



SERVICE BULLETIN

1 June 1972

FROM: Publications Engineering Department, Cedar Rapids, Iowa 52406

AMATEUR RADIO GROUP
32S-3 TRANSMITTER
SERVICE BULLETIN NO 7

AMATEUR COMMUNICATIONS PRODUCT LINE

EQUIPMENT: 32S-3 Amateur Transmitter

UNIT AFFECTED: Frequency Selecting Section

SUBJECT: Convert 32S-3 to 32S-3A

Modification kit number 744B-2, Collins part number 522-3393-000, when installed converts the 32S-3 amateur band transmitter to a general coverage transmitter 32S-3A by providing crystal positions for 14 additional 200 kHz frequency bands.

Approximately 2 hours are required to install this modification.

NOTE: Persons unfamiliar with electronic circuits or who lack circuit wiring experience should not attempt this modification.

Modification kit number 744B-2 may be ordered from any Collins equipment dealer or authorized service agency. If preferred, the transmitter may be shipped to a service agency where the modification will be made. Consult the agency for cost and instructions before shipping. Refer to the 32S-3 service bulletin number 7 when consulting a Collins dealer or agency concerning the modification.

INSTALLATION PROCEDURES

Before starting the installation, carefully check all parts against the list in table 1. Refer the description and part number of any irregularities to the dealer or agency who supplied the kit.

NOTE: General coverage crystals are not furnished with the kit.

- a. Remove four rubber feet and the holding screws on the bottom of the transmitter. Remove two unpainted screws under the front edge of the lid, then slide the transmitter out of the cabinet.
- b. Remove and discard the coaxial cable that connects XV12-1 to S11. Refer to the wiring drawing in figure 1.
- c. Remove the hexnut from GRD-10 then move terminal E12 to GRD-10.
- d. Remove R136 and replace with new 100-ohm resistor from the kit.



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- e. Viewing the front of the panel, measure approximately 4.062 inches in from the left edge and 2-19/32 inches up from the bottom edge. At this intersection, locate the existing 3/8-inch hole at the rear of the panel. Use a 1/4-inch drill-bit and bore a pilot hole through the panel overlay coincident with the rear hole.

CAUTION: DO NOT MAR THE PANEL OVERLAY SURROUNDING THE HOLE.

- f. Use a 0.687 to 0.718-inch spot face drill or counter-bore and carefully bore through the 0.032-inch panel overlay.
- g. Carefully disassemble crystal switch S11 and, from the kit, install switch section S14 using new hardware specified in figure 1, bottom view.
- h. Observe detail A-A in figure 1. Note the parts that make up the assembly and their relative positions, then install switch S15.
- i. Wire socket XY2, S14, and S15 as shown in the wiring diagram in figure 1.
- j. Observe detail B-B in figure 1. Mount crystal socket XY2 using kit hardware specified in the drawing.
- k. Transfer the amateur band crystals from XY1 to their respective positions in XY2 (under the chassis).
- l. Plug the desired general coverage crystals into the top chassis socket XY1. Consult the 32S-3 instruction book section, OPERATION OUTSIDE THE AMATEUR BANDS.
- m. Place the new bar knob on switch S15 shaft (refer to detail B-B).
- n. Discard the old bandswitch knob, replace with the new knob from the kit.
- o. Clean the 32S-3 frequency escutcheon with alcohol. Remove tape from the back of the 32S-3A overlay plate and position the plate on the escutcheon (over the 32S-3). Align the edges and press tight with finger pressure.
- p. Recheck all wiring and solder connections carefully.
- q. Slide transmitter into the cabinet and replace feet and screws removed in procedure a.

OPERATION

The bar knob on top of the band switch frame operates switch S15 and transfers the oscillator grid from the amateur crystals to the general coverage crystals. The bar knob also moves the frequency select card which identifies the new set of band frequencies. To identify new bands, hand letter the frequency of the low end of the band on the window card. Refer to the 32S-3 instruction book.



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PARTS TABLE

A description of parts furnished with modification kit 744B-2 are listed in table 1 with Collins part numbers.

Table 1. Parts List for Modification Kit 744B-2.

ITEM NUMBER	QUANTITY FURNISHED	COLLINS PART NUMBER	DESCRIPTION
1	1	259-0980-000	Rotary switch section S15
2	2	269-1402-000	Tubular spacer (3/16 in)
3	1	269-2023-000	Switch section S14
4	1	303-1034-000	Acetate washer
5	2	328-0512-010	Setscrew (6-40 x 1/8)
6	1	328-0473-000	Setscrew (8-32 x 3/16)
7	1	334-4030-000	Hexnut (15/32 - 32)
8	1	334-4060-000	Hexnut (3/8 - 32)
9	5	342-0048-000	Flathead (4-40 x 1/2)
10	1	343-0289-000	Machine screw (4-40 x 1/2)
11	2	343-0290-000	Machine screw (4-40 x 5/8)
12	1	373-0083-000	Shakeproof washer (15/32)
13	2	421-2220-000	Electrical wire
14	15	428-4824-000	Electrical hookup wire
15	3	540-9049-003	Mtg. Post (4-40 x 3/4)
16	1	544-0779-004	Pointer knob
17	1	544-2825-002	Crystal socket (XY2)
18	1	609-1476-002	Rf cable
19	1	544-7261-000	Crystal cover assy.
20	1	544-7263-000	Frequency selector card
21	1	544-7266-002	Special nut
22	1	790-0408-001	Crankbell
23	1	544-7268-002	Bar knob



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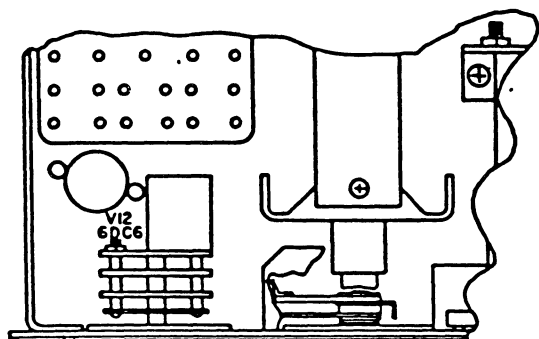
Table 1. Parts List for Modification Kit 744B-2 (Cont).

ITEM NUMBER	QUANTITY FURNISHED	COLLINS PART NUMBER	DESCRIPTION
24	1	544-7277-004	Frequency selector frame
25	0.2 ft	152-1375-000	Sleeve insulation
26	1	745-1310-000	100-ohm resistor, 1/2 W
27	1	328-0506-020	Setscrew (6-40 x 3/16)
28	1	609-1583-002	32S-3A Overlay Plate

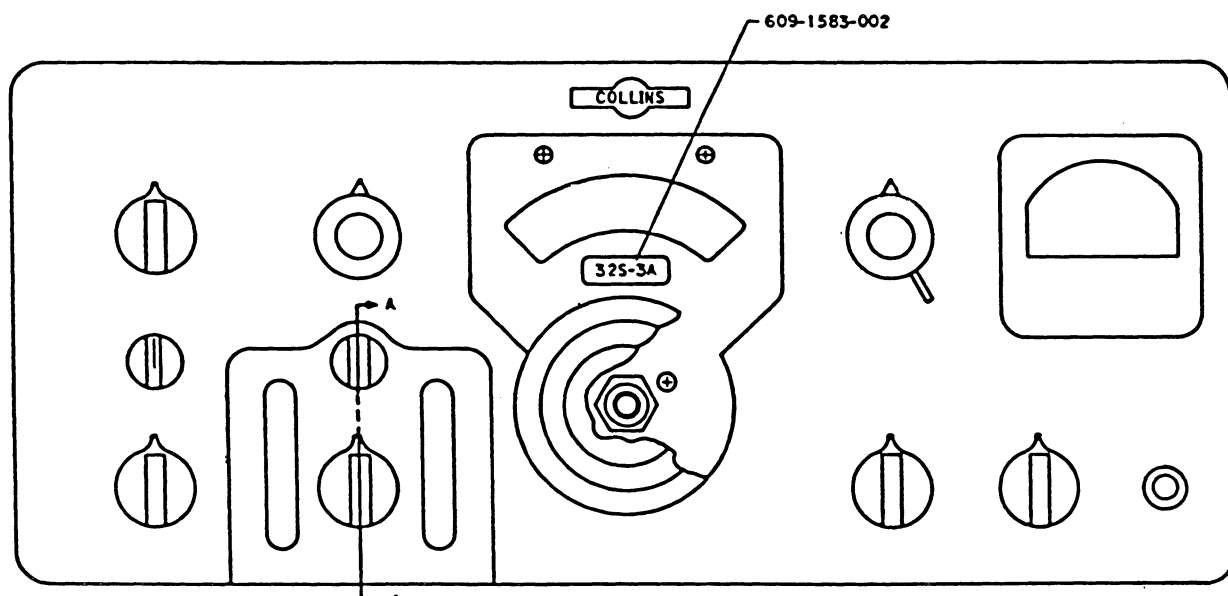


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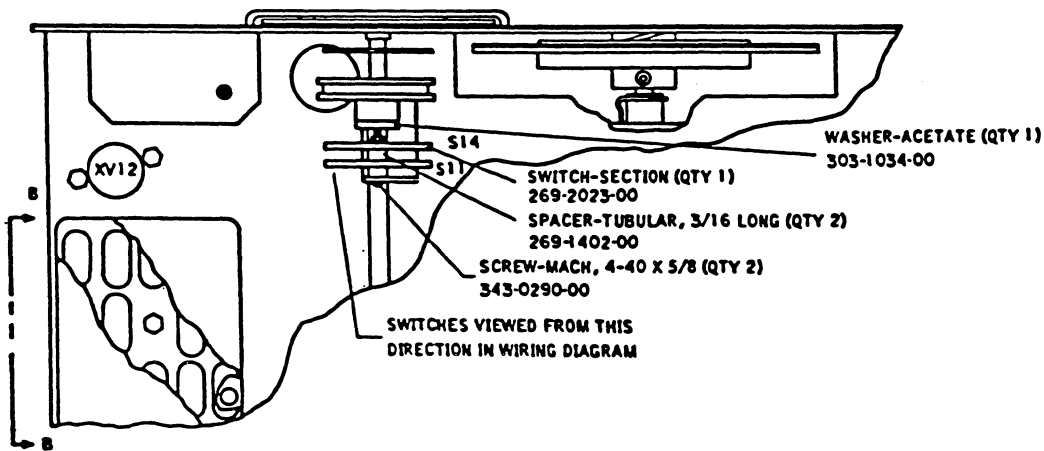


TOP VIEW



SEE DETAIL A-A

FRONT VIEW



SEE DETAIL B-B

BOTTOM VIEW

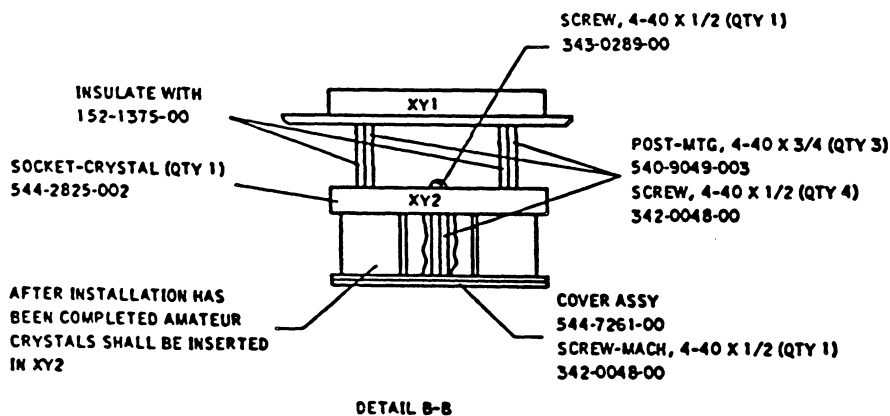
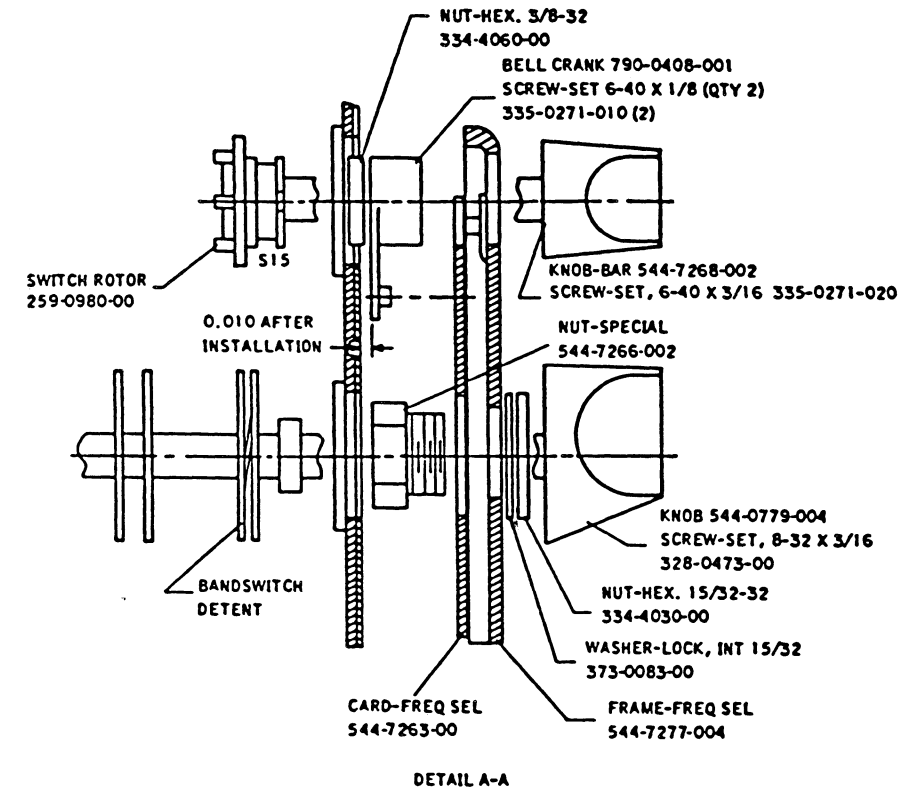
32S-3 Amateur Transmitter, Modification
Kit 744B-2, Installation Drawing
Figure 1 (Sheet 1 of 3)

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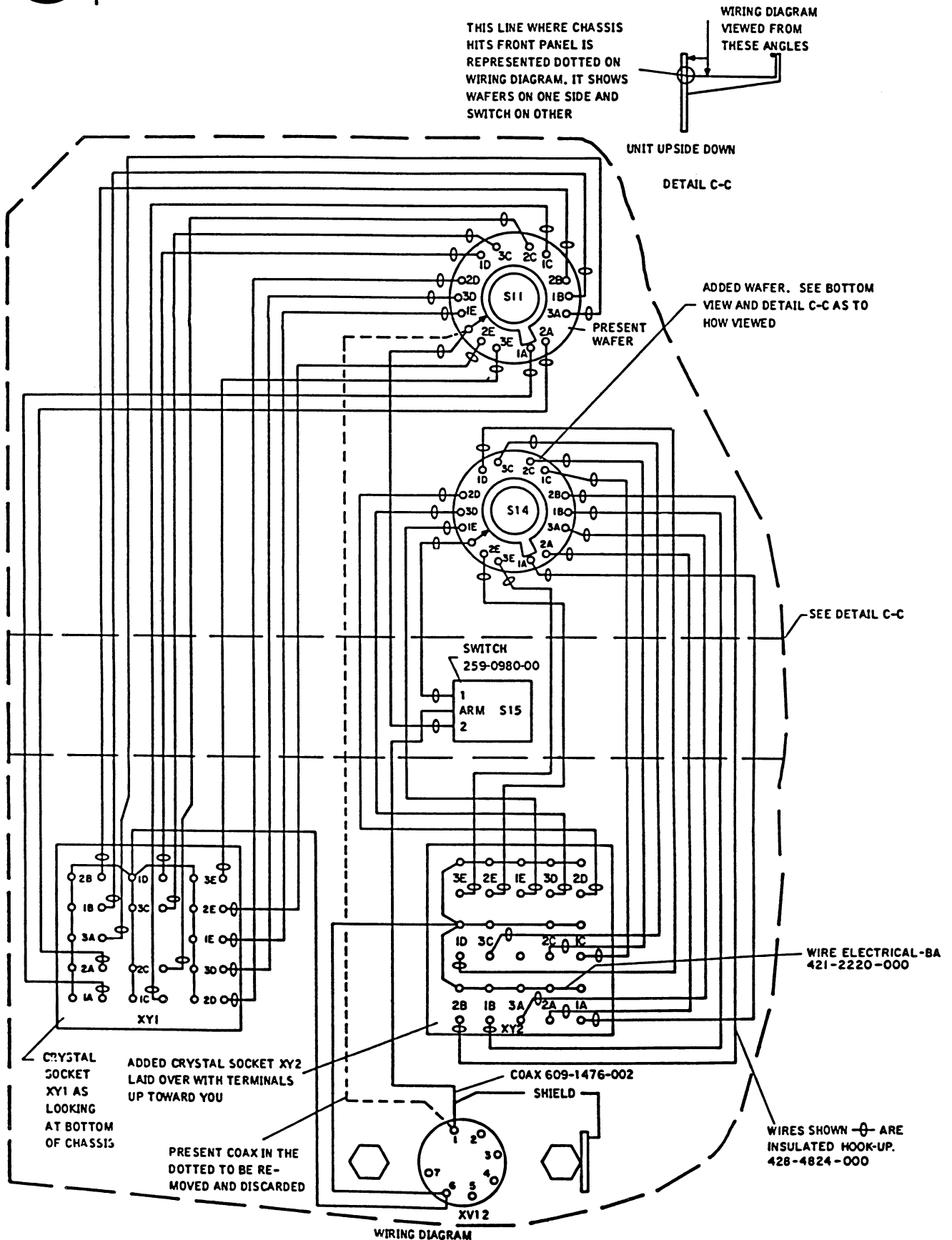
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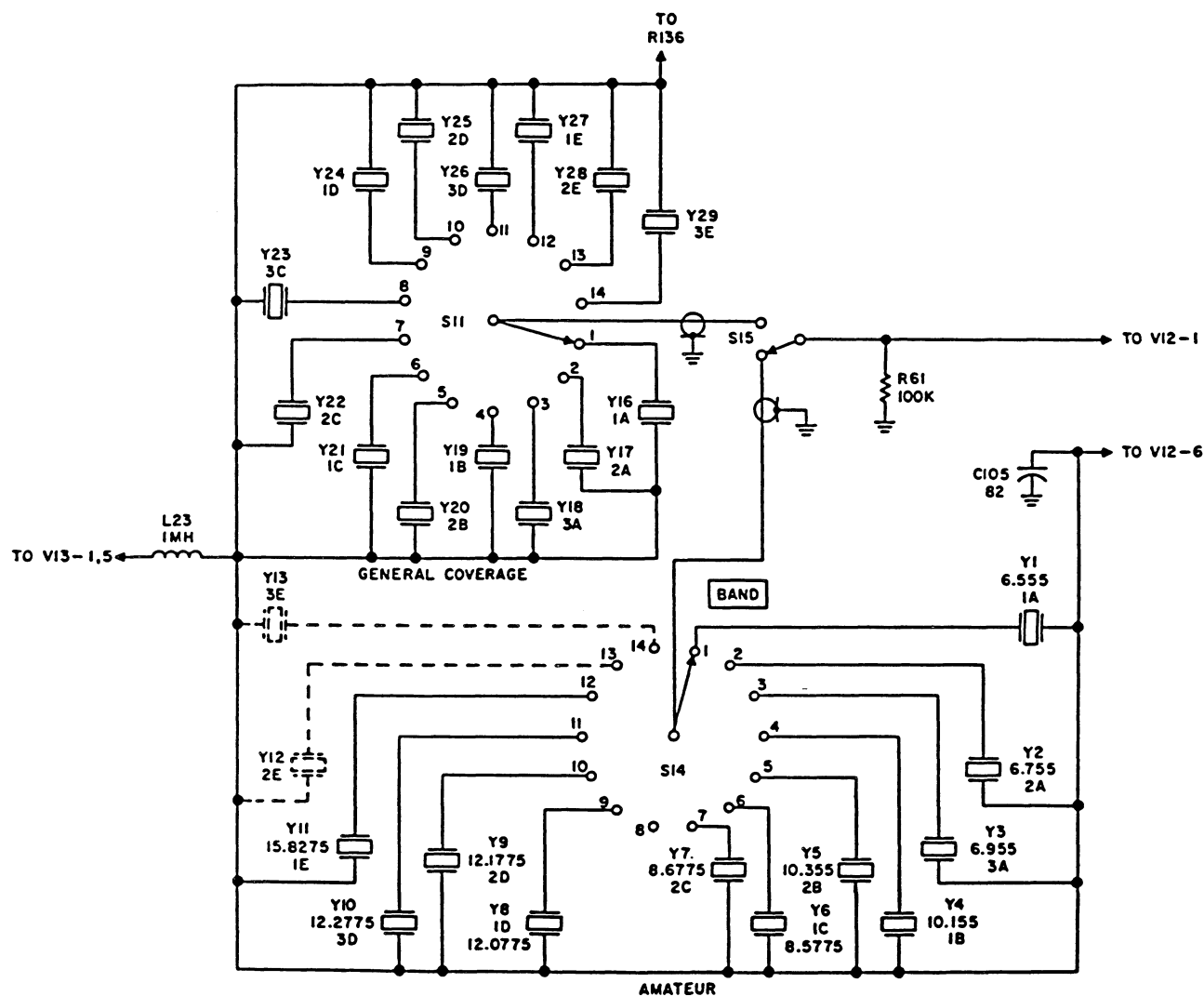
32S-3 Amateur Transmitter, Modification
Kit 744B-2, Installation Drawing
Figure 1 (Sheet 3 of 3)

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32S-3 Amateur Transmitter, Modification
Kit 744B-2, Schematic Diagram
Figure 2