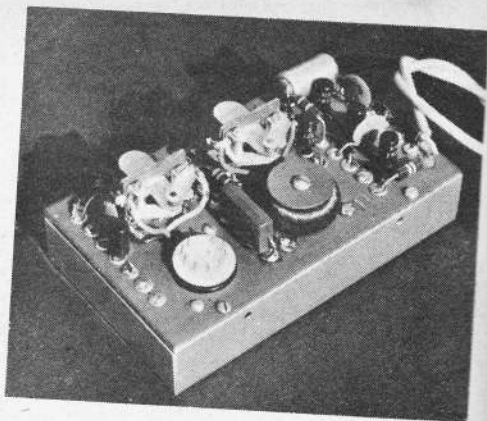


Latest Babcock Marks "A" Big Change in Rcvrs



■ Don't think this is the earlier model with an "A" tacked on the end, Babcocks' BCR-7A receiver is a complete redesign from the former BCR-7. A dual channel simultaneous 465 mc unit, the replacement version is lighter, more compact, and much more sensitive than the original model, and it has a simplified antenna as well. The original BCT-7 transmitter remains unchanged; for those who missed the description of this transmitter, see April 1957 "A.M.," page 60.

Basically, Babcock's latest receiver is the same as the earlier one; it comprises an antenna system which incorporates a crystal detector, this feeding rectified audio to a very high gain all-transistor audio amplifier.

Latter ends in two tuned AF channels, which will accept the 5,000 and 7,000 cycle tones produced by the transmitter. The transmitter sends either tone or both at once; receiver is designed to handle the dual tones for simultaneous dual control operation.

The BCR-7 used two separate antenna systems, each with its own diode, the output of the two being connected in series and run to the amplifier. Reason for the two antennas was to assure adequate signal pickup regardless of the position of the plane with respect to the transmitter. For boats, only a single antenna was used. New setup combines the two antennas into a single unit, with a single diode. To assure reliable receiver operation despite interfering signals there is connected between antenna and amplifier a high-Q tuned circuit (it has a screw adjustment but DON'T twiddle it—it's set at the factory), also there is a double-diode limiter in the amplifier.

Two 12" lengths of music wire come with the BCR-7A; for plane use you solder both to the antenna assembly

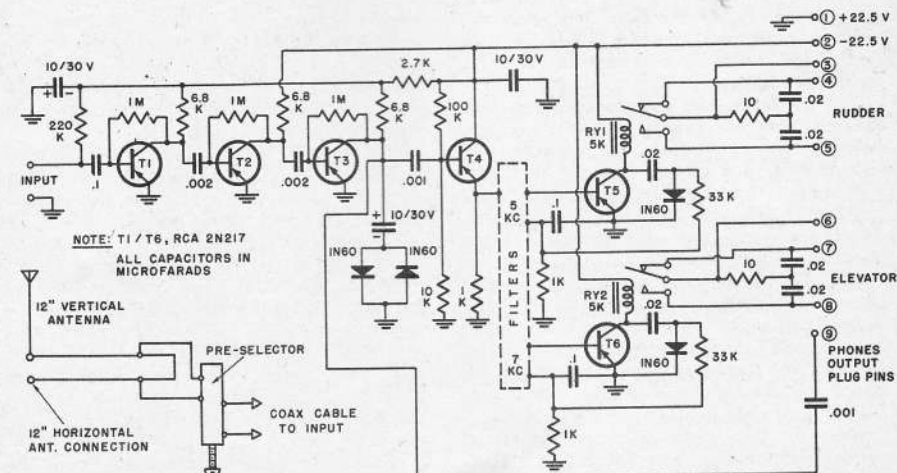
plate, for boats only the vertical wire is needed.

The same number of transistors are now used, and they are of the same type—RCA 2N217. A new feedback circuit has been added to the two filter transistor circuits, similar to that used in the Babcock BCR-10 receiver. It assures full current through the relays even though signal strength may be down a bit.

In the redesign job, the makers have upped sensitivity considerably; whereas the earlier receiver had a 15 microvolt figure the 7A rates at 2 microvolts. As to range, the maker states that on a boat you should get 400-500! With the set in a model plane, and both plane and transmitter held shoulder high, the ground range will be 500 to 600'; in the air you will get much better than this, between three and six times as much. They point out that the Babcock Breezy Sr. plane, which spans 56", is virtually impossible to see clearly when over 1500' away. If you can't see 'em clearly you sure can't control 'em!

While the receiver will pulse reliably at a very high rate, and the maker strongly recommends it for pulse operation of one of the channels, they state the job was not designed for dual-pulse use. Main reason is because of the sometimes peculiar characteristics of 465 mc. signal propagation, which can have odd reflection effects from trees, buildings, wires, etc. Babcock says for moderate range work dual pulse operation should be entirely satisfactory.

Packed with the receiver is everything you need for installation except control actuators and batteries; you get antennas, hookup wire, plugs, and a DPST slide switch. The instruction booklet is the usual profusely illustrated Babcock job, covers both transmitter and receiver, and



Dick Schumacher.

Specifications: Babcock BCR-7A receiver for 456 mc two channel simultaneous audio tone operation. Uses six transistors, five diodes. Two BR-3 5K relays. Measures $4\frac{3}{8}$ x $2\frac{5}{8}$ x $1\frac{3}{4}$ " high with plastic cover. Total weight including antenna and pre-selector is 7.15 oz. AF tone selection by means of toroid choke filters. No adjustments whatever. Battery requirements: No A battery needed; B battery, $22\frac{1}{2}$ volts. Maker recommends two such units in parallel (Eveready type 412 or equiv.) for better life. Should be replaced when voltage with signal on drops to 17. No signal current, about 5 ma. With one tone on, about 8.5 ma. With both tones together, about 11 ma.