

Xtreme Power Systems

TATTLETALETM

Installation And Usage Manual

TattleTale is a trademark of Xtreme Power Systems, LLC.

Firmware v10

Manual v1.0

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Introduction

Thank you for purchasing the TattleTale! This is a device that no modeler should be without! This device monitors receiver input voltage, servo pulse data, and as a bonus, can also be a flight timer.

Installation Requirements

The installation of the Tattletale is simple! Just plug the connector into any open servo channel on your receiver. Just make sure the plug polarity is correct. That's it!

Warranty Information

The TattleTale carries a limited lifetime warranty. Units subject to improper installation, misuse, abuse, or modifications will not be covered under this warranty.

Xtreme Power Systems may at its discretion either repair or replace the unit covered under warranty. The customer will pay all freight charges to and from Xtreme Power Systems. Xtreme Power Systems must be contacted to obtain a return authorization. Any product returned without authorization will be returned without repair or replacement.

Liability

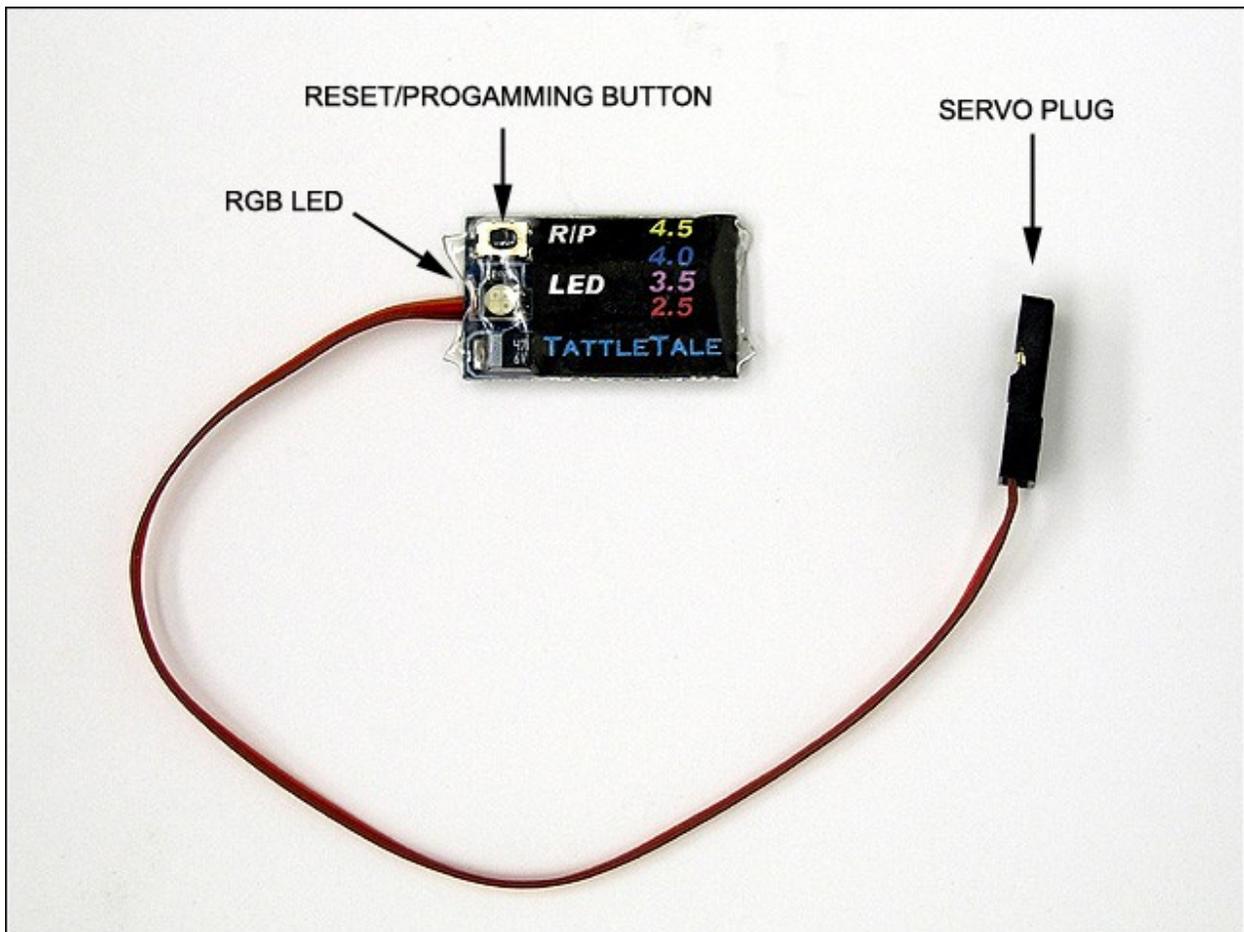
By using this product, you agree to hold Xtreme Power Systems free from any type of liability either directly or indirectly while using this product.

Legal Information

The 'look and feel' and functionality of this product are protected by U.S. copyright laws. Various terminology and feature names are protected under U.S. trademark laws.

SECTION 1 – TATTLETALE DETAILS

The TattleTale device consists of a high speed computer with voltage monitoring capabilities, a push button switch, a multi-colored LED, and a servo plug. The push button switch (labeled "R/P") functions as the (R)eset and (P)rogramming switch. The LED is a "RGB" type, allowing for virtually any color to be displayed. Different colors are used to indicate different conditions. The servo plug is what is used to interface to your receiver, and plugs into any empty servo channel. Optionally, you can also use a "Y-cable" if no empty servo channels are available.



TattleTale Details

Voltage Monitoring

The TattleTale will monitor voltages between 2.10v and 16.0. The voltage monitoring interval is programmable. The factory default time is set to 10 milliseconds (10ms). This means that every 10ms the voltage level is captured and compared. When voltage drops to predefined thresholds, the LED color will change. The LED color will hold that color (indicating the lowest drop in voltage) until the system is either reset or powered off. The threshold levels and the corresponding colors are as follows:

LED COLOR	VOLTAGE THRESHOLD
Green	4.51v – 16.0v
Yellow	4.01v – 4.50v
Blue	3.51v – 4.00v
Purple	2.51v – 3.50v
Red	2.10v – 2.50v

NOTE: If the input voltage drops to 4.50v (or lower), you have a power problem with your system! This device does not lie! Please resolve the issue before attempting to operate your radio controlled device!

Servo Pulse (Glitch/Failsafe) Monitoring

The TattleTale will monitor the servo pulses coming from the receiver when it is plugged into a servo channel. If the TattleTale detects any irregularities in the servo pulses due to a "glitch" (72MHz/40MHz/36MHz) or a deliberate failsafe setting or reboot condition (PCM/2.4GHz), the LED will blink the current voltage threshold color.

NOTE: If the TattleTale is plugged into a "battery only" connection, the LED will constantly blink the current voltage threshold color to indicate that no servo pulse is present.

Timer

The TattleTale has a built-in timer that can be programmed for up to 60 minutes and 59 seconds. Programming information is available in **SECTION 3** of this manual. When the timer expires, the LED will rapidly flash bright white. This timer can be used as a battery run time warning.

To enable the timer, press and hold the push button until the LED changes from solid BLUE to flashing BLUE, and then release the push button. The timer starts automatically once enabled.

To disable the timer, press and hold the push button until the LED changes from RED to flashing RED, and then release the push button.

The state of the timer enable/disable is stored internally and is not affected by powering off the Tattletale. If the timer is enabled, applying power to the TattleTale will immediately start the timer.

Reset

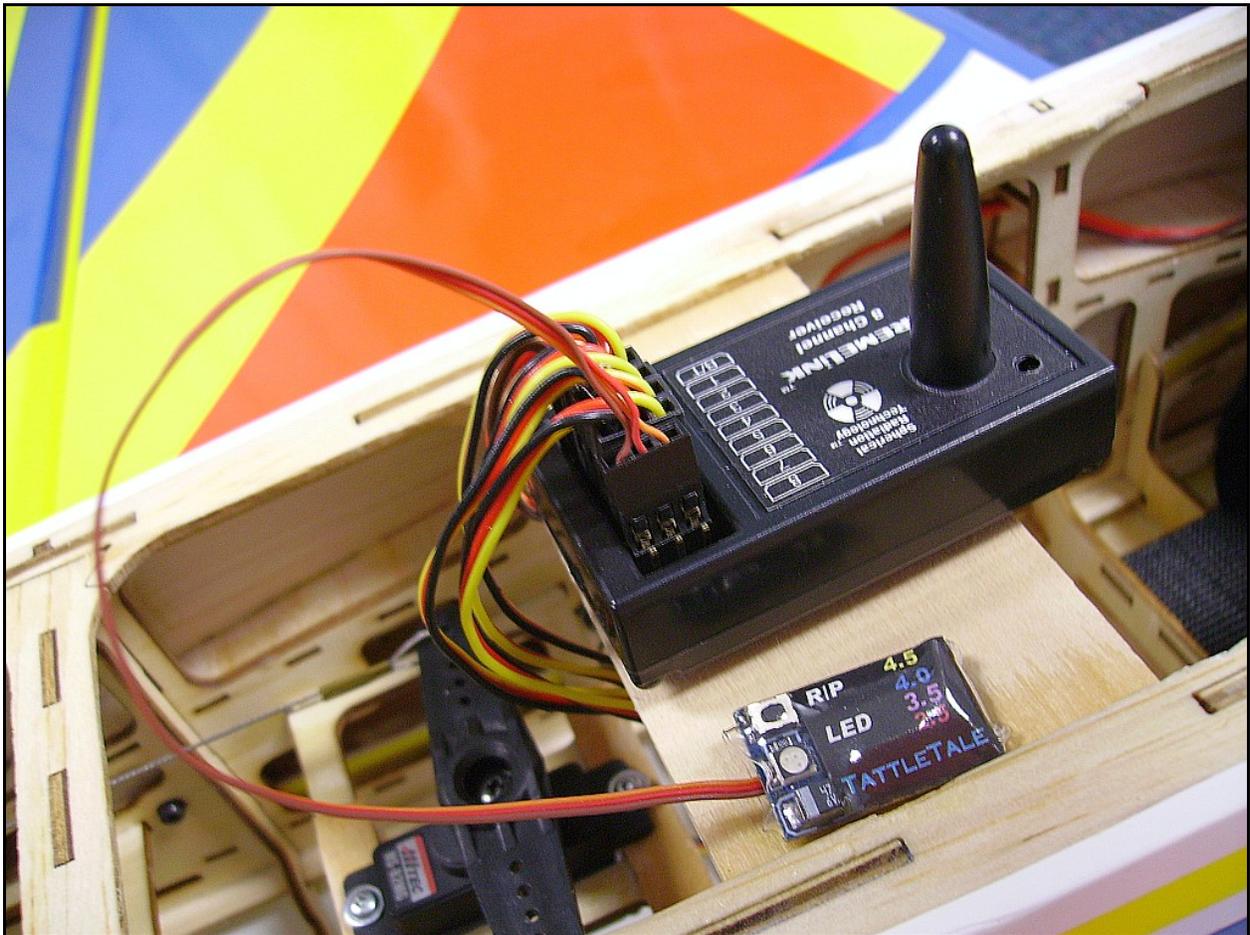
Briefly press and release the push button to reset the system. The LED will turn either BLUE (timer disabled) or RED (timer enabled) when pressing the push button. You are able to determine if the timer is currently enabled or disabled by noting the color of the LED while pushing the button. When a reset occurs, the voltage monitor threshold will be restored and the LED will turn solid GREEN. The timer (if enabled) will also be reset to zero.

SECTION 2 – INSTALLATION

Plugging in your TattleTale

Grasp the connector and insert it into any open servo channel (or “Y-cable” if necessary). Note the polarity of the plug and wires. The BROWN wire is negative, the RED wire is positive, and the ORANGE wire is signal.

Note: plugging the connector in backwards will cause the unit to function erratically!



TattleTale Plugged into a Receiver

SECTION 3 – PROGRAMMING OPTIONS

There are 3 programming options available. To enter programming mode, press and hold the push button while applying power to the TattleTale. The LED will now be solid RED. Release the push button. The TattleTale is now in programming mode.

Briefly pressing and releasing the push button will change the color of the LED. The color of the LED and its associated function are listed below:

LED COLOR	FUNCTION
Red	1 - Set Power Check Time
Green	2 - Set Timer Minutes
Yellow	3 - Set Timer Seconds

Press and release the push button until you have selected the function you wish to change (determined by the color of the LED).

FUNCTION 1 – SET POWER CHECK TIME

The Power Check Time is the amount of time that elapses between each check of the input voltage. Shorter times make the voltage monitoring more sensitive, while longer times make the voltage monitoring less sensitive.

With the LED solid RED, press and hold the push button until the LED turns OFF, and then release the push button. The LED will now flash GREEN the number of times equal to the current Power Check Time value. Each flash is equal to 10ms of time (for example, 2 flashes is equal to 20ms).

After the GREEN flashing stops you have five seconds to change the Power Check Time. Press and release the programming button the number of times equal to the new Power Check Time that you want. With every press and release of the push button, the LED will turn RED so you can visually see when the button is pressed.

If you do not press the push button within five seconds, or if the value you enter exceeds what is allowed, the LED will alternately flash RED and GREEN (error condition occurred) and no change will be made.

If you do make a change, the LED will blink GREEN/RED/BLUE in rapid succession to let you know that the change was successful.

NOTE: The factory default time is 10ms (1 flash). The minimum allowed value is 1 and the maximum allowed value is 10.

FUNCTION 2 - SET TIMER MINUTES

With the LED solid GREEN, press and hold the push button until the LED turns off, and then release the push button. The LED will now flash GREEN the number of times equal to the current number of Timer Minutes. However, if the number of minutes is zero, the LED will flash BLUE one time to indicate 'zero'.

After the flashing stops you have five seconds to change the Timer Minutes value. Press and release the push button the number of times equal to the new Timer Minutes that you want. With every press and release of the push button, the LED will turn RED so you can visually see when the button is pressed.

If you do not press the programming button within five seconds, the value of ZERO will be used (0 minutes).

If the value you enter exceeds what is allowed, the LED will alternately flash red and green (error condition occurred) and no change will be made.

If you do make a valid change, the LED will blink GREEN/RED/BLUE in rapid succession to let you know that the change was successful.

NOTE: The factory default time is 5 minutes (5 flashes). The minimum allowed value is 0 and the maximum allowed value is 60.

FUNCTION 3 - SET TIMER SECONDS

With the LED solid YELLOW, press and hold the push button until the LED turns off, and then release the push button. The LED will now flash GREEN the number of times equal to the current number of Timer Seconds. However, if the number of seconds is zero, the LED will flash BLUE one time to indicate 'zero'.

After the flashing stops you have five seconds to change the Timer Seconds value. Press and release the push button the number of times equal to the new Timer Seconds that you want. With every press and release of the push button, the LED will turn RED so you can visually see when the button is pressed.

If you do not press the programming button within five seconds, the value of ZERO will be used (0 seconds).

If the value you enter exceeds what is allowed, the LED will alternately flash red and green (error condition occurred) and no change will be made.

If you do make a valid change, the LED will blink GREEN/RED/BLUE in rapid succession to let you know that the change was successful.

NOTE: The factory default time is 0 seconds (1 BLUE flash). The minimum allowed value is 0 and the maximum allowed value is 59.