View From The Seventh Floor
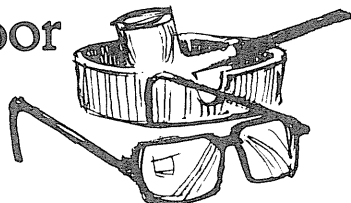
It is a quiet pre-Labor Day Saturday in Fort Worth and a good time to write a column. When I started this monthly message I did say that I would try to respond to both your letters and various rumors with the facts. Yesterday I read an amazing article that stated that we had over 100,000 Model I's stocked in our warehouses and had stopped production. That would sure come as a surprise to the over 200 folks who work at our Model I factory which is running at full speed. Our warehouse inventory is below normal at about a 30 day supply on hand instead of the 45 day supply we usually carry. So if you are waiting for some monster price cut to buy a Model I you will wait a long time as it is not in our plans.

Yesterday I also had a very nice call from a lady who owns a Model II and is using VERSAFILE. She complimented the Newsletter, said she liked my column (we writers thrive on a little praise; I was going to stay in bed today) and pointed out a documentation error in VERSAFILE that caused her to lose some records. Dear Lady, many thanks on all points, your VERSAFILE correction is in this issue for all to see.

Addendum — Model II VERSAFILE

Please add this "Important Note" to the last paragraph of page 3 in your manual:

IMPORTANT NOTE: If you change any of the eight keywords, you must also make the same change in the corresponding line, 11000 to 11070. For example: If you change the keyword IS to NAME in line 10000, you must also change line 11000. Line 11000 now reads:

Microcomputer News to become Subscription Item.

Beginning with the January, 1981 issue, the Microcomputer News will be available on a subscription basis for twelve dollars a year. We feel that the move to a subscription basis will provide you with better service.

Each purchaser of a new TRS-80 (any model) will be entitled to one year's free subscription, for each computer system purchased, upon returning the subscription registration card to us. Purchase of peripheral equipment will NOT provide or extend a free subscription. In the past we have been able to provide only one copy of the newsletter for each customer, without regard to the number of computers owned. This new system will allow the purchaser to send each registration card to us as the computers are purchased and receive one copy of the newsletter for each computer owned. At the customers option, the additional registration cards could be held and used one at a time to extend the free subscription period.
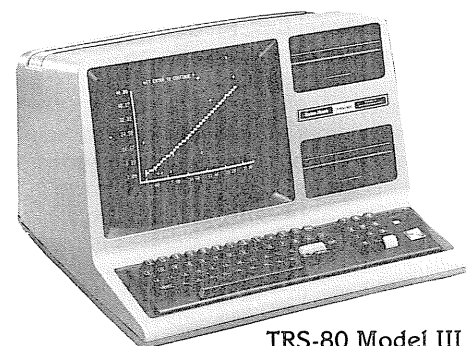
Current TRS-80 owners will be extended free subscriptions to the newsletter on the following basis:

Purchase Date	Free Months After 1/1/81
July 1, 1980- Dec. 31, 1980	12 months
Jan. 1, 1980- June 30, 1980	9 months
July 1, 1979- Dec. 31, 1979	6 months
Before July 1, 1979	3 months

The preparations needed to put the newsletter on a subscription basis have been underway for several months. We have had some success — like our expanded size (up from four pages in October of last year) and (we hope) better content. During this time, we have also had a "few" failures. We realize that in the last several months we have been very heavy

on problems and corrections, and very light on programs and "news." Hopefully we have caught-up on the back log of problems to report, and can maintain a better problem to program ratio in the future. We have also had a few difficulties in getting the new expanded newsletter produced and mailed to reach you by the first of the month dated. These problems have been solved (we hope) and the new on-time newsletter will be coming to you beginning with the December 1980 issue.

TRS-80 Model III

NEWSLETTER INDEX IN THIS ISSUE . . .

View (From Page 1)

```
11000 IFB = " IS " THEN
      SYSTEM"RENAME ISK TO IS"
```

Change 11000 to read:

```
11000 IFB = " NAME " THEN
      SYSTEM"RENAME NAMEK TO
      NAME"
```

By the way I am using Model II SCRIPSIT to write this column and as you read this, SCRIPSIT should just be available at our stores. If you are a Model II owner check it out, it is an outstanding word processing system. Another outstanding Model II program is PROFILE II, a very versatile electronic filing system. With just one drive you can store up to 3000 records of 85 characters each, or lesser numbers of larger records. There can be up to 99 categories in one record, up to 36 user defined search categories in each file, and up to 5 formats each for screens, reports and printed labels. But the neatest feature is that PROFILE II files can be read into Model II SCRIPSIT. Since PROFILE is a great mailing list program it can be used with SCRIPSIT to produce form letters.

One question that has been asked a lot lately is about the FCC, and computers. There is a great deal of misunderstanding about this so I will explain. First of all a computer operates at very high internal speeds and produces high frequency electronic noise that can interfere with radio and television sets. Since for years all computers have been very large and not in homes the FCC never investigated their potential to make noise and there were no regulations that applied to computers. With the coming of the microcomputer age, led by us, computers did get into many homes and in a few cases did disrupt TV viewing. Even a few complaints to the FCC bring action and they did some studies and then started rule making regarding interference caused by small and large computers.

Now if you have read about this you might have noticed that the FCC uses the word radiation which in this case has nothing to do with Three Mile Island type radiation, but with plain old CB-type radio waves that are harmless to your body (but not your mind if you listen to CB too much). Anyway this past spring the FCC did pass some rules pertaining to ALL computers from us right up to the biggest IBM monsters. The rules are complex and take effect on different dates and they apply to the date of manufacture rather than the date of sale. To keep it simple all makers of computers that could end up in a home have to meet certain standards for computers produced after 1/1/1981. What is interesting to note is that the FCC did make the following statements in their rule making. "We are most interested in protecting an individual who is receiving interference from his neighbor's computer. To a lesser extent, we are concerned about devices in the same household. In a household, the homeowner or apartment dweller can choose which device he wants to operate." They then go on to say that there are ways to lessen the problem such as moving the computer away from the TV.

We will comply fully with all the FCC regulations just as we have done for years with other products. The addition of some metal shields, some capacitors, board layout changes and some real black magic is involved in cutting down radiation. Because some re-design work is involved older computers cannot be retrofitted with "fixes." If you have an interference problem a good move is to improve the TV signal strength. If the set is old have it serviced, if new, try shielded lead-in, a better antenna, or sometimes just changing the position of the TV or computer will help. And if you are frustrated during the big game by TV noise because your kids won't stop playing PYRAMID, think of my kids slot car track that totally wipes out my TV. Dear FCC, how about getting after ALL sources of electronic noise?

Some of you write to tell us that customer service is giving anything but service or that you can never get your call through. Customer service consists of a very hard working group of people who wear headsets and sit at a TRS-80 trying to solve your problems. They are on the phone almost constantly all day. To get better service and get through remember that from 11 to 2 (Fort Worth time) is not only their busy time but also their lunch times. Since they are now open from 8AM to 7PM (again, Central Time) try to place your calls early or late and you will get in much faster. If you do not get an answer, or get an unacceptable response, ask for the name of the customer service representative and call or write Mr. John Snodgrass who is in charge of the group and tell him of your problem. BUT please remember that we do NOT customize software, ours or yours, we do NOT have the interface information on Brand X, Y and Z printers, and we can NOT help you figure out why your Model I with a clock speed-up kit, brand Y drives and brand Q DOS will not run.

And since I got on the subject of all those wonderful modification kits out there let me close by responding to the many, many letters that ask why we don't sell high-resolution graphics kits, clock speed up kits etc., etc. The answer is simple: we are the ones who have to repair all those 200,000 plus TRS-80s. Even the plain old Model I main logic boards can have faults that require the use of our $125,000 General Radio tester. If we had to support the repair of hundreds of different versions of the Model I we would have to charge a lot more money and take a lot more time to repair them. And there is more to the answer than just repair, there is also the fact that the Model I power supply was not made to handle extra chips, the Model I is very unstable if its clock rate is increased, and, like all computers, the Model I is very sensitive to noise and noise is always increased if you start running wires all over the place inside the case. I am not trying to bad mouth all those guys selling those devices, some of which are very neat indeed, but just be sure you can get them to support repairs when needed, as we can't. At least be sure if you do go for one of those mods that you get a full service manual so some computer repair place stands a chance of fixing your unit.

Until next month.
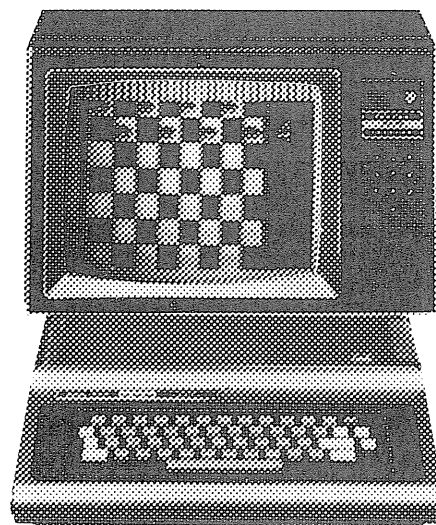
TRS-80 Color Computer

Machine Language Sort—Revisited

The machine language sort routine for Model I and Model II which we published in July, 1980 has generated a large response. Part of the response has been very positive, from individuals who found the routine to be very useful.

The other response was from individuals who were unable to make the routines work. In almost every instance, the reason was that the instructions in the articles were not followed EXACTLY.

These sort routines are "sensitive." They do work, but they must be used carefully. If you have been unable to use the routines in your application, we suggest that you start from scratch, enter everything just as it is published (No, there aren't any typographical errors). After you have entered the routines, run the programs, being careful to set the proper memory sizes and entry points for your machine. The sort WILL work.

Now that you have been successful in making the routine work with our sample program, begin changing things until it fits your application. If at some point the sort no longer works, back up to the last place you know it worked, and change carefully.

If you would like the sort to handle numeric as well as alphanumeric information, here are two methods:

From William Dossett of Austin, Texas:

The machine language sort by Allen Emert in the July 1980 issue is an excellent program for sorting literal strings. Many applications require sorting of numerical data, however. The usefulness of Mr. Emert's program can be extended to sorting numerical quantities by making a few changes,

Delete lines 69, 90 and 210 (Model I version) and add the following lines:

```
69 REM GENERATE RANDOM STRING
   OF DIGITS (000-999)
90 A$ = STR$(RND(10) - 1):
   B$ = STR$(RND(10) - 1):
   C$ = STR$(RND(10) - 1)
100 S$ = A$ + B$ + C$
110 IF LEN(S$) = 1 THEN A$ = "0":
   B$ = "0":C$ = RIGHT$(S$,1)
120 IF LEN(S$) = 2 THEN A$ = "0":
   B$ = LEFT$(S$,1):C$ = RIGHT$(S$,1)
130 IF LEN(S$) = 3 THEN
   A$ = LEFT$(S$,1):B$ = MID$(S$,2,1):
   C$ = RIGHT$(S$,1)
135 A$(I) = A$ + B$ + C$
210 PRINT I;VAL(A$(I)),
```

The program will now sort numerical data. Without these changes numerical strings will not sort in strict numerical or-

der. For instance, the number (string) 65 will sort out as a higher valued string than the string 100, or 2 will not be "higher" than 10. The trick is (to) simply have the program add one or two leading zeros to the numerical strings that contain just two or one digits. That is, in the above examples, change the string 65 to 065 and 2 to 002. Finally, in line 210, after the strings have been sorted, instead of printing the string array A$(I) print VAL(A$(I)).

To input data in some other way simply delete the statements in lines 90 and 100 and add a statement such as READ S$ or INPUT S$.

An alternate to Mr. Dossett's method is to use the following:

```
90 A$ = STR$(RND(1000) - 1)
100 S$ = STRING$(3,32) + A$
135 A$(I) = RIGHT$(S$,3)
210 PRINT I;VAL(A$(I)),
```

In this method we are adding a string of blanks in front of the string which represents our numeric value (LINE 100). The string of blanks should be as long as the longest numeric value you will have. In line 135, after the two strings are added together, we then "pick-off" the rightmost characters which will include our numeric string along with as many blanks in front as we need to make every string the same length (3 in this example).

You may find the second example a little easier to use if your numbers contain more than 3 digits.

More TRS-80 Computer Clubs

ACGNJ
Amateur Computer Group of New Jersey
TRS-80 Users Group
UCTI
1776 Raritan Road
Scotch Plains, NJ 07076

Central New York TRS-80 Users Group
26 Jamesville Ave. J-4
Syracuse, NY 13210
315-471-5472

Computers of the 80's
% Matt Bixler
615 S. Arlington Ave.
Harrisburg, PA 17109

Fairfield County Users Group
% Alan Abrahamson
10 Richlee Rd.
Norwalk, CT 06851
203/866-2670

San Francisco TRS-80 Users Group
150 Dundee Drive
South San Francisco, CA 94080
415-994-0127

Solano Microcomputer User's Group
SMUG-80
% David A. Irwin
550 Marigold Drive
Fairfield, CA 94533
707/422-3347

Notes on Previous Newsletters

On page 7 of the August Newsletter, we had an article on creating mailing labels from your Model I Accounts Receivable (26-1555). There is an omission in line 230 of the program. Line 230 should read:

```
230 FIELD 2,JD*127 AS D$, 11 AS F$, 13
    AS L$, 17 AS SA$, 15 AS ST$, 5 AS
    Z$
```

WARNING— MODEL I OWNERS

CONSTANT VOLTAGE REGULATORS (CVR) MAY PRESENT A HAZARD TO COMPUTER SYSTEMS THEY ARE USED WITH.

If a computer system (connected to a CVR) is turned ON before the CVR, there is a current in-rush when the CVR is turned on that may result in a high-voltage spike of sufficient magnitude to damage computer devices (including printers) that are connected to the CVR. Even if care is used, and the computer system is turned on AFTER the CVR, damage may occur if the AC line voltage should drop significantly. We have had several reports of computer systems being "zapped" under these conditions. If you are using, or plan to use, a constant voltage regulator please exercise caution and follow the manufacturers guidelines.

The Importance of Backup Copies

Radio Shack Computer Services receives a fair number of calls from irate owners who have had either a power failure, interference on the power line, an operator who removed a diskette at the wrong time, or even, actual hardware failure. Whatever the problem was, the caller is very upset because of all the information that was lost when the computer stopped operating.

We must emphasize the importance of making BACKUP copies of any thing you do. How often you make backups should be determined by how difficult it will be to replace or redo the work involved. For some applications, one backup a week may be enough, while other applications may justify two or three backups an hour.

Please remember that problems will occur. The power will go off, or something may happen which will cause you to lose information in the computer. Making frequent backups is your ONLY insurance against complete loss of your data.

Caution about use of LP III Driver and ULCBAS with Model I

The Line Printer III driver program (renamed LP/C) which accompanied the 26-1156, and the upper/lower case driver for the Model I upper/lower case conversion (26-1104) are both self-relocating, self-protecting programs.

When these programs are loaded, they check the computer, determine how much memory is present, move themselves to the top of memory, and then reset certain internal pointers in the Model I.

The effect of this is that the programs become invisible. If you load the LP/C driver, and then come back in a few minutes and reload the LP/C driver, you will have TWO copies of the program in memory, one just below the other. DO NOT reload either the LP/C driver or the upper/lower case driver, unless you turn the Model I OFF or RESET the machine. It is very easy to "unknowingly" load multiple copies of these programs if you have put them on disk with the TRSDOS AUTO function. One copy is loaded by AUTO, then a second when you say "oh yes, I need the driver," forgetting that it has already been loaded.

TRS-80 Model III Announced

FORT WORTH, TEXAS — Radio Shack, manufacturer of the TRS-80 Model I microcomputer, has announced the new TRS-80 Model III, a powerful desk-top general-purpose microcomputer system. Model III is housed in a single cabinet which includes a 65-key keyboard, 12-inch high resolution video monitor, power supply and space for up to two built-in double-density disk drives.

The new computer is said to offer more data storage, greater versatility, and higher computing speeds.

According to Radio Shack, the TRS-80 Model III will be available in three versions. The Level I BASIC system with 4K RAM is priced at $699. It can be used with all Model I, Level I BASIC programs. Level I BASIC is considered an easy computer language and is recommended for beginners. A second version, the TRS-80 Model III with 16K RAM and Model III BASIC including upper and lower case letters sells for $999.

The TRS-80 Desktop Business Computer has 32K RAM, two double-density 40-track disk drives for free data storage of 313K, and a built-in RS-232 C serial interface which sells for $2495. The Desktop Business Computer can be further expanded to 48K RAM and two additional disk drives can be added for a total of four. Model I diskettes can be read by the system.

TRS-80 Model III BASIC is said to be compatible with most TRS-80 Model I programs. A large library of programs for business, education and personal applications is readily available for use with Model III including SCRIPSIT which allows the computer to be used with a printer as a word processing machine.

Radio Shack, a division of Tandy Corporation, headquartered in Fort Worth, Texas, manufactures and sells a complete line of microcomputers and microcomputer-related products. Radio Shack's Model I TRS-80 is acknowledged as the best-selling microcomputer in the world.
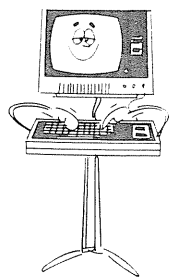
26-1157/1157A Print Wheels and Ribbons

The print wheels stocked by National Parts will fit both the 1157 and 1157A (QUME).

STOCK NUMBER	STYLE	SUG. PRICE
ART-2851	COURIER 10	9.95
ART-2852	PICA 10	9.95
ART-2853	ELITE 12	9.95
ART-2854	GOTHIC 12	9.95
ACT-0159	WP-50 RIBBON	14.75
ACT-0168	QUME RIBBON	5.95

The Elite print wheel (ART-2853) for the 1157 printers is a "legal" elite and not a "word processing" elite. The only apparent difference is that the apostrophe and the degree symbol are reversed.
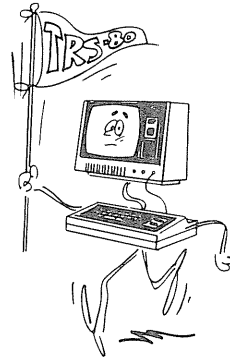
Line Printer Output for Models I and III

The TRS-80 Model I uses a "memory-mapped" system to output data to a line printer. In the Model I, if you POKE a value into memory location 14312, the value you POKED will be sent to the line printer (whether the line printer is on and ready or not). You may recognize the memory location 14312 as being the same location that you PEEK to determine line printer status.

The TRS-80 Model III uses memory location 14312 for line printer status only. That is, you can still PEEK this location to determine line printer status, but POKEing to this address will NOT output data to the printer.

In the Model III, printer output has been redefined to utilize one of the TRS-80's 256 ports. Specifically, you output data to the line printer using port 251.

In the Model I if you want to output an upper case "A" to the line printer you would use — POKE 14312,65 • For the Model III, use — OUT 251,65 • Of course, in both cases you should first PEEK(14312) to determine printer status.

QUME Printer and the LP/C Driver

The QUME printer (26-1157A) recently supplied to customers who had ordered the WP50 (26-1157) does not respond to control functions in the same way as previous printers. Specifically, the printer will occasionally double line feed where only a single line feed is desired. Further, you may experience some top-of-form problems. The following Model I programs will require QUME users to install the "LP/C" driver (formerly called LP III driver) in order for the programs to work correctly on Model I:

26-1504 Level II Payroll
26-1506 Cass. Portfolio
26-1507 S + P STOCKPAK
26-1552 General Ledger
26-1553 Inventory Cntrl
26-1554 Accts. Payable
26-1555 Accts. Rec.
26-1556 Disk Payroll
26-1557 Concrete Take-Off
26-1559 Mfg. Inv. Control
26-1560 Fixed Asset Acct.
26-1571 Real Estate I
26-1572 Real Estate II
26-1573 Real Estate III
26-1574 Real Estate IV
26-1603 Budget Management

The "LP/C" driver has been assigned the stock number — 700-2007, and is available through your local store. This driver will be needed on printers other than the Line Printer III and QUME.

Model II users of the QUME should encounter no difficulties while using the QUME printer after they install the patch listed elsewhere in this newsletter.

CTR-80A Cassette Recorder

Be sure to buy a CTR-80A Cassette Recorder when you buy a Model III or Color Computer. These computers DO NOT include recorders or cables. The CTR-80A (26-1206 suggested retail price $59.95) includes the new cassette recorder cable which is required for the Model III or the Color Computer.

MODEL II VERSAFILE — 26-4510

Model II Versafile is a SINGLE DRIVE program. Computer Catalog RSC-4 lists the program as being expandable for use with up to 4 disk drives. This is NOT true. The program will work with one drive ONLY.

QUME PRINTER FIX FOR MODEL II APPLICATION SOFTWARE

If you have a customer who is using the QUME daisywheel printer (26-1157A), the following patches will correct.

LPRINT CHR$(138)

statements so that they will cause a space character, carriage return to be issued to the printer. This is compatible with LPIII mode.

These patches are valid for QUME Printers on TRSDOS 1.2 ONLY! After the patches are successfully applied, you must re-boot to use the printer. The patches are as follows:

PATCH IODVRS/SYS A = 0056
   F = FFFFFFFFFFFFFFFFFFFF
   C = 213F0F3E8AB8C00620C9
PATCH IODVRS/SYS A = 0F47
   F = 213F0F C = CD5600

Model I/Model III Program Compatibility

Certain Radio Shack Model I software packages require program changes before they can be used on Model III. We are currently updating this software so that changes will not be needed. If you purchase the following software, changes which may be required are LISTED in a document supplied with your Model III (current software does not require these changes):

26-1503 Tape Mailing List
26-1506 Cassette Portfolio
26-1573 Real Estate Vol. III
26-1574 Real Estate Vol. IV
26-1603 Budget Management
26-1806 Casino Games
26-1911 Dancing Demon
26-2006 Level II BASIC Course Part II

The following programs will not be converted, and must be exchanged for Model III versions if the Model III version is not included with the package:

26-1505 Tape SCRIPSIT™
26-1507 Standard & Poor's
     STOCKPAK™ System
26-1562 Profile
26-1563 Disk SCRIPSIT
26-1564 Mailgram®

26-1565 Microfiles
26-1604 Versafile
26-1715 K-8 Math
26-1903 Micro Movie
26-2201 TRS-80 FORTRAN

The following programs will not run in the Model III and are NOT available as exchange items. (Note: items marked with an asterisk (*) will be available in a similar version for the Model III in the future. Check with your store or dealer for announcements.)

26-1146 RS-232 Comm Pack*
26-1147 RS-Term*
26-1566 VisiCalc™ (available as 26-1567 in late November)
26-1901 Micro Chess*
26-1912 Space Warp*
26-2001 T-Bug*
26-2002 Tape Editor/Assembler*
26-2004 Renumber
26-2009 Tiny Pascal*
26-2202 Disk Editor/Assembler*

The following programs are being replaced by new versions:

26-1502 In-Memory Information is being replaced by 26-1508 (November 30)
26-2007 Disk BASIC Instruction Course is being replaced by 26-2010 (January 15)

Special notes:
1. 16K Level I programs are no longer supported.
2. 4K Level II programs require 16K RAM and Model III BASIC.
3. The following characters are displayed differently on the Model III:

Code	Mod I	Mod III
91	↑	[
92	↓	\
93	←	]
94	→	^

The following programs are affected by these cosmetic differences:

26-1506 Cassette Portfolio
26-1603 Budget Management
26-1715 K-8 Math
26-1805 Game Pack I (Space Taxi)
26-1806 Casino Games
26-1902 Micro Music
26-1906 Invasion Force
26-2003 Level I BASIC Course
26-2005 Level II Part I
26-2006 Level II Part II

4. Disk based programs not listed require the use of the Model III TRSDOS CONVERT Utility to produce Model III compatible disks.

BASIC's VAL( ) Function

Last month we pointed out a possible problem which you could encounter while using the BASIC VAL function. The problem, that VAL does not recognize negative numbers if the minus sign is not the first character in the string, is present in Model I, Model III, and Model II TRSDOS 1.2. We are happy to be able to say that in addition to the Color Computer, Model II TRSDOS 2.0 recognizes negative values when the minus sign is the first non-blank character.

Model II Editor/ Assembler Manual Error

Page six of the Link-80 manual in the Model II Editor/Assembler package (26-4702), indicates that a TRSDOS executable command file (created with the − N option) will have a default extension of "/CMD." This is true for Model I, but not for Model II. Model II TRSDOS executable files default to NO extension.

Early Childhood Program

Leo Finkelstein, Jr. sent us this letter:

Thought you might be interested in the enclosed early childhood program. My 2½ year old boy has been fascinated with the computer. Kids that age like to imitate, so I wrote the enclosed program to give him something he could do on the machine. It has fascinated and educated both him and many other neighborhood kids.

```
5000 REM CHILDHOOD PROGRAM
5010 CLS
5020 A$ = INKEY$
5030 IF (A$ = "") OR (A$ = " ") THEN 5010
     ELSE 5040
5040 FOR X = 1 TO 225
5050    PRINT CHR$(23); A$; "    ";
5060    NEXT X
5070 GOTO 5010
```

NOTE: This is an interesting program for Model I, III and the Color Computer. With the Color computer you might want to change line 5010 to read:

```
5010 CLS(RND(8))
```

This will change the background color contantly until the child presses a key.

Model II Mailing List for 80 column printers

Mr. Charles Nickolls made the following recommendation which will allow you to use an 80 column printer with Model II Mailing List (26-4506).

The only report which requires a 132 column printer is the file listing report. These changes will give you this report in 80 columns:

Note: the line numbers used here are the line numbers found in the version of 1.1 which we used. There may be a slight variation in your line numbers.

Change these lines to read:

```
3100 LPRINT STRING$(80," = "):
     LC = LC + 1: RETURN
3350 IF OP$ = "L" THEN 3170 ELSE
     PRINT D1$ TAB(18) D0$
     TAB(37) D2$ TAB(60) D3$
3360 LPRINT TAB(18) "Categories:";: FOR
     I = 0 TO 7: IF (2^I AND CVI(D7$))
     THEN LPRINT I + 1;: NEXT ELSE
     NEXT
3370 LPRINT TAB(60) D4$
3380 LPRINT STRING$(80," − "): LC =
     LC + 4: IF LC>57 THEN LC = 0:
     SYSTEM"FORMS T"
```

Add these lines:

```
3372 IF M8<>0 THEN LPRINT TAB(18)
     "Remarks: ";D8$;
3374 LPRINT TAB(60) D5$ TAB(70) D6$
```

We have spread the contents of the lines out to make them more readable. In the program, most of the spaces between items in a program line are missing. Please note that a significant amount of material was deleted from lines 3350 and 3370. After you have made these changes, save your new version on the program with the filename "MLS/BAS."
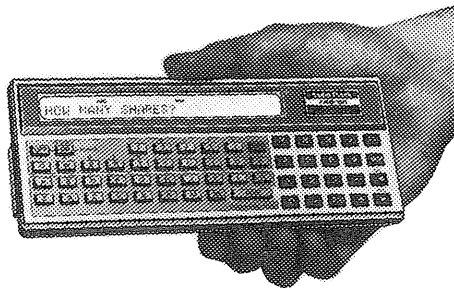
TRS-80 Pocket Computer

Subscription News (From Page 1)

One very large benefit which we will be able to provide by going to the subscription basis is the use of First Class Mail. At present we mail the newsletter fourth class, and we have had a great number of problems with incorrect addresses, undelivered newsletters, etc. We feel that this move will help to provide you with better service and more timely information.

Our major advertising efforts in the newsletter will continue to be limited to the Product News section. This does not mean that we will not mention products elsewhere, but we will try to keep mentions in the body of the newsletter to news rather than advertising.

One thing we need from you are ideas, programs, applications, and information. We will publish all information that we can. There are obvious restrictions. We will not advertise someone else's hardware or software, even though it is used on a TRS-80. We simply do not have the time or staff to adequately screen these items. We will try to publish items such as the recent news release "TRS-80 Goes to College" (August, 1980) and our front page feature "Model I Aids Investigation of Stars" (May, 1980).

If you have a neat little program, share it with us and other TRS-80 users. The TRS-80 Newsletter welcomes the receipt of computer programs, tips, suggestions, or other material which you would like to make available to fellow users of the TRS-80 microcomputer systems. However, in order for us to reprint your submission, you must specifically request that your program or other material be considered for reprinting in the newsletter and provide no notice that you retain copyrights or other exclusive rights in the material. This assures that our readers may be permitted to recopy and use your material without creating any legal hassles.

In order to satisfy the above policy, we will return any programs, or other information, which we receive that do not contain a request for reprinting in the newsletter.

If you have a compliment or complaint, send it in. We will try to answer in general and in specific any questions you have.

The purpose of the newsletter is to communicate with you, our customers. If you don't think we are doing it the right way, or at all, let us know and we will make every reasonable effort to change so that we do.

Data Base Manager

This program was written by a Radio Shack employee as a store demonstration program. We thought you might like it. The program is not as elegant as Profile or Microfiles, but it will serve you well if you need a simple data base program.

We have run this on Models I, II, and III and it works quite well. If you want to use the program on Model II, remove the PEEK statement by DELETEing line 550. You will also want to redo the PRINT@ locations. In addition, add these lines:

```
 125 ON ERROR GOTO 2000
2000 IF ERR= 60 THEN RESUME NEXT
2010 CLOSE
2020 RESUME 100

 100 REM *** DATA BASE MANAGER *** BY R. BUECHE
 110 REM *** INIT
 120 CLEAR 1000
 130 DEFINT I,X,L
 140 B$(5) = "MAKE A SELECTION"
 150 S1$ = "<------- DEFAULT ------->"
 160 S2$ = "<-------- VALUE -------->"
 170 N$ = STRING$(255,32 )
 180 FOR I = 0 TO 9: B$(I) = STRING$(25,32): NEXT
 190 CLS
 200 REM *** SCREEN
 210 PRINT "RECORD"; LR; TAB(24) S2$
 220 FOR I = 0 TO 9
 230 PRINT TAB(11) "FIELD"; I; " = > "; B$(I)
 240 NEXT I
 250 REM *** MENU
 260 PRINT STRING$(63,"*")
 270 PRINT"<Q>UERY A RECORD        <D>ELETE RECORD
 280 PRINT"<A>DD/UPDATE A RECORD
 290 PRINT"<L>IST ON PRINTER       <E>XIT PROGRAM
 300 REM *** Z$ TEST
 310 Z$ = INKEY$: IF Z$ = "" THEN 310
 320 IF Z$ = "E" THEN CLOSE: END
 330 IF Z$ = "Q" THEN 400
 340 IF Z$ = "A" THEN 710
 350 IF Z$ = "L" THEN 500
 360 IF LR = 0 THEN 310
 370 IF Z$ = "D" THEN 1030
 380 GOTO 310
 390 REM *** QUERY
 400 PRINT@ 768, N$;
 410 PRINT@ 832, "";
 420 INPUT"ENTER RECORD TO QUERY"; LR
 430 IF LR = 0 THEN 190
 440 OPEN"R",1,"DBM/DAT"
 450 GOSUB 1010
 460 GET 1, LR
 470 CLOSE
 480 GOTO 190
 490 REM *** LINE PRINTER
 500 PRINT@ 768, N$;
 510 PRINT@ 832, "";
 520 INPUT"BEGINNING WITH RECORD (1 - 200)"; L1
 530 INPUT"     ENDING WITH RECORD (1 - 200)"; L2
 540 IF (L1>L2) OR (L1< =0) OR (L2< =0) THEN 190
 550 IF PEEK(14312) >127 THEN INPUT" FIX PRINTER
     <ENTER>"; Y$: GOTO 550
 560 OPEN"R",1,"DBM/DAT"
 570 GOSUB 1010
 580 FOR II = L1 TO L2
 590 GET 1, II
 600 LPRINT TAB(25)"*** RECORD NUMBER "; II; "***"
 610 FOR I = 0 TO 4
 620 LPRINT "("; I; ") = > "; B$(I); TAB(40) "("; I + 5; ") = > ";
     B$(I + 5)
 630 NEXT I
 640 LPRINT STRING$(80," =")
 650 IF INKEY$ = "@" THEN II = L2
 660 NEXT II
 670 CLOSE
 680 LPRINT STRING$(5,10)
 690 GOTO 190
 700 REM *** ADD/UPDATE
 710 PRINT@ 768, N$;
 720 PRINT@ 832, "";
 730 INPUT"ENTER RECORD NUMBER TO ADD OR UPDATE
     (1 - 200)"; LR
 740 IF LR = 0 THEN 710
 750 OPEN"R",1,"DBM/DAT"
 760 GOSUB 1010
 770 GET 1, LR
 780 CLOSE
 790 CLS
 800 PRINT "RECORD"; LR; TAB(11) S1$; TAB(39) S2$
 810 FOR I = 0 TO 9
 820 PRINT@ 64 + 64*I, "FIELD"; I;
 830 PRINT@ 75 + 64*I, B$(I);
 840 PRINT@ 101 + 64*I, "";
 850 A$(I) = B$(I)
 860 INPUT A$(I)
 870 B$(I) = A$(I)
 880 NEXT I
 890 PRINT
 900 AN$ = "":INPUT"IS THE ABOVE CORRECT (Y/N)"; AN$
 910 IF LEFT$(AN$,1) = "Y" THEN 920 ELSE 790
 920 OPEN"R",1,"DBM/DAT"
 930 GOSUB 1010
 940 FOR I = 0 TO 9
 950 LSET B$(I) = A$(I)
 960 NEXT I
 970 PUT 1, LR
 980 CLOSE
 990 GOTO 190
1000 REM *** FIELD STATEMENT
1010 FIELD 1,25 AS B$(0),25 AS B$(1),25 AS B$(2),
     25 AS B$(3),25 AS B$(4),25 AS B$(5),
     25 AS B$(6),25 AS B$(7),25 AS B$(8),
     25 AS B$(9): RETURN
1020 REM *** DELETE
1030 PRINT@ 768, N$;
1040 PRINT@ 832, "";
1050 AN$ = "": INPUT"DO YOU REALLY WANT TO DELETE
     THIS RECORD"; AN$
1060 IF LEFT$(AN$,1) = "Y" THEN 1070 ELSE 190
1070 OPEN"R",1,"DBM/DAT"
1080 GOSUB 1010
1090 FIELD 1, 255 AS B$
1100 LSET B$ = "DELETED"
1110 PUT 1, LR
1120 CLOSE
1130 GOTO 190
```

Budget Management for 80 column printers.

We have had several requests for information on printing Model I/III Budget Management (26-1603) reports on an 80 column printer. The simplest method is to follow the directions on page 59 of the manual. These instructions tell you how to send the video reports to the line printer.

If you would like to be able to print all of the information on your printer, you need to edit lines 3110 to 3160 and line 3900 of the REPORTS program.

Make the following changes to lines 3110 and 3120:

Within the quote marks, delete the first 2 blanks, move over 9 spaces, delete 2 blanks, move 26 spaces, delete 1 blank, move 12 spaces, delete 1 blank, move 12 more spaces, delete 12 blanks, move 10 spaces and delete 2 more blanks.

In lines 3130 and 3135—within the quote marks move 6 spaces, delete 5 blanks, move 30 spaces, and delete 5 more blanks.

In line 3140, inside the first and second sets of quote marks, delete the first two blanks and the last 5 blanks. Change both occurrences of the number 15 to 8.

In line 3160, delete the first 3 blanks inside both sets of quote marks.

In line 3900, change the number 110 to 80.

After you make these changes, be sure and save a copy of the corrected program on either tape or disk. Then test the program. You should find that your reports now fit your 80 column printer, and still give you all of the available information.

Carry-In Service Contracts

Effective October 1, 1980 Radio Shack has simplified a great idea! Our Carry-In Service Contract gives you twelve full months of service (in addition to your 90-day warranty if your computer equipment is new) for only twelve percent of the regular retail price of the equipment! And, if you buy the Carry-In Contract at the same time that you purchase your equipment, we will even discount the price of that contract by five percent!

We hope you never need to use our Computer Repair Facilities, but if you do the Carry-In Service Contract is the cheapest way we know of to plan for and cover the cost of those repairs.

With the Carry-In Contract you know, for one full year, EXACTLY what computer maintenance will cost you! No surprises!

And, because you bring the equipment to your local Radio Shack store (instead of us sending a repair person to your location) the cost of the maintenance is an absolute minimum. All you have to plan for is the cost of expendables, like paper, ribbons, etc.

Why wait? If you have been planning the purchase of another system, get a Carry-In Service Contract to go with it (and save 5% of the Contract price). If you already have a system, your local Radio Shack store has all the information you need to add a Carry-In Service Contract to that system.

Change of Address

Please detach address label and mail to address shown above along with your new or corrected address.

Computer Centers to Handle Forms

Beginning in November, Radio Shack Computer Centers will be able to supply blank forms for Radio Shack Business Programs. By the end of November they will be able to order imprinted forms for you. Contact your nearest Computer Center for details.

Daisy Wheel Printer I —26-1157

We have discovered that the original Daisy Wheel I Printer will lock up under certain conditions. The computer will return to the READY mode, but the printer must be turned OFF to terminate the lock up condition. The following program will cause the lockup to occur:

```
10 FOR X = 1 TO 255
20 LPRINT "!";
30 NEXT
```

Any single character may be used in line 20, and the lockup will occur only when 255 characters are sent. The printer cable may be completely disconnected from the computer, but the printer will continue to print full lines of the single character in a continuous wrap-around mode.