

# Single VALVE

Cod. 90040401

Single Action valve for Brake and Gear

## USAGE MANUAL V2.0

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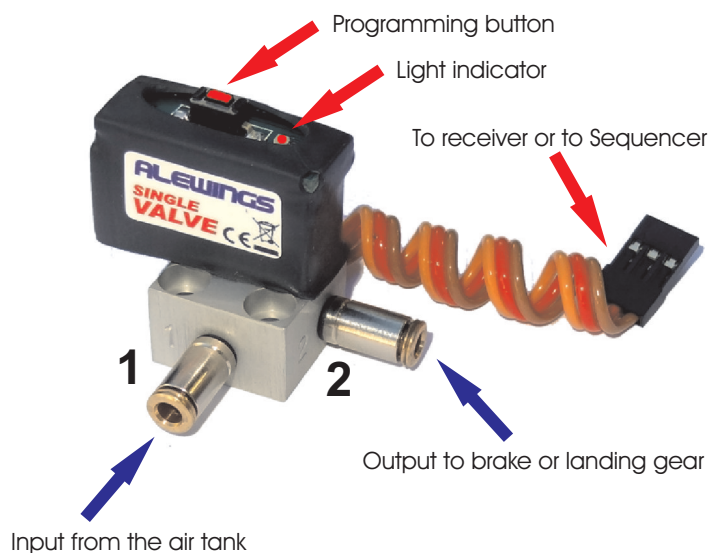
Dear Costumer,

we express our tank for your purchase of Alewings electro VALVE.

The device is a three ways single action valve; it is connected to the receiver or to the sequencer (item 90020401) and allows you to control opening of doors, landing gears or pneumatic brakes.

You can choose two operation mode:

- **ON / OFF:** for opening/closing doors and landing gears
- **PROPORTIONAL:** for measuring out braking



### Box contents

- Valve
- 2 threaded straight 3mm connectors
- Manual

### Two operation mode:

- ON / OFF: for opening/closing doors and landing gears
- PROPORTIONAL: for measuring out braking

## INSTALLATION

Screw the 2 connectors provided to the metal plate in correspondence to number 1 and number 2.

Fix the valve with two screws into the holes of the metal plate or with some double-sided tape.

Connect the 3 lead cable to the receiver (or to the sequencer) into the socket corresponding to the channel you want to use to control the valve.

Connect the tube for air (3mm external diameter) to the straight connectors, as shown into the picture. The tube coming out from the air tank must be connected to the straight connector number 1. The tube from which the air goes to the landing gear, door or brake must be connected to the straight connector number 2.

The number 3 output must be open since it is the escaping hole for air.

**NB: the valve is a normally closed type; this means that when not supplied or when it does not receive any signal from the receiver/sequencer it doesn't let the air to pass and it remains closed.**

## MODE SETTING

Choose the operation mode suitable for the use you need:

- ON-OFF mode: for controlling opening and closing of doors and landing gears. Attention: if you have gears and/or doors with double action system, you have to use two valves (see "Example number 2")
- PWM Proportional mode: for brakes

Make sure that receiver is off. Power it on and observe the light indicator on the valve:

- One sequence of three flashes corresponds to ON-OFF modality
- Two sequences of three flashes correspond to PWM Proportional modality

If the modality isn't the right one, please power the receiver off. Than press and keep pressed the valve button while powering the receiver on. The valve will change operating mode. Release the button and power the receiver off again.

Power the receiver on and check if the valve entered the right modality.

**NB:** when you pass from a modality to the other, you lose all settings and the valve returns to default

## PROGRAMMING

To make sure that the valve is connected to receiver and that you set the correct operation mode. Turn the transmitter on and then the receiver with valve connected to the right channel.

### **ON-OFF Mode:**

Setting of the commutation points:

Set ATV for the channel from transmitter.

We recommend to use a channel controlled by 2 position switch, with ATV at about 100%.

- Press the PRG button and keep pressed for at least 5 seconds; release it when the light indicator emits 3 sequences of 3 rapid flashes
  - Move the switch of the transmitter to position corresponding to valve closed
  - Press the PRG button and keep pressed for at least 5 seconds; release it when the light indicator emits 3 sequences of 3 rapid flashes
  - Move the switch of the transmitter to position corresponding to valve opened
  - Press the PRG button and keep pressed for at least 5 seconds; release it when the light indicator emits 3 sequences of 3 rapid flashes
- After 3 seconds the light indicator will emit a sequence of "n" flashes: they indicate the time that the valve will take to open.

Setting the valve opening time:

Every flash corresponds to half a second: 3 flashes mean that the valve takes 1,5 seconds for opening.

For changing this value, press the button as many times as the half seconds you need. Attention: don't wait for more than 3 seconds between one pressure and the other.

If you wait for more than 3 seconds the light indicator emits a sequence of "n" flashes corresponding to the times you pressed the button. Repeat this step until you reach the wanted number of flashes.

Press the button and keep pressed for at least 5 seconds. Release after you have seen 6 sequences of rapid flashes.

The device has memorized the settings and now it is in operating modality.

Move the switch on the transmitter and check the valve in ON and OFF position.

When valve is opened the light of the light indicator is on, when the valve is closed the light is off.

### **PWM Proportional Mode:**

Setting of the commutation points:

Set ATV for the channel from transmitter.

We recommend to use a channel associated to a proportional control, such as a stick or a slider.

- Press the PRG button and keep pressed for at least 5 seconds; release it when the light indicator emits 3 sequences of 3 rapid flashes
- Move the stick of the transmitter to position corresponding to valve closed
- Press the PRG button and keep pressed for at least 5 seconds; release it when the light indicator emits 3 sequences of 3 rapid flashes
- Move the stick of the transmitter to position corresponding to valve opened
- Press the PRG button and keep pressed for at least 5 seconds; release it when the light indicator emits 3 sequences of 3 rapid flashes.

The device has memorized the settings and now it is in operating modality.

Moving the stick from one recorded position to the other, the valve will open in a proportional way. When you move the stick to the up or down end positions, the valve will completely open or close.

## 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

Dimensions:	Base 18x18mm Valve 28x12x29mm
Weight:	27gr with cable and base
Supply voltage:	from 5,5V to 7,4V
Current drain:	100mA
Operating pressure:	from 0 to 10 bar
Totally programmable single effect valve	
Working temperature:	-10 up to +60 °C

*These specifications may be changed without advance notice.*

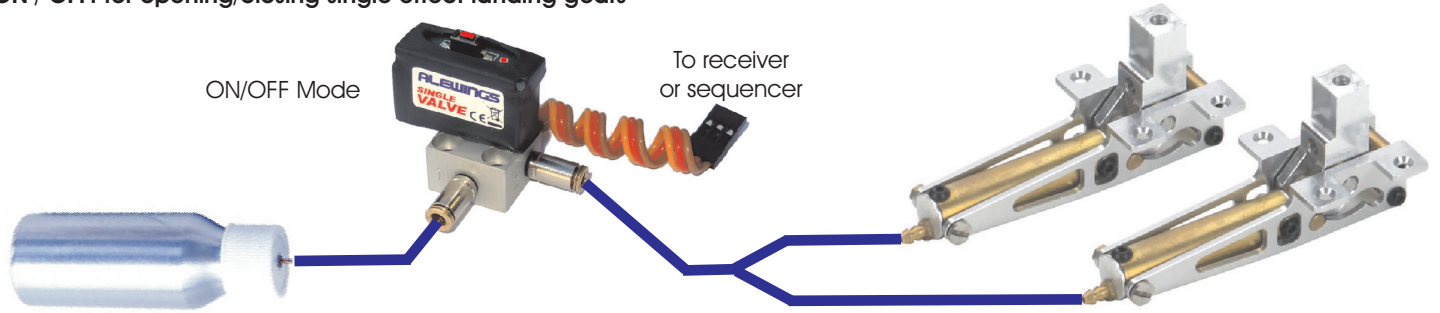
## WASTE DISPOSAL



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

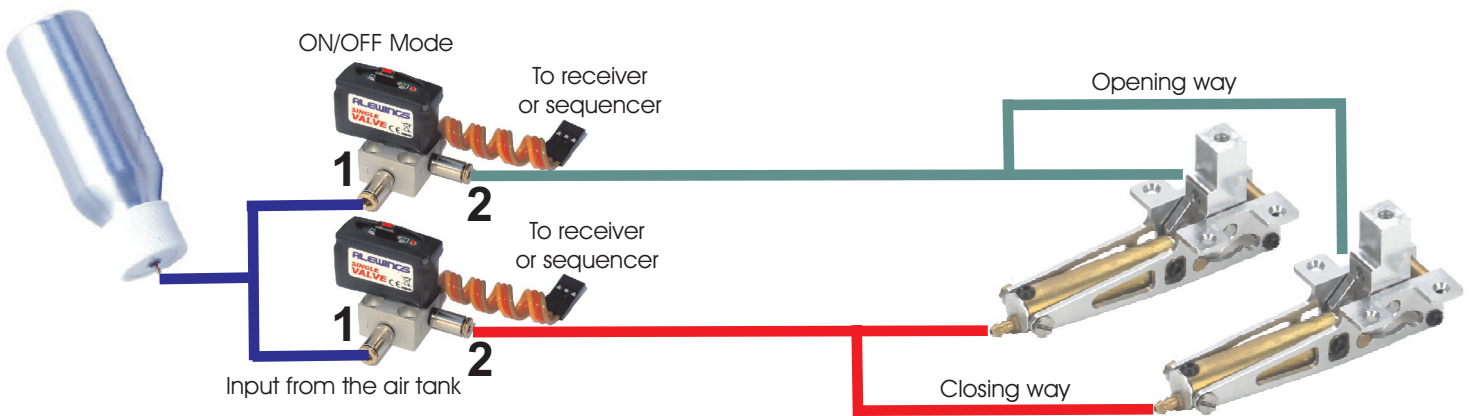
### EXAMPLE 1

ON / OFF: for opening/closing single effect landing gears



### EXAMPLE 2

ON / OFF: for opening/closing double effect landing gears



### EXAMPLE 3

Pneumatic brakes

