

Special packing for a completely wired up boat unit includes servos, batteries, etc., for multi, being packed in far left photo. Right is the multi-channel assembly line with Tritones coming through

Radio control gear being produced en masse at the Radio & Electrical Products' establishment

'REP'TONE

The name of George Honnest-Redlich is synonymous, with radio control. A pioneer of the reed system as employed for model control, with many "firsts" to his credit, George's expansion with extensive production of a range of Tone outfits impressed us during the course of a recent visit. Tritone, Sextone and Octone outfits have been well received in all parts of the world, and are coming through the assembly stages in rapid succession, at the R.E.P. shop in Sheen. Always ready to help the enthusiast, George makes no secret of his circuits, and provides Octone Tx circuit as below. Results of our tests with Unitone follow:

UNITONE IS IN keeping with the standard of all the R/C goods produced by R.E.P. Ltd. Both transmitter and receiver are well made and neat in appearance and it is obvious that a great deal of thought has been put into design and production. The result is reliable single-channel equipment at a reasonable price.

The Transmitter is housed in an attractive aluminium case with a mottled grey finish. Size is $9\frac{1}{2}$ in. x 6 in. x 3 in. and at a weight of $4\frac{1}{2}$ lb. complete with aerial and batteries

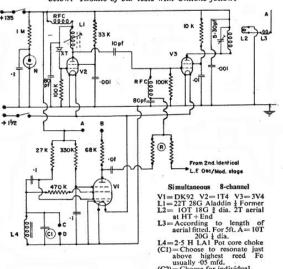
it is ideal as a hand-held unit.

Circuit includes a single valve RF oscillator using a 3V4. This is coupled to the aerial inductively and although there is no provision to load the oscillator fully there appears to be ample RF output to meet all requirements. The RF oscillator is modulated by a DK-96 in a Dynatron circuit in which a sub-miniature choke is included in the second grid circuit. This method is standard in all tone transmitters produced by R.E.P. and has been found to be extremely stable for reed work. Its inclusion in the single-channel version is merely to conform with the standard circuit and provides a reliable source of modulation.

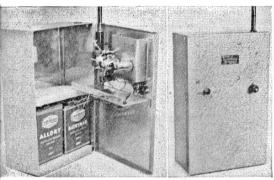
Input power is approximately 1.5 watts and the output is ample for all needs.

[George H.-Redlich checks an Octone on the 'scope





(C2) = Choose for individual reed Fe C3) = Highest four reeds 01 Lowest four reeds 02 XT = Overtone Xtal in 27 m/c band (R) = Choose to give same mod. depth from both stages. Usually 47 K

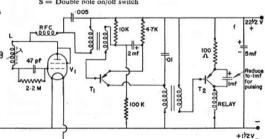


Unitone Transmitter a neat, hand-held unit, with telescopic aerial. Octone has several refinements including a neon flasher indicating battery state

RECEIVER is housed in a shockproof red plastic case and the wiring both neat and compact. Size is $3\frac{1}{8}$ in. $x 1\frac{1}{2}$ in. x 1 in. and weight $2\frac{1}{2}$ oz. The unit is

\$270 K 20pf= ₹330к UNITONE no!

 $\begin{array}{c} \text{UNITONE Tx} \\ V_1 = \text{DK}96 \text{ (or DK 92)} \\ V_2 = 3V4 \\ I_1 = 10 \text{ turns } \frac{1}{8}\text{-in. dia.; Aerial coil } \frac{1}{2} \text{ turns} \\ \text{RFC} = \text{RF C hoke} \\ C = \text{To tune to 400 c. approx. 01} \end{array}$ K = Operating switch = Double pole on/off switch



Aerial 21 turns

supplied with switch and plug ready wired and all that is necessary to operate is to connect the H.T. and L.T. batteries together with the actuator and battery. The size and weight make it suitable for any size model, the cross-section adapting itself to small fuselages.

Although small in size, however, nothing has been sacrificed and performance is excellent.

The circuit is a hybrid using a valve super-regenerative detector followed by two transformer-coupled transistor stages. The new R.E.P. \(\frac{1}{2}\)-oz. relay is in the final circuit and is set to make contact at 2.8 m/A.

This is a tone system, which means that the receiver will only respond to a carrier modulated by a tone. No sensitivity control is needed and tuning is very simple by means of a single control. Once tuned it should remain stable for long periods provided reasonable precautions are taken in wiring up the batteries, etc., and in maintenance. A measure of temperature stability is incorporated in the circuit and on test no trouble was detected at extremes of temperature.

A range test was made on a day when the temperature was at freezing point along a road lined with trees. Full current change was observed up to 500 yards, and beyond that the reduction was only 2 m/A. The equipment can, therefore, be recommended with every confidence. This distance being greater than normal flying range with good visibility.

Minor criticisms are as follows. The absence of transmitter switch markings which is being corrected by the inclusion of an engraved escutcheon. The flexible leads are not anchored at the point of connection. In the sample tested one had fractured. Relay adjustment is a little coarse and in view of the change of 3 m/A care in setting up is desirable, should this ever be considered necessary.

Those who intend to use Unitone for pulse systems are advised to specify the intention when placing their order so that the manufacturers can make special adjustments.

SPECIFICATION

Transmitter. Transmitter.
Single valve RF oscillator (3V4) modulated by a Dynatron L.F. oscillator (DK96)
H.T. Voltage 135 (2 Ever Ready B101 batteries).
LT. Voltage 1-5 (Ever Ready AD4),
Total L.T. Current 125 ma.
Total H.T. Current 10 ma.

Total H.T. current (no modulation) 12 ma.

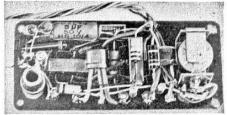
Price £8/17/6. Receiver
Valve super-regenerative detector followed by 2 transistor A.C.

coupled amplifier. H.T. voltage 221 (B122). L.T. voltage 1.5 (pencell).

Total standing current (no signal) 1.2 ma. 4.2 ma. (signal on)

Standing current (no signal) ·3 ma. (signal on) 3·4 ma. (final stage) Relay opens at 1 Weight 2½ oz. closes at 2.8 ma. Battery weight 14 oz.

Price £7/2/-



Unitone Receiver tested is not far off actual size. Standard of soldering and assembly is high, and latest production units have newest type transistors