



Bramco's Regent 10 receiver (above) and schematic (below). See 1959 Air Trails Model Annual for data on Bramco transmitters, other items.

## BRAMCO 27¼MC SETS OFFER MULTI CHANNELS

■ For several years the Bramco "Blue Chip" 5 channel receiver and transmitter were the main product of this Detroit concern, but they are now concentrating on 8 and 10 Channel Regent receivers and matching transmitters. The Blue

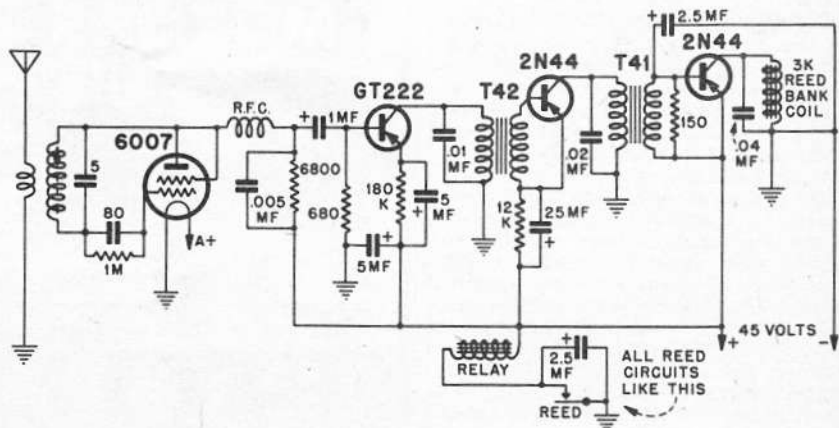
Chip is still available however.

From the first Bramco has made reed transmitters in ground based form, with a separate plug-in control box. These boxes may be purchased separately and some users have a single transmitter and several control boxes, each tuned to a different receiver. The 8 channel box has a control stick to take care of rudder and elevators, two buttons for high and low motor control, and a "crossover" button. The latter switches the control stick sideways movement from rudder to ailerons; however, the box contains separate trim "pots" for all eight channels. In the 10 channel box there is an additional small control stick for elevator up or down trim.

The transmitter, designed for extreme stability, features two separate oscillator circuits so simultaneous operation of two tones may be accomplished. The oscillators feed individual modulator tubes which are connected by a balancing pot to grid modulate the RF output tube. The pot allows an exact balance between the two groups of tones, so it is easier to achieve successful simultaneous reed operation.

The RF section of the transmitter uses a crystal cut to one quarter of the output frequency, crystal output being multiplied up to the required 27 mc. The antenna tuning circuit is such that the antenna can be fully loaded even when not fully extended, but it should normally be used full length except when testing in the shop.

Though they have always been noted for their ground type transmitters, requests by some users have resulted in development of a hand-held unit, which



comes in either 8 or 10 channels. Basically the same printed circuit plate is used in this transmitter, but the circuit elements from the control box have been included in the same case. Smaller batteries are used and the antenna is shorter. The hand held jobs do not have the advantage of being usable with any of several control boxes.

While the ground transmitter has space enough for much larger B batteries than most hand held jobs, there is plenty of room in it for a storage cell and a vibrator power supply. Bramco does not make such a unit but recommends the ESSCO power pack made expressly for this transmitter.

Unlike most R/C manufacturers, Bramco utilizes reed banks of its own make. These heavy duty units can also be had separately in 5, 8 and 10 reed sizes. The 8 and 10 channel receivers use a low drain detector tube and several transistor amplifiers. Relays in these receivers by Jaico feature a special contact arrangement that gives a wiping and self-cleaning action as the relays operate. The 8 and 10 channel receivers are the same except that the latter is a bit longer to accommodate the two extra relays. While Bramco reed banks are noted for resistance to vibration, the makers recommend that the receivers be mounted vertically, cemented to sponge rubber. This has been found to help maintain reliable operation even with "rough" engines.

**SPECIFICATIONS:** Bramco 27¼ mc 8 channel transmitters use MOPA circuit with 3V4 oscillator and amplifier tubes, 3A5 tone generators and 3V4 tone amplifiers. Ground type transmitter uses separate control box which has tone adjusting pots; also uses 100" collapsible antenna. Hand held transmitter utilizes same circuitry, but entire unit is in case 3½" x 8½" x 10½"; there are lever switches for rudder, elevator and ailerons, two buttons for motor control. 10 channel hand held has additional lever for elevator trim.

**Battery requirements:** Ground type takes three 45 volt batteries such as Burgess M30, and two 1½ volt A batteries (Burgess 2D). Hand held unit carries one Burgess 4F 1½ volt A battery and two XX45 B's. Makers recommend that B batteries be renewed when they drop

to 1.25 volts and B supply when it is down to 100 volts.

**BRAMCO REGENT 8 AND 10 RECEIVERS:** 10 channel is 2" x 2½" x 4½" long, 8 channel about an inch shorter. Same circuit in both. Single 6007 tube and three transistors, two interstage coupling transformers. 8 channel unit weighs 8½ oz. Reed frequencies run 240 to 450 cycles.

**Battery Requirements:** Makers suggest single pencil for A supply (1½ volts at 12 ma) and a Burgess U30 for B. Latter is 45 volts, and idling current is about 1 ma. Drain with one tone is 8 ma. Batteries should be replaced when they drop lower than 1.25 volts and 38 volts.

