FANTOM

SP V1.1
SERVO PROGRAMMER

USERS MANUAL

https://www.fantomracing.com/downloads

System Requirements

1 Operating Voltage: USB (SV/S00mA).
2 Operating System: Windows XP/Windows Vista/Windows 7/ Windows 8/ Windows 10 (32/64bit).
3 Application: Fantom Racing servos marked with "Programmable".

Software Menu Instructions

▶ Programmable Servo

The upper section of the software window is the information display. Information will be displayed here while programmer is connected/ disconnected, or while writing/reading the servo parameters.

Parameter Function Instructions

1 **Servo Angle:** Sets the servo rotation angle.
2 **Servo Neutral:** Sets the servo neutral position.
   NOTE: With the transmitter set in the neutral position, if the servo is not in the corresponding neutral position, this value can be changed to adjust the servo horn position. This is equivalent to trimming the transmitter channel.
3 **PWM Power:** Adjusts the servo output power. The higher the power setting, the higher the servo torque, speed, and current consumption will be .
4 **Damping Factor:** Sets the servo damping.
5 **Sensitivity:** Adjusts the servo dead band (sensitivity).
6 **Soft Start:** Slowly restores the position of the current input signal, once power is applied to the servo.
   NOTE: This function is to prevent damage to the servo, once power is applied, if mounted incorrectly.
7 **Inversion:** Sets normal and reverse rotation of the servo.
8 **Narrow Band:** FUTABA SR Mode.
9 **SANWA SSR:** SANWA SSR Mode.
   NOTE: By enabling this function, it can support SANWA SSR high speed mode. However, the servo angle may need to be readjusted.
10 **Lost PPM Protect:** Signal loss protection. There are three functions for selection.
   (a) **Release:** Non-Protection.
   (b) **Keep Position:** Stay in the position before the signal loss.
   (c) **Go Neutral Position:** Back to Neutral position (IS00uS position).
11 **Over Load Protect:** Sets the servo blocking protection. There are three levels, ticked to enable protection.
   Level 1: Sets the starting time and power value of the primary protection.

Level 2: Sets the starting time and power value of the secondary protection.

Level 3: Sets the starting time and power value of the tertiary protection.

NOTE: The left side is to set the protection starting time. The right side is to set the output power value after enabling the starting protection.

12 **Servo Information:**

Servo Name: Servo model

Manufacture: Servo version date

Firmware: Servo firmware name

13 **Read:** Reads the servo parameters from the software interface.

14 **Write:** Writes current parameter into servo.

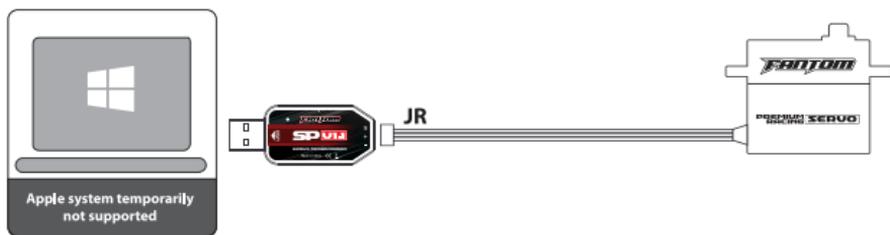15 **Open:** Opens servo parameter file that is saved on the computer.

16 **Save:** Saves current servo parameter to the computer.

17 **UPF:** Servo firmware upgrade function (Only works if update available)

18 **Default:** Restores factory defaults.

19 **Exit:** Exits and closes the configuration software.

Wiring Diagram

Usage Instructions

1 Download programmer software from the Fantom website:
   https://www.fantomracing.com/downloads
   Using software such as WinZip (or comparable software)
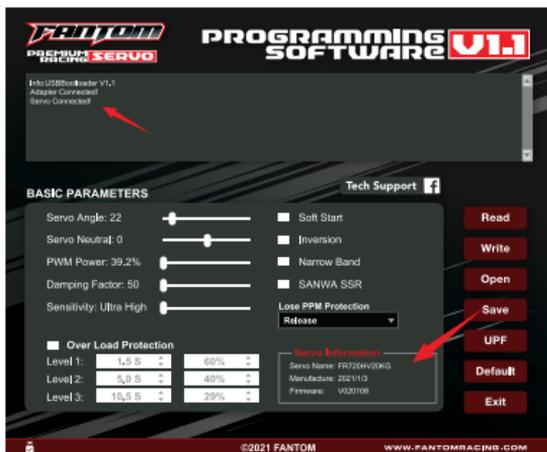   decompress the downloaded zip file and then open the
   software.

2 Once software is open, plug
   USB adapter into computer.
   Within the software
   information window you
   should see the programmer
   as "Connected". If not, remove
   the USB programmer from
   the USB port and re-insert
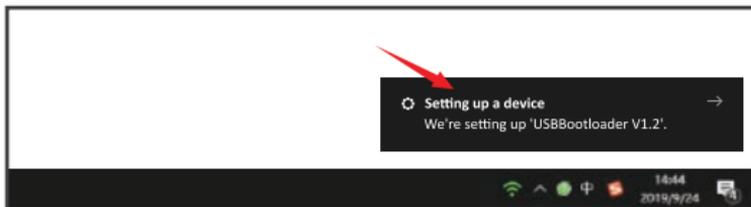   into the USB port.

3 Connect servo to
   programmer. Software will
   automatically recognize
   and read the servo
   parameters for current
   interface (see image).
   NOTE: If servo information
   is not displayed, USB
   programmer and/or servo
   may not be plugged in
   properly. Unplug and
   re-connect both items.
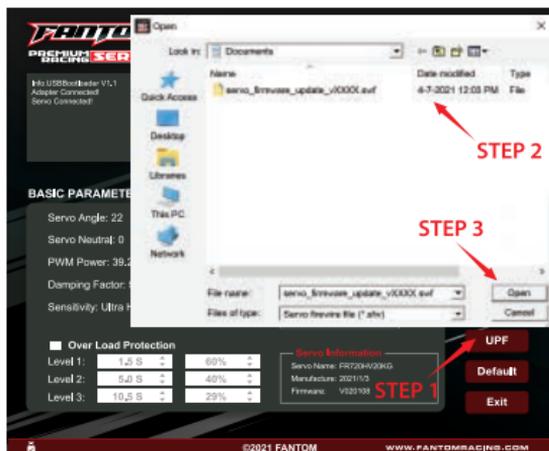
Programmer Driver Update Instructions

1 If USB Programmer Driver Update is available, download from the Fantom website. Once downloaded, connect servo to USB programmer. Next, plug programmer into the USB port of your computer. Please wait for the USB programmer to automatically update it's driver. This should take approx. 5-10 seconds. Your computer will alert you that driver has successfully completed installation (see below).
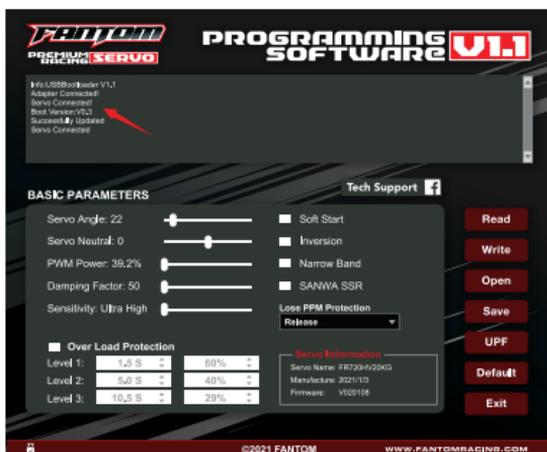

Servo Firmware Update Instructions

▶ **Firmware Update for Programmable Servo**

1 If a Servo Firmware Update is available, download it from the Fantom website. Once downloaded, while connected to the servo, click "UPF" (Step 1). Select the firmware update file (Step 2) and click to open (Step 3) - (see image).

2 During upgrading, the information window will show the upgrade process. Once complete, it will display "Successfully Updated" (see image).

3 Once the servo firmware is updated, the servo parameters will be read automatically on the software interface.

Troubleshooting

▶ **If the servo can't be programmed, please take the following steps:**

1) Check to make sure everything is connected is properly.
2) Check whether the programming software is the latest version or not.
3) If connection still fails, please email support@fantomracing.com for assistance .

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