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

The purpose of the <u>MOD-II/16 NEWSLETTER</u> is to provide and exchange information related to the care, use and application of the TRS-80 MOD-II and 16 microcomputer systems (TRS-80 is a Trademark of the Tandy Corporation). The <u>MOD-II/16 NEWSLETTER</u> is a user-oriented publication and will greatly depend on Model II and 16 owners as sources of information. Please send any questions, comments, ideas, programming hints, stories, etc., to The Editor, <u>MOD-II/16 NEWSLETTER</u>, 50 North Pascack Road, Spring Valley NY 10977

*** ATTENTION PRESENT SUBSCRIBERS ***

The cost of the MOD-II/16 NEWSLETTER is increasing to $24 for twelve issues. All present subscribers may renew their subscription at the current price of $18 for twelve issues.

*** DOSPLUS II ***

DOSPLUS II is our product of the month. DOSPLUS has been available for some time on the Model I and Model III. Now it's available on the Mod-II/16. DOSPLUS II was developed by MICRO SYSTEM SOFTWARE who claims that it is 100% compatible with TRSDOS. Who should buy it? Anyone who writes any programs on the MOD-II (or MOD-16) should surely obtain a copy. It is <u>much</u> faster than TRSDOS, contains hundreds of additional commands and essential features not contained on TRSDOS and seems to be more reliable. DOSPLUS II sells for $250 and is available through H & E Computronics, Inc. (with our usual 30-day money-back guarantee).

Two DOSPLUS II reviews are included within this newsletter. Here is our advice. If you own a Model II or a Model 16 and you write your own programs--get DOSPLUS II

<u>now</u>. It is unbelievable! If you own a Mod-II or Mod-16 and know nothing about your computer, DOSPLUS II is still worth the purchase price. It is much faster than TRSDOS and comes with a better manual.

In short, DOSPLUS II is the best product ever made available to Mod-II or Mod-16 owners.

*** SPEEDING UP DISK ACCESS ***

A special note to beginners: we want you to know that the PATCHES found below are very easy to implement, even for a beginner. See PATCH within your TRSDOS manual. All you have to do is to ENTER the information exactly as provided. Do make sure that you only use PATCHES on a diskette that does not contain any vital information because it is possible to ruin your entire diskette if you make an error.

Our publication does not recommend that users implement the VERIFY DETECT OFF command. We do believe that this is dangerous. We also do not recommend the use of a single directory (TRSDOS 2.0 stores an alternate directory for use if the main directory should be destroyed). Although much time is saved, we have frequently needed to use the alternative directory on our diskettes (when the primary directory has been destroyed, which does happen from time to time. We simply used SUPERZAP, found on the Racet Computes MOD-II UTILITY PAC, to copy the alternative directory onto the area of the diskette that contains the defective primary directory).

We found that this patch to speed up disk access time does work very nicely, and we also have found the patch to change the break key to <CTRL> <0> to be very useful.

The following letter comes from Mountain Maid Self Help Project, Box 1386, Port-Au-Prince Haiti. We advise our readers to use this information with care, and to carefully test out any operating system changes and weigh the possible consequences before implementing any of the suggestions below.

"Mountain Maid currently operates five MODEL II computers.

While we started with some of the packaged software from Radio Shack, we have had to go to our own home-written programs for everything except word processing. We love the Scripsit 2.0 program. Our operators learn Scripsit very easily and it does everything that we require.

We feel that Profile is also an excellent package but do not like the restriction of the sort/select fields being limited to 85 bytes.

We agree with you entirely that one drive more than the number of diskettes required to run a program is a great convenience. That additional drive is invaluable for backup purposes. We have far fewer operator errors when the source diskettes can remain in their usual positions during backup.

Has no one done for TRSDOS 2.0 what was immediately done for the Model I and Model III TRSDOS? Surely some programmers must have discovered, even if by accident, some of the important addresses. It seems that your magazine (Newsletter) might be able to perform a valuable service by sharing some of this information.

In addition to the Verify Detect feature which slows down TRSDOS 2.0, having to maintain two directories also slows it down. We format all of our diskettes with only one directory, we also run with Verify Detect off as a standard power up situation.

We have also sped up our disk-access time a bit. All of these minor changes to TRSDOS 2.0 permit it to function much faster than the standard Radio Shack version.

PATCH TO BOOT UP WITH VERIFY DETECT OFF:

    PATCH SYSRES/SYS A=0040,F=20,C=22

THIS PATCH WILL SPEED UP THE DISK DRIVE STEPPING RATE FROM 20 MS TO 12 MS (be sure to test it on your drives):

    PATCH SYSRES/SYS A=0CFB,F=1E,C=1D
    PATCH SYSRES/SYS A=0D12,F=1E,C=1D

PATCH TO ELIMINATE THE TIME QUESTION ON POWER UP:

    PATCH SYSRES/SYS A2390,F=0A,C=39

PATCH TO MOVE THE BREAK KEY TO CTRL 0 (If you want any other key to function as BREAK then replace all the references to C=7C to C=Hex value of the key you want to be BREAK. <u>DON'T put this patch on Scripsit</u>):

    PATCH SYSRES/SYS A=0407,F=03,C=7C

```
PATCH BASIC A=57E7,F=03,C=7C
PATCH BASIC A=594C,F=03,C=7C
PATCH BASIC A=5F70,F=03,C=7C
PATCH BASIC A=6066,F=03,C=7C
PATCH BASIC A=6515,F=03,C=7C
```

TWO USEFUL TRSDOS 2.0 ADDRESSES:

CALL 0445DH loads the argument in parentheses of a USR call into HL.

JP 0447AH returns the contents of HL to Basic in the integer preceding the equal sign in a USR call.

*** SOFTWORKS OFFERS FIRST LANGUAGE FOR RADIO SHACK MODEL 16 ***

Below is an announcement by SOFTWORKS (for more advanced TRS-80 owners).

Softworks Limited is offering a complete C Compiler for the TRS-80 Model 16. Softworks C is the first higher-level language for the Model 16, preempting even Tandy Corporation.

Softworks implementation of C is based upon Whitesmith's C compiler which is a complete implementation of the C Language. In addition, cross-compilers are available for developing Model 16 C programs using different machines.

Softworks is a leading producer of higher level languages for microcomputers. C is priced at $950. Documentation may be purchased separately for $30. For more information, call (312) 327-7666 or write to SOFTWORKS LIMITED, 607 W. Wellington, Chicago IL 60657 (Softworks C is not available through H & E Computronics Inc.)

*** A COMPLETE SUBSCRIPTION MANAGEMENT SYSTEM ***

All of the information below has been provided by WPL Associates, Inc. This product and any additional information may be obtained from WPL directly. This product is not sold by H & E Computronics, Inc.

"The first microcomputer subscription management system designed specifically for small publishers was unveiled by WPL Associates, Inc...

Called PUBLIPHILE, the system is the 'only subscription management program designed to run on popular microcomputers such as the Radio Shack TRS-80 Model II and many other CP/M systems....' The majority of small publishers now manage their subscription lists either by contracting with outside computer service bureaus to do the job or by keeping records on clumsy manual systems....

The system allows on-screen verification of individual subscriber data within seconds and provides hard copy for circulation summaries, expiration counts, renewal analysis, cash receipts, bank deposits, accounts receivable, earned income and subscriber liability reports...."

The system sells for $7,000 to $20,000 (price includes hardware and software). For more information, contact WPL Associates, Inc. 1105-F Spring Street, Dept.

01, Silver Spring MD 20910 or call (301) 589-8588.

EDITOR'S NOTES: H & E Computronics, Inc. designed and has been using its own subscription management program for five years. Our program keeps track of all our subscribers, automatically fills out credit card slips, prints invoices and renewal notices...as a matter of fact, our Mail List program that works with our subscription program is one of the programs that appears on our USER CONTRIBUTED PROGRAMS diskette.

*** TERMINATING PLUGS ON THE MOD-II AND THE MOD-16 OPERATING SYSTEMS ***

The following letter was received from Robert P. Graham, 2709 N. Sibley Street, Metairie LA 70003.

"I must write and immediately and strongly object to the information which appeared in the August Mod-II/16 Newsletter. You state that all Model IIs with the 'chopped' front panel switches do not require a disk terminator plug. THIS IS NOT TRUE. Any 32K Model II with a serial number of 32001700 or higher or 64K Model II with a serial number of 64036930 or higher does not require a disk terminator plug.

Our company has one 64K Model II (serial number 64037605) which has 'chopped' switches AND REQUIRES A DISK TERMINATOR PLUG. Simply stated, Radio Shack's change to a new floppy disk controller board did NOT coincide with the shortening of front panel switches. There are at least 2,300 machines out there with short switches that require terminator plugs. I wonder how many diskettes crashed due to readers following your advice?

Another note on the true 'new' Model IIs: the disk expansion unit, even when connected, does not need to be turned on. Or, it can be turned on or off after the system is up and running. I recommend doing this only at TRSDOS READY when the Drive 0 light is OFF. No sense sending electro-magnetic pulses to the FDC while it's reading or writing. Most of this information is contained in the May 1982 <u>Radio Shack TRS-80 Microcomputer News</u>, page 35.

Regarding the Model 16--an interim operating system and macro editor-assembler are provided with the machine, but NO BASIC. In fact, no mention of BASIC is made in any RS literature. COBOL was supposed to have been released 08/06/82, but as of 08/18/82, it was still not in the stores.

As far as what the Model 16 can do, if you're not an MC68000 machine language programmer, it won't do anything a Model II can't do except use a double sided diskette. It will also boot up TRSDOS-II version 4.1 from a floppy diskette, but a Model II modified for hard disk will do this also. The Model 16 has great potential, but ask any football coach about 'potential'. Until Model 16 software becomes available, all you can do with a Model 16 is use it as a Model II. You may want to do that, knowing that the 16's future is bright. But make the decision based on facts.

I hope this has added to the 'worth' of your newsletter. Specifically, I hope I saved a few diskettes from bombing out. Really, guys and gals, if you can't give good information, SHUT UP and let your readers use the newsletter as a 'bulletin board' to pass info."

EDITOR'S REPLY: All we wanted our readers to know is that there are different versions of the Mod-II out there. This is helpful when you find that something that works on someone else's Mod-II doesn't work on yours. Regarding your brief evaluation of the Mod-16--we agree. We currently own five Mod-II's and at least one of every machine that Radio Shack has created. We've always been first to run out and purchase the brand new machines. In the case of the Mod 16, we don't have one and don't even have the intention of purchasing one in the near future. We feel that at the present time, the Mod 16 is just a tiny step up. All that may change in the future when a new operating system is developed, but at the present time it's no great improvement. If you own a Mod-16, don't get insulted. If we needed a new machine or we wanted to recommend a machine to someone buying a new computer, we would recommend the Mod-16. Our opinion is, if you presently own a Mod-II, you don't have to run to get rid of it and purchase a Mod-16. As for your last remark in your letter..."SHUT UP and let your readers use the newsletter as a 'bulletin board' to pass info," I certainly agree. SEND IN THOSE LETTERS. We print just about every one we receive. They are more interesting than anything we can tell you.

*** A REVIEW OF DOSPLUS II by Howard Y. Gosman ***

DOSPLUS II is by far the best thing to ever happen to the TRS-80 Model II/16. At the risk of being pushy, I highly recommend DOSPLUS II to every TRS-80 Mod-II/16 owner that writes his own programs (from beginner to expert). Those of you who are users only and never write your own programs can also benefit from some of the features found on DOSPLUS II.

DOSPLUS II was developed by the same people that developed DOSPLUS for the Mod-I and Mod-III (Micro-Systems Software), but it's probably four times better than the outstanding Mod-I and III versions.

DOSPLUS II adds over 1,000 enhancements to the original TRSDOS 2.0 including much faster disk access times, speedy formats and backups, automatic sorting, a complete cross reference utility, compatibility with all types of floppy and hard disk drives, compatiblity with every printer, easy spooling, indirect labeling....

The DOSPLUS II manual deserves high praise. It consists of approximately 500 pages of detailed descriptions of every command (and that doesn't include descriptions of MICROSOFT BASIC commands). I want to emphasize that the descriptions of each command are complete (and easier to understand than the descriptions given in the Radio Shack Mod-II/16 manual). Where the regular TRSDOS manual might give one or two pages of instructions, the DOSPLUS II manual will give as much as six or seven pages covering every possible way to use each command. The manual is very well organized and superior in every way to the TRSDOS manual.

What features make DOSPLUS so great?

1. The manual.

2. DOSPLUS II accepts commands in upper and lower case so that when you enter DIR or dir or DiR or DIr, DOSPLUS understands what you mean.

3. The CAT command gives the user a less detailed directory, which puts just the

filenames on screen (as opposed to using the DIR command).

4. The DIR and CAT commands allow you to use "wildcard" specifications--in other words, you can list only files with "/TXT" extenders, or all files starting with the letter "A", etc. Also, DOSPLUS II will sort your directory or catalog into alphabetical order, if you wish.

5. The COPY command also allows "wildcard" specifications, for copying more than one file from one disk to another.

6. CONFIG is an amazing command that allows DOSPLUS II owners to use any disk drives with the Mod-II/16 (that includes 5-1/4 floppy disk drives as well as any brand of hard disk drive--but you also have to have a 5-1/4 disk controller installed). The command allows for every possible format that can exist (so if you want to, you can use a 5-1/4 inch disk drive along with an 8 inch disk drive and a hard disk drive, all at the same time).

7. The LINK command will link two devices together so that any output going to either device will also be sent to the other (so for example, you can print everything on your printer that is displayed on the screen, or print everything on your printer that is sent to your disk drives).

8. The FORMS command allows the user to set options for any type of printer that he may have, and also will allow you to create your own internal printer buffer, of any size! If you create a 20000 character printer buffer, then you want to print a document, that document gets sent at _very_ high speed into the buffer, then from the buffer to the printer as fast as the printer can handle it. But meanwhile, as the printer proceeds to print out the text, your computer is already free to proceed with your program. When we set up a buffer, we sent two pages of text to the printer, and the computer came back to the "Ready" prompt almost instantly. It's quite a thrill to watch the printer chugging away by itself while you're free to load and run another program, look at the directory, etc. (Of course, when you establish a buffer, it does deduct from available memory.)

9. The PAUSE command will pause execution until any key is pressed.

10. The ROUTE command allows you to change the I/O path of the system's devices. So, for example, you can send all output going to your printer to the a disk drive instead, or you can send all output to disk drive #3 to disk drive #1 instead.

11. The RENAME command not only allows you to change a file's name, but also allows you to change a _device_ name. For example, if you don't like having disk drives 0, 1, 2, and 3, you can have drives 1, 2, 3, and 4, or drives A, B, C, and D, or even drives W, X, Y, and Z, instead.

12. The SYSTEM command allows you to configure certain aspects of the DOSPLUS II system to your requirements. So, for example, you can boot up your system, skip the logo and the date and time questions, and automatically set the FORMS command on your printer, all automatically on boot up.

13. DOSPLUS is 100% compatible with TRSDOS. Programs can be converted from DOSPLUS to TRSDOS...or vice versa.

14. DIRFIX can repair most directory errors with very little input or knowledge from the user.

15. DOSPLUS II contains a complete DISKZAP program (similar to SUPERZAP).

16. DOSPLUS II has a very quick backup feature (12 times quicker than TRSDOS, including automatic formatting of your diskette).

17. DOSPLUS II eliminates a memory-restriction problem which exists under TRSDOS, which allows you 4000 bytes more memory for your BASIC programs.

18. A new feature, called "label addressing" is added to Model II BASIC. With this feature, you can use GOTO and GOSUB commands that refer not to a line number, but rather to a subroutine name. The function of the "NAME" command is changed under DOSPLUS: if you embed the command "NAME SUBROUTINE" in a program line, you can then use the commands "GOTO SUBROUTINE" or "GOSUB SUBROUTINE" anywhere else in the program. This means you don't have to remember line numbers of your subroutines, just their names. And the subroutine names may be up to 240 characters long!

19. The REF command is a complete BASIC cross reference utility of line numbers, variables or keywords--this is an indispensible programming tool.

20. SR is a global BASIC program editor that allows you to make changes to all occurences of a particular string, literal or expression in a BASIC program.

21. SORT is a BASIC array sort program that allows you to sort BASIC arrays of any type.

*** A TRSDOS ALTERNATIVE by Dr. Peter Shenkin ***

Until now, the only real choice of operating systems for the Model II owner was TRSDOS or CP/M. CP/M has the advantage of being much faster than TRSDOS (possibly at the expense of some reliability). In addition, and most important, there is a lot of CP/M applications software available. Unfortunately, most of the good CP/M applications software is somewhat expensive. In its favor, TRSDOS seems to have more in it than most versions of CP/M. For example, the copious set of library routines, the amount of information given in response to the DIR command, the ability of BASIC to easily access all SYSTEM commands directly, explicit error messages, etc. In fact, in this writer's opinion, the speed and availability of software programs are about the only reasons to switch from TRSDOS to CP/M. Of course, the availability of applications software should be of prime concern when choosing a computer and an operating system to run it. In the case of the MOD-II, many people we have spoken to have used both TRSDOS and CP/M. Of these, a good proportion prefer to develop their in-house applications using TRSDOS because the operating system just seems to be easier to work with than CP/M. Most of these people program in BASIC, but there are some COBOL programmers among them.

DOSPLUS II is a new operating system written by the people who wrote DOSPLUS for the Model I and Model III. DOSPLUS II is much faster than TRSDOS. It is claimed that DOSPLUS II is more reliable than TRSDOS (and from extensive testing, it does appear to be). DOSPLUS is 100% compatible with TRSDOS for all BASIC programs (and all supervisory calls).

We received our DOSPLUS II the first week in September. I always read a manual rather completely before even putting the diskette into the machine and this was to be no exception. On the first page, I was told that this a preliminary manual and contained only information on the Library commands and Utilitites on the diskette. Preliminary manuals are sometimes unreadable, but this was certainly not the case with the DOSPLUS II manual. Everything is well explained with step by step directions. For example, two and one-half pages of the manual are used to explain exactly how the user should make a backup of the original DOSPLUS II diskette if that user has a multiple drive machine. Another two pages are given for those with single drive machines. If you can read then you can make a backup using these directions (even if you are a beginner). There are explanations of what the BACKUP utility tries to do and what to do when a BACKUP is not working properly.

Further descriptions of how DOSPLUS uses memory, how a DOS command is entered, how DOSPLUS differs from TRSDOS, etc., are carefully and completely given. DOSPLUS will work on the Model 16 as well as the Model II; and on hard disks as well as floppies. I especially enjoyed the section on how hard disk drives operate. General information like this is generally not put into a manual or at best, is relegated to an obscure appendix.

As to how DOSPLUS II works, I have several comments. The system does work much faster than TRSDOS. The BACKUP command wll both FORMAT and BACKUP the target diskette though in general, only as much of the diskette as is needed will be formatted. This might seem somewhat dangerous but there is an option which guarantees that the entire diskette will be copied and formatted. The entire backup procedure took under three minutes for the DOSPLUS II distribution diskette (that includes formatting and backing up, compared to 15 minutes for TRSDOS). DOSPLUS II cannot read TRSDOS files directly but the diskette contains a conversion utility to change any TRSDOS file into a DOSPLUS II file. DOSPLUS II diskettes seem to be formatted to contain over 560K of data compared to 482K of data on TRSDOS diskettes. DOSPLUS II has all the library commands contained on TRSDOS plus several added commands. DOSPLUS II ignores upper lower-case in command syntax. For example, DIR and dir will both give a directory.

One of the nice aspects of DOSPLUS II is improved editing capabilities over TRSDOS BASIC. DOSPLUS II is not supplied with its own BASIC, but with a special file called BASICP.CMD, which will transfer Model II BASIC from your TRSDOS disk to the DOSPLUS disk, then make several patches to BASIC, and add several utility files as well. Thus, you will be able to run any of your BASIC applications programs under DOSPLUS. DOSPLUS II has added capabilities of moving program lines around in a program, of renumbering all or part of a program (start and end line, etc.). DOSPLUS II also comes with a built in "Multi-Key Array Sort" that can be called up from BASIC.

Aside from those outstanding features mentioned above, DOSPLUS II has several other features important to mention: a graphic screen editor, a directory repair facility, a program cross reference utility, a global search/replace program editor, the TRSDOS file conversion, a rigid disk formatter, and a diskzap utility.

In short, DOSPLUS II is a worthwhile product and does seem to be a major improvement over TRSDOS (with 100% TRSDOS compatibility).

*** FIRST HARD DISK CP/M FOR MODELS II & 16 ***

Since the appearance of Radio Shack's hard disk on the market last January, no CP/M-compatible operating system has been available--until now. ATON International has introduced CP/M 2.2 for Model II/16 Hard Disk systems. According to ATON president Charles Wilde, "results from our beta test sites have shown consistent excellence on both the Mod II and 16. Data throughput has been enhanced and transfer speed has increased."

ATON CP/M apparently makes efficient use of memory space, using only 16K of controller RAM and 2K of CPU memory. This leaves a generous 62K of RAM in the CPU for use by applications programs. For programs requiring dual floppies or dual hard disks, the total formatted capacity of the 8-megabyte hard disk may be divided into user specified logical drives that simulate multiple drives. This partitioning also lets the user back up data on unused portions of the same hard disk, with obvious advantages over floppies--both in speed and convenience. With the same utility the user can also back up data onto a different hard disk. Another utility allows files as large as 8 megabytes to be backed up onto multiple floppy disks.

Another good feature of ATON's CP/M is that either TRSDOS or CP/M may be booted up, enabling the user to access application programs formatted for either operating system and are stored on different parts of the same hard disk. CP/M can also be booted directly from the hard disk, with no need to insert a floppy at start-up time.

The ATON package includes CP/M 2.2, the special hard disk adaptation, and full documentation--ATON's 40-page manual with hard disk supplement, and Digital Research's standard documentation. ATON CP/M 2.2 lists for $279, and present ATON CP/M owners may upgrade their systems to hard disk for $125. For more information contact ATON International, Inc., 260 Brooklyn Avenue, San Jose, CA 95128; (408) 554-9922.

*** MORE LETTERS FROM READERS ***

This letter comes from Robert L. Goddard, 601 West Shaw Avenue, Suite E, Clovis, California 93612.

"Frankly, I find your newsletter quite interesting even though on occasions there is some crab that vents his frustration upon you. In order to help the situation a little bit, here's an idea that has worked for me, and I believe your readers will appreciate it.

Don't throw away that Line Printer VI ribbon. Get yourself some Carter's black ink in the container that has a little head on it that you would run across your ink pad. The one I have has #414 on the back of it. It is not the inker with the ball in it.

Get a screwdriver and carefully remove the top of your old ribbon. Be careful, for the ribbon is a mass of folded material inside the container. Squeeze the Carter's inker and lightly touch the top of the ribbon. Do not draw the inker over the ribbon or it will come out of the ribbon holder and go all over the place and the procedure is dead. Repeat, lightly touching the ribbon all over

until you have put ink all over the top of the ribbon. Don't overink. It will then splatter all over your printer head. Just be careful as you dab the ink on the ribbon. Put the cover back on the ribbon and, if you like, let the ribbon set overnight before using it on the printer. If you get too much ink on the ribbon it may blur on the paper. Sometimes, printing out a program listing will help get the ribbon to where the letters are clear and black.

I have had problems with a light ribbon and the letters being too light to photocopy. Once you get the hang of how to ink your ribbon just right, the copy will come out beautiful!

It seems to me there ought to be a way to cut a screen to fit the ribbon holder that would hold a pad or sponge or some sort of material that would hold ink and filter down onto the ribbon folded within the container. This would make those $12.50 ribbons last several months, as my ribbons have been lasting.

I run about fifty-one business accounts on my Model II. I am packed with some practical ideas for accountants, which I will forward to you in days to come. Best regards!"

The following letter is from John S. Watson, Treasurer, Early American Industries Association, P.O. Box 2128, Empire State Plaza Station, Albany, New York 12220.

"I don't find it surprising that you estimate that most of the people using Model II's don't program. The Model II is sold as a business machine and I would assume that most of them are being used in some form of business. In my case, I've had my Model II for a little over a year. The organization of which I am Treasurer bought it to enable me to maintain the mailing list of our over-2700 members. My first priority was to get the membership onto the computer. I have since added Scripsit 2.0 and a general ledger program to allow me to produce form letters and to put the organization's books onto the computer. All of this has kept me busy enough that I have not had the time to begin to learn to program. Now that I have met the obvious needs of the organization, I can begin to take the time necessary to begin to learn BASIC programming. I suspect you will find that my situation is a common one with Model II users.

I found Mr. Heinze's letter in the last issue of the newsletter interesting. I first started my mail list using Profile. Last October I managed to get an advance copy of Profile Plus and transferred my list to the new program. One of the immediate benefits I noticed was that the plus version was much faster in searching through the file. While I was pleased with the increased speed, I didn't know how they had achieved it. Now I do. Profile Plus includes an automatic start-up program as part of the boot operation that will take you directly to the master menu, once the data and time entries are made. As part of this start up program, the screen shows "Detect Off". What they have done is to incorporate Mr. Heinze's "Verify Detect Off" as part of the boot operation, to enable Profile Plus to operate at greater speed. When you are talking about a 2700-name mailing list, this does make a difference!

Perhaps in some future issue you could compare an upgraded Model II to a standard Model 16. Are they identical, or does a new Model 16 still have some advantages that the upgrade doesn't give the Model II?"

This next letter is from Donald L. Fasig, Jr., 12999 McGregor Blvd., Suite 101, Fort Myers, Florida 33908.

"I have encountered a problem with my printer/TRSDOS that is very aggravating. Perhaps you can help me.

I have a Radio Shack Line Printer V. When I use the "DUAL" function (to get simultaneous output to screen and printer) everything is fine. However, after exiting the DUAL function, my printer underlines everything. The only cure seems to be to reset the printer.

I thought at first that it might be my computer or my printer, so I checked on a friend's Model II (also with the LP V), and the results were the same. Switching to a different copy of TRSDOS (from the Radio Shack Computer Center), I again obtained the same results.

Upon further inquiry of the Computer Center personnel, I was informed that the problem was inherent to the equipment, and that they knew of no cure.

Please, if you know of any way around this problem, I would appreciate hearing from you."

EDITOR'S REPLY: I find it very hard to understand why this is a problem. Apparently your local Radio Shack Computer Center personnel don't read their own manuals -- the answer lies in plain sight in the LP V manual (pages 9 & 10). Like condensed printing, underlining is one of the standard features of the Line Printer V, and you select these features by sending <u>control codes</u> to the printer. Until your letter arrived, we were unaware that the DUAL function leaves the printer in the "underline mode". We quickly duplicated the situation on our own Mod II and LP V, and, although we expected to have trouble finding a solution, we found that the regular "stop underline" code -- CHR$(14) -- sets the printer back to "non-underlining" mode just as it should. There's no need to reset the printer. All you have to do is tell the printer to "LPRINT CHR$(14)", and subsequent characters will be printed normally, with no underlining. If you want to turn the underlining <u>on</u> again, just have the printer "LPRINT CHR$(15)" and it will start underlining again. Similar procedures are used to select line spacing and condensed or boldface printing, with the addition of an extra "escape" code -- CHR$(27). For example, to select condensed print you use the escape code plus either 14 or 15: "LPRINT CHR$(27);CHR$(15)" will set the printer into condensed print mode and "LPRINT CHR$(27);CHR$(14)" will return it to normal mode again. I'm really at a loss to explain how Radio Shack's people could be unaware of this procedure. If this were a difficult problem, then maybe we could understand how Computer Center personnel would have a tough time finding the answer. But the procedure of sending control codes to a printer to select options like underlining, boldface and condensed print is so widely understood by users that it's inconceivable that Radio Shack's local computer "experts" could overlook it -- especially when the procedure is so clearly presented in the manual. We certainly expect more from our local Computer Center people. For explicit examples of all LP V control codes see pages 9-10 and especially page 14 in your printer manual.

*** MODEL II SOFTWARE SECURITY ***

The following press release comes from The Management, P.O. Box "T", Aledo,

Texas 76008.

"The TRS-80 Model II computer offers little effective protection against unauthorized program modification and/or plagiarism. Hardware modifications or complex encryption are not acceptable. Alternate operating systems offer no additional security and have compatibility problems.

A solution: a simple, effective and reversible software enhancement resulting from an effort to protect our own small-business program designs. At an extremely low cost considering the program security it offers.

This software extension enhances the standard TRSDOS 2.0 operating system and BASIC. It requires no additional RAM, no additional disk space, no assembly-language coding, no user calls and is permanent even through BACKUPs. Your BASIC program is not modified in any way.

The only visible result is that LIST and LLIST will not work.

Installation is quick and non-technical. Step-by-step instructions are provided. Each SYSTEM disk may be individually protected.

We call this software enhancement 'The LOCKER'. It is available for immediate delivery. The introductory price is $24.95, postpaid."

*** MOD-II SOFTWARE FOR MUNICIPAL GOVERNMENTS ***

A Municipal Billing System, MBS, has been announced by Foy, Inc., 100 McKinney Street, Farmersville, Texas 75031 (214-782-7282). This system handles the billing of electricity, water, sewer, garbage, and other utilities for municipal governments. It is designed for the Model II and is available in versions to handle from 2000 to 30,000 customers.

MBS is currently in use by the cities of Farmersville, Murphy, and Van Horn in Texas; Avenal, California, and Crystal Springs, Mississippi. These cities use MBS to generate a meter reading list, print a high/low audit of unusual usages, print an account status report, calculate and print postcard bills ready for mailing, generate a daily cash receipts listing, and print a delinquent account report. MBS will handle a wide range of rate structures, making it suitable for virtually all cities with populations between 1000 and 50,000.

*** MODEL 16 OWNERS: COMMENTS WANTED ***

First-hand information about the Model 16 is very hard to come by, and many owners of Model II's are very curious about the Mod 16 -- especially if they are considering the Mod II-to-Mod 16 upgrade. Not much is known about the "real" Model 16, because so far, they're all running as Model II's. As soon as the true Model 16 TRSDOS, with a Model 16 BASIC is released, we hope to find out a lot more about the 16's capabilities.

So, if you are a Mod 16 owner, please don't hesitate to write and share your experiences. Problems, insights, comments, warnings, anecdotes, etc., are all welcome, and anything you can tell us will most likely appear in the newsletter.