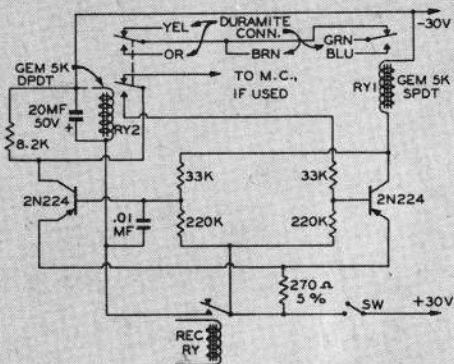
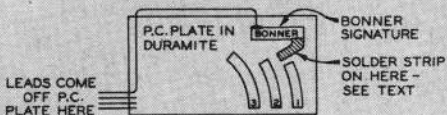


Single Channel Servo Switcher. With circuit shown you have full servo power using a Duramite, yet keying via single channel radio is same as with a compound escapement. You get quick-blip MC action as a bonus, too. System, demonstrated at Buffalo Bisons' Winter R/C Convention, worked like a charm . . . dreamed up by Leonard Klebanoff (28 Fraserwood, Apt. 6, Toronto, Ont.).

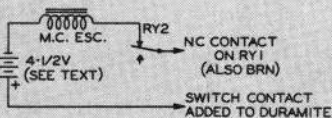
Main circuit consists of two transistors in "bi-stable" multi-vibrator arrangement (stable in either of two conditions). RY at bottom of circuit is usual receiver relay; RY1 and RY2, plus transistors and other small parts may be mounted in small plastic box, placed where desired in model. L.K. reports the only critical part, the 270 ohm resistor which sets bias of transistors, should be chosen to give correct idling current through RY1—value shown is correct for 2N224 transistors. Other types such as 2N217 or T0037 should work fine, but would probably require resistor change. Capacitor across RY2 sets time delay on RY2; its size depends upon how fast user hits key button. The usual arc suppression should be employed across receiver relay contacts. (.01-mf in series with 10-ohm resistor should do). A .01-mf should be across servo motor brushes to prevent brush noise from bothering receiver.

If same low-voltage battery is used for servo and receiver, it might be necessary to connect a large capacity electrolytic across the battery to prevent possible feedback effects. Should servo not neutralize but oscillate around full-right rudder position it is a sure sign servo motor noise is bothering your receiver.

To use the system for quick blip, an addition must be made to the servo circuit board . . . Len found he could solder



Single channel servo switcher is offered by Len Klebanoff.



a piece of thin copper to the Bonner signature on the board, as shown. It is important that there be no connection between this contact and strip #3 when servo is in full-right rudder position! Separate 4½-volt battery was found necessary to prevent triggering MC escapement when servo returns to neutral from right-rudder. With some other types of servos, switching might be arranged differently and this added battery not required. Switching contact for MC must be placed between neutral (and just a little way beyond it) and right-rudder position, yet far enough from neutral that the MC escapement will not be triggered when you are signaling for left-rudder. Klebanoff would like to hear from anyone who can avoid added 4½-volt battery (other than via addition of a completely isolated switch for MC escapement in servo).

He terms this a "slow quick blip" MC rig, as user needs only to start servo moving, then release signal anywhere between neutral and right-rudder. Capacitor across RY2 will hold it long enough so that servo reaches the added switching contact to trigger the MC escapement. Len figures the action is slow enough so another servo might be used for MC instead of an escapement, but he hasn't tested this.

By the way, he is a member of Toronto R/C Club.