

# NFA Noise Figure Analyzer Firmware Upgrade Procedure

## \*\* PC's with Windows 7 & 8 \*\*

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### **Purpose:**

The purpose of this document is to provide a step-by-step procedure for obtaining, and installing the latest revision of NFA Firmware and Power Suite Utility into a Keysight NFA Noise Figure Analyzer. This procedure should be used when the user PC has a Windows 7 or Windows 8 operating system.

### **Procedure:**

**Be sure to follow all of the parts of this procedure to complete this upgrade process:**

- Obtain (6) floppy disks and perform a long format
  - Create the firmware upgrade disk set
  - Install Firmware into the Keysight NFA Noise Figure Analyzer
  - Restore the system defaults
  - Performing the Instrument Self Alignment Routine
  - Verifying the Installed Versions of Firmware & Power Suite Utilities Software
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## **A. Obtain (6) floppy disks and perform a long format**

1. You must use 1.44 MB HD floppy disks.
  2. Perform a long format on each disk using a Windows based PC.
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**Note:** If the user PC does not have a floppy drive an external USB to floppy drive can be used. USB floppy drives are readily available on the consumer market.

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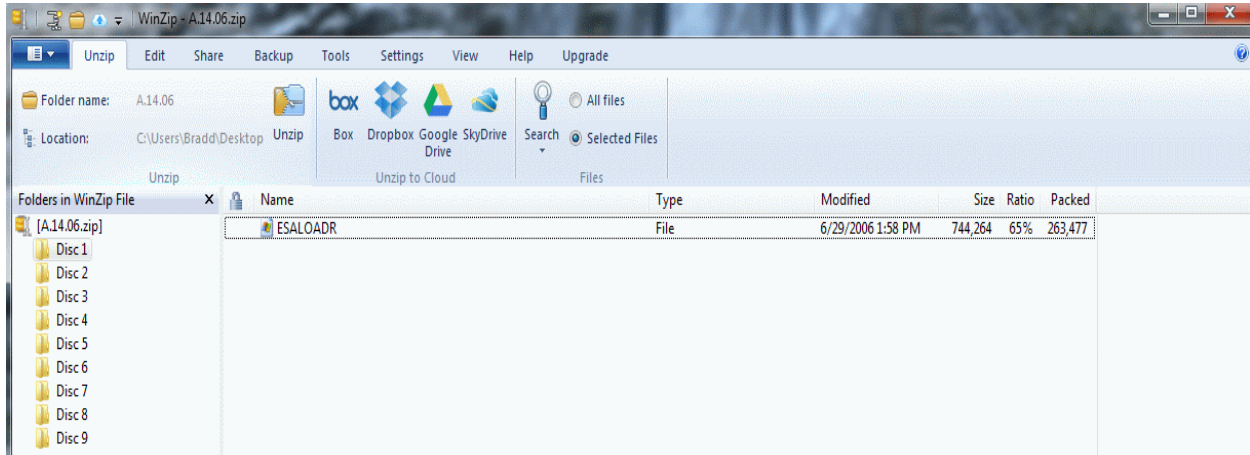
3. Label the formatted disks ahead of time as follows:

1. NFA Loader
  2. NFA Firmware 1 of 5
  3. NFA Firmware 2 of 5
  4. NFA Firmware 3 of 5
  5. NFA Firmware 4 of 5
  6. NFA Firmware 5 of 5
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## B. Create the firmware upgrade disk set

4. Open the Disc 1 folder.

Figure 2



5. If your PC does not have a floppy disk drive, insert the external USB/Floppy disk drive into your PC USB port.
6. Insert the floppy disk you previously formatted and labeled as “NFA Loader” into the floppy drive on the PC or the external USB floppy drive.
7. Open Windows Explorer and navigate to the USB Floppy Drive location.
8. Highlight the contents in the Disc 1 folder and copy them or perform a “drag and drop” onto the NFA Loader disk that is in the floppy drive.
9. Once the contents from the Disc 1 folder have been completely copied to the NFA Loader disk remove the ESA Loader disk from the floppy drive.
10. Refer to the table below to see what contents should be copied over to each disk, then repeat steps 4-9 for Disc 2 contents, Disc 3 contents, etc. until all (6) disks have the Disc files copied over.

Disc Folders contained in the downloaded .zip file	Labeled Disks from step A-3 above	Disc Contents
Disc 1	NFA Loader	ESALOADR
Disc 2	NFA Firmware 1 of 5	NFAFW NFAFW.BIN
Disc 3	NFA Firmware 2 of 5	NFAFW NFAFW.BIN
Disc 4	NFA Firmware 3 of 5	NFAFW NFAFW.BIN
Disc 5	NFA Firmware 4 of 5	NFAFW NFAFW.BIN
Disc 6	NFA Firmware 5 of 5	NFAFW NFAFW.BIN

**IMPORTANT:** You will notice that many of the Disc folders contain more than one file. Be sure to highlight all the contents in each Disc folder before copying the contents to the associated floppy. If the files do not copy correctly or an incorrect floppy is used, format that floppy and begin the process over.

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## C. Install Firmware into the Keysight NFA Noise Figure Analyzer

1. **Insert the floppy diskette labeled "NFA Loader" into the disk drive and cycle power.**  
After several seconds the NFA Firmware Loader utility window will appear on the display of the Keysight NFA. It will prompt you for the first of the firmware diskettes.
  2. **Insert the floppy diskette labeled "NFA Firmware 1 of 5" into the disk drive and press {CONTINUE}.** After a few seconds the analyzer will display the revision of firmware which will be loaded into the analyzer, along with the number of firmware diskettes that you should have (5). It will again ask you to press {CONTINUE} if you would like to proceed with the firmware upgrade.
  3. **Press {CONTINUE} and wait for the first firmware disk to load.**  
It will take approximately 5 minutes for this disk to load into the analyzer.
  4. **When prompted, insert the floppy diskette labeled "NFA Firmware 2 of 5" into the disk drive and press {CONTINUE}.**  
It will take approximately 5 minutes for this disk to load into the analyzer.
  5. **When prompted, insert the floppy diskette labeled "NFA Firmware 3 of 5" into the disk drive and press {CONTINUE}.**  
It will take approximately 5 minutes for this disk to load into the analyzer.
  6. **When prompted, insert the floppy diskette labeled "NFA Firmware 4 of 5" into the disk drive and press {CONTINUE}.**  
It will take approximately 5 minutes for this disk to load into the analyzer.
  7. **When prompted, insert the floppy diskette labeled "NFA Firmware 5 of 5" into the disk drive and press {CONTINUE}.**  
It will take approximately 5 minutes for this disk to load into the analyzer. After the firmware has been loaded off of the fifth diskette, the Firmware Installation Verification window will be displayed on the analyzer.
  8. **Press {CONTINUE} and wait for the analyzer to copy the firmware into Flash memory.**  
It will take approximately 5 minutes for this process to take place.
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**NOTE:** It is extremely important to **NOT CYCLE POWER** while the process being performed in this step is taking place. Doing so will disrupt the installation of the firmware and will prevent the firmware from completing a proper installation.

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9. **Once the copying of the firmware to Flash memory has completed, you will be prompted to cycle power on the analyzer.**
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## D. Restore System Defaults:

After the firmware has been upgraded the instrument needs to have the system defaults restored to accommodate any new features that may use these. To restore these defaults perform the following these keystrokes:

**[System] {More} {Restore Sys Defaults} {Restore Sys Defaults}**

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## **E. Verifying the Installed Version of Firmware**

1. In order to verify the revision of firmware, follow these keystrokes:

**Press [System], {More}, {Show System}**

The 5th line down on this screen should now list the loaded version to be the same as what was downloaded.

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