter "P" or "p". Go to page 33

To edit data on cards, or to sort the datafile into some specific order, type the number "5", the letter "E" or "e". Go to page 41

To end the program, and return to the computer's main menu, type the number "6", the letter "M" or "m". Close the book and take a break.

To turn off the sound features, type the letter "Q" or "q". You will still be at this menu.

To hear the various sounds the program produces, type the letter "Z" or "z". You will still be at this menu.

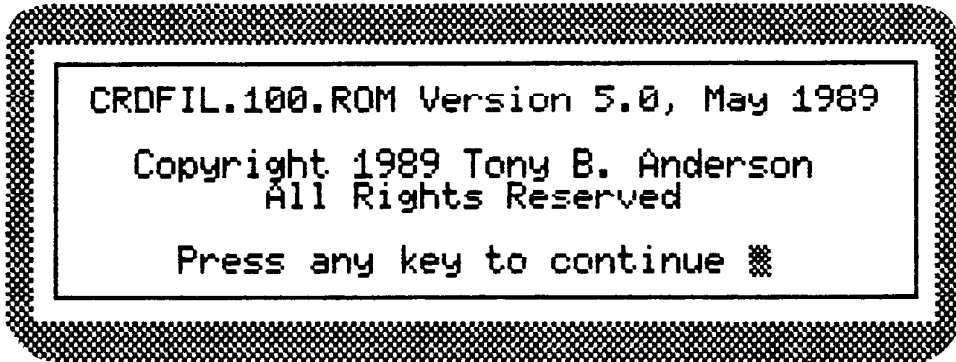
To see what version your EPROM is, and when it was manufactured, type the letter "V" or "v". Go to page 20

Type the letter "X" or "x" to access the perpetual calendar. See page 52.

Type the letter "K" or "k" to deinstall the ROM prior to physical removal. See Page 12.

The checkered block in the upper right-hand corner represents the flashing cursor. Note that Tandy 200 screens will be larger, but basically the same unless otherwise indicated.

VERSION DISPLAY



This display tells you the version number of the software (5.0 is the initial release in EPROM), the production series when the EPROM was burned (by date), displays the copyright notice, and asks you to press any key to continue.

When you press a key, you go back to the opening menu. Go back to page 19

Note that the checkered block indicates a flashing cursor at that position.

## CREATE A NEW FILE

```

CARD FILE TEMPLATE MAKER
Filename to Create? *

```

You have arrived at the TEMPLATE MAKER section of the program where you can create a brand-new datafile, including a new display template.

The first thing you will be asked is for a filename for the new datafile. There is no particular name you need to use, or format to enter the name, except that if you want to create a file on a disk drive or external storage device, you need to precede the filename with the device specifier. Include the ".DO" name extension only if it is required by the device, like for the Chipmunk disk drive, which requires the filename extension.

Next you will be asked for the number of entries on your card. Think carefully about this. You might think a simple name and address file would only need 3 entries; name, address, and city-state-zip. But for future use, you might prefer to have more, so that you could sort on additional fields, like putting all the cards in alphabetic order, or sorting by zip code. It's better to have extra fields now, rather than to need them later and have to try to manually edit the datafile to add the extra fields... a very messy job. It's especially easy to add blank field names now, and assign them names later on as you need to add more information to an existing file.

I'm using the words "field names" and "prompts" rather interchangeably here. While technically each card entry is considered a "field", and to identify it you have a "field name", the field names also become "prompts" during the card input cycle. So the terms are rather interchangeable as applied in this context.

You can create as many entries, fields or prompts, as you wish, but keep in mind the size of the screen on your machine, and how much data it can display. You can use more than 8 entries on the 100 or 102 screen, or more than 16 on the Tandy 200 by putting more than one entry on each line on the final screen display. CRDFIL will allow you to position your prompts on the screen, and the position data will be saved to the data file.

The next question is, "Do you wish to automatically add any characters to the end of each prompt or field name? (Y/N)" You can choose Yes or No by typing the first letter, Y for yes, or N for no.

If you choose yes, this will allow you to choose some characters to be automatically added to each field name you type, which later on become the "prompts" when you're entering data into your file. It is often useful to add a space after the word, so your data doesn't "mush up" against the prompt, or to add a colon, followed by a space. So if you chose yes, the next screen will explain this to you, and allow you to input whatever characters you want added to each prompt. - During input, you type the prompt, the program adds a neat ending.

Next the screen will clear, and you'll see an asterisk in the upper left corner. This is the tentative position for your first "prompt". You can place the prompt at this location on your card by simply typing in what you want to use as a prompt -- if it's a name and address file, this might be the name field, so type "Name" and press the ENTER key. Each time you typed a letter, the asterisk moved over one space to show where the next character would go. When you pressed ENTER, whatever characters you selected for automatic entry were added to "Name", and your display might now be "Name: \*". The asterisk now indicates where your data would start when you are in the input mode.

You can type as long a prompt as you like, but keep in mind, long prompts use up precious screen display space. "Name" is more sensible than "Name of Applicant".

If you want to have an unnamed field, or a blank field, just type a single space, followed by pressing the ENTER key and you will get a space, followed by your automatic prompt-end characters. If you want the prompt to be totally blank, you can go into the datafile later on, and delete the end characters, too.

You can use the cursor keys (up, down, left and right arrows), and the tab key to move the asterisk around on the screen to locate where you want the prompts to be located. The TAB key will move the cursor to the next multiple of eight spaces to the right, and will wrap around to the beginning of the next line. The ESCape key will move the asterisk to the first position on the next line immediately. Use only the arrow keys, TAB key and ESC key to move the asterisk; do not use the space bar to position the asterisk, since a space will be accepted as part of the prompt, and can inadvertently overwrite your data. You may use the space bar to create a blank prompt after positioning the asterisk with the TAB, ESC or arrow keys.

If you are typing in a prompt, and make a mistake, you can use the BKSP key to backspace over the error and retype it. However, if you try to backspace when you are at the beginning location of a new prompt, i.e. at the first character, you will cause an error that the program can't recover from, and the program stops with a function call error.

You will be allowed to enter only the number of prompts you previously specified, but you can place them in any location you want on the screen.

You may wish to use a little advance planning on placing your prompts on the screen, especially if you have a relative few prompts, and anticipate any long entries. For example, if you place the first prompt on the top line, and the second one on the third line, when you type in data, in response to the first prompt, what you type can automatically "wrap" to the second line if it is longer than "to the end of the line", and will not interfere with the second prompt (on the third line), or be overwritten by that prompt and subsequent data when the cards are displayed. Remember your "card" is geared towards screen display. The program does no error checking on entry size or screen display positions. It is possible to have prompts overwrite displayed data if you don't watch your available space. Output (display) will look the same as input.

When you have entered the last prompt (field name) the screen clears and you will be given the opportunity to review what the display screen will look like. Press ENTER when you are ready to review the prompts.

After displaying the prompts and card layout, "ALL OK?" will appear in the bottom right corner of the screen, overwriting anything else you may have placed there. That's OK, your data isn't gone, I've just used that as the most likely clear location. Respond Y or N to the question.

If you respond "Y" (or "y" - remember you can use upper or lower case), the program will create the file, and save the template. -- But suppose something was wrong... a typo, or a wrong location. Respond "N", and the screen will clear and each prompt will be shown, one at a time, and you can retype it, or move it to a different location on the screen; but you cannot change the number of entries originally specified.

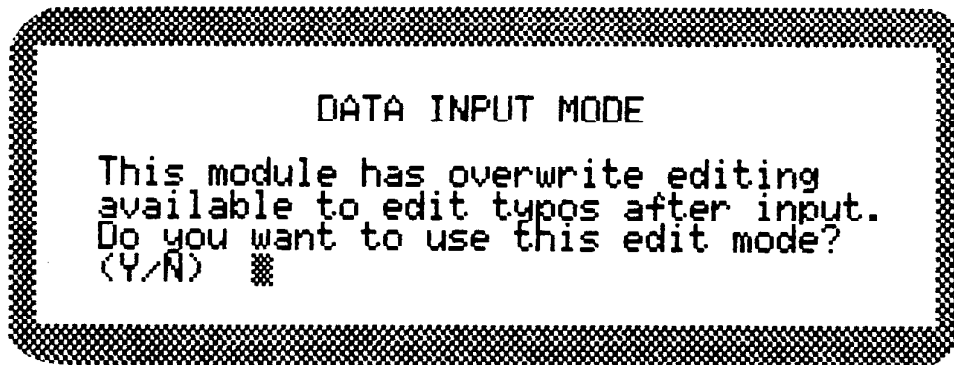
Once you have made corrections, you will review the layout again, and if acceptable, the template will be saved to a new file. If you goofed and need more entries, go ahead and save the file, go back to the main menu, kill the incorrect file, and start over.

At this point, you go to the data entry mode. An opening screen advises you where you are, and you can press ENTER to actually start typing new data into the file, or you can type END to terminate this mode and return to the opening menu. "END" can be typed in one of three common forms; "END", "End", or "end" - the program accepts them all, but interprets anything else as approval to continue with the input mode.

For details on input mode, go to page 25

END goes back to the opening menu, page 17

## DATA INPUT MODE



This is the program section that allows you to enter data into a specified datafile. You can get here from the "create a new card" or "add cards to an existing file" section. Either way, input of data is the same. The program presents you with a prompt, and you "fill in the blanks", so to speak; you provide the data.

This opening screen allows you to choose whether you want overwrite editing, or whether you consider yourself a good enough typist that you don't need the additional feature. If you select overwrite editing by responding "Y", it works in the following manner: After you type an entry in response to the prompt, when you press the ENTER key, the cursor moves back to the beginning of what you just typed. If you goofed, you can retype it as many times as is necessary to get it right. When your response IS correct, simply press the ENTER key again, when the cursor is resting on the first letter of your response, and the program accepts the input, and moves on to the next prompt. For less-skilled typists, it gives you a chance to look at what you just typed, and correct it before it gets into the file. If your typing skill is better, it amounts to a second press of the ENTER key to go on to the next prompt.

If you respond "N", then this mode is locked out, and each time you complete an entry, when you press ENTER, you are presented with the next prompt. -- All is not lost, however, you will still have a chance to correct a mistake after the "card" is totally filled out.

When you finish responding to the last prompt, you get a "Was all the data correct?" question. A "Y" response will save the data to the datafile. A "N" response, returns to the beginning of that card, and allows you to start over, with a new feature added; use of the ESCape key. - When you get a prompt this time, you can elect to retype the whole response, and effectively, every response on the card; or you can press the ESCape key, which will retrieve the response you typed the first time through, display it, and go into the overwrite edit mode, so you can correct it if necessary. Pressing ENTER moves you on to the next prompt, and leaves the retrieved data in the field as if you had retyped it yourself.



If you press the ESCape key and the program "beeps" at you... there was no data that the program could retrieve, and you have to type it in manually. (This is one of those "you can't kill the sound" beeps. It's always there if you make a mistake, whether you've chosen the quiet mode or not.)

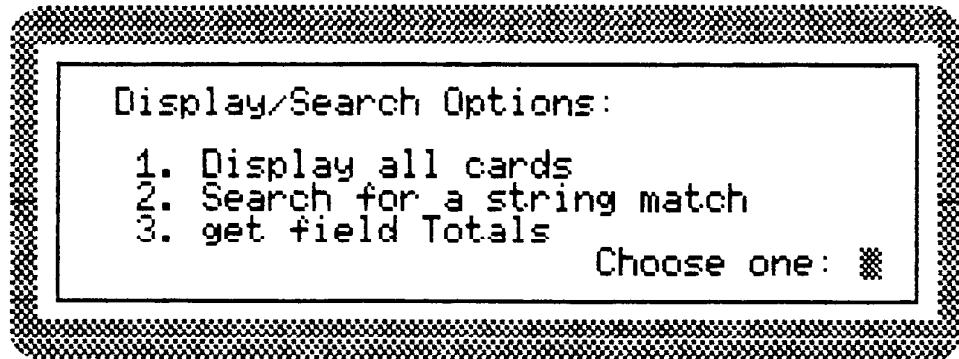
This "ESCape retrieval" feature is very valuable where you may be entering a series of cards with similar data in several fields, with only minor changes in some others. You can "retrieve" the fields that do not change from the last previously typed card, and type in only the different fields. This could be valuable in cases such as creating an inventory datafile. The name and address of a supplier would be the same on several consecutive cards, but a part number or price might differ. Obviously for this retrieval feature to work, you have to have typed at least one previous card. - Remember the data is retrieved from the same field on the LAST card, not the last field on the SAME card.

Retrieve works in any prompt field on the card, not just the first one. So you can duplicate as many fields as may be needed from card to card, simply by pressing ESCape, and the ENTER key alternately, as needed.

When the data is correct, and the card has been saved to the datafile, the program loops back to the beginning of the data input section, clears the screen, and starts you off at the top of a new card with the first prompt. At any time, on any prompt line, you can type "END" to terminate the input mode and return to the opening menu.

When you have finished input, and typed END, you go back to the opening menu. Go to page 17

## DISPLAY CARDS



This section of the program allows you to display cards on the screen from a specified data file. Your first options are to display all cards, select certain cards for display via a "word match" search, or to get totals from various fields on cards in the file.

To display all cards, type the number "1", the letter "D" or "d".  
Go to page 29

To display only cards that match a search criteria, type the number "2", the letter "S" or "s". Go to page 30

To get totals from fields on cards, type the number "3", the letter "T" or "t". Go to page 31

## DISPLAY ALL CARDS

This section of the program will read through the datafile, and display each card in the original format, including original prompts, just as it was entered into the file.

As each card is displayed, the program will stop, to allow you to read or review the data on the card. Note the flashing cursor in the upper right-hand corner of the screen. It contains the letter "R" in it. This is a reminder to press the ENTER key to continue on to the next card. ("R" = Return; Return key = ENTER key to some of us old-timers) I put it in the upper right-hand corner, where it would most likely not interfere with, or overwrite any data on the card.

Tip: Whenever you seem stuck at a display, look at the upper right-hand corner. If the flashing "R" is there, all you have to do is press the ENTER key to move on.

While you are reading through files in this manner, should you want a copy of the individual card dumped to the printer, all you have to do is press the PRINT button on your keyboard. Naturally you'd want to have your printer "on" and "ready" to receive such data dumps. Otherwise -- Lock Up! There's no error trap for pressing the PRINT button.

Pressing the PRINT button is accepted as a keypress, and in addition to dumping the screen content to the printer, the program will move on to the next card. So don't press the PRINT button, or any other key, until you are actually ready to move on to the next card display!

When you have displayed the last card, you'll get a "Last card has been displayed, Press any key to continue" message. Pressing any key will return you to the beginning of the program, the opening banner and opening menu.

Go to page 17

## SEARCH DISPLAY

Search display is very efficient, and has several options to narrow down your search. Your first choice is "Is this a <U>niversal search or a <S>pecific field search?" Respond with the letter "U" or the letter "S".

A "Universal" search will search all fields on every card for a match to the search word you will specify later. A "specific field" search will search for the matching word only in one specified field.

If you asked for a universal search, the program asks for the name of the datafile, checks to see it's there, and retrieves the template. If you asked for a specific field search, the program will ask for the filename, and then will display the template, along with a number for each field on the card. Note the field number which you will specify for the search. You can press `PRINT` to get a copy of the template if you like, or press `ENTER` to continue with the program. (Did you notice the flashing "R" in the upper right-hand corner?)

Next you specify what word you want to search for. Your "word" can be any word, group of numbers, or any group of characters that can be typed on the keyboard. Hopefully, something you expect to find on the cards.

If you specified a specific field search, the program will ask you in what "field" the search word will be found. Then it's on to the search.

The program displays an "I'm looking for it" message, and whenever a card is found where your search word matches the search criteria, the card is displayed on the screen. The program pauses to allow you to read the card, and the "R" cursor flashes in the upper right-hand corner. Press `PRINT` to get a copy of the card, or `ENTER` to search for the next card.

If your search didn't find any matching cards, you get a "No matching entries" message. If the program found at least one match, then the message is "No more matching entries". In either case, it is followed by "Press any key to continue", and pressing any key will return you to the beginning of the program, the opening banner and opening menu.

Go to page 17

Note that in all searches in all CRDFIL modules, the search is not case sensitive. It doesn't matter whether you provide your search word in upper or lower case letters, or whether the matching word on the card, whether in a universal search or specified-field search, can be in either upper or lower case.

"ADAMS" = "Adams" = "adams" = "AdAmS" = "aDaMs" = "adAMS", whatever.

## THE DATAFILE TOTALATOR

OK, the name is kind of corny, but gathering totals from specified fields on cards in the datafile can be a very useful feature... Imagine using the CRDFIL system as an expense account database. At the end of the month, you could retrieve all cards which dealt with business or travel expenses, total the amounts recorded on them, and produce a report based on the figures obtained.

Reportedly, one of our early users used the method to track and compile deduction data for his Income Tax, and his CPA LOVED it!

Or if you're a business-type, you can track expenses by category, capital outlay, operating expense, payroll, taxes, etc. If you set up the field in your original template, the Totalator can track the figures and produce the end-result figures for you.

One of the strong points is that you can gather field totals from all the cards in the file, or selected cards, using a search criteria, and you can total up to seven fields in the Model 100/102 version, up to fifteen fields in the Tandy 200 version. The data is displayed on the screen, and can be dumped to your printer when finished, or you can save the data to a file, where it can be retrieved later, to be included in a report of some type.

The opening option is whether you want to gather total figures from all cards in the datafile, or only selected cards. Your response can be an "A" or an "S".

The program asks for the file name, opens it and gets the template, then shows you a list of the fields, along with identifying numbers, as it did when you were doing a selective search. Again, you can press the PRINT button when the prompts and numbers are displayed, to get a paper list of the fields. Otherwise, press ENTER to continue.

If you asked for data from selected cards, you are then asked for the search criteria; the search word, and what field it will be found in.

Next you will be asked how many fields you want totals for. You can specify up to seven (fifteen for the 200). The program will then prompt you for the field numbers to be identified with each total. i.e. "Total # 1 will be for Field # 6". You entered the "6". Your fields can be entered in any order desired for the final output.

When you have indicated which fields get totalled into which registers, the program goes to work. And it reports "Working..." on the screen. It also shows the totaling registers, and shows the values incrementing as matching cards are found in the file, as the figures are retrieved from the cards and added to the cumulative totals.

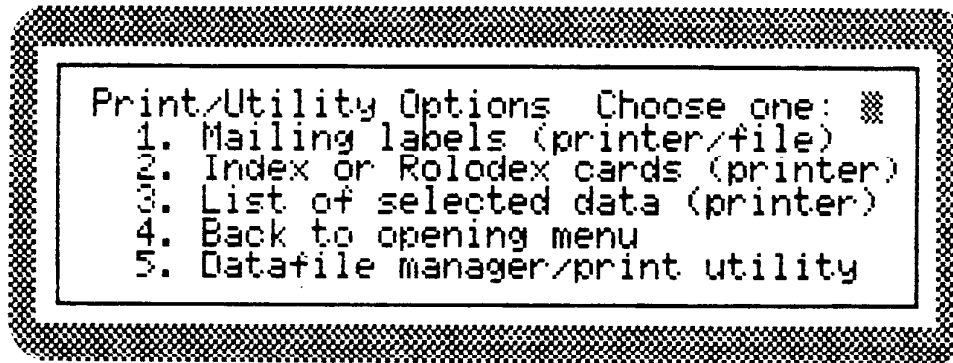
If you selected "all" cards, then the amount in the specified field on every card is added to the register(s). If a selective search, then only those fields which appear on matching cards will be added to the totals.

When the last card in the file has been read, the screen display will change to indicate how many cards were read, and what the field totals are. At this point, you can press PRINT to get a paper copy, or ENTER to go on to the next question, which is, "Do you want to save the totals?" You can respond with a "Y" or "N". If you choose to save the totals, the program asks for a filename to save them in. When provided, the totals are saved to the specified file, and the program reports "Done", and "Press any key to continue". Upon a key press, back you go to the opening banner/opening menu.

Go to page 17

The data that is saved to the file, if selected, includes the name of the original datafile, the name and total for each field. It is relatively easy to develop reports from that data using the TEXT program or any good word processor.

## PRINT MENU



This menu is essentially a "data output" selection menu. You can choose several output options directly, such as mailing labels, Index cards, Rolodex cards, printed listings of selected data, or the powerful Datafile Manager/Print Utility.

To print mailing labels, or similar small-label formats, or to save such output to a file for future use, type the number "1", or the letter "M" or "m". Go to page 34

To print Index or Rolodex-type cards, type the number "2", or the letter "I" or "i", or "R" or "r". Go to page 36

To print a list of selected data fields, type the number "3", or the letter "L" or "l". Go to page 39

To go back to the opening banner/opening menu, type the number "4", or the letter "B" or "b". Go to page 17

To go to the Datafile Manager/Print Utility, type the number "5", or the letter "D" or "d". Go to page 49

## MAILING LABEL OUTPUT

This section of the program extracts selected data from the datafile, formats it for label output, and sends it to the printer or saves it in a file for future use.

The first prompt asks for the name of the file to be used, and provides a display of the template and assigns a number to each prompt for reference. Next, you are asked how many lines can normally be printed on the label you will use. The "standard" is six lines per inch; so a 1 inch label, commonly used for mailing labels would have six lines. A two inch label would have twelve lines, etc.

At this point you are given an option to concatenate any two fields on the cards, and to put the output in any field. Not on the data in the file; the program does not rearrange your original file, but it can add two fields together for output. This is commonly used when a cardfile has been set up with first and last names separated. For example, if Jimmy was in Field number 1, and Jones was in field number two, adding field number 2 to field number 1 for output would give you "Jimmy Jones". Another selection might give you "Jones, Jimmy". The technique can also be used to add a State and Zip code field to a City field.

This feature only allows concatenating two fields. If you need to concatenate more than two fields, you can pre-sort the file, which also allows concatenating fields. Perhaps a zip-code sort; or a sort by last names.

Your option is to select it or not, with a "Y" or "N" answer. If you select "Y", then you will be asked "Add field number", "To field number", in two questions. That's pretty straight-forward, you add the first one to the second one. - But wait! It gets more complicated! Next question asks what characters you want to add between the two fields to separate them. You might want just a space, if you were adding "Jones" to "Jimmy", so it would come out "Jimmy Jones" instead of "JimmyJones". Or if you opt for last name first, you would want to add a comma and a space to get "Jones, Jimmy".

Finally, "Put the result in field number:" -- You get to choose where to stick it. errr... where to put it on output. For example, you might want to have the two fields in field number 1, then when you specify field #1 for output, you get both names on one line.

Next option is to select which field from the card you want printed on each line on the label. For example, you might want field number 1 (the "togetherness field") on line 1; then you might want field number 5 on line number 2; then field number 3 on line number 3. That's all OK, you get a chance to specify that in response to the prompts. You can use up all the available lines on your label if you want to, but normal practice is to leave at least one blank line at the bottom of the label to account for the "split" between the labels.



The program will allow you to do that by typing a zero to indicate a blank line at any given line. You can have more than one blank line; zero's don't count.

After you've decided, and instructed the program what fields are to be printed on what lines, you get to the "All" or "Selected" option again, and can choose to have output from all cards in the file, or only selected cards.

If you choose "Selected" output, you get a chance to select what field the search word will be found in, and the search word.

Now comes an important question; "Do you want to suppress blank lines in the output?" Respond "Y" or "N". A "Y" answer will not print a blank line in the middle of the label. Example: in many address formats, an additional address line is used to specify an alternate addressee (c/o So-and-So), or a business name, or ATTN line. If some of your addresses don't have such data, why put a blank line there anyway? The suppress blank line option will move any other lines up to fill that blank space, and will relocate the blank to the bottom of the label.

Your next question is also important, "Output to <L>abels or a <F>ile?" Respond with an "L" to get printer output, presumably onto labels. Use "F" to save the data to another file for later use. Data will be saved in the same form that it would be printed, so later, you can just dump the file to a printer to get the labels. If you choose "F", you get to name the file the data will be saved in. It can be in RAM, or an external disk drive, assuming your DOS will allow it.

If you specified printer output, the program will check to make sure the printer is there... on and ready. If not, it will warn you that the printer isn't ready.

When all the cards, or all the selected cards, have been printed, or saved to the new file, you will be informed that the printing is completed, and "Press any key to continue". Upon any keypress, back you go to the opening banner/opening menu.

Go to page 17

## INDEX CARD/ROLODEX CARD OUTPUT

This section of the program is much like the mailing label section; it extracts selected data from the datafile, formats it for card output, and sends it to the printer. It does not save the data to a file for future use like the mailing label section does.

The first prompt asks for the name of the file to be used, and provides a display of the template prompts and assigns them a number for reference. Next, you are asked how many lines can normally be printed on the card you will use. The "standard" is six lines per inch; so a 3 by 5 inch card, commonly used for such indexes, would have eighteen lines. A two inch card (like the small Rolodex cards) would have twelve lines, etc.

Next option is whether you want the card's "prompts" on the output cards. A "Y" or "N" answer is expected. Sometimes it will be useful, sometimes not.

The next question is whether you are using continuous form cards. "Y" or "N" answer required. The program allows a stop between cards if you are not using continuous forms, so you can insert a new card each time.

At this point you are given the option to concatenate any two fields on the cards, and to put the output in any field. Not on the data in the file; the program does not rearrange your original file, but it can add two fields together for output. This is commonly used when a cardfile has been set up with first and last names separated. For example, if Jimmy was in Field number 1, and Jones was in field number two, adding field number 2 to field number 1 for output would give you "Jimmy Jones". Another selection might give you "Jones, Jimmy". The technique can also be used to add a State and Zip code field to a City field.

This feature only allows concatenating two fields. If you need to concatenate more than two fields, you can pre-sort the file, which also allows concatenating fields. Perhaps a zip-code sort; or a sort by the last name.

Your option is to select it or not, with a "Y" or "N" answer. If you select "Y", then you will be asked "Add field number", "To field number", in two questions. That's pretty straight-forward, you add the first one to the second one. - But wait! It gets more complicated! Next question asks what characters you want to add between the two field to separate them. You might want just a space, if you were adding "Jones" to "Jimmy", so it would come out "Jimmy Jones" instead of "JimmyJones". Or if you opt for last name first, you would want to add a comma and a space to get "Jones, Jimmy".

Finally, "Put the result in field number:" -- You get to choose where to put it on output. For example, you might want to have the two fields in field number 1, then when you specify field #1 for output, you get both names on one line.

Next option is to select which field you want printed on each line on the card. For example, you might want field number 1 (the "togetherness field") on line 1; then you might want field number 5 on line number 2; then field number 3 on line number 3. That's all OK, you get a chance to specify that in response to the prompts. You can also specify if lines are to be left blank, by typing a zero when asked what field to put on that line. You can have as many blank lines as you want on the card.

Now, the "All" or "Selected" option again, and you can choose to have output from all cards in the file, or only selected cards.

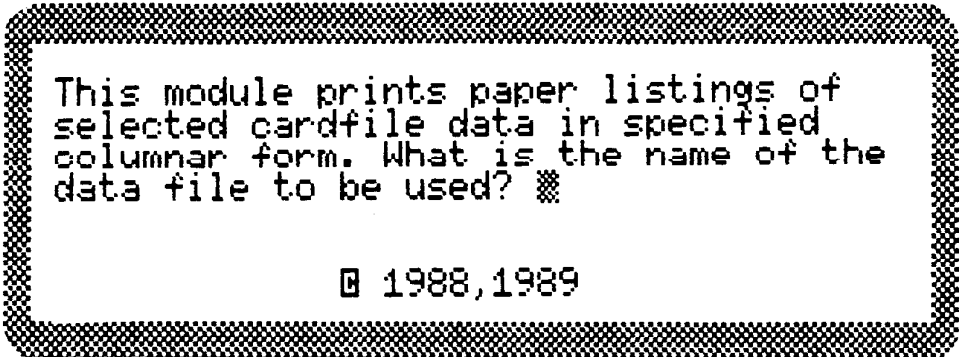
If you choose "Selected" output, you get a chance to select what field the search word will be found in, and the search word.

The program will now check to make sure the printer is there... on and ready. If not, it will warn you that the printer isn't ready, and wait until you get it ready. When it's all ready to go, press the ENTER key, and your cards will be sent to the printer as specified. If you indicated you were not using continuous forms cards, output will stop between cards, and you will be asked to press ENTER for the next card to be printed.

When all the cards, or all the selected cards, have been printed, or saved to the new file, you will be informed that the printing is completed, and "Press any key to continue". Upon any keypress, back you go to the opening banner/opening menu.

Go to page 17

## SELECTED DATA LIST



This module prints paper listings of selected cardfile data in specified columnar form. What is the name of the data file to be used? \*

Q 1988,1989

This module is designed to print data from the datafile in columnar form on paper. Such data lists can be developed into reports of selected data, or may simply be used to generate lists from data in the file.

This module is extremely flexible, with many questions and options presented prior to final output of the lists. Since it is simply a questions and answer setup, it almost needs no explanation, just run the program and follow the prompts.

After responding to the filename question, the card template is displayed, along with reference numbers. You can press PRINT to get a paper copy of the list.

You are then asked to type the numbers of the fields you want listed on paper in the order you want them printed, left to right. For example, if you want the data from field 8 printed in the first column, you'd indicate "8", first, when prompted for the order of printing. A zero will terminate the printing order prompts, and verify the number of columns you want printed on the paper.

The program then asks for the names and widths of each column specified, and then adds up the number of columns specified and asks if your printer can support that number of columns. If your answer is "Y", then the program moves on. However, if you answered "N", you are given the opportunity to change both names and column widths for the output data, so it will fit. The program will not allow you to use a column name wider than the column itself; thus, you can't use the five character word "State" to identify a two character column.

The next option is presented in the form of a menu... output from all cards, selected cards, or scrap the whole thing and return to the menu. You can select the desired action by number or indicated letter.

At this point, you are allowed to concatenate the contents of any two "fields", and to insert them into any field for output. See page 34, paragraphs 3 and 4 for a more complete description of how this function works.

Now we get to page formatting parameters... stuff needed to properly format the page output. The first option is, "Assuming you are going to print on continuous form paper, how many blank lines do you want at the top of the sheet for a top margin?" You may respond with any number you wish... anywhere from 3 to 6 is a "normal" range.

Next, "How many lines do you want printed on each page, INCLUDING the lines specified for a top margin?" Suppose you want about 50 lines on a page, and you indicated 6 lines for a top margin... then your response here would be 56, the total number of lines printed, plus the lines used by the top margin.

Next, you can set a left margin, an "indent" from the printer's default left margin. Use this carefully, it affects where the data will be printed on the page, and might send the right side off the right edge of the paper if the columns are close to being as wide as the paper can accommodate.

It might be a good idea to manually set up your printer before you start, since the program issues no printer commands, to accommodate the width of the lines you selected. Either set the printer to Elite or Compressed mode to get the most data on a sheet.

The next option is whether you want each page numbered consecutively. If you answer "Y", then the following question will ask for a starting page number. The page number is printed at the bottom center of each page. That's the only position provided for in the code.

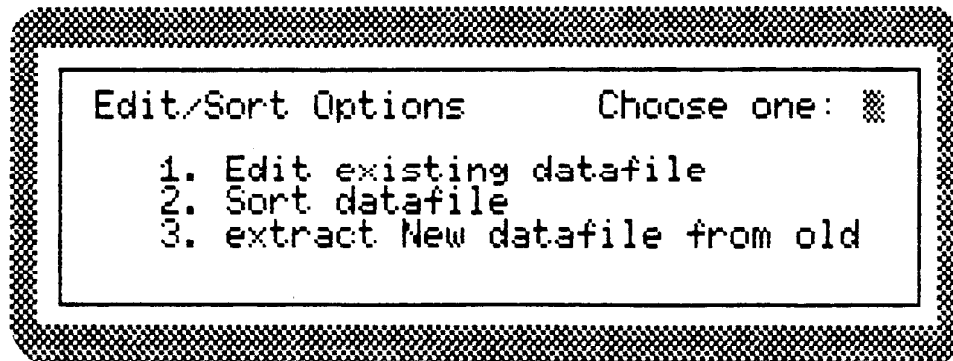
However, you get to add title lines to each page if you want, that's the next question, "Do you want a title line?" A "Y" answer will then ask if the title line is to appear on only the first page, or on all pages. The next question is how many lines in your title, and ask you to type each line, ending each line by pressing the ENTER key. You can use any reasonable number of title lines, 1, or 3, or 6, whatever. The number you select is subtracted from the number of lines printed on each page, to allow for the space used.

If you selected selective search, you are then asked for the search word, and the field in which it will be found.

You are now ready to print. The printer is checked to see if it's ready, and if so, pressing ENTER at the "ready" prompt will start non-stop printing of the selected data fields from the selected cards.

After the last card has been examined, and the last line printed, you will be informed that the last card has been printed. Press the ENTER key, and you go back to the opening banner/opening menu.

## THE EDIT/SORT MENU



The edit module is extracted and revised from the copyrighted program CRDFIL.EDT by Charles Lewis.

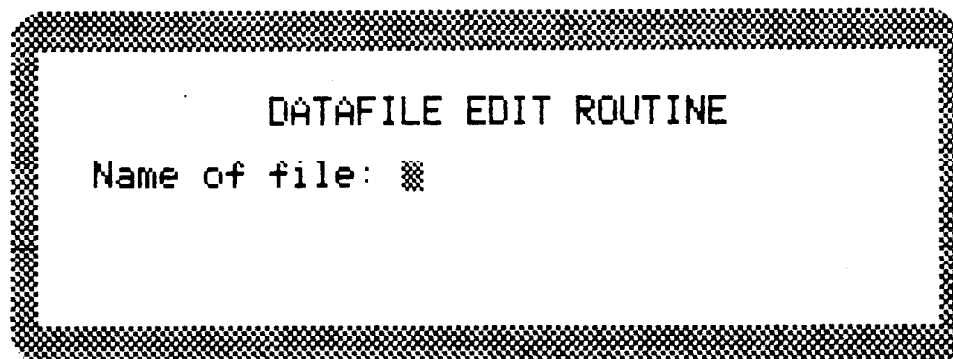
The opening screen provides three options, Edit cards from an existing datafile, Sort the datafile, or extract a new datafile from an old one. You may select your options here by either number or capitalized letter in the option list.

To edit cards from an existing datafile, type the number "1", or the letter "E" or "e". Go to page 43

To sort an existing datafile, type the number "2", or the letter "S" or "s". Go to page 45

To extract a new datafile from an existing file, type the number "3", or the letter "N" or "n". Go to page 49

## THE EDIT MODULE



The edit module is very powerful, allowing you to edit or change both field names (prompts), and/or data in the file itself. It's main drawback is that it needs to have two files open at the same time, one for input of data from the old cards, and one for output to an edited file. If you have no external storage device, such as a disk drive or cassette, then both files will have to be able to fit into RAM at the same time, limiting datafile size to something under half of your maximum available RAM space. If one of the files can be on an external device, that will make it easier to work with, but at least one file must still be able to fit in RAM. File size in this case is probably limited to about 2000 bytes less than free RAM space, allowing for the program's variable storage and string manipulation needs.

If you are one of the lucky few who have a disk drive or storage device which allows more than one open file at the same time, like one for input, and one for output, you are indeed blessed. You can work with both files from the disk or storage device, and are limited only by the file size allowed by the device.

After obtaining the data file name, and retrieving the template, the program allows you to review the template, to refresh your memory about the prompts actually used in the original file. After displaying the template, you are asked if it is all OK? If your response is "N", then the program asks if you want to change any of the field names. If you answer "Y" to that, then the program first asks what character or characters you want to add to the end of each prompt when you type it. Useful for automatically adding a space or a colon after each "prompt".

Then each prompt is displayed in it's proper position, and you are asked if it's OK? If "Y", then the next prompt is displayed.

If you reach one that isn't OK, then respond with a "N", and the program calls the original input routine, and you can move the prompt's location, as well as change the prompt itself.

Once all the prompts are OK, the program asks if you want to edit the cards. This is provided in case you only wanted to change some of the prompt names or print locations. If you answer "N", all the cards from the old datafile are copied to the new file, and you get to the "Last Card Done" message.

If your answer was "Y", then the next option is to edit all cards, or selected cards from the datafile. If you select "Selected", then you will be asked for the search word to match, and the field in which it is likely to be found.

At this point, you see a screen that advises how the editing mode works; "As each card is displayed, press the ENTER key if the card is OK, or the letter "E" (or "e") to edit the card, or "D" (or "d") to delete the card completely from the new file. Type over any incorrect entries to correct them."

The program then displays the first card, or the first selected card for disposition. If a card in the original file was not "selected" for editing, it is passed unchanged to the new datafile. Only those cards that are "selected" by the search criteria will be displayed, unless ALL cards were selected, in which case each and every card is displayed for editing options.

First, the program displays the selected card. You can press the ENTER key, accepting it as-is, and it is passed to the new datafile unchanged. Or, you can press the D key, and the card is deleted from the new file completely. Or, you can press the E key, and you go into an editing mode that is a lot like the way initial input for a new file, or adding cards to an existing file, works. A prompt and its associated data is displayed, and the cursor is placed at the beginning of the data. If it is OK, just press the ENTER key. If it needs to be changed, simply type over the old data and it is automatically replaced with the new data. The entire new card is then displayed, and you can again select to accept it, edit it, or delete it entirely.

When you have finished the last card from the original data file, "Last Card Done" is displayed, and you are asked if you want to kill the original file. If you respond "Y", the file will be killed immediately. You are then asked if you want to rename the temporary file? If you respond "Y", and you have erased the old file, the new file is given the old filename. If you respond "Y" and did NOT erase the old file, then you will be asked for a name for the new file. If you do not rename the new file, when you get back to the new menu, you will find the new data in a file called "[QX].DO". The square brackets are used to signify a temporary CRDFIL file during program operations.

After renaming the temporary file, the program returns to the opening banner/opening menu. Go to page 17



## THE SORT MODULE

## DATAFILE SORT ROUTINE

Options:            Choose one by number: ☒

1. Absolute alpha/numeric sort
2. Relative alpha/numeric sort
3. Straight Ascii sort

This module allows you to "sort" a datafile into an ascending sort based on any field, or combination of fields. If you wish to sort on more than one field, it requires more than one sort, and is based on the "diminishing fields" concept, where the most important field is sorted last, the least important field is sorted first. In this case, suppose you have a name and address file, with the first name in one field, and the second name in the second field. First you would sort by first name, then by last name. The final result will give you an ordered list, with first name priority in the list among similar last names. Thus, Jones, John comes before Jones, Mary, regardless of how they may actually appear in the original file.

In order to deal with all possible file structures, I've chosen a "keyword sort" method here, where a specified field becomes the keyword. The keywords are extracted from the file, sorted, then the cards are matched up with the sorted list, and written to a second file. In this method, three files are required; the input file, the output file, and the keyword sort file. Unless your original datafile is small, I would recommend either the input or output file be on an external device; disk drive preferred. In the interests of speed, I'd recommend the output file be on the external device. In matching up the original "cards" with the sorted keyword list, the file has to be read several times, locating the matches. If the file is in RAM, search speed is much faster. The actual "sort" takes only a few seconds... it's written in assembly language. Typically, a file of 80 to 100 keywords, representing 80 to 100 cards, can be sorted in 8 to 10 seconds. What takes the time is reading through the original file to find all the keyword matches, in order to restructure the output file.

Keyword sort requires a minimum of ten bytes to store each "keyword" and the accompanying data, so in a computer with about 25,000 bytes available, a practical sort is limited to about 2500 "records". This would represent a huge datafile, typically ten times as large as the single-field "keyword" extracted for the sort. Such datafiles exceed the capacity of the program and the storage medium, so it's unlikely you'll ever create that large a file.

Typically, disk and RAMdisk files are limited to 64K. Assuming about 200 bytes for a "card" (remember it has to fit on the screen, along with the prompts), such a file would contain an "average" of about 320 "cards". So maybe files of 500 cards are possible, using an external device for storage, and very small "cards". Certainly such a file is unlikely to be RAM based.

There is another approach available; Randy Hess has written a stand-alone support program for the CRDFIL series, called CRDSRT.BA, which is available for downloading on CompuServe's Model 100 forum. It's in Library 4. Also get the file CRDSRT.DOC which contains the operating instructions. It differs from the keyword sort method, in that it reads your datafile, makes all the data from the card into one line, through concatenation, then sorts the entire datafile in RAM, using a sort program called SORTHI.100, also available in the forum's Library #7. After sorting, the data is restructured to the original format in a new file. The program supports disk-based files, as long as they can be brought into RAM for sorting, and you have a DOS that will read and write directly to files on the disk.

This approach has a major benefit, and a few limitations. The benefit is that in the process of concatenation of the card data, you can order the fields into any priority, so that a single sort will put the entire file into any order you select. One limitation is that no "card" in your file can contain more than 255 characters of data, all together. If it does, the program won't run. Second, the only sort criteria is an ascending ascii sort. In this method, any entry with lower-case letters is separated from similar entries with upper case letters, and placed at the end of the file with all other lower-case entries. -- You can't get a "true" alphabetic sort. For example, entries could be in three forms; all upper case, an upper case first character followed by lower case letters, and all lower-case. ("ADAMS", "Adams", and "adams") In an ascii sort, the first two would be at the top of the file, with the mixed-case following the all-upper-case entries. The all lower-case would be at the end of the file, after all the other upper-case entries. (See Appendix "A" for a further description of sort methods)

Another limitation is that "number fields" are not sorted correctly. In a column of numbers, "11" through "19" follows "1", and comes before "2", "3", and all the rest of the single numbers. A file that has fields of varying lengths, perhaps part numbers, when being concatenated with other fields, can come out as "12345678Screw6-32" or "1234Screw1/4-20". Which comes first in output, the "1234", or the "12345678"? I'd choose "1234" as first, being lower than "12345678", but an ascii sort places them the other way around.

Randy's program takes slightly less time, but the larger the original datafile, the longer it takes to sort - ten to fifteen minutes is not uncommon with large datafiles. This is partially because of the slow clock speed of the portables, and partly because the actual sort routine is a bubble sort; generally considered to be the slowest possible sort method.

However, in some cases it could be a useful method, and is recommended as an auxiliary support program for your CRDFIL.ROM.

The opening menu in the Sort Module gives you the choice of three types of sorts. The "absolute" sort, where all entries are placed in proper alphabetic order, regardless of upper and lower-case differences. The "relative" sort, where all similar letters are grouped together, but upper and lower-case differences are preserved. ("adam" follows "Adam", and both follow "ADAM") And last, a standard ascii sort, where mixed-case follows upper-case, and lower-case follows everything else. See Appendix "A" for illustrations of the various forms.

You must choose your sort method by number, 1, 2 or 3.

Next, you are given the opportunity to review the datafile template, to refresh your memory on which field you want to sort by, and get a number to identify it. If you already know what field you want to sort by, then "N" will move you on to the next question, which asks what field number to sort by.

The program will now extract the specified fields for the sort, and save them to a file in RAM, then sort them. The program will report what it is doing through this operation. You'll see that the actual "sort" is very fast.

When the sort is finished, you will be asked for the name of the new output file. Again, let me suggest disk for output, if you have one available.

You will also have an opportunity to "restructure" a couple of the fields through concatenation, prior to output to the new file. You've seen this before in other modules, and it works the same way; the program adds the data in one field to the data in another, and puts the result in any field on the card, including back to one of the original two fields. You might use this to add the zip code to the city and state field, or to add two parts of a person's name together, in name/address files where they are separated for sorting purposes.

You will be asked if you want to write the template to the new file. In most cases this will be a "Y" answer, but in some cases, you might want just the sorted data, and not the template, so this is allowed. Use this feature judiciously; without a template the datafile cannot be redisplayed or used by the CRDFIL program for other applications.

The program now enters the "reconstruction" phase. It gets a keyword from the sorted file, and searches through the original datafile for the matching "card". When found, it saves the match to the new file. - This process takes some time; typically, it finds and rewrites about ten cards a minute, so an 80 card file takes about 8 minutes to rewrite. Speed depends on how close to "sorted" the original file was when you started.

When reconstruction of the datafile is completed, you will be given the choice to kill the original data file. In most cases, I'd recommend against killing the original file... save it as a backup copy of the new file, just in case. In any case, if you did not save the template to the new file, the program will remind you that you didn't, and ask you to confirm killing the original file.

Pay attention; this could be disasterous! The program will do what you tell it to do!

Either way, yes or no, the program will now return to the opening banner-opening menu.

Go to page 17

## THE DATAFILE MANAGER

## CARDFILE DATA MANAGER/PRINT UTILITY

The main purpose of this module is to extract new datafiles from an old one, but it can also be used to print or save special files from the original. Press any key to continue

The Datafile Manager module is extracted and revised from the copyrighted program CRDFIL.PR4 by Bob Craft. It is a multi-purpose program that can extract a new datafile from an old datafile, it can print or save extracted data from a datafile, or send specified information to another computer via the RS-232 port. Output devices supported include RAM, Printer, Disk, Cassette, and the COM port.

The opening screen explains the main purpose of the module. Pressing the ENTER key clears the screen and asks for the name of the file to be used. This is followed by a menu which allows you to select output from all cards or from selected cards.

Next, you will be asked if you want to write the template to output. This is very important if you are creating a new datafile, since without a template, you have the data, but no way to display it. If you are extracting data to go in a report or print on cards, envelopes, or whatever, you would not need the template, since you are not creating a new datafile for display.

You are also given the opportunity to review the template, to refresh your memory on what fields are available for manipulation.

You will be asked if you want to include the prompts in the output. A "Y" choice here would be useful in printing lists or cards in non-standard format, including both the "prompt" and the data.

You will also be given an opportunity to change any prompts or field names that do not exactly fit your output criteria. For example, you might want to change "Name: " back to "Name of Applicant: ", or "C/S/Z" to "City, State, Zip: ". If you elect to change any prompts, just select the one you want to change by number, the program displays the present prompt, and you type in what you want it changed to. Type a zero to exit this routine, or respond "N" to the "Do Another?" question.

After you have made your changes, you are given a chance to review the prompts again, just to make sure they are all Ok. -- You don't HAVE to review them again, if you're sure they were all Ok, you can type "N" and bypass the review. But you will need to know what the field numbers are, if you want to select only some of them for output.

At this point, you are allowed to concatenate the contents of any two "fields", and to insert them into any field for output. See page 34, paragraphs 3 and 4 for a more complete description of how this function works.

Next, you'll be asked if you want to output all data fields, and if you respond with an "N", then you will be asked which field numbers you want to select for output. Just type in the number of any field you want to select for output, and type a zero after you have selected the last one.

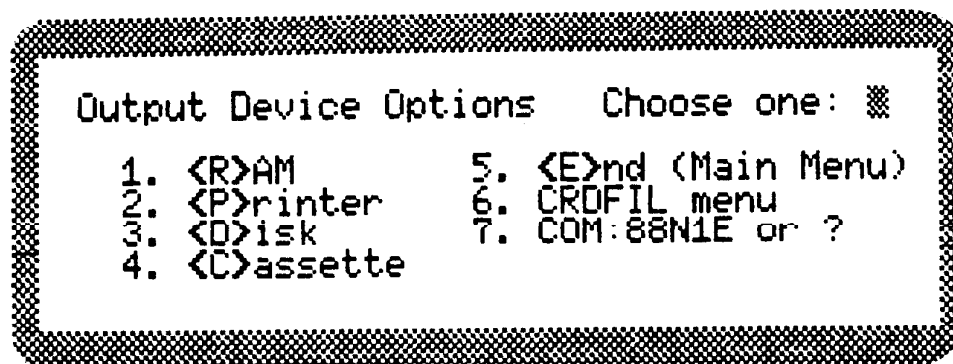
You will then get a chance to review the prompts again, to verify that you have selected the right ones, and if all is OK, you'll move on to the next question. If not, the original data structure is restored, and you're given another chance to select which fields go to output.

When you are satisfied with your prompt changes (if any) and your output selection, you will be asked for output formatting information, starting with the number of lines in the output. You can use this figure to match the number of lines on output media, or to create blank line spacing between "cards" in an output file. Example, if you have four lines of data selected for output, choosing six lines in the output would separate your four line groups by two blank lines, and incidently would format the output correctly for mailing label-type output. Selecting 18 lines for output format would be correct to put your four data lines on a standard, continuous form 3 by 5 index card.

There is a possibility of error here, which the program will trap... if, for example you have chosen to send the selected data to a new datafile, and included the template, the number of lines in output must match the number of lines expected by the template; otherwise the data will be out of sync with the template on future displays, and the file will be useless. If you did NOT save the template to output, then you can use any value you want for number of output lines, and use those extra blank lines for data separation.

If, a while ago, you selected "Selective Search", at this point you will be asked for the field number to search in, and the search word. - This is the standard search method used by all the other modules; you should be familiar with it by now.

At this point, you will be given a list of output options. (See the menu display at the top of the next page)



The destination for output can be selected here.

"1", "R", or "r" selects output to a RAM file, and you will be asked to provide a name for the output file.

"2", "P", or "p" selects output to the printer, and you will be asked for top margin and left margin settings. If you are not sending the template to output, you will also be asked if you want to suppress blank lines.

"3", "D", or "d" selects output to a disk drive, and will automatically add the prefix "0:" to the filename you specify for output.

"4", "C", or "c" selects output to a cassette drive, and automatically adds "CAS:" to the filename you specify for output.

"5", "E" or "e", or "M" or "m" will abort the module and return you to the computer's main menu. Just in case you change your mind about the whole process.

"6" will return you to the CRDFIL opening banner/opening menu.

"7" will allow you to send data to the RS-232 port for output, and will allow you to select the default parameter of 88N1E, which is 9600 baud, 8-bit data, or specify the COM parameter you want. You might want a slower baud rate to match a serial printer, or a faster rate to send data to another computer.

You now reach a "Finally ready for output, Press any key to continue" message. If you selected printer output, printer availability is verified, and if not ready, you are asked to make it ready before proceeding. If all is Ok, when you press ENTER, data output will begin, and will continue until the job is completed. "Output completed" will appear on the screen, and a press of the ENTER key will take you back to the opening banner/opening menu.

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## PERPETUAL CALENDAR

NOVEMBER 1989						
SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		
						Another? █

The perpetual calendar is not really part of the CRDFIL program, but was added as an extra feature during the early stages of development to take advantage of "all that extra space" in the ROM chip. We've kept it in the program because it's kinda useful, but if we need the space for future improvements in CRDFIL, the calendar will have to go. Meanwhile, it's a useful feature.

When the calendar first comes up, it shows the calendar for the current month, according to the calendar in the computer's clock. For Model 100 users with the well-known DATE Bug, where the calendar randomly changes to different years, this may not be accurate.

On the bottom line of the screen, you will see "Another?" and a flashing cursor. If you press "Y" or "y", the program will allow you to select the month and year to be displayed. Note that the year requires correct input; "87" is not the same as "1987".

Although the calendar will calculate and display a calendar for any year selected, from the year 0, the Gregorian Calendar, which we presently use, was developed in 1582, and is technically accurate only from that time. So while you can look up the "Ides of March" (the fifteenth) to see on what day Julius Caesar was killed, the odds are 6 to 1 against it having actually occurred on the day indicated. Besides, Julius Caesar lived from 100-44 B.C., which would require a negative year calculation, -44, and I can't vouch for the accuracy of the calendar program for negative years. But, for looking up the day of the week your wife's birthday will fall on next year, it's perfectly accurate.

If you type the letter "N" or "n", or any other letter, or just press the ENTER key, the program will go back to the opening CRDFIL banner. Go back to page 17.



## APPENDIX "A"

## SORTING METHODS:

Consider list 1, a random group of names, extracted from a typical name and address datafile. (or maybe "non-typical")

List 2 shows how this file will be sorted in an "absolute" sort. All the entries end up in a real, alphabetic order, regardless of upper or lower-case differences.

List 3 shows the same group of names in a "relative" sort. In this method, a combination of "absolute" and "ascii", all the upper-case only entries come to the top of the list, followed by mixed-case entries that start with an upper-case letter, followed by lower case entries. In this approach, all the letters are "grouped", so that all the "A's" appear first, followed by the "B's", etc.

List 4 shows a standard "ascii" sort. Note that the entries which start with lower-case letters have sifted down to the bottom of the file.

<p>1 carpenter, james adams, mary ADAMS, harry BAKER, Jim Adamson, Steve Adams, Tom Ackerman, Tim armstrong, Bob anderson, tony ADAMS, John Armstrong, Harry</p>	<p>2 Ackerman, Tim ADAMS, harry ADAMS, John adams, mary Adams, Tom Adamson, Steve anderson, tony armstrong, Bob Armstrong, Harry BAKER, Jim carpenter, james</p>
<p>3 ADAMS, John ADAMS, harry Ackerman, Tim Adams, Tom Adamson, Steve Armstrong, Harry adams, mary anderson, tony armstrong, Bob BAKER, Jim carpenter, james</p>	<p>4 ADAMS, John ADAMS, harry Ackerman, Tim Adams, Tom Adamson, Steve Armstrong, Harry BAKER, Jim adams, mary anderson, tony armstrong, Bob carpenter, james</p>

In all sorting methods, entries which begin with blank spaces or numbers sort to the top of the list, before any alphabetic characters.

APPENDIX "B"

PROGRAM ENHANCEMENTS FOR THE TANDY 200:

In addition to the larger screen display, there are a few special functions available to users of the Tandy 200.

1. Considering the difference in screen display capabilities, datafiles created on the 200 will seldom be usable by an owner of a 100 or 102, unless the 200 owner takes precautions to make sure his screen displays use only the upper half of the 200's screen. In order to assist the 200 owner who wants to create a datafile usable on either machine, typing the letter "L" or "l" at the opening menu, will cause a horizontal line to be drawn across the middle of the screen, and the bottom half to be "blacked out" during all template creating modes. This will indicate the "safe area" for displays on the 100/102 screen on the top half of the 200 screen.
2. The "Totalator" allows you to gather totals from up to fifteen fields on each card in the datafile.
3. Screen menus have been opened up to allow less cramping of the displays, and some menus have been rearranged to display better on the larger screen.

## APPENDIX "C"

The following are sample data templates, which can be typed directly into a TEXT file, then accessed using the CRDFIL program. They can be modified to suit your needs, and are provided here as both working samples and ideas. For best screen display, when typing these templates into TEXT, add a single space after each colon. That's the way these templates were originally created, but which doesn't show here.

VIDEO LIBRARY: This template allows you to maintain a database of films or videotapes, as in a library or collection. It allows you to enter a file number, the date acquired, the title, a list of the principal actors, the running time, whether the film is in black and white or color, the source of the film (cable, PRT, etc), and whether the film includes commercials (cable or commercial TV).

```

8
No:
0
Date:
21
Title:
40
Actors:
120
Time:
200
Col/BW:
221
Source:
240
Cmls:
261

```

VENDOR LIST: This is a CRDFIL template which allows you to create and maintain a list of vendors; sort of a card file of people or companies you buy things from regularly.

```

10
Name:
0
Address:
40
City/St:
80
Zip:
120
Phn:
142

```

(continued on the next page)

Contact:  
160  
V#  
190  
Products:  
200  
LotPch:  
280  
Inv#  
302

(Note that in the above template, in two number fields, we have manually substituted a cross-hatch for a colon at the end of the prompt.)

CREDIT CARD LIST: This template is designed to keep a record of your credit cards, which is vital information in case of loss or theft.

10  
Card Type/Name:  
0  
Card Number:  
40  
Issued by:  
80  
Address:  
120  
City/St:  
160  
Zip:  
200  
Phone:  
215  
Alt Phone:  
240  
Card expires:  
280  
Limit:  
300

TIRE WARRANTIES: This template is designed to keep track of tire purchases and warranties.

10  
Brand:  
0  
Type:  
40  
Size:  
80  
Date:  
120

(continued on next page)

Warranty:  
134  
Dealer:  
160  
Address:  
200  
City/St:  
240  
Zip:  
280  
Phone:  
294

EQUIPMENT LIST: This template tracks equipment information which may be of importance in case of loss or theft. Particularly useful when filing an insurance claim.

9  
Descr:  
0  
Brand:  
40  
Model #  
80  
Serial:  
120  
Purch:  
160  
Value:  
186  
Marks:  
200  
Dealer:  
240  
Location:  
280

INCOME TAX 1: This template tracks income, and includes source, file number assigned, amount, income tax withheld, state tax withheld, and social security tax withheld.

6  
Name:  
0  
File No.:  
80  
Amount:  
160  
Fed. Tax:  
240  
State Tx:  
253  
FICA:  
266

INCOME TAX 2: This template tracks other taxes paid such as property tax, license tags, personal property tax, etc.

4  
Name:  
40  
File No.:  
120  
Type:  
200  
Amt.:  
220

INCOME TAX 3: This template tracks payments in which interest is included and has provision for noting whether or not the debt was or was not for a credit card.

5  
Name:  
40  
Acct. No.:  
120  
File No.:  
200  
Amt.:  
218  
Card?:  
232

INCOME TAX 4: This template is for other deductible expenses except for automobile usage. (See TAX 5)

3  
Name:  
40  
File No.:  
120  
Amt.:  
200

INCOME TAX 5: This template is for automobile expenses and provides a notation as to whether or not a credit card was used.

5  
Name:  
40  
Acct. No.:  
120  
File No.:  
200  
Amt.:  
218  
Card?:  
232

INCOME TAX 6: This template tracks contributions to Church and charities.

3  
 Name:  
 40  
 File No.:  
 120  
 Amt.:  
 200

SUNDAY SCHOOL: This template keeps track of Sunday School class members, their spouses, addresses, phone numbers, birthdays, and other information, and can be adapted to similar uses for groups or memberships. By using the sort module, it's possible to sort and resort the file to obtain any information needed, such as who has a birthday in 08/, or 09/.

14  
 Last:  
 0  
 First:  
 19  
 Wife:  
 40  
 Tel:  
 59  
 Add:  
 80  
 City:  
 120  
 ZIP:  
 139  
 Memb:  
 160  
 Assoc:  
 179  
 Church Memb:  
 200  
 Birthday:  
 219  
 Officer:  
 240  
 Group:  
 259  
 Position:  
 280

ADDRESS LIST: The following template is an example of a complete name and address file of personal contacts, friends and relatives, including space for useful personal information, which can be adapted to any users needs. Several useful sub-files can be extracted from a file such as this. The "Other" field allows two lines for listing birthdays, anniversaries, or other useful information.

10  
Name:  
0  
First:  
40  
Spouse:  
60  
Address:  
80  
City:  
120  
St:  
150  
ZIP:  
160  
Phone:  
172  
Children:  
200  
Other:  
240

DATE LIST: This template is used to record every important date such as anniversaries and your wife's birthday; you can include family members, associates or any other important date. Use the sort module to sort them by month, and then print the list for easy reference.

5  
Last:  
0  
First:  
40  
Event:  
80  
Date:  
120  
Other:  
160

MEDICAL RECORD: This template is used to keep track of medical insurance, dates claims are filed, and when paid. Use the Edit module to update records, when payment is received, etc.

5  
COMPANY:  
0  
DOCTOR:  
80  
AMOUNT:  
160  
SENT:  
240  
REC'D:  
260



CREDIT DEBTS: This template keeps track of the name, address, and phone number of each of your creditors, an arbitrary file number, credit card number if necessary, and the amount of the current bill. Data can be updated or changed using the Edit module when the bill is paid, or new amounts can be entered as the bills come in each month. Note the use of an unassigned field name, generally used as a second address line.

10  
 NAME:  
 0  
 FILE #:  
 40  
 ACCT #:  
 80  
 ADDR:  
 120  
 :  
 163  
 CITY:  
 200  
 STATE:  
 220  
 ZIP:  
 240  
 CARD? (Y/N):  
 280  
 AMOUNT:  
 300

RADIO LIST: This template can be used to keep a list of favorite radio stations, and may be useful to travelers who want to keep a list of radio stations in various areas. The alternate list may be useful to CBer's, truckers, and amateur radio operators.

5	5
AM/FM:	CALL:
40	40
Button:	Handle:
120	120
Station:	Freq:
200	200
Frequency:	City:
219	240
City:	State:
280	280

ARTICLE INDEX: This template helps you find magazine articles of interest that you may have misplaced, or can be used to organize notes for a school or research project. It allows three screen lines for notes, which can be useful in subject matter searches.

6  
Magazine:  
0  
Issue:  
40  
Article:  
80  
Author:  
120  
Page:  
160  
Notes:  
200

INVENTORY/PARTS LIST: This template illustrates a simple way to track a small business inventory, parts, vendors, stock quantities, delivery schedules, and reorder quantities. Lists can be printed which track individual suppliers, part numbers, stock on hand, etc.

12  
Name :  
0  
Address:  
40  
Adr 2 :  
80  
City/St:  
120  
Zip:  
160  
Phone:  
180  
Descr:  
200  
Part#  
240  
Deliv:  
260  
Price:  
280  
Stock:  
293  
Reord:  
306

Several of the above templates have been provided by our beta tester, George Sherman. (Thanks, George)

## ADDENDA

### Version 5.07 Changes

1. Internal program changes to make the program more efficient, run better, or remove code duplication.

2. Added a Grand Total calculation to the Totalator code, which will display the grand total of all field totals calculated, prior to asking if you wish to save the totals. Saves the grand total with the totals in the named file if that option is chosen.

The "Grand Total" is calculated by adding up all the totals. There is no capability for a "calculated" grand total - you cannot add the totals of fields 1 and 2, and subtract the total of field 3, then divide by field 4, etc. It is a straight-forward total of all the fields selected for totalling. It is possible however, to subtract the contents of specified fields from the grand total, by the simple method of storing the original data in that field in the form of a negative number. Adding a negative number to a positive number effectively subtracts the negative number.

How can this be used? As an example, in tracking merchandise that includes a quantity discount, you could have one field with the actual price, and another field which lists the discount, expressed as a negative value. If the product costs \$8.50, for example, and has a 20% discount at 100 units, field 1 might contain 8.50, and field 2, -1.70. Adding the two fields together in the totalator, gives you a grand total of 6.80, the actual price of the product.  $(8.50 + (-1.70) = 6.80)$  Of course the computer rounds that off to 6.8, you have to mentally add the last zero. Can't make the program do that, because a lot of users are totalling other things, not dollars and cents, which don't require the two decimal places.

The grand total feature may be useful to you, and it may not, it depends on how you use it. It is not optional, there wasn't enough available space in the ROM code to add the code to make it optional.

3. The "Kill the ROM" routine has been improved for faster operation. After killing the ROM, MAXFILES is reset to the computer's default of 1, and you are returned to the computer menu.

4. The perpetual calendar has been documented and a description page has been added to the 5.06 manual.

## ADDENDA

### Version 5.08 Changes:

1. Version 5.08 changes were primarily to support Disk/Video Interface users.

Chipmunk disk users must remember to add the .DO filename extension to all files they wish to access which are on disk.

2. Internal program changes to improve program logic.

### Version 5.09 changes:

1. A keypress trap has been added in the file editing portion of the program, which disallows any keypress except "Y" or "N" in response to the "All Ok?" prompt when editing field names. Formerly pressing the ENTER key, or any other key, was accepted as a "No", forcing you to reenter a field name prompt if you didn't press "Y".

2. Fixes a bug in the Datafile Manager which would not allow you to output ALL data fields to a new file.

ADDENDA: (2)

## USE OF CRDFIL.ROM WITH THE D/VI

The D/VI version of CRDFIL fully supports disk access of files, and display on an attached video monitor or television screen in the 40-column mode, which matches the 40-column mode of the computer's LCD screen. The user may use the full D/VI screen to compose and display his "cards", or restrict input to the top eight lines of the screen to assure the datafiles may be displayed on the LCD screen when the D/VI is not available. The 80-column mode is not available. CRDFIL is designed as a computer-specific database system, and CRT display via the D/VI is an accommodation; CRDFIL was not specifically designed with the D/VI in mind.

In a D/VI based system, you install CRDFIL in the same manner discussed in the early pages of the CRDFIL manual. All CRDFIL displays will appear on the D/VI screen instead of the LCD screen of the computer if the D/VI's Disk BASIC is loaded, and should appear the same as the typical LCD screen displays shown in the manual except for lines and boxes, which are not supported on D/VI screen displays.

Loading Disk BASIC (the D/VI's operating system), lowers MAXRAM (a pointer in your computer) to 58263. CRDFIL looks at the pointer, and if it's set to 58263, CRDFIL assumes you have the D/VI connected and operating, and will direct all screen display to the CRT screen. In order to use CRDFIL in the computer alone, without display on a CRT screen, just disable Disk BASIC. In the process, of course, you lose access to any disk-based files. This technique will allow you to use CRDFIL with CRT screen display when connected to a D/VI at home base, and to use it on the LCD screen when you have the computer away from the D/VI; when travelling, for example.

To load the D/VI's Disk BASIC, follow the instructions in the D/VI manual.

To unload Disk BASIC, in order to use the computer as a portable, a few simple statements in BASIC will restore the computer to normal, and allow CRDFIL to operate in it's original mode. One caveat - if you design data display templates that use more than the top eight lines on your D/VI screen, you will not be able to display those datafiles on the LCD screen. You can, however, display any datafiles created for display on the LCD screen on the D/VI's CRT screen. If your primary use of the computer is connected to a D/VI, then you can use the full screen to create and display your data cards.

To unload Disk BASIC, go into BASIC and type the following, and press the ENTER key:

```
SCREEN 0:CALL 32454:POKE 62966,201:MENU
```

The latest version of the D/VI version is 5.06, November 1989.

11/11/89

## ADDENDA

### Version 5.08 (DVI) Changes:

1. 5.07 changes incorporated into the 5.08 version.
2. An error in the Editor portion of the program which would not allow users to use DVI disks in that portion of the program has been corrected. The original program supported the Chipmunk disk drive in that portion, which handled disk filenames differently, requiring the .D0 filename extension, which was not recognized by the D/VI. The D/VI version now allows proper name construction.
3. A mandatory use of drive 0 in the File Manager program (Extract new datafile from old), has been eliminated, allowing D/VI users to use either drive they have available. (Again, caused by Chipmunk disk drive support.)

D/VI users will have to remember to use the disk access specifier required, either "0:" or "1:" to access all disk files.

### Version 5.09 (DVI) changes:

1. A bug has been corrected in the new template maker portion of the program which did not allow full screen use when creating new templates.
2. A keypress trap has been added in the file editing portion of the program, which disallows any keypress except "Y" or "N" in response to the "All Ok?" prompt when editing field names. Formerly pressing the ENTER key, or any other key, was accepted as a "No", forcing you to reenter a field name prompt if you didn't press "Y".
3. Fixes a bug in the Datafile Manager which would not allow you to output all data fields to a new file.

## ADDENDA

### Version 5.10 changes:

Internal program changes to save space for future bug-swatting or other changes.

### Version 5.11 changes:

1. Fixed a typographical error in the code which prevented the program from accepting a lower-case "m" to get to the mailing label module.
2. Fixed a bug in the mailing label module which did not count output lines correctly when using all the available lines on a label, which resulted in an occasional extra blank line in the output.
3. Fixed a bug in the Data Manager module which improperly handled the field concatenate feature, resulting in multiples of the concatenated data appearing on the same line.

## ADDENDA

### ROM Conflicts and Cold-Starts Reported:

It has been reported by some users of ROM bank devices, that other companies ROM's leave various "hooks" intact when they are removed or killed from RAM memory. It seems that Traveling Software's Ultimate ROM-II kills and removes itself completely from RAM, so no problems are encountered when loading another ROM. But P.C.S.C.'s SuperROM and RAM+ ROM are leaving code in the ROM handling routines between 62982 and 63017. In some cases, this has resulted in unwanted cold-starts when loading other ROM products with the standard CALL to 63012 or 63013 (depending on suppliers recommendation).

The most successful approach to dealing with this problem has come from the efforts of Jerry Evans in California. He has found that using a small BASIC program to poke "pre-load, default values" back into the ROM handling routines after killing SuperROM or RAM+ ROM does the trick by removing the left-over code that Super and RAM+ don't properly clear up. This is the short program that does it, and you can copy it, and use it to solve the problem left by these two ROM products.

```
0 ' REMOVE.BA Pokes default values into ROM handler area to prevent future ROM
1 ' loading conflicts. FOR THE MODEL 100/102 ONLY. Public Domain
10 DATA 1,211,232,33,64,0,17,164,250,126,18,35,19,125,214,72,194,15,246,211
20 DATA 232,42,164,250,17,84,67,195,24,0,243,62,1,211,232,199
30 IF PEEK(1)=171THENSTOP:' Wrong machine!
40 FOR A=62982TO63017
50 READX:POKEA,X
60 NEXT:MENU
```

Remember, CRDFIL changes no system hooks. So if you experience a cold-start after loading and using CRDFIL, and you have other ROM's that you also use, the first thing to suspect is the other ROM product. Running the above program will probably eliminate the problem.

I would appreciate hearing from any users who may have experienced similar problems with other commercial ROM's, so they may be listed here for the benefit of future users. Thanks.



## ADDENDA:

### INSTRUCTIONS FOR USE WITH EXTERNAL ROM BANK DEVICES

At the time CRDFIL was developed, the three popular ROM bank storage devices were Traveling Software's Booster Pak, P.G. Design's SAFE ROM Pack, and P.C.S.G.'s 6-ROM bank. Each device has its own idiosyncrasies, its own installation procedures, and technique of accessing the optional ROM products installed in it. Whichever device you use, you should check the manual for instructions on installing, initializing, and using various ROM products installed in the device.

Not having copies of the manuals for those devices, nor the cooperation of the companies who designed and sell those products, I can only offer some guidelines, and comments based on feedback from other users.

#### Traveling Software's BOOSTER PAK: (with 100 or 120)

Instead of CALL 63012 to install CRDFIL, use CALL 63013. 63012 will apparently freeze the keyboard. It may be necessary to cold-start the computer (not the Booster Pak), before installing CRDFIL, in order to reset the system hooks which were set to accomodate access to the Booster Pak. It is necessary to create an "environment" in some directory that you will commonly use to work on files with the CRDFIL system. This can be an empty or partially full directory, but you must create a separate environment for the ROM. See the Booster Pak manual, starting with Creating Other Environments, on page 2-19.

If you deinstall CRDFIL, using the "K" command prior to removing the EPROM (should there be some reason you need to remove it), the next CALL to install another ROM may bring CRDFIL's menu back to the screen, even though you've removed the EPROM. Or it may attempt to install another ROM you have used. This is because the Booster Pak copies the ROM image into the current environment RAM, and removing the EPROM doesn't clear out the image in the environment RAM. It may be necessary to cold-start the computer each time you need to remove the CRDFIL EPROM.

#### P.C.S.G.'s 6-ROM BANK:

This device allows switch selection of up to 6 ROM devices. The switch is a mechanical selection of the active ROM. Some optional ROM's set system hooks as part of their normal operation, as part of the way they work. TS-DOS on a ROM chip is an example, it hooks into the computer's operating system so that a program attempting to access a disk file will be routed into the ROM to accomplish that task. You will have to determine whether any of your optional ROM's reset system hooks, and if so, it may be necessary to "deinstall" the ROM, or cold start the computer each time you switch from one ROM to another. Users will have to define their situation on a case by case basis.

Reportedly, if ROM's do not reset system hooks, and none of the optional ROM's which I produce do, it is possible to switch from ROM to ROM without problems, just using the installation CALL to get the ROM's name on the main menu. It may be necessary to use a program method to remove a ROM's

name from the menu effectively, and if you need that sort of program, let me know, and we'll work one up for you.

P.G. DESIGN'S SAFE ROM PACK:

So far, there have been no reported problems with the P.G. Design ROM bank.

## ADDENDA:

Use of the CRDFIL program with the EME Systems extRAM storage device:

extRAM is a RAM chip that can be installed in the Model 100/102 and Tandy 200's optional ROM socket, which can be used as an extra RAM bank, a RAM "disk" or as a ROM emulator. In this latter application, the binary-coded software that is normally burned into an EPROM can be loaded into the extRAM, and can be used exactly as if it were the actual ROM chip. Using appropriate software from the supplier, "images" of commercial ROM's may be stored on disk, and the required program image can be loaded into the extRAM when needed, thus creating, in effect, an internal ROM bank, where the "ROM's" are loaded from disk.

There are two forms such software can be made available in; as an Intel Hex format file, where the code is stored in hexadecimal format, two characters to represent each binary character, along with checksums and other characters, and as a true binary file - the exact characters that would be loaded into or burned into an EPROM. Each requires it's own special approach to loading the resulting code into the extRAM.

The "hex code file" is always larger than the original code, since it uses two characters to represent each binary value, plus checksum figures and lines which end with a carriage return. 32K of software for example, when saved to disk in Intel hex format, generally uses between 72 and 80K of disk storage space. So hex files generally have to be used with a second computer, which can handle the larger sizes of such files, and transfer them to the portable when needed. The hex-file version of CRDFIL is released on a 5.25 inch disk for IBM and PC compatible computers. The program is transferred from the PC into the Tandy portable by using the INTELI.CO program from the extRAM manual in the portable, and any communications program in the PC which can send an ascii file to the communications port, and can respond to X-on/X-off data flow control codes. This includes almost all the PC telecommunications programs. Instructions for loading and using INTELI.CO are in the extRAM manual. Connect the portable to the PC with a null modem cable - or an RS-232 cable and null modem adapter - start the INTELI program, then send the hex file from the PC to the portable. The time it takes for the hex file to be transferred and loaded into the extRAM will depend largely on the software you use to transfer the file out of the PC. I use a program called PROCOMM, and it takes 8 to 10 minutes - there are over 1800 lines of program code to be loaded.

When you run INTELI.CO in the portable, the screen will go blank, and you will hear a "ticking" sound as each line of code is transferred from the PC to the portable. When finished, INTELI will beep at you and return to the main menu. You can then go into BASIC and type the CALL to access the ROM and place it's name on the menu.

Using the INTELO.CO program, also in the extRAM manual, you can save images of other commercial ROM's you own to disk, to be loaded back into the extRAM when needed. The INTELI (input) and INTELO (output) programs were developed by Tracy Allen, president of EME Systems.

The extRAM manual also contains two programs from Wilson Val Alst, ROMCOM.CO and COMROM.CO, which will send binary images of ROM software in and out the COM port of the portable. These programs require that you have a communications program in another computer attached to the COM port of the portable, which can transfer

and store binary images. It works basically the same as INTELI/INTELO, except that it works in binary images, and is therefore limited to machines and storage media that can accept the full binary symbol range, from 0 to 255. I do not support this format, but it is available in the manual if you wish to use it, once you get CRDFIL loaded into the extrAM. It is faster than working with the hex-file version, since it does not require the binary-to-hex conversions. You would load CRDFIL the first time with the INTELI program, then use ROMCOM to save it back to the second computer in binary form. From then on, you would use COMROM to load the image back into the extrAM.

Mr. Van Alst also developed two programs called R2D2X, which is distributed by EME Systems, bundled with units purchased after April 1990, and available separately for extrAM purchasers before that time. The "R2D" part refers to the fact that the software can save an image from a ROM to a disk, and the "D2X" part refers to the fact that another program can copy the image back from disk into the extrAM. "R2D2X" = "ROM-to-Disk-to-extrAM". The software works with the Tandy Portable Disk Drive, either 100K or 200K versions, and also with the Brother disk drive (100K) sold by Traveling Software, Purple Computing, and some others.

The R2D2X package, therefore, can be used to copy software images from your commercial ROM's onto disk - 3 images on a 100K disk, 6 on a 200K disk - and later, back into the installed extrAM, which can then be used as if the original ROM were installed. A very flexible package. Copying or loading a ROM's image takes less than a minute, and is stored on disk in a special binary form, with a .CX filename extension, which is not usable by any normal methods of disk access such as TEXT or BASIC. They can, however, be loaded into several popular text editors in a PC, using the LapDOS software from Traveling Software/Club 100, allowing such programs to be edited by knowledgeable assembly language programmers who might have an interest in doing so.

The binary form of CRDFIL is distributed in a .CX compatible form, on a 3.5 inch TDD-1 (100K) disk, which is readable in either a TDD-1 or TDD-2 disk drive. You will need to obtain a copy of the R2D2X software from EME systems in order to load CRDFIL into the extrAM for use. Once you receive the R2D2X software, you will find the two programs are named R2D100 (or R2D200 if you have the version for the Tandy 200) and D2X100 (or D2X200). D2Xxxx is the loader program. You can put a copy of this program on the CRDFIL distribution disk, so you will have both the program and the loader available on one disk if you like. You use any disk DOS to load the loader program into RAM, and use the loader to load CRDFIL into the extrAM. No special DOS is required by the loader, it accesses the .CX file on disk directly, without any DOS being loaded at all. Once CRDFIL is loaded into the extrAM, the loader program may be removed from RAM (killed).

Whether CRDFIL is loaded into the extrAM from a hex-file image, or a binary image, from a PC or a TDD disk, it works exactly as if the original ROM chip were installed in the socket, including all features normally found in the comparable ROM-based version. The principal advantage, to owners of the extrAM storage device, is that they can actively use more than one commercial ROM in their portable, without having to physically exchange ROM chips to take advantage of the programs contained in them. The "ROM bank" has effectively moved inside the computer, and you load your ROM software when you need it.

COMPATIBILITY: Tandy 100/102.

# CRDFIL.ROM: The Review

This "card-file database system" can be your ace in the hole.

by George Sherman

**L**ate in 1987, Tony Anderson, a SYSOP (systems operator) on the Model 100 Forum on CompuServe, and a frequent contributor to its libraries, whiled away a weekend with a little mental exercise. He wanted to see if it was possible to create a program that could create any number of data files based on a "card" concept. He was amazingly successful. The result enabled the user to set up his own *template*, like a 3 by 5 or Rolodex™ card, the size of the Model 100 or Tandy 200 screen, and which could then be used repeatedly to enter information into a data file. He made the weekend exercise available through CompuServe's M100SIG, and it was an instantaneous success.

I first downloaded *CRDFIL.BA* in early 1988, and it has remained my absolute favorite M100 program. I use it for everything. My cards run from simple two-prompt cards to cards with fourteen prompts. My files run from less than 1K, to one weighing in at over 14.5K. I have kept track of my taxes, my Christmas card list, my class roll, my company's stock room, my medical bills, and more. Several other M100SIG members contributed support programs to do such operations as printing, editing, and sorting the information contained in the *CRDFILs*. Tony himself wrote several others, which included two different printing programs, a new and easier template maker, and an amazing totaling program.

## THE CREME DE LA CREME

Tony has now combined the best parts of his programs, as well as programs

written by Charles Lewis and Bob Craft into an EPROM, purchasable from him. This is solid software at a reasonable price and is the first new ROM-based product to become available in about two years. It appears to be the start of a whole line of low-cost, no-frills ROM products. In addition, Tony has added many features not available in the original versions. For instance, with *CRDFIL.ROM*, it is possible to copy information from a previous card by a simple press of the ESC key, in effect creating a temporary macro. An-

```
Product: CRDFIL.ROM
Company: Tony Anderson
Adrs1: P.O. Box 60925
Adrs2:
City: Reno State: NV ZIP: 89506
Comment: CRDFIL.ROM is the first major
M100 ROM software release in two years
```

An example of a *CRDFIL* entry.

other nice feature is the ability to concatenate, or join, two fields into one while a file is being printed. As an example, you could join "John" to "Doe" from two different fields making the output "John Doe." Or you could combine city and state into one entry.

With *CRDFIL.ROM* you can create your own form in any arrangement you choose. Or you can use one of the 20 templates given as examples in the accompanying manual. The examples cover a wide range of interests from managing a CB log to organizing income tax records. If you later change your mind, you can also correct or rearrange your form as long as you don't change the number of prompts. You can "thumb" through your cards looking at all of them or a selected set keyed on a word or words and/or numbers. You can total up to 7 numerical fields at once on the 100/102,

or 15 on the 200. When you use this feature you see all the totals running up, all at the same time, until the run is complete. As I said before, simply amazing. I used this feature to compile, total, and print out my 1989 income tax information. (My tax consultant was favorably impressed.)

You can sort by three different sort methods: an absolute alphanumeric sort, a relative alphanumeric sort, or a straight ASCII sort. Depending on how you have arranged your lists, you can sort on any field, and print lists based on that sort, without destroying the original file.

Or you can produce an entirely different file. You could, for instance, sort by ZIP codes, names and/or addresses, or important dates, and set up a separate file extracted from the original for business contacts, birthday cards, a Christmas card list, and on and on. Another thought is a schedule card file that would include dates and times of various events, which could then be printed in date/time order and constantly updated with new information to become a to-do file.

With the printing modules, you can print mailing labels, make index or Rolodex cards, or print lists of data in columnar form. This latter format is my favorite. I recently put my entire small stock room of over 300 parts on *CRDFIL*. My template includes part number, location, description, minimum quantity (the point at which I reorder), and the number of pieces per pound. I sort three different ways, and print out each sort in columns. One sort is by part number, another is by part name (it's amazing how many em-

## REVIEW

ployees do not know the part number), and the last is by location. Each printout is used by many different people and for differing reasons. But all the items (part numbers, descriptions, and the like) arranged in vertical columns make that much easier, whatever purpose I use the printout for. The ability to list the data in any order is a very nice feature.

### THE DATA MANAGER

With the data manager, you can create data files that you can output to RAM, the printer, disks, cassettes, or the COM port for transmission to other computers. *Data Manager* also allows you to output data to a file that you can use with other programs or to generate reports.

I previously mentioned that you can change or rearrange a *CRDFIL* template. The editing portion of the program also allows editing of the information on the cards. Again, you can edit all cards, or a selected number. This is handy to change information, such as paid bills or quantity or address changes. In other words, this program is very usable. You may delete old or out-of-date cards from the file, making it ideally suited for a file where you're constantly changing or deleting data after completion.

My EPROM arrived mounted in a

*My tax consultant  
was favorably  
impressed.*

ROMBO adapter from EME Systems, or carrier, because of the differences in the standard pinout and the Molex carrier used by Tandy. Installation was simplicity in itself. I opened the door on the back of my M100, removed a spreadsheet ROM I had installed there, and inserted the EPROM in its place. Then I went into *BASIC* and typed *CALL 63012* and *CRDFIL* began running. I returned to the computer menu, and there was *CRDFIL*, installed and ready for use. If you have Traveling Software's Booster Pak, P.G. Design's SAFE ROM bank, or PCSC's 6-ROM bank, all you need is the *CRDFIL.ROM* without the carrier.

The words *user friendly* have been overworked, but this aptly describes the program. Screens are clear and easy to use. In most instances the program requires that you depress either a letter or a number key to choose an option. After a

## CRDFIL Heads EPROM-Based Software Series

Tony Anderson, an independent programmer for the Tandy/Radio Shack portable computers, has released his first in a planned series of EPROM-based software for the Model 100/102 and Tandy 200. *CRDFIL.ROM*, a card file database system, is the first new major software release on EPROM in over two years.

You can plug EPROM's directly into the option ROM socket on the portable computers, or install them in an external expansion device (e.g. Traveling Software's Booster Pak, PG Design's SAFE ROM Bank, PCSC's 6-ROM Bank, etc.). Once installed, the programs function exactly like the computer's built-in programs (*BASIC*, *TEXT*, *TELCOM*, etc.).

*CRDFIL* lets you custom design small databases easily, based on the card file concept, where each screen is a "card" created according to customized templates. The menu-operated program allows changing, adding to, or deleting from existing files, new files, or templates, plus printing mailing labels and other selected cards and lists. Extremely flexible, *CRDFIL* also allows sorting and recording of data for statistical reports. It performs true alphanumeric sorting or your choice of two other sort formats. The manual is 66-pages.

*CRDFIL.ROM* is available in two forms: a standard-pin EPROM, for installation in one of the external storage devices, at \$59.95 postpaid; or mounted on a translator board to fit the non-standard Molex socket in the Tandy computers, at \$74.95 postpaid. For further information, contact Tony Anderson, P.O. Box 60925, Reno, NV 89506.

module has been chosen, the program takes the user step by step through the routine necessary to set the module up to achieve the desired end. It also supports disk operations such as *TS-DOS*, *Power Disk* or *Power DOS*, and *Disk Power* as well as the Chipmunk and Tandy's D/VI disk drives.

I must comment on the operating manual that accompanied the EPROM chip. This is without exception the easiest, the clearest, and the best organized manual I have ever seen or used. Tony's method is simple. Screens are shown as they appear to the user. Following is an explanation of the screen and the choices available. After each choice is the page number to turn to that explains the choice. If the choice produces another screen, or takes you back to the opening screen, Tony gives you the page number on which that screen appears. What happens on the screen as you go from choice to choice is exactly what happens in the manual as you go from page to page. As I said, without exception, the most organized manual I have ever read. (Tandy, are you listening?)

I have explored several so-called "card file" and inventory programs for my PC. I have yet to find one that is as simple to use, as flexible, or as useful as *CRDFIL*. And the fact that it runs in ROM, and uses no RAM space, leaving all my

RAM for data files and program operations, is great.

Oh, one final comment. Tony has hidden a secret program on the chip. At the opening screen, pressing a *Q* or *q* turns the sound off for silent running, pressing a *Z* or *z* runs through the sounds used in the program, pressing a *V* or *v* gives the version number and information about the program manufacture. Pressing the secret key pops up the hidden program. It has no connection to the *CRDFIL* series but is, nevertheless, a very handy little program. I am not at liberty to tell you what it is or how to find this secret program because Tony has nixed that idea. So all I can do is wish you much success in finding it.

-BY GEORGE!



### Manufacturer's Specifications

*CRDFIL.ROM*—\$59.95  
(price for standard pinout EPROM)  
Mounted on carrier board to fit  
Tandy's Molex socket:\$74.95  
Card-file database system

Tony Anderson  
P. O. Box 60925  
Reno, NV 89506

## ADDENDA

### PROBLEM REPORTS:

If the LCD screen stays blank when you turn the computer on after installing the ROM chip, there's a good chance the ROM is not installed correctly, it's not seated fully in the socket, or it's not making good connections with the fingers in the socket. Remove the ROM chip, check to be sure that the legs are straight, check your orientation to pin 1 (marked on the printed circuit board), and reinsert the chip fully. You may need to wiggle it around a bit to get it to slide in, and wiggle it a little more to make sure it's fully seated in the socket. Turn on the computer again, and see if the main menu comes up. If so, continue with the normal installation procedure. If the screen is still blank, then try aligning the legs and cleaning the contacts as listed below. Each ROM is checked before it's shipped, and was working before it left here. If it still won't work, then you'll have to return it for inspection and/or replacement, as there's little more that I can tell you to do, if it won't load.

What to do if the ROM suddenly starts acting erratic, fails to work as expected, or does something it's never done before, and you simply can't get it to work right.

First of all, don't assume it's a defective ROM and send it back with no explanation, asking for a replacement. It's probably NOT the ROM chip. I've had a number of ROM's returned, none of which proved to be defective when tested. There may be other problems, which make it appear the ROM is at fault.

Here are some tips that might get it working again properly.

1. If you can't load the ROM's name on the opening menu, with the CALL that's indicated for your model, then first, save all important files and programs in RAM to an external storage device; either cassette or disk, then cold-start the computer to clear all hooks in memory. You can generally force a cold-start by turning the computer off, pressing down the CTRL key, and the Break/Pause key at the same time, then switching the computer on. The screen should clear, and show an empty machine. Turn the computer off again, and reinstall the ROM chip per instructions in the manual and try the loading CALL again. If it fails, try CALL 910 (for the 100/102) - that's the same routine, except that it's in the ROM instead of in high RAM.

If the program still fails to load, turn the computer off, remove the ROM and carefully inspect the pins, some may be bent out of line, and may not be making good contact with the carrier. Place the row of pins along the edge of a table or desk, and pressing down on the ROM, try to bend them out into a straight line, just slightly. Do the same thing with the pins on the other side, then clean the edges of the carrier that make contact with the socket by rubbing the contacts with a rubber eraser a few times. Now reinsert the ROM in the socket and try again.

2. If you have the ROM name on the menu from previously loading it, and can't enter the ROM program, either by moving the cursor over the name and

pressing ENTER, try going into BASIC and entering it with the CALL that initializes the ROM. If that fails, turn the computer off, remove the ROM chip, and adjust the legs and clean the contacts as indicated above. Reinsert the ROM and try again.

3. If you've been using the program successfully, and suddenly it starts acting up, doing strange things, first try to kill the ROM from the program menu. If it won't kill, or you can't get to that portion of the program, then go into BASIC and type KILL"CRDFIL" and press the ENTER key. If that doesn't work, you may have to cold-start the computer, but first, turn it off, remove the ROM chip, adjust and clean it as above, reinstall it, and try the program again.

If you're still having problems with it, then send it back to me. Enclose a sample of the file you were working with; include the template and at least one or two cards that will demonstrate the problem. Include a key-by-key "script" that tells me how to duplicate the problem; what keystrokes get you to the place where the program goes astray. Here's an example of a script that looks for a name in a Name/Address file called LEADS.DO:

```
D-S-S-LEADS<ENTER>-<ENTER>-ANDERSON<ENTER>-2-<ENTER> etc...
```

If you have a CompuServe account, you can send me an Email describing the problem and I'll get back to you, usually within 24 hours. My ID number is 76703,4062. Or you can telephone me at (702) 677-7290, and leave your name and number on my answering machine. I'll get back to you as soon as I can, probably during the following weekend, depending on my work schedule at my regular job.

In any case, if it is a program problem, I'll most likely need a copy of the template and a few cards to be able to see exactly what is happening, and if you have to mail me that, you might as well save the cost of the phone call, just send it, and I'll get back to you.