m908

1.0.x to 2.1.x Firmware Migration Procedure

m908 firmware 2.1.x is a major update for the m908 that enables the web UI for configuration and control of the m908. The nature of the update has changed from previous updates as the entire operating system in the m908 is replaced. This requires booting the m908 from a USB flash drive that has been formatted with a linux disk image. Creating the USB flash drive can be done on MacOS and Windows computers.

IMPORTANT NOTICE:
We have reports of some updates failing because the ACU does not recognize the USB flash drive mid way through the update process. We recommend using the USB flash drive with the Grace Design logo that was included with your m908.
If the Grace Design USB flash drive is not available it is possible that the USB upgrade will fail. If you use another USB flash drive and the update fails then the SD card inside the m908 will need to be removed and flashed with the m908 DC card image. See m908_2.1_SD_card_flashing_instructions.pdf on the Grace Design Support firmware page.

Preparing for the update:

1. Back up all of your workflows using a USB flash drive plugged in to the RCU USB port. The upgrade process will not overwrite your workflows, but this is a good safety measure.

2. Make sure your m908 is on version 1.0.8, 1.0.9, or 1.1.0 before attempting to update to 2.1.x. If your unit is on an older firmware download version 1.0.9:
   https://gracedesign.com/support/firmware/m908_1.0.9_Field_Upgrade.zip

   Then follow the upgrade instructions included in the upgrade package. Once your unit has been successfully updated to 1.0.9 proceed with the 2.0.x update below.

Creating a USB Upgrade Image

Warning: The USB flash drive used for this step will be completely overwritten, and the drive will need to be reformatted after the upgrade is complete before it is returned to normal use. Do not use a drive that has any files that you want to keep on it, or back up its contents prior to completing this step.

1. Download and install Balena Etcher. The application can be downloaded from https://balena.io/etcher

2. Download the m908 2.1.x Migration Package:
    m908_21x_migration_upgrade_image.wic.gz

3. Select a USB Flash Drive that can be completely erased and plug it into your
    computer. The contents of the drive will be completely erased. The upgrade requires
    at least 500MB of storage space.

4. Run Balena Etcher
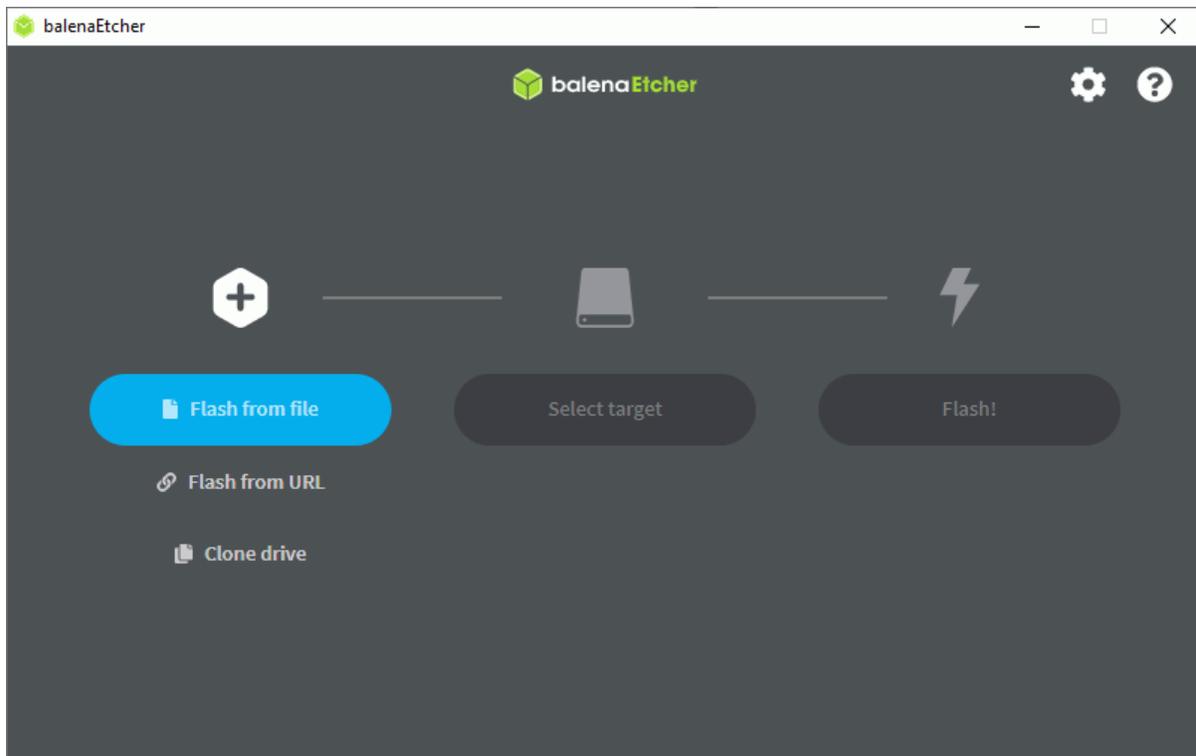
Illustration 1: Balena Etcher

5. Click on "Flash from file" and select the m908 2.1.x Migration Package

6. Click "Select target" and choose the USB drive you have selected for the upgrade. Be
    sure you are selecting the proper drive! **The selected drive will be completely
    overwritten!**

7. Click "Flash!" to start the image writing process.

8. After the image burn is complete, remove the USB flash drive from your computer.

Upgrading the m908

NOTE: A power interruption during the upgrade process can cause the internal SD memory card in the m908 to be corrupted. Ensure that the m908 is connected to a reliable power source before proceeding. If your power source is not reliable consider connecting the m908 to UPS power source. If the internal SD memory card becomes corrupt it will need to be removed and re-flashed with the m908 operating system image. Contact Grace Design Technical Support for assistance.

1. Turn off power to m908

2. Insert USB drive in to USB HOST connector on the back panel of the m908.

3. Power on the m908 and wait for the prompt. Once the system has booted, it will identify the new firmware package and provide the following dialog box:
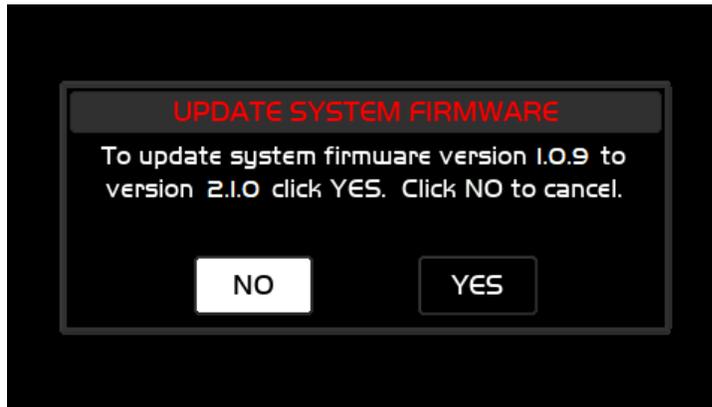
Illustration 2: Update System Firmware Confirmation

4. In this message the current ACU firmware version is displayed along with the new firmware version. Selecting "NO" will cancel the firmware update and the system will boot normally. Selecting "YES" will begin the ACU firmware update. The following message will be displayed while the ACU firmware is being installed:
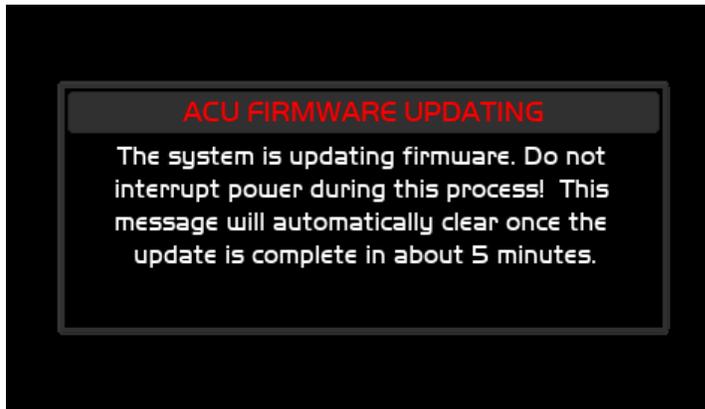
Illustration 3: ACU Firmware Updating Message

5. DO NOT DISRUPT SYSTEM POWER DURING THIS PROCESS!

ⓘ   The firmware migration update will take approximately 4-5 minutes. If this message remains for more than 10 minutes power cycle the m908.

6. Once the ACU firmware update is complete, the system will provide the following dialog box:
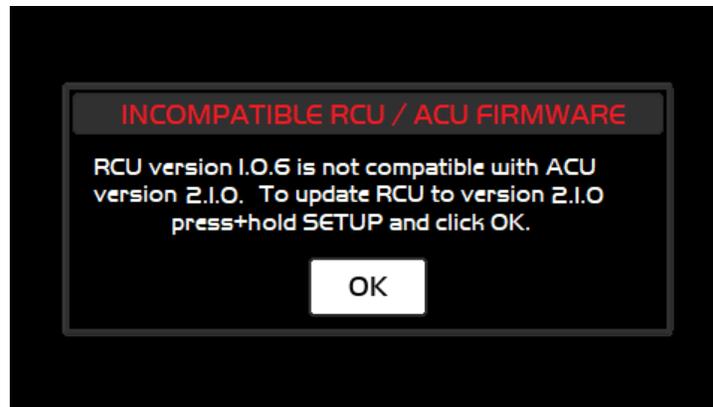
Illustration 4: Incompatible RCU / ACU Firmware

7. In this message the current RCU firmware version is displayed along with the new firmware version. Since system firmware 2.x.x requires a new version of RCU firmware the RCU firmware must be updated. To enter the RCU firmware updater, the SETUP button must be held until the LED boot sequence has completed. Once this happens, the m908 RCU bootloader will show up on the LCD. At this point you can release the SETUP button. The RCU firmware update will take approximately 12 minutes. Once it

completes, the RCU will reboot and the system will display the following message indicating the new ACU firmware has been installed successfully:
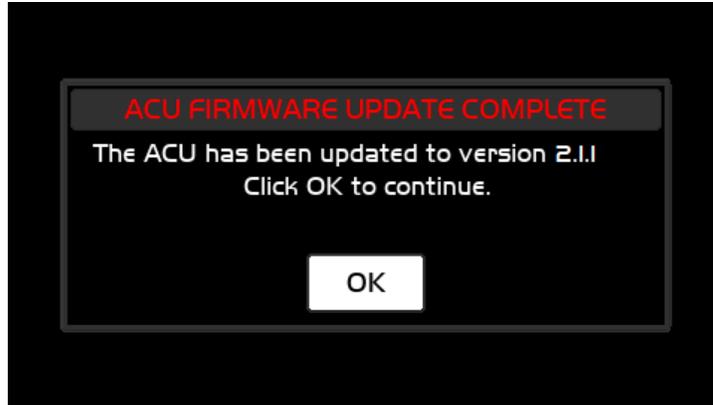
Illustration 5: ACU Firmware Update Complete

8. Click OK to complete the boot process.

9. Power the m908 off and remove the USB drive.

10. Power the m908 on.

Manual Revision History			
Rev.	**Description**	**Date**	**Initials**
A	Initial Release	12/16/2022	MBG