RC Kill Switch

Cod. 90040210

Photocoupled electronic switch with voltage regulator

USAGE MANUAL V1.1

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Dear Customer,
thank you for your purchase of electronic switch RC Kill Switch.

It is an electronic switch for starting spark ignition of gasoline engines and it can be activated by the transmitter (a free channel is needed) or by the button on the device itself; a high brightness LED indicator shows the status of the device (ON/OFF).

The RC Kill Switch brings together an electronic switch, a voltage regulator and a photocoupler that assures the insulation of the receiver from electronic ignition interferences.

It is ready to use and any setting is required; anyway the user can activate the fail safe function in case of loss of signal from the receiver.
It needs a dedicated battery 4,8-9V and the output voltage can be set by the user from 5 to 7,4V

CONNECTIONS

FIXING:
Drill a rectangular hole of 53x23,5mm for placing the device.
Position and fix it with the 2 self-threading screws supplied.

It is recommended to realize an installation assuring the right insulation from engine vibrations.

CONNECTION RC Kill Switch-Receiver:
Connect the 3 wires cable to the receiver into the channel you want to use for controlling the Kill Switch.

The channel should correspond to a 2 position switch of the transmitter with ATV and D/R set at 100%.

CONNECTION RC Kill Switch Spark ignition unit:
Connect the 2 wires cable with UNI connector (output of the switch) to the spark ignition unit.

Connect the 2 wires cable with BEC connector (input of the switch) to the battery you intend to use for supllying the spark ignition unit.

USAGE

The RC Kill Switch is ready to use after you have fixed the device, carried out the connections as shown into the "Connection" paragraph and set the right output voltage for your engine unit. (See the following 2 paragraphs)
When you turn the device on:
- if the FailSafe function is activated the LED emits 3 rapid flashes
- if the FailSafe function is not activated the LED emits 2 series of 3 rapid flashes.

For starting the engine use the switch on the transmitter or press the button on the device.
The LED on indicates that the switch is closed and that it is supplying the spark ignition of the engine.

PICTURE 1

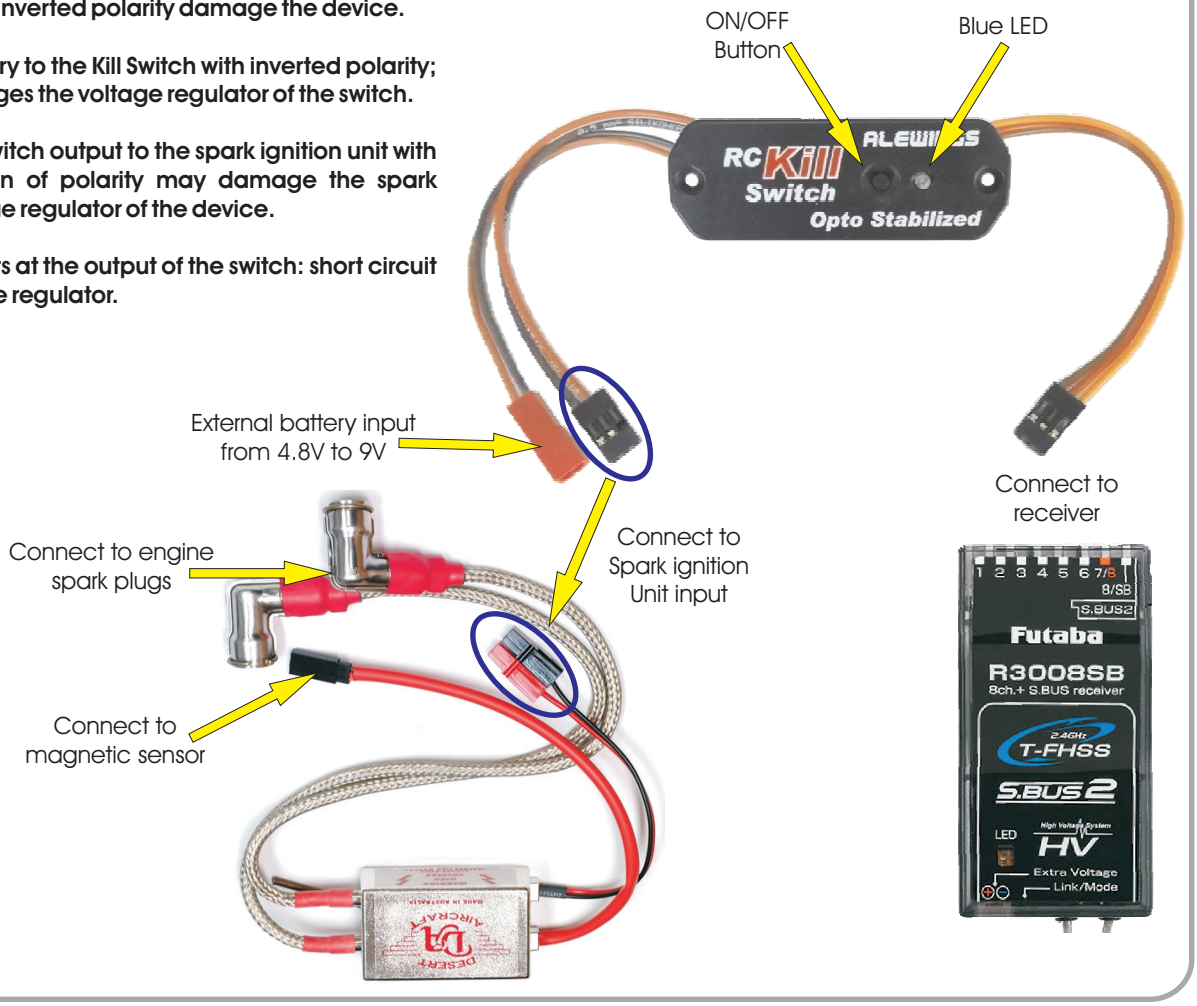
WARNING:

- Do not connect the Kill Switch to the receiver with inverted polarity: connections with inverted polarity damage the device.

- Do not connect the battery to the Kill Switch with inverted polarity; inversion of polarity damages the voltage regulator of the switch.

- Do not connect the Kill Switch output to the spark ignition unit with inverted polarity; inversion of polarity may damage the spark ignition unit and the voltage regulator of the device.

- Do not cause short circuits at the output of the switch: short circuit damages the inner voltage regulator.



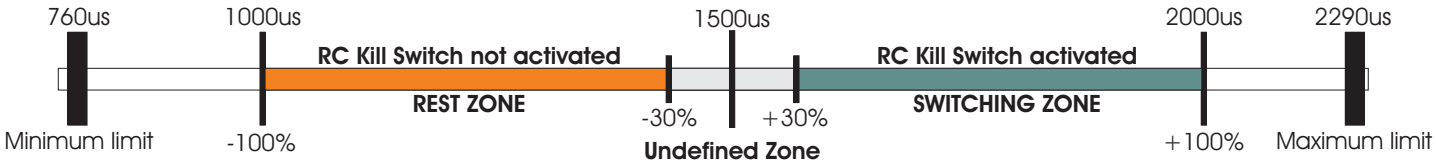
BEFORE USE

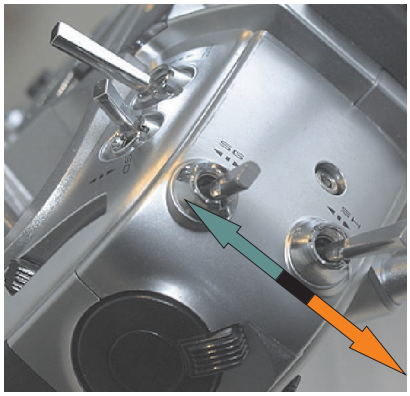
TRANSMITTER SETTING:

For using the Kill Switch first of all you have to choose a channel on the receiver controlling it.
Check that the channel correctly respond to the transmitter and that travels (ATV, D/R) are set at maximum values.
We recommend associating the channel to a 2 position return spring switch; if your transmitter doesn't have one, it is possible to use a 2 position switch or a trimmer or a slade.

The **Rest Zone** (=Kill Switch not activated) corresponds to a signal from receiver with value of ATV minor than -30% (it is recommended setting the ATV from transmitter at 100%); when starting the Kill Switch, the signal from receiver must correspond to the rest position.

Check that when you operate on the channel, the **Switching Zone** (from Kill Switch off to Kill Switch on), corresponds to a signal from receiver with ATV higher than +30%
(it is recommended setting the ATV from transmitter at 100%).





SWITCHING ZONE
ATV > +30%
SIGNAL > 1640us

REST ZONE
ATV < -30%
SIGNAL< 1390us

Whenever you turn the device on, it check that the signal from receiver corresponds to the rest position; if the signal is not correct, the LED starts flashing slow for indicating an error and the Kill Switch doesn't activate.

If the signal is correct, the LED on the device flashes in order to show the Fail Safe status:
- 1 series of 3 rapid flashes= Fail Safe is activated
- 2 series of 3 rapid flashes= Fail Safe is not activated

CHECK AND CHOICE OF THE FAIL SAFE MODALITY:

The device features a safety system (Fail Safe) that, if activated, in case of a wrong or missing signal from receiver, forces the Kill Switch to open; so the spark ignition is no more supplied and the engine turns off.

To verify if Fail Safe is activated or not, proceed as follows:
make sure that the receiver is off, connect the Kill Switch to the receiver into the channel chosen for controlling it; after configuring it, turn the transmitter on and bring the control to the rest zone.

Turn the receiver on and check the number of flashes of the LED:
-1 series of 3 rapid flashes= Fail Safe is activated
-2 series of 3 rapid flashes= Fail Safe is not activated

To change from a modality to the other, proceed as follows:
make sure that the receiver is off and the Kill Switch is connected to it; press and keep pressed the button on the device and simultaneously turn the receiver on; release the button and turn the receiver off. Turn on again and check if the number of flashes corresponds to the modality chosen.

BATTERY FOR SUPPLYING THE SPARK IGNITION UNIT:

To the Kill Switch you can connect any type of battery having voltage between 4,8V and 9V.
Connect the battery to the 2 wires cable with BEC connector (see picture 1).

Ideal battery is a LiPo 7,4V from minimum 1000 mAh to maximum 2500 mAh.

OUTPUT VOLTAGE SETTING

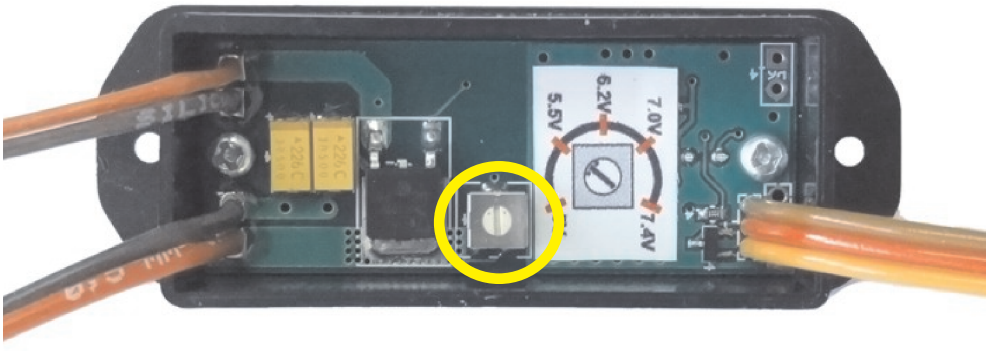
Before using the Kill Switch check carefully that output voltage is correctly set compatibly with your spark ignition unit.

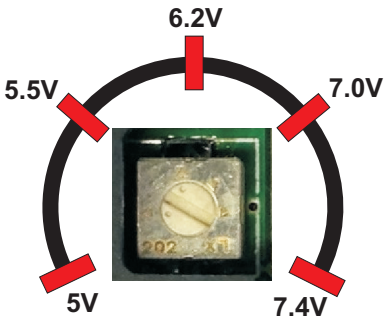
ATTENTION: a wrong setting of the output voltage may damage the spark ignition unit; always check that the set output voltage is less than or equal to maximum supply voltage indicated into specifications of your spark ignition unit.

This new concept Kill Switch can be used with both spark ignition units supplied at maximum 5V and last generation LiPo compatible ones.

Using a little screw driver, move the rotary potentiometer to the position corresponding to the desired voltage.

Only after this setting is possible to connect the switch output to the spark ignition unit. .





OUTPUT VOLTAGE SETTING

USAGE

After carrying out all connections, checking transmitter configuration, chosing Fail Safe modality and setting the output voltage, the device is ready to use.

Turn the transmitter on and check that the control of the channel managing it is in rest position.

Turn the receiver on and check the right flashes of the LED.

For activating the RC Kill Switch you can act in 2 different ways:

- Press the button on the device for at least 2 seconds
- Move the control on your transmitter from the rest position to the commutation position and keep there for at least 2 seconds (if you are using a two position switch without return spring or a trimmer/slade, bring it back to the rest position).

After one of these 2 actions, the LED starts blinking fast and after 2 seconds the Kill Switch activates the output; the LED turns solid blue and the spark ignition unit is supplied.

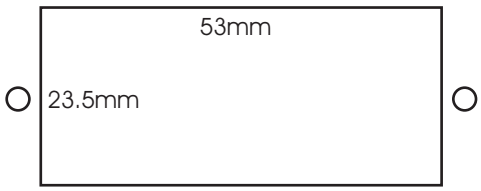
When the device is activated (spark ignition unit supplied), you can deactivate it acting in the same 2 ways:

- Press the button on the device for at least 2 seconds
- Move the control on your transmitter from the rest position to the commutation position and keep there for at least 2 seconds (if you are using a two position switch without return spring or a trimmer/slade, bring it back to the rest position).

After one of these 2 actions, LED starts blinking fast and after 2 seconds the Kill Switch deactivates the output; the LED turn off and the spark ignition unit stops being supplied.

Turning on and off the spark ignition unit can be managed by transmitter or manually by the button on the device.

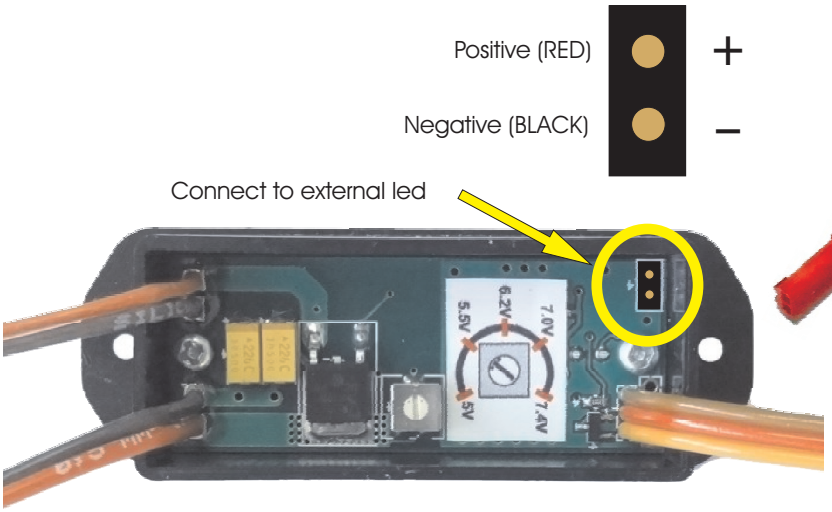
FIXING

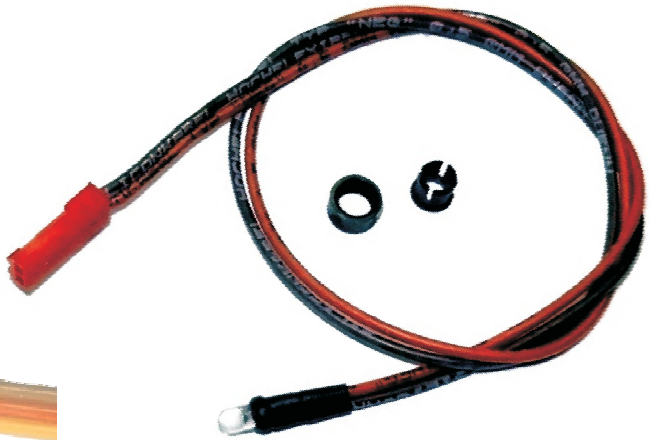


Distance between the holes 60mm

ACCESSORIES

If you have to mount the device inside your model and you are not able to see the LED, you can use this optional accessory in order to bring the lighting indicator in a visible position.





Item code: 90010705

WARNING

This is not a toy.
Pay close attention to the following points, as the non observance of them can destroy the product, nullify your warranty and lead to property damages or personal severe injuries!
- Never leave the product unattended while it is switched on, in use or connected with a power supply. If a defect occurs, it could set fire to the product or to the surroundings.
- Avoid incorrect connections or connections with reversed polarity.
- All wires and connections have to be well insulated. Short-circuits might destroy the product.
- Never allow this product or other electronic components to come into contact with water, oil, fuels or other conductor liquids, as these could contain minerals, which are harmful for electronic circuits. If this happens, stop the use of your product immediately and let it dry carefully.
- Always wire up all the parts of the equipment carefully. If any of the connections loosens, due to vibrations, you might damage your device.
- Never cut off or modify the original plugs
- Never change the polarity of the receiver connectors
- Do not open the product and never solder on the PCB

SPECIFICATIONS

Operating voltage:	from receiver >5.1V to 9V MAX
Current drain from receiver:	2mA
External battery:	4-5cells Nixx, 2s Li.Poli, 2s LiFe
Voltage external battery:	from 4.8V to 9V MAX
Output voltage:	programmable from 5 to 7.4V
Dropout voltage regulator:	200mV@ 3A
Max load:	3A continuous - 6A peak
Current drain Switch ON:	10mA
Current drain Switch OFF:	50mA every 6 months
Fail Safe setting:	Programmable
Dimensions:	52x23x20mm 69x25mm external panel
Weight:	20g including cables
Working temperature:	-10 up to +60 °C

These specifications may be changed without advance notice.

WASTE DISPOSAL

At the end of its life cycle this product is subject to special waste disposal and it cannot be disposed with urban waste