

SUPER AEROTROL

■ Because it is one of the few outfits that can be had in both kit and completely assembled form, there are doubtless more Super Aerotrols in use than any other commercial R/C equipment. Berkeley Model Supplies states over 5000 have been sold.

The transmitter is of the hand-held variety, with all batteries carried in the sheet steel case. While you can save considerable money by purchasing it in kit form, you actually get almost a completely assembled transmitter; all you have to do is wire it up. The chassis has tuning condenser, tube and crystal sockets, switches and lug strip already riveted to it. All necessary holes in chassis and case are punched and the case is finished in gray crackle. The chassis is held in case by four screws and may be removed quickly for servicing. Field tune-up is made easier if a $\frac{1}{4}$ " hole is drilled in the top of the case directly over the slot in the tuning condenser. Under normal conditions retuning will seldom be required, unless the crystal or tube is changed.

The excellent plans sheet shows top and bottom views of the wired chassis with every lead clearly indicated. By close reference to this drawing and the step-by-step assembly instructions, the beginner in R/C should have little trouble in successfully wiring the unit. The plans also include all the circuit symbols used in the transmitter, to make the schematic diagram doubly clear.

In actual use, the transmitter should be held in both hands about waist high, with the antenna projecting vertically. The right thumb will then be near the On-Off switch, while the left thumb is used on the keying button.

The transmitter is crystal-controlled, as required for operation on the examination-free $27\frac{1}{4}$ mc. spot. The circuit utilizes a single 3A5 tube, with both sections connected in parallel. Rather loose coupling is used to the $\frac{1}{8}$ th wave antenna; this results in less adverse reaction when the transmitter is handled during use.

As a kit, the transmitter comes with crystal, but less tube and batteries. The tube and crystal are included with the finished unit; you get a finished antenna in either case.

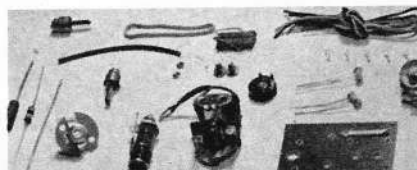
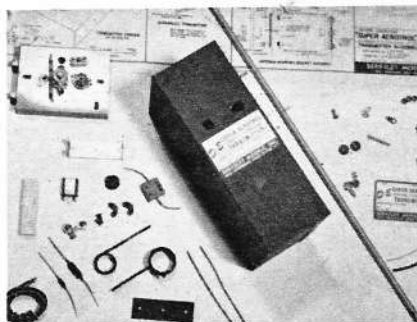
The Super-Aerotrol receiver kit includes a drilled linen bakelite "chassis,"

which has six eyelets on it for connection purposes. The tube is held by a band around a long lug, and by threading the clipped leads through four "flea clips." The tuning coil is completely finished, as is the RF choke. You have only the simple job of mounting a few parts and wiring them. Flexible battery leads, potentiometer, and meter socket and two plugs (one for meter, one for a shorting plug) are part of this kit.

The relay is the moderately light and very sensitive Kurman, of 5000 ohms. Due to the compact assembly, this is probably the smallest and lightest commercial receiver available today for $27\frac{1}{4}$ mc. use.

The receiver plan sheet is just as complete as that for the transmitter and includes the same general drawings and data. In addition to these sheets, each kit features the 30 page Aerotrol Instruction Manual which gives full operating and service data for the equipment. The receiver is intended for either the RK61 or XFG-1 gas tubes; Berkeley normally supplies only the latter.

The equipment described here should not be confused with the earlier DE-Aerotrol transmitter and receiver, which are made for use on the amateur 50 mc. band, and which are sold only in kit form. The (Continued on page 81)



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Instruction Manual covers conversion of the De-Aerotrol receiver to $27\frac{1}{4}$ mc. operation; the transmitter can be converted to the amateur 27 or 28 mc. bands, but cannot be used on $27\frac{1}{4}$ mc., since it is not crystal-controlled.

Specifications

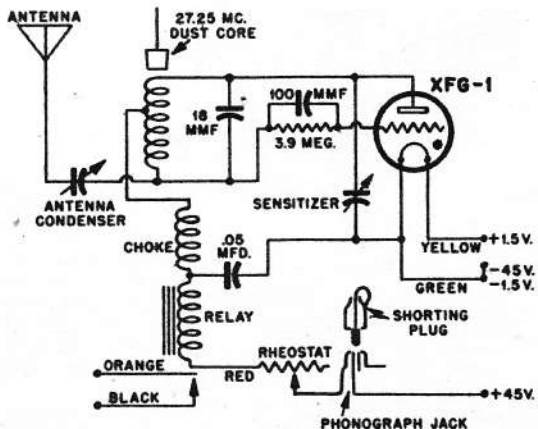
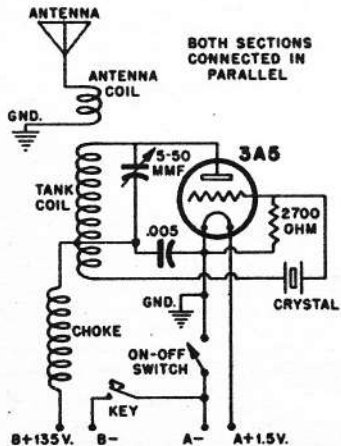
Receiver. Single gas tube type fitted with sensitizer for better range. Entire receiver mounts on base $1\frac{3}{8} \times 2\frac{3}{8}$ " and is about $1\frac{3}{4}$ " high. Wt. with battery leads and tube— $2\frac{1}{4}$ oz. On-off switch, meter jack and plug and potentiometer add about $\frac{1}{2}$ oz. Relay in kit furnished fully adjusted, as it is in finished receiver.

Battery complement: A—two pencells in parallel (Eveready 915 or equivalent), $1\frac{1}{2}$ V at 50 ma. B—two $22\frac{1}{2}$ V. batteries in series (Eveready 412 or equiv.) Idling current about 1.4 ma.; with signal, current drops to around .2 ma. Lightest recommended battery supply, as above— $3\frac{1}{2}$ oz.

Adjustments: variable antenna coupling condenser. Screw core for setting frequency. Relay adjusted by bending components. Sensitizer.

Transmitter. Case size, $8\frac{1}{2} \times 4\frac{1}{8} \times 3$ ", less antenna holder. Weight with batteries 4 lbs. Antenna projects about $4\frac{3}{4}$ ft. above case; it is two-section type, $2\frac{3}{4}$ ft. long when collapsed. Antenna attached by a single wing nut.

Batteries: Case holds two $67\frac{1}{2}$ V. B batteries (Eveready 467 or eq.) and one $1\frac{1}{2}$ V. A cell (Eveready 742 or eq.) A current—200 ma. B—135 V. at about 20 ma. (B current drawn only when key is depressed).



"SUPER AEROTROL" TRANSMITTER

"SUPER AEROTROL" RECEIVER

FEBRUARY, 1954