

## Read this first

### Introduction

The Model 2700/2750 mainframe requires firmware revision B04 or higher (B05, B06, etc.) to properly support the Model 7701 150V 32-Channel Differential Multiplexer switch card, the Model 7711 2GHz RF module, and the Model 7712 3.5GHz RF module. The Model 2750 mainframe requires version A03 or higher to support these modules. If the firmware revision of your device is lower than B04 for the Model 2700 and A03 for the Model 2750, a ROM upgrade is required.

### Step 1. Determine the firmware revision of your Model 2700/2750

The firmware revision is briefly displayed during the power-on sequence of the instrument. When the instrument is turned on, all display annunciators will turn on for a short period of time. After that, the firmware revision will be briefly displayed as follows:

REV: yyy zzz

where: yyy is the mainframe firmware revision (e.g., B04 of the Model 2700, A03 of the Model 2750).  
zzz is the display board firmware revision (e.g., A01), which does not apply to this upgrade.

To determine the firmware revision remotely, use the \*IDN? query command. After sending the \*IDN? command and addressing the instrument to talk, the following response message is sent to the computer:

KEITHLEY INSTRUMENTS INC., MODEL wwwwww, xxxxxxxx, yyy/zzz

where:

wwwwww is the mainframe model (2700 or 2750).

xxxxxxx is the serial number of the mainframe.

yyy is the firmware revision of the mainframe.

zzz is the display board firmware revision (e.g., A01), which does not apply to this upgrade.

### Step 2. Determine the next course of action

Based on the firmware revision of your Model 2700 or 2750, choose the appropriate course of action:

- If the firmware revision is B04 or higher on the Model 2700, or A03 or higher on the Model 2750, an upgrade is not needed for the Models 7701, 7711, or 7712.
- If the firmware revision is B03 or lower on the Model 2700, or A02 or lower on the Model 2750, an upgrade is required. Proceed to Step 3 to perform the upgrade.

**NOTE** If the firmware revision begins with the letter A (e.g., A01, A02, etc.) for the Model 2700, DO NOT perform the upgrade. For these revisions, a hardware upgrade is also required. Contact your local Keithley service center for instructions and pricing for upgrading your Model 2700.

### Step 3. Perform the ROM upgrade

#### System requirements

Two installation disks for each mainframe are provided for the ROM upgrade. The minimum requirements include a Pentium-class PC that is running Windows 95 or later. The firmware can be installed via the IEEE-488 bus or the RS-232 interface:

- **IEEE-488 Bus** – If using the IEEE-488 bus, a Keithley, CEC, or National Instruments IEEE-488.2 interface board must be installed in the PC. Use an IEEE-488.2 cable to connect the interface board to the Model 2700 or Model 2750 mainframe.
- **RS-232 Interface** – If using the RS-232 port, use an RS-232C cable to connect the communications port to Model 2700 or Model 2750 mainframe. **NOTE:** With RS-232, upgrade takes approximately 20 minutes.

#### ROM upgrade procedure

1. From Windows, click Start → Settings → Control Panel → Add/Remove Program, and then remove KI Model 2700 or 2750 ROM Upgrade if previously installed. **NOTE:** All saved scanlists, setups, and buffer readings will be lost with this upgrade.
2. Insert the KI Model 2700 or 2750 ROM Upgrade Disk 1 into the PC.
3. From Windows, click Start → Run.
4. From the Windows dialog box, run the A:\setup.exe file, and follow all the prompted instructions.
5. From Windows, click Start → Programs → KI Model 2700 ROM Upgrade (B04) or KI Model 2750 ROM Upgrade (A02) and then follow all prompted instructions.
6. Perform Step 1 above (determine the firmware of your mainframe) to verify correct installation. **NOTE:** Error +516, “Battery Backed Memory Lost” will be displayed after the first power cycle procedure.

*Thanks again for choosing the Keithley Instruments Integra Series System!*