Hitec HS-40

Analogue nano servo
Instructions for use



The product is intended for persons aged 14 and over. Read the safety instructions in Chapter 1 before use and keep these instructions.

www.rotorama.com

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1. Safety instructions

- The product is intended for persons **aged 14 and over**. It contains small parts that could be swallowed – keep it out of the reach of small children.
- Power the servo only with a voltage of **4.8–6.0 V**. A higher voltage will irreversibly damage the servo.
- Check the polarity of the connector before connecting (Chapter 3.1). Reversed polarity can destroy both the servo and the receiver.
- Do not overload the servo and do not let it rest permanently against a mechanical end stop. A stalled servo draws a considerably higher current, heats up and may be damaged.
- Do not turn the output shaft or the servo arm by hand with force – you could damage the gears.
- Protect the servo from moisture, water, dust and dirt. The servo is neither waterproof nor dustproof.
- Before every flight, check that the servo and the controlled surface work correctly, smoothly and in the correct direction.

2. Product description

2.1 Intended use

The Hitec HS-40 is a small and lightweight analogue servo with plastic gears. It is intended for small and light RC models – micro aircraft, small gliders (mini, park flyer), foam models for 3D aerobatics, sport aircraft weighing up to approx. 570 g (20 oz) and 125 mm class electric helicopters.

2.2 Package contents

- 1× Hitec HS-40 servo
- 1× set of servo arms

2.3 Technical data

Type	analogue servo
Operating voltage	4.8–6.0 V
Speed (4.8 V / 6.0 V)	0.12 s / 0.10 s per 60°
Torque (4.8 V / 6.0 V)	0.6 kg·cm / 0.75 kg·cm
Current draw	idle 8 mA, no load 60 mA, stalled 460 mA
Dead band	5 µs
Dimensions	20.0 × 8.6 × 17.0 mm
Weight	4.8 g
Motor	three-pole, metal brush
Gears	plastic
Bearings	none
Cable	28 AWG
Water and dust resistance	none

3. Connection and installation

3.1 Connecting to the receiver

Connect the servo to the appropriate channel of the receiver or flight controller. The wires are assigned as follows:

Wire	Function
black	ground (−)
red (middle)	power (+)
third wire	signal

- The servo is controlled by square-wave pulses with an amplitude of 3–5 V. The pulse width is **0.9–2.1 ms**, the centre position corresponds to **1.5 ms**, and the pulses repeat at a frequency of 50 Hz (period 20 ms).
- The receiver power source (BEC or receiver battery) must supply sufficient current for all connected servos. If the voltage drops, the receiver may lose the signal.

3.2 Installation in the model

① Fasten the servo securely in the model using the mounting lugs.

② Switch on the transmitter and receiver and let the servo move to the centre position (transmitter stick centred, trims off).

③ In this position, fit the servo arm so that it is perpendicular to the pushrod and secure it with the screw.

④ Connect the pushrod. The control surface must move freely and without binding.

⑤ Run through the full range of travel. The servo must not hit a mechanical end stop at the end positions – limit the travel in the transmitter.

⑥ Route the servo cable so that it is not under tension, not pinched and does not touch any moving parts.

4. Maintenance and troubleshooting

- Inspect the servo regularly, especially after a crash: secure mounting, play in the gears, condition of the servo arm, pushrod and cable.
- Do not open the servo unless necessary. When replacing the gears, use only grease intended for servo gears – other grease may damage the motor.

Problem	Cause and solution
The servo rattles or behaves unpredictably	The gear teeth are probably damaged. Replace the gears.
The servo jitters (oscillates)	Possible contamination of the potentiometer or insufficient power supply. Check the power supply; if the problem persists, have the servo serviced.
The servo hums under load	This is normal – the servo holds its position against the load. If it hums without load, check that the servo is not hitting an end stop.
The servo heats up	Check the wiring and the travel settings. The motor may be stalled (end stop, damaged gears). Disconnect the servo immediately and have it serviced.

5. Information for the EU and Czech Market

European Union regulations apply in all Member States, but national regulations differ from country to country. The information in Chapters 5 and 6 describes the situation in the Czech Republic. If you use the product in another country, follow the regulations of the country in which you use it.

5.1 Manufacturer, importer and seller

Manufacturer	**Hitec RCD Korea Inc.**
Address	653, Yangcheong-ri, Ochang-eup, Cheongwon-gun, Chungcheongbuk-do, South Korea
Website	www.hitecrcd.com

Importer / responsible person in the EU	**KAVAN Europe s.r.o.**
Company ID (IČO)	178 33 914
VAT ID (DIČ)	CZ17833914
Registered office	Doubravice 110, 533 53 Pardubice, Czech Republic
E-mail	info@kavanrc.com
Phone	+420 463 358 712
Website	www.kavanrc.com

Seller	**Rotorama, s.r.o.**
Company ID (IČO)	051 57 692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.com

5.2 Product conformity

CE

- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the e-mail address info@kavanrc.com.
- **Product identification:** the type designation HS-40 is given on the servo label. EAN 669962310406.

5.3 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.

6. 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 contact details of the manufacturer, importer and seller are given in Chapter 5.1.
- 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.