

CHAPTER 2  
SYSTEM HARDWARE INSTALLATION OR MODIFICATION

2.1 INTRODUCTION

The previous chapter listed the hardware requirements of an ETOS system, the layouts of the ETOS materials within the memory and disk pack, and the ETOS support software. This chapter explains the installation of the materials contained in QUODATA ETOS distribution package and describes the procedures that transfer the ETOS software to the appropriate back-up medium for your unique hardware configuration.

QUODATA usually distributes ETOS on an RK05 disk pack or a System Industries removable pack. This distribution pack should not be used on a day-to-day basis as a production pack. It should only be used to create production packs. The procedures to create production packs are dependent upon your hardware configuration.

Installation procedures include placement of the ETOS board, modification of existing hardware to accommodate ETOS and tailoring of the ETOS software to your software and hardware specifications. This chapter will discuss the hardware modifications necessary to operate single user ETOS. Chapter 3 will examine the modification necessary to configure the software to your hardware configuration. After you have completed these two chapters, a one-user ETOS system will be ready for running. Chapter 4 will explain how to start ETOS and Chapter 5 will discuss the implementation of additional users.

## 2.2 BOOTING RK05 ETOS DISK PACKS

Before you can install ETOS, you must be able to boot stand-alone OS/8 on the ETOS pack. These sections describe the procedures appropriate for all types of installations.

The information in this section is used to boot the ETOS distribution pack. The pack used for daily operation of ETOS (the production pack) is a copy of the distribution pack tailored for your site. Therefore, this information is also used to boot the daily operational or production ETOS pack.

### 2.2.1 Booting With a Hardware Bootstrap

If you have an RK05 hardware bootstrap (MI8) for the PDP8E (or PDP8M), lift the SW switch up and down to boot the disk. If you have a KM8-AA bootstrap for the PDP8A set to the RK05 disk, lift the BOOT switch up and down to boot the disk. If you do not have a hardware bootstrap for your disk, use the appropriate information from one of the following sections to boot OS/8.

### 2.2.2 Booting With a Front Panel

The following instructions explain the initiation of OS/8 from the front panel. These instructions are valid for PDP8E (or PDP8M) and PDP8A computers. The PDP8E and PDP8A designations respectively for front panel keys are enclosed in parentheses.

- 1) Insert the ETOS disk pack in drive 0. Set the switches on the drive to RUN and WT PROT. Insure that the RUN, ONCYL and WTPROT lights are on. It takes approximately five seconds for all lights to come on.
- 2) Lift or depress halt key and restore to original position (HALT or HLT).
- 3) Set the switch register to 0000.

- 4) Depress extended load address key (EXTD ADDR LOAD or LXA).
- 5) Set switch register to 0030.
- 6) Depress load address key (ADDR LOAD or LA).
- 7) Set switch register to 6743.
- 8) Lift or depress deposit key (DEP or D NEXT).
- 9) Set switch register to 5031.
- 10) Lift or depress deposit key (DEP or D NEXT).
- 11) Set switch register to 0030.
- 12) Depress load address key (ADDR LOAD or LA).
- 13) Depress the initialize key (CLEAR or INIT).
- 14) Depress the run key (CONT or RUN).

Adr 0030  
 Load  
 6743  
 5031  
 St. 0030

The system responds with a ".", indicating that stand-alone OS/8 is up and running.

### 2.2.3 Booting From a Non-RK05 Peripheral

If you do not have a front panel but have a non-RK05 peripheral hardware bootstrap, use the following instructions to bootstrap the RK05.

- 1) Hardware bootstrap the non-RK05 peripheral. The non-RK05 peripheral must contain media with OS/8 on it. When bootstrapped, it produces a ".".
- 2) Enter the commands shown in Figure 2-1.

Figure 2-1  
ODT Bootstrap for RK05 Disk

.ODT<RET>

27/ XXXX 6007<LF>  
 00030/ XXXX 5743<LF>  
 00031/ XXXX 5031<RET>  
 27G

The system responds with a ".", indicating that stand-alone OS/8 from the ETOS pack is up and running.

As an alternative to using ODT to type in the bootstrap, you can run the OS/8 BOOT command from your non-RK05 peripheral from the disc to initiate OS/8. To boot the RK05, enter the command contained in Figure 2-2 after bootstrapping a non-RK05 peripheral.

Figure 2-2  
Using the OS/8 Command, BOOT, to Boot an RK05

.BOOT/RE (RE is the mnemonic for the RK05)

Stand-alone OS/8 is now up and running on the RK05.

#### 2.2.4 Booting on a DEC Data System

If you have a DEC Data System, pressing the INIT key on the front of the desk causes the numbers "0123" to be printed. If you mount a COS system diskette in the left-hand floppy drive and press <RET>, you can run single-user COS. In the ETOS distribution kit, there is a floppy diskette labeled "RK05 BOOT DISK". If you mount this floppy in the left-hand drive after "0123" is printed and you press <RET>, the RK05 is automatically booted.

## 2.3 BOOTING SYSTEM INDUSTRIES (SI) ETOS DISK PACKS

Before you can install ETOS, you must be able to boot stand-alone OS/8 on the ETOS pack. These sections describe the procedures appropriate for all types of installations.

The information in this section is used to boot the ETOS distribution pack. ETOS is distributed on a removable SI disk pack. When ETOS runs, it executes on the fixed SI disk pack in port 0. To get ETOS running you must boot the distributed removable pack and copy it onto the fixed pack. Once the information is copied, utilize a fixed pack bootstrap to boot this production pack. The fixed pack bootstrap information starts in section 2.3.5.

### 2.3.1 Booting a Removable Pack with a Front Panel

The following instructions explain the initiation of OS/8 from the front panel. These instructions are valid for PDP8E (or PDP8M) and PDP8A computers. The PDP8E and PDP8A designations respectively for front panel keys are enclosed in parentheses.

- 1) Load the removable pack in the drive on port 0. Follow the procedures contained in the disk drive instruction manual for disk cartridge load. Set the RUN switch on drive 0 down so that the light is on. Set the PROT FIXED switch down so that the light is off. Set the PROT RMVBL switch up so that the light is on. Insure that the READY light is on. It takes approximately ninety seconds for this light to come on.
- 2) Lift or depress halt key and restore to original position (HALT or HLT).
3. Set switch register to 0400.
4. Depress load address key (ADDR LOAD or LA).
5. Depress extended load address key (EXTD ADDR LOAD or LXA).
6. Set switch register to 6502.