Servo Signal Reverser

Servo signal reverser
User manual



Read the entire manual before first use and keep it for future reference.

www.rotorama.com

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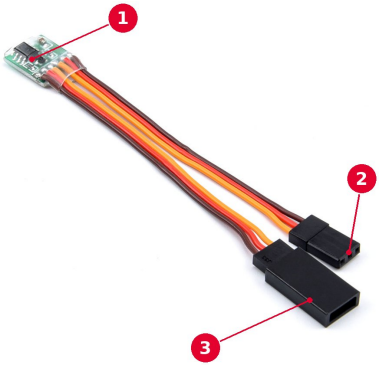
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1. Product description

1.1 What it is for

The Servo Signal Reverser is a short cable with an electronic module that is connected between the receiver and a servo. The module inverts the servo control signal, so the **servo moves in the opposite direction** to the one it would move in without the reverser.

It is used mainly in model aircraft where two aileron servos are connected to a single receiver channel via a Y cable. Because the servos are usually mounted as mirror images in the wing, both ailerons would move in the same direction. Adding the reverser to one of them reverses its direction, so the ailerons deflect in opposite directions as they should.



① electronic reverser module · ② connector towards the receiver · ③ connector for the servo

1.2 Technical data and package contents

Product designation	Servo Signal Reverser
Function	reversing the direction of servo travel
Operating voltage	5–6 V
Maximum current	2 A
Connectors	3-pin servo connector ② (socket) and ③ (pins in a housing)
Wires	brown (−), red (+), orange (signal)
Package contents	1× cable with reverser
Not included	servo, receiver, Y cable, transmitter, power supply (BEC / receiver battery)

2. Use

2.1 Safety warnings

- Use the reverser only within the operating voltage range of **5–6 V**. Do not connect it to a system with a higher voltage (e.g. high-voltage HV servos powered directly from a battery) – the module could be damaged.
- The total current flowing through the cable must not exceed **2 A**. For powerful or large servos, check the current draw in the servo manufacturer's specifications.
- Connect and disconnect the cable only with the receiver **power switched off**.
- When setting up an electric model on the ground, disconnect the motor or remove the propeller – an unintended propeller start can cause serious injury.
- Protect the module from moisture, dust, impacts and short circuits. Do not remove the protective heat-shrink sleeve.
- Before every flight, check the direction and range of travel of all control surfaces (Chapter 2.3).

2.2 Connecting it in the model

The reverser is always inserted **only into the branch leading to one servo** – the one whose direction you want to reverse.

① Switch off the transmitter and the receiver power supply.

② Connect connector ② of the reverser to the output of the Y cable (or directly to the receiver channel if you are reversing a single servo).

③ Plug the servo connector into connector ③ of the reverser.

④ Observe polarity when connecting: brown wire (−) to the negative pole, red (+) to the positive pole and orange to the signal. The wire colours of the reverser must match the same wire colours of the receiver and the servo.

⑤ Secure the connections against coming apart (e.g. with a connector clip or tape) and fix the module so that it does not move freely and is not strained by the cables.

※ If you connect the reverser between the receiver and the Y cable, the direction of both servos is reversed at the same time and the ailerons will still move in the same direction.

If your transmitter has a free channel and mixing, you can also connect the aileron servos to two separate channels and set the direction in the transmitter. The reverser is a simple alternative where this is not possible or where you want to keep the Y-cable connection.

2.3 Function check

After connecting, switch on the transmitter, then the receiver power supply, and check:

- **Direction of travel** – when the aileron stick is moved to the right, the right aileron goes up and the left aileron goes down; when moved to the left, the opposite.
- **Neutral position** – with the stick centred, both ailerons are level with the wing. Correct any difference mechanically (pushrod length or servo arm position); the channel trim and subtrim act on both servos at once.
- **End points** – the servos do not bind or buzz in their end positions. A mechanically blocked servo draws increased current.

2.4 Troubleshooting

Problem	Possible cause and solution
The servo after the reverser does not respond	The connectors are not fully inserted or polarity is not observed. Check the connection according to Chapter 2.2.
The ailerons move in the same direction	The reverser is connected before the Y cable (it reverses both servos) or is missing. Insert it into the branch of one servo only.
The ailerons move against each other, but opposite to the command	Reverse the aileron channel direction in the transmitter (Servo Reverse).
The neutral positions of the ailerons differ	Adjust the pushrods or servo arms mechanically.

3. Information for the EU and Czech Market

3.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

3.2 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

4. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 3.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.