

MPI MX-9900 SUPER GLOW

On-board Glow Driver

Congratulations on your purchase of the MX-9900 SUPER-GLOW on-board glow driver. This an advanced on-board glow driver offering unique features. MX-9900 is very different from other on-board glow drivers. Please read the entire instruction manual before attempting to install the unit.

Designed for 4.8 - 5.9 Volt RC systems, 6 volt system must have a regulator

- Digital microprocessor design,
- Simple one-button setup, no pots, jumpers, or switches,
- Unique three operating modes – Dual Mode, Automatic, & Manual,
- External LED status display to simplify setup,
- Built-in hysteresis for chatter free operation,
- Suitable for single or twin cylinder engines,
- Compatible with AM, FM, & PCM,
- Auto shut-off when Tx or Rx is off.



1. Connecting the system:

There are three ways to connect the SUPER-GLOW to your engine and radio system. Each installation may suit a different purpose. However, we strongly recommend using the Dual Mode to take the full advantage of MX9900.

Dual Mode - throttle priority with manual override, please follow Figure 1.

Automatic Mode – throttle control only, please follow Figure 2.

Manual Mode – on demand control, please follow Figure 3.

Caution: This unit is designed to mate with Futaba, Hitec, JR, or the new Airtronics Z connector systems. If using other connector systems including the old Airtronics system, please obtain the necessary adapters or check the connector polarity before connecting the unit. Improper polarity will damage the unit and/or radio equipment.

Caution: When connecting the single NiCd cell to the unit, make sure that the **BLACK wire** is connected to the **NEGATIVE side** of the cell. The system will not work if improperly connected and the unit will be damaged. The kill switch is for safety. Turn off the kill switch while priming the engine to prevent inadvertent starting.

2. Setup the system:

For Dual Mode:

1. With the transmitter on, hold down the SET button on the unit and turn on the receiver. When the LED starts flashing, release the button. This indicates it is reset and ready to record the new setting.
2. Set the throttle stick to the position where the glow should light, usually about 1/4 throttle. Also set the CH-5 switch to the preferred "off" position.
3. Now, hold down the SET button. The flash rate of the LED will change while the unit records both throttle idle position and CH-5 off position.
4. Continue holding the SET button and move the throttle stick to full throttle position then release the SET button. Setup is complete.
6. To reset the system, restart from step 1.

For Automatic Mode:

Follow Dual Mode setup without connecting CH-5.

For Manual Mode:

1. With the transmitter on, hold down the SET button on the unit and turn on the receiver. When the LED starts flashing, release the button. This indicates it is reset and ready to record the new setting.
2. Set the CH-5 switch to the preferred "off" position.
3. Hold down the SET button. The flash rate of the LED will change while the unit records the CH-5 off position. Release the SET button and the setup is completed.

The unit features a non-volatile memory. The set position will not be lost without a battery connected.

3. In-flight operation:

For Dual Mode:

The on-board ignition will turn on automatically when you throttle back below the preset point. As the throttle stick is advanced above the preset point, the on-board ignition will turn off. A built-in hysteresis provides a stable chatter free, glitch free operation. The external LED indicator will turn on and off accordingly.

At any point during the flight, you can always flip the CH-5 toggle switch to turn on the ignition and override the automatic setup. This is most useful to re-ignite the dead cylinder of a twin. Instead of throttling back to turn on the ignition, while risking a dead stick, just set the throttle to keep the operating cylinder running and flip the CH-5 to relight the dead cylinder.

For Automatic Mode:

The system will perform as stated in the Dual Mode without the CH-5 overriding capability. The external LED indicator will turn on and off accordingly.

For Manual Mode:

Simply toggle the CH-5 switch to turn on and off the on-board ignition as required. The external LED indicator will turn on and off accordingly.

For FM and AM radios, the glow plug is turned off automatically whenever transmitter or receiver is off. For PCM radio, this will depend on your fail-safe setup. The glow plug is turned off automatically whenever the receiver is off. However, when only transmitter is off, depending on the fail-safe setup, the on-board ignition may come on automatically after losing the transmitter signal.

4. Specifications

- Size: 1.9" x 1.4" x 0.7
- Weight: 1 oz
- Power consumption (from receiver): 2-15 ma
- Power Source: 1.2 Volt, 1300 mAh SC size minimum for single and 2000 mAh SC size minimum for twin

5. Troubleshooting

The LED flashes all the time when the SET button is pressed while setting the idle.

If the LED flashes on and off at the same interval, the SUPER-GLOW is not getting transmitter signal. Turn on the transmitter and try again.

If the LED blinks twice then off and repeats, turn the receiver off, wait for a few seconds then try again. If the problem continues all the time, the SUPER-GLOW program was lost, reprogram the unit. Or, the SUPER-GLOW may have failed. Send it in for repair.

The LED flashes all the time when both transmitter and receiver are on.

If the LED blinks twice then off and repeats, repeat the procedures to set the idle position again. If it still fails send it in for repair.

The idle position is correct for one airplane but fails to work for another.

The idle position should be set individually for each plane. If the servo reverse of throttle is changed, the idle position must be reset again.

LED flash

Try again after turning the system off for at least two seconds then turn it on again. It is caused by high loads by the servos during power up.

Disclaimer

Improper use of this product may cause serious injury to oneself or others, or result in property damage. Maxx Products suggests that you read and comprehend the information contained in this manual before installing and operating this product. Please follow all R/C safety guidelines.

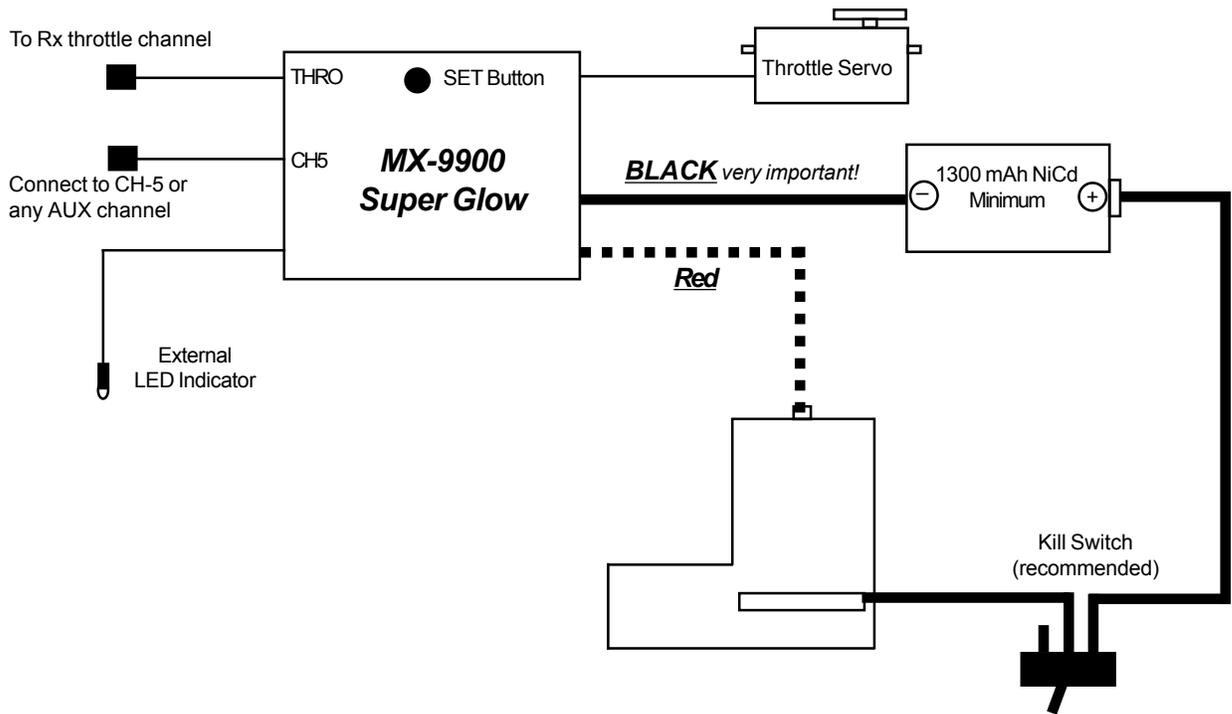
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MPI

Single Cylinder Installation for Dual Mode



Twin-Cylinder Installation for Dual Mode

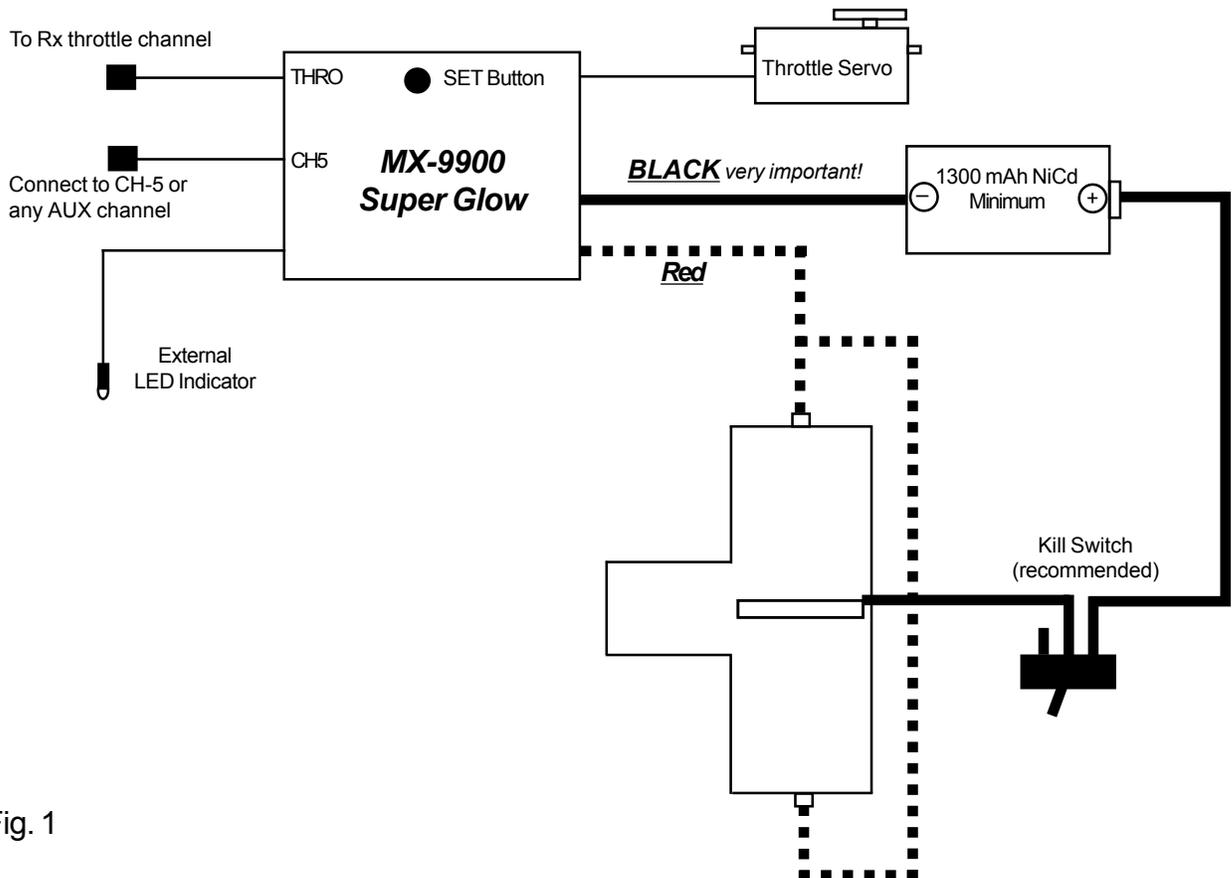


Fig. 1

Single Cylinder Installation for Automatic Mode

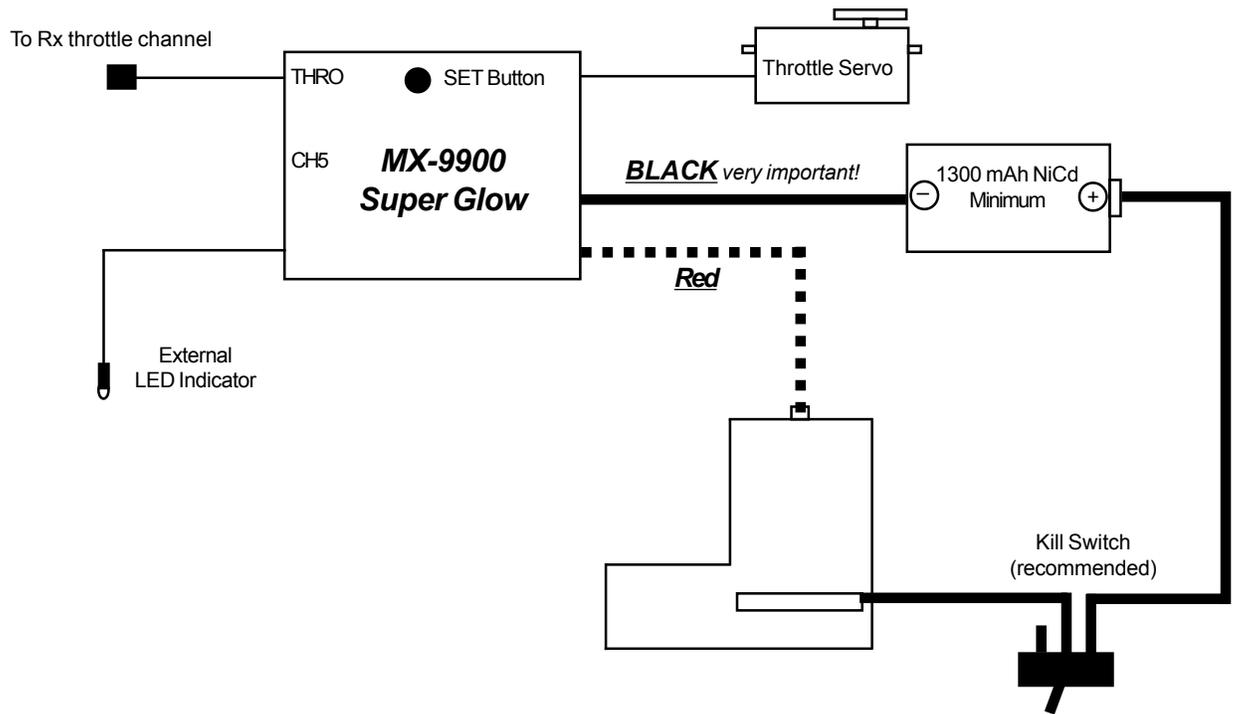


Fig. 2

Single Cylinder Installation for Manual Mode

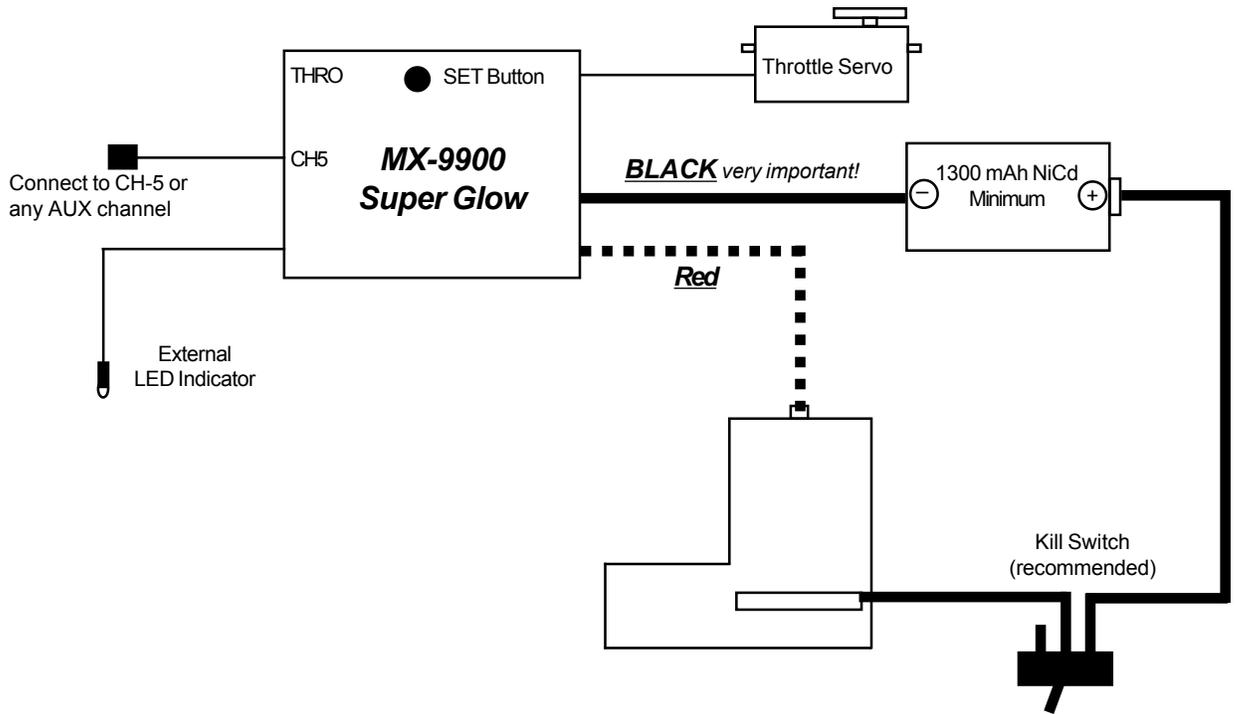
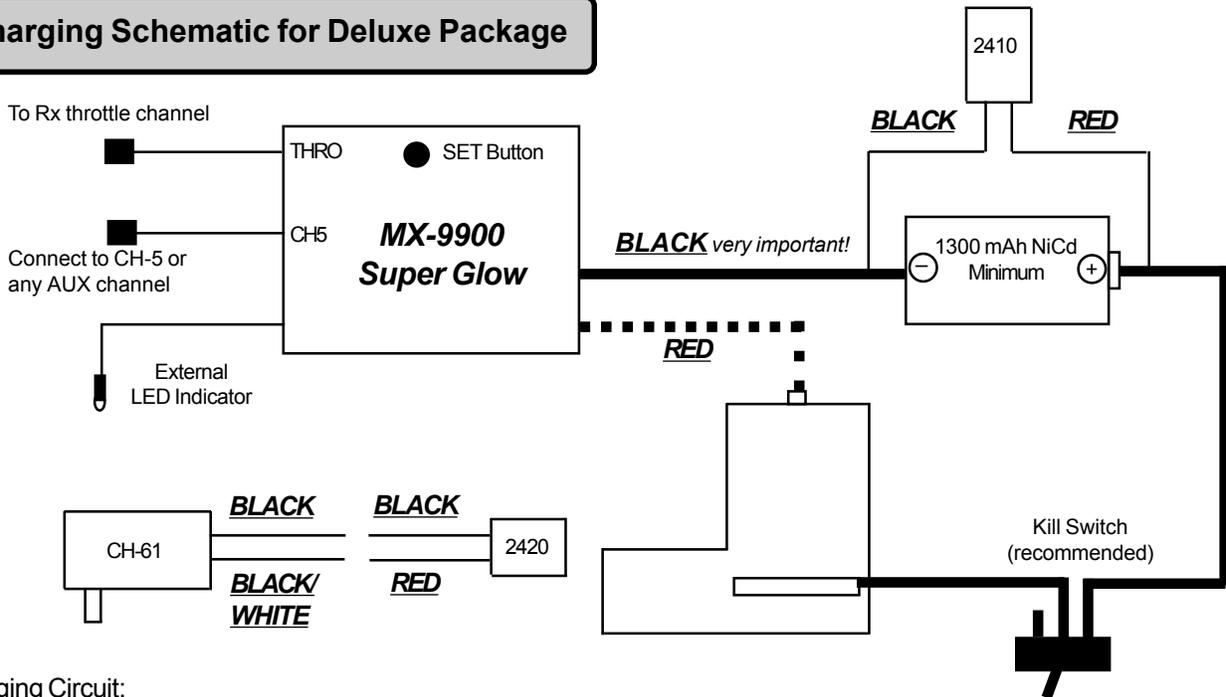


Fig. 3

Charging Schematic for Deluxe Package

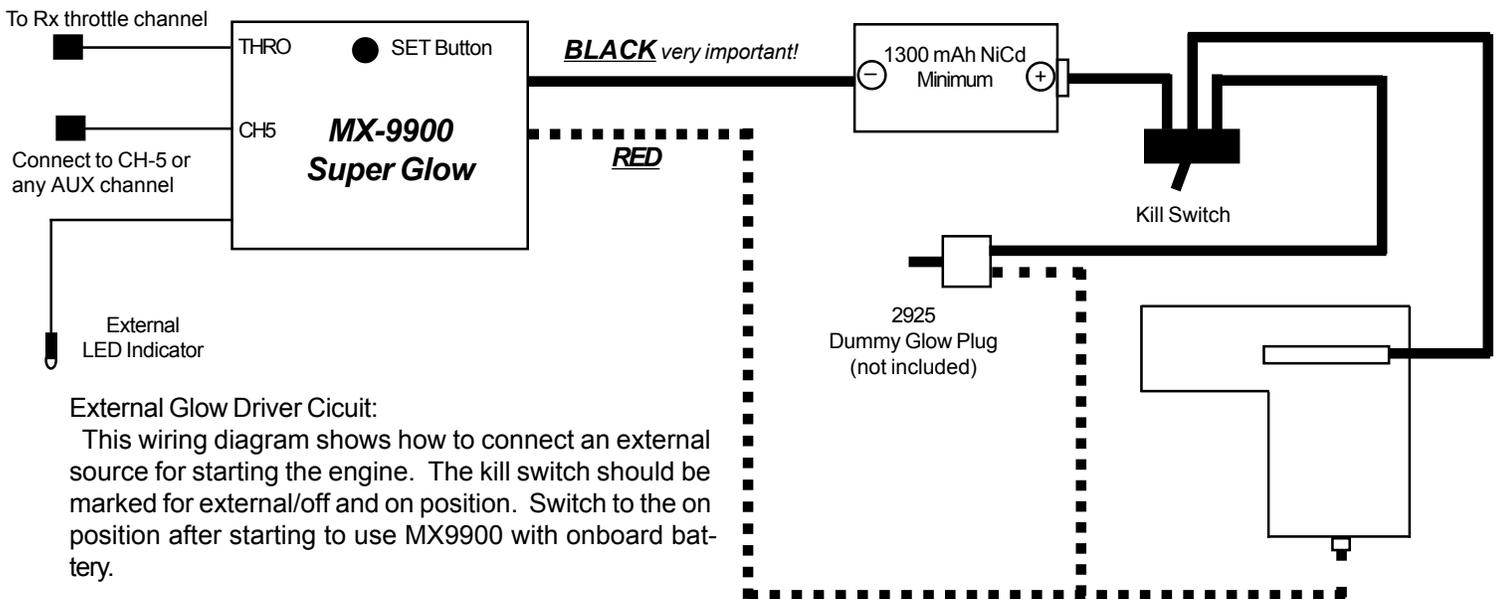


Charging Circuit:

1. Remove the glow plug end from the charger, CH61. Attach the charge connector, 2420. Observe polarity per drawing. If the charger is not clearly marked for polarity be sure the verify the output from the charger to prevent damage to the charger and/or cell.

2. The charging jack consists of 2 parts, 2410(connector) and 2490(receptacle). Connect the leads from 2410 directly to the single cell for the glow plug, observe polarity. 2410 can be inserted in 2490 and mounted in the model for easy access.

Schematic for External Glow Driver for Starting



External Glow Driver Cicuit:

This wiring diagram shows how to connect an external source for starting the engine. The kill switch should be marked for external/off and on position. Switch to the on position after starting to use MX9900 with onboard battery.