

Centurion

ITEM#: WRL-CENTRN
Remote Glow Driver & Beacon powered by VWR

Congratulations on your purchase of the Centurion Remote Glow Driver & Beacon. The Centurion is designed with an advanced micro-controller technology that serves as a dual purpose remote glow plug igniter and audible recovery beacon for any R/C model application. It simply connects to your model's R/C receiver or Battery pack and glow plug. The Centurion drives and monitors the R/C model's engine cylinder glow plug with the control of the transmitter's available channel and/or alternatively it can drive manually with an external remote push button (sold separately). This helps the model's engine from starting and maintaining idle. This unique device monitors your attached receiver's battery voltage or battery pack and also indicates if the glow plug is faulty or disconnected with the aid of the green light emitting diode (LED) and/or with an optional remote audible buzzer extension (sold separately). The Centurion has built in features that include a selectable 12 or 40 second glow drive auto shut off to protect and extend the glow plug and battery life. Also a selectable on/off select is available to turn off the transmitter remote glow if you only wish to drive the glow manually with the push button. In this mode, the transmitter will only trigger the Centurion to act as an audible model recovery beacon with the aid of an audible buzzer if you ever lose site of your model.

It is universally designed to work with all popular brands of radio control systems and is fits in all types of R/C models. It is equipped with male/male servo plug and glow plug pigtail cable to provide easy installation. This device is recommended for all types of R/C car, truck, plane, helicopter and boat models that uses a glow plug.

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

Features:

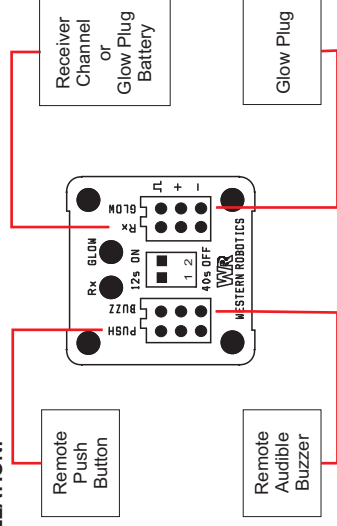
- Remotely or manually ignite your cylinder engine glow plug safely and consistently for easier engine start ups and maintain idle.
- Prolongs glow plug life compared to battery operated starters and glow igniter.
- Ultra low power consumption with operational voltage range of 3.5 to 18 volts. Can be powered by the same receiver battery or by a separate battery pack. Ideal for 1s to 4s LiPo battery packs.
- Very high efficiency glow driver up to 91% efficient to prolong battery life.
- Monitors cylinder glow plug integrity and receiver/battery pack low voltage warning.
- One red and green LED status indicator gives visual feedback of "receiver/battery" and "glow plug drive" operation.
- Smart glow plug driver that learns the transmitter remote trigger channel signal, to prevent false glow drive triggers upon power up of the transmitter and receiver. This also eliminates the confusion for the need of servo reversal trigger toggle.
- Safety features includes selectable 12 or 40 second glow drive auto shut off if the glow was left on.
- Remote audible model recovery beacon and radio transmission signal lost beacon.
- Thermal and over current (short circuit) protection.
- Optional high decibel audible buzzer for glow drive status indicator and lost model recovery beacon. Sold separately.

Package Contents:

- Centurion Remote Glow Driver unit
- 8" Glow Plug pigtail cable
- 8" Male to Male servo extension cable
- User Instruction Manual

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INSTALLATION:



Remote Glow Plug Igniter Installation

1. Make sure your receiver is turned off and installed on your R/C model with the appropriate fully charged battery pack.
 2. Securely mount the Centurion unit to your R/C model.
 3. Plug the supplied male to male servo cable to the dedicated receiver channel to drive the glow plug. Plug the other end to the Centurion's Rx slot. Make sure to match the positive and negative polarities of the Centurion slot's labelling.
 4. Pigtail Connection: Connect the ground (black) wire to any metal engine mounting bolt.
 5. Connect the glow (red) wire connection to the glow plug post.
 6. Make sure to route and secure all wiring to avoid contact with the engine.
 7. Switch the on board #2 switch to the ON position to allow the transmitter to trigger the glow igniter.
 8. Switch the on board #1 switch to either 12s position for the glow plug igniter to automatically turn off after 12 seconds have lapsed or to the 40s position to turn off after 40 seconds have lapsed. This safety feature prevents the glow plug to be ignited too long if left on.
 9. Turn on your transmitter before applying power to your receiver and Centurion unit. Now the Centurion will learn your dedicated transmitter channel signal's default position. Simply toggle your transmitters dedicated channel and the Centurion will ignite your Glow Plug. The Green LED should light up if a successful glow is apparent and the buzzer if attached will sound. Please refer to LED & Buzzer status table for feedback references.
- If the remote transmitter feature and/or the use of the receiver battery as a source is not desired, alternatively plug your battery pack source direct to the Centurion's Rx slot instead (18 Volts MAX, note correct polarity configuration before connection).

Optional Manual Push Button and Buzzer Installation

1. **Manual push button:** if an optional manual triggering of the glow igniter is desired, either in parallel or separate from the remote transmitter trigger, simply plug in the remote push button (sold separately) plug into the PUSH port the Centurion (Red wire positive +, Black wire negative -).
2. Securely mount the push button extension to your model.
3. Switch the #2 switch to either the appropriate ON or OFF position. ON position allows the transmitter to toggle the glow igniter, while the OFF position disables the remote transmitter. In the OFF position, if the transmitter channel is still plugged in the Rx port of the Centurion, it will only trigger the audible buzzer (if connected) to sound as a model recovery beacon.

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Optional Manual Push Button and Buzzer Installation Cont'd

4. **Audible Buzzer:** If an optional buzzer connection is desired for an audible feedback of the glow plug igniter or as a model recovery beacon, simply plug the audible buzzer (sold separately) into the BUZZ port of the Centurion (Red wire positive +, Black wire negative -).
5. If the glow plug igniter is ever turned on, the buzzer will sound. If the transmitter mode is enabled and the transmitter signal is lost, then the buzzer will sound as model recovery beacon. Please refer to the LED & Buzzer status table for feedback references.

ON Board Switch Functions:

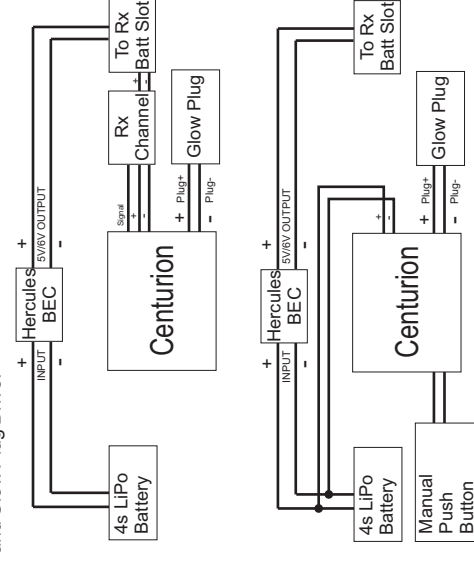
- 1 - Automatic Shut Off: 12/40 Seconds
12s = Glow igniter will turn off in 12 seconds
40s = Glow igniter will turn off in 40 seconds
- 2 - Transmitter Trigger: ON/OFF
ON = Transmitter will trigger Glow Igniter
OFF = Transmitter will trigger Audible Buzzer Only. Glow trigger only from the attached manual push button
Note: Manual Push Button will always trigger Glow Igniter in either position

LED & Buzzer Status Table

Status	Green LED	Buzzer	Red LED
Glow Plug Ignited	Solid On	Intermittent Beeping	N/A
Glow Plug Off	Solid Off	Solid Off	N/A
Glow Plug Faulty	Flashing	Constant Beeps	N/A
Model Recovery Beacon ON	N/A	Constant Long Beeps	N/A
Receiver Signal ON	N/A	N/A	Solid On
Receiver Signal OFF/Lost	N/A	Constant Beeps	Rapid Flashing
Receiver or Connected Battery Low (4.5V or lower)	N/A	N/A	Flashing

TYPICAL CENTURION APPLICATION SETUP

The following diagrams display other typical setups that the Centurion can be applied for. Remote glow plug driver using one single battery source for the Receiver and Glow Plug Drive.



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TROUBLESHOOTING:

- Q:** The Centurion's buzzer gives a silent unique beeping sound when the glow plug turns on?
A: This is normal as it distinguishes the glow plug driver being on from all other buzzer sounds. When the glow plug is cold, the buzzer will sound more silently until it reaches a regular hot temperature.
- Q:** The glow plug does not ignite when the glow plug driver is enabled and Green LED is flashing?
A: Check that the glow plug is not faulty and the connection secured tightly.
- Q:** When the glow plug driver is enabled and working properly, but if I trigger it with the transmitter the glow does not turn on but the buzzer is sounding intermittently?
A: This occurs when the on board switch #2 is switched on the OFF position. This disables the transmitter glow igniter trigger, but it triggers the model recovery beacon instead.
- Q:** The Centurion always gives a constant beeping from the attached buzzer when I turn it on.
A: The Centurion on board switch #2 could be switched on the ON position indicating the transmitter mode is enabled. If there is no transmitter signal available in this mode the recovery beacon will sound as a intermittent beeping.

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Limited Warranty (North America Only)

The Centurion Remote Glow Driver & Beacon 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 may void the warranty.

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