M C MODEL 100B RADIO CONTROL RECEIVER

The MC 100B receiver is designed with prime purpose of getting the most sensitivity and reliability from a one tube receiver. In fact, by using the so called "hard tube", iron core coils, and a sensitivity control, we achieve not only a remarkable "drop" in plate current, but also excellent range - the two qualities required for the ideal model control receiver.

The MC 100B receiver weighs approximately two ounces, complete with relay and power leads. Has a cube dimension of 2 7/8" x 1 5/8" x 2¼", including the antenna clip. The narrow configuration lends itself to installation in very small R/C planes. the MC 100B has a 5000 ohm relay and operates on a plate supply of 45 volts. This receiver will idle at 2 to 2.2 ma. and drop to approximately .5 ma on signal. Filament 1½ volts at 100 ma

ANTENNA: The MC 100B receiver is designed with a high degree of antenna isolation. Therefore, almost any length of antenna can be used with a slight readjustment of the "tuning slug". However, we recommend 18" to 36" as practical length. It is to be noted that any type of antenna may be used, vertical or horizonal, etc, providing it is kept a reasonable distance away from metal parts of the installation.

INSTALLATION: MC 100B receivors are provided with four holes for the popular "rubber suspension" method of installation. The receiver may be mounted directly on sponge rubber or suspended on rubber bands. The relay is mounted on the receiver chassis, so reasonable freedom from vibration will be necessary. For the beginner, particularly, we suggest a bench or open hookup be made with all the parts used being temporarily wired for checking, so that he will gain experience in tuning and adjusting the different components. Many have found this procedure a very worth-while effort.

TUNING: With the receiver and accessory components installed and wired (note schematic) and DOUBLE CHECKED, connect or plug in a 0-5 ma. (moving coil type) meter in the plate circuit B plus and turn on the switch. The current will rise to the idling value of the particular receiver you have. (model 100B receiver approximately 2.2 ma.). Here we would like to note that these receivers were factory tuned with a 24" antenna and a "center band" crystal oscillator, so very little tuning should be required to "find" your transmitter. Now assuming the transmitter has been checked out and is okay, move it at least 20 or more feet away, turn it on and close the "key", so you will have a continuous signal. Check for drop on the meter. If no drop takes place turn the transmitter OFF and adjust the sensitivity coil (red band) "clockwise", turn to the right until meter again indicates the idling condition. Again turn on transmitter and

"key" for continuous signal. Tune (yellow band coil) the receiver for minimum reading on the meter. Open the transmitter "key" and send intermittent signals to the receiver. Each time the key is closed the current reading on the receiver should drop to approximately .5 ma. For final check out, take the controlled unit (airplane or boat) to a point at least ¼ mile away from the transmitter and with the help of your "side kick", who will "key" the transmitter on arm signals from you. With signal on, trim the receiver very carefully for a minimum reading on the meter. With transmitter off, turn the sensitivity slug clockwise until current drops and back out slowly until current returns to idling and continue for approximately one-half turn. For a final check, key the transmitter several times and note the meter readings. Remove the meter and turn on escapement or servo. If the transmitter signal operates these devices properly, you are ready to go - flying or sailing. The relays are adjusted for proper operations; however, if through accident or rough handling the relay becomes maladjusted, adjust gap between the parts by bending to approximately 10 to 12 thousands - the thickness of an ordinary postcard. Now by varying the gap between the armature (clapper) and the pole piece by bending, adjust the "pull in" to approximately 2/3 the idling current or in the case of 2 ma. idling the "pull in" point will be approximately 1.5 ma. The drop out will be 1 ma.

Last, check your batteries periodically and under load. It is desirable to provide jacks in the installation, so that the batteries may be checked conveniently with the equipment operating.

WARRANTY: The MC model 100B receivers are guaranteed for 90 days from date of purchase and if for any reason the receiver fails to operate satisfactory within this period and is returned with the dated sales ticket to M C Manufacturing & Sales Co., 6720 Monroe, Kansas City, Missouri, it will be repaired free of charge, providing the unit has not been abused or tampered with. The tube is not guaranteed against burn-out or breakage. Enclose 25¢ for packing and shipping charges. Pack well, for we are not responsible for equipment damaged in shipment.

REPAIR SERVICE: The M C Manufacturing & Sales Co. has an established repair service for all MC equipment. We will repair or replace whatever parts necessary for proper operation of your MC equipment at minimum rate of $1.00 with the unit to be repaired. If for some reason such as large damage from crash or dunking, you will be advised of estimate repair cost before repairs are made.

RED BAND - SENSITIVITY. YELLOW BAND - TUNING.

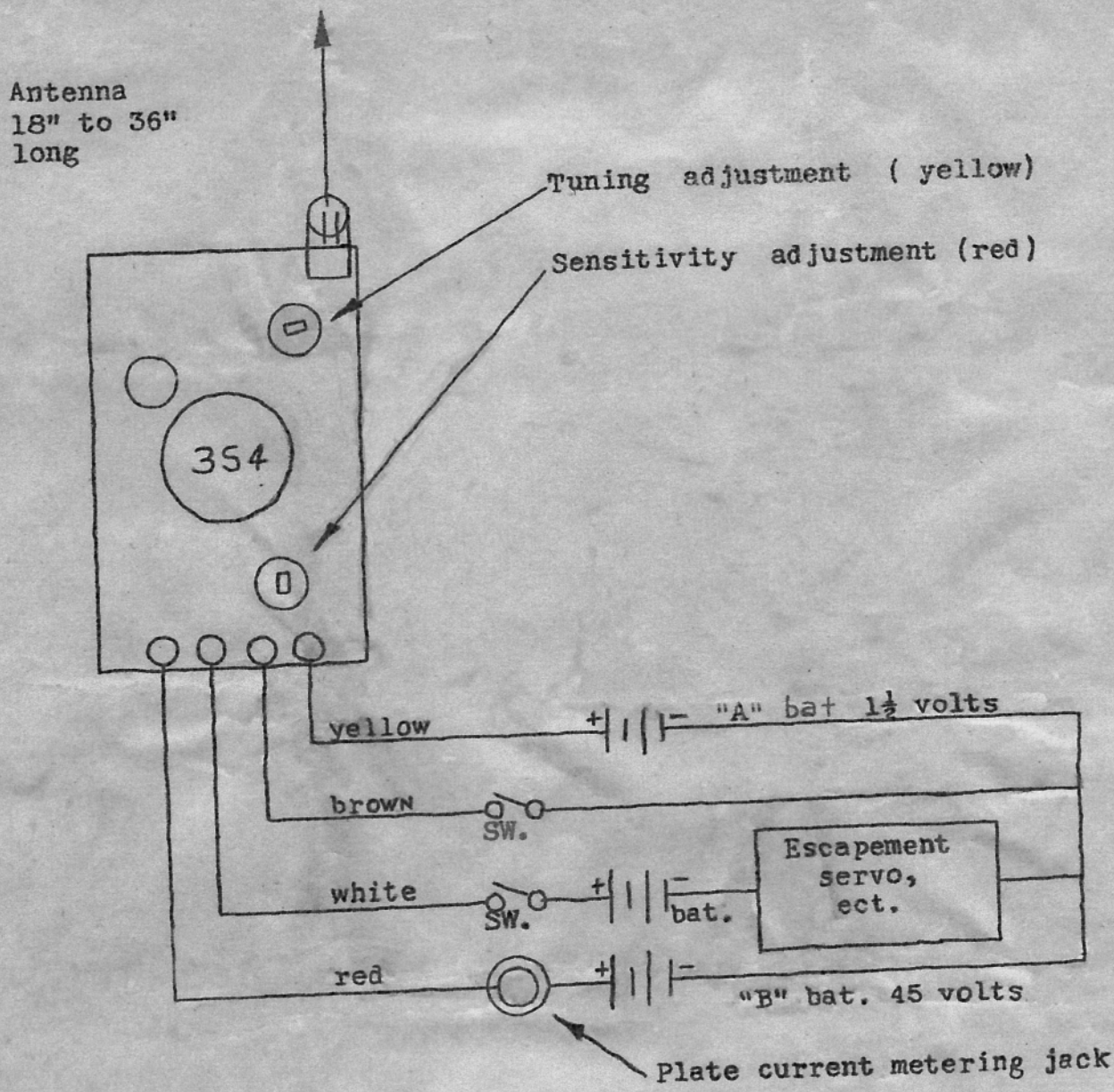
CAUTION: Quinch coil is pre-set and cemented at the factory - DO NOT DISTURB.

Yours for fun.

Joe Carlos

M C MANUFACTURING & SALES CO.

M C MODEL 100B RECEIVER



BATTERIES:

The M C model 100B receiver requires an "A" or filament source of 1½ volts at 100 ma. Two pen cells in parallel will furnish this power; however, if space and weight permit, four pen cells are more economical. The "B" or plate supply required is 45 volts at 2 ma. The most common source for 45 volts in flight batteries is two 22½ volt hearing aid batteries.