E. D.

Mark III Miniature
RADIO CONTROL UNIT

OPERATING INSTRUCTIONS

ELECTRONIC DEVELOPMENTS
(SURREY) LIMITED,
18, VILLIERS ROAD,
KINGSTON-ON-THAMES,
SURREY.

RECEIVER.

BATTERIES :—

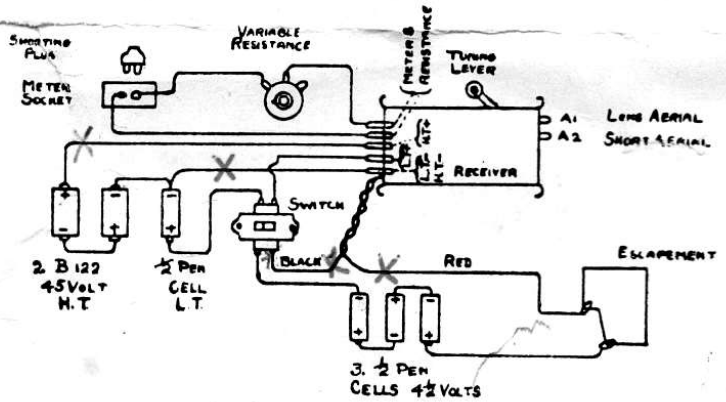
H.T. Two B122 22½ volt batteries in series. Total=45 volts.
L.T. One half pen cell 1.5 volt.

Battery life with average week-end intermittent use is :—
H.T. approximately 2 months.
L.T. 30/45 minutes. (Four ½ pen cells in parallel for L.T. will give an eight-fold life).

As most of the trouble encountered is due to bad wiring and faulty connections, great care must be taken to follow the wiring diagram as well as neat cabling of the wires, and well soldered connections without frayed ends.

Use of the four pin plug and socket will isolate the receiver from harm when either making battery connections or changing the batteries.

A wire loop should be soldered into the two pin plug, which is used as a shorting plug for the meter socket.



DIAG.II

OPERATION :—

A meter with a scale of not more than 5 M/A should be connected, or better still, plugged into the meter socket.

If the model calls for a short aerial, under 18 inches, it should be connected to A2, if a longer aerial is used then connect to A1.

With all batteries and aerial connected, switch on. The potentiometer should be rotated until the meter reads 1.8 M/A. Switch on the transmitter and press the operating key. As the receivers are practically pre-tuned, a drop in the standing current may be noticed.

The tuning lever should be rotated until the point of lowest current is obtained. The tuning point will be fairly flat close to the transmitter, and for final tuning adjustments, the receiver should be taken about 100 feet from the transmitter.

A close adjustment of the standing current should now be made. The potentiometer should be set to give the *lowest* possible current at which the escapement will operate when the transmitter is keyed. This will be in the region of 1.5 to 1.8 M/A. It should never be adjusted *dead* at the point where the relay and escapement cut in, but slightly above that point.

The meter should now be removed and the socket shorted over with the shorting plug. Before releasing the model, check for operation.

TRANSMITTER.

BATTERIES :—

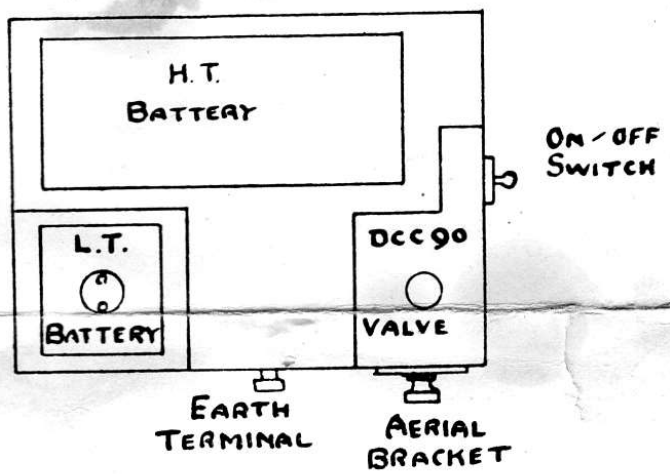
H.T. 120 volt Everready type.
L.T. 1.5 volt Everready type All Dry No. 1.

Battery life with average week-end use is :—
H.T. approximately 6 to 9 months.
L.T. approximately 3 to 5 months.

Place the batteries as shown in the diagram. The red plug into the H.T. +120 socket, and the black plug into the H.T.— socket. The special two pin non-reversible plug should be pressed tightly into the L.T. battery socket.

Joint the aerial sections tightly together, and if on soft ground push in the earth spike and connect to the "E" terminal.

Insert the non-reversible plug of the keying lead into the socket on the front of the transmitter.



DIAG.1 TRANSMITTER CASE PLAN

ESCAPEMENT.

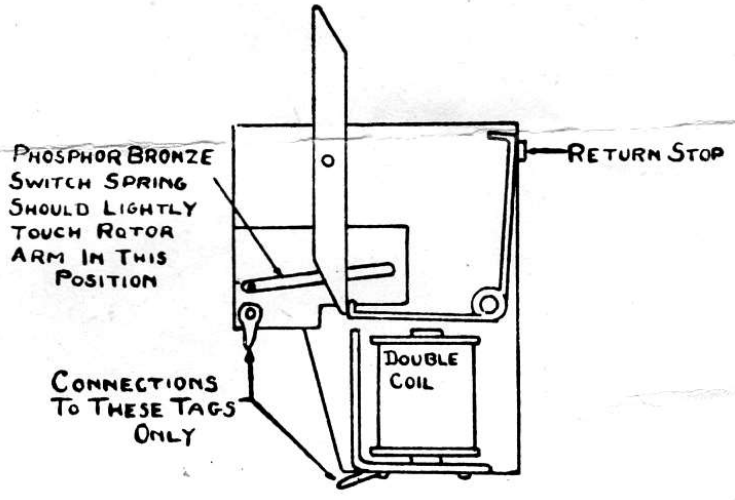
BATTERIES :—

Three half pen cells in series, Total 4.5 volts.
Battery life with average use is approximately One month.

The connections are the two soldering tags, one on the base, and the other on the bakelite panel. *No* connections should be made to the phosphor bronze spring, which is the cut-in switch for the current saving coil. This spring should lightly "make" on the cross arm when in the "rest" position.

The elastic drive should be a loop of $\frac{1}{8}$in. flat, and should in its unwound form be 20% longer than the distance between hooks, in order to relieve friction due to tension. A 12 inch loop can accommodate about 200 turns, enough for several average flights.

All stiffness should be avoided on the drive to the rudder, bearings should be quite slack, and the 16 s.w.g. drive extension wire should be quite straight.



DIAG II

VALVE REPLACEMENT.

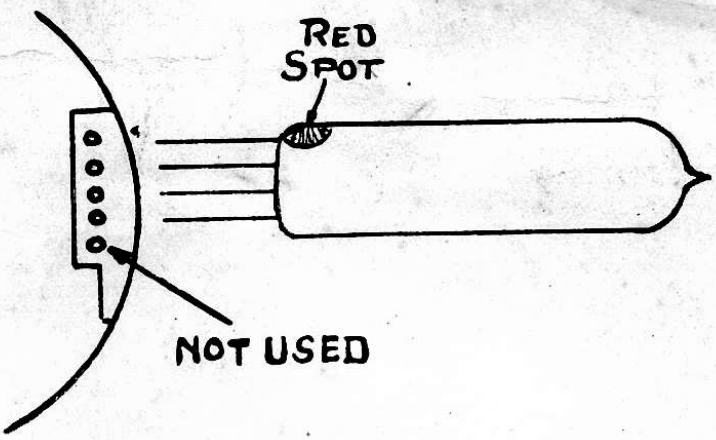
The life of the XFG1 valve is, compared with ordinary valves, limited.

Taking care not to exceed operating voltages and currents, a season's operation can be obtained at a replacement cost of under 3d. per flight.

Remember that lengthy preliminary tests and checks with the receiver switched on will reduce the useful life of the valve.

Always switch-off until ready to launch your model. Ten minute flights should not be preceded by twenty minute tests and adjustments.

To replace the valve, cut the leads leaving them about ¼ inch long, then remove burrs at the ends and scrape the protective varnish off the wires. Insert valve as indicated maintaining the position of the red spot. Note that the fifth hole in the valve holder is not in use. When positioned, firmly fix the valve with the wire loop over the rubber sleeve.



DIAG. IV