

INSTRUCTIONS FOR THE BRAMCO BLUE-CHIP and GOLD CHIP RECEIVERS

IMPORTANT: READ THESE INSTRUCTIONS VERY CAREFULLY and THOROUGHLY !

It is suggested that the receiver be bench tested for maximum tuning. Acquaint Yourself with its operations. It is very important that you are thoroughly familiar with this unit before you install it in a model plane or boat

The first step is to wire the power cable. Make sure that this cable is wired exactly as that in the diagram. It is suggested that the highest quality components are used with this equipment, such as meter jacks and switches like those which we have put into our installation kits.

After this power plug is wired, check it over very carefully against the diagram before turning the switch on. If the wiring is correct, turn the switch on with the meter inserted in the circuit 0-25 MA or equivalent and you will note that the idling current will be between 1/2 and 1 MA. The meter may quiver when the receiver is idling. This is just a characteristic of the receiver and should be ignored.

Turn the transmitter on, place your finger over the reeds and key one of the tones on the transmitter, preferably one of the low tones. Note that the meter will jump to approximately 7 MA, in some cases even to 9 MA. **THE NEXT STEP IS VERY IMPORTANT: INSERT THE TUNING WAND INTO THE TRIMMER. NOTE THAT THIS TURNS VERY HARD AND IS VERY SENSITIVE. TURN THE WAND VERY SLIGHTLY BACK AND FORTH UNTIL YOU GET THE HIGHEST POSSIBLE READING ON YOUR METER. IT IS IMPORTANT THAT YOU REACH A PEAK.** This procedure should be followed periodically and **MUST** be done when the batteries are changed.

After the receiver is tuned for maximum, release your finger from the reeds and adjust the tone control POTS on the transmitter control box as described in the instructions. After these controls are adjusted and the reeds are all vibrating properly, you should have an additional 3 to 4 MA on the meter reading which is a total of 10 to 11 MA. Now make a distance check of about 1,000 feet. The meter reading should be the same. If not it will probably be necessary to make a slight adjustment in tuning.

The reed contactors are adjusted at the factory, but if for some reason, such as a bad crackup, they need to be adjusted, raise up the contactor that needs to be adjusted, and vibrate the corresponding reed to its maximum. Press down on the contactor with a screwdriver or other similar instrument until the reed vibrates just slightly more than half of its maximum deflection.

When installing this equipment in an airplane or boat, use a good grade of sponge rubber 3/8" to 1/2" thick. Glue this to the bottom of the receiver with Ply-O-Bond cement. This is then glued to the sliding bulkhead. We would like to point out that this receiver should be installed vertically into the fuselage. Be certain the power and servo cables are free to move and that they are also out of the way of the receiver. Be certain also when you mount the receiver that it cannot vibrate against anything solid in the plane.

Keep the antenna free from any parts. If the antenna is run out between the trailing edge of the wing and the top of the fuselage. There should be no metal reinforcements in the wing of this section. The antenna should be at least 2" away from any **METAL** objects.

RELAY MAINTENANCE: The relays on this receiver are a special design and were engineered and manufactured solely for this receiver. These relays incorporate a scrubbing action for a dirt free relay. It is, however, suggested that the relay contacts be cleaned periodically. **DO NOT USE ANY OF THE CONTACT CLEANERS SUCH AS CARBON TETRA-CHLORIDE.** The best way to clean these relays is with a contact burnisher such as the Western Electric No. 265-C. If this is not available, use the cellophane off of a cigarette package. **DO NOT USE SANDPAPER OR ANY ABRASIVE, AS THIS WILL RUIN THE FINISH ON THE CONTACTS.** This same procedure is also used on the reed contacts.

(over)

Batteries: It is VERY IMPORTANT that the highest quality and freshest batteries obtainable be used. Many headaches can be eliminated by checking your batteries periodically. A battery that has a high voltage reading does not necessarily mean that it has the sufficient capacity to operate the receiver. Some of the symptoms for a battery with very low current capacity are erratic and pulsating conditions in the receiver, a fast climb in the meter reading from 1/2 to 8 MA, and then a slow reading from 8 to 11 MA, or a meter reading of under 9 MA. One way to check batteries for capacity is by shorting them instantaneously with an ammeter. This is the only certain way to determine the capacity of the battery. A battery such as a Burgess K45 should have a current reading of at least 125 Ma or more. In making a check of this sort the probe should only be touched for an instant. Never leave them on longer than a second. This is the reason that battery manufacturers do not recommend this.

RECOMMENDED RECEIVER BATTERIES:

- A-Batteries: 2 Medium size flashlight batteries, $1\frac{1}{2}$ volt
or Yardney Silvercalls.
B-Batteries: Burgess K45 - $67\frac{1}{2}$ volts
Burgess P45 - $67\frac{1}{2}$ volts
Burgess XX45 - $67\frac{1}{2}$ volts (This is best for testing)

Wiring: When wiring the plugs and servos use only rosin core solder. If you are not sure, buy a new roll that is plainly marked. Do not leave any loose wires in the installation except the power cables which are all tied together. Single wires such as battery and switch connections should all be glued down with Ply-o-bond cement to eliminate any breakage caused by vibration.

Pre-Flight Checks: Distance checks should be made out approximately 1,000 feet with the antenna on the transmitter extended the full length. It might be necessary to retune the receiver slightly at this distance for maximum current. Do not change the setting after coming back to the transmitter. It is also a good idea to run your engine and check the receiver. Use a smaller propeller than you would normally use in flying. The reason for this is that it gives a higher RPM, a condition similar to that which would occur with a larger prop after it is airborne.

Check all controls thoroughly while engine is running. Check for any vibration such as in the servo contacts, read contacts, and relays. If a vibration should occur in the receiver, check over the shock mounting to make sure that it is not too rigid and also that it is not touching any solid object in the fuselage.

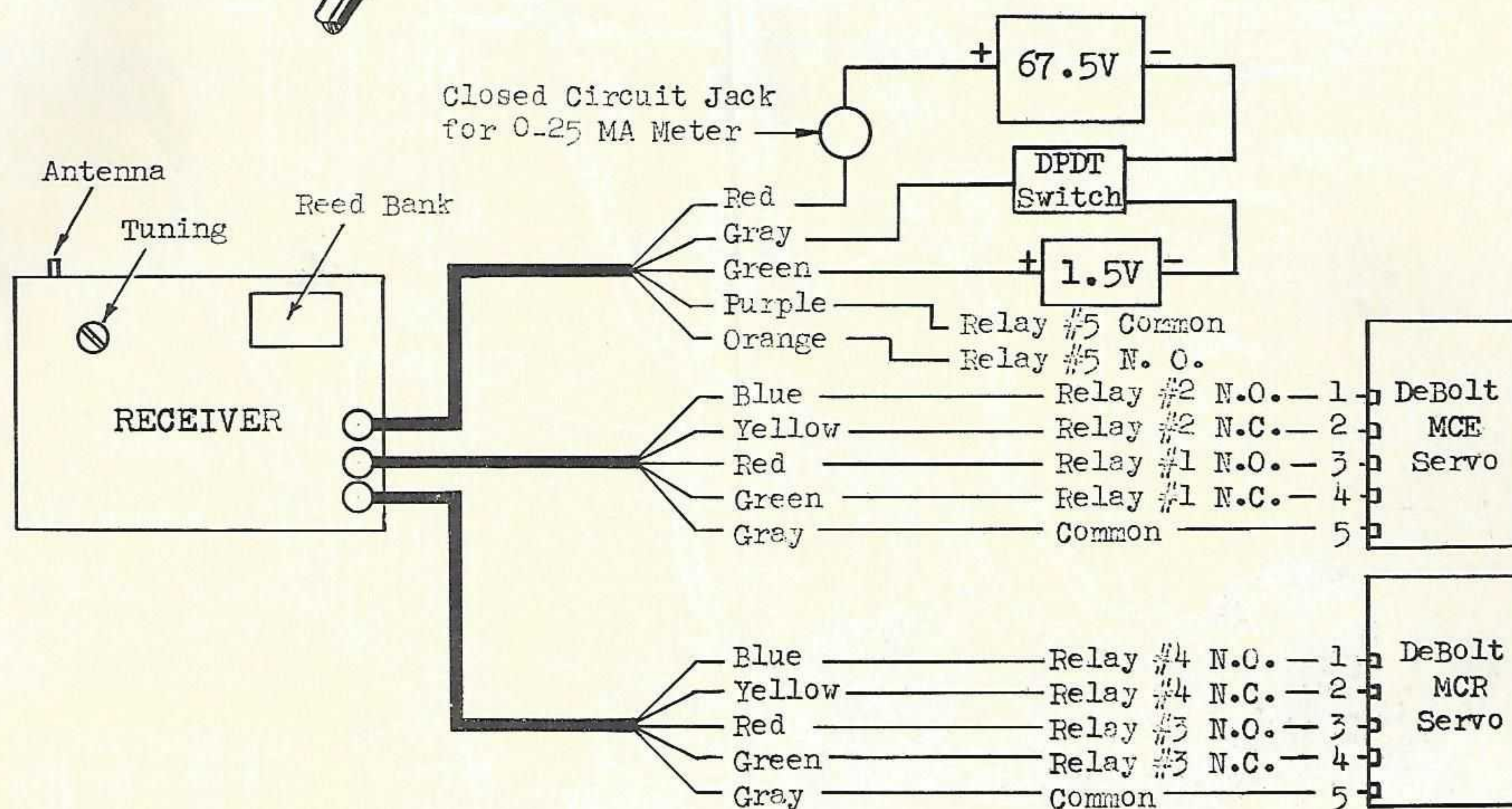
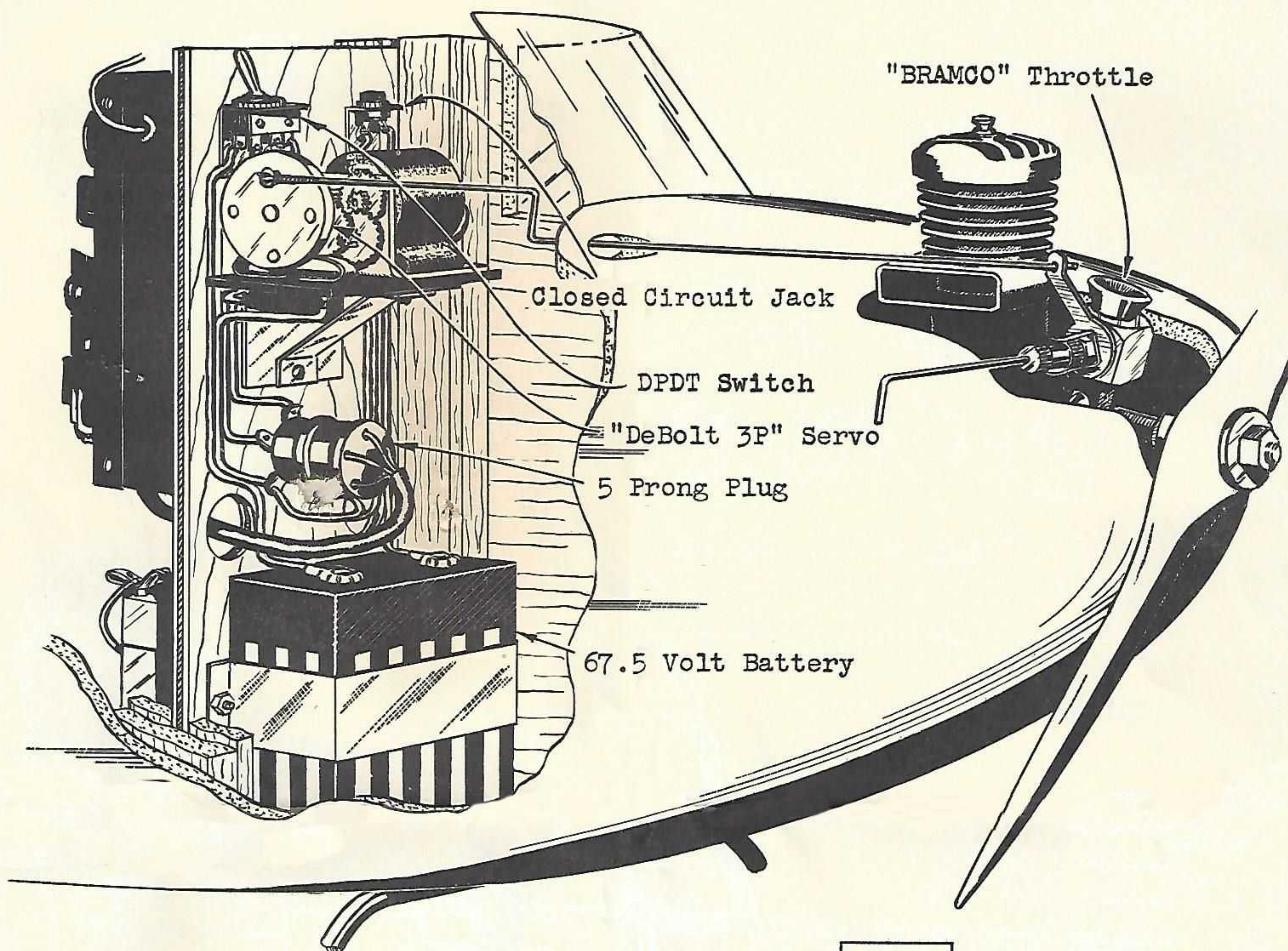
COLOR CODING FOR POWER CABLE AND SERVO CABLES

Power Cables: No 1 - Red Wire - B Plus
No. 2 - Green Wire - A Plus
No 3 - Gray Wire - A Minus, B Minus
No 4 - Orange Wire - Relay No. 5 - Normally Open
No 5 - Purple Wire - Relay No. 5 - Relay frame (This relay is added for a control such as engine. This relay can be connected to a deBolt 3P, 3P3N, or 3P3NX Servo. This is then linked to the popular Bramco Throttle.

Servo Cables: The servo cables are identical and are interchangeable.

- No. 1- Green Wire - Relay No. 1 - Normally Closed
No. 2 -Red Wire - Relay No. 1 - Normally Open
No. 3- Yellow Wire - Relay No. 2 - Normally Closed
No. 4- Blue Wire - Relay No. 2 - Normally Open
No. 5- Grey Wire - Relay No. 1 and 2 - Armature Common

If these instructions are read carefully and followed through completely, you will have endless hours of trouble-free flying, as you are the owner of the finest radio-control equipment that money can buy.



RECEIVER WIRING DIAGRAM

RECEIVER

NOTE: Use "Pliobond" Cement to fasten Receiver to sponge rubber and sponge rubber to Plywood Mounting Board

1/2" Sponge Rubber

1/8" Plywood

Aluminum Mounting Bracket

4 "SILVERCELL" Batteries

3 Prong Plug

"DeBolt MCR" or equivalent rudder servo

1/2" Sponge Rubber

5 Prong Plugs

"DeBolt MCE" or equivalent elevator servo

