IFR 6800A Series Software V5.02

Restricted Upgrade procedure

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1. INTRODUCTION

V5.02 software for the 6800A series of Microwave Sources, Scalar Analyzers and System Analyzers has been released. The changes from the earlier 6800A software releases (V5.01 and V5.00) are described in Section 2.

The upgrade is available in two levels:

- A Full Upgrade that requires the unit to be returned to an Aeroflex Regional or Authorised Service Center.

- A Restricted Upgrade that can be installed by the user. This allows the user to benefit from most of the upgrade with the minimum of downtime with the option to delay the full upgrade, for example, until the instrument is next sent in for calibration.

  If users choose to upgrade their own instruments, then the main feature that they will lack is a fix to the Linux operating system that addresses a problem that can prevent the instrument from booting. Although incidents of this are very rare, it should be noted that an affected unit can only be restored by sending it to a service centre.

  The procedure for accessing and installing the Restricted Upgrade software is detailed in Section 3.

2. CHANGE HISTORY

Changes in V5.02 from V5.01	Fixed in 5.02 ?	
	Restricted Upgrade	**Full Upgrade**
All known problems with ***Store/Recall and Store Management using a USB Memory Stick*** have been resolved.	√	√
A problem has been fixed where, when using a Fault Locator or Autotester with severely mis-matched loads, a numeric overflow caused ***obviously incorrect VSWR and Return Loss traces***. (For information, this problem was confined to the 6800A series; 6800 "plain" units were not affected.)	√	√
Coinciding with the release of V5.02, the underlying operating system on the Linux processor's Compact Flash (CF) Card has been updated with: a. A fix for a rare problem where an instrument fails to boot and a message regarding corrupt files appeared. Restoring the unit requires returning it to a service centre. b. An updated set of printer drivers. c. Greater masking of meaningless and occasionally misleading screen displays during instrument boot-up	**X**	√

Changes in V5.01 from V5.00	Fixed in 5.02 ?	
	Restricted Upgrade	**Full Upgrade**
A problem where ***if, when the instrument boots-up, the source is set to operate at 3GHz or less, then oscillators that were set to frequencies above 3GHz were occasionally left running*** has been fixed.	√	√
A problem where ***Limit Lines stores residing on a USB memory stick could not be edited*** has been fixed.	√	√

3. RESTRICTED UPGRADE procedure

3.1 Preparation

Accessing the software:

1. Go to

   http://www.aeroflex.com/ats/products/category/General_Purpose_Test/Microwave.html

   and select the link to 6800A V5.02 Restricted Upgrade software.

2. Copy the software ZIP file to an ***empty*** USB Memory Stick.
3. UnZIP the contents to the top level of the Memory Stick.
4. When done, delete the ZIP file from the Memory Stick. All the remaining files should be at the top level; there should be no folders.

Accessing the instrument's Primary Password:

1. When installing the upgrade you will need to enter the instrument's Primary Password. From new, a 6800A's Primary Password is held in a settings store which, assuming it has not been deleted, can be accessed by pressing "SAVE/RECALL", "Recall Settings", and selecting the store called "password". The Primary Password will now be displayed in the title bar of the display screen.

2. If the "password" store has been deleted for some reason, then go to the Customer Service/Support Helpdesk, http://www.aeroflex.com/ats/service/support-email.cfm, and request a Primary Password corresponding to the serial number of each instrument that needs to be upgraded.

Accessing the instrument's current software version number:

1. Check the current version in the instrument by pressing UTILITY, Service, Status, Display Build State. Against "Software Release Number" you will see either "5.00, 5.00" or "5.01, 5.01" (the FPGA number is irrelevant).

2. If you are upgrading from V5.00, continue with "3.2 Upgrading from V5.00".

3. If you are upgrading from V5.01, go straight to "3.3 Upgrading the software".

3.2 Upgrading from V5.00

When upgrading from V5.00 there is a possibility that the instrument will fail to recognise the presence of a user's USB Memory Stick. Checking and, if necessary fixing this, requires a USB Keyboard and USB Mouse.

1. With the instrument powered-up and running normally, connect a USB keyboard and mouse to the USB ports.
2. Press ALT+F4. This terminates the 6800 measurement display application. You should now see a Linux (Kubuntu) desktop.
3. Drag the cursor down to the bottom-left corner of the screen and select the "K" icon, "System Menu", "Storage Media".
4. At this point you would normally see a single folder under "Storage Media" labelled "*CDROM 0*".
5. If only "*CDROM 0*" is visible, proceed to the next step, below. Otherwise, for each additional folder:

    - Right-click on the folder and select "Move to deleted items folder".
    - At this point an "Are you sure" box will appear. Before clicking on "Deleted", first make you are ***not*** about to delete "*CDROM 0*".

6. Remove the keyboard and mouse and then power cycle the unit.
7. The unit should now be in a recovered state and an external USB memory stick should be recognised.
8. Continue with Section 3.3.

3.3 Upgrading the software

6800A software runs under two different systems: Linux and Phar Lap. Installation is a two-stage process, first the Linux-based software, then the Phar Lap:

1. Linux-based software

    1. Switch the instrument off.
    2. Insert the Memory Stick into one of the front panel USB ports.
    3. Switch the instrument on and let it boot up.
    4. Leave the Memory Stick plugged into the instrument. Power-cycle the instrument and let it boot up for a second time.
    5. The Linux-based software has now been upgraded.

2. Phar Lap-based software

    1. If the instrument is off, first check that the Memory Stick is not plugged into the front panel, then switch the instrument on and let it boot up.
    2. Plug the Memory Stick into the instrument.
    3. Press “UTILITY”, “Service, Upgrade Instrument”. Key in the instrument's Primary Password and press ENTER.
    4. When prompted for "Disk 1", check that the Memory Stick is plugged in and press Continue.
    5. The installation takes about 30 secs. When it has finished, remove the Memory Stick.
    6. Power-cycle the instrument.

On the first re-boot after upgrading, the display may end up offset (with part of a Linux screen visible in the background). If this happens, power-cycle the instrument for a second time.

To check that the installation has worked, press “UTILITY”, “Service”, “Status”, “Display Build State”. The Software Release Number should appear as:

5.02, 5.02, (FPGA: n)

(The FPGA number is irrelevant.)