

Appendix A

K2600 Boot Loader

The boot loader lets you install a new K2600 operating system and/or new K2600 ROM objects from a SCSI device or the floppy drive into flash ROM. The boot loader also provides hard reset and diagnostics options.



Note: Your K2600 comes from the factory with the operating system and ROM objects already installed. You do not need to run the K2600 boot loader to start up a new K2600.

Starting the Boot Loader

When you start the K2600, it displays a “Please wait...” message and waits for approximately two seconds. Press and release the **Exit** button while the “Please wait...” message is displayed to start the boot loader. Otherwise, the K2600 will start up normally.

The boot loader’s menus resemble K2600 dialog boxes. That is, they consist of a series of options and a cursor that is used to select one of the options. You can use the cursor buttons to move the cursor up, down, right, and left. Press the **OK** soft button to invoke the highlighted menu option. You can also use the Alpha Wheel and **Enter** button to select options.

Boot Loader Main Menu

When the boot loader starts up, its main menu appears

```
----- K2600 Boot Loader v0.03 -----  
  
Install System      Hard Reset  
Install Objects    Run Diags  
Run System         Fixed Diags  
  
OK
```

Initially, the Install System option is highlighted. After invoking various actions, however, other options may be selected by default, as the context suggests, upon returning to this menu.

Install System / Install Objects

Use **Install System** to install the K2600 operating system and diagnostics files by loading them from floppy or from a SCSI device and programming them into Flash ROM. Use **Install Objects**

to install ROM objects into Flash ROM. After either option is invoked, a dialog box such as the following will be displayed.

```
Device to install from: floppy
SCSI ID of this unit: N/A
Cancel OK
```

From this dialog box, you can select which device contains the system or ROM-objects file. You can use the Alpha Wheel, the **Plus/Minus** buttons, or the cursor buttons the same way you can in normal operating modes. If you choose to install from a SCSI device, the SCSI ID of this unit will change from **N/A** to **SCSI 6**. If there is another device on your SCSI bus with an ID of 6, you will need to change the SCSI ID of this unit to a free SCSI ID. At this point you can continue by pressing **OK**, or abort the operation by pressing **Cancel**. Canceling the operation returns you to the boot loader menu, with the Run System option selected. Use this option to return to normal operation.

When you select an option and press **OK**, the K2600 tries to access the specified drive and scan it for files. If it is successful, the following display appears:

```
File to Install: FILE1.KOS
DIR1 <DIR>
FILE1.K26
FILE2.K26
VLABEL <VOL>
NewDrv Root Parent Cancel OK
```

While this page is displayed, you can use the **Up** and **Down** cursor buttons, the Alpha Wheel, or the **Plus/Minus** buttons to highlight different items in the file list. Names that have **<DIR>** displayed to their right are directories. If the disk has a volume label, it will be displayed in the list, marked with **<VOL>**. Operating system files typically have a **.KOS** extension, while ROM object files have a **.KRZ** or **.K26** extension. If you're loading a new operating system, be sure to load both files: there's an A file and a B file, both of which must be loaded. Typically, you'll load the A file first, although the order isn't significant.

The **OK** soft button selects the highlighted file for loading, or changes to the highlighted directory. The **Cancel** button aborts the installation and returns to the menu. **Parent** changes to the current directory's parent directory, while **Root** changes to the disk's root directory. The **NewDrv** button returns to the previous page, allowing you to choose a different drive from which to install.

After you select a file by pressing the **OK** button, you will be asked to confirm the installation. The K2600 will display a message of the form **Ready to install operating system from filename on device** or **Ready to install ROM objects from filename on device**. When it displays this message, it will fill in *filename* and *device* with the name of the file and device you have selected. To confirm that you want to proceed, press the **OK** soft-button. If you do so, you will not be able to interrupt the installation. Alternatively, the **Cancel** button will return you to the menu, or the **Choose** button will allow you to select a different device or file from which to install.

While the K2600 is installing the file into Flash ROM, the top line of the display will gradually fill to indicate the progress of the operation. Note that operating system files and ROM object files are of different formats. If you try to install a file using the incorrect menu option, the K2600 will think the file is corrupt and will refuse to install it into Flash ROM. If this happens, simply choose the correct menu option from the boot loader's main menu, and repeat the installation.

If there is a problem accessing the drive or installing the file, an error message will be displayed. At this point, you can (1) abort the operation with the **Abort** soft button and return to the menu, (2) press the **Retry** button to try the operation again, or (3) choose another device or file by pressing the **Choose** button.

If you load a new operating system, you should then load all the object files corresponding to the ROM programs you have (always load the basic objects file, then load the Live-mode, Orchestral-block, and Contemporary-block object files if you have the sampling option and the Orchestral and Contemporary ROM blocks.

Run System

The Run System option executes the engine software. When this option is invoked, the operating system and ROM setups are checked for integrity. If either does not appear to be installed, a message will be displayed explaining this. If this happens, you can (1) double press the **Run Anyhow** soft buttons and be given a chance to try to run the system anyhow, knowing that the machine might crash, (2) install the uninstalled portion with the **Instal** button, or (3) return to the menu by using the **Menu** button. In the last case, the menu will be displayed with the Load System or Load Setups option highlighted as appropriate.

Hard Reset

The Hard Reset option causes all user RAM to be erased. When you select this option, a strict warning message is displayed. You must press the **Up** and **Down** cursor buttons simultaneously to actually erase the RAM. If you push any other button or turn the data wheel, the operation is aborted, and the menu is displayed with the Run System option highlighted. Otherwise, the RAM will be marked for reinitialization, and a message declaring this fact will appear prior to return to the menu. When the menu reappears, it will have the Run System option highlighted.

Run Diags

The **Run Diags** option first runs a diagnostic test of the system software. If there's no system software currently intalled, you'll see a corresponding message, at which pont wyou can do one of the following:

- Press **Run Anyhow** to execute the system diagnostic. The instrument may crash.
- Press **Instal** to begin the process of installing sytem software.
- Press **Menu** to return to the Boot Loader page.

After the system diagnostic finishes, you'll see a warning about erasing RAM objects during the diagnostics. If you don't want to lose any data in RAM, you should save everything before exeduting any of the diags. Press any button on the K2600's fron panel to continue to the

Run Diags

Dagnostics page, where you can choose from a series of diagnostic tests. These tests can be useful in identifying problems you might be having with your instrument.

```
----- K2600 Diagnostic Ver 0.02 -----
LCD
Engine Blk      Scanner      Sine Wave
Object Blk     MIDI Uart   Sound ROM
RAM/PRAM       FDD R/W    Sound RAM
I/O Port       SCSI       1st NURAM
FDD Init       ULSI & ZRAM 2nd NURAM
BurnIn Forever SamplingOpt KDFX Relays
OK
```

A Few Precautions

1. Turn down your sound system before beginning diagnostics!
2. Before executing the MIDI UART diagnostic, connect a MIDI cable from the K2600's MIDI Out port to its MIDI In port. If you do not do this, the MIDI UART test will fail.

Running the Tests

Select the desired test with the Alpha Wheel or cursor buttons, then press OK to begin the test.

When you're finished, restart your K2600 to return to regular operation.