



ALPHA TECH RIGS PERMIT TWO FLYERS SAME-TIME OPERATION

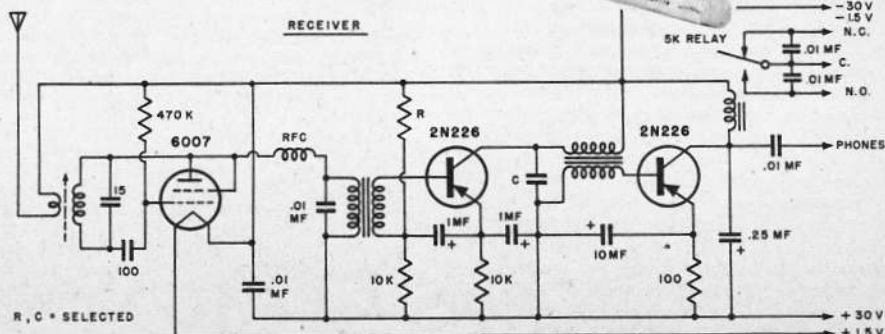
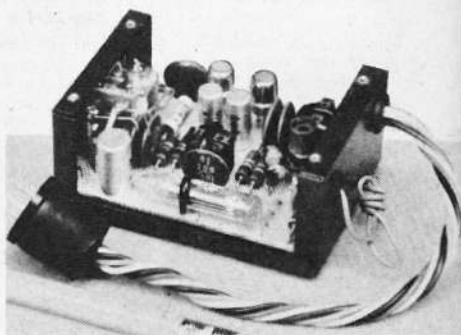
While the circuit of the R300 receiver is fairly conventional, it will be noted that a rather large capacity is used in the detector tuned circuit. As seen in the inset circuit, this receiver can also be used on 50 mc with a few alterations, including substitution of a 1AG4 in place of the 6007 tube used in the 27 mc receivers.

The Alpha Tech T300 transmitter is a compact unit of the MOPA style. All its tuned circuits are "set" at the factory and sealed. The certification required by the F.C.C. rules is engraved on the front of the case, which is marked with the output frequency. The case, fairly heavy aluminum and anodized red as is the receiver, also uses the same interlocking edge construction. Batteries, a snug fit, are held in place positively, so they cannot shift no matter how the transmitter is handled. Here again a glass fiber epoxy printed circuit plate is utilized, with every part held firmly in place.

The audio oscillator is set at the factory at 600 cycles to best match the

The transistor audio stages of the R300 are well stabilized, so that high or low temperatures will not bother the set. The entire receiver has been designed so that it will follow very high pulse rates, making it very satisfactory for use with proportional control systems.

Construction is very rugged, with the printed circuit base being a glass epoxy



R300 receiver. However, it is easily adjustable over a range of about 200 to 1000 cycles, to work at optimum with other makes of receivers. This adjustment is made by turning a nut on the AF oscillator inductance. The modulation is close to a sine wave and at 100%; the makers assure that the transmitter will cause no "splatter" to bother other nearby receivers.

An examination of both units shows many little points of careful detail design and construction. For example, the receiver uses a type of relay that gives a "wiping" contact, which helps to keep the points clean. Additionally, arc suppression is fitted to both relay contacts and both are brought out through the power cable. On the transmitter, it will be noted that the screws which hold the cover in place are carefully positioned so that when turned in tightly they will not cut into any of the batteries. The transmitter includes a socket on the front intended for attachment of a pulser (Alpha Tech can supply one—their #305); it is also handy for use with external B batteries. The transmitter can be operated safely with shortened antenna, or with it removed entirely, for close range testing.

A 10 page instruction booklet contains detailed information on use of the equipment, circuits for both units, certification of compliance to F.C.C. specs, and maker's warranty.

Specifications: Alpha Tech Model R300 receiver, for 27 mc use. One tube and two transistors; transformer coupled AF circuits, Jaico relay. 2-15/16 x American Modeler — November 1960

2-1/16 x 1-1/4" overall; weight with cord and plug 3.6 oz. 7-pin socket, headphone jack, DPST switch furnished with receiver. Single control, for tuning. Antenna length, 24 to 30". Requires modulation at 100% and about 600 cycles. Power requirements: 1½ volts at 13 ma for "A," 30 volts for "B." Set idles at about 1.4 ma with no signal, drops to about 0.8 ma with CW signal; current rises to 4.5 or 5 ma with tone. Replace "A" battery when it drops to 1.1 volts, "B" when it is down to 25 volts, both under receiver load.

Alpha Tech Model T300 Transmitter. MOPA RF circuit with single tube modulator, tone adjustable from 200 to 1000 cycles. May be had tuned to any of the

six 27 mc R/C spot frequencies. One section of 3A5 tube acts as half frequency oscillator, other section is doubler. No external arrangements for tuning, which is sealed at factory. Overall size of case, 8-3/16 x 4-1/4 x 2-3/4", not including protrusions. Weight with antenna and batteries, 3-1/4 lb. 5-section antenna, 11" long when collapsed, 48" long when open. 4 prong plug furnished for pulser connections. Batteries: 1-1/2 volts at 420 ma (Burgess 2D or equivalent); 135 volts for "B" (two Burgess XX45 or equiv.). "B" drain is about 12 ma with carrier only, 14 ma with tone. "A" battery should be replaced when it drops to 1 volt under load, "B" batteries when they show 105 volts or less.

Gold Cup

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Accepted engine starting procedure is to pass length of cord or tape under flywheel and pull upward sharply on one end, with engine rotation, while other end is held less tightly but maintaining friction to rotate flywheel. When engine starts cord is then pulled clear of flywheel quickly. While flipping engine, helper must hold boat down firmly on stand.

A word of caution while handling boat getting it from stand to the water. NEVER, NEVER let fingers get under the transom! That little prop is really screaming and can have the same effect on your fingers as a meat-grinder.

To launch your boat grasp sponsons with one hand and fin with other. You can't just drop the boat into the water, because prop will cavitate and stall engine. Give the boat a firm underhand level pitch just off the surface so that the model is moving when the prop hits the water. There is a certain knack to launching a high speed boat and you'll probably stall the engine on the first few tries. You'll have to get into the water and practice the underhand launch to get the right combination of forward speed, level attitude and closeness to water surface. Try to get boat into the water quickly after starting engine so that it will not overheat. Radio checks should be brief but positive.

So give our unlimited hydro model a try. This is a real water-borne boom.