

# Hitec 2.4 GHz System Firmware Update Manual

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# HPP-22 Software Installation

## 1. Download the latest version of the HPP-22 software from the Hitec website

The HPP-22 and PC Software program are required to update the firmware in Aurora 9, Spectra 2.4 Module and Optima receivers.

Go to the website as linked below:

<http://www.hitecrd.com/support/hitec-usa-downloads/software.html>

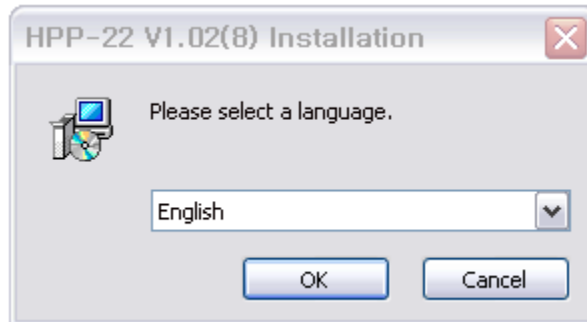
## 2. Before installing the new HPP-22 Software you must do the following:

**WARNING – Failure to do follow these steps will result in interoperability issues**

- A. Uninstall any previous versions of the HPP-22 Software
- B. If using Anti-Virus software turn it off for the install
- C. If Using Windows 7 or Windows Vista OS you need to run as an administrator or turn you User Account Control off.

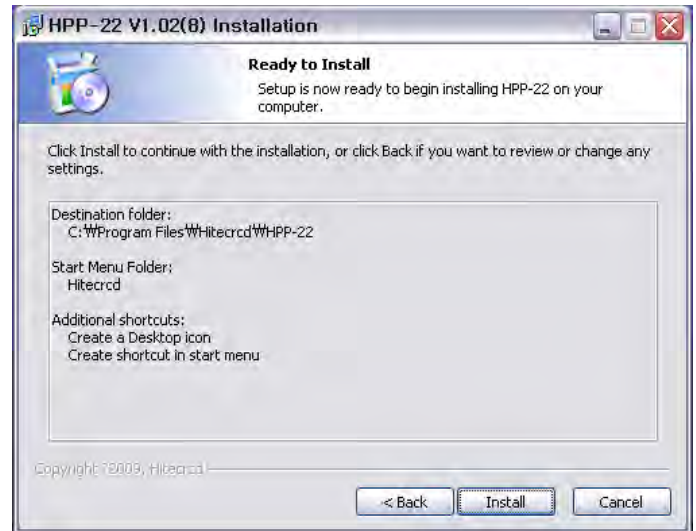
## 3. Installing HPP-22 PC program

Please double click on the icon as you see below on the left. Select your preferred language.



## 4. Follow the steps as shown:




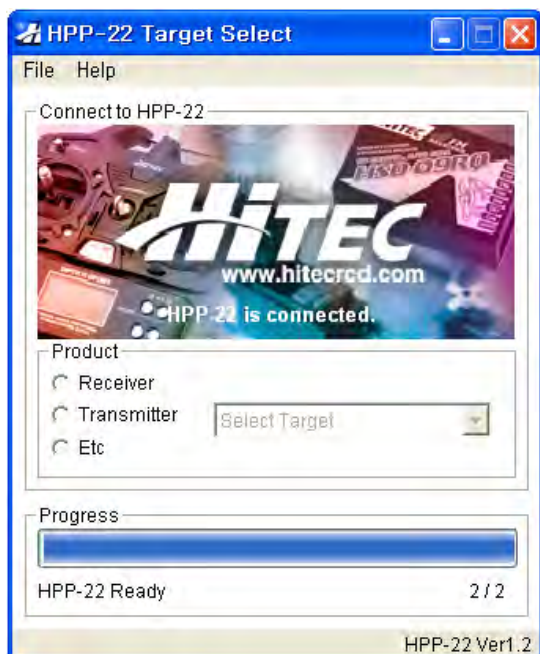


# AURORA 9 V 1.07 Firmware Upgrade Procedure

**WARNING:** Before you use your updated AURORA 9 with the firmware version 1.07, please make sure to upgrade your **SPECTRA 2.4 module** and **OPTIMA 7 and 9** receivers to firmware version 2.0 in order to use the telemetry functions, otherwise the telemetry functions will **NOT** work properly. Refer to the firmware update instructions for those items later in this manual.

## Aurora 9 Update Procedure

After the installation attach the **HPP-22** to your PC and click on the **HPP-22**  icon to launch the program. From the main page of the program select **"Transmitter"** and choose **"AURORA 9"** from the list\*

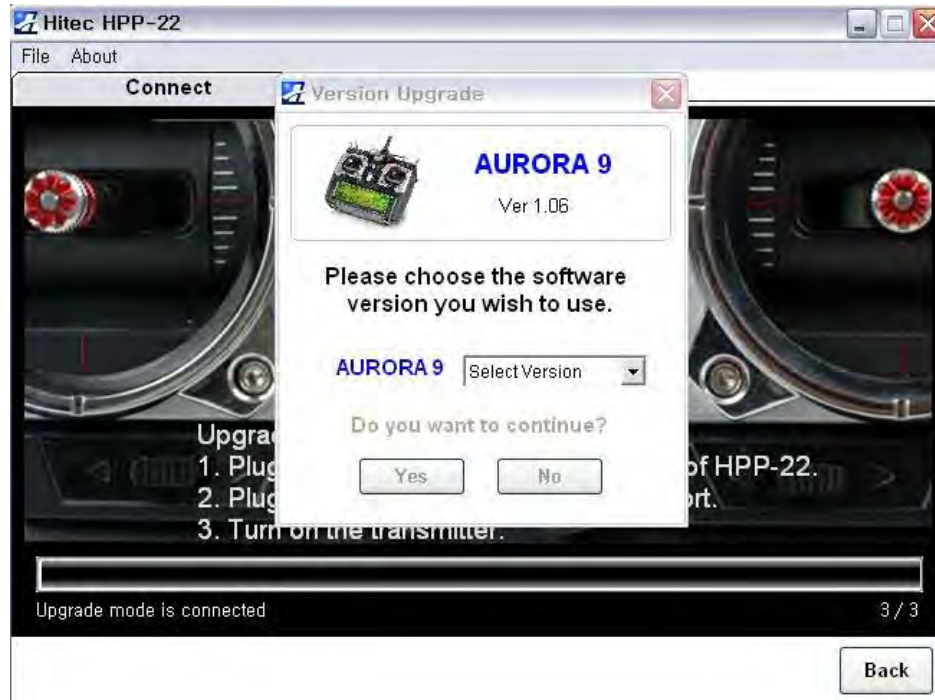


## 5. Connection Sequence & Firmware Version Change

Click on the **"Upgrade Mode"** icon, **connect the cable** between HPP-22 and AURORA 9, and **turn on** the transmitter.



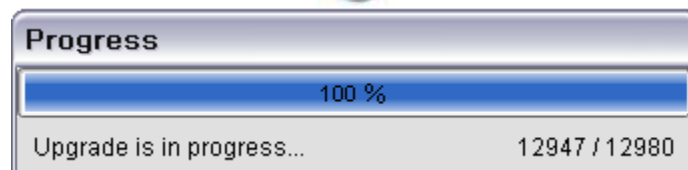
When all the necessary items are connected properly, the window shown below will pop up.



Select the firmware version you wish to install. Then click on "Yes" to continue.



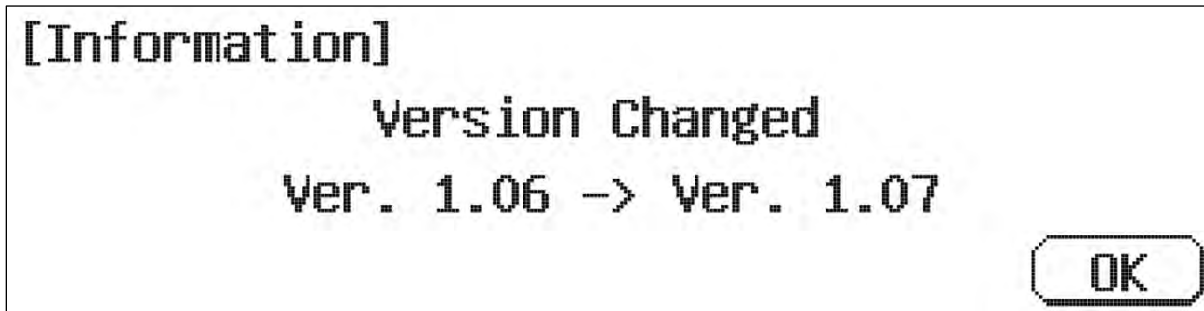
The update process will begin and progress bar will be displayed  
**DO NOT DISCONNECT YOUR RADIO DURING THIS PROCESS**



When the firmware version change is complete, a small notification window will pop up to inform you that the firmware version change has been completed successfully. Click "OK". Now the system will take you to **Aurora 9** screen automatically, and you can see your **current firmware version** on the bottom right of the setup window.



When the version change on the **Aurora 9** is finished, you will see the image below on the screen of your radio. Touch the **"OK"** icon on the screen to reboot the system.

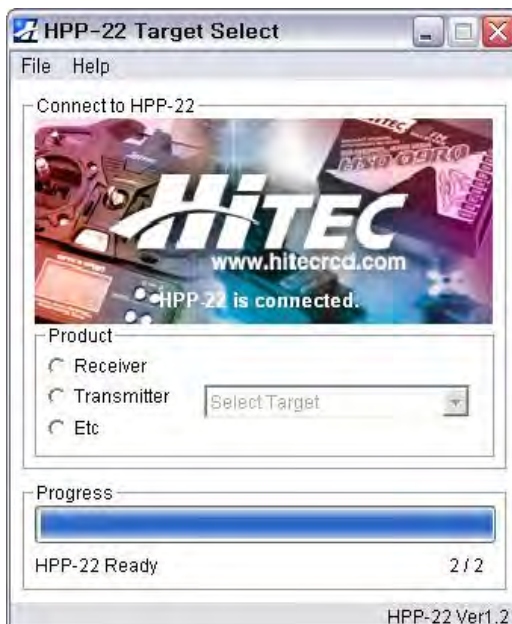


You have now completed the update of you Aurora 9 transmitter. If you haven't already done so you should update you Spectra 2.4 Module and Optima 7 & 9 Receivers

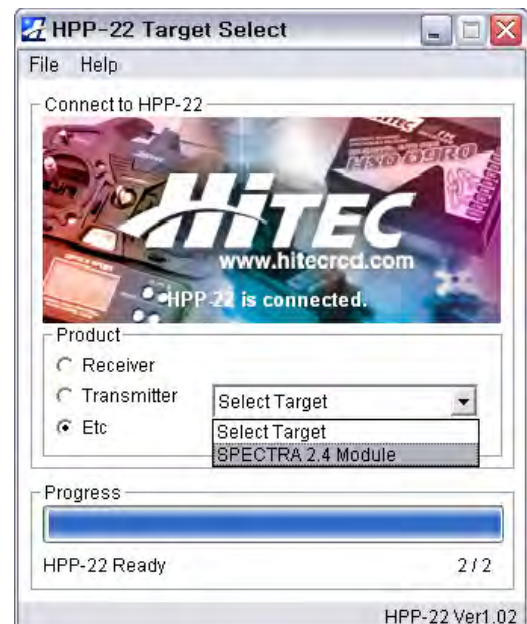
## SPECTRA 2.4 Module Firmware Upgrade Procedure

### 1. Program Operation

Launch the HPP-22 Software program by clicking on the **HPP-22**  icon



\*Main page of the program\*

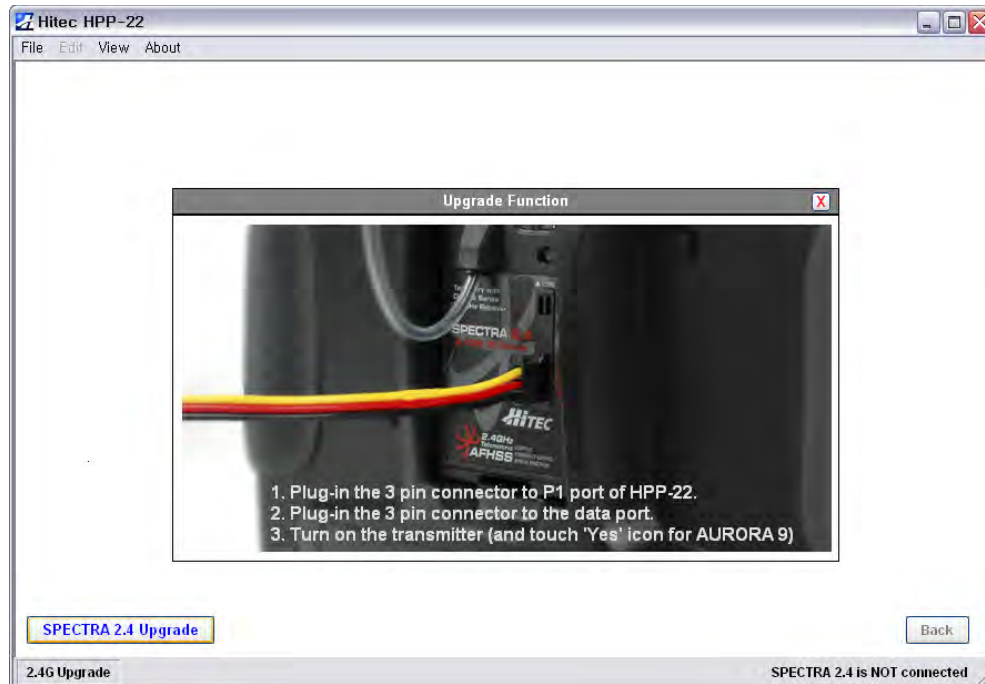


\*Select "Etc" → "SPECTRA 2.4" from the list\*

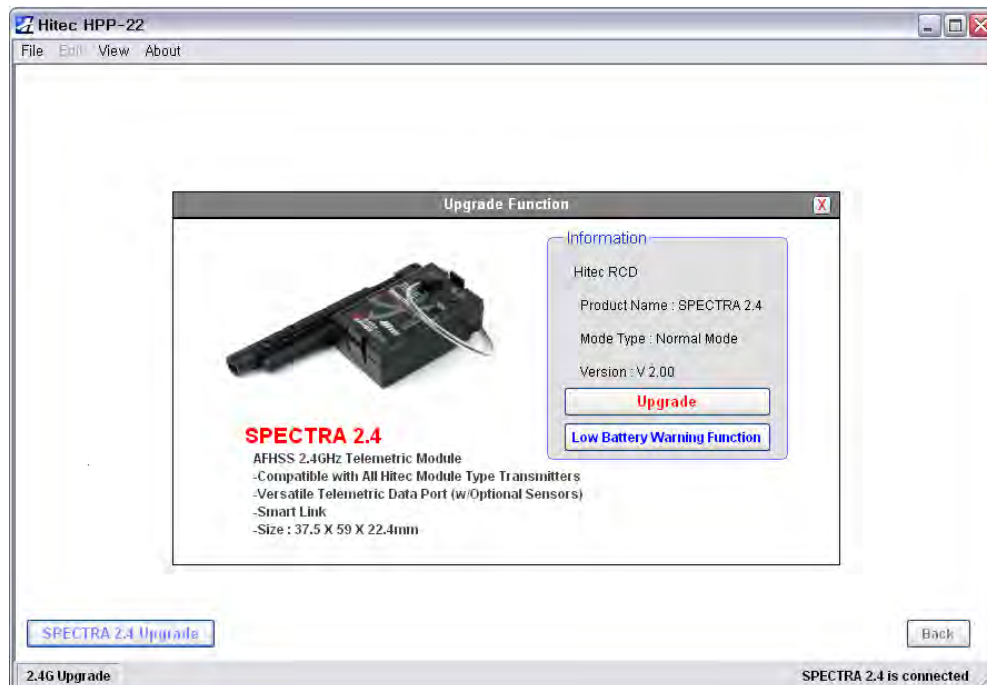
## 2. Connection Sequence & Firmware Version Change

Click on the **"Upgrade Mode"** icon and **connect the cable** between HPP-22 and **Spectra 2.4 Module**, in the following sequence

1. Connect one side of a 3-pin connector to the **HPP-22 P1** port.
2. Connect the other side of the connector to the **DATA** port of the module
3. Turn on the **AURORA 9**, wait until the transmit permission screen appears on the screen and touch **"YES"** to continue.



When the connection is successfully done, you will see the window shown below. Click on the **"Upgrade"** icon to update the firmware version of your **SPECTRA 2.4** Module.

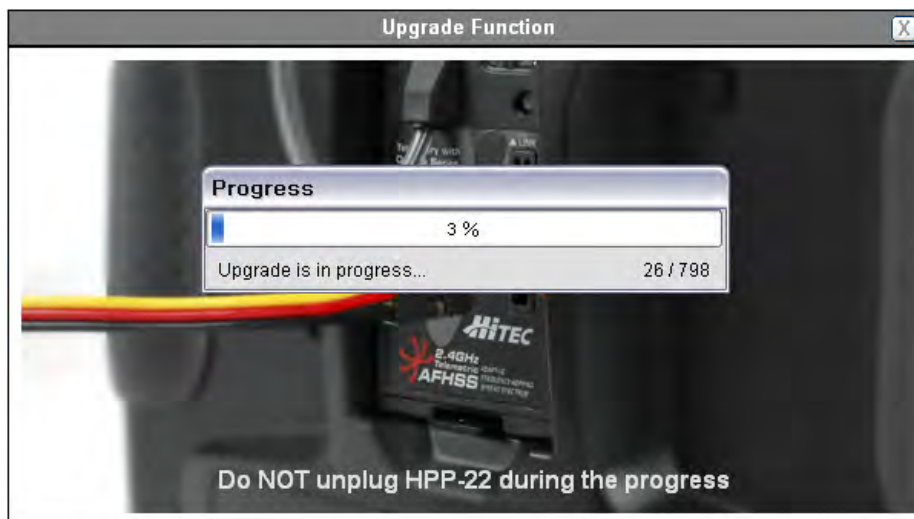




Select the version you want to install and click "YES."



When all the necessary items are connected properly, the upgrade will be in progress as shown.



When the firmware version change is complete, a small notification window will pop up to inform you that the version change has been completed successfully. Click "OK". Now the system will take you to the **SPECTRA 2.4** Setup home screen, where you can see your current firmware version in the setup window.



When the upgrade process is complete, unplug all the cables and reboot the system by powering it off momentarily and turning it back on..

### **WARNING**

After the firmware upgrade, you must perform a range check and full ground check before the first flight.

## **SPECTRA 2.4 v2.00 Low Battery Warning (LBW) Function**

When the HPP-22 is plugged into the **Spectra 2.4** module there are two different modes to choose from:

**Upgrade Mode:** This mode allows you to change your firmware version on your Hitec products. This mode will allow you to upgrade a product to the most up-to-date firmware version, but it can also reverse the product firmware version upgrade, if you are not satisfied with the new version.

**Low Battery Warning Function (LBW) Mode:** This mode allows you to customize your **SPECTRA 2.4** Module's **LBW** activation level. Whenever your module detects the receiver's **SPC** input voltage level drop below the setup level, it will activate the alarm to notify you that your aircraft's battery is running low.

**NOTICE**

To have proper function of **Low Battery Warning (LBW)** Function, all your related products have to be updated as follows:

**SPECTRA 2.4 module:** v2.00 or higher

**OPTIMA Receivers:** v2.00 or higher

**Aurora 9 and other Hitec AFHSS 2.4GHz radios:** v1.07 or higher.

**Using the Low Battery Warning (LBW) Function**

Depending on how you setup the Spectra 2.4 Module and the LBW function the LBW will activate the alarm when it detects that the voltage has dropped below the pre-set value. There are two different ways to use the LBW

**1. 4 ~ 5 Cell Mode:**

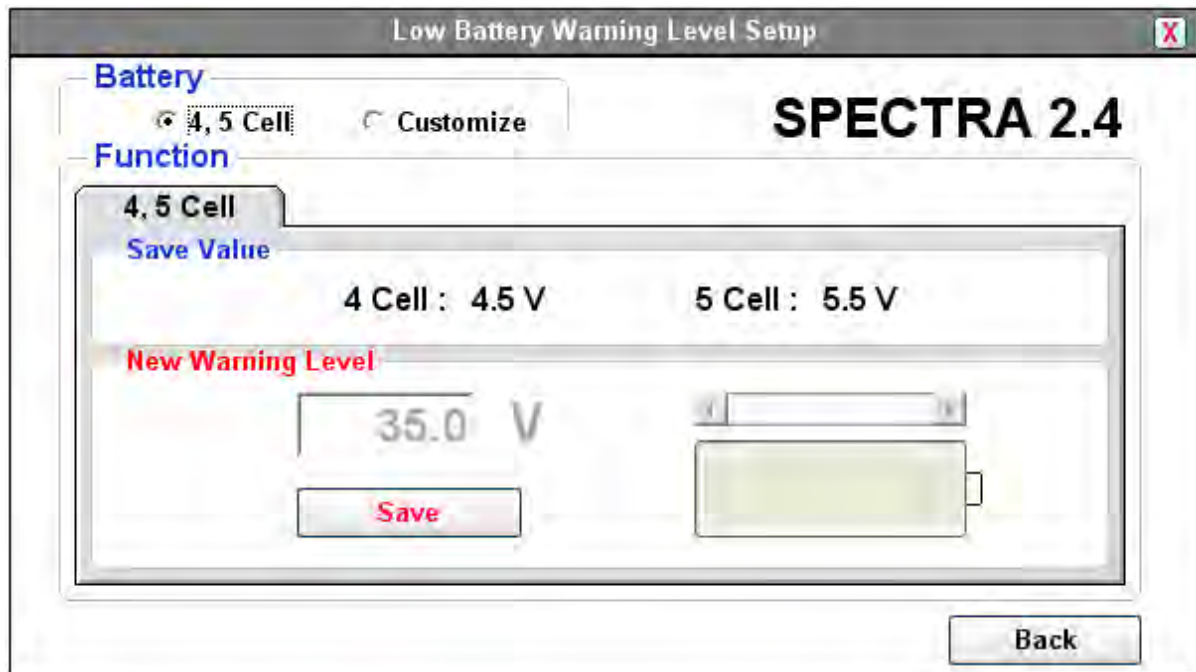
This is a default setting of **Spectra 2.4 module**, and it detects regular four to five cell NiMH / NiCad batteries and selects the LBW level automatically. In this mode the use of the **SPC** connection is **NOT** required.

Four Cell: 4.5V or lower.

Five Cell: 5.5V or lower.

**Setup Method:**

- 1) Select 4, 5 Cell mode, and click "Save"
- 2) Click "Yes" to go on.



## 2. Customize Mode:

You can customize the **Low Battery Warning (LBW)** Level of a receiver's battery input level through the Battery port for packs with voltages up to **7.4 volts** or through the **SPC** port for packs voltages of **3.5V to 35V**. If utilizing both the SPC and regular battery port only the SPC voltage will be used. The LBW alarm will be activated when the receiver's input battery level drops below your customized level.

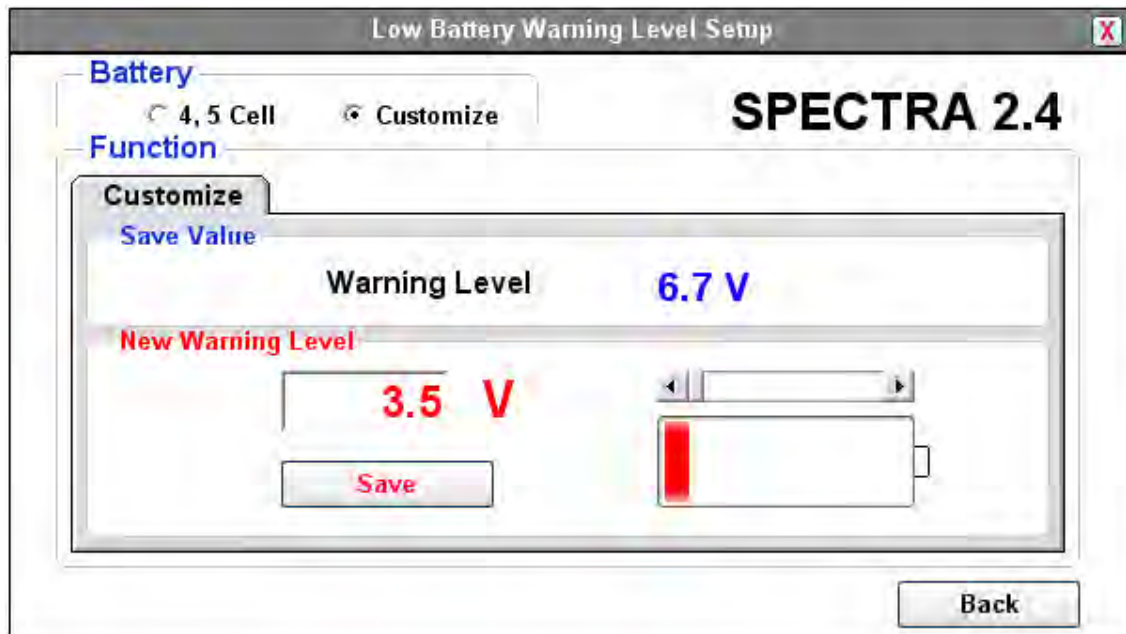
**When Li-Po battery is used:** When a Li-Po battery is used as a receiver battery, you can customize the LBW and decide the warning voltage level to prevent unintended overdraw of Li-Po battery which could cause explosion or permanent damage of the battery itself.

\* **Warning:** This data should be used as reference only, and the users should be aware that the data could be inaccurate depending on the type and quality of the battery.

**When the SPC function is utilized:** When the SPC port and the receiver battery port are simultaneously used with different batteries, SPC input voltage has priority and AURORA 9 will display the voltage level of SPC input only. If you are utilizing the SPC port, set the LBW voltage level for the main battery.

### Set-up Method:

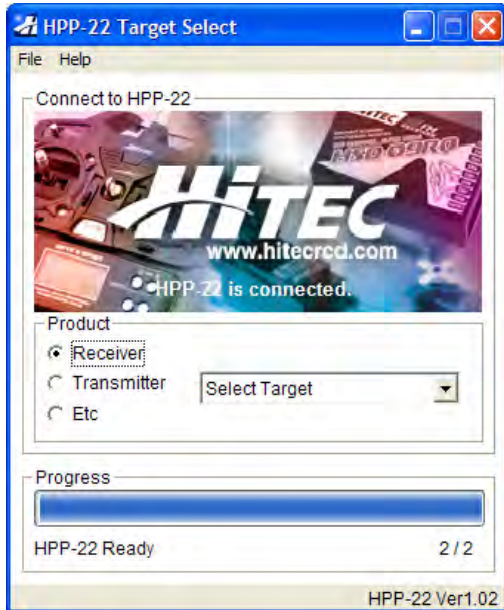
1. Click on the "Customize" Mode to activate the function.
2. Use the scroll bar on the middle right of the window to adjust the level. Or you can also type in the desired warning level in the box left of the scroll bar.
3. Click "Save" then "Yes" to save and exit the program.



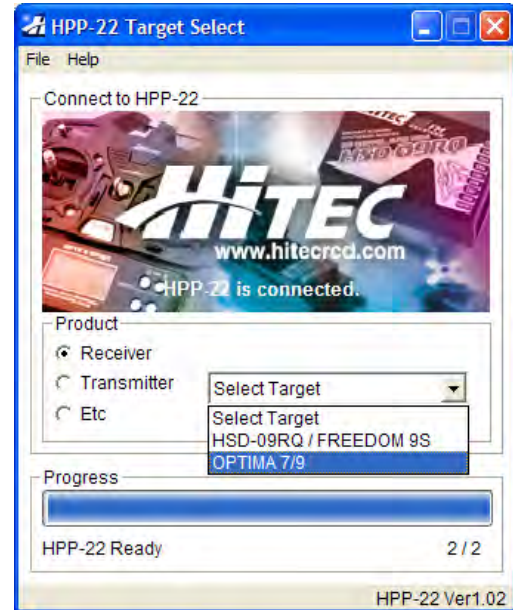
# OPTIMA 7 & 9 Receiver Firmware Upgrade Procedure

**OPTIMA 6 Note:** The full telemetry and LBW functions are not available in Optima 6.

After the installation double click on the **HPP-22** icon on the Desktop.



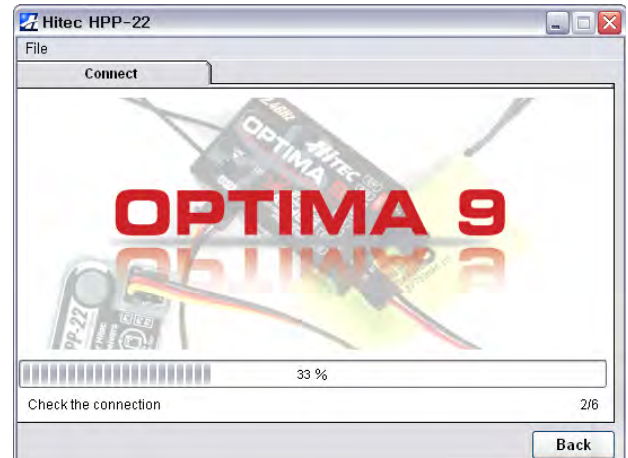
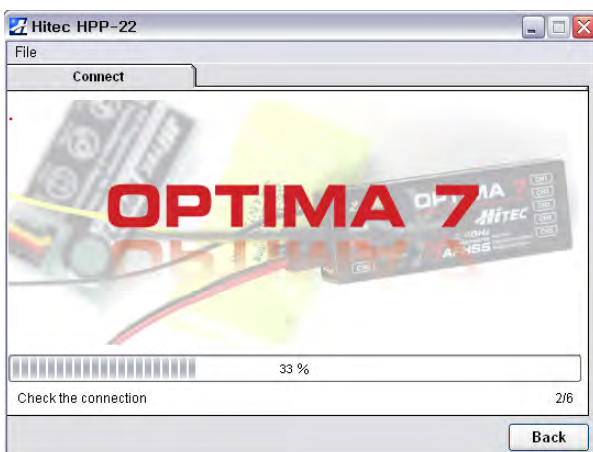
\*Main page of the program\*



\*Select "Receiver" → "OPTIMA" from the list\*

## 1. Connect Sequence & Change Firmware Version

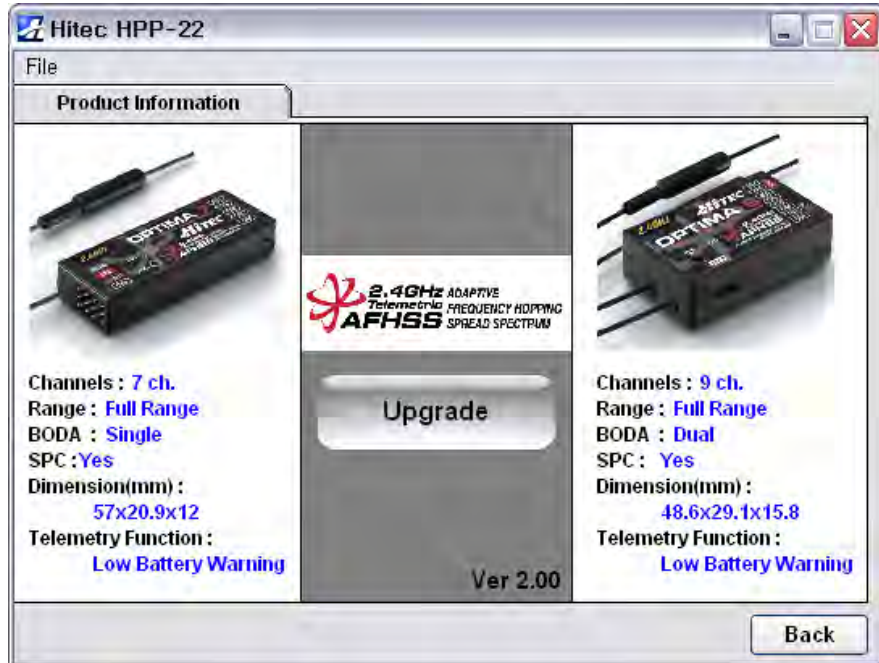
1. Run the HPP-22 PC program and connect the HPP-22 to the PC using the Mini-B/USB cable.
2. Use the 3-pin cable to connect P1 port of HPP-22 and the DATA port of OPTIMA 7 or 9 receiver.
3. Plug in a 4/5 cell NiMH/NiCad battery to the BAT port to turn on the receiver power.



### \* Note:

When the cables are connected properly, the **RED** and **BLUE** LEDs on the receiver will start to blink. If the LEDs don't blink, disconnect the battery power cable from the receiver momentarily then plug it back in.

When all the items are connected properly you will see window below.

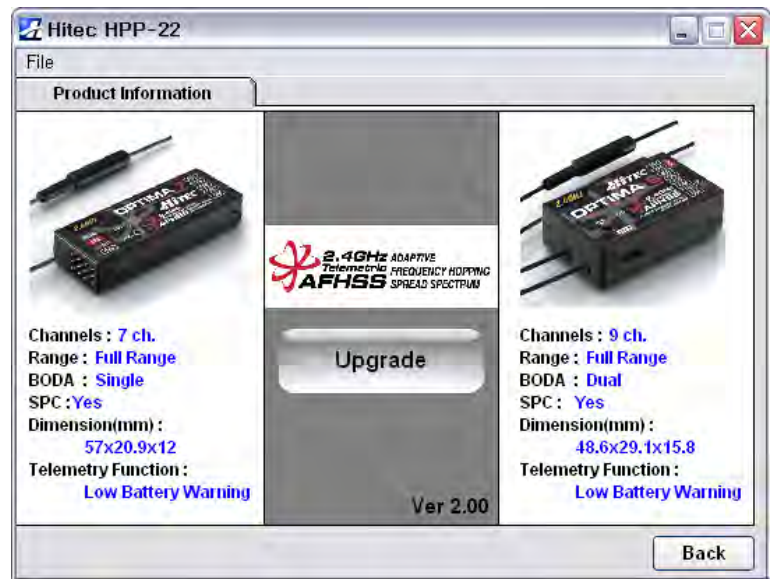
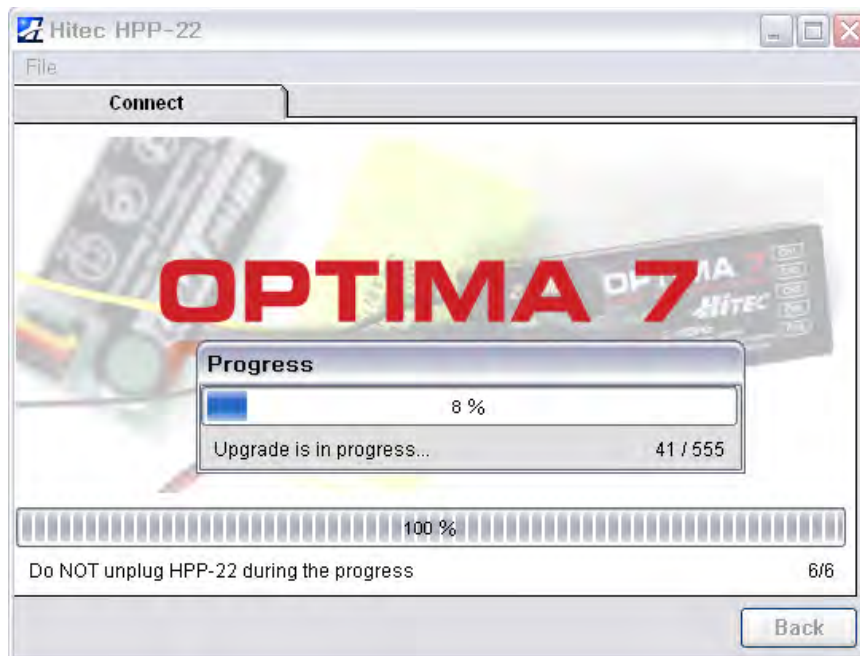


2. Click on the "Upgrade" icon in the center.



3. Select the firmware version from the list and select yes to continue





When update is complete, a notification window will pop up notifying you that the version change has been completed successfully. Click **“OK”**. Now the system will take you to **Optima Receiver Setup** home screen, where you can see your **current firmware version** in the setup window. Now that the upgrade process is complete, unplug all cables and reboot the receiver by momentarily disconnecting the power and turning it back

### **Warning!**

After the firmware upgrade, perform the range check and full ground check before the first flight.