



ISSUE 11

MOD-II/12/16

THE NEWSLETTER FOR OWNERS OF THE TRS-80™
MODEL II/12/16 MICROCOMPUTERS

Our apologies to all of our subscribers -- we know you've all been waiting to see a new issue for quite a while. The production of the Computronics Magazine and our new Catalog #12, along with difficulties due to the rapid expansion of our software sales and development (without enough space to expand into) have all contributed to the delay.

The big news is that H & E Computronics, Inc. has sold the Computronics Magazine to the publishers of 80-US magazine. This means that the Mod-II/12/16 Newsletter is now the only publication of H & E Computronics, Inc. H & E Computronics, Inc. has decided to focus our full attention on software sales. All Mod-II,12/16 Newsletter subscribers should have already received our latest catalog. This catalog represents the largest catalog mailing ever by a microcomputer software house. Our total 1983 mailings will exceed 1 million catalogs.

We have stated in the past that the Mod-II/12/16 Newsletter is not a profitable publication. Our entire business is run on Mod-II's. That includes invoicing, inventory, back orders, payroll, general ledger and our entire mailing list and all other business records. The Mod-II (when we say Mod-II we do mean Mod-II, 12 and 16) is the only computer that we use for our business records (actually we use four of them) and is our favorite computer. Once again, our Mod-II

Newsletter has always been our favorite undertaking. We enjoy doing it and the response to the Newsletter has always been extremely favorable. Our goal still remains...to provide our readers with valuable information related to the Mod-II,12,16. Thank you for your support.

Since our last issue, we've changed the name of the Newsletter again, to include the new TRS-80 Model 12. This newsletter is being typed on a Model 12, and in many respects this is one of the best computers available anywhere. As one of our readers points out, the Model 12 is, if anything, a better computer than the Model 16. We agree with this reader (see letter below) in his opinion that prospective Model 16 owners should buy a Model 12 instead and have it upgraded to Model 16 capability. You'll get a better computer for the same price as a new Model 16. The Model 12 has greater expandability, the best keyboard in the business, and a more pleasing design than the Model 16.

The Mod II/12/16 Newsletter subscription price is now \$24 for 12 issues. Present subscribers may renew at the old price of \$18 for 12 issues if they order by August 30th, 1983.

*** ENHANCED BASIC ***

RACET COMPUTES has the best utility programs anywhere, and their latest item for the Mod II/12/16 is ENHANCED BASIC, which sells for \$99.95.

ENHANCED BASIC is fantastic, but only a programmer would really appreciate it...so if you don't do any programming at all, you don't need it.

ENHANCED BASIC is a programmers dream (and it's simple to use). ENHANCED BASIC adds the following features to BASIC:

1. Labeled line references -- This feature allows you to assign a label to a subroutine and then call that subroutine by name, using GOTO or GOSUB statements. For example, if your program has a print routine on line 1575, you don't have to call the line by using "GOSUB 1575." Instead you can place the label "PRINT ROUTINE" on line 1575 and then call the routine from anywhere in the program by using "GOSUB PRINT ROUTINE." Now you can renumber your program as many times as you want during development, without worrying about what lines all of your subroutines end up on. The label for any subroutine can be up to 255 characters long!

2. Merge non-ASC programs.

3. LOAD/RUN/MERGE programs and continue execution WITHOUT LOSING VARIABLES OR CLOSING FILES. This is POWERFUL!

4. Capability of moving program lines allows you to completely reposition a routine to another place in the program.

5. Greatly improved renumber command (allows you to renumber to the middle of a program).

6. Improved editing commands. (You can now break from a program, edit a line, and continue the program without losing any variables or closing open files!)

7. Dynamically add/edit/delete program lines from command mode.

8. New BREAK command allows you to turn the BREAK key on and off.

9. Improved default parameters.

10. More reliable keyboard type-ahead buffer -- up to 80 characters!

11. Automatic save of last program loaded (a great feature...you don't have to know the name of the program you just loaded). Just type SAVE and your computer will use the same filespec as the last LOADED program.

12. BREAK key redefinition (for example, disable the BREAK key, use the F1 key instead for breaks).

13. Screen scroll protect

14. Reverse screen scroll.

15. Edit subroutine ideal for application programs.

Once again, RACET COMPUTES has come out with a winner. ENHANCED BASIC works on every MOD-II, Model 12 and Model 16 (with floppy or hard disk drives).

*** A SUCCESSFUL HOOKUP ***

We recently purchased one of Radio Shack's new Model 100 portable computers, and were quite impressed with the computer's many advanced features. We were also interested to see how Radio Shack, in the Model 100 manual, had stressed the ease of connecting the Mod 100 with other computers -- especially other TRS-80's. They went so far as to include hookup instructions. What they did not do, unfortunately, was include specific instructions for use with the Mod II's terminal program. The Mod 100 has a very good communications program built in, called TELCOM. The TELCOM program is simple and straightforward, allowing setting of baud rate, parity, word length and stop bits, easy uploading and downloading of files, and direct conversations. Unfortunately, using SETCOM to set the Mod 12's parameters to the same settings, and then running the TERMINAL program on the Mod 12 resulted only in a "DATA CARRIER LOST" message. Checking of cables and the Mod 100's display showed no problems, so rather than investigate further, we tried running the Small Business

Systems Group's ST80-III smart terminal program instead. It worked like a charm. It seems to be "smarter" than Radio Shack's TERMINAL program.

We ran a null modem cable (an RS232 cable with several pins reversed) between the Model 100 and our Model 12 (the pinning of this cable was diagrammed in issue # 8 of the Mod-II Newsletter). The opening for the RS-232 port in the Mod 100's plastic case is a little too small to accept the standard plug housing -- you may have to either remove the plug housing at that end of the cable or use an extender to fit the plug into the RS232 slot (the Model III's RS-232 port has exactly the same problem).

Using the ST80-III smart terminal program on the Model 12 and the Model 100's own TELCOM program, we were successfully transferring files back and forth less than fifteen minutes after setting up the machines and starting to read the TELCOM and ST80-II documentation for the first time.

Text files created with the Model 100's TEXT program can be used with the ELECTRIC PENCIL word processing program on the Model 12. The reverse also worked -- ELECTRIC PENCIL files could be edited by the TEXT program on the Model 100. Next step, BASIC programs. A simple program was written on the Model 100, run, and then sent to the Model 12. The program also ran fine on the Model 12. Data files stored in RAM on the Model 100 are essentially text files, and they can be transferred just as easily.

What we have in mind, besides portable word processing, is to create a set of remote data entry programs for the Model 100 to be used in conjunction with our own in-house software which runs on a Model II. A BASIC program on the Model 100 will prompt the operator for a series of variables, say, for check register entries, and then sequentially write the data into a RAM file. This will allow the operator to do some data entry work at home rather than stay at work after hours or come into work on the weekend. On Monday

morning, the data files can be transferred into the Model II, where another BASIC program reads the file and processes the entries. This kind of programming is very simple to work out, and will make lap-size portables like the Model 100 very attractive.

*** QUESTIONS FOR OUR READERS ***

We'd like to ask our readers for some information that we'd love to be able to print here. These questions are on a lot of people's minds, and we want to be able to answer them as soon as possible.

Does anyone out there actually have a Model 16 Hard Disk-based system with one or two DT-1 terminals and XENIX successfully up and running as a multiuser system? If so, we want to know how well it works, how you got it running, what problems you've had, and anything else you can tell us about it (also, where did you find applications software for it?).

We want to hear from anyone who gets hooked up with a Datapoint ARCnet system. What are you planning to do with your local-area network? We keep hearing that this kind of networking is the wave of the future -- let's hear from someone who's doing it now.

Anyone with experience using the big TRS-80's has a story to tell that can help others in the same situation. Write to us about your problems and successes, and we'll pass it on to everyone else.

*** LETTERS ***

Here's a letter from Art Frasick, P.O. Box 443, Middletown, OH 45042:

"I have been state-of-the-art ever since Radio Shack came out with the Model I. I bought a Mod 16 when they first came out and thought that I would be one of the first to come out with some really neat software and be ahead of all the others. Since they came out with the Mod 12, it is clear to me that this is a replacement for the Mod 16. It has more room for cards, therefore it is

more expandable than the Mod 16. It has a better keyboard and is just a far superior machine. Just to be able to program the Mod 16 in the 16 mode, it will cost you a bundle by the time you buy the compilers necessary. All Radio Shack is doing is giving out a runtime disk so that you will be able to use their three-drive software. You can of course use it as a glorified Mod II and use the 2.0 or 4.0 operating systems. In summary, if you find the need to obtain a 16 bit computer, DON'T BUY A MODEL 16! Instead buy a Mod 12 and have it upgraded. You'll be much happier and more up to date.

In talking about the endless know-how in the Fort Worth branch, I timed a few functions using a Mod II 2.0a (regular drives, not slimline), a Mod 16 4.0 slimline, and a configuration of Mod II's multiplexed with Arm Hard Disk Drive operating system. So we have 3 different operating systems to compare.

Disk Access Times (in seconds)

Operation	2.0a	4.0	HSDS
DIR 18 FILES	3	13	1
FILES COMMAND (114 FILES)	N/A	16	1
LOADING BASIC	4	9	2
CREATE A FILE (OPEN & CLOSE)	2	15	>1
CREATE A FILE (OPEN FILE, WRITE 50 RECORDS, CLOSE FILE)	13	51	1.5
CREATE A FILE AND WRITE 500 RECORDS	61	126	12
OPEN A FILE AND READ 500 RECORDS	18	23	9

It is clear to me that Radio Shack has some very superior computers, but to use them, I have had to apply patches and modules so that I can

have the speed and efficiency necessary to run a company and to service my customers. Patches are available for the Mod 16, and they are not from Radio Shack. Racet Computes makes a good fast loader that I use. If it wasn't for other companies that support these computers, I would still be waiting for the computer to process my text that I finished last month.

I also think that it's a shame that I have failed to find qualified personnel in the stores or even the Centers! Just last week, a company that is now my client went to one of our local Radio Shack Computer Centers and they told her that they could sell her the equipment to handle a 90,000 -- that's right, ninety thousand -- name mailing list. I would personally like to see their mailing list sort that many names and handle the job! That's the least of the conversation. I have not been able to get an intelligent answer to any of my problems out of them yet, even by calling Fort Worth and being transferred many, many times."

This next letter is from Harold J. Hendriks, P.O. Box 539, Morro Bay, CA 93442:

"Although I use my TRS-80 Mod-II almost exclusively for word processing, using Radio Shack's SCRIPSIT 2.0, and do very little programming in BASIC, I enjoy the MOD-II/12/16 Newsletter very much and find much informative and valuable information in it.

My computer facility consists of the 64K RAM version of the Mod II with one disk drive in the disk expansion bay and a Radio Shack Daisy Wheel II printer, all of which I purchased some 26 months ago. I have no intention of upgrading to the Mod-16 or the new Mod-12. In general, I have been very pleased with my setup and am happy with my decision to go the Radio Shack Mod-II with SCRIPSIT route for word processing. My only problem has been the failure of the

drive unit in the expansion bay about two months after my warranty expired. I had to pay for the replacement plus labor, but I have had no more problems in the past 21 months. I was very pleased with the prompt, efficient and courteous service that I received from the Radio Shack Computer Center repair people.

I get more than a little tired reading the constant line of gripes and 'stab in the back' statements in the well-known 80 Micro magazine. I, for one, am a contented TRS-80 owner and Radio Shack booster. I wish that there were more of us."

From Jerry A. Kroeger, D.D.S., 249 South 84th Street, Lincoln, Nebraska 68510:

"I have been mad at you guys ever since I subscribed to the Mod-II Newsletter. \$18 to read a bunch of advertising every few months, Really!

Well I got your Dec. 1982 issue, and you really redeemed yourselves. More info and less plugs is really appreciated -- plugs are fine, but I don't want to pay for them!

The advice on how to eliminate the underline after a 'DUAL OFF' was a lifesaver. This has been bugging me for a year (I have a Daisy Wheel II printer). The Lincoln Radio Shack couldn't help. The Tandy Hot Line told me to shut my printer off and turn it on again! I won't miss their service now that it's being discontinued! Right there I got my money's worth from you.

I will renew and break my vow never to buy anything from you again."

From Leon P. Jorgensen of Brok Manufacturing Corp., P.O. Box 36903, Charlotte, NC 28236:

"Our business uses a pair of Model II's for a variety of accounting and billing functions. All software has

been developed in-house, which puts us a bit out of the mainstream relative to your assessment of most Model II users.

At any rate, we have encountered a problems and would appreciate any insights you might be able to offer.

Our billing program accumulates daily data on sales and goods shipped in a pair of files with date-related filenames to allow easy monthly consolidation. The daily file of sales information is named, for example, DECS15. The daily file of goods shipped is named GONE####, where the numbers reflect year and day of the year.

In recent months, we have encountered several of these file names that could not be used because they trigger an Error 39 message (Illegal I/O attempt). Two specific examples are GONE2277 and OCTS25. The problem was dealt with on a temporary basis by adding an appendage to the filename.

If this is going to be a recurring problem, we could go to another file naming system. Although any other system could be subject to the same flaw. If this is going to happen only rarely, we could live with it, although it is a complication. What we would like, of course, is to find out why it is happening and stop it. Discussions with the local Computer Center caused them to call Ft. Worth where they promised to investigate and send us a reply. Several months have passed and they have not contacted us.

Do you have any ideas?"

Editor's Comments:

This is a bit mystifying. We couldn't duplicate the problem on our Model II. Are you using TRSDOS 1.2 or version 2.0a? On our Mod II using BASIC, we could write files called GONE2277 and OCTS25 without errors. Is your program written in BASIC? If not, you may have a software problem that we can't hope to identify. If your program is in

BASIC, then does it consistently give errors for these filenames, no matter what disk you try to write the files on?

Another letter, from A.W. Brunsell, Business Administrator of Olsen, Thielen & Co., Ltd., 223 Little Canada Road, St. Paul, MN 55117:

"We are a public accounting firm utilizing two reasonably large minicomputers for client accounting work. About one year ago we decided to make our first purchase of a micro for some special projects, and purchased a TRS-80 Model II after a rather detailed study of published specifications. There is no doubt that we picked a good machine because not only have we successfully completed many projects during the last year, but we have not experienced one minute of downtime due to hardware malfunctioning.

In December, we purchased a second micro, but decided on a Model 16, which we knew to be compatible with the Model II using the TRSDOS operating system. This has proved to be correct, requiring only some 'thinline' patchwork when switching machines.

Since TRSDOS was common, we also were certain that our Lifeboat 2.25C version of CP/M would also run on the Model 16. This was not the case when we first attempted to boot the Model 16. We called Lifeboat and they were kind enough to send us some system modifications to upgrade the version 2.25C to 2.25D, which they claimed would then provide the means for booting the system.

After we tried this modification from 'C' to 'D' unsuccessfully many times and also tried the modification without success on new Model 16's at the Radio Shack Computer Center, we called Lifeboat to see what else could be done. The only answer we received was that there must be a hardware problem

with the Model 16.

We then wrote to Digital Research, who suggested that we substitute 'SAVE 55 SYS64.COM' and 'SYSGEN SYS64.COM' in the Lifeboat instructions. Further attempts were unsuccessful, with Digital Research finally saying there was nothing further they could suggest.

Unfortunately, our two machines are not located in the same place, and it would be beneficial if we could use our CP/M System on both machines.

The following is a copy of the system corrections offered by Lifeboat. If you have any suggestions we would be very receptive. We have purchased your 'Business Pac 100' and will undoubtedly be using Computronics as a software source in the future.

Cold boot a Read/Write copy of CP/M version 2.25C; then do the following (user's entries are underlined -- note that these are the instructions that were provided by Lifeboat and were unsuccessful):

```
A>DDT MOVCPM.COM <enter>
DDT VERS 2.2
EXT PC
3500 0100
-S1FED <enter>
1FED 43 44 <enter>
1FEE 20 . <enter>
-S2533 <enter>
2533 0F 4F <enter>
2534 C1 . <enter>
-^C <control-C>
A>SAVE 52 MOVCPM-D.COM <enter>
A>MOVCPM-D * * <enter>
```

Constructing 64K System

New System in memory at 900H (sysgen, image) is ready for 'SYSGEN' or 'SAVE 45 SYS64.COM'
A>SYSGEN <enter>
SYSGEN Version 1.1
Copyright (c) 1981, Lifeboat Associates

for TRS-80 Model II

Source drive NAME (or RETURN to skip) <enter>
Destination drive NAME (or RETURN to reboot) A <enter>
Place DESTINATION disk on A:, then type RETURN <enter>
Function complete
Destination drive NAME (or RETURN to reboot) <enter>
A>

CP/M Version 2.25D now resides on the system tracks of the disk. It will load in on a cold boot. You may need to rerun the CONFIG program as I/O assignments, etc., will revert to their original values. You may delete the MOVCPM program and then rename MOVCPM from MOVCPM-D.

Your newsletter is very enlightening. I can't believe some of the criticism you have received in letters from readers. The newsletter is great and I look forward to every issue with enthusiasm."

This is a letter from a long way off. It comes from Ray Watson of the Tandy Computer Department at 123 Liverpool Street, Hobart, Tasmania (Australia 7000):

"You may have heard of Tasmania, a smallish island at the bottom of Australia. There is already one subscriber here, and soon there will be another two. As the Tandy Computer Sales Rep. here, I find that recommending user magazines such as yours is a good sales move and often of great value to me in learning about computers. I find that expertise in Model II/16 areas is sparse and hard to access through Tandy. Real experts are only poor suffering users and programmers. Goodness knows how I would cope selling another make with even sparser support.

I am particularly interested in

BASIC, Pascal and Fortran for the Model 16. Following the sale of 2 Model 16's with hard disks, I have organized the writing of a COBOL Payroll package for Australian conditions, in case any other Australians are interested. The programmer, who is very experienced in large applications, finds the Tandy COBOL quite good, but has to use the Model II Text Editor for programming, and then recompile it with the Model 16 Compiler.

We have been using TRSDOS 4.1, and a couple of 'shortcomings' have been exposed. First, there is no KILL configuration that doesn't require constant Y's or N's, and I cannot get DO files to 'do' other DO files. The Hard Disk Manuals are very sparse, and require a lot of referring to the Mod II Owner's Manual. They don't have many examples in them either.

On the good side, the new COBOL Business programs seem to be excellent in all areas, and the Model 16's have proved to be more reliable than the first Model II's (that's to be expected, I suppose)."

From M. Young Stokes, III, M.D., P.O. Box 1098, Denison, TX 75020:

"Having recently received your Software Catalog 11, I am impressed with the Winchester hard disk drive system shown on page 33. At present, I have been using a Radio Shack TRS-80 Model II with Corvus 20 megabyte hard disk. Backing up this system on video tape has proved undesirable, and the use of multiple floppy disks is time consuming and impractical. I have a KayPro II with CP/M and can transfer back and forth between the TRS-80 Model II and the KayPro II using a null modem and the CrossTalk communications programs from Microstuf, at 9600 baud. I am questioning whether one of your 20 megabyte systems with an optional 5 megabyte removable hard disk cartridge drive could be configured with different cards and cables so

that the same drive could be transferred between both the TRS-80 Model II and the KayPro II. This might simplify my backing up of the systems. This would also suggest the desirability of getting 2 of your systems."

Editor's Comments:

Undoubtedly the same hard disk drive could be configured with different cables and interface arrangements to work with either the KayPro II or the TRS-80 Model II. However, it would probably be impossible to have the computers share the same data on the disk. Both computers would need special hard disk operating systems just to run the drive. The problem is that two different operating systems for two different computers would be very unlikely to format the drive and store data in exactly the same way, making one system's format incompatible with the other.

From Ralph E. Degenhardt of the Krispy Kreme Doughnut Corp., 2749 Skidaway Road, Savannah, GA 31404:

"My business has purchased a Radio Shack Model 16 with the COBOL Compiler, and I am now in the process of writing applications programs. The dearth of information on the version of COBOL used by the computer became immediately obvious since all the texts I have been able to locate on the subject assume that a mainframe or mini is to be the object computer.

I am now in the process of trying to organize the generation of reports and sorting of files without the Report Writer or Sort feature. In doing this the only source of algorithms I can find published are in BASIC; this is inconvenient (to say the least). As a COBOL novice with only one quarter of BASIC in the way of training, I would appreciate any advice and information you can give as to finding a source of explanatory literature for COBOL on a micro.

Another point I would like clarified is if any benefit exists in the new Ryan-McFarland Model 16 COBOL package. Does it, perhaps, possess a Report Writer or Sort feature? Aside from being able to handle multiple terminals, is it any improvement on the system they supply through Radio Shack?

My final question is who, if anyone, makes a printer buffer compatible with the Model 16 and the Daisy Wheel II printer?"

Editor's Comments:

To answer the last question first, practically any printer buffer can connect your Model 16 with a Daisy Wheel II. In our last two catalogs (# 10 & 11) we advertised the "Printer Optimizer" from Applied Creative Technologies, which can connect virtually any computer with any printer, available in parallel or serial versions. For a few opinions about RM COBOL, see the next letter.

From Thomas W. Scott, 9715 W. 77th Drive, Arvada, CO 80005:

"In the December issue you asked for information about the Model 16. I have had a 2-drive Model 16 since May 1982, and after some frustration (and anger at Radio Shack) I have come to love and appreciate my Model 16.

I am a self-employed programmer who writes custom software for small businesses on TRS-80 equipment. I have written a Travel Agency accounting system, a small Credit Union accounting system and a general purpose General Ledger system. Each of these systems is presently being marketed on a small scale. All of the systems have been written using RM COBOL purchased from Radio Shack. I purchased the Model 16 COBOL some months ago and have converted all of my systems to operate in Model 16 mode. I use TRSDOS 4.1 with some modifications as supplied from SNAPP-WARE in

Cincinnati, Ohio. I am not trying to sell my systems through the newsletter, but hope to impart some useful information to those people contemplating moving from a Model II to a Model 16. If you use BASIC, forget it. Radio Shack still does not have a BASIC for Model 16 mode.

I ran into a couple of DOS problems in converting to Model 16 that you might not be aware of:

1. There is no HOST communications available on the Model 16 mode.
2. The SAVE command to backup files will only work on hard disk, even though the manual indicates you can save from floppy to floppy.
3. There is no BUILD command in Model 16 mode. You must use the EDIT16 editor supplied by Radio Shack on the system diskette to create DO files.
4. ANALYZE and XFERSYS are not available in Model 16 mode, but you can use the COPY command with a SYS option to merge system files.
5. There is no FREE space map any more, but simply a total of free sectors available.

All of the above concerns only relate to Model 16 mode. In Model II mode everything works the same as before, but if you are only going to use Model II mode, don't bother to buy a Model 16 computer.

Running in Model 16 mode is much faster than the Model II mode and the double sided drives hold a lot more data. Don't try changing the System disk (drive 0) during operation or you'll get some strange error messages. What this means is that you must always keep the system files available on drive 0.

If you are going to use COBOL (which is about all you can use in Model 16 mode), you will have some differences between the Model II and Model 16 COBOL. I would say the changes are well worth making to

your programs, as I have found compiles to run 3 to 4 times as fast and object code to execute much faster. Radio Shack in its infinite wisdom decided not to provide CEDIT with Model 16 COBOL. Instead you are instructed to use the new EDIT16 Editor. I believe that most of you will find that to be abortive. It is much slower and more cumbersome than the old CEDIT. What I do is to use CEDIT in Model II mode to maintain my source code, then jump to Model 16 mode to compile. the Model 16 COBOL reads the old CEDIT code just fine. It's something of a pain to keep jumping from one mode to another, but CEDIT (in Model II mode) will still only have the 64K to work with until Radio Shack gives us CEDIT in Model 16 with its doubled memory capacity.

There are a couple of things to be aware of when converting COBOL programs from Model II to Model 16:

1. Mod II allowed you to DISPLAY a large literal spanning any number of CRT lines. Mod 16 will kick these out as a CRT ERROR during runtime. You cannot overflow a CRT line with a DISPLAY in Mod 16.
2. You cannot DISPLAY a character directly to Position 80 of any line in Mod 16. This also gives you a runtime error. For example: you can DISPLAY 'XX' LINE 3 POSITION 79, but you cannot DISPLAY 'X' LINE 3 POSITION 80. Who knows why?
3. Mod 16 COBOL gives you an automatic page advance when you close the PRINTER file. This did not occur in Mod II.
4. Mod 16 will not allow you to ACCEPT data into subscripted areas (tables) as Mod II allowed you to do. Get around this by ACCEPTING into a common independent item in Working Storage and then move it to the subscripted item.

SCRIPSIT and other 2.0 systems will work fine in Mod II mode, but you must apply some patches called

'THINLINE' for them to work properly on the Mod 16 drives. These patches seem to create a problem with FORMAT and BACKUP, but Radio Shack has put out some new patches to fix this problem. Model 16 also allows a procedure called 'FCOPY' which copies files from 26 sector format to the 32 sector format used on the Model 16. You will need to use FCOPY when moving diskettes created by TRSDOS 2.0 from Model II to Model 16.

Before closing this letter, I would like to comment on Radio Shack software packages. I keep running into a lot of people who buy one of the R/S packages (such as Inventory Control) then want someone to change it for them. Unfortunately, when you buy a package you get what you get. I have successfully converted the Inventory Control package to Model 16 mode, but it was a horror to work with. I will no longer agree to modify R/S software. All the programs are loaded with COPY's and CALL's, making modifications an exercise in delirium. The packages run extremely slowly and response times on the Inventory Control program average about 30 seconds per screen. Please be sure the system does what you want, at the speed you want, before throwing down your money on software packages.

In summation, I am very pleased with my Model 16 and, aside from a problem with Disk Drive #1, it has been very reliable. RM COBOL is about the best I have ever seen on a microcomputer, but I wish they would give us a SORT verb for the Model 16 with all the memory available. If there are any other Model 16 users out there, please talk to us. Do you have any neat ideas? Have you encountered any new problems? I hope the Newsletter becomes a little more informative for us serious users in the future."

*** DISK STATUS PROGRAM ***

A Disk Status Program is available for the TRS-80 Model II & 16 from Custom

Software Services. This utility program checks each disk mounted in a drive and displays the disk name, type, free space information and directory status information. Information for all four drives is displayed at one time, with each drive in a separate column. Empty drives will have no information displayed in their columns.

STAT will also check to see that the system is still using the primary directory. This is the ONLY way of determining if the system has switched to the alternate directory! STAT is available for \$50 from Custom Software Services, P.O. Box 150, Porterville, CA 93258; (209) 784-7966.

*** BOOT ERROR ELIMINATOR ***

Systems Enhancement Engineering, Inc. (See) has announced their new Boot Error Eliminator (Bee) Unit for the Model II. The SeeBee Unit is an electronic interface between the Disk Expansion Unit and the Model II which eliminates the DC Boot Error which occurs when the system is initialized without turning on the Disk Expansion Unit.

When the system is turned on without turning on the Disk Expansion Unit, or if the Expansion Unit's power switch is turned off while the system is running, the computer will obliterate data recorded on the system diskette wherever the read/write head is located. The SeeBee Unit prevents the destruction of your system disk.

The SeeBee Unit is available from Systems Enhancement Engineering Inc., P.O. Box 40215, Indianapolis, IN 46240. Telephone orders can be placed by calling (317) 844-8817. The unit is priced at \$59.95 plus \$3 for shipping and handling.

*** SPEECH SYNTHESIS ***

COMPU-TALK is an assembly language program that transforms the Radio Shack Model II/12/16 into a fully functional TALKING COMPUTER.

There are several features that make COMPU-TALK unique. It is flexible, it can be used as a talking computer, a "dumb" or "intelligent" terminal, or a talking word processor. COMPU-TALK actually merges with TRSDOS, allowing users to completely control the voice synthesizer. Disk space is not needed for a vocabulary. COMPU-TALK gives spelled speech, total speech, identification of upper/lower case, line and column number, reading/spelling of the entire screen, reading of the current line and other functions, all at a keystroke.

Ron Hutchinson of SofTalkSystems, is the creator of this program. Hutchinson, himself severely visually impaired, stated that while he had created the program to meet his own needs, COMPU-TALK has a much broader audience than the visually impaired. He said educators, hobbyists, and security programs could use COMPU-TALK. Hutchinson spent the last several years working on this program to get it to do what he needed as a professional programmer. He found that commercially developed hardware and software combinations had been developed by sighted programmers and did not meet the needs of visually impaired persons. They are also quite costly. Most currently available talking computers costs more than \$9,000. While some machines may need to be shipped across the country for repairs, the Radio Shack computers can be repaired at any local Radio Shack Computer Center, making the TRS-80 a good choice of computers for this program.

The program requires that your Model II/12/16 be equipped with an RS-232 cable and a VOTRAX voice synthesizer (TYPE 'N TALK or PERSONAL SPEECH SYSTEM), a speaker if equipped with TYPE 'N TALK (the PSS has its own speaker). This is inexpensive and requires little user-manipulation. COMPU-TALK configures the synthesizer to the "B" serial channel on the computer. Hutchinson stated, "I have used COMPU-TALK for hundreds of hours, and I have continually improved it." COMPU-TALK presently works with

TRSDOS, BASIC, SCRIPSIT 1.0 and numerous other programs, including Tandy's BI-SYNC package.

The COMPU-TALK software is available for \$129.95. The Votrax TYPE 'N TALK and PSS synthesizers are also available, priced at \$250 and \$400 respectively when purchased with COMPU-TALK. RS-232 cables are available for \$30. To order, or for more information, contact: SoftTalkSystems, c/o JC, P.O. Box 28355, Columbus, OH 43228; (614) 279-8271.

*** CP/M FOR RADIO SHACK HARD DISK ***

Many of you have been waiting for CP/M to support the Radio Shack Hard Disk. You don't need to wait any longer -- Pickles & Trout has released P&T CP/M 2.2eH-RSHD, for the TRS-80 Models II, 12 and 16 running with the Radio Shack Hard Disk.

It includes all the standard P&T utilities plus additional backup routines and a logical drive configuration program. The 120-page Radio Shack Hard Disk addendum supplied with the system has been written in a new format: sample video displays with sample responses of each utility are included to show the user what to expect when running each hard disk utility. The description includes possible error messages and their meanings.

P&T CP/M 2.2eD is the double sided version. It is adapted to the Model 16 (Z-80 mode) with the Tandon Slimline drives. This version contains all of the neat features of the Model II version plus 1.2 megabytes of storage per double sided double density diskette. The Pickles & Trout CP/M for Radio Shack Hard Disk, priced at \$250, and the Model 16 CP/M, at \$220, are both available from H & E Computronics, Inc. (Hard Disk versions are also available for Cameo and Corvus Hard Disk systems. Hopefully a Model 16-mode CP/M will also be available soon (when Digital Research releases a CP/M for the 68000 chip).

*** PRIORITY ORGANIZER ***

The PRIORITY ORGANIZER is a work scheduling and planning program that enables the owner of a Model II-compatible TRS-80 to keep track of tasks, goals, objectives, etc. in an organized and systematic fashion. This program was developed in order to improve efficiency, and as a tool for management to delegate projects and tasks according to their importance. Each employee's work load (jobs, projects) are stored on disk and can be updated as jobs are obtained or a priorities change. The employee can be given a hard copy of his assigned tasks and their importance.

The PRIORITY ORGANIZER requires a Model II (or 12 or 16), and, although it isn't required, an 80 or 132 column printer will be useful for printing reports. The program stores a maximum of 100 tasks in priority list at one time (typically 25 to 50 items are stored at once).

We saw a copy of a letter from Radio Shack's Outside Software Support Group to Data Automation Services, the creators of the program. The PRIORITY ORGANIZER had been submitted for review by Radio Shack and possible inclusion in Radio Shack's Software Guide. Radio Shack's comments: "We found your program to be an excellent and easy to use package. It should be of great interest to many Model II/12/16 users. You will be pleased to find that your package received a four star rating. Five stars is our maximum and reserved only for exceptional packages. You should be proud of this accomplishment."

The PRIORITY ORGANIZER is priced at \$29.95. For further information, or to order, contact: Data Automation Services, Inc., 4 East Germantown Pike, Plymouth Meeting, PA 19462; (215) 825-3435.

*** TO ALL NEWSLETTER SUBSCRIBERS ***

We'd like to make a couple of special offers, exclusively for MOD-II/12/16 Newsletter subscribers.

First, all present subscribers are invited to renew at the old price of \$18 for twelve issues, rather than the present \$24 per 12 issues price.

We used to express the opinion that WordStar (the popular CP/M-based word processing program) was overrated, slow, and difficult to learn. Well, since we purchased an OSBORNE computer, we've started to use WordStar part of the time, and our opinion has turned 180 degrees. It looks difficult to learn only because there are so many features. Probably no other word processor allows you the kind of control over your output that WordStar allows. And WordStar looks even better when you combine it with all the other -Star programs in the series. We'd like to offer WordStar and its companion programs to our subscribers at a special price -- our cost. Any MOD-II/12/16 Newsletter subscriber can order these programs at the following prices: WordStar, \$325; MailMerge, \$175; DataStar, \$200; SpellStar, \$175; CalcStar, \$99.95; InfoStar, \$325; ReportStar, \$235. We believe that WordStar is the best word processor you can get for your Model II/12/16, and you'll get the latest version, just released by Micro Systems Software. The list price for WordStar is \$495, so you'll save \$170. (Please note that to use the -Star programs, your Model II, 12 or 16 must be equipped with CP/M version 2.2 or higher).

If you don't have CP/M, maybe you'd be interested in getting DOSPLUS II for your Model II/12/16 -- we'll sell it to you for \$159.95 (that's \$90 off the regular price). DOSPLUS II is positively the best operating system you can get for your Model II, 12 or 16 (yes, it works on all three computers).

To order, send your check or money order to H & E Computronics, Inc., 50 North Pascack Road, Spring Valley, NY 10977. Be sure to state that you want the special price for newsletter subscribers. Phone orders are 5% extra. These offers expire August 30th, 1983.