Planetary Gearbox Set

TECHNICRAFT SERIES

READ BEFORE ASSEMBLY

- Study the instructions carefully before commencing assembly.
- The RC-260 motor included in this set utilizes carbon brushes for long motor life.
- Mabuchi RE-140 or RE-260 motors can also be used.
- RC-260 motor operates on 3 volts. Keep voltage under 4.5 volts.
- Use only grease in kit for lubricating gears and shafts. Other greases may result in damage to the product.

工具

- Cross screwdriver, side cutter, pliers and modelling knife shown at right will help your work.
- Apply grease or oil periodically to reduce friction loss and to prolong gears. Low viscosity grease or oil is recommended.
- With 3mm x 80 screws (not in set), two gearbox sets can be combined. 24 different gear ratios are available by combination of 8 gearbox units. The maximum ratio is 160:1.
- Batteries and battery case not included.

1. ASSEMBLY OF GEARBOX UNIT

- Trim away unnecessary plastic.
- Gear ratio 5:1.
- Sun Gear in Orange
- Do not attach yet.
- Gear ratio 4:1
- Match up guides.
- Sun Gear in Brown
- Do not attach yet.
- Grease gears and mountings.

2. ASSEMBLY OF OUTPUT CASE

- 4mm Washer
- 3mm E Ring
- Output Shaft
- 4mm Washer
- Attach E ring
- Press on with pliers.

3. ASSEMBLY OF GEARBOX

- Refer to diagram for gear ratio combinations.
- Assembly Screw
- When 1-2 gearbox: Short Screw
- When 3-4 gearbox: Long Screw
- Output Case
- Gearbox Mount
- 3mm Nut
- Sun Gear
- When combining 5:1 and 4:1 units, attach 5:1 unit near motor end.
- Improper installment of sun gear, planetary gears or the gear units results in rotation failures. Make sure that the gears rotate smoothly when assembled.

4. ATTACHING MOTOR

- When using RE-140 motor
- RE-140 motor
- Sun Gear
- Press on fully
- RC-260 motor
- Installation of RE-260 motor is the same.
<Gear combinations>

Combining the gearboxes in various ways enables 8 different gear ratios. At a gear ratio of 400:1 and voltage of 3V, the gearbox produces a torque of about 1.5kg-cm.

16:1 (4:1 x 4:1)
Length: 5 units

20:1 (5:1 x 4:1)
Length: 4 units

25:1 (5:1 x 5:1)
Length: 5 units

400:1 (5:1 x 5:1 x 4:1 x 4:1)
Length: 6 units

Short screw for 12 units.

5:1

6:1

7:1

8:1

9:1

10:1

12:1

14:1

16:1

18:1

The gearbox can be extended with additional units for ultra slow rotation. When doing so, never hinder the rotation of the gears will be destroyed.

<Motor specifications>

Stall torque: 159cm
On-load speed: 10,500rpm
Current: 1.0A