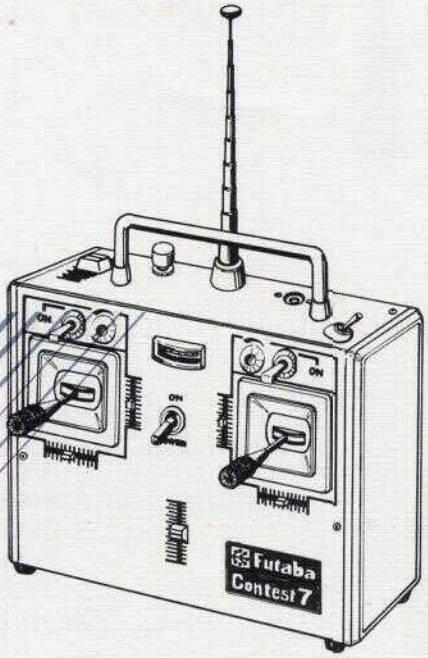
Futaba

DIGITAL PROPORTIONAL RADIO CONTROL



OPERATION MANUAL

FP-7G CONTEST-7

FUTABA INDUSTRIES U.S.A.
FUTABA CORPORATION

INDEX

SPECIAL FEATURES

Maximum class 7 channels

*** Transmitter FP-T7G**

- Dual travel ailerons, dual travel elevator built-in.
- Maximum operation sensation through prudent design and adoption of open gimble and stick mechanism.

*** Receiver FP-R7L**

- Double conversion Receiver
- Newly designed connectors improve electrical and mechanical reliability tremendously.

*** Servo FP-S15, FP-S15L (reverse rotation servo), FP-S15G (landing gear servo)**

- Output shaft is supported by miniature ball bearings. Extremely smooth operation. Superior durability. 20~ motor.
- Potentiometer drive section is separately driven through a one-stage gear. Element life is extremely long.
- Special reinforced plastic, ultraprecision, powerful gear.

CONTENTS AND RATINGS OF CONTEST-7 SET

Transmitter	FP-T7G	1	Receiver use nickel-cadmium battery NR-4E Receiver switch harness R7-SW Ribbon Extension cord Spare horn Channel indicator tab Rubber bushing, wood screws, washers, grommets
Receiver	FP-R7L	1	
Servo	FP-S15	4	
Charger	FBC-2(F)	1	

CONTEST-7 Ratings

(These ratings are subject to change without notice.)

Transmitter FP-T7G

Operating system	CH1~4 2-stick system CH5 Snap switch CH6~7 Lever system Total 7chs
Transmitting frequency	1 band selected from among 7 bands in the 72 MHz band.
Antenna output	500mW
Power requirement	9.6V 8/500mAH nickel-cadmium battery
Current consumption	Approx 150mA
Dimensions	153x190x50mm
Weight	1.1kg

Servo FP-S15

Control system	+ pulse width control 1310μS ±690μS
Operating angle	Rotary system, one side 45° *or greater (including trim)*
Power requirement	4.8V 4/500mAH nickel-cadmium battery (shared with receiver)
Current consumption	6mA (when stopped)
Output torque	3kg-cm
Dimensions	48.2x36.0x23.0mm
Weight	60g

Charger FBC-2(F)

Input voltage	AC117V (220V, 240V)
Power consumption	Unloaded 2.0VA/ *loaded* 3.5VA
Output	TX side 9.6V 45mA RX side 4.8V 45mA

Receiver FP-R7L

Type of receiving	Double conversion & 7 channels
Intermediate frequency	1st: 10.7MHz, 2nd:455kHz
Usable sensitivity (Servo controlled)	10μV
Selectivity	4.4kHz at -6dB, 20kHz at -35dB
Image rejection	-50dB minimum
Spurious and Harmonic rejection	-70dB minimum
Power requirement	4.8V 4/500mAH nickel-cadmium battery (shared with servo)
Current consumption	11.5mA
Dimension	42x84x21mm
Weight	90g

Landing Gear Servo FP-S15G

Control system	+ pulse width control Switching pulse width 1270μS~1380μS
Operating angle	Rotary system, 160° or greater
Power requirement	4.8V 4/500mAH nickel-cadmium battery (shared with receiver)
Current consumption	8mA (when stopped)
Output torque	4kg-cm
Dimensions	48.2x36.0x23.0mm
Weight	60g

Receiver, Servo Nickel-Cadmium Battery NR-4E

Voltage capacity	4.8V 4/500mAH
Dimensions	61x62x18.5mm
Weight	120g

CHARGE THE NICKEL-CADMIUM BATTERY BEFORE USING

•Connect the TX jack of the FBC-2(F) charger to the charging jack of the transmitter and the RX jack of the charger to the receiver/servo nickel-cadmium battery and connect the Charger to an AC 117V (220V, 240V) socket.
The TX and RX LED of the charger will be lighted to indicate that the battery is being charged.

•Charging time is normally about 15 hours. When the battery has not been used for some time, charge it for about 20 hours.

•The transmitter and receiver nickel-cadmium batteries can be charged simultaneously or separately.

•The usable time is normally about 10 times at a rate of 10 minutes/time.

•Be sure that the batteries are connected to the proper charging jacks of the FBC-2(F) charger. If the receiver/servo nickel-cadmium battery (NR-4E) is connected to the TX jack, the battery will be rapidly charged and a large current will flow and the battery and charger will be damaged.

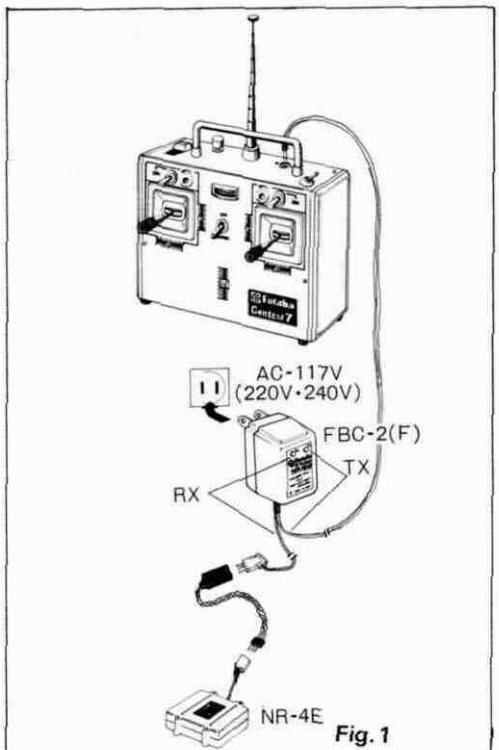
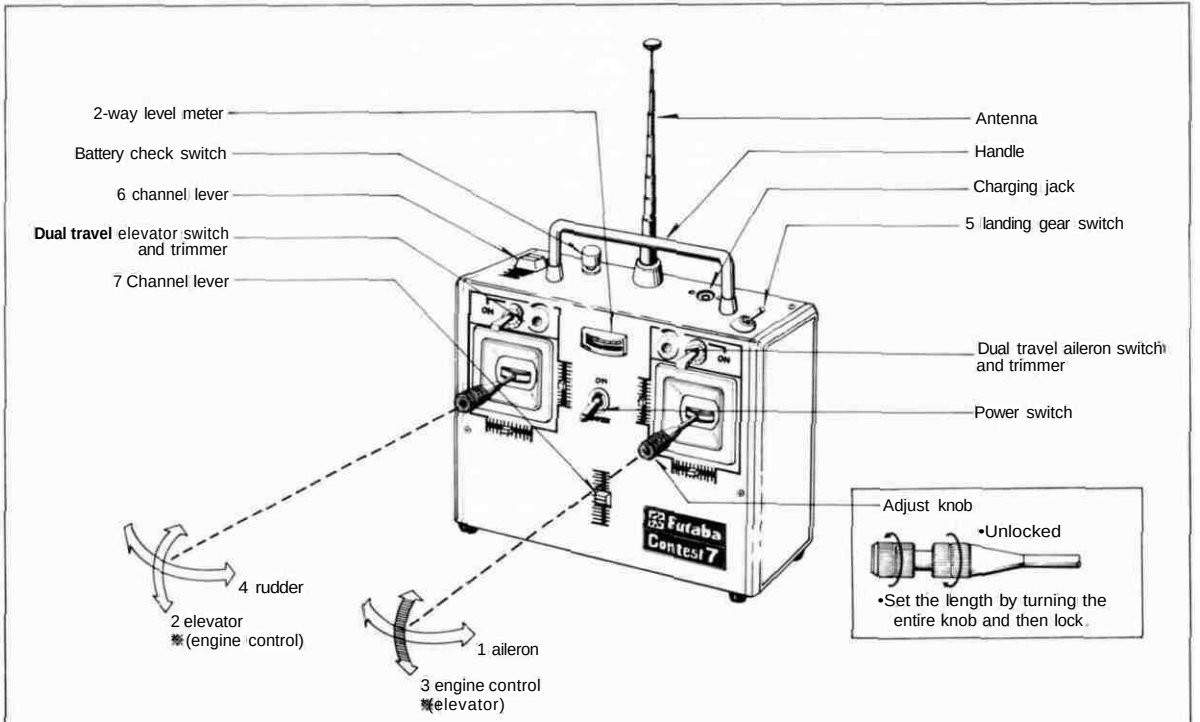


Fig. 1

HANDLING



*In Mode II, 2 elevator and 3 engine control are interchanged.

Fig. 2

•Refer to Fig.2 for the operation of each channel and the name of each part.

•When the power switch is set to ON, the pointer of the level meter will deflect. Since this indicates the antenna output, it should deflect to graduation 7. Since this indication is different when the antenna is contracted and when it is extended fully, check the indication when the antenna is extended fully. (The indication will also be different when the antenna is held in your hand and when free)

•Next, push the battery check switch. The level meter will indicate the battery voltage at this time.
The battery is OK if the meter pointer deflects to the green **zone.** Charge the battery when the pointer deflects to the boundary between the green and red **zones.**

•Using dual travel
When the dual travel switch is set to ON, the steering angle can **be** made small within the range of the hatched lines of Fig.3. The steering angle is variable within the range maximum, 90% of total operating angle, minimum 40%.

- •The dual travel aileron switch should normally be set to OFF Set this switch to ON when desiring to make the aileron steering angle small such as slow roll, etc Then set the steering angle with the trimmer
- *The dual travel elevator switch should normally be set to OFF But when desiring a large steering angle such as spins, etc , set the switch to ON and adjust the steering angle with the horn adjuster trimmer for level flight. Kick-up will occur and the elevator steering angle will become large when the switch is OFF

•The receiver channel order is shown in Fig-.5.
Since each lead wire of the connectors is color coded, connect the servos in accordance with these colors. Attaching the accessory channel tabs is convenient.

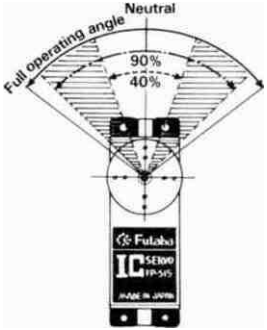


Fig. 3

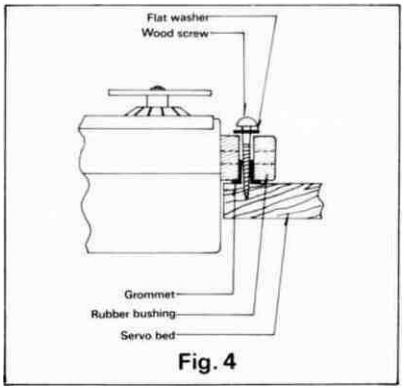


Fig. 4

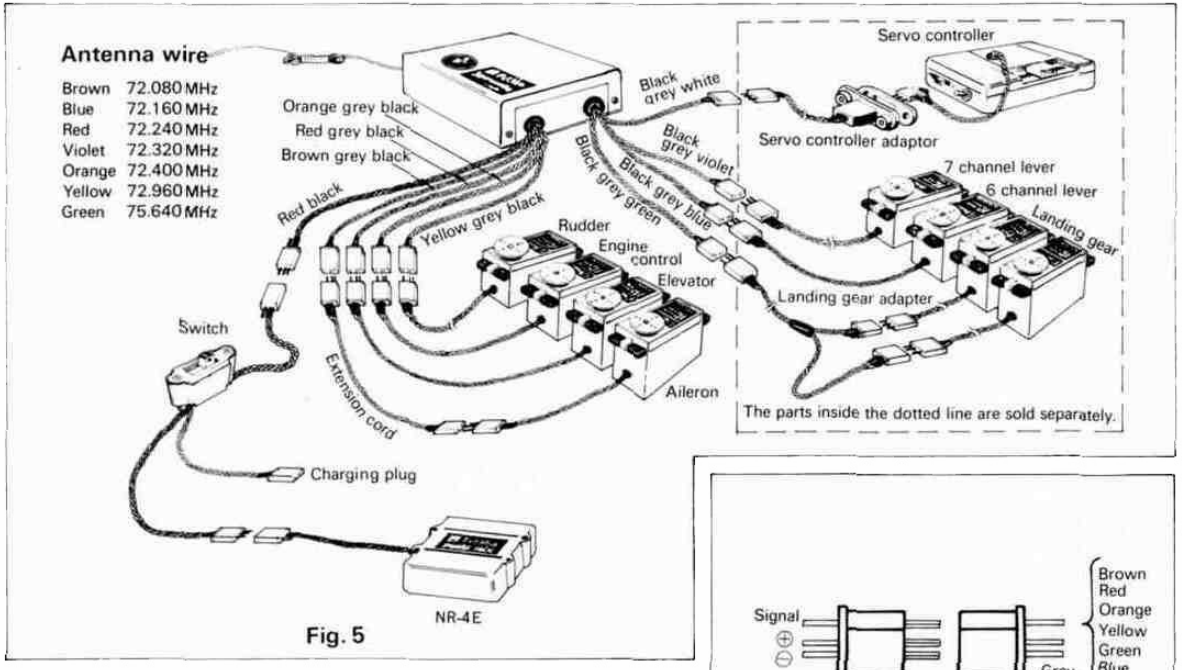


Fig. 5

Fig. 6

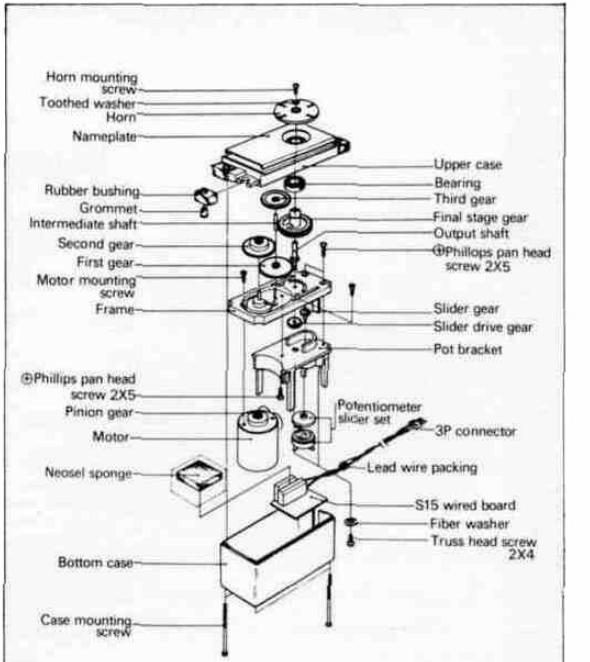
- The antenna wire is color coded by frequency (band).
- The connector wiring order is shown in Fig.6.
- Pack the entire receiver in sponge and mount so that the antenna wire is as straight as possible.
- Refer to Fig.4 when mounting the servo.

- Mount the servo so that the rod adjuster flexible wire, hinges, and other steering operations are performed smoothly.
- The 3P male connector with the fine lead wire connected to the switch harness is the connector used for charging with the nickle-cadmium battery mounted. Charging is possible from this connector when the switch is OFF.
- The set is normal if the range is about 3m when the aircraft is placed on the ground and the trasmitter antenna is extended fully.
- The CONTEST-7 employs a crystal fixed system. A crystal socket is used, but the crystal is not replaceable. Since the bandwidth is narrow for both the receiver and transmitter, do not change the band in the conventional manner. When desiring to change the band, send the transmitter and receiver to Futaba. Also note that the specifications are different from those of the conventional crystal.

Futaba PROPORTIONAL FREQUENCIES

*72.080 (Brown/White)
72.160 (Blue/White)
*72.240 (Red/White)
72.320 (Violet/White)
*72.400 (Orange/White)
72.960 (Yellow/White)
*75.640 (Green/White)

Remarks: Mark *=Model Aircraft use only



FP-S15 construction

GUARANTEE

Your NEW FUTABA Digital Proportional R/C system is guaranteed against defects in workmanship and material for 180 days from the date of purchase when the attached registration card is returned to us within ten days of purchase.

This Guarantee is null and void if the R/C system has been improperly handled, damaged in a crash, or tampered with and does not cover the replacement of plastic housings or electronic components damaged due to the use of improper voltages.

When service is required, please take your equipment to your local authorized service station or ship it directly to us. All postage, shipping, and insurance charges must be paid by the user.

This guarantee only applies to the continental U.S A., Hawaii, and Alaska

FACTORY REPAIR SERVICE

To insure prompt service, please follow the instructions given below

1 Charge the batteries for at least 18 hours prior to shipment

2 Return the system only Not your complete installation **Remove the servos from their mounts and remove the foam padding from the receiver.**

3 Plugs or other modifications which interfere with factory test procedures will be returned to factory standard at your expense

4 Carefully pack all components individually, using sufficient packing material to prevent damage during shipment

5 Include a brief but thorough explanation of all problems and service required and tape it to the back of the transmitter Place a label describing the functions of the servo on each servo

6 Be sure to include your full address and zip code inside the box as well as on the outside

7 Include a packing list of all items being returned, and double check to make sure that all items are packed

8. Upon receipt of damaged equipment at the FUTABA factory, an estimate of the cost of repair will be sent to you Your equipment will then be repaired and returned to you upon receipt of payment.

This factory repair service applies only to the continental U S A. Hawaii, and Alaska.

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