

APPENDIX G

BOOTSTRAP PROCEDURES

Figure G-1 shows a PDP-11 console. The up position indicates "on" for all switches.



Figure G-1
The PDP-11 Console

The switch register comprises the 18 switches numbered 0-17. Flipping one of these switches up indicates a "1" condition for the bit that it represents. For example, to enter the octal value 173100, switches 15, 14, 13, 12, 10, 9, and 6 must be up.

G.1 BM792-YB BOOTSTRAP LOADER FOR DISK/DECTAPE

1. Move HALT/ENABLE switch to HALT position.
2. Load the processor switch register with 773100.
3. Depress LOAD ADDRESS processor switch.
4. Load the switch register with the correct address from the following:
 - 777344 for DECTape.
 - 777450 for RC disk.
 - 777462 for RF11 disk.
 - 777406 for RK11 disk.
 - 776716 for RP11 disk.
5. Move HALT/ENABLE processor switch to ENABLE position.
6. Depress START processor switch.

G.2 MR11 (DISK/DECTAPE), BM792-YA (PAPER TAPE), BM792-TC (CARD READER), AND BM792-YH (CASSETTE) BOOTSTRAP LOADERS

1. Move HALT/ENABLE switch to HALT.
2. Load processor switch register with 773100.
3. Depress LOAD ADDRESS switch.
4. Load the switch register with correct address from the following:
 - 773100 for RF11 disk.
 - 773110 for RK11 disk.
 - 773154 for RP11 disk.
 - 773220 for RC11 disk.
 - 773120 for DECTape.
 - 773136 for magnetic tape.
 - 773000 for paper tape.
 - 773200 for card reader.
 - 773300 for cassette.
5. Move HALT/ENABLE switch to ENABLE.
6. Depress START processor switch.

G.3 PAPER TAPE BOOTSTRAP LOADER

In the following description nn is a code that represents the amount of memory available. The value of nn should be specified according to the following list.

Memory Size in Words	Value of nn
8K	03
12K	05
16K	07
20K	11
24K	13
28K	15

1. Place the absolute loader paper tape into the high-speed paper tape reader with the special leader code (351) positioned over the read sensors.
2. Set HALT/ENABLE to HALT.
3. Set the console switch register to nn7744, and depress LOAD ADDR.
4. Load the bootstrap procedure by loading the switch register the first value listed below. After setting the value raise the DEP key. This deposits the value into the specified address. Repeat this operation for the remaining thirteen values in the list. (The DEP key automatically increments the address by 2 each time, so that subsequent values are inserted into the next thirteen words.)

Address	Value
nn7744	016701
nn7746	000026
nn7750	012702
nn7752	000352
nn7754	005211
nn7756	105711
nn7760	100376
nn7762	116162
nn7764	000002
nn7766	nn7400
nn7770	005267
nn7772	177756
nn7774	000765
nn7776	177550

5. Reset console switch register to nn7744, and depress LOAD ADDR.
6. Set HALT/ENABLE to ENABLE.
7. Depress START processor switch.

G.4 MAGNETIC TAPE BOOTSTRAP LOADER

1. Move HALT/ENABLE to HALT.
2. Set the processor switch register to 010000.
3. Depress the LOAD ADDR switch.
4. Load the bootstrap procedure by loading the switch register with the first value listed below. Raise the DEP key. This deposits the value into the specified address. Repeat this operation for the remaining fifteen values in the list. (The DEP key automatically increments the address by 2 each time, so that subsequent values are inserted into the next fifteen words.)

Address	Value
10000	12700
10002	172524
10004	5310
10006	12740
10010	60011
10012	105710
10014	100376
10016	5710
10020	100767
10022	12710
10024	60003
10026	105710
10030	100376
10032	5710
10034	100777
10036	5007

5. Reset processor switch register to 010000, and press LOAD ADDR.
6. Set HALT/ENABLE to ENABLE.
7. Depress START processor switch.

G.5 CASSETTE BOOTSTRAP LOADER

1. Move the HALT/ENABLE switch to HALT.
2. Load the processor switch register with 001000.
3. Press LOAD ADDR switch.
4. Load the bootstrap procedure by loading the switch register with the first value listed below. Raise the DEP key. This deposits the value into the specified address (001000). Repeat this operation for the remaining 27 values in the list. (The DEP key automatically increments the address by 2 each time, so that subsequent values are inserted into the next 27 words.)

Address	Value
001000	012700
001002	177500
001004	005010
001006	010701
001010	062701
001012	000052
001014	012702
001016	000375
001020	112103
001022	112110
001024	100413
001026	130310
001030	001776
001032	105202
001034	100772
001036	116012

Address	Value
001040	000002
001042	120337
001044	000000
001046	001767
001050	000000
001052	000755
001054	005710
001056	100774
001060	005007
001062	017640
001064	002415
001066	112024

5. Reset console register switch with 001000, and press LOAD ADDR.
6. Set HALT/ENABLE to ENABLE.
7. Depress START processor switch.

