ESA Spectrum Analyzer Firmware Upgrade Procedure
** PC's with Windows 7 & 8 **

Purpose:

The purpose of this document is to provide a step-by-step procedure for obtaining, and installing the latest revision of ESA Firmware and Power Suite Utility into an Agilent ESA Spectrum 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 (9) floppy disks and perform a long format
- Create the firmware upgrade disk set
- Install Firmware into the Agilent ESA Spectrum Analyzer
- Restore the system defaults
- Performing the Instrument Self Alignment Routine
- Verifying the Installed Versions of Firmware & Power Suite Utilities Software

Note: Instrument must have option B72, Expanded Memory to install this version of firmware. Press [**System**], {**More**}, {**Show System**} to verify.

A. Obtain (9) floppy disks and perform a long format

1. You must use 1.44 MB HD floppy disks.
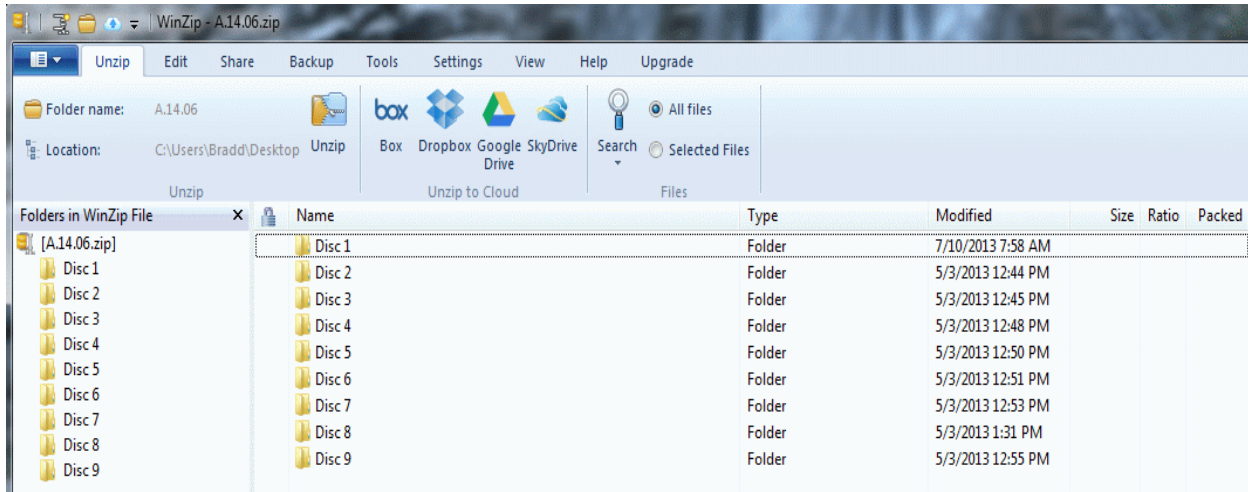2. Perform a long format on each disk using a Windows based PC.

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.

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

1. ESA Loader
2. ESA Firmware 1 of 5
3. ESA Firmware 2 of 5
4. ESA Firmware 3 of 5
5. ESA Firmware 4 of 5
6. ESA Firmware 5 of 5
7. ESA Power Suite 1 of 3
8. ESA Power Suite 2 of 3
9. ESA Power Suite 3 of 3
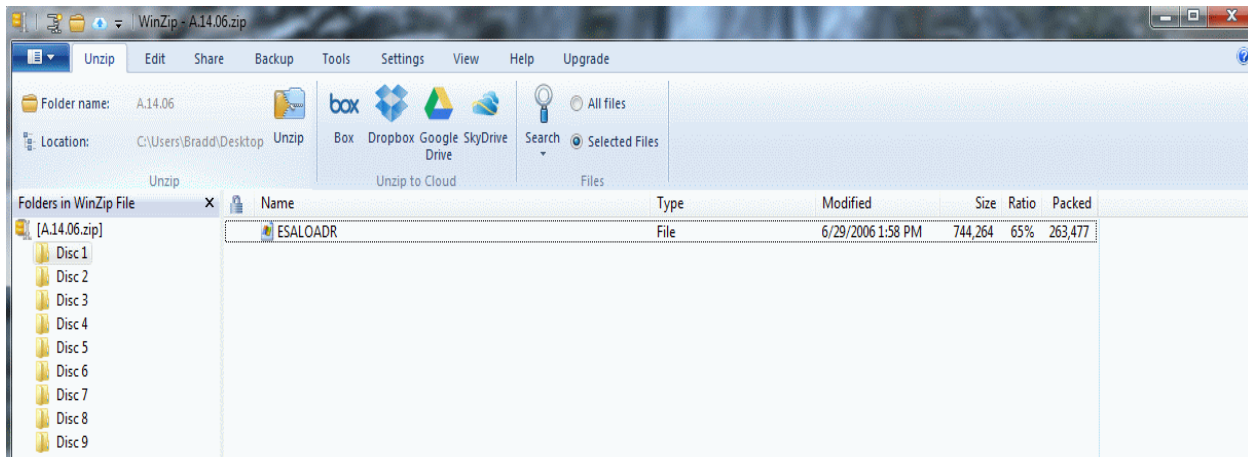
B. Create the firmware upgrade disk set

1. Go to http:// www.agilent.com/find/esa_firmware
2. Select the Download button from the ESA Spectrum Analyzer Firmware webpage and choose the correct download file with the suffix, "Download file for PC's running Windows 7 and 8".
3. Save the .zip file to your PC Desktop. The .zip file contains folders labeled as Disc 1, Disc 2, etc. as illustrated in Figure 1.

Figure 1

4. Open the Disc 1 folder from your Desktop as illustrated in Figure 2.

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 "ESA 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 ESA Loader disk that is in the floppy drive.
9. Once the contents from the Disc 1 folder have been completely copied to the ESA 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 (9) 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	ESA Loader	ESALOADR
Disc 2	ESA Firmware 1 of 5	ESAFW ESAFW.INF
Disc 3	ESA Firmware 2 of 5	ESAFW ESAFW.INF
Disc 4	ESA Firmware 3 of 5	ESAFW ESAFW.INF
Disc 5	ESA Firmware 4 of 5	ESAFW ESAFW.INF
Disc 6	ESA Firmware 5 of 5	ESAFW ESAFW.INF UPGRADE.0
Disc 7	ESA Power Suite 1 of 3	D1 F0000000 Id install.o
Disc 8	ESA Power Suite 2 of 3	D2 F0000001 F0000002 Id
Disc 9	ESA Power Suite 3 of 3	D3 F0000003 Id

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.

C. Install Firmware into the Agilent ESA Spectrum Analyzer

1. Insert the floppy diskette labeled "ESA Loader" into the disk drive and cycle power.
   After several seconds the ESA Firmware Loader utility window will appear on the display of the Agilent ESA. It will prompt you for the first of the firmware diskettes.

2. Insert the floppy diskette labeled "ESA 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 "ESA 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 "ESA 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 "ESA 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 "ESA 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.

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.

---

9. Once the copying of the firmware to Flash memory has completed, you will be prompted to cycle power on the analyzer.
   When the instrument boots back up you will be prompted to install the latest version of the ESA Power Suite software, if it is not already installed.
10. If prompted to do so, insert the floppy diskette labeled "ESA Power Suite 1 of 3" into the disk drive and press **{Okay}**
    It will take approximately 5 minutes for this disk to load into the analyzer, after which it will then prompt you for the "ESA Power Suite 2 of 3" diskette and, if necessary, the "ESA Power Suite 3 of 3" diskette.
11. When the last ESA Power Suite diskette has finished loading cycle the power of the instrument.

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}

E. Performing the Instrument Self Alignment Routine:

After the firmware has been upgraded the instruments internal alignment routine will need to be run. To perform the alignment follow these keystrokes:

[System] {Alignments} {Align Now} {All}

NOTE: It is necessary to connect the calibration cable and adapters provided with your ESA Spectrum Analyzer between the AMPTD REF OUT and the INPUT, for all models except the E4401B and E4411B.

F. Verifying the Installed Version of Firmware & ESA Power Suite Utilities Software:

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.

2. In order to verify the revision of the ESA Power Suite Utilities, follow these keystrokes:

Press [System], {More}, {Personalities}

The Power Suite Utilities version should now be: **A.06.05**