

Marching to a different beat...

Tom, turn that stuff down - I can hardly hear myself write. Oh, that commercial drives me up a wall. Hey, this call has a bad connection. Could you turn the radio down? Yes, yes. It's the ol' 'radio dial shuffle'. Ya see, we like to have music playing in the background (note that I said 'background', Grady). Unfortunately, we have 6 different definitions of 'music'. So the radio gets switched from station to station until we find one that only has to be tuned out by a couple of us...



P.O. Box 1448,  
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*	Side	Title	Filename	Turns		Count		*
*				CTR-41		CTR-80		*
*								*
*	****	Computer Cover	A	15	& 269	8	& 156	*
*	** **	Medical	B	74	& 312	42	& 180	*
*	** **	Round	C	112	& 342	64	& 198	*
*	****	Picaria	D	185	& 399	107	& 231	*
*								*
*	**	Eclipse	A	12	& 266	6	& 154	*
*	***	Trend Calc	B	125	& 352	72	& 204	*
*	**	Venerian Invasion	C	209	& 419	121	& 243	*
*	****	Keyplus (System - Mod I only)	KEYPLS	251	& 453	145	& 262	*
*								*
*	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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A machine within a machine - Computer Cover. A picture of a TRS-80 is drawn, then it 'loads' and 'runs' a mini-cover program. Only one thing is inaccurate about this cover - the mini-cover seems to load easily on the first try...

Call the coroner - Medical is deadly. A heart attack victim is in the hospital and a scope shows her condition. As her condition changes you must decide (right away!) what kind of medication is necessary. Note: There are no instructions with the program. It is as if the doctor has left for his 1:30 tee-off time, and you are responsible for the patient! So far I'm 0-for-12...

Let's cut corners - Round tutors you on how to round off numbers.

Is it Tic-Tac-Toe, or is it Picaria? By moving one of your 3 pieces to an adjacent open spot on a 4-by-4 grid, you try and get 3 in a row. Play against a friend or against the TRS-80.

Just in time for the big summer lunar eclipse (at least we're consistent)? Eclipse predicts coming lunar eclipses and their totality.

Get'cher data ready for Trend Calc. Trend Calc will graph the data and give a mean for it. But that's not all! There is also a calculator function attached to this program that can be accessed and used at any time. Ah, the perfect tool to help you fit your data to the desired graph...



No, it's not a social disease - the Venerians are a group of beings from far, far away who are staging a Venerian Invasion. You must run back and forth across the ground and touch the ones that have landed so that there are never more than 2 untouched Venerians on the ground at one time. There are Venerian sounds with this game (no rude thoughts, now), so take the large grey plug that goes to the AUX jack on the recorder and connect it to an amplifier.

Disk users and Model III'ers get ready to scream - Keyplus is for Model I non-disk users only. The program does a lot, so there are detailed (and probably difficult to read due to the reduction) loading and running instructions later on in these sheets. Twenty pushups for anyone who can't run the utility because they didn't read the instructions. Note - the author originally marketed this program on his own. Also, there is an article on a disk version of this program in an upcoming BYTE magazine.

Even quarters won't help...

Last month's Arcade program would not work on all non-disk systems because the PEEK used to see if you had a disk system or not was not the one normally used. If the program would not work on your system, change the ':IF PEEK(14305)=255' in line 40 to ':IF PEEK(16396)=201'.

One space too few...

There is a flaw in the R/S BASIC interpreter (Oh, NO!!!!). Stephen Wood of Ft. Walton Beach, Florida discovered that the following line works ok:

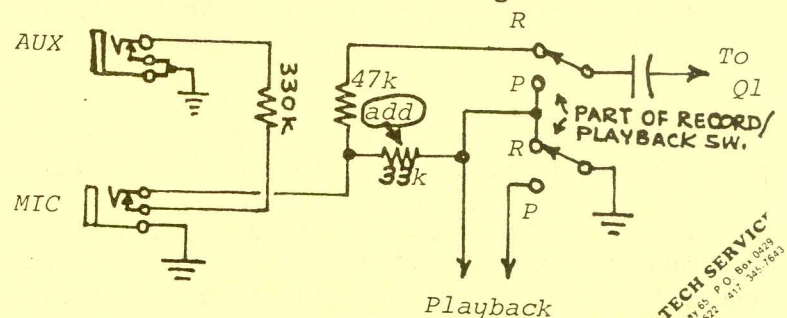
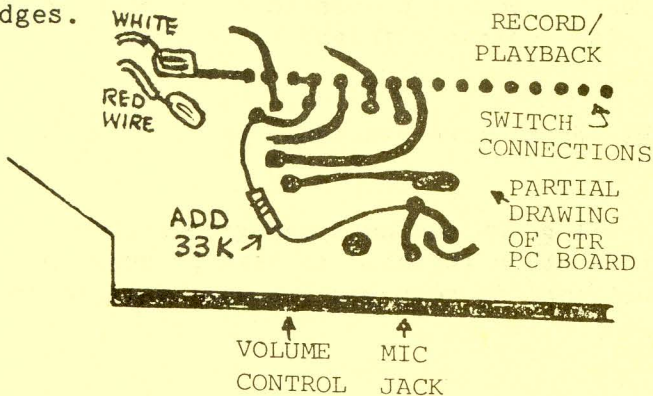
```
100 IF A$="Y" GOTO 540 ELSE 710
```

However, if you remove the space before the 'GOTO', the 'ELSE' will be ignored. This only happens when comparing a string literal (the 'Y' is a string literal). This is really something to watch out for when you are using some utility to pack (removing REMs and spaces from) a program.

Sound on...

Wayne Lemons of Lemons Tech Services sent us a mod that you can make to get arcade sound from your CTR-80 or CTR-80A recorder without affecting any of its other functions (a freebie!). Now you can get the sounds that some programs produce without using an auxillary amplifier! NOTE: This mod will void any warranty you may have on the recorder. Also, CLOAD Magazine and/or Lemons Tech Services can not be responsible for any damages done while making this modification.

- 1) Remove the bottom cover of the CTR-80 by removing three screws (one is inside the battery compartment). Carefully lift off the cover (don't strain the wires).
- 2) Look at the drawing below and identify the points where the 33K resistor is to be added.
- 3) Use rosin-core solder with a small soldering iron and install the 33K resistor. Do not use too much solder to prevent any short-outs.
- 4) Replace the bottom cover making sure that there are no wires binding under the edges.



Schematic for Technical Head Reference only.



With the exception of keyboard debounce, which is automatic, Keyplus Utilities can be enabled whenever the TRS-80 accesses the keyboard.

#### LOADING THE CASSETTE

Keyplus is loaded via the SYSTEM command. Reply to the \*? prompt by typing "KEYPLS" (exclude quotation marks). After the second \*? prompt appears, type "-" (exclude quotation marks). The MEMORY SIZE prompt will appear. Key <SHIFT-CLEAR> followed by <M>. A five digit number will appear on the screen. Press <ENTER> and the READY prompt will appear. The loading process is complete.

#### COMMAND MODE

Keying <SHIFT-CLEAR> will enter Keyplus Command Mode. You may enter Command Mode anytime the TRS-80 is accessing the keyboard.

Once in Command Mode you may enable or disable specific Keyplus Utilities by typing a key. A summary of active Command Mode Keys follows:

- <A> - AUTO-REPEAT ENABLE
- <SHIFT-A> - AUTO-REPEAT DISABLE
- <L> - VIDEO LOWERCASE ENABLE
- <SHIFT-L> - VIDEO LOWERCASE DISABLE
- <M> - PRINT ADDRESS
- <SHIFT-M> - "MEMORY SIZE" PROMPT
- <SHIFT-E> - EXIT
- <R> - RESTORE LOST PROGRAM
- <0,1,2,3,4,5,6> - KEYBOARD ENTRY MODES
- <Y> - START RECORDING STRING "Y"
- <SHIFT-Y> - STOP RECORDING STRING "Y"
- <Z> - START RECORDING STRING "Z"
- <SHIFT-Z> - STOP RECORDING STRING "Z"

Typing an inactive key will exit Command Mode without altering the status of any utility.

#### AUTO-REPEAT

This utility allows you to repeat an input by simply pressing a key without releasing it. This is particularly useful when editing Basic programs.

#### LOWERCASE VIDEO

If your TRS-80 has a hardware modification installed for lowercase video, this routine adds the software needed to make the modification work. Several companies, including Radio Shack, offer lowercase hardware modification at reasonable prices.

#### PRINT ADDRESS ROUTINE

This routine prints the address used to set the correct protected memory limit.

#### "MEMORY SIZE" PROMPT ROUTINE

You may generate the "MEMORY SIZE" prompt without exiting Keyplus. Do not set MEMORY SIZE above the starting address of Keyplus.

#### EXIT ROUTINE

This routine exits Keyplus, returning to the MEMORY SIZE prompt. Expansion interface owners must press the <BREAK> and <SHIFT-E> keys simultaneously to implement this routine in Command Mode.

#### RESTORE LOST BASIC PROGRAM ROUTINE

This utility will restore a Basic program that has apparently been lost. Resurrecting a program lost via the Basic NEW command is easy. Simply enter Command Mode and hit <R>. All done!

Restoration after a system reset may require reloading Keyplus. If the system reset returns to the MEMORY SIZE prompt, Keyplus must be reactivated. This usually occurs in systems with Expansion Interfaces.

If necessary, reload Keyplus following the procedure outlined on page 1. Initiate the Restore Routine by entering Command Mode and keying <R>. List the Basic program to confirm that it has been restored. Programs lost during power failures are not recoverable.

#### KEYBOARD ENTRY MODES

Keyplus allows six new keyboard entry modes. Each new mode alters the function of several keys.

Command Mode and all routines accessed via Command Mode are completely independent of the keyboard entry mode.

You may enable a specific keyboard entry mode by entering Command Mode and keying the numeric key corresponding with the entry mode number.

#### MODE 0 - STANDARD KEYBOARD

Mode 0 enables the traditional TRS-80 keyboard. No modifications are made.

#### MODE 1 - TYPEWRITER STYLE KEYBOARD

In this mode lowercase alphabetic characters are generated without using the <SHIFT> key. Uppercase requires the <SHIFT> key.

#### MODES 2,3, AND 4 - DIRECT GRAPHIC ENTRY

Mode 2 acts like mode 0 until a quotation mark appears, thereafter, mode 2 inputs graphic characters on all the alphanumeric keys (see chart on other side). When a second quotation mark is typed the keyboard acts like mode 0 again. Another quotation mark and we are back to graphics, etc.

Mode 2 is useful for entering a series of graphic strings into Basic programs.

Mode 3 is identical to mode 2 with the exception that after the second quotation mark the mode permanently switches to mode 0.

Mode 3 is used when entering a single graphic string.

Mode 4 inputs graphics irrespective of quotation marks.

Because Level II Basic was not designed with graphic strings in mind, some idiosyncrasies occur.

If you LIST a line containing a graphic string, the graphics will be printed as Basic key words. This is normal and not a cause for concern.

Using the Basic Editor on a line containing graphics will destroy the graphics. If you must change a line containing graphics, type the line over.

Finally, if you assign a graphic string to a variable, the Basic string space housekeeping routine may alter the contents of the string. If this occurs try using the CLEAR statement to reserve more string space. Also, changing the location of the line where you define the variable may help. This problem does not occur when using a graphic string as part of an INPUT or PRINT statement.

#### MODES 5 AND 6 - BASIC SHORTHAND

In modes 5 and 6 keying <SHIFT-A> thru <SHIFT-X> generates Basic key words. The following list shows the relationship between the keys and what is outputted:

<SHIFT-A>	AUTO	<SHIFT-G>	GOTO	<SHIFT-M>	MID\$(	<SHIFT-S>	STEP
<SHIFT-B>	GOSUB	<SHIFT-H>	INPUT	<SHIFT-N>	NEXT	<SHIFT-T>	THEN
<SHIFT-C>	CHR\$(	<SHIFT-I>	INKEY\$	<SHIFT-O>	OUT	<SHIFT-U>	USR(
<SHIFT-D>	DATA	<SHIFT-J>	CLOAD	<SHIFT-P>	PEEK(	<SHIFT-V>	VARPTR
<SHIFT-E>	EDIT	<SHIFT-K>	CSAVE	<SHIFT-Q>	POKE	<SHIFT-W>	SYSTEM
<SHIFT-F>	FOR	<SHIFT-L>	LIST	<SHIFT-R>	RETURN	<SHIFT-X>	ELSE

<SHIFT-Y> and <SHIFT-Z> output user definable strings up to 32 characters long. More on this in the next section.

Mode 6 differs from mode 5 in that Basic key words are printed with trailing blanks when practical. This adds to the appearance of the listing at the expense of memory space.

#### GENERATING USER DEFINABLE STRINGS

To begin recording a string enter Command Mode and key <Y (or Z)>.

When the string is complete enter Command Mode and key <SHIFT-Y (or Z)>. The maximum length of a user definable string is 32 characters. Control characters such as <BACKSPACE>, <TAB>, <CLEAR>, etc. are counted in the 32 character limit.

Command Mode sequences may be initiated while recording a string, but will not be counted as part of that string.

Once the 32 character limit is reached, recording is halted.

#### ALTERING THE KEYBOARD ENTRY MODE FROM SOFTWARE

Keyplus Ver. 1.5 uses address 32767 (7FFF HEX) to indicate which keyboard entry mode it is in. To change the mode from software simply POKE the mode number into this address.



To get the sound, leave the AUX plug (and the MIC plug if you use it) in place. Take the EAR plug (the big black one) and remove it. Now push the PLAY button on the recorder (no tape needs to be in the machine) and adjust the volume on the recorder to set the arcade sound level. If the sound is weak, you can move the AUX plug to the large MIC hole but you may get some distortion.

Tape help...

To make loading tapes a little less painful, there is a cute little device from the above mentioned Lemons Tech Services (P.O. Box 0429, Buffalo, MO 65622 (417) 345-7643). I used the "Lemonaide Loader" when I was checking the July master tape and it worked wonderfully! CLOAD wasn't a dreaded command for me any more... Contact Lemons for more info.

Mod III mod...

Joe Sangemino of Ottawa, Ontario, Canada found that March 1981's Screen Writer would not work with his Model III because the control characters were not being accepted (his was a newer model where the <shift><S><P> dumps the screen to a printer). But he found that for \$20 he could get a 'ROM C' installed from Radio Shack that solved the problem.

Another way to beat the CLOAD blues...

CLOAD Magazine will also be on disk soon (by October?). The programs will be the same ones that appear on the tape, so you disk users that don't want to spend the extra bucks don't need to fret. They will be easily usable on any Model I or III disk system (2 drives won't be necessary). Note: for a fee-per-tape, you will be able to convert your subscription to disk (more on this aspect later).

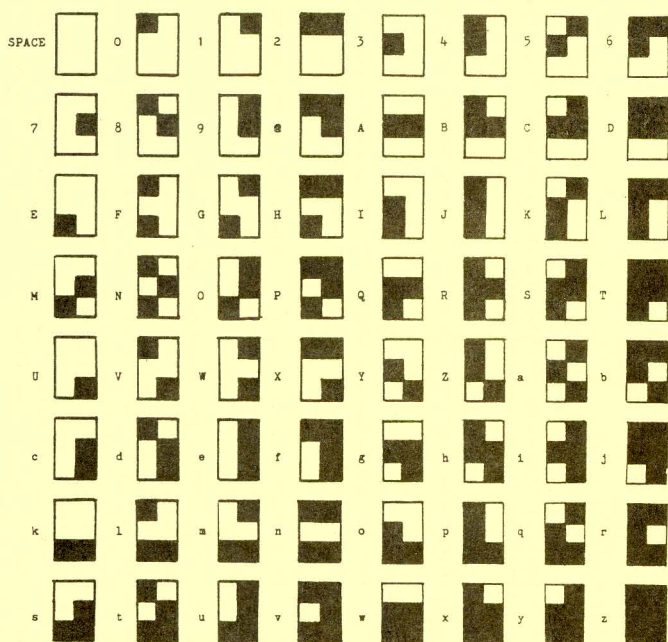
We did get a lot of feedback from our survey (we're still compiling them) and one question pops up often - "Why does it cost twice as much?" Well, it costs much more to produce and we like to make money. The disks cost about four times as much as tape. They are much more fragile so they take extra care to handle and mail. The duplication is much more labor intensive. And we like to make money (reprise). But 12 disks with over 75 programs for \$100 still seems like a bargain to me (and there will be a six month rate).

Now for CLOAD on a hard disk.

Dreamin',

*Dave*

ed.



For the Extended BASIC **COLOR COMPUTER**



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