

DATE: 8-9-61
SHEET 1 OF 8

TMC SPECIFICATION NO. S-594

S.D.
COMPILED

S.D.
CHECKED

TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110)

SAM
APPROVED

I. EQUIPMENT AFFECTED

TMC MODEL SBE-3

II. PURPOSE

To provide an ALDC line into the SBE-3.

III. MATERIALS SUPPLIED IN KIT

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
1	One each, TMC No. CA-351-20.00 Cable, Coax.
2.	One each, TMC No. UG-625/U, (Symbol No. J113) Connector, RF.
3	One each, TMC No. TE-104-1 Terminal, Locking.
4	One each, TMC No. CL-240-120, (Symbol No. L150) Coil, RF, Fixed, 120 uh.
5	One each, TMC No. RC20GF474K, (Symbol No. R277) Resistor, Fixed, Composition, 470K ohms.
6	One each, TMC No. CB21P152K, (Symbol No. C283) Capacitor, Fixed, Mica, Button, 1500 uuf.
7	One each, TMC No. TE-102-2 Terminal, Turret.
8	One each, TMC No. SCBS0440BN2 Screw, Machine.
9	One each, TMC No. SCBS0348BN3 Screw, Machine.
10	One each, TMC No. LWE04MRN Lockwasher, External Tooth.
11	One each, TMC No. LWE03MRN Lockwasher, External Tooth.

DATE 8-9-61
SHEET 2 OF 8

TMC SPECIFICATION NO. S-594

COMPILED

CHECKED

TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110)

APPROVED

MATERIALS SUPPLIED IN KIT CONTINUED

<u>ITEM NO.</u>	<u>DESCRIPTION</u>
12	One each, TMC No. PX-104-8-.034, (3 inches) Insulation, Slewing.
13	One each, Drill Bit, #33 (.113 inch)
14	One each, TMC No. NP-362-4 Nameplate, Modification.
15	One each, TMC No. NP-380-2 Nameplate, Instruction.
16	One each, TMC No. TE-111-2 Lug, Solder.

IV. TOOLS REQUIRED

To be provided by installing activity.

1. Pliers, 6 inch longnose.
2. Pliers, 6 inch diagonal cutting.
3. Screwdriver, 7 inch.
4. Soldering Iron.
5. Wrench, Open End, 1/2 inch.
6. Electric Hand Drill, 1/4 inch Chuck Capacity.

V. PROCEDURE

- A. With the SBE-3 on the bench and all power disconnected, the following procedure is to be followed.
 1. Remove top and bottom dust covers.
 2. Unsolder the grounded ends of R192 and R193.
 3. Mark appropriate spot on the chassis, for the drilling of the two holes used for mounting of the turret terminal and button capacitor (hole locating dimensions shown in Figure 1).

DATE 8-9-61		TMC SPECIFICATION NO. S⁻⁵⁹⁴
SHEET 3 OF 8		
COMPILED	CHECKED	TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110)
APPROVED		

PROCEDURE CONTINUED

4. Insert the #33 Drill Bit into the electric hand drill, and drill the two holes required.
NOTE: It will be easier to drill the two holes required from the bottom of the SBE-3.
5. Clean SBE-3 of all metal shavings resulting from the drilling. Be sure that nothing is shorting.
6. Mount the turret terminal (Item 7) and locking terminal lug (Item 3) by use of the 4-40 hardware (Items 8 & 10) as shown in Figure 1.
7. Mount the button capacitor (Item 6) by use of the 3-48 hardware (Items 9 & 11) as shown in Figure 1.
8. Slide the proper amount of insulation (Item 12) over the loose ends of R192 and R193 and connect each resistor to the button capacitor (Item 6). Do not solder.
9. Connect the 470K ohm resistor (Item 5) between the button capacitor (Item 6) and the tube saddle. Use insulation (Item 12) on the end of the resistor connected to the button capacitor. Do not solder. Be sure that there is a connection between the tube saddle and Pin 4 and 5 of V113. Solder the grounded end of the 470K ohm resistor (Item 5).
10. Mount the 120 uh RF choke (Item 4) between the button capacitor (Item 6) and the turret terminal (Item 7). Use insulation (Item 12) on the end of the coil connected to the button capacitor. Solder all connections on the button capacitor only.
11. Insert RF cable (Item 1) through hole found on RF shield wraparound as shown in Figure 2.
12. Connect center conductor of RF cable to turret terminal (Item 7). Solder the connection.
13. Connect shield of RF cable (Item 1) to locking terminal (Item 3). Solder shield connection.
14. Dress the free end of the RF cable (Item 1) along the main cable all the way to J111 and J112.

DATE <u>8-9-61</u>		TMC SPECIFICATION NO. S-594
SHEET <u>4</u> OF <u>8</u>		
COMPILED	CHECKED	TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110)
APPROVED		

PROCEDURE CONTINUED

15. Mount the RF connector (Item 2) in the hole found between J111 and J112 as shown in Figure 3. Mount the solder lug (Item 16) over the rear of the RF connector. Proceed now to tighten the locking nut by use of the 1/2 inch open end wrench.
16. Connect center conductor of RF cable to the RF connector (Item 2). Solder the connection.
17. Connect shield of RF cable to the solder lug (Item 16). Solder the connection.
18. Affix instruction nameplate (Item 15) directly to the left of the connector which has just been installed (Refer to Figure 3).
19. Check modifications to see that everything conforms with Figure 2.
20. See Figure 4 for schematic diagram.
21. Replace the top and bottom dust covers, after the SBE-3 has been inspected for proper installation of the ALDC modification.
22. Affix modification nameplate (Item 14) immediately to the bottom of the "BAND MCS" Switch Knob.
23. Reinstall the SBE-3 into its rack.
24. The ALDC modification is now completed.

DATE 8-9-61
H. 5 OF 8
COMPILED BY

TMC SPECIFICATION NO. S-594

TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110) JOB

APPROVED

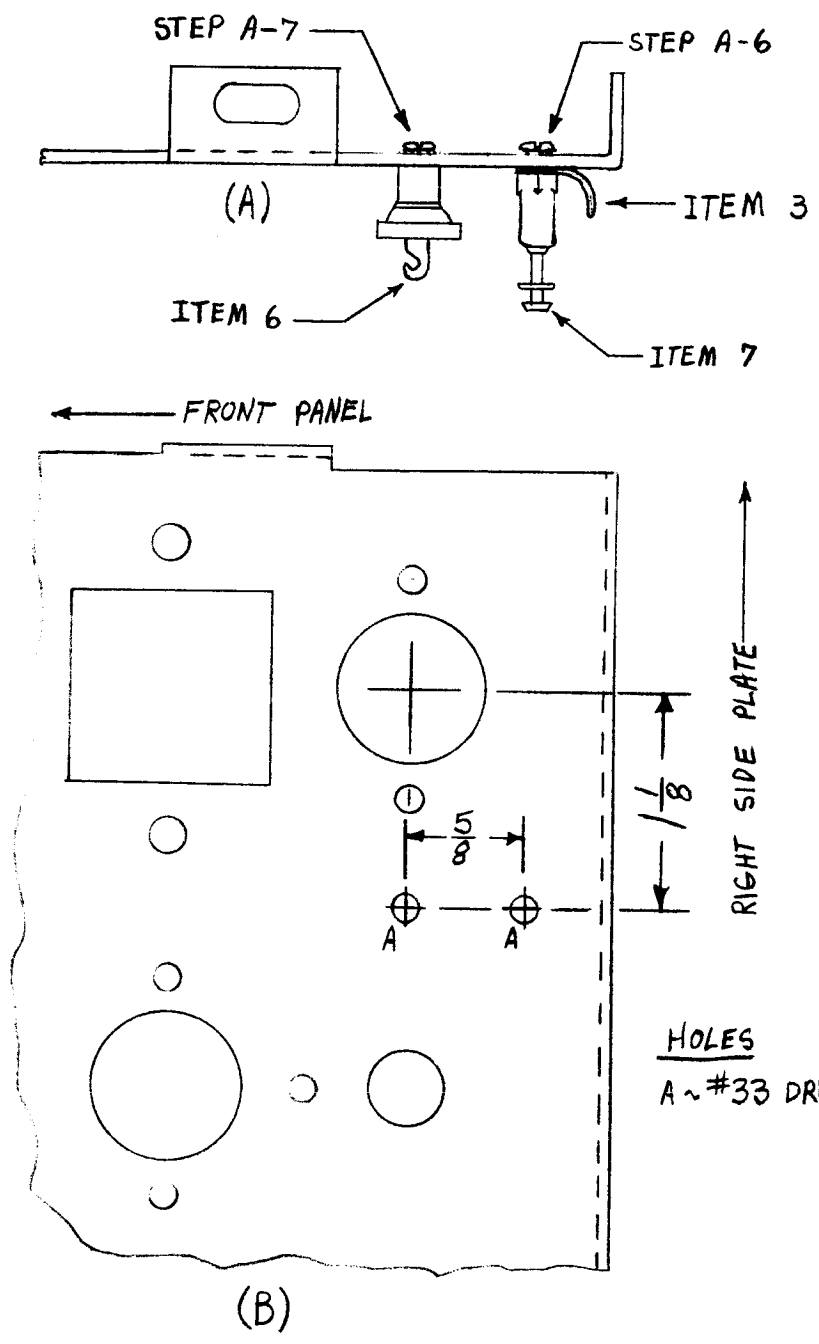


FIGURE 1*

(A) ~ ASSEMBLY DETAIL
(B) ~ HOLE LOCATING DIMENSIONS

* BOTTOM VIEW OF UNIT SHOWN

DATE 8-9-61
SH. 6 OF 8
COMPILED BY

TMC SPECIFICATION NO. S-594

TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110)

JOB

APPROVED

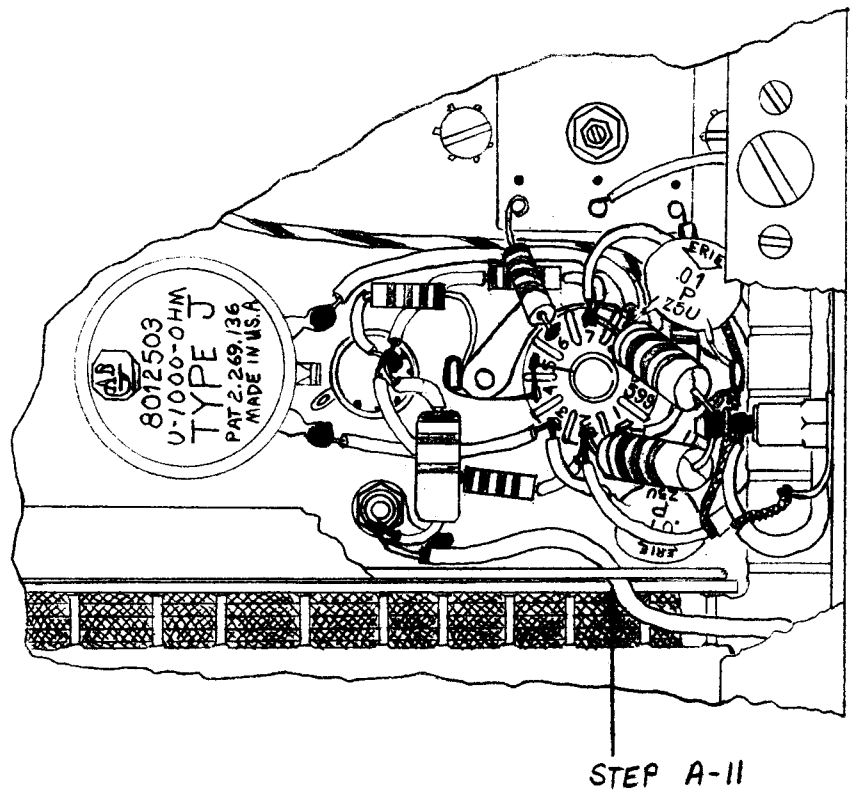


FIGURE 2
COMPONENT LAYOUT

DATE 8-9-61
SH. 7 OF 8
COMPILED BY

TMC SPECIFICATION NO. S-594

TITLE: SBE-3 ALDC MODIFICATION KIT (TMC NO. KIT-110)

JOB

APPROVED

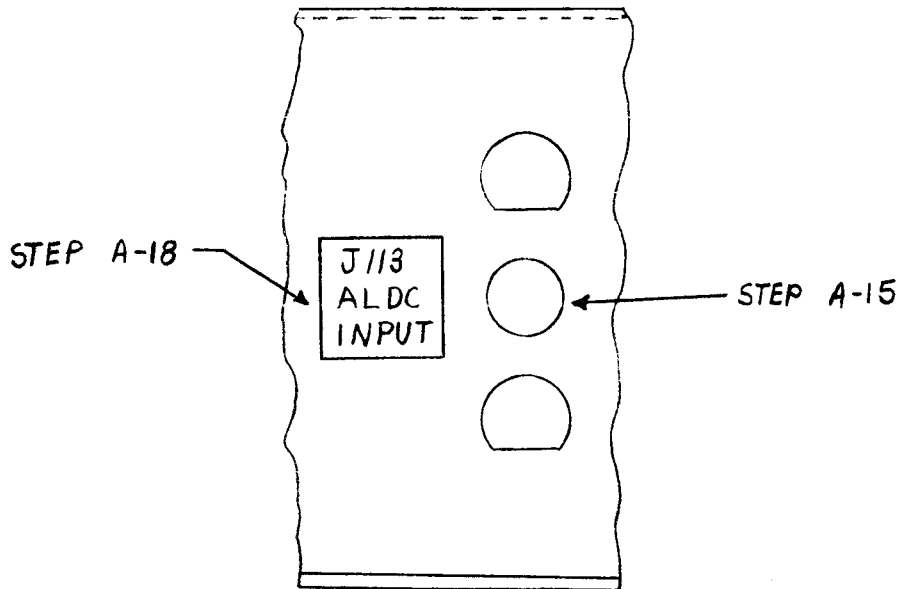


FIGURE 3*
HOLE LOCATING VIEW

* REAR CENTER OF UNIT SHOWN

APPROVED

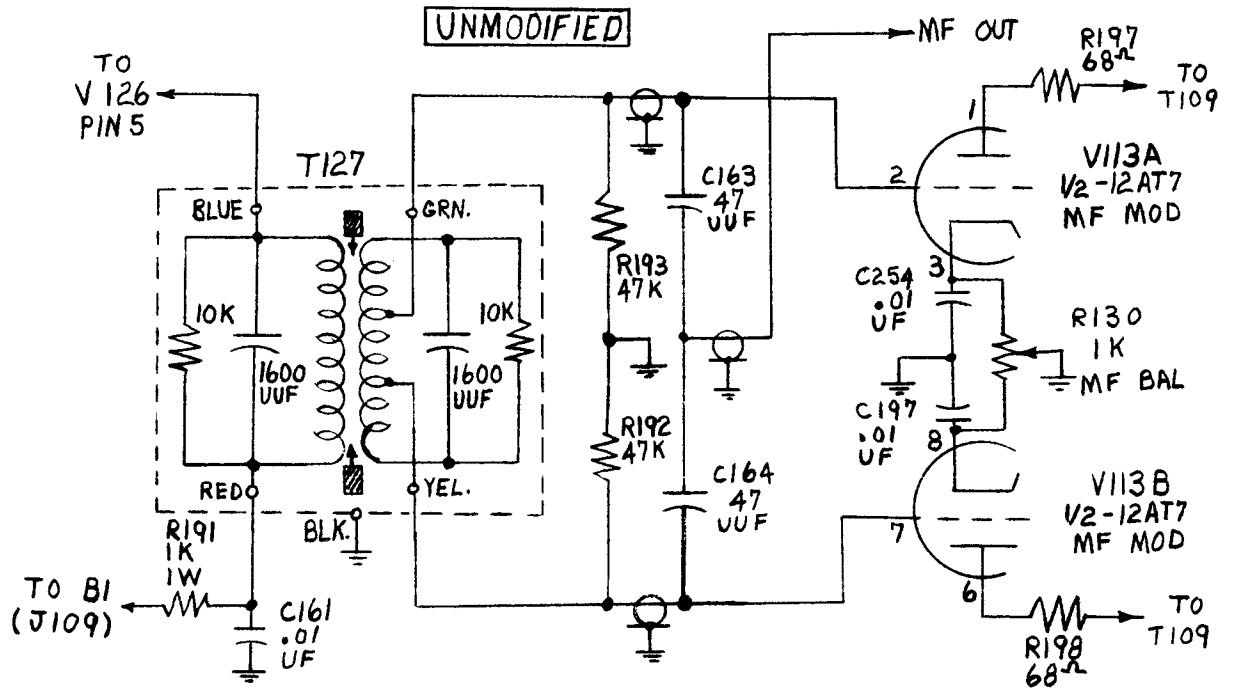


FIGURE 4
 SCHEMATIC CHANGES

