

# NEW SOFTWARE



## PULSAR TOUCH COMPETITION SOFTWARE v1.50

Firmware v1.50 further optimizes LRP's top-of-the-line competition charger Pulsar Touch with several new features and functionalities. By installing this update, you will give your charger an even greater usability and make it suitable for a wider range of applications.

First of all, LiPo battery cut-off voltage during charge can now be set up in a wider range of 3.80V - 4.40V. This allows you to fully charge LRP's high-voltage Outlaw batteries to their designated voltage.

In many applications, only part of the high capacity of today's batteries is actually needed. Our new 'Partial Discharge Mode' allows to discharge a battery only partially – controlled by the capacity discharged – which is exactly what you do most of the time during racing. This way, you are able to compare different batteries and their performance in the range you actually use and keep track of your batteries' condition.

Finally, the starting sequence has been slightly changed to further increase the charger's safety. Now, the menu does not move automatically to the next step after you hit the START button for the first time. Instead, to make sure you have set up the charger correctly, it will now ask you to confirm your adjusted parameters by pushing the START button again.



**Firmware:** v1.50

**Product:** Pulsar Touch Competition

**Description:** Charger software update with improved features

**Part No.:** 41556

### KEY IMPROVEMENTS

- EXPANDED LIPO BATTERY CUT-OFF VOLTAGE RANGE
- PARTIAL DISCHARGE MODE
- IMPROVED STARTING SEQUENCE

## ADDITIONAL FEATURE EXPLANATION OF PULSAR TOUCH COMPETITION SOFTWARE v1.50

1. EXPANDED LIPO BATTERY CUT-OFF VOLTAGE RANGE	2. PARTIAL DISCHARGE MODE	3. IMPROVED STARTING SEQUENCE
<p>The new v1.50 firmware of the Pulsar Touch Competition allows you to adjust the cut-off voltage per cell in an expanded range from 3.80V to 4.40V in steps of 0.01V - suitable for every condition and demand!</p> <p>Changing the LiPo battery cut-off voltage from the standard 4.20V/cell has several advantages:</p> <ol style="list-style-type: none"><li>Charge high-voltage LiPo batteries a.k.a. Outlaw LiPo batteries to their designated voltage.</li><li>Maximize your battery voltage according to the voltage allowed by Technical Inspection.</li><li>Reduce the maximum punch and power by charging to a lower cut-off voltage than the standard 4.20V/cell.</li><li>Increase the lifetime of your battery by charging to a cut-off voltage lower than 4.20V/cell when maximum performance is not vital, for example during practice.</li></ol>	<p>With this new feature in discharge mode, you can partially discharge your battery by between 100mAh and 20,000mAh.</p> <p>When discharging a battery the deciding criterion to stop the discharge process is the one reached first: voltage or capacity. Note: Due to security reasons, discharge will always be stopped if your battery reaches the pre-set cut-off voltage, independently of how much capacity should still be discharged.</p> <p>Why should I use the „Partial Discharge Mode“?</p> <p>Quite simple: You want to know how your battery performs in the voltage-range you are using it in.</p> <p>Given you have a 7,000mAh 2S LiPo battery and you are racing a touring car in a class with motor-limitation to 17.5T motors. Within 5 minutes you use about 1,700-2,500mAh of your battery's capacity (depending on motor, set-up, ESC, timing).</p> <p>So if you want to know the average voltage and the internal resistance of your battery during that range, discharging it to a voltage of 6.6V does not deliver the information you asked for. So stop the discharge voltage after the set capacity to make sure you receive the information you ask for!</p> <p>To check the battery's capacity, simply set the discharge-capacity higher than the expected capacity, e.g. to 20,000mAh. Then the discharge process stops at the pre-set cut-off voltage (as usual) and delivers the battery's capacity, average voltage and internal resistance.</p>	<p>For improved safety during charging or discharging your battery, the starting sequence of each programme has been changed slightly. After selecting a programme and hitting START, the adjusted parameters are shown and you need to confirm them by hitting START again. If you do not confirm the shown parameters within 30 seconds you will be taken back to the main menu.</p> <p>This further increases your charger's safety by minimizing the chance of charging a battery with incorrect settings.</p>

Please see the next page for instructions how to update your charger.

## PULSAR TOUCH COMPETITION SOFTWARE v1.50

### HOW TO UPDATE YOUR CHARGER

Please read these instructions for the firmware updating procedure of the LRP Pulsar Touch Competition System carefully. It is important that you follow these instructions to prevent errors or damages to your charger.

In order to update your Pulsar Touch to the latest firmware version, you will need a Windows-based personal computer and the following hard- and software:

- USB driver: „CP210x\_VCP\_Win2K\_XP\_S2K3.exe“
- PC software: „LRP\_Charger\_Firmware-Downloader.exe“
- Latest firmware file: „pulsarT\_vx.xx.bin“ (x.xx is for the version)
- USB interface wire

The hardware was supplied with your charger and the software is available at [www.LRP.cc](http://www.LRP.cc).

#### 1. INSTALL USB DRIVER

Install the required USB-driver „CP210x\_VCP\_Win2K\_XP\_S2K3.exe“ which is mandatory for correct communication between Pulsar Touch and your PC by USB.

Follow the simple on-screen instructions for correct installation.

#### 2. UPDATE FIRMWARE ON YOUR PULSAR TOUCH

**Important:** Do not turn off or disconnect your Pulsar Touch from USB while the update is in progress! This may damage your charger!

After successfully installing the USB driver, proceed as follows:

1. Connect your Pulsar Touch to a suitable DC power supply or a fully-charged 3S LiPo battery.
2. Connect your computer to your Pulsar Touch using the supplied USB cable.
3. Start the PC software „LRP\_Charger\_Firmware-Downloader.exe“.
4. Select the latest firmware update by using the „Browse“ button.
5. Select the correct COM-port, if unsure check with the „Search“ button.
6. Select and confirm baud-rate of „115200“.
7. If all above selections are done, press „Start“.
8. Your Pulsar Touch will shortly turn off automatically and then start updating itself.
9. Once the firmware update is complete, your Pulsar Touch will turn on again automatically and indicate the new firmware version on the start-up screen.

Check the profile settings, especially regarding the new/changes features and enjoy your updated LRP Pulsar Touch Competition!