MOBILE RADIO

Maintenance Manual LBI-30305

series 2500

COMMAND CONTROL CENTER

VOTING CONTROL PANEL

FOR USE WITH RECEIVER VOTING SYSTEMS

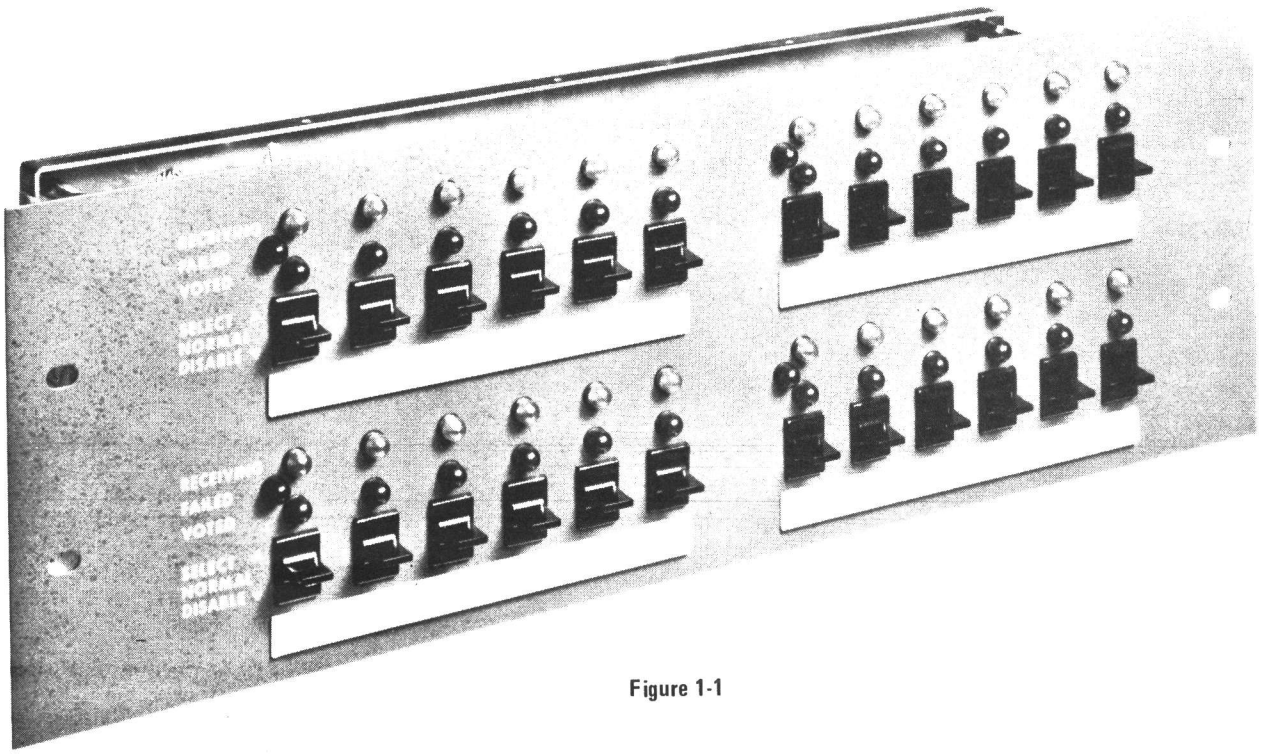

Figure 1-1

Voting Control Panel

SPECIFICATIONS*

Number of Receivers:	
Option 6600-44	Controls up to 12 satellite receivers on two RF channels.
Option 6600-45	Controls up to 24 satellite receivers on four RF channels
Input Power	Regulated + 25 volts DC (from the Voting Selector).

*These specifications are intended primarily for the use of the serviceman. Refer to the appropriate Specification Sheet for the complete specifications.

GENERAL ELECTRIC

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WARNING
No one should be permitted to handle any portion of the equipment that is supplied with high voltage; or to connect any external apparatus to the units while the units are supplied with power. KEEP AWAY FROM LIVE CIRCUITS.

DESCRIPTION & OPERATION

SEC/53387-001, 002

VOTING CONTROL PANEL

A Voting Control Panel may be installed in any uncommitted port of a Series 2500 console for installations using receiver voting systems. Option number 6600-44 provides a Panel for control of up to 12 satellite receivers on two RF channels, and option 6600-45 provides for control of up to 24 receivers on four RF channels. A 6600-45 Panel is shown in Figure 1-1.

The Voting Control Panel is mounted in one of the standard, 19-inch turret openings in lieu of a card cage or blank panel and is easily removed for servicing. Connections from the voter selecting unit are normally made through a control cable to terminal boards on the rear of the Panel. See Figure 1-2, page 2.

The standard controls for each channel consist of six toggle switches, one for each receiver, 12 status-indicating LEDs (light-emitting diodes) and a channel fail-light LED indicator. The LEDs are socket-mounted for easy replacement.

Each toggle switch has three positions: NORMAL, SELECT and DISABLE. When switches are in the Normal position, the best quality received audio is automatically routed from the selected receiver to a speaker.

The Select position provides for manual selection of a receiver, and bypasses the selector voting unit. When a switch is in the Disable position, it's receiver is removed from the voting process. In the Disable position, a receiver is rejected until the switch is returned to Normal. As many receivers as desired may be switched to either the Select or Disable mode.

Each LED status indicator has a yellow lens in the top section, and a green lens in the bottom. When a receiver is selected, the green indicator comes on. The yellow indicators are activated when satellite receivers are "unsquelched." Normally, several yellow indicators will be activated during each call.

The LEDs are operated by regulated 25-volt power supplied from the voting selector unit. Voltage is switched from the voting selector lamps to the Voting Control Panel indicators by placing the Local/Remote switch, on the voting selector power supply, in the Remote position.

Assembly diagrams and a front view of the Voting Control Panel are shown in Figure 3-1; 12-receiver and 24-receiver schematics are shown in Figures 3-2 and 3-3, respectively.

SEC/53258-001

FAIL LIGHT ALARM CIRCUIT

The two red LEDs warn of failure in the receiver voting process. One is for channel A, and the other for Channel B. The Fail Light Alarm circuit consists of two solid state switching circuits, one for each failure indicator.

An external alarm such as a light or buzzer may be connected to the switched ground connection at TB1-B-7 (channel A) or TB2-B-7 (channel B).

WARNING

The external alarm current should not exceed 150 mA, to prevent damage to the switching transistors.

When a failure occurs on receiver voting channel A, a ground appears at J6 on the Fail Light Alarm PC board. Refer to Figure 3-4. This turns Q1 OFF, which causes Q2 to conduct and apply a logic low to J2, and to TB1-B-8, the external alarm connection. The channel A Fail LED also comes on when Q2 conducts. The delay circuit in the input of the alarm circuit prevents a momentary ground at J5 or J6 from activating the alarm.

Channel B operates identically.

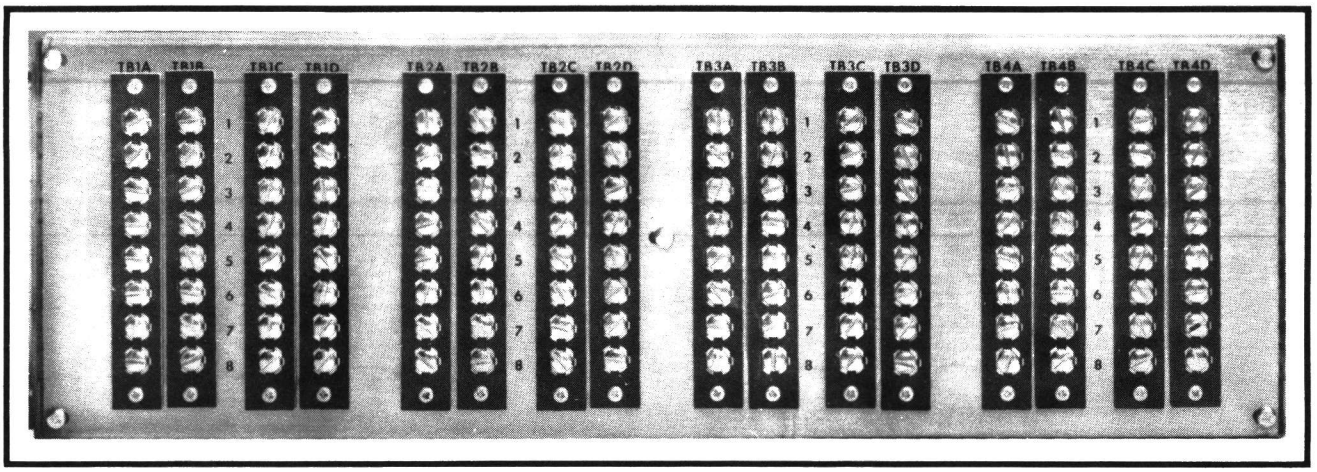
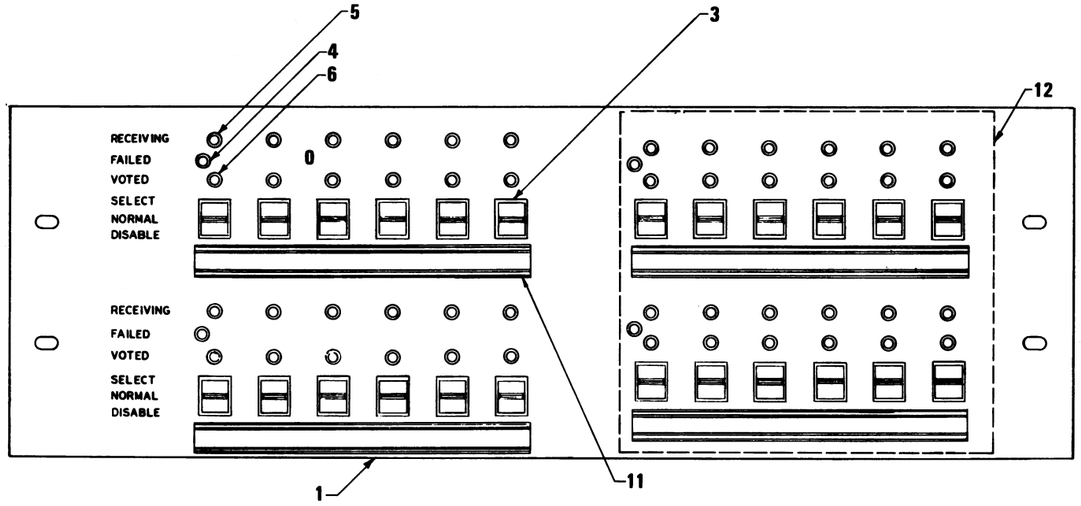
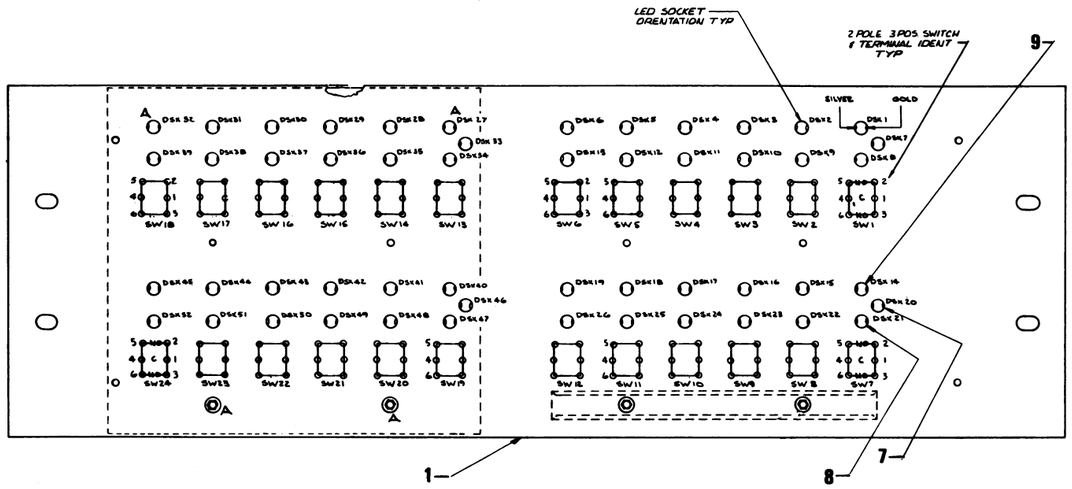


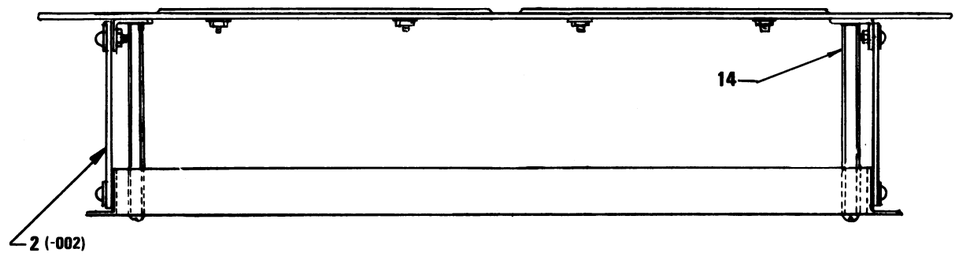
Figure 1-2 Terminal Boards for Interconnection with Voting Control Unit

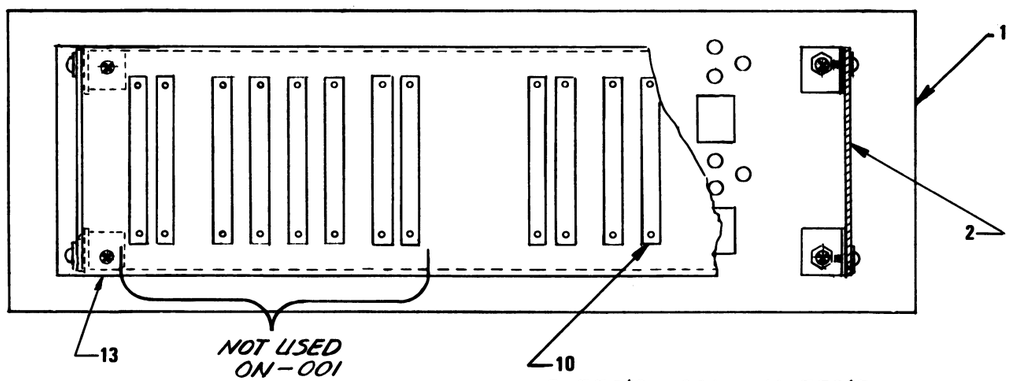


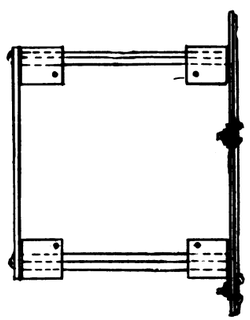
FRONT VIEW

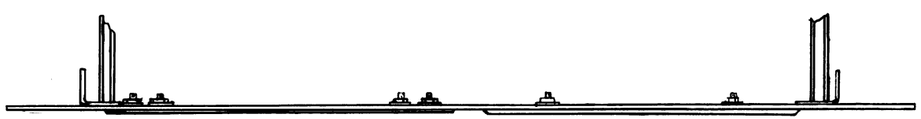


REAR VIEW





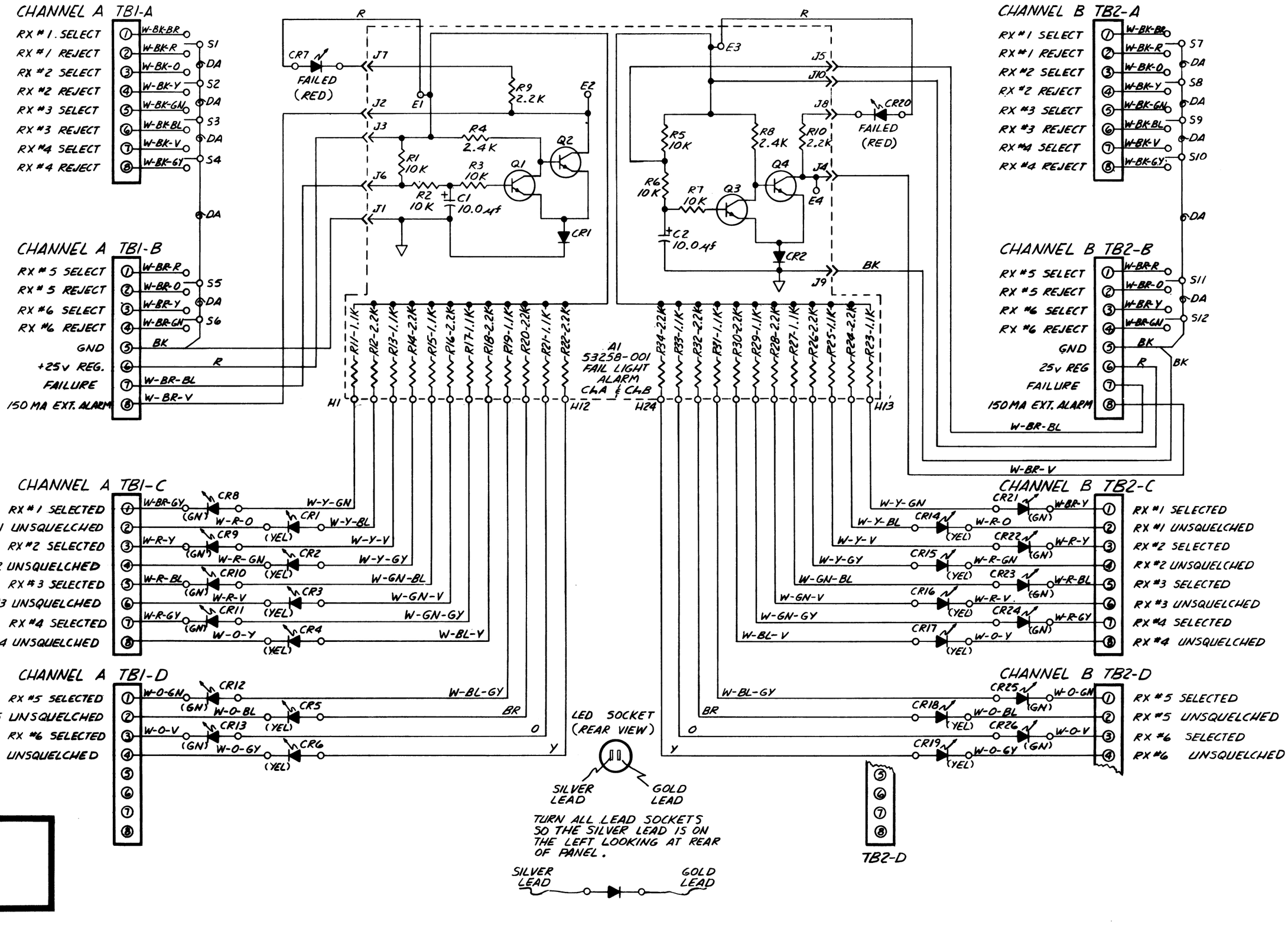




Quantity -001	Quantity -002	GE PART NO.	DESCRIPTION	ITEM
1	1	SEC/53253-001	Front Panel	1
1	2	SEC/53258-001	PC Board Assembly, Fail Light Alarm	2
12	24	SEC/51322-6122	Paddle Switch, 3-position	3
2	4	SEC/51233-002	LED, red	4
12	24	SEC/51233-001	LED, yellow	5
12	24	SEC/51233-003	LED, green	6
2	4	SEC/50556-002	LED socket w/red lens cap	7
12	24	SEC/50556-005	LED socket w/green lens cap	8
12	24	SEC/50556-004	LED socket w/yellow lens cap	9
8	16	SEC/15499-008	Terminal Strip, 8-position	10
2	4	SEC/53333-001	Designation strip	11
1	–	SEC/53592-001	Plate, cover	12
1	1	SEC/53254-001	Terminal Panel	13
4	4	SEC/50669-6264	Standoffs ¼ hex. x 4"	14

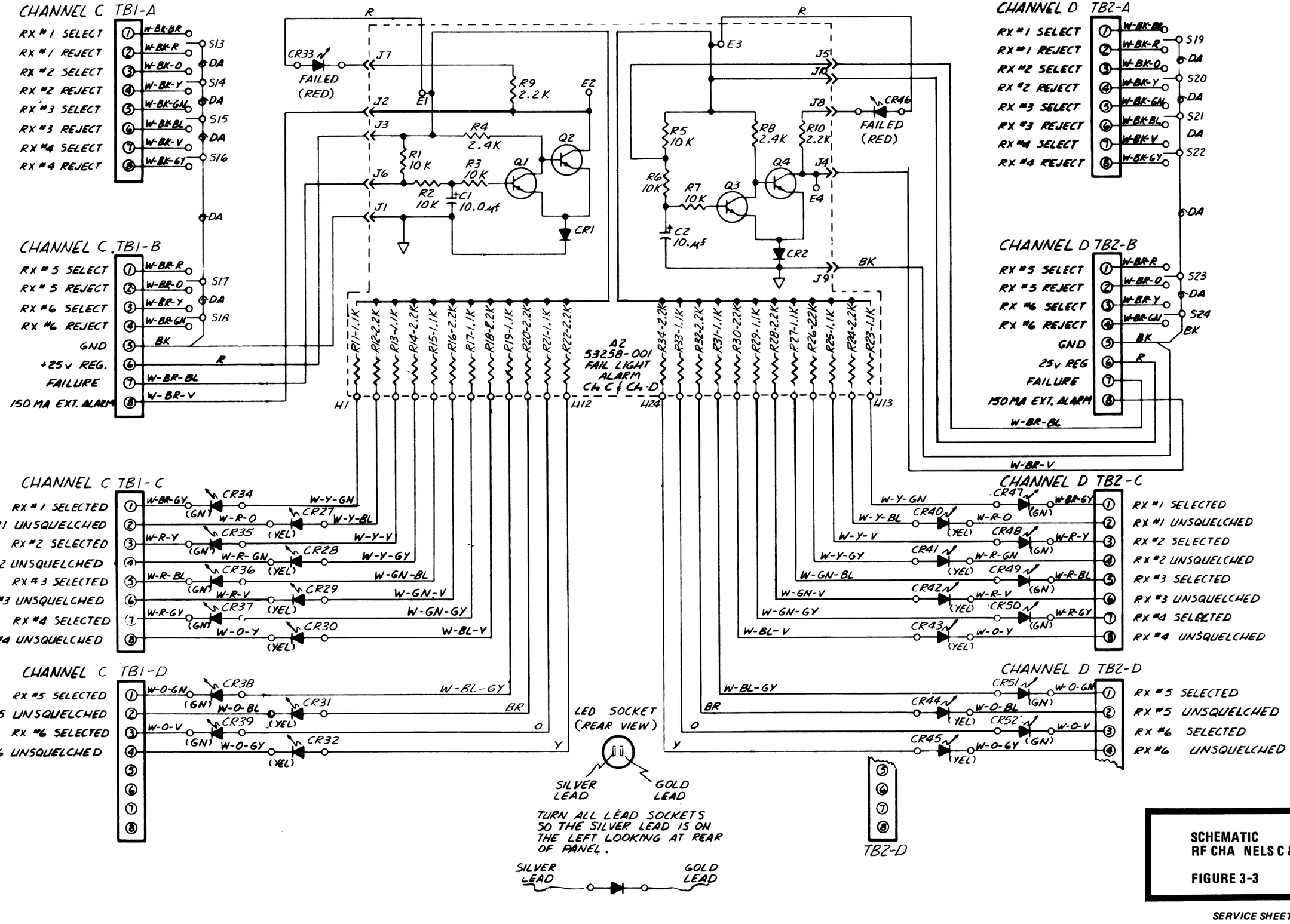
SEC/53387-001, -002
VOTING CONTROL PANEL
ASSEMBLY DIAGRAMS & PARTS LIST

FIGURE 3-1



SCHEMATIC
RF CHANNELS A & B

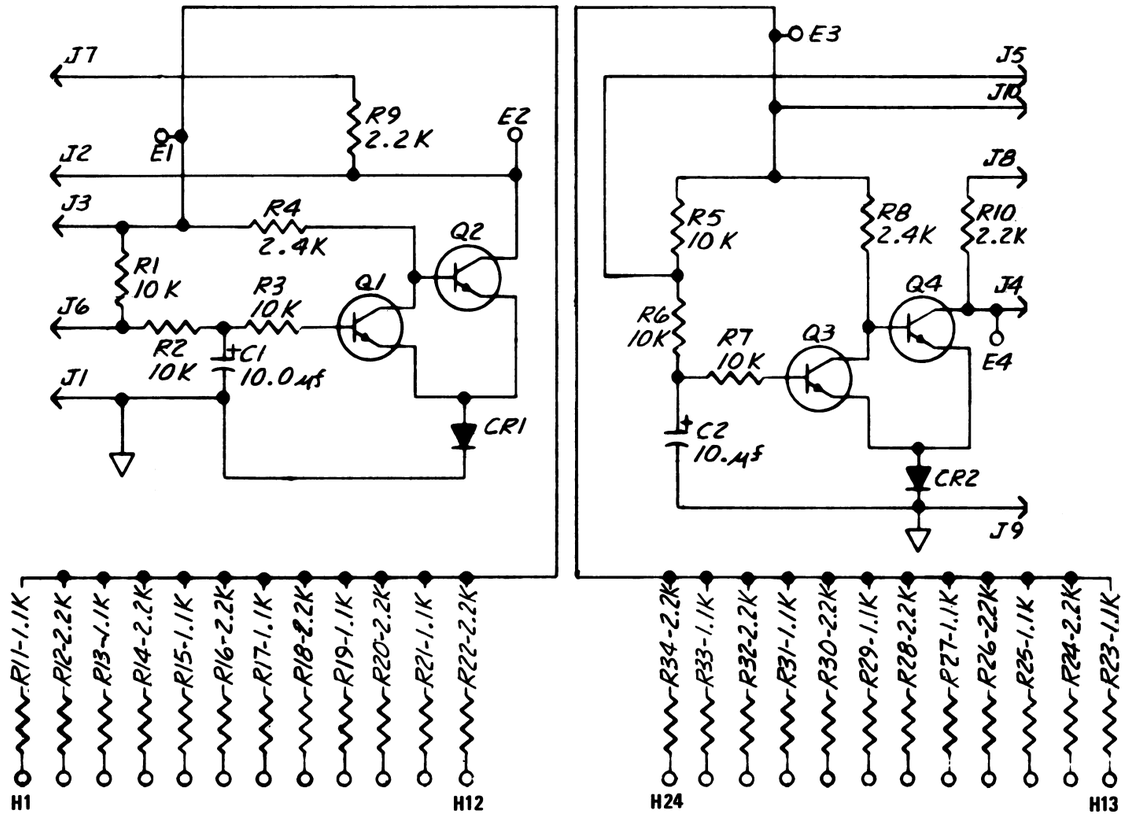
FIGURE 3-2

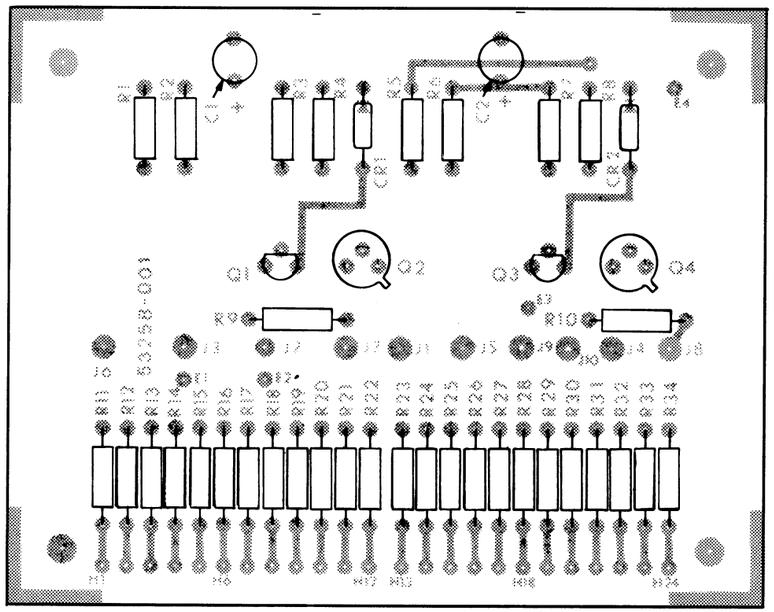


SCHEMATIC
RF CHA NELS C & D

FIGURE 3-3

SYMBOL	GE PART NO.	DESCRIPTION
		CAPACITORS
C1, C2	SEC/25076-106	10 uF, 35 V, Electrolytic
		DIODES/RECTIFIERS
CR1, CR2	SEC/23786-600	1N4005, Silicon, rectifier
		RESISTORS
		(Resistors are ¼W, 5%, carbon composition unless otherwise described.)
R1-R7	SEC/51016-103	10 Kohms
R4, R8	SEC/51016-22	2.4 Kohms
R9, R10-34 (even no.s)	SEC/51017-222	2.2 Kohms, ½W
R11-R33 (odd no.s)	SEC/51017-112	1.1 Kohms, ½W
		SOCKETS/JACKS/RECEPTACLES
–	SEC/24095-001	Contact pin, male
		TRANSISTORS
Q1, Q3	SEC/51205-5210	2N5210, silicon, small signal
Q2, Q4	SEC/51205-3053	2N3053, silicon, small signal





SEC/53258-001
FAIL LIGHT ALARM

FIGURE 3-4

ORDERING SERVICE PARTS

Each component appearing on the schematic diagram is identified by a symbol number, to simplify locating it in the parts list. Each component is listed by symbol number, followed by its description and GE Part Number.

Service parts may be obtained from Authorized GE Communication Equipment Service Stations or through any GE Radio Communication Equipment Sales Office. When ordering a part, be sure to give:

1. GE Part Number for component
2. Description of part
3. Model number of equipment
4. Revision letter stamped on unit

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, contact the nearest Radio Communication Equipment Sales Office of the General Electric Company.

MAINTENANCE MANUAL

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DF-4107

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GENERAL ELECTRIC COMPANY • LYNCHBURG, VIRGINIA 24502

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