

Version 2.0.0 Firmware Release Notes for Bird 4480 Wattmeter

This document contains release notes for the Bird 4480.

Notes appear in reverse chronological order, with the latest release at the top.

General Information

SUPPORTED MODELS

This firmware is used on the following product models:

- 4480A Digital RF Wattmeter

INSTALLATION INSTRUCTIONS

Updater Application Installation

Bird will provide an executable file that, when executed, will walk you through the installation process. Select all the default options.

Once the installation is complete, you can find the application, called

Updater.exe, in the *C:/ProgramFiles (x86)/BirdRF/4480* directory.

Administrator permissions are required to install and run the application.

Firmware Installation

1. Remove the battery cover on the back of the 4480 using a 7/64 Allen key to loosen the screws and expose the wattmeter USB port.
2. Turn on the device and then plug in the DC charger. Then, use a USB cable to make a connection between the 4480 and the computer which will be running the Updater.exe software.
3. Open the **Updater.exe** software application found in the path indicated in the *Updater Application Installation* section above.
4. Verify that the 4480 is identified in the **Select Device** drop-down control.
 - a. Note that if more than one 4480 is connected to the computer, you will need to click on the drop-down control and select the unit you wish to update, identifying it by serial number.
 - b. The serial number is the third item in the comma separated string shown in the drop-down control.
5. Click on the **Choose File** button to select the *.bin firmware update file.
6. Click the **Update** button to start the update process.
7. Wait for the dialog box to appear prompting you to disconnect the 4480; follow the instructions then click the **OK** button.

8. Wait for the dialog box to appear prompting you to reconnect the 4480; follow the instructions then click the **OK** button.
9. Wait for the update progress bar to reach 100%, which indicates the update is complete. *Note that this may take up to 5 minutes.*
10. A dialog box will appear directing you to power cycle the 4480. Unplug the USB cable for 5 seconds. Then, if the display is still on, press the power button to completely turn off the device.
11. Press the power button to turn on the device, then re-plug in the USB cable.
12. Click the **OK** button on the dialog box.
13. Close the Updater app.
14. Unplug the USB cable from the 4480.
15. Return the battery cover to the back of the 4480, tightening all four screws.

Firmware Restore (as needed)

If the operator does not properly follow the prompts during the install process, they will be presented with a notification of failure, and the 4480 will need to be recovered.

NOTE: IF A 4480 FAILS TO UPDATE, DO NOT ATTEMPT TO UPDATE ANOTHER ONE UNTIL THE 4480 THAT FAILED IS RESTORED.

1. Unplug the USB cable for 5 seconds. Then, if the display is still on, press and hold the power button to completely turn off the device.
2. Press the power button to turn on the device. You will either see a static screen or nothing; both scenarios are normal.
3. Plug the USB cable into the 4480. At this point, the serial port that the 4480 is connected to should populate the *Serial Port* dropdown. Make sure that serial port is selected.
4. Click the **Restore** button. The updater will either:
 - a. Display a dialog box that indicates the restoration was successful. Unplug the USB cable for 5 seconds, then press and hold the power button to completely turn off the device. Proceed from step 6 in the *Firmware Installation* instructions.
 - b. Continue the update process. Let the update finish and proceed from step 9 in the *Firmware Installation* instructions.

Version 2.0.0 Release (2025-04-24)

New features

- a. The 4480 now displays return loss in dB. *Note that we represent this value as a positive number.*
 - b. The 4480 display can now be toggled to show forward and reflected power in dBm.
 - a. A long press (3 seconds) of the backlight button will perform this toggle.
 - b. Any press shorter than 3 seconds will toggle the backlight.
 - c. When the 4480 is turned on, the backlight will be on.
 - d. On battery power, the backlight will remain on for 15 minutes.
 - e. When the charger is plugged in, the backlight will remain on indefinitely.
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- f. On battery power, after 30 minutes of inactivity, the 4480 will automatically power off. Activity is defined as a button press or SCPI command sent via the USB interface.
- g. When the charger is plugged in, the 4480 will remain on indefinitely.
- h. To turn **on** the 4480, the power button must be held down for at least 700 ms.
- i. To turn **off** the 4480, the power button must be held down for at least 400 ms.
- j. There is one new SCPI command that allows you to read return loss: FETCh:RL.

Bug fixes

- a. In the low band, high input power (~700 W) no longer causes saturation.

Version 0.1.8 Release (2024-06-11)

New features

- a. Initial release.