

ELECTRA ONE-CHANNEL MARKS WWRC ENTRANCE

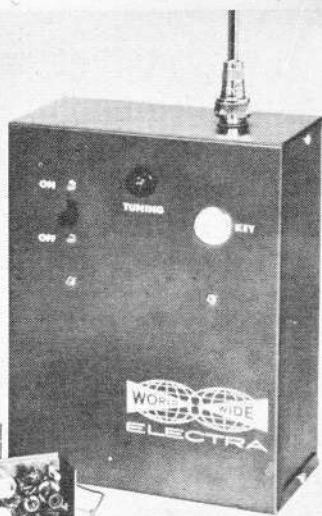
■ New entry in the field is World Wide Radio Control with its low cost Electra 27 mc single channel tone receiver and transmitter. Previously World Wide sold equipment from many other makers, but none of its own. The two units are in red anodized aluminum cases, with distinctive World Wide insignia on the covers. You can purchase each unit separately, but there is a saving of almost two dollars if the two units are bought together.

The transmitter has a printed circuit plate for a chassis and in accordance with present F.C.C. laws comes with the oscillator tuning adjustment sealed. The test transmitter was fitted with a 26.995 mc crystal but presumably you can get an Electra transmitter with any of the six R/C spot frequencies upon order. The maker states that tuning of the amplifier stage of this MOPA circuit will have no effect on frequency, but once tuned there should be no reason for changing the amplifier plate circuit adjustment.

The threaded fitting for the antenna is atop the case and the antenna itself is a sturdy chrome-plated unit. A series loading coil is used to assure maximum power into the antenna, and this power is 100% modulated, when you depress the keying button.

The transmitter modulation frequency, about 800 cycles, is generated in a tiny neon tube; it is stepped up in one half of a 3A5 tube, then fed into the 3V4 amplifier. The other half of the 3A5 acts as the crystal oscillator. The circuit is certified to be well within the frequency tolerances required by the F.C.C., under all conditions of temperature and voltage. Grid modulation is used and as is often the case with this system, the apparent output of the transmitter, as seen by brilliance of the output indicator bulb, decreases when the keying button is depressed (actual RF power does not decrease, however).

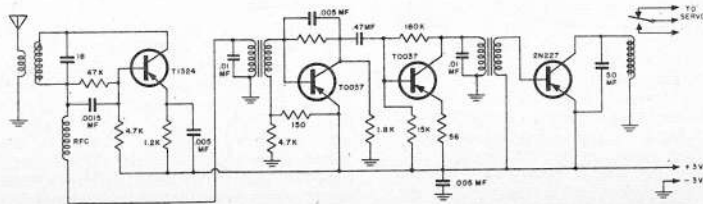
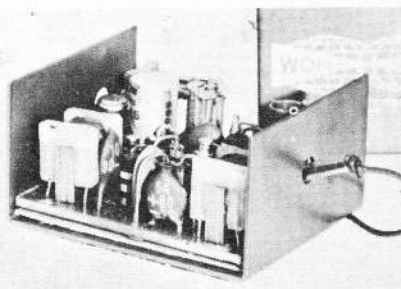
Transmitter top of page, rcvr here.
WWRC now at Box 106, Birmingham, Mich.



The Electra receiver is a tiny unit, built on a glass epoxy printed circuit base, with a heavy aluminum lower case for maximum crash protection. The top cover is of lighter material. Both are red anodized to match the transmitter. The receiver is intended for 3 volt operation, but the makers say that a separate battery should be used for the escapement or other unit controlled by the relay. The receiver will pulse at high speeds, and the normally closed relay contact is brought out in the power cable, for use in proportional or other systems that require connection to both relay contacts. This is an all-transistor receiver, but the circuit is well stabilized to take care of extreme climatic conditions. As with the transmitter, the Electra receiver is tuned at the factory for 26.995 mc. It can be retuned to any of the other 27 mc R/C spots by simple movement of the detector inductance core; a hex tuning wrench is required.

The transmitter used with this receiver should be at least 85% modulated, but best results are had with 100% modulation, as provided with the matching Electra transmitter.

The maker recommends that tuning be accomplished by noting when the relay closes and opens, rather than by use of a meter in series with the battery supply. Also, the cover should always be on when the set is being tuned; relay operation can easily be heard with the cover in place.



Specifications: World Wide Electra 27 mc non-selective tone receiver. Case size $1\frac{3}{4}$ " x $2\frac{1}{8}$ " x 1". Weight 2.4 oz. 5-lead cable includes two wires for battery, three from relay. 100 ohm Deans relay used. Single adjustment for tuning. Antenna length between 18 and 30". 800 cycle tone is optimum, 85 to 100% modulation. *Battery Supply*—3 volts. Current with no input, 8 ma; with carrier only, 3 ma; with signal from Electra transmitter, 32 ma. Battery should be changed when it drops to 2.3 volts with tone signal tuned in.

Electra transmitter, 27 mc R/C frequencies. Ne-2 neon AF oscillator, 3A5 as modulator and RF oscillator, 3V4 power amplifier. Normally supplied with 26.995 mc crystal. Panel has on-off power switch, button for keying tone, small bulb for tune-up and monitoring RF output. Case measures $7\text{-}5/8$ x $5\text{-}15/16$ x $3\text{-}1/16$ ". Total weight with batteries and antenna is 4 lb. Osc. tuning sealed; amplifier tuning by means of ceramic variable condenser. Antenna is 3-section collapsible type, $16\frac{1}{2}$ " long folded and 46" when open. *Battery Supply*—A power required is $1\frac{1}{2}$ volts at 250 ma (one Burgess 4F or equivalent). B power, 135 volts (two Burgess XX45 batteries in series or equiv.); current drain with carrier only is 24 ma, with tone key depressed, 22 ma. "A" battery should be replaced when it drops to 1.2 volts under load, "B" batteries when they drop to 105 volts with power switch on, key button up.