

9/21/71

C-E1B

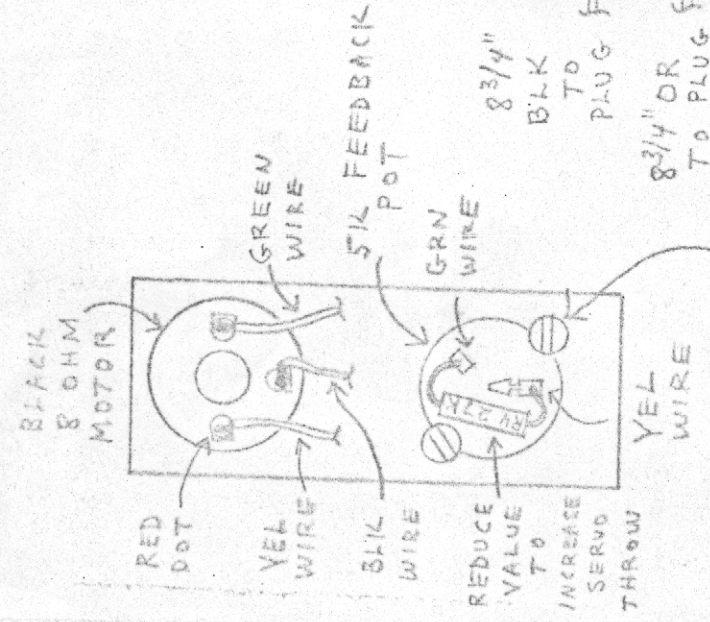
WF3141 I.C.

CANNON ELECTRONICS
BASIC SERVO ASSEMBLY INSTRUCTIONSPARTS LAYOUT
1972

The following instructions apply to all servos. Follow applicable instructions if one or two P.C. boards are used.

1. Use a pencil type low wattage soldering iron, 30 to 47-1/2 watts (maximum).
2. To assemble P.C. board (s) first position board, metal side down, so that hole arrangement corresponds with assembly illustration. Locate desired mounting holes, insert wire leads of part through holes until part is positioned as close to board as possible. Bend wire leads over solidly against solder lands on bottom of board to hold part firmly in position. Clip off excess lead length, leaving at least 1/16" to hold part in place. It is extremely important on this servo that leads be as flat as possible against lands, or cover may not fit. Also, leads must not extend beyond edge of land to which it connects.
3. Assemble and solder parts on board (s) as shown. Use as little solder as possible to reduce bulk on back side of board.
4. Cut short wires to lengths shown. Remove 3/32" insulation from each wire end, except remove 1/2" insulation from end of wire which connects to motor ground.
5. Solder wires to Board No. 1, then solder other end of wires (except motor) to Board No. 2. (On servos where two boards are used).
6. Assemble servo plug and cable. Cut each wire end to proper length to attach to P.C. board (s) (minimum 1/2" for any wire). Solder wires to P.C. board (s).
7. On Super-Flite servos, cut the prefabricated cable assembly so that wires are 10" long.
8. On some servos, it will be necessary to assemble pot wiper to wiper plate as shown.
9. On C-E1 and C-E3 servos, install wiper assembly in pot housing so that contacts face end of servo. Press firmly on plastic pot wiper center plate while holding output shaft until pot wiper assembly is firmly seated.
10. If necessary, position motor and feedback pot as shown on drawing. Do not tighten pot screws.
11. Clean solder flux from boards with lacquer thinner. Inspect both sides of board (s) very carefully with an eye loupe to make certain all parts are correctly installed, as close to board (s) as possible, that parts will not touch when boards are brought together, and that no solder shorts exist on back sides of boards.
12. Using a fine, flat file or fine sandpaper block, very carefully remove excess material (solder, etc.) that project from soldered side of board. It is important that outsides of P.C. board (s) be as flat as possible to permit installation of servo cover. Clean and recheck to be sure all joints are well soldered. Touch up where necessary.
13. Position boards facing each other with solder sides out. Connect green, yellow and brown wires to correct tabs on feedback pot.
14. Solder white and black leads to motor. Be sure long bare end of ground wire is soldered to both tabs as shown.
15. Plug servo into receiver and check operation. Center servo to your Tx as explained on drawing.
16. Dress wires for best fit and fit each board vertically, one into each side of servo. Be sure parts do not touch, then install cover with screws. Grommet should fit into cover slot.

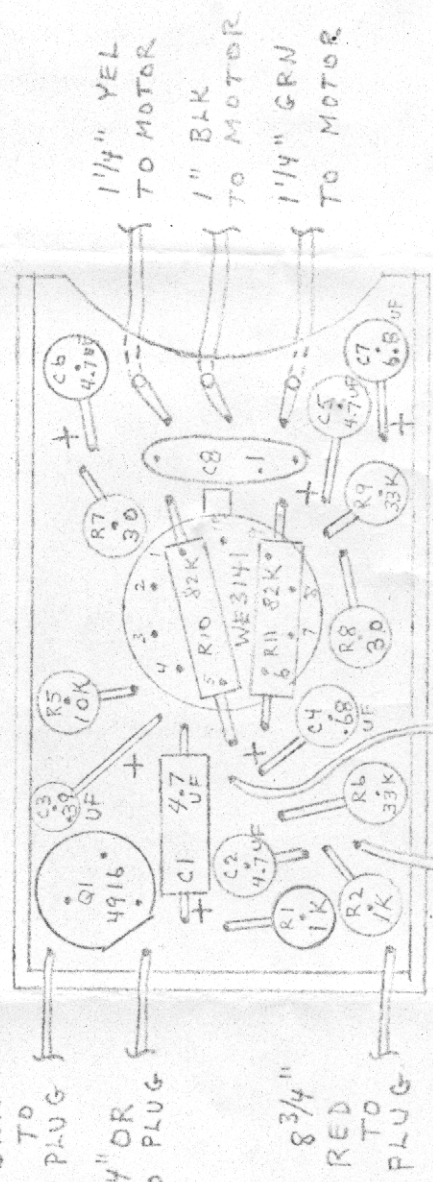
CANNON ELECTRONICS C-EIB SERVO (3-WIRE)



SCREW AND
FIBER WASHER
(2 REQ)

TO CENTER
SERVO, REMOVE
CASE, LOOSEN 2
SCREWS HOLDING
FEEDBACK POT,
AND ROTATE POT
ELEMENT UNTIL
ARM POSITION
IS OBTAINED.
DO NOT OVER-
TIGHTEN SCREWS,
OR POT ELEMENT
MAY BREAK.

MOUNT I.C. FLUSH
TO BOARD. MOUNT
TRANSISTOR 1/16"
ABOVE BOARD.



1 1/2" GRN TO POT
1 1/2" YEL TO POT
MOUNT C2, C3,
C4, C5, C6 & C7
WITH RED END UP

SEE CABLE DRAWING FOR
DETAILS OF SERVO PLUG
AND CABLE ASSEMBLY
FOR MODEL 540 SERVOS,
CUT PRE-MADE CABLE
10" LONG.

TO REVERSE SERVO
DIRECTION, REVERSE
CONNECTIONS OF
YEL & GRN MOTOR
WIRES. MOVE GRN POT
WIRE AND RESISTOR
TO UNUSED TERMINAL
ON POT.

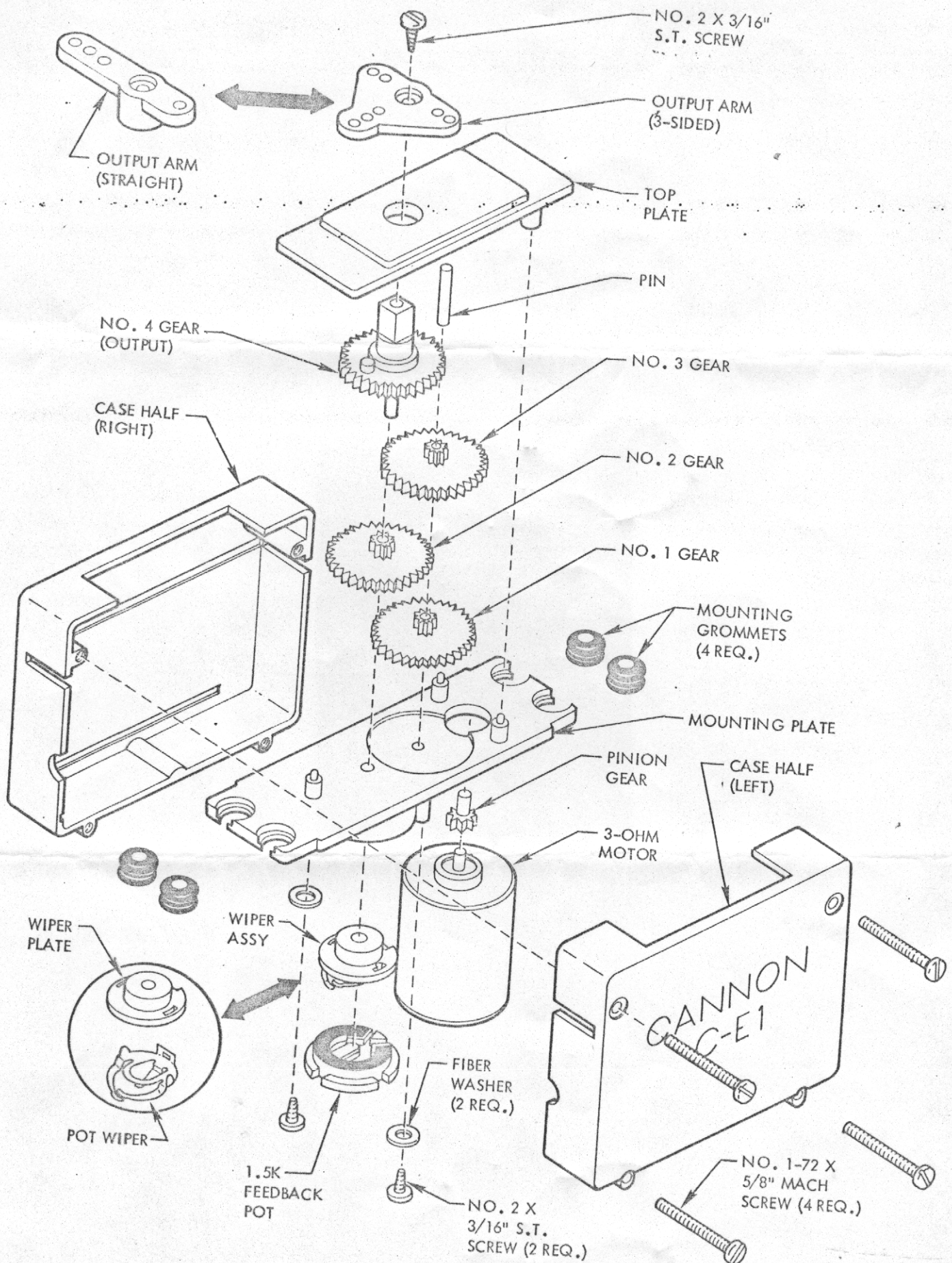
R10 & R11
MOUNT ABOVE
I.C.

ONE TERMINAL
ON POT IS
NOT USED.

R7 & R8 DETER-
MINE SERVO DEAD-
BAND. IF SERVO
MOTOR CHATTERS,
INCREASE VALUE
OF R7 & R8. (IN
PAIRS). REDUCE
VALUES IF
CENTERING IS
TOO WIDE.

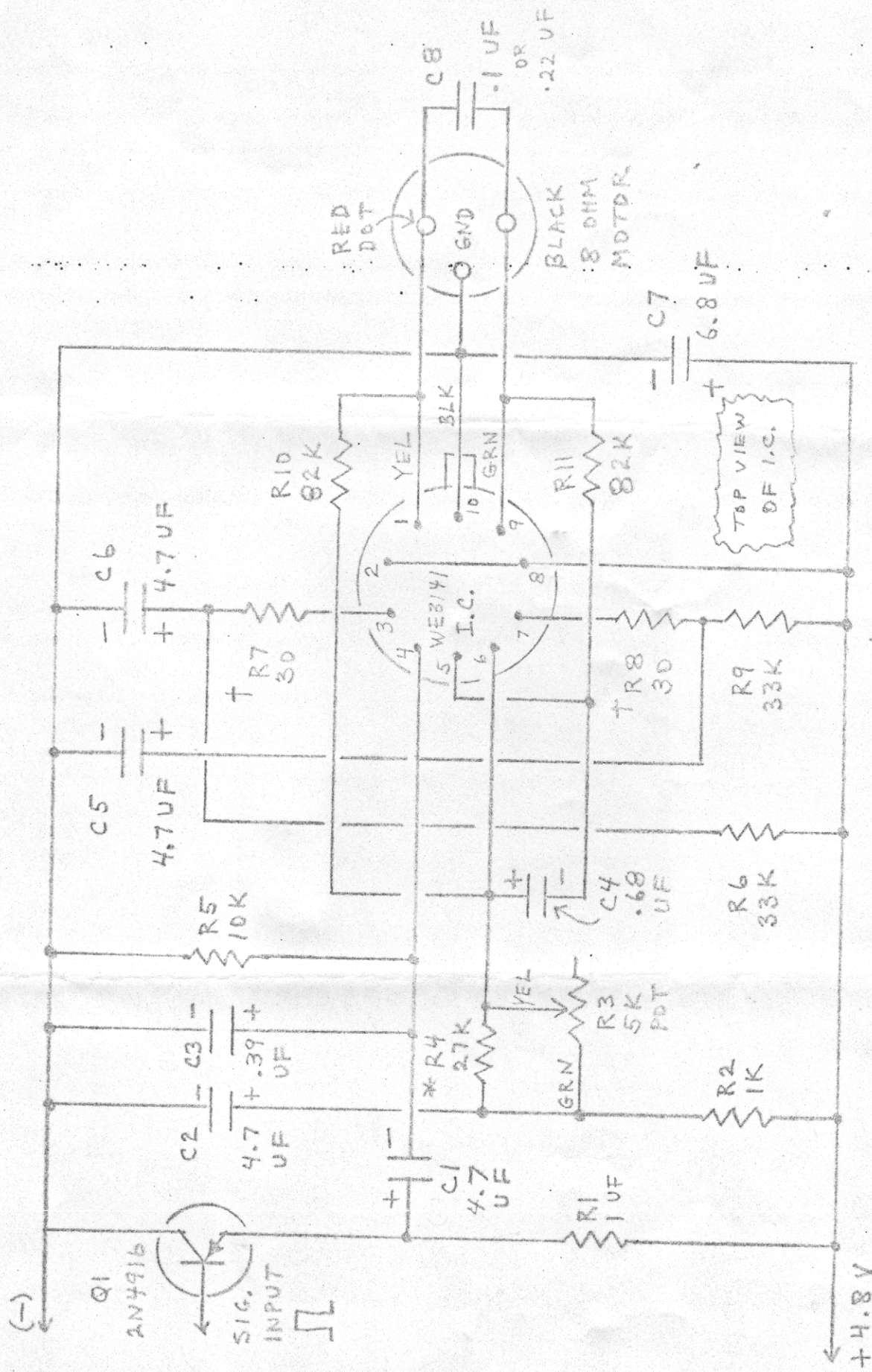
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CANNON ELECTRONICS
C-E1 SERVO



CANNON ELECTRONICS 3-WIRE SERVO

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+ DECREASE VALUES
(IN PAIRS) TO
REDUCE DEADBAND

*DECREASE VALUE TO
INCREASE SERVO THROW

4/15/72

OMIT WHITE
WIRE ON
3-WIRE SERV



DIFFERENTIAL CALCULUS

1. SOLDER WIRES TO PLUG.
2. INSTALL 5 SHRINK TUBINGS AT PLUG END.
3. TWIST WIRES.
4. INSTALL SINGLE SHRINK TUBING AT POSITION SHOWN.
5. SLIDE ON GROMMET (KPS-9 & KPS-10 ONLY).
6. CUT WIRES TO LENGTHS SHOWN, IF NECESSARY.
7. SLIDE KABLE THRU HOLE IN CASE BOTTOM (S).
8. CONNECT WIRES TO BOARD.