DIGITAL SANWA PROPORTIONAL RADIO CONTROL SYSTEM

Mamual

GCZZIII, GCZZIII

STAC4.STAC6 STAC5NIX

FEATURES OF HEADINGSOON

TRANSMITTER

- Antenna Terminal Output/500 mW
- Meter indication/True output

power

Power supply/Eight UM-3 DRY

cells, 12V

(or Eight Batt. 9.6V as opption)

- Weight (excepting Battery)/350 grs.
- Frequencies/27 MHz, 29 MHz, 40MHz
- Power comsumption/110 130 mA
- Modulation/AM 100 %
- Crystal/Interchangeable

RECEIVER

- Frequencies/27 MHz, 29 MHz, 40 MHz
- Power supply/Four UM-3 DRY cells, 4.8 V 6V
 (or four UM-3 nicad battery)
- Size (mm)/20.5 H x 65 L x 48 W
- Weight/50 grs.

SERVO: SM-391

- Power/2.5 kgs (kg-cm)
- Size (mm)/41 H x 39 L x 20 W
- Weight/45 grs.

FAURES OF STATES TABLES

TRANSMITTER

Antenna Terminal Output/500 mW
 Meter indication/True output

power

- Power supply/Eight UM-3 DRY cells, 12V
 (or nine Nicad Batt. 10.8V as opption)
- Weight (Excluding Battery)/595 grs.
- Frequencies/27 MHz,40MHz
- Power comsumption/200 mA max.
- Modulation/AM 100 %
- Crystal/Interchangeable

RECEIVER

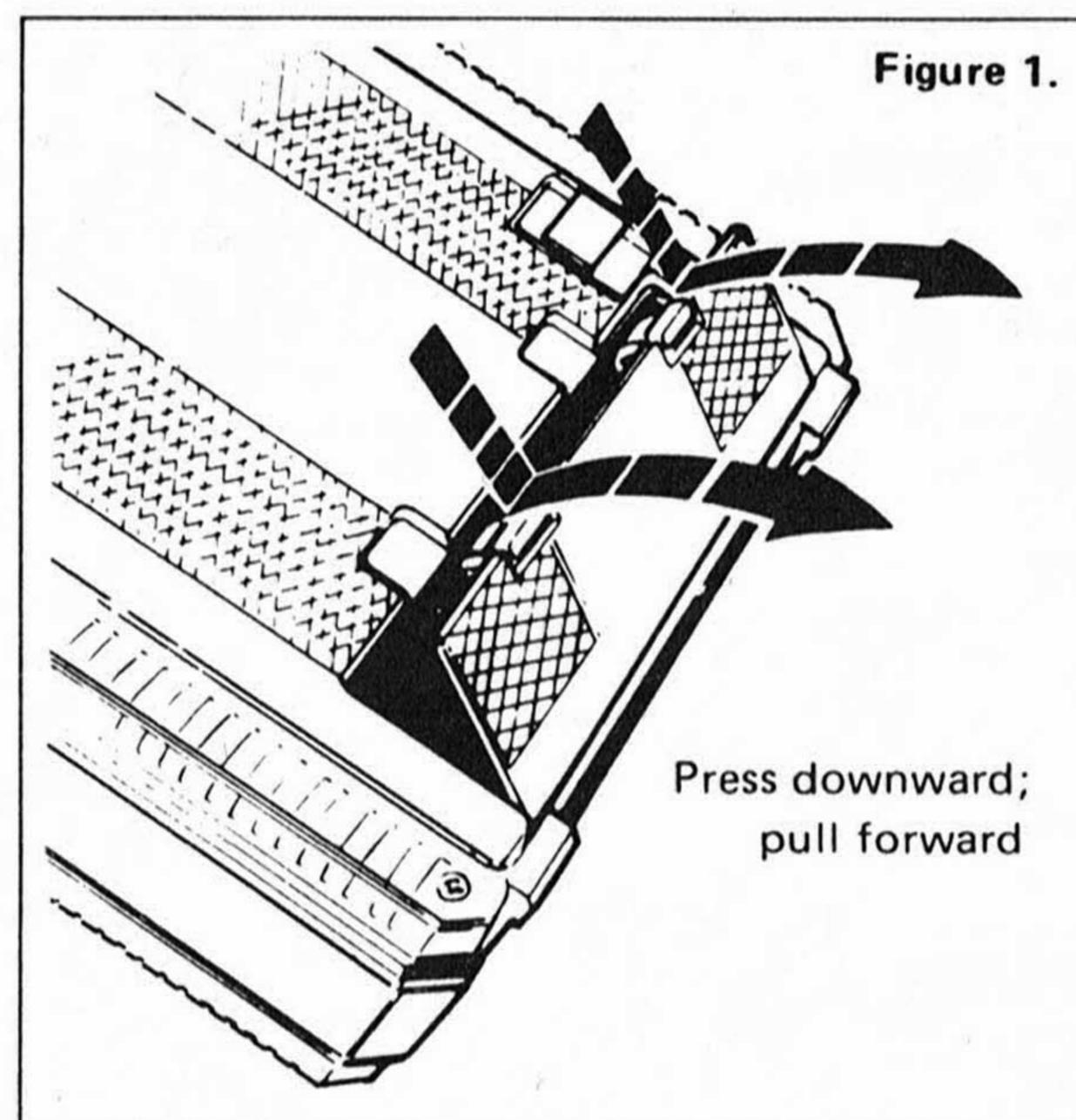
- Frequencies/27 MHz, 40MHz
- Power supply/Four UM-3 DRY cells, 4.8V 6.0V
 (or four UM-3 nicad battery)
- Size (mm)/20.5 H x 65 L x 42 W
- · Weight/53 grs.

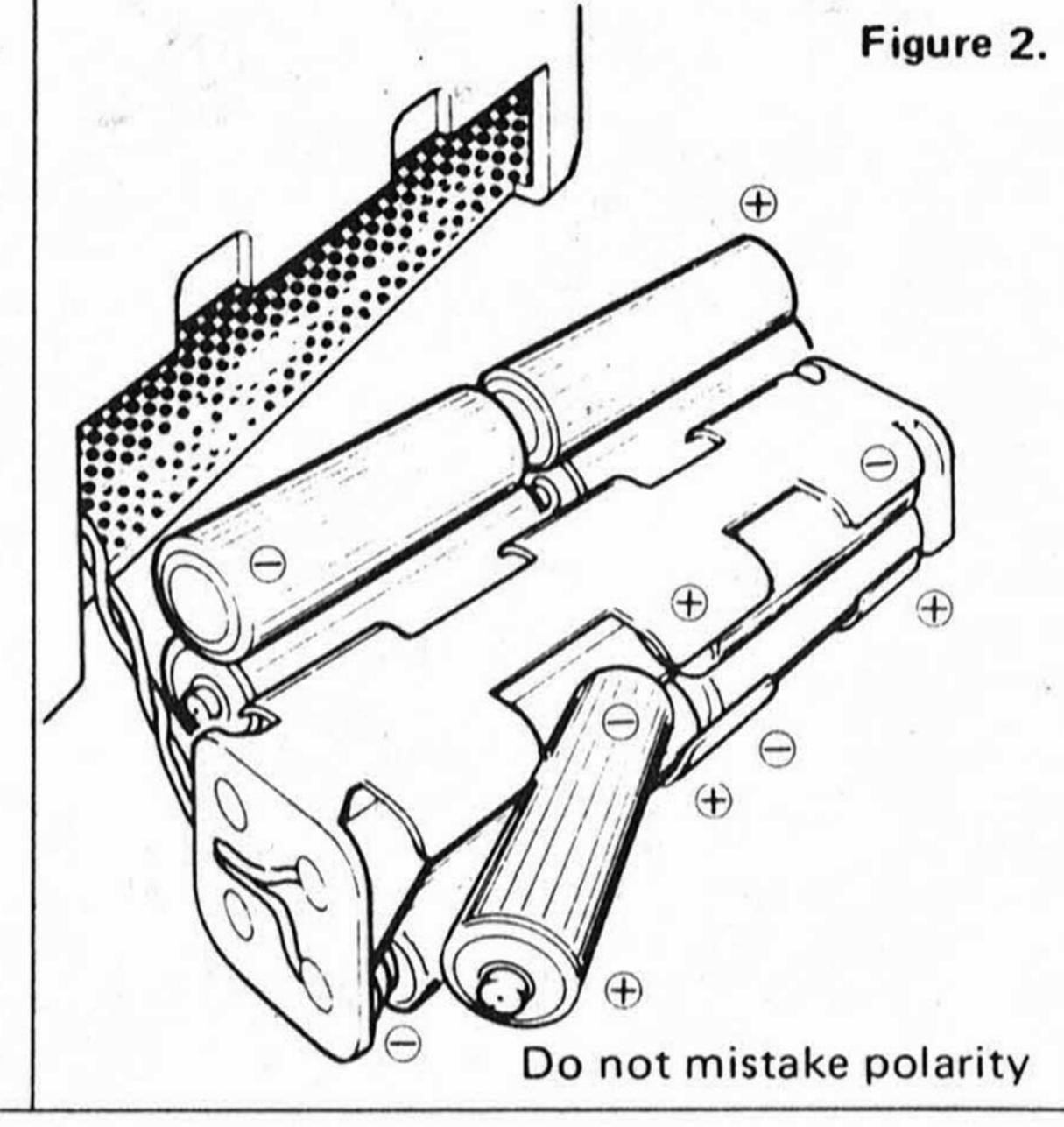
SERVO: SM-391

- Power/2.5 kgs (kg-cm)
- Size (mm)/41 H x 39 L x 20 W
- Weight/45 grs.

REPLACING BATTERIES METHOD FOR GC-2200, GC-3300

- Pull the cover toward you while pressing it downward with the thumbs, and the cover can be removed.
- 2. Take out the battery case inside, and place 8 pieces of UM-3 dry cells according to the polarities indicated at the bottom of the case.
- 3. Insert the battery case in the body in the direction in which the arrangements of the batteries in the case are visible. (If the case is obliquely inserted, insertion may not be smoothly made. Therefore, insert the case while sliding both ends of the case along the body.)
- 4. With the hooks on the lower part of the battery case cover applied to the corresponding parts of the body, mount the cover.
- Notes for using NiCad battery
- Disconnect the connector provided on the battery lead lines in the transmitter, and connect the NiCad battery available as option. (If you have bought the unit with NiCad battery, you need not do this work.)

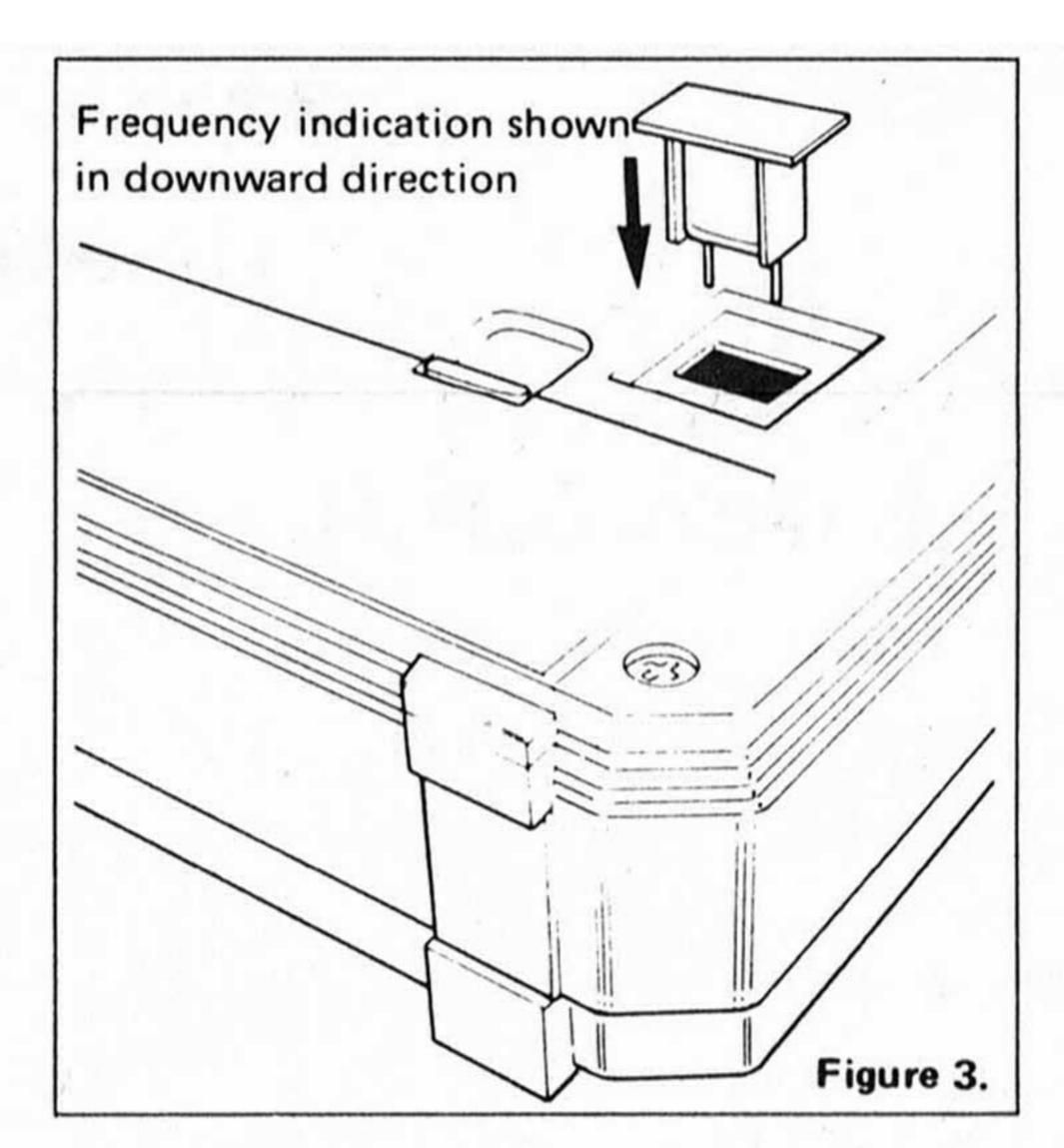




- 2) Charge the NiCad battery. Remove the tape on the reverse lid of the transmitter and expose the charging jack. Be sure to charge it for 20 hours in the beginning before use. (The same procedures apply to the NiCad battery for the receiver.)
- 3) Charging for the second time and on shall be given for more than 13 hours. Irrespective of the frequency of use on the previous occasion, be sure to charge the battery for more than 13 hours. Also, in case the battery has not been used for a long period of time (more than 1 month), charge it for 20 hours as in the initial charging.
- 4) Observe the procedures of 2) & 3) for the charging of the transmitter only or the receiver only.
- 5) The NiCad battery will not be damaged by a little overcharging. However, evade excessive overcharging which will shorten the life of NiCad battery.
- 6) Charging with dry cell is not possible. In case of changing the battery from NiCad to a dry cell, a mistake may be avoided if a tape is stuck to the charging jack on the back lid of the transmitter.

Notes for replacing crystals

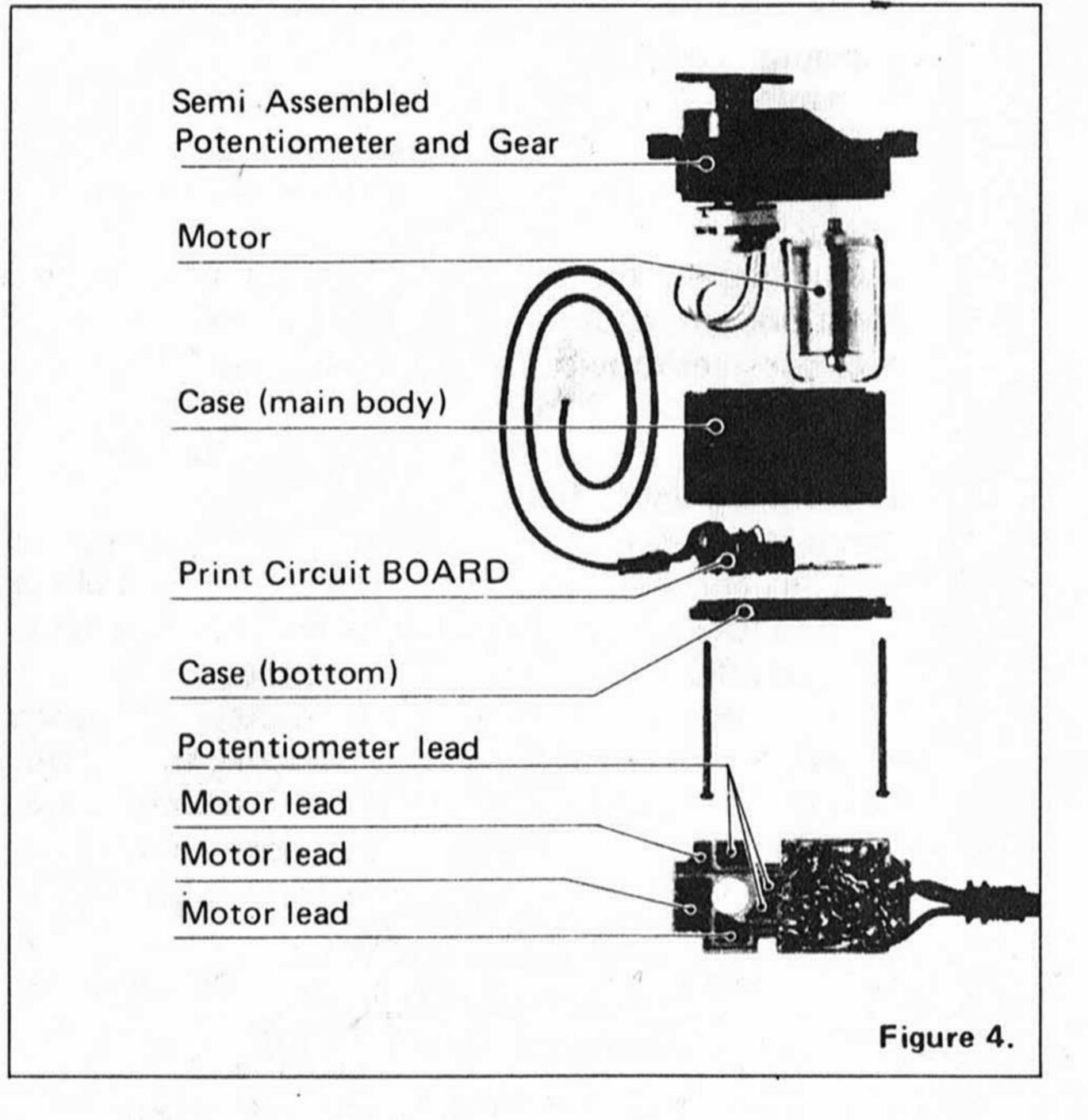
- Mount the specified crystal without mixing up the one for the receiver and the one for the transmitter. The crystal for the transmitter is attached with a crystal case, and the one for the receiver with a drawing ribbon.
- 2. In case of replacing the band, be sure to change the color of the ribbon for the transmitter.
- The flag to indicate the band of the crystal for the receiver is attached to the crystal drawing out ribbon.
 The crystal for the transmitter is indicated by the color of the crystal case itself.



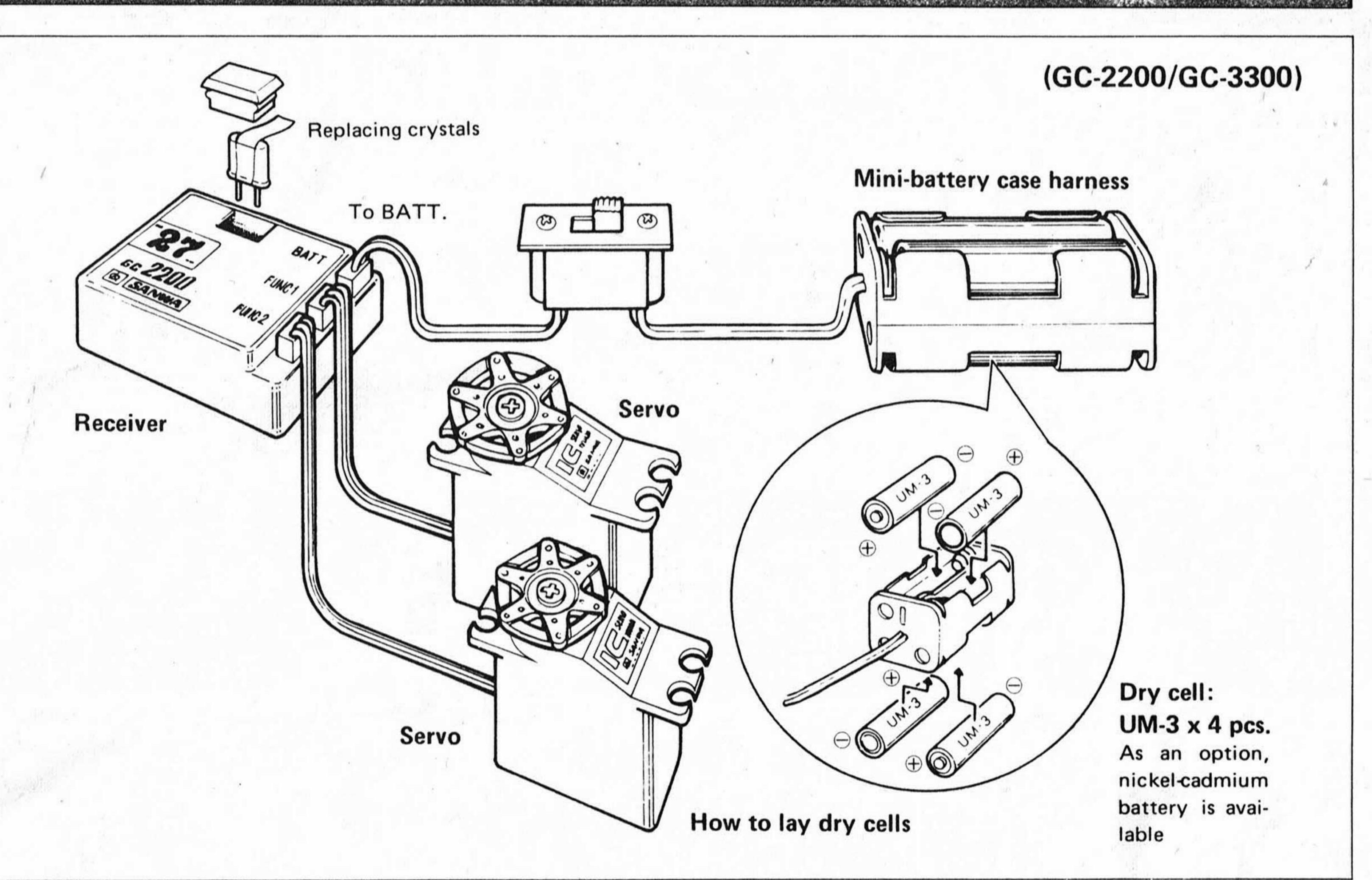
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The elements constituting the proportional radio control system are mainly the three items of transmitter, receiver, and servo. Of these elements, the servo has the highest rate of troubles. Every user would try to repair the servo for himself without sending it to the manufacturer so as to utilize the system for the contest to be held tomorrow. In this SM-391, the three divisional type system has been adopted so as to enable users to repair it by themselves. The photograph shows the disassembled elements. The servo-constituting parts are formed as packed units and divided into three blocks of motor, print baseplate, and gears. The lead wires connecting the respective circuits are provided with large SPACE at their soldering parts of the print board so as not to necessitate a high levelled soldering technique. The gear part adopts a cartridge system which prevents the gear elements from breaking into pieces during assembly. Since this system does not necessitate gear assembly, it helps cut the repair time greatly. This SM-391 servo will contribute to changing your life of the radio control from now.

SM-391 & SM-392



DESCRIPTION OF RECEIVER AND CONNECTION DIAGRAM.



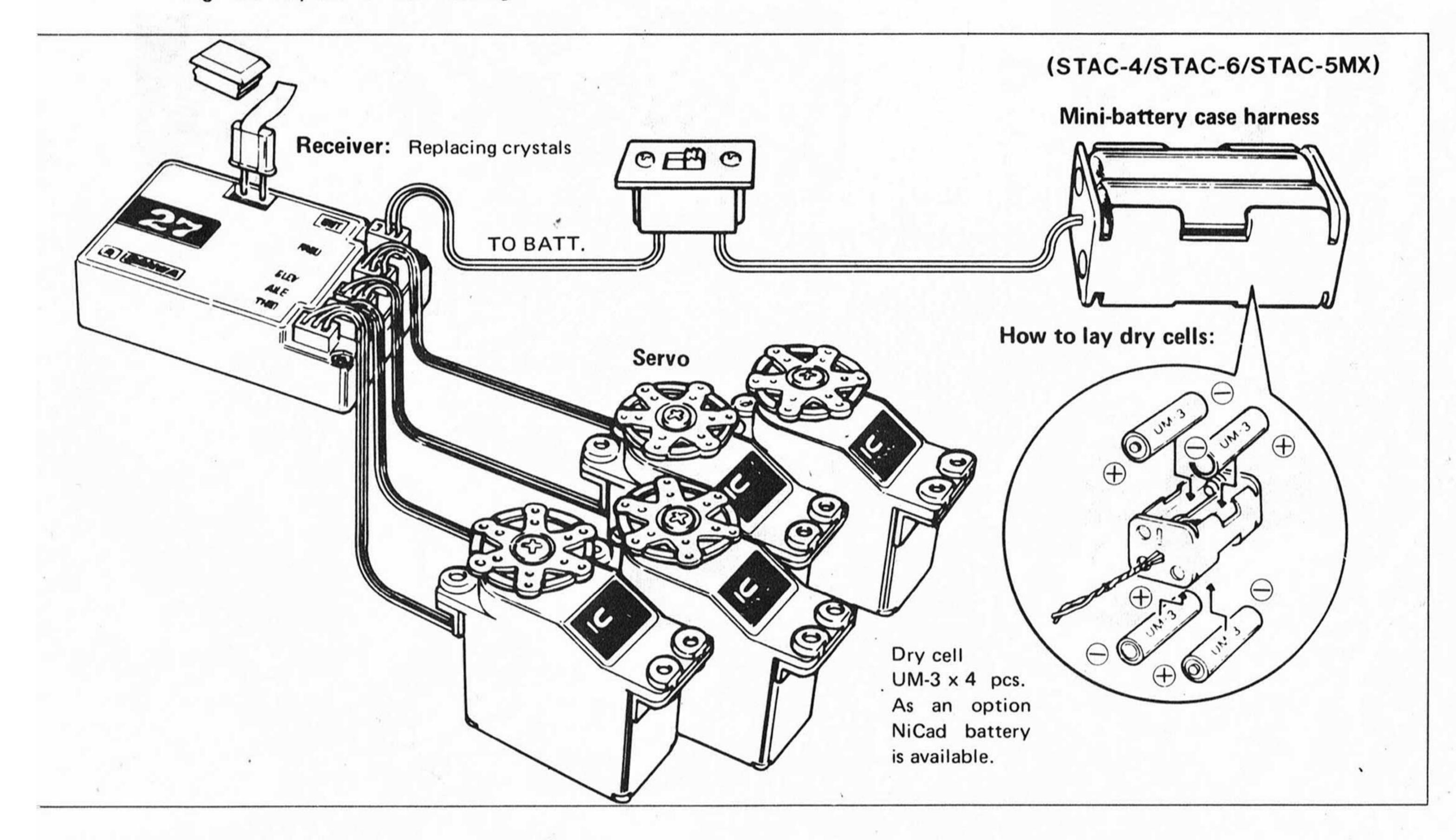
Receiver

- There are the connector holes at the end of the case. Insert each connector of the servo in the hole indicated according to the function of the servo.
- As the receiver is of the crystal replacement type, you may change the frequency range to the band you prefer by inserting the crystal of RX having

the same band as that of the transmitter. In order to protect the crystal from any damages caused by vibration or defective contact, be sure to apply the rubber cap to the inlet for running or flying.

Antenna

Set the antenna at a distance of more than 5 cm from the switch or the servo. In case of the electrically driven antenna, keep it aloof from the motor by more than 10 cm. Stretch any extra line steadily and longitudinally, without cutting or bending it.



Field Testing and Flight

- 1. After completing your plane and installation of the radio equipment, it is now ready for the few field checks and the test flight. It is strongly recommended that you use a flying site that is utilized by other R/C pilots so that you may have the benefit of their experience for these tests and also the initial test flight. Rest assured they have a much better chance (than the beginner) of flying a new model.
- Have the experienced flyer check your installation. Most of them will be able to pick up any mistakes you may have made. After you are satisfied commence with the ground range checks.
 - The ground range checks are necessary to establish the relationship betwen range on the ground and range in the air. These checks should always be made at the field where you plan to fly. A check made at home would not be valid.
- 3. Set your model on the ground in an area away from obstructions in order that you may see one of your control surfaces moving aş you back away from the model while moving one of the control sticks. Rudder is usually the best since it is higher and you will be able to see it move from a greater distance.

Disconnect your receiver antenna from the top of the vertical fin and coil it up in a small bundle and allow it to hang from the side of the fuselage. The idea here is to reduce the effective sensitivity of the receiver.

With the transmitter antenna completely collapsed and both the transmitter and receiver switches turned on, start moving one of the control sticks noting which surface you are moving. Back away from the nose of the plane or glider while continuously moving the stick and carefully watching the moving surface. At some point you should note that the surface starts moving erratically and does not follow the movement of the stick as it did before. Try moving the transmitter around and holding it at different angles to achieve the greatest amount of control-

lable range. As you do this you may have to back even further away from the model. When this point is reached take careful note of the distance you are from the model. This is now your valid ground range.

If you are flying a powered model repeat this check with the engine running at full throttle. You should achieve almost the same distance from the model. If not within 10 or 15 ft. of the distance with the engine off, chances are that you have a vibration problem and this should be investigated before attempting any flights.

You should achieve a distance of 30 to 50 feet or more.

If the above check proves satisfactory you are now ready for your first flight. REMEMBER TO REINSTALL THE RECEIVER ANTENNA TO THE TOP OF THE VERTICAL FIN.

ALWAYS BE SURE TO CHECK THE CONTROLS FOR PROPER DIRECTION OF MOVEMENT AND PULL OUT THE TRANSMITTER ANTENNA TO ITS FULLEST LENGTH BEFORE FLIGHT.

Let your instructor test fly the model and trim it out for you. After the model is trimmed he can then start teaching you how to fly it and you can enjoy one of the greatest sports in the world.

