


# TITAN DUAL STEP DOWN REGULATOR

Powered by 

ITEM# WRL-TITAN

Congratulations on your purchase of the TITAN dual step down regulator. The Titan Dual Step Down Voltage Regulator provides regulated voltage protection for up to two servo functions with two input ports and two output ports. The Titan eliminates the danger of higher voltage power systems to standard voltage servos by being placed in between the receiver and the servo requiring a 5.2 volts regulation. Dual Step Down Regulator is primarily designed for use with gyros in helicopters. Most brands of gyros/ tail rotor servos have voltage limits of 6 volts or less. The Titan installs between the receiver and the gyro in the rudder and gain channels and regulates the voltage to the gyro and tail rotor servo to 5.2 volts. This allows the rest of the system to operate using higher voltage of typical 7.4V up to 10V, providing increased servo performance and response. The Titan is ideal for any R/C models that are equipped with servos with limited input voltage range.

**Please read the entire manual before proceeding. Before installation, be sure your radio system uses center red or positive receiver/servo connections.**

## Features:

- Compact 5.2V linear voltage regulator with dual input and dual output.
- Ideal for 2 cell Lithium Polymer battery applications. Input voltage range from 6V Min to 10V Max.
- High current capability of 3 Amps continuous, 10 Amp peak.
- Built-in Thermal and Current overload protection.
- Ideal for any R/C models that are equipped with servos requiring a 5.2V supply.
- Includes 2 8" male to male servo extension plug for easy installation.

## Package Contents:

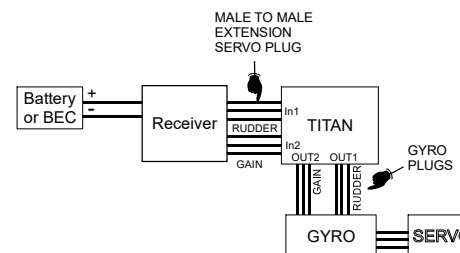
- Titan Dual Step Down Regulator unit
- 2 x 8" male to male servo extension plug
- User Instruction Manual

## Installation

**NOTE: THE TITAN IS DESIGNED TO BE INSTALLED BETWEEN THE RECEIVER AND THE GYRO, OPERATING THE GYRO AND TAIL ROTOR SERVO ONLY. IT IS NOT INTENDED TO BE INSTALLED BETWEEN THE BATTERY AND THE RECEIVER TO POWER AN ENTIRE SYSTEM. CONSIDER THE HERCULES BEC TO POWER AN ENTIRE SYSTEM (SOLD SEPARATELY).**

Please disconnect the battery from its terminal before continuing.

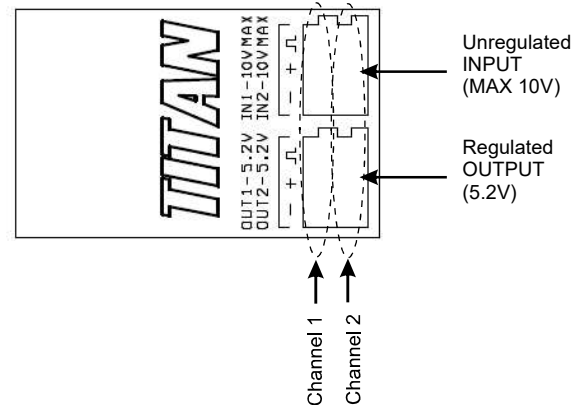
## BLOCK DIAGRAM



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## Installation Cont'd:

1. Plug the signal source to be regulated such as the receiver port for the Gyro rudder to one of the input slots (IN1 or IN2) of the Titan unit with the male to male servo extension. Make sure the polarity is matching with the receiver slot before inserting the plugs - **black wire negative (-) and red wire positive (+)**. The Gyroscope rudder plugs to the relative regulated 5.2V output slot (OUT1 or OUT2). The IN1 signal will be bypassed to the OUT1 slot and the same with the IN2 and OUT2 slots.  
**Caution: Makes sure that both IN slots are using the same voltage source. Having different voltage sources can damage the Titan unit.**
2. The receiver port for the Gyro gain can be connected to the remaining IN slot of the Titan and the relative regulated 5.2V OUT slot will connect to the Gyroscopes gain plug.



**Warning:** Under heavy continuous current load, the Titan unit will get extremely hot and cause burns when touched. Allow unit to cool before handling.

**Caution:** Current loads of excess of 3A continuous should be used cautiously with forced cooled air ventilation directed at the Titan. Ideally place the Titan unit close to the aircrafts propellor for ventilation.

Securely mount the Titan unit on your R/C model away from the receiver and antenna if possible.

## Setup:

1. With the Titan unit installed and required servo(s) connected, turn on the transmitter without the battery connected.
2. Before connecting the battery to the circuit, please ensure that all proper connections are in place for your particular application. Make sure your transmitter has the throttle off before continuing. Now connect the your power source into the circuit.
3. The LED on the Titan unit should turn on.
4. The LED on the Titan unit should turn on.
5. Now the Titan is actively regulating the voltage to your connected tail servo gyro and servo.
6. Double check the tail servo responds to your tail rudder control.

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## TROUBLESHOOTING:

- Q:** The Titan unit gets very hot during operation?  
**A:** This is normal when the Titan is put under very heavy loads. Make sure the Titan unit is well ventilated to prevent thermal shutdown.
- Q:** The LED does not turn on in the Titan when I apply power to the input slots?  
**A:** Make sure that only one voltage source is being used on both input slots and check the matching polarity as indicated on the Titan unit.
- Q:** My tail rudder does not respond when it is connected to the Titan?  
**A:** Double check your rudder and gain signal are connected on the channel of the Titan. IN1 signal is bypassed to the OUT1 signal and IN2 signal is bypassed to the OUT2 signal while the OUT slots have a regulated 5.2V.
- Q:** Can I plug in two different voltage sources to the IN1 and IN2 ports and get the same 5.2V output on each port?  
**A:** **NO**, do not plug two different voltage sources to the input ports, doing so will damage the Titan unit. Use only one voltage source for both IN1 and IN2 slots. Only the signal pin is separate between both channels.

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## ITEM# WRL-TITAN

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### Limited Warranty (North America Only)

The Titan Dual Step Down Regulator is guaranteed to be free from defects in material and workmanship for a period of 90 days from the date of purchase accompanied by the proof of purchase or invoice. Warranty does not cover damage due to improper use or incorrect installation. During the 90 day warranty period, if the product shows defects caused by abuse, accident or misuse, it will be repaired or replaced upon Western Robotics Ltd. sole discretion, at a service charge not greater than 40% of the current retail list price. Please ensure to include your contact information before any repair(s) or replacement(s) can be conducted. Under no circumstances or condition will the purchaser be entitled to consequential or incidental damages. In no case shall our liability exceed the product's original cost. We reserve the right to modify warranty provision without notice. Because Western Robotics Ltd. has no control over connection and use of this product, no liability may be assumed nor will be accepted for damage resulting from the use of this product, user accepts all resulting liability. If you attempt to disassemble, modify or repair this unit yourself, it may void the warranty. For warranty service on Western Robotics product(s) in, out or off warranty period, please send the defective unit(s) along with the proof of purchase and a description of the problem, postage paid, to the given address below.

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