

Evolution® 58GX2 ICU-L Ignition Addendum

The ignition system that is included with your Evolution 58GX2 engine has been changed to the ICU-L type ignition. The instructions for the ICU-L type ignition are shown below.

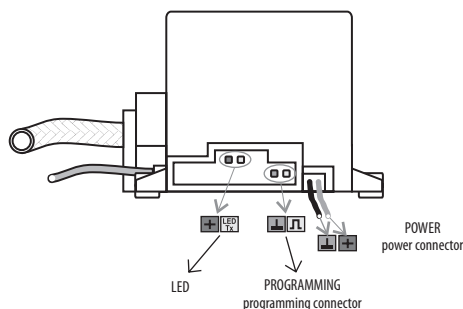
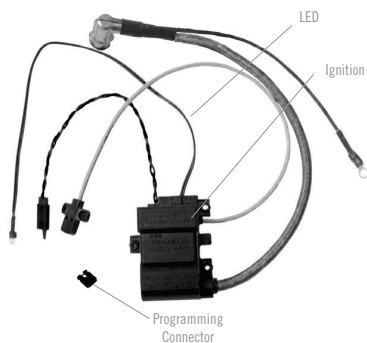
Evolution 58GX2 Engine Simple Start Ignition System

The spark ignition included with your Evolution gas engine is a modern generation electronic ignition. There are many useful functions built into the microprocessor of this unit.

In addition to the basic ignition functions, the unit has a FAIL-SAFE feature: After 90 seconds of inactivity, it automatically switches to an inactive state. In order to resume normal operation, it is necessary to turn the battery switch off and then back on. This function will preserve battery life should the switch be left in the ON position during inactivity.

Installation of the 58GX2 Simple Start Ignition Unit

While installing the ignition unit in your model, be careful to have all parts that are connected to the unit and the engine situated as far as practical from the radio receiver and radio antenna. The throttle servo should be mounted a distance of 8–12 inches from the engine. The spark plug cable must not touch any part of the model structure as vibration may damage the cable. If this is not practical, it will be necessary to provide an insulation material for the cable. Secure the ignition unit to the airframe using the provided hardware. Install the bolts through the three rubber grommets and tighten securely. The grommets help to dampen the ignition unit from vibration. **DO NOT HARD MOUNT.** Your Evolution ignition module has steel braided spark plug leads with grounding straps. Attach the grounding strap lead to a cylinder base bolt or suitable place on the engine, and push the spark plug cap firmly on the spark plug. Install the spiral wrap spark plug lead covering to protect the plug lead steel braiding from any possible chafing.



DESCRIPTION

The ICU-L ignition makes the selection of a pre-ignition curve ("short" or "long" exhaust stroke) possible. You can change the setting using the supplied programming connector.

The setting is permanently stored in the memory of the ignition even if the supply voltage is turned off. You do not need to change the setting when you turn the ignition on again.

BASIC FEATURES

- Two preprogrammed pre-ignition curves ("short," which is the default setting, and "long," the tuned silencer)
- Sleep mode after 90 seconds of engine inactivity to save battery power
- Ignition shuts off if engine runs counterclockwise

Enabling or Disabling Battery Test

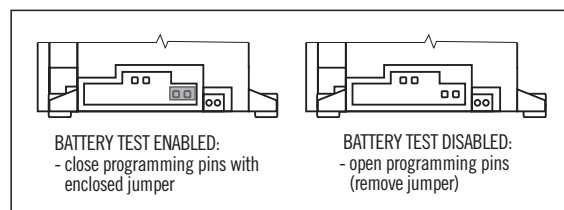
This ignition makes it possible to enable or disable the battery test. The battery test is very useful when Li-Po or Li-Ion batteries are used. During the test, a series of flashes are generated and voltage is measured. When the battery passes the test, that means it will run for a minimum of 10 minutes in flight.

- Battery test is disabled when jumper is removed and programming pins are open (this is the default condition of the engine as shipped from Evolution)

- Battery test is enabled when jumper is plugged and programming pins are closed

CAUTION: With the battery test enabled the engine can unintentionally start during the testing process. Be sure to restrain the aircraft prior to turning the ignition on when using the battery test feature.

- Enable or disable battery test when the ignition is off



If you want to change the type of silencer, do the first two steps and then continue to PROGRAMMING SEQUENCE. Otherwise, follow these steps:

FIRST STEP	SECOND STEP	START
<ul style="list-style-type: none"> - Screw on pickup on engine - Attach the plastic protection to the high voltage cable - Connect boot to plug - Mount ground terminal on the high-voltage cable bolt holding the engine to the motor mount - Mount the ignition to the airplane 	<ul style="list-style-type: none"> - Connect enclosed LED to the ignition (red or red/black wire to left) 	<ul style="list-style-type: none"> - Keep clear of the propeller - Connect battery with the ignition box

Starting Sequence

- Move propeller to put the piston at bottom dead center of its travel
- Keep your hands outside of the propeller radius to avoid serious injury
- Hold the airplane and switch on ignition
- If battery test is enabled, the ignition starts battery test; during this test, a series of sparks are generated for about 2 seconds and LED is blinking
- If battery test is disabled, then LED blinks for about 2 seconds
- If LED turns off, you can fly; otherwise battery is low

Changing the Ignition Timing

If using the battery test function

- Make sure plug cap is attached to the plug
- Turn on ignition and power up
- Wait about 90 seconds until sleep mode is active; LED will begin flashing once per second
- If battery test is enabled (jumper is plugged) remove the jumper from programming pins
- Wait about 3 seconds; a flashing sequence changes itself
- Unplug battery
- Plug jumper back (to enable battery test)

If not using the battery test function

- If battery test is disabled (jumper is removed), plug the jumper to programming pins
- Wait about 3 seconds until flashing sequence changes
- Unplug battery
- Unplug jumper back (to disable battery test)

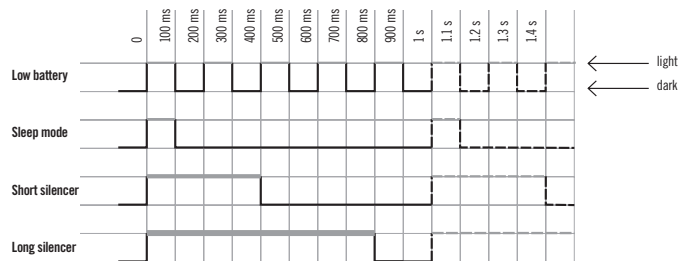
To change silencer type, repeat the procedure again:
short muffler ⇨ tuned pipe ⇨ short muffler, etc.

WARNING! Use the ignition only in dry conditions

Use recommended number and type of cells for every ignition type
 The product is specified for RC engines only (other use must be approved by the manufacturer)
 Do not take off the plug cap if the ignition is on
 Danger of electric injury (voltage over 20,000V)
 Recharge ignition battery only outside the model
 Because of possible interferences, ignition and battery should be placed at least 25 cm from the receiver

The manufacturer is not responsible for damages caused by not following the manual or by using the ignition for anything other than RC engines. Guarantee is void if the high voltage (HV) cable or HV isolation is damaged, the pickup or batteries are reversed, or the ignition box is opened.

LED Blinking Types



LED Blinking Indication

Type	Problem	Solution
One short flash per second	Sleep mode spark is blocked	Unplug battery and reconnect it again

Technical Data

Version	Lite
Weight	170 g
Power supply	2x Li-Ion/LiPo* 6x NiCd / NiMH* 5x NiCd / NiMH
Minimal battery voltage*	6.5V*
<i>Sleep mode after 90 seconds of engine inactivity</i>	
<i>Battery level signalization *</i>	
<i>Ignition goes off if engine runs counterclockwise</i>	
Choice of preignition curve	
Preignition point	5°
Location of the magnet	240° / 120°
Min. battery capacity	600mAh

* if battery test is enabled

Never use ignition with plug cap removed from plug! Before first flight, do a range check with running engine.