



Topcon Receiver Utility: GNSS Receiver Firmware Update Process

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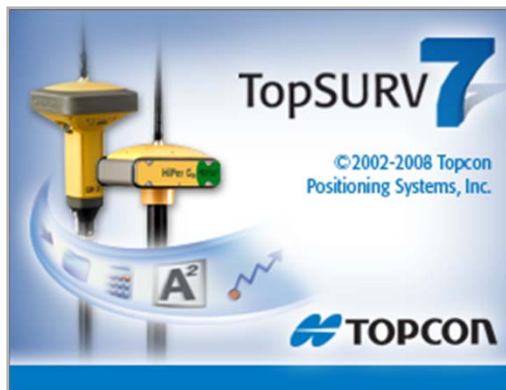
Topcon Receiver Utility (TRU), product definition



**Office Processing and
Reporting Software**



**Transfer and Conversion
Software**



Data Collection Software



**Topcon Receiver Utility
(TRU) Software**

Topcon Receiver Utility (TRU), product definition



**Personal
Computer with
TRU Software**



**Topcon GRS-1
Receiver**



**Topcon FC-2500
Field Controller**



**Topcon FC-250
Field Controller**

- Topcon Receiver Utility (TRU) software is a combination of:
 - Modem TPS
 - Bluetooth Configuration
 - PC-CDU and CE-CDU
 - Firmware Loader
- It is available for both **desktop computers** and hand-held **field controllers**.
- It is common to install TRU software on all field controllers as well as any personal computers that deal / work with Topcon GNSS receivers.

Topcon Receiver Utility (TRU), product definition



Topcon HiPer G
Series



Topcon GRS-1
Receiver



Topcon GR-3
Receiver

- Like the previous utility packages that it replaces, Topcon Receiver Utility (TRU) software enables users to **configure** and **update** various Topcon GNSS receiver components such as:
 - GNSS Receiver and Power Board
 - Radio / Modem
 - Bluetooth

What you will need..



**Personal
Computer with
TRU Software**



**Topcon Field
Controller with
TRU Software**



**Topcon GNSS
Receiver Serial
Cable**



**Topcon GR-3
Receiver**



**Topcon HiPer G
Series**

- Using a 9-pin serial cable, establish a connection between your Personal Computer (or hand held field controller) and your Topcon GNSS receiver.
- **Note:** It is highly recommended that the GNSS receiver that you are working with be placed *on charge* during any maintenance process. This is to avoid battery power loss while in the middle of programming / configuring your hardware component.

<http://www.topconuniversity.com/>



Welcome to Topcon University Online.

- Topcon Receiver Utility (TRU) software is available now for download from the Topcon University website.
- If you do not have an account yet, please use the [Click here to register](#) link.

It all starts with a login...

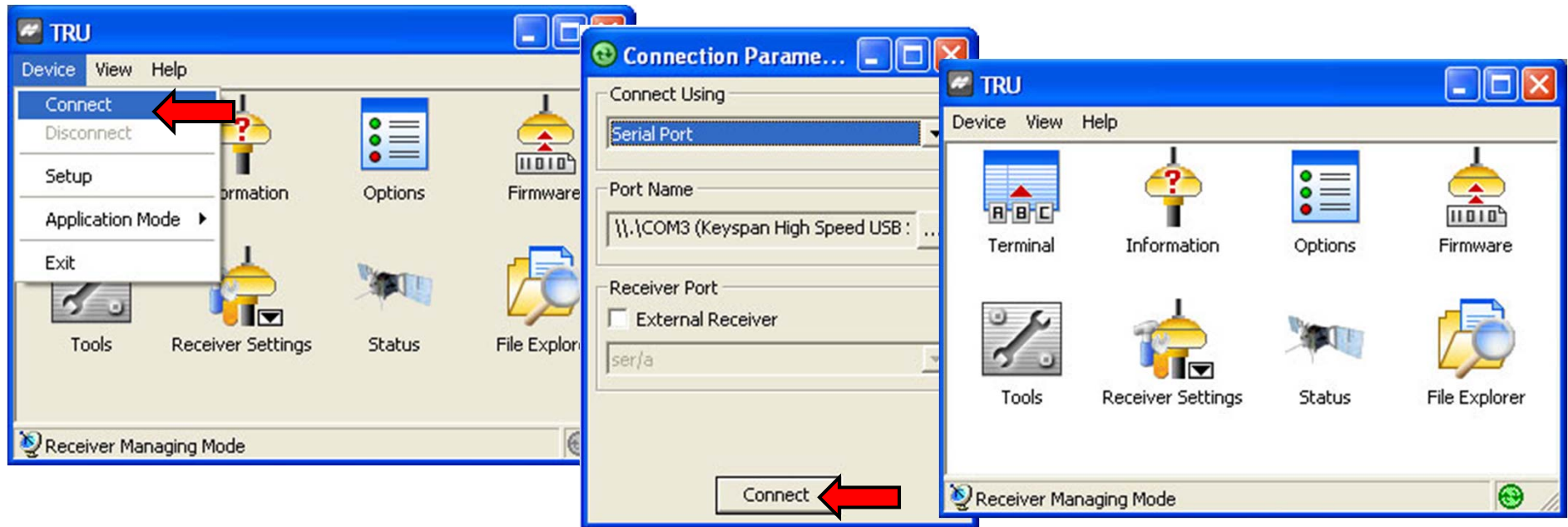
Email Address

Password

Sign In >

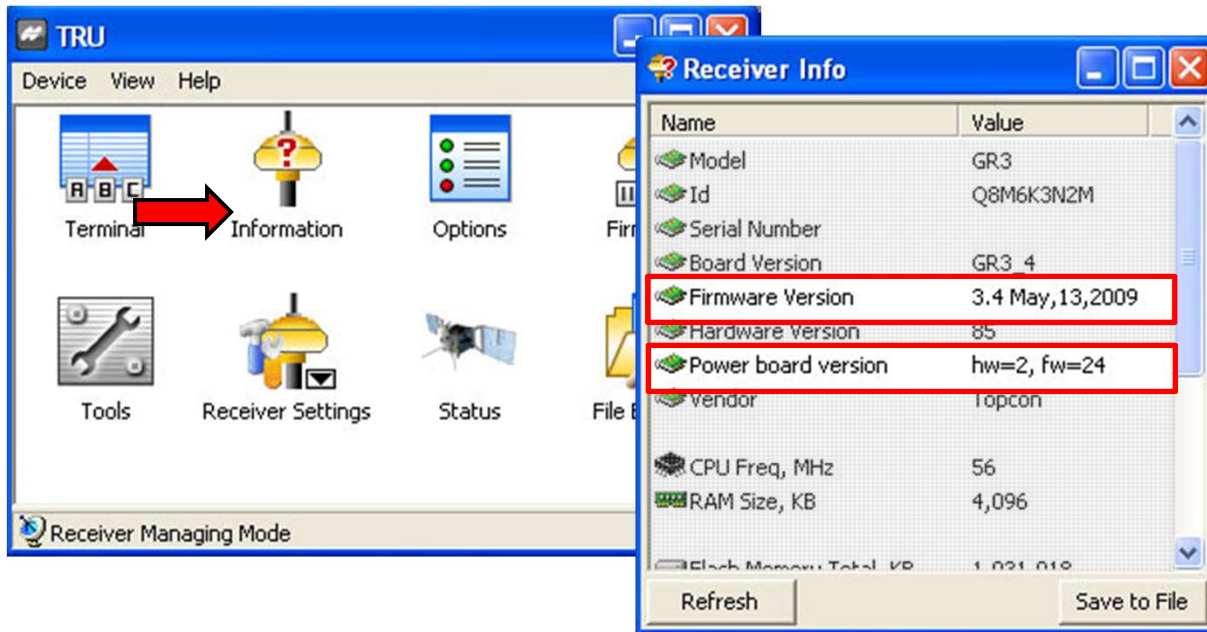
[Click here to register »](#)

Connect to Receiver using TRU



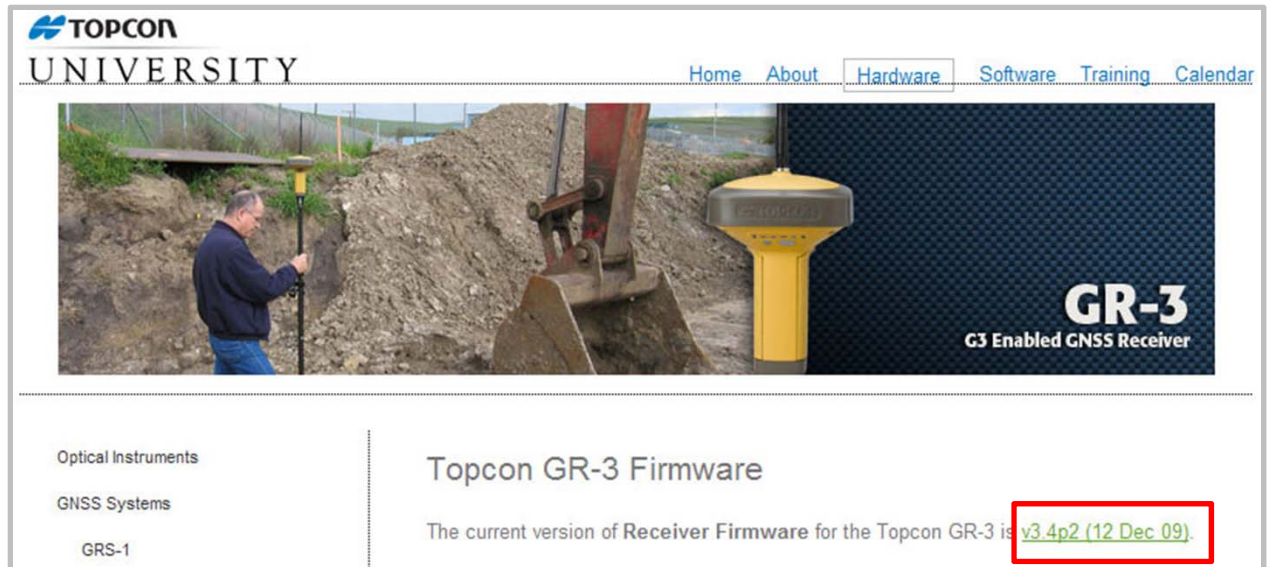
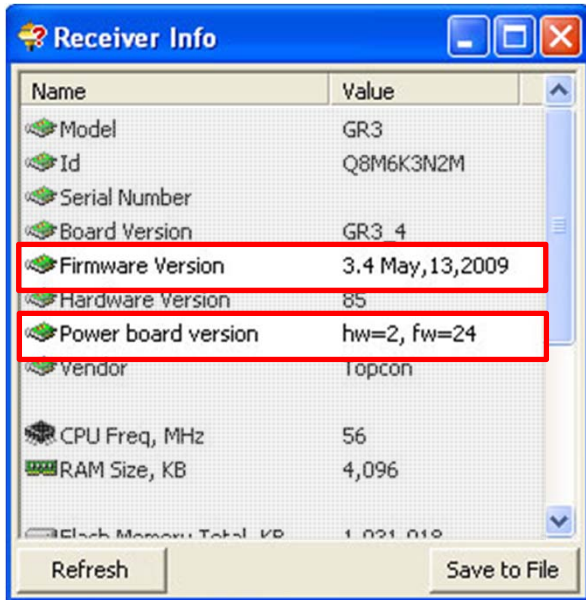
- Launch Topcon Receiver Utility (TRU) software on your Personal Computer. Go to **Device >> Connect** and select **Serial Port**.
- If your personal computer has a 9-pin serial port, then you will mostly likely declare a **Port Name** of COM1. However, if you are using a USB to Serial Adapter, then you will need to select the communication port name of that device.
- The background screen color of TRU changing from gray to white is a visual indicator that you are actively communicating with your receiver.

Check Current Firmware Version



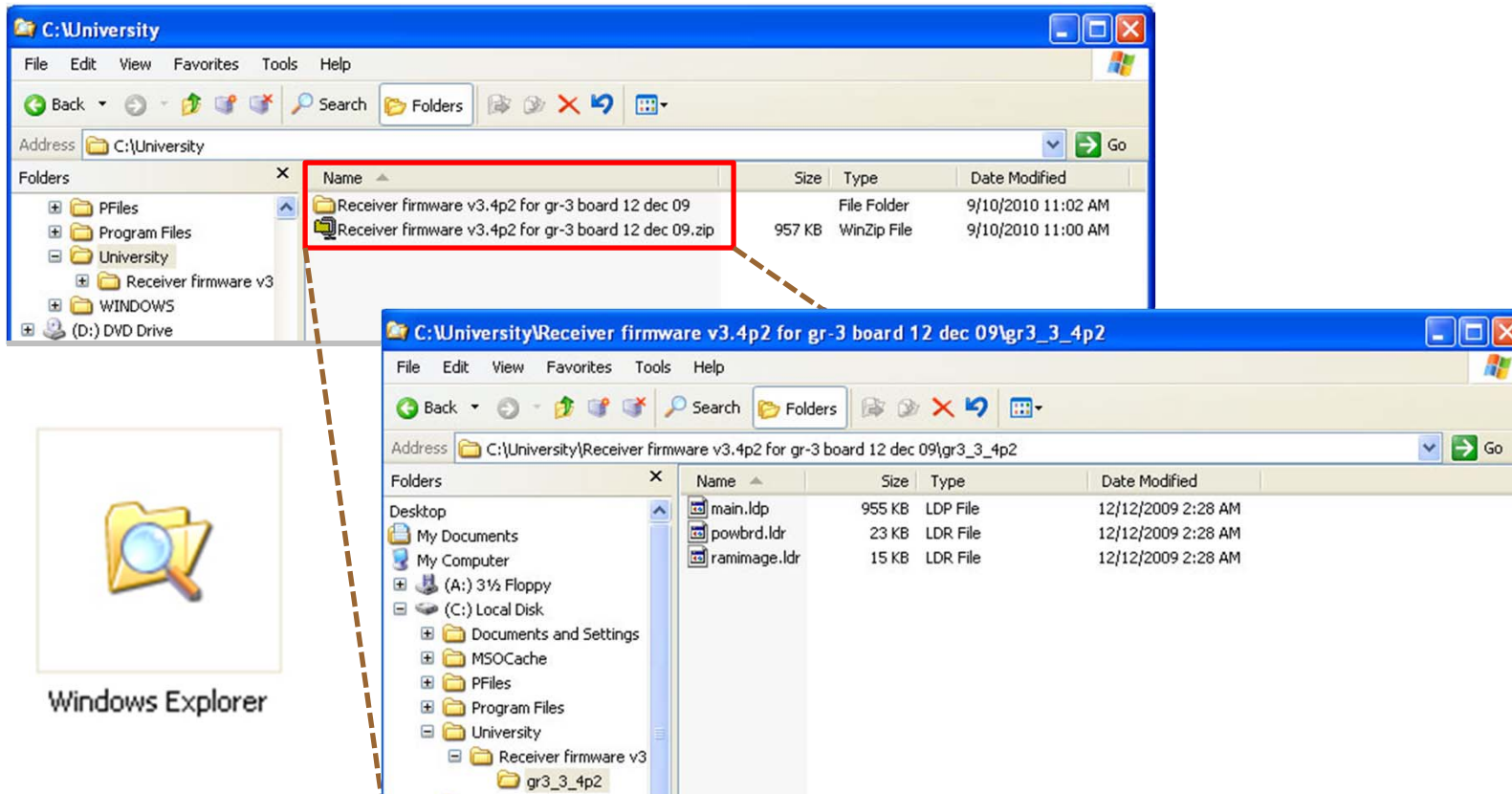
- Once connected, tap the **Information** icon to see the current versions of component firmware that you are starting with in your receiver.
- For this example, the receiver that we are working with initially has Receiver Firmware version **3.4 May 13, 2009** and Power Board firmware version **24**.
- The process will be to check the [Topcon University](http://www.topcon-university.com) website for the current version of GNSS receiver firmware.

Download Firmware Update



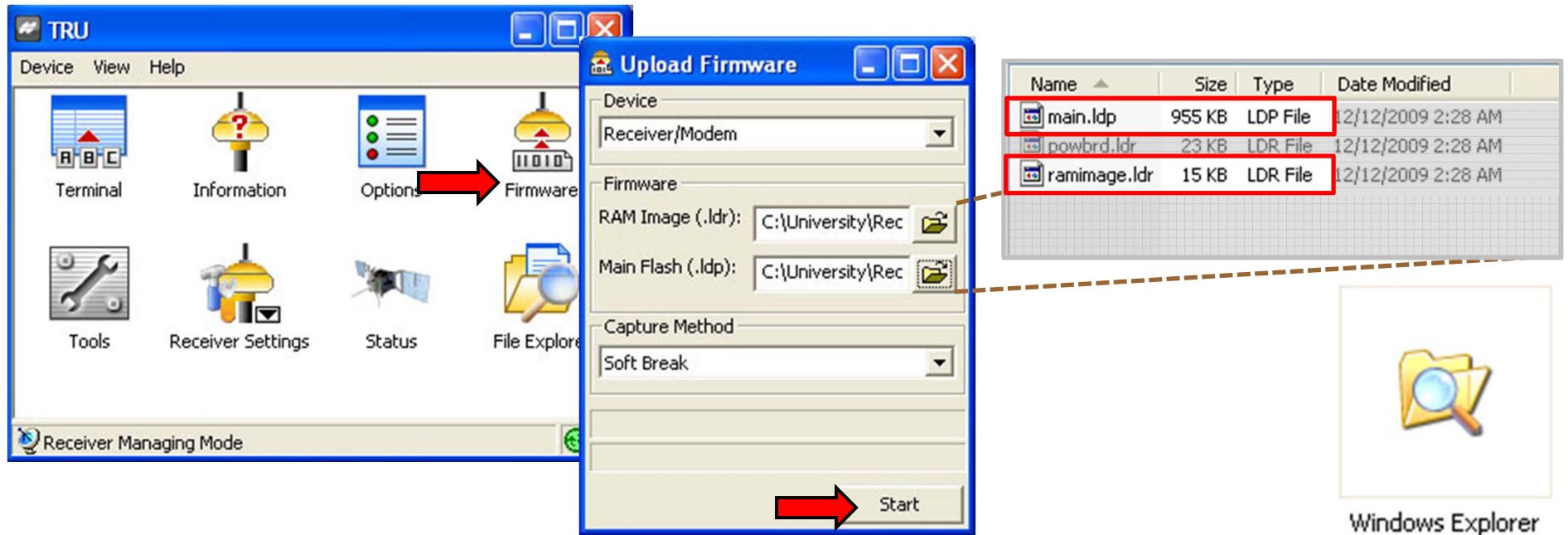
- As of the time of this Quick Guide, the current version of GNSS receiver firmware for the Topcon GR-3 is **v3.4p2 (12 Dec 2009)**.
- Click and save the ZIP file of latest receiver firmware to your personal computer.

Download Firmware Update



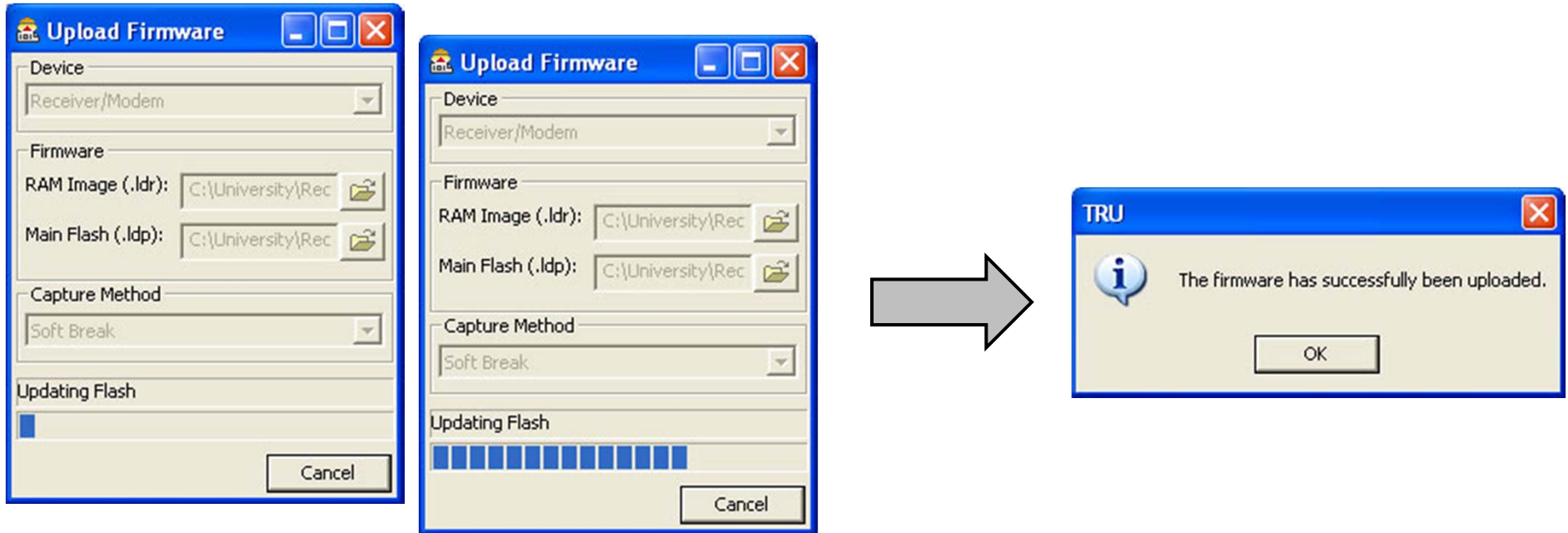
- Once you have downloaded, ensure to also extract the ZIP file.
- It is normal for a single ZIP file of GNSS receiver firmware to contain **three** individual files (2 LDR, 1 LDP) ..shown above.

Update Receiver Firmware with TRU



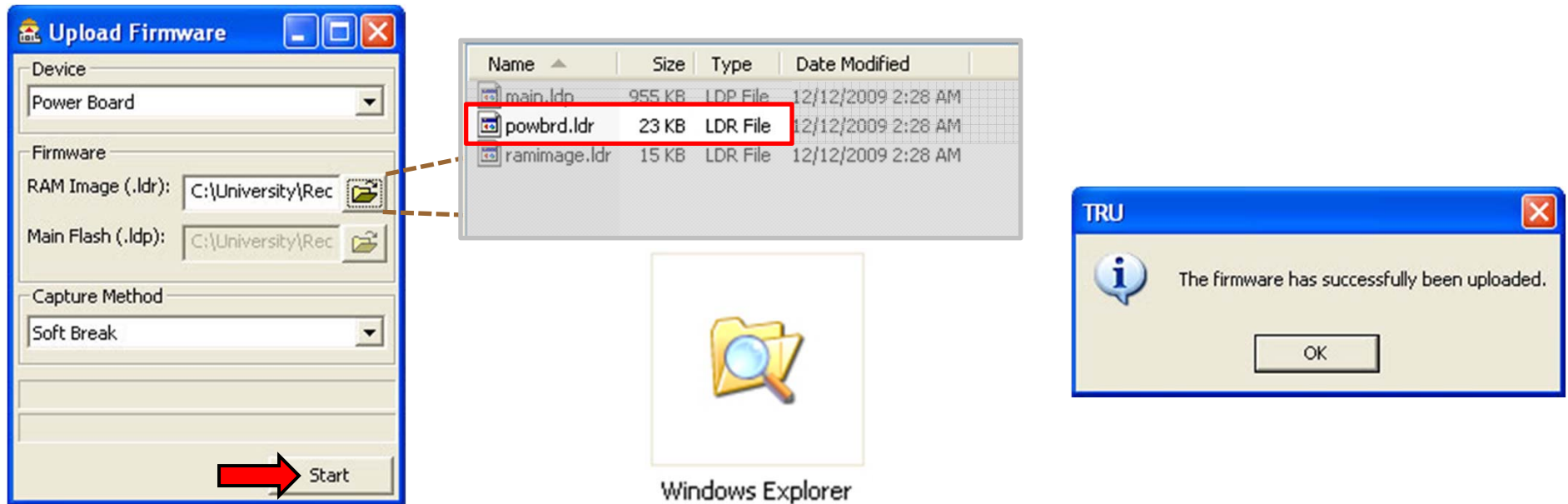
- With all files downloaded and extracted, click on the **Firmware** icon from the Topcon Receiver Utility main menu and ensure that **Device = Receiver / Modem** and **Capture Method = Soft Break**.
- Click on the folder icons and browse to the LDR and LDP firmware update files that you have just extracted. You will find and select a RAM Image (*.ldr) file as well as a Main Flash (*.ldp) file.
- With both files selected and your receiver on charge, click the **Start** button to begin the receiver firmware update process.

Update Receiver Firmware with TRU



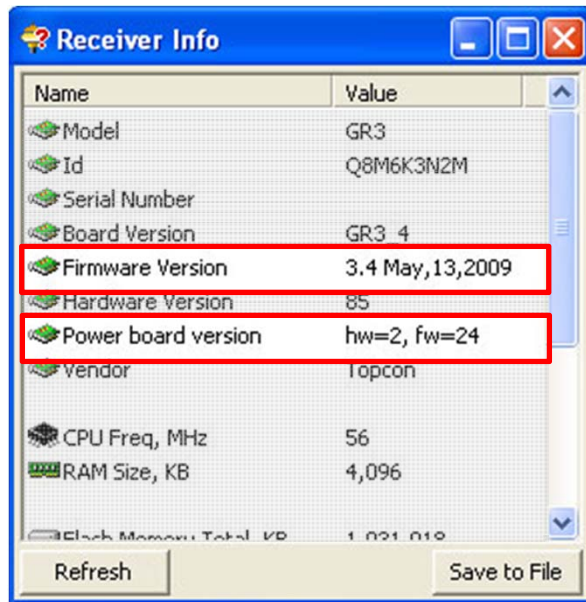
- It is common for this receiver firmware update process to take up to 2 minutes.
- Once done, you will receive a confirmation message of success.
- The next task will now be to also update the same receiver's **Power Board** firmware as well.

Update Power Board Firmware with TRU

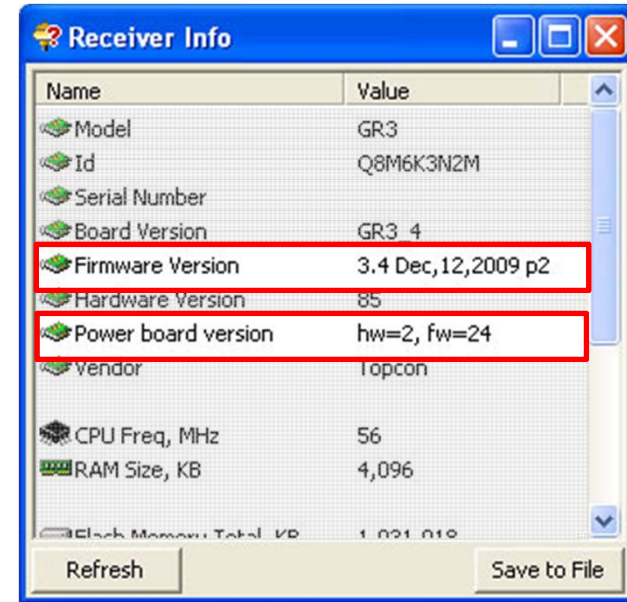


- Change the **Device** pull down menu from Receiver / Modem option to **Power Board**.
- Repeat the process of browsing to the location of your extracted ZIP file and select the single remaining firmware file of **powbrd.ldr**.
- With the single Power Board file selected and your receiver still on charge, click the **Start** button to begin the firmware update process. It is normal for this process to take less than a minute.

GNSS Receiver Field Preparation



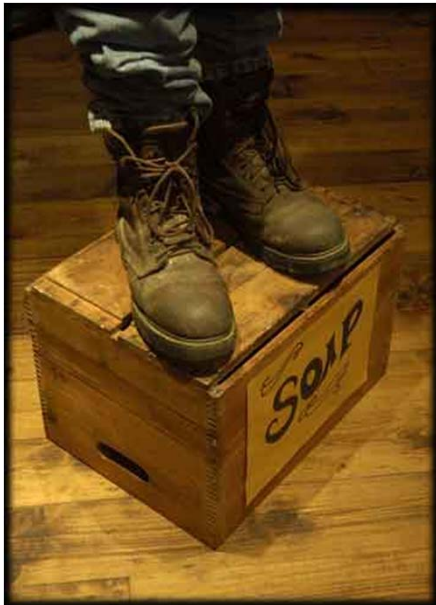
Before



After

- When finished, return to the Topcon Receiver Utility (TRU) main menu and select the **Information** icon again to verify what you have done.
- Recall that at the time of this Quick Guide, the intent was to update the GR-3 receiver from firmware version **3.4** to **3.4p2**. Done.

GNSS Receiver Field Preparation



Topcon HiPer G
Series



Topcon GRS-1
Receiver



Topcon GR-3
Receiver

- Updating receiver firmware is a vital part to improving both a receiver's performance and lifetime.
- Firmware updates should be done at a minimum of **once per year**. The current version of receiver firmware is updated and available from the [Topcon University](http://www.topcon-university.com) website.
- Rule of thumb, "What you do to one (receiver), you must do to the other(s)". Meaning, if you have updated, for example, your Base receiver, you are not finished with the **Field Preparation** process until you also update your Rover and all remaining receivers. ..easy.



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