Documentation for the BOOT Program

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LOADING INSTRUCTIONS

You may load BOOT using the extended basic cartridge by installing the
diskette with LOAD, BOOT, and BOOU in drive 1, and selecting Extended
Basic. You may also load it using any Editor Assembler Option 5 loader,
including TI Writer Option 3, Funnelweb, etc., using the filename
DSKn.BOOT, where n is the drive number you have the BOOT diskette
installed in.

The program uses all of low memory and a good portion of high memory from
>C000 up, and runs independent of any cartridge or special environment.
It uses one routine from the console, the keyscan at address >000E. You
can run it without a cartridge in the computer, or you can run it on a
Geneve. It will run on the Geneve in GPL mode identically as described
above or you may run it from MDOS mode using Barry Boones excellent EXEC
program in the syntax EXEC BOOT. Load it up and lets get down to
business!

HARDWARE REQUIRED/USED

No special hardware is required to run BOOT. Hardware recognized:

```
CorComp Clocks                  \
John Clulows Clock               \  Reads and posts the time
MPB Clock                         > in the upper right corner
Geneve Clock                     /
P-Gram Clock                    /
P-Gram Card                     \ Allows grams
Geneve                          / to be loaded
Myarc Disk Controller             Patch VDP for last drive accessed
Mechatronic 80 column device    \ Allows switching into
Dijit 80 column card.           / 80 column modes
```

THE SPECIAL KEYS

The following keypresses are available anytime BOOT is running.

```
Key Description
--- -----------
F7  (AID or ?) Get help
    Press FCTN 7 or the "?" to get a help screen.

B   Change screen color
    Pressing B will allow you to choose which color out of the 16 you'd
    like your screen to be.

D   Delete a file
    Prompts for a filename to delete.
```

```
Key Description
--- -----------
F    Change text color
     Pressing F will allow you to choose which color out of the 16 you'd
     like your text to be.

G    Select a new grom
     Pressing G will allow you to step through any grom cartridge headers
     that might be installed in your machine.  For instance, if TI WRITER
     is installed in your console, next to the C would be the text
     "PROCESADOR DE TEXTO".  If you can barely read English like me, you
     probably have a heck of a time with Spanish, so press G six times to
     get to the "TI-WRITER" header.  More on this later, but for now,
     understand that the "G" key will cycle though any and all headers
     installed in your machine.

I    Toggle xb interupt
     If Extended Basic is installed, and you press the "C" key, the
     cartridge will be run just as if you'd selected it from TI's option
     screen.  Some folks don't really like the Cyan/Black colors of xb, and
     now, they have a choice.  Instead of pressing the "C" key to run the
     cartridge, press and hold either SHIFT key, then press "C".  You'll
     notice that the colors you set up with the "B" and "F" keys will be
     "carried" into extended basic.  Now, if you find yourself constantly
     using the SHIFT C instead of just a plain "C", you can make the color
     carry-over the default by pressing the "I" key.  This color interupt
     is only active with the extended basic cartridges.

K    Execute a call
     If you were to enter extended basic (or basic), and use the CALL
     routine to execute a system call, you'd be doing the same thing as
     this "K" routine.  For instance, owners of CorComp disk controllers
     enter one of the basics and type "CALL MGR" to get the CorComp disk
     Manager program up and running.  From BOOT, you could do the same
     thing by pressing "K", then typing MGR.  Calls found in external DSR's
     (usually the p-box cards) will be found and executed, while calls
     inside cartridges (CALL CLEAR etc) will be ignored.

P    Change printer name
     You can print any file from BOOT or you can send a disk directory to
     your print device.  What device? You can tell BOOT what print device
     you'd like to use after pressing "P".

S    Check for supercart
     The grom header displayed next to the "C" won't show you a ROM header
     if there is a grom header, so to see it, just press "S".  This will
     show you a supercart ROM type of header if present.
```

```
Key Description
--- -----------
T    Change track disk
     Looking at the screen, press FCTN 5.  You'll see a screen like this:


          ┌─────────────────────────────────┐
          │                                 │
          │         1   Show Directory       │
          │                                  │
          │         2   Display a File        │
          │                                  │
          │         3   Run a Program         │
          │                                  │
          │         4   option 1             │
          │             DSK*.PROGRAM1        │
          │         5   option 2             │
          │             DSK*.PROGRAM2        │
          │         6   option 3             │
          │             DSK*.PROGRAM3        │
          │         7   option 4             │
          │             DSK*.PROGRAM4        │
          │         8   option 5             │
          │             DSK*.PROGRAM5        │
          │         9   option 6             │
          │             DSK*.PROGRAM6        │
          │         C   EXTENDED BASIC       │
          │                                  │
          └─────────────────────────────────┘
```

Look at option 4, the first of 24 user options. You'll notice the text
"DSK*.PROGRAM1" under the text of the option. When you elect to press
"4", this filename will be run. Since there probably isn't a PROGRAM1 on
one of your disks, you'll probably want to edit this filename to something
else. Let's say you'd like option 4 to run the excellent disk utility by
John Birdwell named DSKU. And let's say you stored the program (DSKU) on
your second disk drive, right along with your other favorite utilities.
You could edit the filename to DSK2.DSKU, just as you could edit all the
other 23 options to DSK2., but there is a better way. You could instead
use the "*" to indicate the drive number, then, using the "T" option, set
the default drive to mean "2". Why? Maybe down the road you'll decide to
keep your utility diskette in drive 3. It would be easier to change the
"T" drive number than all 24 user options. You of course can put a "hard"
disk number or path name in the device/filename and forget about the "T"
option entirely. If the BOOT program is loaded from a TI or CorComp disk
controller, upon running, it knows what drive number it was loaded from.
For instance, if BOOT was loaded with the EA Option 5 like this:

                         DSK3.BOOT

and if the "T" option contains a "*", then all instances of "*" in any of
the user program names will be changed to a "3", since disk tracking is in
effect. So "t" can be used to track the disk the BOOT program was loaded
from, or it could be used just as a convienence to modify all the program
names easily. More on editing the filenames later.

V   displays version
     Pressing "V" will show when the software was last modified, and the
     initials of the author.

```
Key Description
--- -----------
W   Toggle screen width
    If you have a Mechatronics 80 column device, or a Dijit 80 column
    card, or a Geneve, pressing "W" toggles the program from 40 to 80
    column mode.  I am doing business directly with the 9938 video
    processor, so it ought to remain compatable with any future 9938 based
    video processors.

X   Run x-basic program
    If you have extended basic installed, and you'd like to run an
    extended basic program, just press "X" and enter the filename.  With
    option 3, "Run a Program", I am duplicating the EA option 5 loader,
    which loads a machine language program.  This option (option 3) can be
    used to load an extended basic program as well, but I must first load
    the program from disk into memory, then, by analysis, realize it's an
    extended basic program, then, treat it as such and load it treating it
    as an extended basic program.  By specifying "X" instead of using
    option 3, the analysis is by-passed, and the program is loaded into
    extended basic much faster.

]   Save a config file
    Once all your user configurations are accomplished, you can save them
    into a file with this option.  This way, whenever a new version of
    BOOT comes out, you won't have to do all that typing again.

[   Get a config file
    The data you saved to disk with the "]" option can be loaded into a
    "virgin" BOOT program with this option.

/   Load a CHARA1 file
    One mans junk character set is another mans treasure, so if you don't
    like the characters you see in front of you, place your favorite
    CHARA1 file on a disk in drive 1, and load it into BOOT using this
    key.

0   Blank screen/reset
    On a 99/4A, press this key (zero) to blank the screen.  On a Geneve,
    this will do a reset, allowing you to return to MDOS if loaded from
    EXEC.

Sp  Next screen
    Press the spacebar to go to the next screen of options.

F5  Config user options
    As discussed earlier, FCTN 5 puts you in configuration mode.  You
    enter into the editor, and change all user options using FCTN 5.

F9  Exit from a routine
    Let's you escape most anything.

S2  Print a file
    Press SHIFT 2, and you'll be prompted for a filename to print.  This
    is exactly like pressing "P" on a filename in the catalog routine
    (explained later).  The file will be printed to the device specified
    with the "P" option.
```

OPTION 1 - THE DISK DIRECTORY

The first option is used to catalog a floppy or hard drive. When 1 is
pressed, you'll be asked for the directory to catalog. Enter any valid
device or device.directory name for the catalog. Using a period '.' is
optional after the device/directory name.

The directory will look like this:

```
 _____
| DSK1.                                   |
| Filename      Type        Size     AU's |
|                                         |
| LOAD          Prg                     5 |
| BOOT          Prg                    25 |
| BOOU          Prg                    25 |
|                                         |
|   Back,XRun,Run,View,Delete,Enter       |
|                                         |
|_____|
```

The pathname is on the first line, followed by a ruler line. The size
block will be filled out on those disk controllers that support byte
counts for program files, and it will show the length of a variable or
fixed length file. AU's, or Allocation Units show how many disk sectors
the file occupies on the disk.

The bottom line is a status line showing you what actions you may take on
the files.

BACK   Takes you back to the first screen of BOOT (Function 9).

XRun   Press X, and if the file is a PROGRAM or IV254 file, and if
          Extended Basic is installed, this program will be run in XB when
          the ENTER key is pressed.

Run   Pressing R next to a PROGRAM will run this program when
          ENTER is pressed later. You can only run PROGRAMs.

View   Put a V in front of any and all files to view when ENTER
          is pressed later. This can't be pressed on a PROGRAM or
          directory.

Print   (Not shown). Placing a P next to the file(s) will print this
          file to your output device. Can't be pressed on a PROGRAM.

Delete   A D will delete the marked file(s) when ENTER is pressed later.
          You can't delete a protected file, so D won't be allowed if the
          file is protected.

Continue If C is pressed while next to a directory name, the directory
          will continue in this subdirectory. This allows you to "step"
          through a disk with subdirectories. You'll notice that C can't
          be pressed unless the line is a directory name.

REDO   Prompts for a new directory name to catalog.

ENTER   Executes all commands.

All commands can be used together. For instance, you can delete a group
of files, view a couple, print a few, then run one. To execute all
commands (V,P,R,X,D), just press ENTER.

The UP/DOWN arrow keys as well as the PAGE UP/PAGE DOWN keys are active.
Use them to scroll though a long directory.

All of the above applies if you are in 80 column mode, but your screen
will contain additional information if you have a Myarc HFDCC card
attached to your computer. The date and time stamps will be displayed to
the right of the file data.

While looking at the directory, pressing FCTN P will send the disk
directory to your print device in a full 80 columns. So if you don't have
80 column capability, and you do have a Myarc HFDCC, your printed catalog
will show the date and time stamps.

OPTION 2 - VIEW A FILE

This option is a quick and dirty way of viewing a file. It is the exact
same routine as using "V" from a disk directory, except it will only do
one file at a time. Enter the filename to view when prompted, Once the
viewing begins, you can manually scroll through the file by pressing the
spacebar on every page, or you can make it "autoscroll" by pressing FCTN 8
instead. Cancel autoscroll by pressing the spacebar.

If you want to send the file to your print device as well as view it,
press SHIFT 2 instead of 2.

OPTION 3 - RUN A PROGRAM

This option prompts for a program name to run. There are three kinds of
programs you might want to run; a machine language program (assembly, C,
Pascal, etc), an extended basic program, and a GROM program. This option
will load them all. It is identical to using the "R" option from the
directory routine. After entering the program name, BOOT will decide what
type of program it is. If it's machine language, the program will be
immediately run. If it's extended basic, the cartridge port is checked
for the presence of that cartridge, and if it's installed, the extended
basic cartridge is run, with DSK1.LOAD replaced with your selected
programs name. If you know it's an extended basic program, you'd be
better off using the "X" option to run it as explained earlier. If BOOT
determines that you are trying to run a GROM cartridge, it will attempt to
load the cartridge into your GRAM simulator, be it a Gramkracker, PGram,
or Geneve. The cartridge will not be run immediately, but it's name will
appear next to the "C" at the bottom of the screen. You can then run it
by pressing "C" as explained later.

OPTION C - RUN A CARTRIDGE

You'll notice that the last item is C. This allows you to run the
installed cartridge. Just to the right of the C is a small number, either
a 1, 2, 3, or 4. This number indicates which GROM Library is active.
Most everyone knows that the text "REVIEW GROM LIBRARY" is hidden in the
console. This feature was never exploited by TI, but it was by the
creator of the P-Gram card, the late John Guion. John was a genious in
his time, designing a product called the P-Gram. I have to take a moment
to talk about the P-Gram. I bought a Horizon Ramdisk way back when they

first started selling them, and I still love it. To me, the Horizon was an extremely well designed product that proved to be functional and reliable. I am still running serial number 10 with not so much as a battery change after 4 years! Well, I've recently aquired a P-Gram+ card, and after closely examining it, and programming it, it is also one super piece of hardware. No other products in the TI world come close to either. My P-Gram+ card has 4 gram libraries, and each library can hold 64k of groms each. Imagine extended basic, editor assembler, multiplan, plato, TI Writer, Disk Manager, and a few more, all being inside this card and available at all times! I have that capability and it's truly fantastic. My hat is off to Robert Jones for the fabulous software he wrote for the P-Gram, and to Bud Mills for his unending support to us all for continuing to market such quality products as this.

Where was I....

Oh yea, the little numbers next to the C. If you don't have a gram simulator that supports more than one library, you'll see the contents of Grom 1 (usually TI BASIC) and whatever cartridge you have installed in the machine as options when "G" is pressed to cycle through the groms. Press "C" to run the one showing. If you do have a simulator such as a P-Gram, Gramkracker, or Geneve, you can load a cartridge into the gram with the "R"un option or from the disk catalog routine with "R". If you have a gram device that simulates more than one library, you can load software into a specific bank by cycling through the libraries with the "G" key. The small 1 indicates library 1 (grom base >9800), 2 indicates library 2 (grom base >9804), 3 is library 3 (grom base >9808), and 4 is library 4 with the grom base at >980C. Before using the "R" option, cycle the "G" to the base you want the software loaded into.

MODIFYING THE PROGRAM

Before doing any modifications to the filenames, configure your print device name with the "P" key, your foreground/background colors with the "F" and "B" keys, and load your favorite CHARA1 into the program. Change the screen width to either 40 or 80 columns with the "W" key. After these settings are satisfactory, enter the edit mode by pressing FCTN 5.

You may now change the text of each user option to a meaningful title for the program you'd like that option to run. When the title is ok, press a down arrow or the ENTER key to drop down to the program name line. Enter the program you want BOOT to run when that option is run, as I explained earlier with DSKU. There are many options or formats available to you for program names. Here they are:

        DSK1.FILENAME   Runs a program named FILENAME
                                        located on DSK1.

        DSK*.FILENAME   Runs a program named FILENAME
                                        located on the same disk that BOOT
                                        was loaded from, IF the track drive
                                        is "*" and you have a CorComp or TI
                                        disk controller (or Geneve).

        DSK*.FILENAME   Runs a program named FILENAME
                                        located on DSK3 if the track drive
                                        is 3.

```
    WDS1.DATABASE.PRBASE            Runs a program named PRBASE on a
                                    winchester under the directory
                                    of DATABASE.

    C MGR                           CALLs a System Call named MGR.
                                    (Remember the "K" option? Same same)

    X DSK6.FILENAME                 Runs an extended basic program or
                                    IV254 file (just like the X loader)
                                    named FILENAME from DSK6.
```

Go ahead and modify the first screen of options to your liking. Then,
press FCTN 9 three times, and modify the other two screens just as you did
this one. On the last screen, when you are done, press FCTN 9 once. **
(Geneve owners, see note below) You will be asked for a drive number to
save your new, modified BOOT program to. Enter any valid drive number or
letter, then press ENTER. BOOT and BOOU will be saved to that drive.
Next, you'll be asked which gram you'd like the program saved into. BOOT
will serve as a gram cartridge and as such, folks with gram simulators may
want to store it there. Respond with a gram number between 1 and 6.
Press ENTER, and you'll be asked if you want a power-up. A little known
fact is that all groms/grams can do a power-up routine, so that when your
computer is first turned on, you'll see that cartridge. Try it both ways,
and see what you like. Your new BOOT program is saved, along with all
your modifications.

The "[" and "]" keys allow you to save your user options 1-24 to a
separate file, so that when future versions of BOOT are created, all
you'll have to do is re-load that data from a disk file. Go ahead and
save your options by pressing the "]" key, and specifying a filename. To
reload the data at a later date, just press "[".

** Geneve owners: After being prompted for a drive number, you'll be asked
if you want to save the program in BOOT or GPO format. When TIMODE is
entered on the Geneve by running GPL, the last two programs, GPO and GPP
are TI BASIC. To replace TI BASIC with the BOOT program, press G. The
programs GPO and GPP will be created instead of BOOT and BOOU, and you
won't be prompted as to which gram to save to, as it will automatically be
stored into gram 1, replacing TI Basic. After the programs GPO and GPP
are created, copy them over the original GPO and GPP files and BOOT will
automatically be run when you enter GPL mode.