

Workin' up a sweat...

Hold on a second, let me get another juice from the refrigerator. Ah, that's better. Groundhog Prediction - six more weeks. Of what, winter?!! It's 82 degrees outside! And it's probably 75 in here. Time for a nap. Spring Fever and all - in February. Life is rough, eh? Today the sun, tomorrow the brown hills. And water shortages. And fires. And mudslides. Soon it will all be dunes. Then it's time to drill for oil....

CLOAD

MAGAZINE INC.

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*      Side              Title              Turns Count
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*                               CTR-41      CTR-80
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*      ****      Arrow Cover      15 & 260      8 & 152
*      **  **      Hit'n'Miss      65 & 297      38 & 175
*      **  **      Gardener      115 & 336      67 & 198
*      ****      Float      227 & 423      133 & 249
*
*
*      **      Empire Instructions      10 & 256      6 & 150
*      ***      Empire      82 & 309      48 & 182
*      **      L2REP (System L2REP /)      218 & 415      128 & 243
*      ****      DOSREP (Disk only - see notes) 235 & 429      138 & 253
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* CLOADing Notes - This tape may load at an ODD RECORDER VOLUME. Set the volume LOWER than normal for your first attempt, then
* increase it slightly until the tape loads. If the first copy of a program won't load, try the second. That is why it is
* there. Model I only: Put an AM radio very close to the keyboard, tune it to a non-station, and you can listen to the tape
* loading in. Adjust the recorder volume so the hash from the computer sounds 'cleanest' during a load.
*
* Model III notes - Load the tapes at the LOW speed (POKE 16913,0). An occasional program will NOT run. There may be upper and
* lower case goofs in some programs. Arrow keys often are translated as follows: (↑, ↓, ←, →) = ([, \, ], ^).
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Bad, bad Clyde...

Before going on to describe this month's data stream, I'd like to say some more words on tape loading (oh, no - not again!). It seems that January's efforts to make CLOAD more loadable met with a resounding thumbs down when the tapes reached your TRS-80s. Many of you found them difficult or impossible to load. And most of you had to adjust your recorder volume unusually low to get your computer to respond to the signal from the tape. We were surprised, since our in-house tests went so well. And now we humbly beg for a another chance (what gall...). This tape should load easier, and at a more reasonable recorder volume. The dozens of tapes that we tested loaded consistently from volume 3 1/2 to 4 1/2 on our CTR-41 (with an occasional tape loading from 4 1/2 to 5 1/2). Tests on other TRS-80s with other recorders (the CTR-80, for instance) gave us similar results. Here's hopin' for better loadin'...

On to more pleasant things - Arrow Cover, for instance. Watch as two arrows jockey for the best phaser firing position. Watch as they fire at ghosts. Watch as they get lined up, and then don't fire! And watch as they fire and HIT!

There is an interesting routine (see below) at the beginning of the cover. It first checks to see whether you have a Model I or a Model III. It then fills an array with arrows (Model I) or semi-passable substitutes (Model III). The array is then used to print out the 'arrows' during the running of the cover. This has to be done since CHR\$(91) thru CHR\$(94) are the arrows in the Model I, while in the Model III, they are the standard ASCII characters for those values (see note above in the Table of Contents). In many programs written for the Model I only (ie: all CLOADs previous to this issue), the Model III user may be asked to use the '|', '^', '[', and '\' keys to do some operation. Just use the left, right, up, and down arrow keys instead, and it will be okay. If the program uses arrows as it is running, you may have to go in and edit the program to make it look good on the Model III.

```
11 REM IF PEEK(84) IS 1, THEN IT'S A MODEL I
12 IF PEEK(84)=1 THEN F=0 ELSE F=1
13 AR$ = CHR$(91+3*F)+CHR$(94-32*F)+CHR$(92-6*F)+CHR$(93-33*F)
14 REM AR$ IS NOW A 4 CHAR ARRAY OF 'ARROWS' FOR EITHER TRS-80
```

What is the best way to get rid of a landfill? Why, just bomb it out of existence! Add a point value for particular garbage types and a penalty for hitting the bill, and you have Hit'n'Miss. The hole even gets refilled if you manage to clear out all of the old trash. For one or two sanitation engineers.

It may seem a bit early, but spring appears to be in the air already around here. So here is Gardener - in February. With this program you can save your current crop comments and yields to tape for future reference. There are also 17 vegetables' vital statistics ready for review in the program. Some of them would be hard to grow here, I believe. They say to plant them after something called 'frost'. Isn't that the stuff you spread on top of birthday cakes?

Floating is something to practice in the ocean. But it would be rather hard to measure just how much water is displaced. So use Float, a tutorial on displacement vs. weight vs. density. Let's see, now to find the volume of the ocean in cubic centimeters...

It's not easy to be at the top. It's even harder to get there. That is the lesson Empire can teach you - over and over. This is one of the programs that has made it to my personal 'Classic' library. You and 5 of your friends (or a combination of friends and computer-driven would-be autocrats) strive to make each of your countries strong through immigration, production, and large armies. You must survive famines, rats, poor weather, disease, wars, and crazed mothers. But to become Emperor, your country must also grow. Beware of the ides of March... April, May, June...

L2REP and DOSREP are the Level II and DOS BASIC programs, respectively, that make the keyboard of your TRS-80 auto-repeat. These are both excellent examples of user-oriented code. There is NO need to set memory size - it is set automatically. If you have previously set memory size to protect another routine in high memory, the repeat routines will be relocated below the currently set memory limit, and the memory size will automatically be reset to a lower point to protect the repeat routines themselves. Also, there is no need to type in a jump address since the repeat routines auto-execute.

To load and use L2REP (Level II only), just type 'SYSTEM'. Answer the '*?' prompt with 'L2REP'. The program will now load and auto-execute. Note - string space is automatically CLEARED to 50 bytes.

DOSREP is just as easy to load and use. First, you would like to put the

routine on disk, right? Put away your LMOFFSET, TAPEDISK, etc. This program contains its own loader! Just follow the simple instructions below:

- 1) Boot your DOS (any DOS) and enter Disk BASIC. Type 'CMD"T"'.
 - 2) Type 'SYSTEM'. Answer the '*?' prompt with 'REPEAT'. The cassette will then load in and auto-execute.
 - 3) You will then be prompted to load in a diskette that will have 'REPEAT/CMD' saved to it. This diskette must NOT have a different DOS on it and must have at least 1 usable granule. Note - this will write over any other program on the diskette named 'REPEAT/CMD'.
 - 4) When you are returned to the 'DOS READY' state, the file 'REPEAT/CMD' will be on the diskette, and can be implemented by simply typing the DOS command 'REPEAT'.

Miscellaneous DOSREP notes: The load module loads from 7000H-725CH and is not saved to disk. The executive module loads from 7500H-75BBH. And the driver module loads 75BCH-760CH. The 'driver' also uses locations 4019H and 401AH during operation. When 'REPEAT' is activated, the 'exec' module gets the high mem address, subtracts 50H bytes from it, and places the driver above the new high mem address.

Features (?) - any keyboard debounce routine that you might have is not necessary with these routines due to an additional timing loop. By holding down any key, this timing loop will slow the computer a bit, allowing you to slow LISTings and displays. When typing, be aware that releasing the <shift> key before releasing the other key will result in the computer recognizing the other key as UN<shifted>.

All of this month's programs tested fine on the Model III, except for L2REP and DOSREP (which are not needed on the Model III!). The Model I'ers with the lower case mod and the Model III'ers will be pleased to see upper and lower case letters in the instructions and commands of the program.

Insects! Just when I thought there was an issue out without bugs in the programs (January 81), along comes someone with a fix to a problem that I fixed for my machine, but should have been left alone for someone else's. It seems that on Tony Asaro's (of Howell, NJ) disk system, the 'mines' that the submarines released in the Subs program stayed on the screen. If you have that problem also, he suggested changing line 1010 back to the way it was submitted to me:

```
1010 IF PEEK(C3 + SF(S1))>=91 THEN 1030: REM CHANGE THE '<>' TO '>='
```

Hello, program submitters and tape returners - if you send tapes in plain white envelopes, the Post Office has requested that you mark PLAINLY on the envelope that there is a tape enclosed. Automatic cancelling machines don't digest cassettes too well...

There's a new kid in town...

And lots of people are talking about him/her. So I'll join the crowd. INTRODUCING: The TRS-80 Model III! Oh, you've heard enough about it. Well, just plug your ears...

Since I haven't really looked inside of the beast, I'll just ramble about things that I've discovered in using it.

First of all, the cosmetics are different. The whole machine is in one

neat package, with two slots on the side of the video for disk drives (ours are full). The video is a lot sharper and the 'screen hash' associated with the Model I video is essentially gone. The RF hash is also gone! Now the ol' AM radio trick won't work. The keyboard has the same key layout that the Model I has, but it feels SOLID. The recessed RESET button is right on the keyboard also. Drawbacks - just one: there isn't a light to tell you if the computer is on or not. If you have disks, but don't happen to have the system disk in the drive, you can only guess since the screen is blank also.

Now to play with it. Boy, it's a lot like the Model I. But nicer. Let's see just what the differences are...

Tape loading - Great! They load and save easily at the Model I compatible rate (500 baud). But you can also load and save program (not data) files at a 1500 baud rate! Gripes - the cassette connector cable from the Model I will not fit on the Model III. Big deal, huh? STILL NO CHECKSUM when loading in BASIC programs!!! That really bothers me. And the little stars flash every 64 bytes when loading in a program. At first I thought that would help me see if I was getting a bad load. No such luck. 3 years of 'flashing star' watching and learning to detect bad loads by 'the stars' is wasted on the Model III. The stars still flash every 64 bytes, no matter what is being loaded. Finally, programs saved from the Model I cannot be verified (CLOAD?) on the Model III, and vice-versa.

Features - Upper and lower case letters, for one! Or you can have all upper case if you want. You can dump the display on the screen to a printer by just holding the <shift> <down arrow> and '*' keys down. Some of the control characters (codes 0-31) can be produced from the keyboard, although the manual says that all of them can. The <break> key now works on CLOADs, CSAVES, LPRINTs with no printer connected, etc.! Seven lines at the top of the screen can be protected from scrolling with a simple POKE command. And there are 96 special characters (32 fun ones and 64 Japanese Kana characters) that can be POKEd or PRINTed to the screen.

Little thing - Forget the garbage-looking LISTs that you sometimes get on the Model I due to the use of fast graphics in a program. The Model III LISTs with the graphic characters.

Disk stuff - Double Density Disks! 180K bytes! And the drives are quiet! An RS-232 is built in! DOS notes - 'CMD"'"T'"' is not needed when CLOADing or CSAVEing (but you need to POKE 16913,0 if you want the slow speed). You can COPY or KILL all of the files with the same extension with just one COPY or KILL command (must be a 3 character extension). You can go from tape to disk or RAM (or vice-versa) with ease using the TAPE command. And by using CONVERT, you can transfer all of your Model I disk files to a Model III disk. The other side - TRSDOS still makes you type in the date on power-up... Longhand is still needed for some commands (ie: TAPE (S=<file>,D=<file>)) is always the format of TAPE, so why the 'S=' and 'D='?... You can BACKUP disks, but unless you have 3 drives, one of them MUST be the system disk.

There are other neat things that I've left out, I'm sure. But I've probably missed some major drawbacks, too. Anyway, I think ya dun good, Tandy.

Time to rush March's issue out to beat the postage hike (CLOAD rush??).

Dave