How to Update Firmware
ORSR and ORMR Readers

Firmware update files are issued by Oregon RFID to add new features and fix issues reported by customers. Notifications of new versions are sent out on our mailing list. The latest versions are on our web site at:

https://www.oregonrfid.com/resources/software-manuals/

There is one firmware file for the ORSR reader. The ORMR has three microcontrollers so there are three firmware files.

ORSR	ORMR
ORSR_**v.vv**.txt	ORMR_FW1_**v.vv**.txt
	ORMR_FW2_**v.vv**.txt
	ORMR_FW3_**v.vv**.txt

v.vv is the version number of the firmware

Update Procedure

To update the reader firmware, open an update file with a text editor, select the entire file and copy it to the clipboard. Open the serial connection with the reader and start a terminal program such as Coolterm (Windows, MacOS), terminal (MacOS, Linux), Hyperterminal (Windows) or putty (Windows).

Open the firmware text file, select the entire contents (control-A or command-A) and copy the contents to the clipboard (control-C or command-A). Type the FW command and paste. The process for ORSR and ORMR readers is shown on the following pages.

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ORSR

Turn the reader off by typing the OF command. Next, type the command FW and type Y after the question mark. When the word "Start" appears, paste the clipboard.

```
HSGB> OF

OZGB> FW

CTRL MCU4
Update(Y)?Y
Start
.....................................................................
..........  Paste  firmware file  ...................................
.....................................................................
.........
Received 4684/205949
Checksums OK
-------------------------------------------------------------------
-------------------------------------------------------------------
-------------------------------------------------------------------
---------
```

Wait for "Start"

The dots are shown while file is uploaded into the reader. After it has finished, the number of lines and bytes are shown. The checksum on each line is verified and if they are all valid, the reader firmware is written to the microprocessor while the dashes are displayed.

ORMR

The procedure is repeated three times for the ORMR reader to send the three files. The number of the microcontroller is selected with the FW command.

The dots are shown while file is uploaded into the reader. After it has finished, the number of lines and bytes are shown. The checksum on each line is verified and if they are all valid, the reader firmware is written to the microprocessor while the dashes are displayed.

```
OZGB> FW1

CTRL MCU1
Update(Y)?Y
Start          <-- Wait for "Start"
.............................................................
.............  Paste FW1 file  ...............................
.............................................................
.........
Received 4684/205949
Checksums OK
-------------------------------------------------------------
-------------------------------------------------------------
-------------------------------------------------------------
---------

OZGB> FW2

CTRL MCU2
Update(Y)?Y
Start          <-- Wait for "Start"
.............................................................
.............  Paste FW2 file  ...............................
.............................................................
.........
Received 4624/203327
Checksums OK
-------------------------------------------------------------
-------------------------------------------------------------
-------------------------------------------------------------
---------

OZGB> FW3

CTRL MCU3
Update(Y)?Y
Start          <-- Wait for "Start"
.............................................................
.............  Paste FW3 file  ...............................
.............................................................
.........
Received 3392/149142
Checksums OK
-------------------------------------------------------------
-------------------------------------------------------------
```

“Wrong Type” Error

An error will be shown if the wrong file is used. The firmware will load into memory (dots) but will not be written to the microcontroller.

```
OZUB> FW

COMM MCU4
Update(Y)?Y
Start
Wrong type M2
.................................................................
.................................................................
.................................................................
.........
Received 4684/206028
Wrong type M2
```

“Bad Checksum” Error

Checksums are used in the file to verify the nothing was lost. If this error occurs, try again in case some characters were not sent correctly. If it still does not work, reset the reader (see next page).

```
OZUB> FW

COMM MCU4
Update(Y)?Y
Start
.................................................................
.................................................................
.................................................................
......
Received 4624/203326
06611000611102C0411101
Checksum bad #1554/68353
```

Still Having Problems?

If all else fails, the reader can be reset to the factory settings (scan rate, etc). The contents of the datalogger file will **not** be erased by this procedure.

- Disconnect the power source
- Remove the back of the reader
- Press the reset button. (photo below)

Pressing button with power removed from the reader will completely reset the hardware.

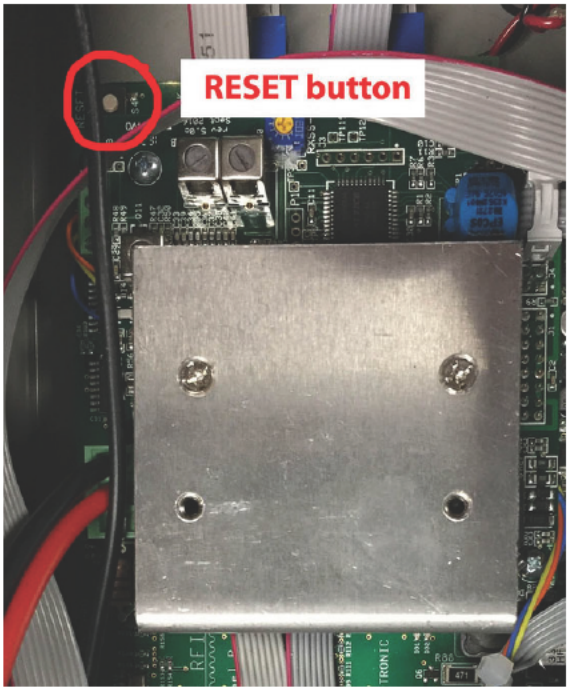
Reconnect the power source and press the reset button again. The update prompt will appear on the console.

```
ORSR MCU4
Update(Y)?
```

Type "Y". When "Start" appears, paste the firmware update file from the clipboard as shown on previous pages.

```
ORSR MCU4
Update(Y)? Y
Start
```

ORSR



ORMR