

TRS80 - Radio Shack TRS-80 Model 1, 3, & 4 Emulator for Slackware

The following information will assist you in getting TRS80 by David Keil running on Slackware.

PREWORK:

1. Purchase the EMULATOR, and have it in the mail before proceeding. The EMULATOR is provided by, and purchased for \$10.00 from:

```
David Keil  
P.O. Box 143  
Alma Center, WI 54611  
Email: dmkeil@discover-net.net
```

It is well worth the modest price he is asking..... David's website is located at:

<http://www.classiccmp.org/cpmarchives/trs80/mirrors/www.discover-net.net/~dmkeil/>

2. Install [DOSBox from SlackBuilds.org](http://SlackBuilds.org)

REF's:

- <http://slackbuilds.org>
- <http://www.dosbox.com>
- <http://dosbox.sourceforge.net/wiki>

3. DOSBox - Command Summary

The following commands can be used in DOSBbox

```
intro  
intro mount  
intro cdrom  
intro special  
help  
help /all
```

- **Ctrl+F1** to Enter the Keymapper Setup
- **Ctrl+F11** to Slow down Emulation - Decrease DOSBox Cycles
- **Ctrl+F12** to Speed up Emulation - Increase DOSBox Cycles
- **Alt+ENTER** to Toggle to FULL Screen or Normal Display

There are several special commands that are shown in the DOSBox Help screens.

Be sure to also read those instructions.

If you should have problems getting the CPU Speed (Cycles) Decreased with **Ctrl+F11**, Increased with **Ctrl+F12**, and access to the Keymapper with **Ctrl+F1**, the problem may be associated with your Window Manager.

The solution is to look at:

APPLICATIONS MENU → SETTINGS → WINDOW MANAGER → KEYBOARD TAB then scroll down until you see workspace_1, workspace_11, workspace_12, and delete those assignments. If you wish to enable those again, just use **RESET** to Default.

This allows DOSBox to use **Ctrl+F1**, **Ctrl+F11**, and **Ctrl+F12** to access the Keymapper and Change the CPU Cycles accordingly.

SETTING UP TRS80

1. Copy the complete EMULATOR subdirectory TRSDOS from the CDR to your /home/loginuser directory.

TRS80 - Command Summary

The following three commands apply ONLY to Montezuma Micro CP/M:

- **F1** does a DIR A:
- **F2** does a DIR B:
- **F3** does a DIR M:

- **F5** key brings up the 'Configuration Screen'.
- **Shift+F5** key will shell to DOS.

- **F6** key toggles 1, 2, 4, 8 MHZ
- **Shift+F6** Locks the Speed at the current setting.

- **F7** key will save a snapshot of the TRS-80 system.
- **Shift+F7** key will load a snapshot of the TRS-80 system allowing you to continue running a TRS-80 program after exiting the emulator. Like a save game feature.

Added ability to load & execute /CMD files directly from a PC directory

- use **Shift+F7** to bring up load Snapshot window then use **F1** to toggle load /CMD options
- **F9** will bring up the virtual drive status screen. From this screen you can insert, remove and change virtual disks.
- **Shift+F9** selects virtual hard disk selection screen.

In the virtual drive selection, screens have changed.

- **INSERT** now brings up a window for entry of a path+filename of a virtual disk to be mounted in the currently selected drive.
- **ENTER** brings up the point & shoot screen for selecting a virtual disk to be mounted in the currently selected drive.
- Pushing the numbers , **1**, **2**, **3** now selects the corresponding drive.
- Pushing **Shift+Tab** selects the previous drive.

- **F10** Reset Emulator (Same as CNTL C in CP/M)
- **Shift+F10** now exits even if CPU is stopped.

- **F11** now selects virtual cassette selection screen.
- **Shift+F11** selects audio/wave cassette selection screen.
- **F12** stops & single steps Z80 CPU.
- **Shift+F12** stops and restarts Z80 CPU.

Running TRS80 or TRS81 the Radio Shack TRS-80 Model 1, 3, & 4 Emulators

Locate the .DSK or .DMK (NEWDOS, DOSPLUS, LDOS, TRSDOS, ULTRADOS, MULTIDOS, or MONTEZUMA MICRO CP/M) OS files you will use:

If you are using Montezuma Micro 2.31 CP/M, use Tim Mann's mkdisk to reset the write protect attribute of the file, so you can use CONFIG to change the Drive Parameters and save the settings. If you don't change the file to unprotected, you won't be able to save the parameters, so the settings won't survive a reboot. If you are using Newdos and want to use the Pdrive command you will also need to use Tim's mkdisk to allow the Pdrive command to write the changes.

TYPICAL Pdrive commands are:

- pdrive,0 —— This will display the current settings
- pdrive,0,1=4,a - This will change Drive 1 to displayed Drive 4 settings and make it effective immediately
- pdrive,0,1=2,a - This will change Drive 1 to displayed Drive 2 settings and make it effective immediately

These parameters allow you to read a Model 1 Floppy in a TRS-80 Model III or Model 4

```
mkdisk -u -k filename.dmk
mkdisk -u -k MMCPM231.DSK
mkdisk -u -k ND80-M1.DSK
```

Start DOSBox from the Slackware Xfce menu:

APPLICATIONS MENU → SYSTEM → DOSBox

DOSBox will come up and you will be on Drive z:

Type the following commands adjusting for the specific Emulator.

```
mount c ~/path/to/subdir/TRSDOS
c:
dir /p
trs80 MMCPM321.DSK
```

I copied the Montezuma Micro CP/M DSK file into the TRSDOS subdirectory. I could have just used trs80, and then immediately used **F9** to select the Drive, and the OS used on that drive, and then used **F10** to read the Disk's information and reset the Emulator.

Use **Ctrl+F12** to increase cycles to around 9K or 10K so the DIR B: command in CP/M, or the DIR :0 command in TRSDOS acts like a real TRS-80 Model 4.

Montezuma Micro ver 2.3.1 will come up running.

Formatting a floppy disk takes about 30 seconds, and booting up is less than 30 seconds with a 2 MHZ CPU with 64 or 128 Meg RAM.

Use the **F9** to configure another DSK file to view in Drive :1

Use the **F10** to RESET the System

Use PIP to transfer a couple of files to Drive M:.. (pip destdrive:=sourcedrive:filename.*)

```
pip m:=a:mdm730*.*
```

- **F1** does a DIR A: - **ONLY in Montezuma Micro CP/M**
- **F2** does a DIR B: - **ONLY in Montezuma Micro CP/M**
- **F3** does a DIR M: - **ONLY in Montezuma Micro CP/M**

Reference the Command Summary above for more commands.

Now, the whole world of CP/M, TRSDOS, LDOS, NEWDOS is available for your work or play. Be sure to check out DUP, and CONFIG, in Montezuma Micro CP/M, and all the other utilities with CP/M and TRSDOS. With Config you can read and write almost any format available at that time.

When you are finished with the Emulator use **Shift+F10** to exit. Then you need to un-mount the subdirectory, and exit the Terminal Window.

Here are the commands

```
z:  
mount -u c  
exit
```

If DOSBox doesn't terminate properly, open another Terminal Window and use the top command to find the DOSBox process ID Number.

Assume 4790. Use q or CNTL C to stop the top command and then use kill -9 4790 to terminate DOSBox.

```
top  
q
```

Ctrl+C - Can also be used to Terminate the command "top"

```
kill -9 4790
```

References for CP/M & TRS80 Archives

- <http://www.classiccmp.org/cpmarchives/trs80/mirrors/www.discover-net.net/~dmkeil/>
- <http://www.trs-80.com/>
- <http://trs80stuff.net/>
- <http://www.retroarchive.org/cpm/>
- <http://www.retroarchive.org/cpm/cdrom/>
- <http://www.sharpmz.org/succpminfo06.htm>
- <http://z80cpu.eu/mirrors/oak.oakland.edu/>

- <http://www.classiccmp.org/cpmarchives/cpm/>
- <http://z80cpu.eu/mirrors/oldcomputers.dyndns.org/rechner/>
- <http://www.sydex.com/about.html>

Sources

- Contributions by [ldkraemer](#)

[howtos](#), [software](#), [emulators](#), [TRS80](#), [Z80](#), [CP/M](#), author [ldkraemer](#)

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