



Radio Control World

Controlled by Howard McEntee

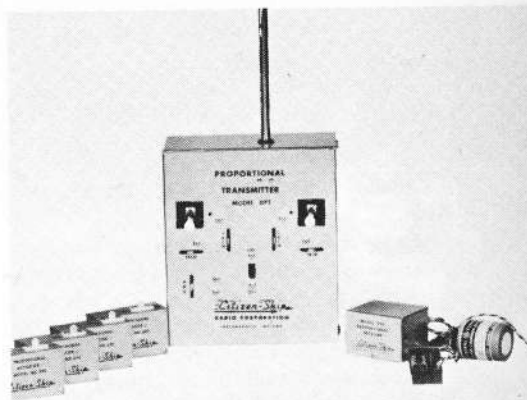
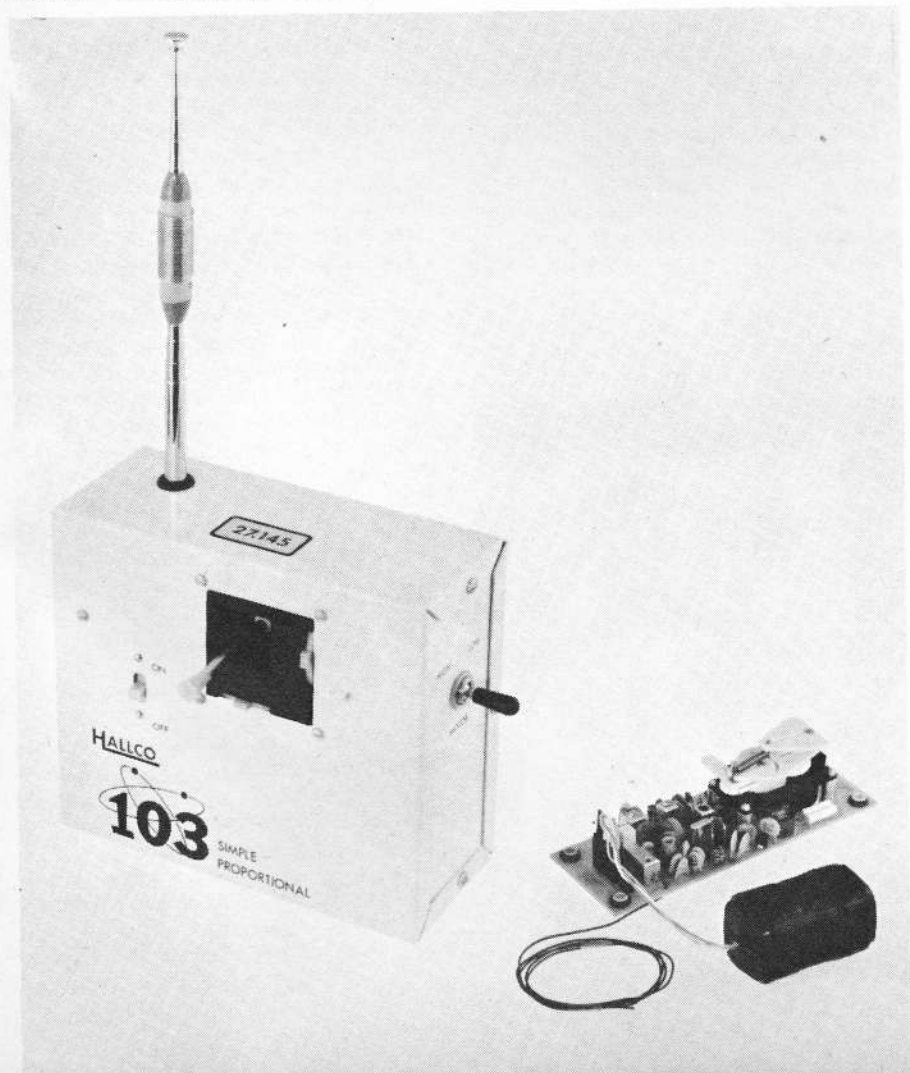
Single Channel Propo: Circuitry seen on next page affords independent proportional rudder and elevator, with trimmable throttle, via well-known variation of pulse rate and length (plus tone full on or off for MC). But a few interesting tricks have been added to the usual setups for such systems, by Henry Frink (36 Radnor Dr., Melbourne, Fla.). For one, Henry utilizes a mono-stable multivibrator for a rate detector; for another, he utilizes some of the ideas from Walt Good's article on Propo Current Saving (1966 A.M. Annual) to good advantage. Claims his arrangement

is so reliable that he has just as much flying fun as the boys with expensive multi rigs!

In the March '67 issue we showed some mods Henry made to a Controlaire 5 receiver, which supplies the sigs to the servo arrangement seen here. Rudder amplifier is fed right from receiver output, and circuit is quite conventional (aside from 50-mf capacitor corresponding to C2, and which will be covered in a moment); since connections are exactly same as for elevator channel to right of "X," duplicate elevator amplifier. As no double-pole relay was

available, two SPDT units were used in parallel for fail-safe and MC purposes. Transmitter pulser has a range of 4 to 16 pps, with about 10 pps at center stick position. Servos are made from Micro-Mo T 03 motors, and servo amplifiers were copied from the Good article. The mono-stable MV is triggered from the positive edge of the receiver output pulses. Ten ohm resistor increases temperature stability of the circuit. C1 and R1 set the neutral rate of the MV; values shown are for 10 cps neutral. With value of C2 shown, and pulse rate range mentioned, it was found that the "current saver" (just C2

The Hall Company has expanded its line of RC products to include a complete Galloping Ghost system called the "Hallco 103." Superhet, uses a Rand servo.

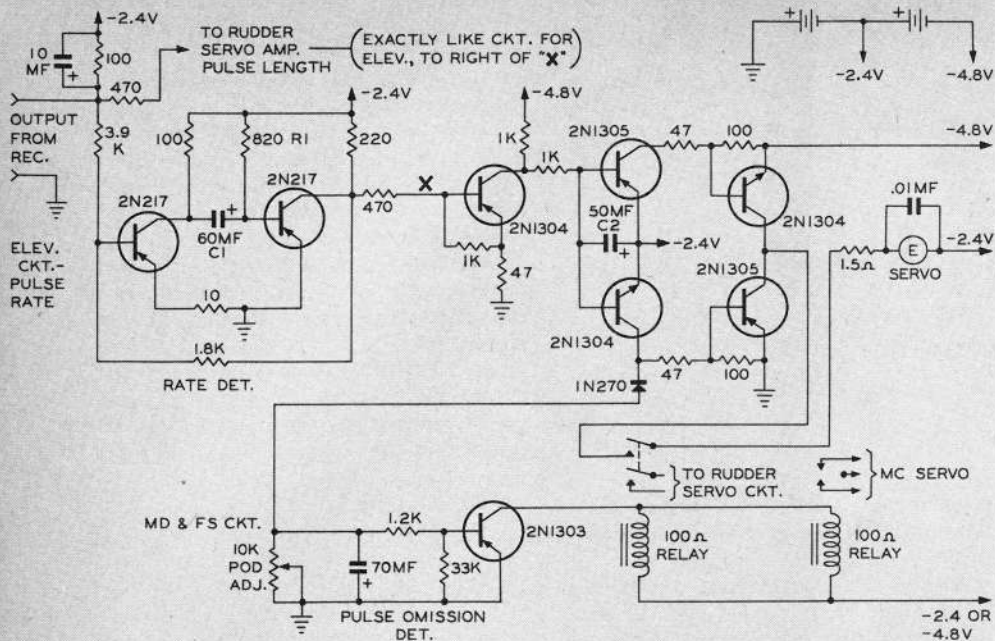


Citizen-Ship's multi digital sets now type-accepted for 72mhz. Available in three- or five-channel systems.

in Henry's set-up—he did not find the diodes utilized in the Good article to be necessary) reduced servo current drain to about half the value it would be without C2, at neutral stick. At high pulse rate the current drops to about one quarter, while at low rate it is roughly three-quarters. Thus there is a very worthwhile saving in servo current. Servo response seems faster with the current saver. Incidentally, note that the POD shown here is the type which holds the relays operated (they draw full current) during normal pulsing; they open when pulsing ceases.

Quick-Change Servos: Bothered at the complications of shifting the servos of his ACL Digilog VI system from one plane to another, Paul Hook (410 13th St., Honesdale, Pa.) worked out rig we show in sketch and photo. The servos are mounted on 3/32" ply as closely as feasible, with R and E servos lengthwise at rear, MC servo crosswise at front. Servo board is 3" wide by 4 1/2" long; screws at the four corners hold it to hardwood crosspieces in fuselage, and of course, the servo bodies are toward fuselage bottom, with the wheels atop the ply plate.

To simplify problem of disconnecting the three linkages from the servo wheels, Paul rigged a "keeper" for all three, made of 1/16" thick clear plastic. A short length (Continued on next page)



Reliable all-transistor dual-proportional single-channel system. Henry Frink.