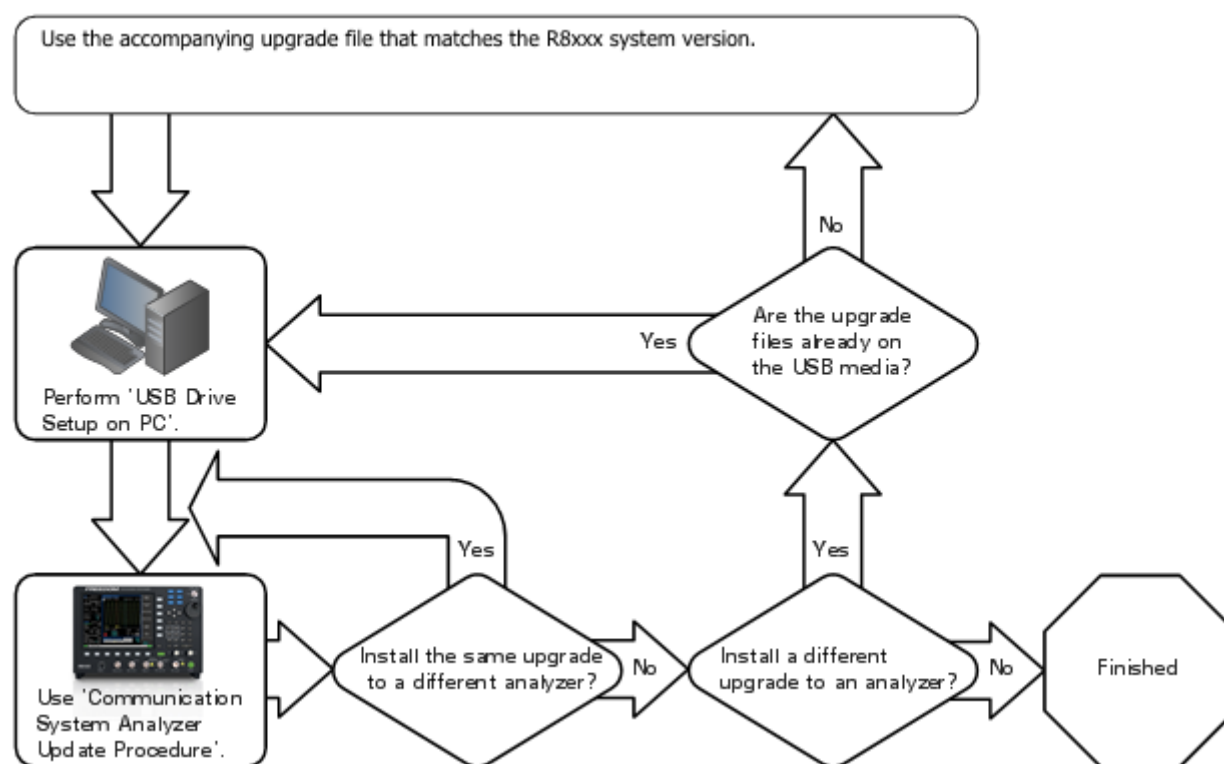## Purpose

This procedure upgrades the communications system analyzer software to 3.2.0.0. The update may be applied only to systems with the following system version:

```
3.1.0.0
```

This procedure must be performed in its entirety for the update to apply correctly.

Upgrade Procedure Overview

Conventions Used

Soft Key – Vertical and horizontal buttons along the edge of the communications system analyzer LCD screen.

WARNING

PERFORM THESE STEPS WITH THE COMMUNICATION SYSTEM ANALYZER POWERED BY AN UNINTERRUPTABLE POWER SUPPLY (UPS). IF POWER IS LOST DURING AN UPDATE, IT IS POSSIBLE TO DAMAGE THE ANALYZER IN A MANNER THAT REQUIRES FACTORY REPAIR.

WARNING

THIS PROCEDURE REQUIRES A USB THUMB DRIVE WITH CERTAIN SECURITY FEATURES DISABLED (FOR EXAMPLE, PASSWORD PROTECTION). THE COMMUNICATION SYSTEM ANALYZER IS NOT CONFIGURED TO SUPPORT SUCH SECURITY FEATURES.

NOTE

THESE INSTRUCTIONS CONCERN UNPACKING A .ZIP FILE USING WINDOWS BUILT IN ZIP FILE EXTRACTION. IF OTHER TOOLS ARE USED TO UNPACK .ZIP FILES, CERTAIN PORTIONS OF THE PROCEDURE MAY NEED TO BE ALTERED.

NOTE

WHILE IT IS ACCEPTABLE TO UNPACK MORE THAN ONE .ZIP UPDATE FILE TO A SINGLE USB DRIVE, AS THE UPDATE FLOW CHART ILLUSTRATES, IF MULTIPLE UPDATES ARE APPLIED IN SEQUENCE, IT IS CRITICAL THAT BOTH SECTIONS BELOW ARE EXECUTED FOR EACH UPDATE.

WARNING

WHEN REMOVING A USB DRIVE FROM A COMPUTER, IT IS USUALLY CRITICAL TO USE A "SAFELY REMOVE HARDWARE" FEATURE TO PREVENT CORRUPTION OF FILES COPIED TO THE DEVICE.

USB Drive Setup on PC

ALL SIX (6) STEPS IN THIS SECTION ARE REQUIRED. If one or more steps are skipped, or, if any step is executed improperly, "Search for Updates" on the product "Settings" | "About …" screen is certain to produce an error message that reads: "An update applicable to this unit was not found on any USB drive".

1. Extract the USB Files

   a. Move the "R8000_Update_03010000_to_03020000.zip" file to the top level directory of the USB drive. Do not place it in a sub-folder.

   b. The procedure for extracting files from the .zip file varies from system to system, particularly when a third-party archive/unarchive tool is installed, but, for reference, a number of .zip extraction scenarios for using a built-in Windows file extraction tool are documented below:

      Windows 10 / Windows 8.1

      Select "R8000_Update_03010000_to_03020000.zip" by clicking it once. A Compressed Folder Tools "Extract" menu ribbon should appear, but if it is not shown ("Extract all" is not visible), click the "Extract" menu tab to reveal it.

      Click "Extract all" in the "Extract" menu ribbon.

      When an "Extract Compressed (Zipped) Folders" pop-up appears, modify the path that appears in an edit box below "Files will be extracted to this folder". Delete the "R8000_Update_03010000_to_03020000" folder name to leave only a drive reference like "Z:\" (drive letter varies).

      IMPORTANT: If the folder name is not removed, "An update applicable to this unit was not found on any USB drives" error will occur when the product "Search for Updates" soft-key is used.

      Uncheck "Show extracted files when complete", then click the "Extract" button at the bottom of the pop-up window.

      Windows 7

      Either right-click "R8000_Update_03010000_to_03020000.zip" and select "Extract all…", or, double-click the .zip file and click "Extract all files" on the task ribbon beneath the title bar. Alternatively, use "File" | "Extract all…" from the command menu next to the title bar. The <Alt> key toggles visibility of the command menu.

When an "Extract Compressed (Zipped) Folders" pop-up appears, modify the path that appears in an edit box below "Files will be extracted to this folder" by deleting the "R8000_Update_03010000_to_03020000" folder name to leave only a drive reference like "Z:\" (drive letter varies).

IMPORTANT: If the folder name is not removed, "An update applicable to this unit was not found on any USB drives" error will occur when the product "Search for Updates" soft-key is used.

Uncheck "Show extracted files when complete", then click the "Extract" button at the bottom of the pop-up window.

Windows XP

Double-click "R8000_Update_03010000_to_03020000.zip" to reveal "Folder Tasks" in the explorer window.

If "Folder Tasks" appears, click "Extract all files". Alternatively, use "File" | "Extract All..." from the command menu.

When the "Compressed Folders Extraction Wizard" appears, click the "Next" button.

In the window called "Extraction Wizard", click the "Browse" button and select the USB drive as the destination.

NOTE: To see the USB drive, it may be necessary to click the "+" beside "My Computer" in the "Select a destination" popup window.

Press the "OK" button.

Press "Next" (to extract the files to the USB drive).

Ensure that the "Show extracted files" checkbox is checked.

Press the "Finish" button.

c. When the contents of the .zip file are correctly extracted, a "FREEDOM" folder and "R8000_Update_03010000_to_03020000.cmd" file are both present on the root of the USB drive.

d. At this point, the USB drive is still not fully prepared to update the product. Perform the following additional steps to complete preparations for updating the product.

2. Activate the update on the USB drive by selecting only one of the sub-steps below. Choose the sub-step that best describes the operating system of the PC that the USB drive is plugged into:

    a. Microsoft Windows

        Double-click the "R8000_Update_03010000_to_03020000.cmd" file on the root of the USB drive. A window normally pops up and automatically disappears when the operation completes successfully, but, if an error occurs, the window does not close, and an error message is displayed. Do not continue the upgrade procedure until this operation completes successfully.

        If an error occurs, usually the drive either does not have enough free space or is write-protected. After correcting the problem, retry this operation.

    b. Any Operating System

        Navigate to the "FREEDOM\R8000\update" folder on the USB drive, then delete all "*.md5sum" and "*.r8a" files in it, but do not remove the folder.

        Navigate to the following folder on the USB drive: "FREEDOM\R8000\R8000_UPDATE_03010000_to_03020000".

        Without removing the original files, copy "03010000.md5sum" and "03010000.r8a" from the "R8000_UPDATE_03010000_to_03020000" folder to the empty "FREEDOM\R8000\update" folder.

3. As desired, verify the USB drive is properly prepared by navigating to the "FREEDOM\R8000\update" folder. When it is properly prepared, the folder will contain two files: "03010000.md5sum", and "03010000.r8a".

4. Use "Safely Remove Hardware" controls to when ready to remove the USB drive from the computer. Details on how to do this vary by operating system and desktop configuration. For non-Windows operating systems, this is sometimes referred to as "unmounting" or "ejecting" the media. Refer to Appendix A for some examples how to "Safely Remove Hardware" on a PC that has one of several Microsoft Windows operating systems installed.

5. Remove the USB drive from the PC.

6. USB drive preparation is complete.

Communications System Analyzer Update Procedure

The approximate completion time for this procedure is less than 5 minutes.

1. Power up the analyzer using the green power button.
2. Wait approximately one minute for the analyzer boot sequence to complete.

   While the product is booting a "Loading Configuration File… Please Wait" message is shown in the product display status bar. Do not proceed to the next step until the message disappears from the status bar.

3. Insert a USB drive prepared using the "USB Drive Setup on PC" procedure into an available USB port located on the front or side of the analyzer.
4. Wait about 30 seconds to allow the analyzer to identify the USB drive.

   If the USB drive has a light on it, several seconds after insertion, the light blinks rapidly for a short period of time. Depending on the USB drive type, the system indicates that identification is complete by either extinguishing the light or by transitioning it from a rapid blink to a slow, periodic blink pattern.

5. Press the <Settings> button located on the analyzer front panel.
6. Press the "About…" soft key.
7. Verify that the current "System" version is 3.1.0.0.
8. Press the "Search for Updates" soft key.

   a. An "IMMEDIATE ACTION REQUIRED" message panel is shown.

      If the message panel is not shown, either the analyzer does not recognize that the USB drive is installed, or the USB drive preparation described in the "USB Drive Setup on PC" section was not successful. In some cases, using a different brand or model of USB drive may be helpful.

   b. Press the "Continue" soft key to proceed with the update process.
   c. A second "IMMEDIATE ACTION REQUIRED" message panel is shown after the update files have transferred from the USB drive to the analyzer. For USB 2.0 compatible drives, the transfer requires less than 1 minute to complete. Allow additional time if a slower device is used.

      During this time, the standard operating menu is visible. While it may appear that the system is not processing the update, there is no need to navigate away from the settings screen or to press additional controls.

      IMPORTANT: USB drive light activity ceases prior to completion of the transfer. Do not assume that the transfer has failed if the second panel does not appear immediately after the drive appears inactive.

If the panel fails to appear, a file on the USB drive is corrupt, or could not be processed, a red status bar ": code = <x>" message appears.

The update procedure must be restarted if the transfer fails. It may be sufficient to re-run the "USB Drive Setup on PC" procedure using files previously obtained from the web site, but it may be necessary to download the files again if they are corrupted. In some cases, use of a different brand or model of USB drive may be helpful.

   d. Unplug all USB devices from the analyzer.
   e. Press the "Continue" soft key to apply the update.

9. Wait for the system software upgrade to begin.

The analyzer automatically reboots twice and then displays an "Upgrade in progress…" message.

10. Wait for the system software upgrade to complete.

The unit reboots during this process. When the upgrade is complete, the analyzer displays the standard user interface and resumes normal operation.

11. Verify that the product has finished rebooting.

While the product is booting a "Loading Configuration File… Please Wait" message is shown in the product display status bar. Do not proceed to the next step until the message disappears from the status bar.

12. Press the <Settings> button.
13. Press the "About…" soft key.
14. Verify that the "System" version has changed to 3.2.0.0.
15. Press the "Versions" soft-key and review the list of versions.

NOTE: If any version number is "0.0.0.0", an additional reboot may be required to return the unit to normal operation.
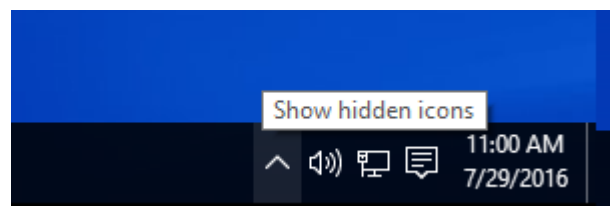
16. The upgrade is complete.

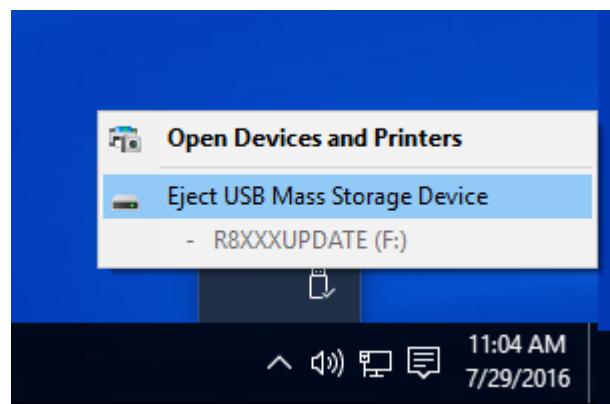## Appendix A: Safely Remove Hardware Examples

Examples of safe removal of USB storage are provided below, but the procedure can vary significantly per installed operating system and desktop configuration.
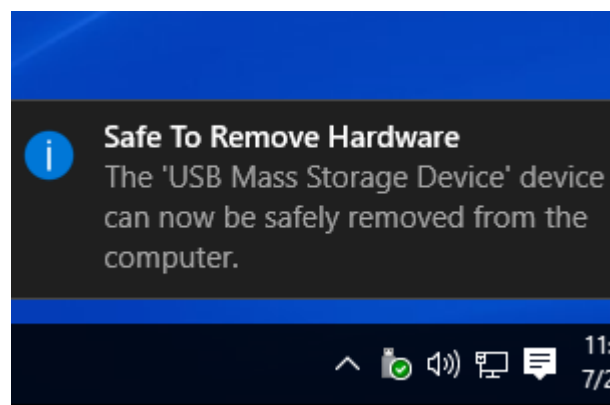
Windows 10

As needed, move the mouse pointer over a "Show hidden icons" widget, then click the icon to expose the "Safely Remove Hardware and Eject Media" icon.

Move the mouse pointer over the "Eject USB Mass Storage Device" widget for the drive letter of the USB media, then click it.

Wait for a "Safe To Remove Hardware" notification near the "Safely Remove Hardware and Eject Media" icon.
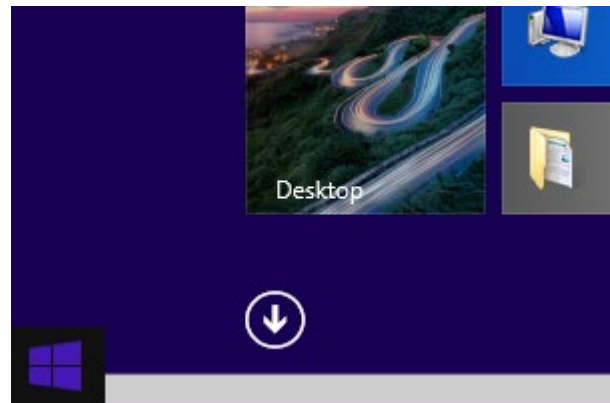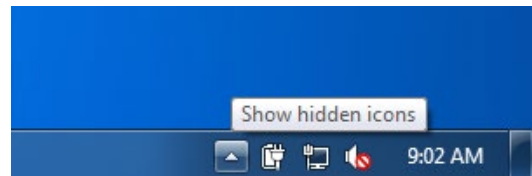
Windows 8.1

On Windows 8.1, extra steps are sometimes needed to show the start bar where the system tray is found. Either use the keyboard Windows key to select a desktop with a start bar, or, swipe the mouse pointer to the lower left corner of the desktop to reveal a Windows button that, when clicked, acts like the Windows keyboard key.
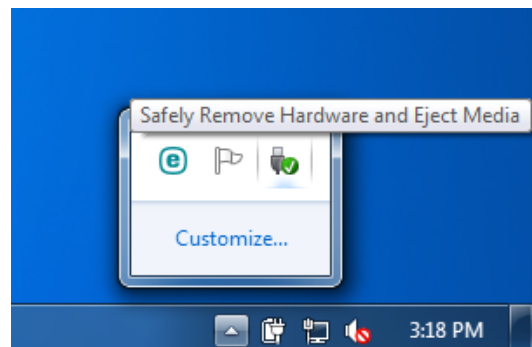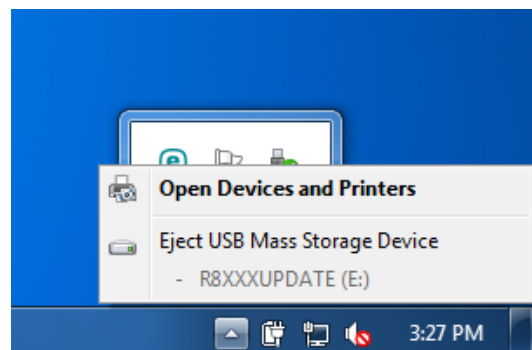
Windows 7 / 8.1

As needed, move the mouse pointer over a "Show hidden icons" widget, then click the icon to expose the "Safely Remove Hardware and Eject Media" icon.

Move the mouse pointer over the "Safely Remove Hardware and Eject Media" icon, click it to expose an "Eject USB Mass Storage Device" widget.

Move the mouse pointer over the "Eject USB Mass Storage Device" widget for the drive letter of the USB media, then click it.

Wait for a "Safe To Remove Hardware" notification near the "Safely Remove Hardware and Eject Media" icon.
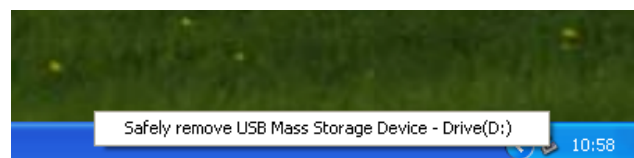

Windows XP

As needed, move the mouse pointer over a "Show hidden icons" widget, then click the icon to expose the "Safely Remove Hardware" icon.

Move the mouse pointer over the "Safely remove Hardware" icon, click it to expose a "Safely remove USB Mass Storage Device" widget.

Move the mouse pointer over the "Safely remove USB Mass Storage Device" widget that mentions the drive letter of the USB media, then click it.

Wait for a "Safe to Remove Hardware" notification near the "Safely remove Hardware" icon.

Initial Release / A	W. Black	4/30/18	M. Humpries	3/23/21	0330
Change/Rev. No.	Revised By	Date	Approved By	Date	ECO#