

Instructions for Installation and Operation of

Babcock PROPORTIONAL PULSER AND SERVO

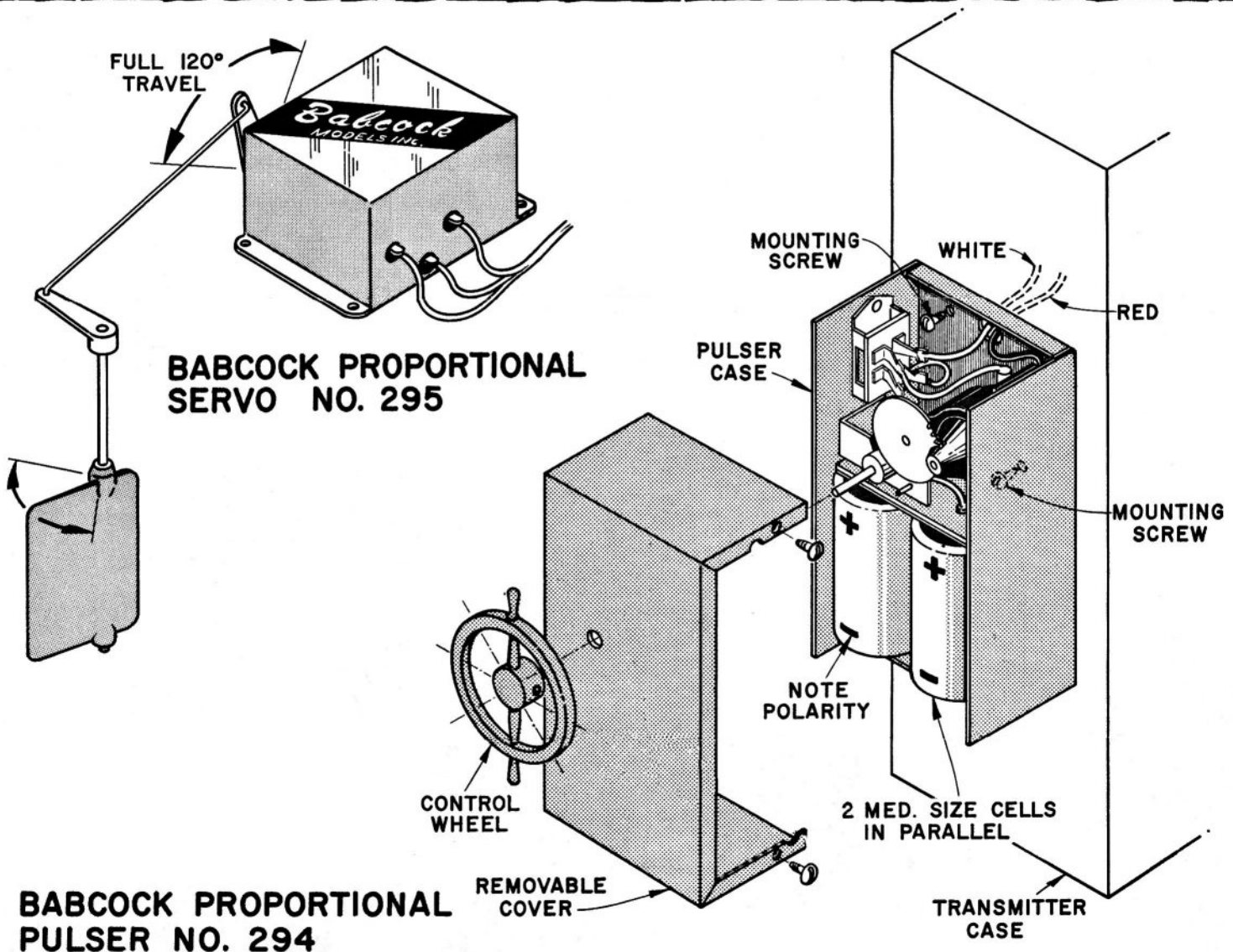
INTRODUCTION

Here at last is the ultimate in Radio Control for model boats and vehicles. Now after months of exhaustive research, the Babcock engineering staff has perfected a fully proportional control system that enables the modeler to control his craft as easily and precisely as steering a car. Gone are the jumpy reactions to control, and in its place is a smoothness of action heretofore available only in the Government target aircraft. It was through Babcocks development work in perfecting this same type of control to meet rigid Military specifications that has now resulted in a fool-proof and highly dependable control for model use.

PERFORMANCE DATA

The proportional control servo requires a single battery supply of 4.5 volts. As in any battery operated device, the larger the supply the more economical the operation. However, due to the low voltage tolerance a minimum battery supply of three pen cells in series will give approximately three quarters of an hour dependable operation. Higher voltages such as a 6 volt wet cell used primarily for boat propulsion may be used as shown in the appropriate drawings.

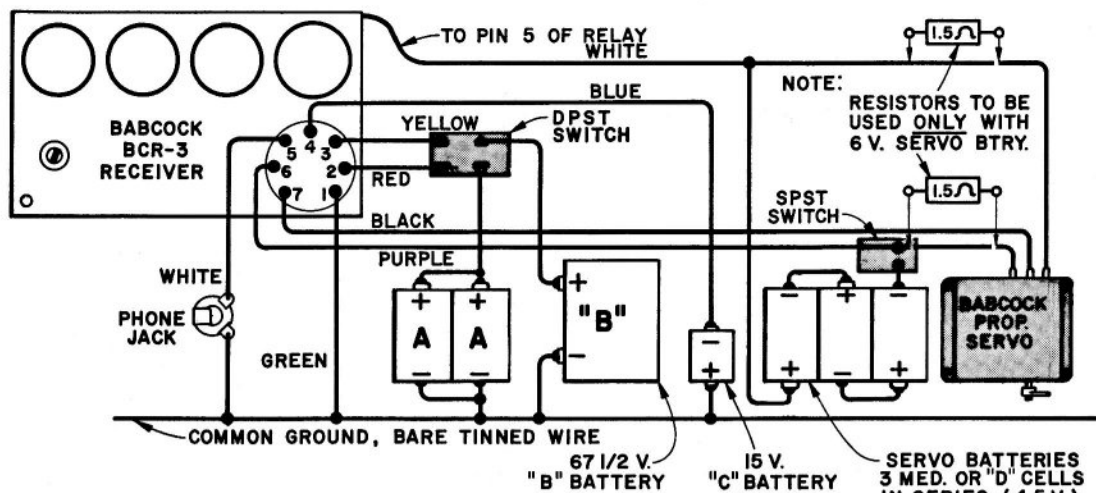
The servo is designed to operate in any position and may be mounted directly to the hull; however, in hydroplanes of high vibration a mounting of 1/8" sponge rubber will suffice to prevent brush skipping. Eight inch ounces of torque is delivered by the servo which is more than adequate to operate controls under all normal uses and conditions. This coupled with an optimum pulse rate assures contest winning accuracy of control with a minimum of oscillation.



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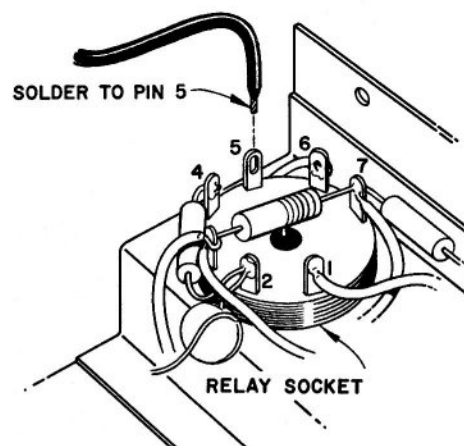
MODELS, INC. - Costa Mesa, California

**BABCOCK
HAS THE ONLY COMPLETE LINE
OF RADIO CONTROL AVAILABLE
FROM ONE MANUFACTURER**



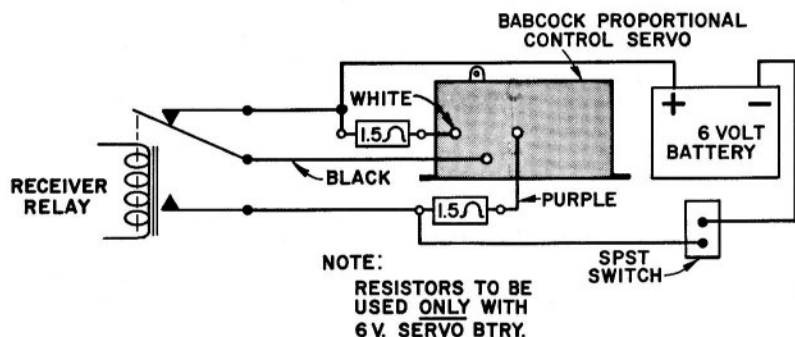
WIRING DIAGRAM FOR BABCOCK BCR-3

The Babcock Proportional Control Servo is compatible with any make of receiver utilizing a standard single-pole double-throw relay. Use the above wiring diagram.



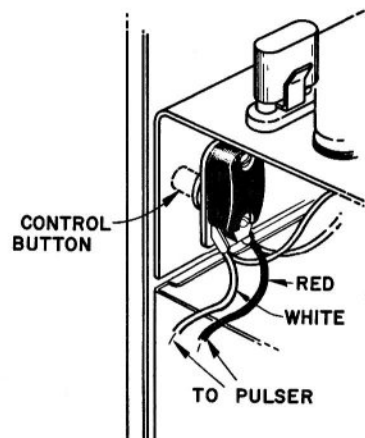
BCR-3 RELAY HOOK-UP

The conversion of our BCR-3 Single-Channel Receiver to proportional control is easily accomplished by soldering a wire to Pin #5 of the relay socket. First remove the receiver bottom and note the pin numbers on the bottom of the socket. Carefully solder a white wire to this pin as shown in the drawing. This wire then goes to the positive side of the servo batteries and to the matching white dot on the servo.

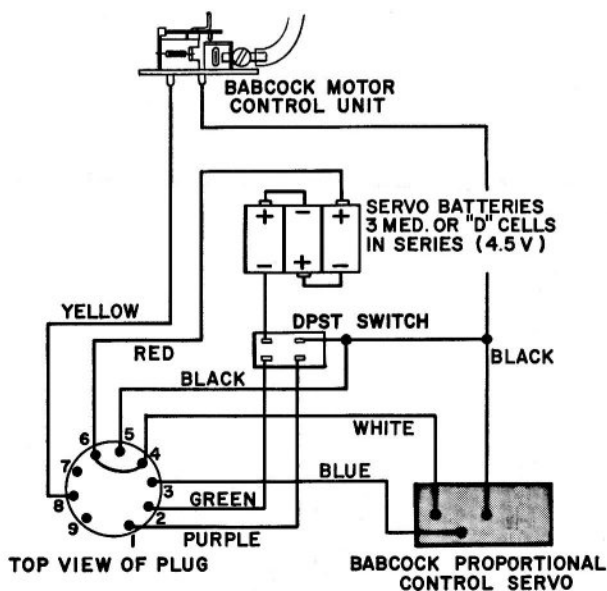


WIRING DIAGRAM FOR BABCOCK BCR-4A, BCR-8, BCR-10 OR SIMILAR RECEIVER

The wiring installation of the proportional pulser to any transmitter is simple to accomplish. In the accompanying illustration we show how the two wires (white and red) from the pulser are soldered directly to the control button. While the drawing is of our BCT-2 Transmitter, this identical hook-up holds for other makes of transmitters as well. Just remember to connect the two pulser wires across the poles of the control button, not the switch.



BABCOCK BCT-2 TRANSMITTER HOOK-UP

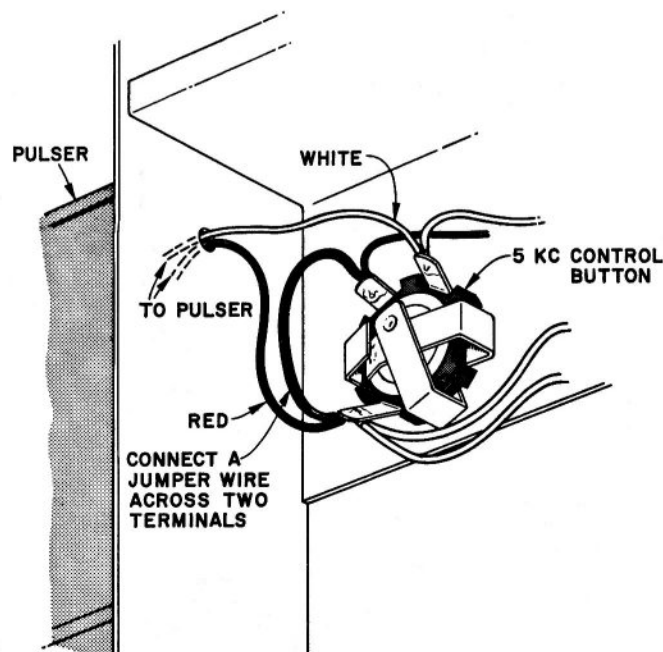


BCR-7 AND MOTOR CONTROL UNIT HOOK-UP

In connecting the pulser to our 465 MC BCT-7 Two-Channel Transmitter it is recommended that the 5Kc control button be used. This holds true when the transmitter is operated in conjunction with the BCR-7 two-channel receiver. The BCR-8B Receiver requires the 7Kc button to be wired.

IMPORTANT

With the proportional pulser attached to the side of the 465 MC BCT-7 Transmitter, the most natural way of holding the transmitter is with the pulser facing the operator. This rotates the antenna to a horizontal position which will decrease the maximum range if only a "J" Antenna is mounted in a boat. For this reason the antenna must be re-oriented by removing four screws and rotating the antenna 90°.



BABCOCK BCT-7 TRANSMITTER HOOK-UP