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# RCA SERVICE COMPANY, Inc.

MI-9257

A Radio Corporation of America Subsidiary

CAMDEN • NEW JERSEY

CLASSIFICATION: Technical - Photophone - Amplifiers

DATE: Dec. 20, 1945

SUBJECT: MI-9257/A/B/C/D/E MONITOR-EMERGENCY AMPLIFIER

NUMBER: 203-28.01

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These amplifiers are of the rack mounting type first used on type PG-140 Equipments. They differ in the following respects.

**MI-9257** 110 volt 60 cycle type, high impedance input, used in MI-9253 or MI-9210-G racks.

**MI-9257-A** similar to MI-9257 except for changes in circuit values and rearranged volume control for side and extension operation. Used in MI-9258 amplifier cabinet assembly.

**MI-9257-B** similar to MI-9257 except includes input transformer XT-2874 and changes in circuit values. Used in MI-9210-G rack.

**MI-9257-C** similar to MI-9257 except for circuit values and the addition of voltage regulation in the PEC circuit. Used in MI-9253-A.

**MI-9257-D** similar to MI-9257-A except for circuit values and the addition of voltage regulation in the PEC circuit. Used in MI-9258-A or MI-9259.

**MI-9257-E** similar to MI-9257-B except for circuit values and the addition of voltage regulation in the PEC circuit and the XT-2874-A input transformer. Used in Deluxe PG-240 line racks.

See Schematic Diagrams for circuit changes.

## ELECTRICAL and MECHANICAL SPECIFICATIONS

DESCRIPTION . . . . . 15 Watt Monitor-Emergency Amplifier for Motion Picture Sound Reproduction. AC operated, to be used in either cabinet or rack mounting.

LINE VOLTAGE RATING . . . 105-125 Volts 50-60 cycles

FUSE . . . . . .2 Amp. buss type line fuse

POWER CONSUMPTION . . . . . 101 Watts max.

POWER SUPPLIED TO EXTERNAL DEVICES. . (PEC) . . . . .

90 Volts DC

POWER OUTPUT . . . (2% max. distortion) . . . 15 Watts

AVERAGE OVER-ALL GAIN (250,000 ohm source to 250 ohm load) . . . . . 108 db

INPUT IMPEDANCE . . . MI-9257-C . . . . . 100,000 ohms

at 1000 cps.

MI-9257-A/D . . . . . 270,000 ohms

at 1000 cps.

MI-9257-B/E . . . . . 500 ohms

at 1000 cps.

INPUT LEVEL . . . . . (Minimum for Rated Output)

. . . . . (.006 W. ref.) -74 db

NOISE LEVEL . . . . . 250 ohm load, volume control

max. . . . . -25 db

FEEDBACK . . . . . at 1000 cps. . . . . 16 db

TUBE COMPLEMENT . . . . . 2 RCA 1620 Tubes. . . . .

(Voltage Amplifier)

1 RCA 6SN7GT (Driver & Phase Inverter)

2 RCA 1622 (Output)

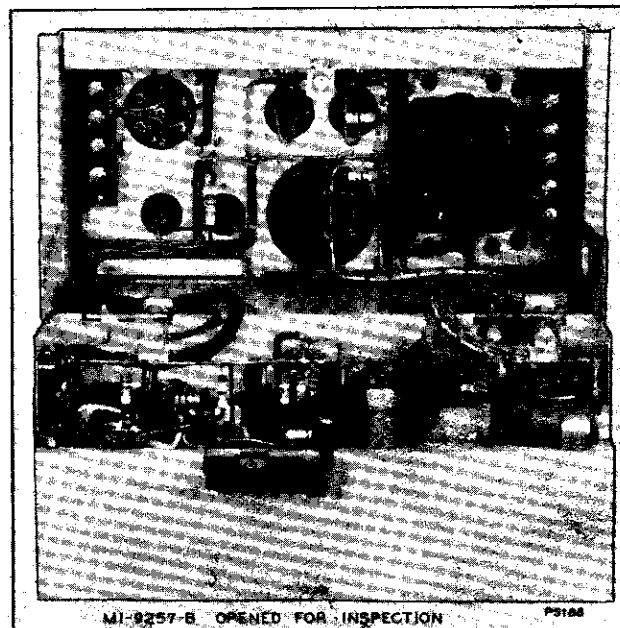
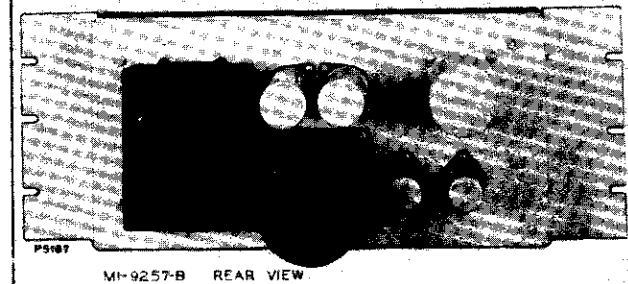
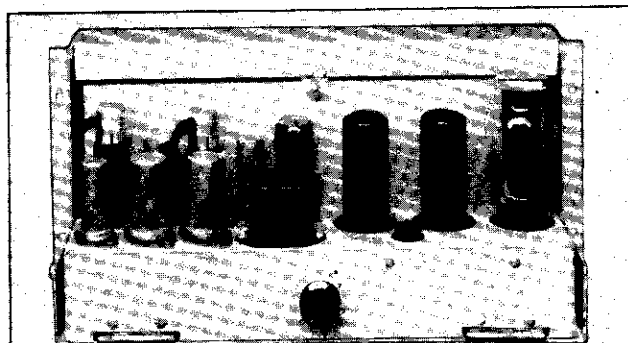
1 RCA 5U4G (Rectifier)

MI-9257-C/D/E 2 RCA 991 (Voltage Regulator)

OVER-ALL DIMENSIONS . . . . . Width 14-7/8", Depth 8",

Height 6-7/8"

WEIGHT (Net). . . . . 19-1/2 lbs.



**TUBE SOCKET VOLTAGES**

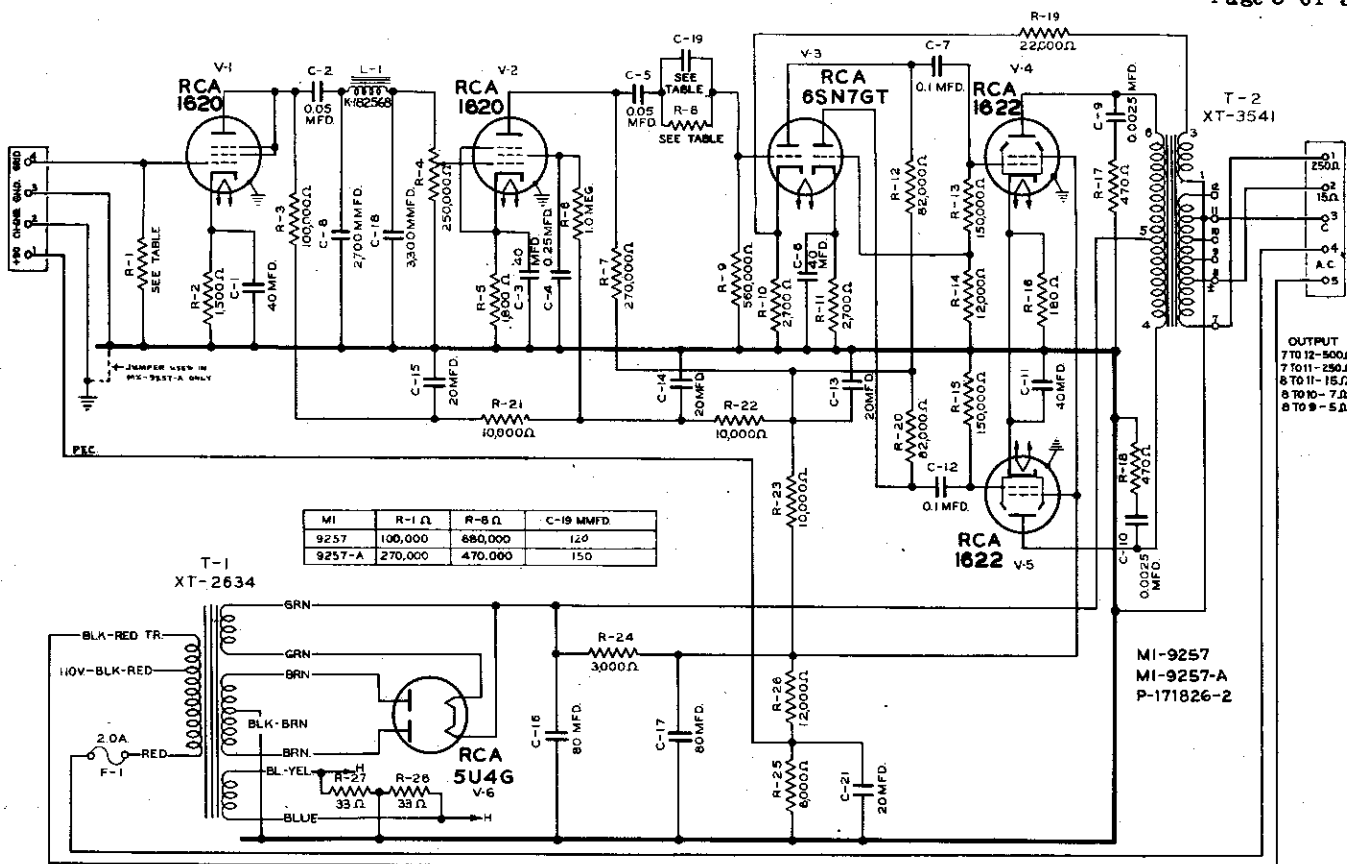
120 VOLT AC LINE      120 VOLT TRANSFORMER TAP  
20,000-OHMS-PER-VOLTMETER

Tube	Plate MA	Plate to Cathode	Screen to Cathode	Cathode to Ground	Heater
1. 1620	.84 MA	68 V	-	2.1 V	6.2 V AC
2. 1620	.54 MA	75 V	42 V	1.29 V	6.2 V AC
3A 6SN7-GT	1.4 MA	100 V	-	4.1 V	6.2 V AC
3B 6SN7-GT	1.4 MA	100 V	-	4.1 V	-
4. 1622	50 MA	310 V	258 V	19.2 V	6.2 V AC
5. 1622	50 MA	310 V	258 V	19.2 V	6.2 V AC
6. 5U4-G	-	To GND 320 V AC	-	-	5 V AC

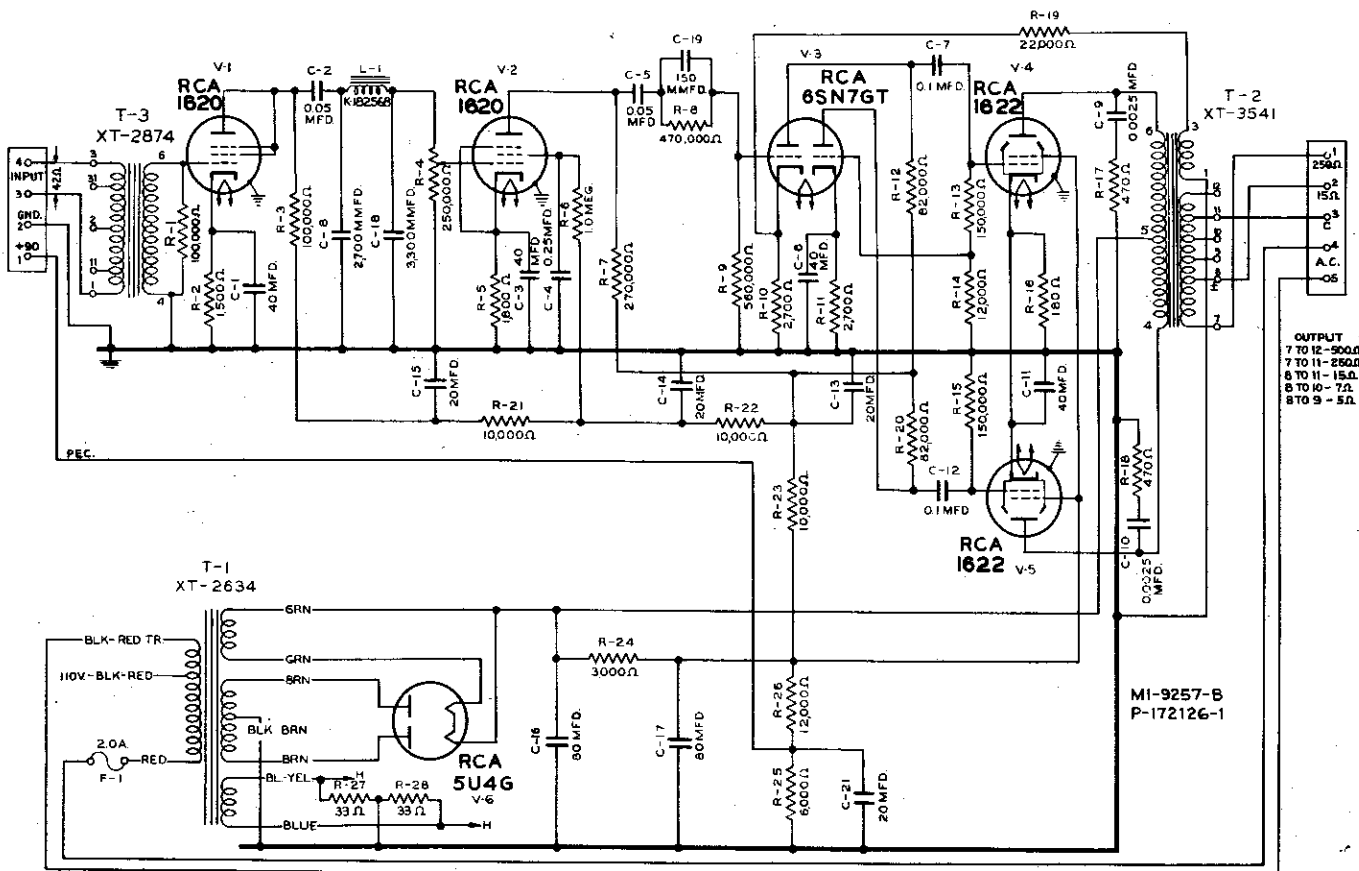
Routine inspection and cleaning of the contacts of the RCA-991 tubes should be made to prevent any possibility of oscillation.

**REPLACEMENT PARTS**  
**MI-9257-A/B/C/D/E**

SYMBOL NO.	DESCRIPTION	STOCK NO.	SYMBOL NO.	DESCRIPTION	STOCK NO.
C-1, C-3, C-5, C-6	Capacitor - 40 mfd., 25 V,	19907	R-16	Resistor - 180 ohms, 10 w	44164
C-2	Capacitor - 0.05 mfd., 500 V	65633	R-17, R-18	Resistor - 470 ohms, 1 w	30681
C-4	Capacitor - 0.25 mfd., 300 V	65634	R-19	Resistor - 22,000 ohms, 1/2 w	30492
C-7, C-12	Capacitor - 0.1 mfd., 500 V	65635	R-21, R-22	Resistor - 10,000 ohms, 1/2 w	3078
C-8	Capacitor - 2700 mmfd., 500 V	65400	R-23	Resistor - 10,000 ohms, 1 w	13097
C-9, C-10	Capacitor - 0.0025 mfd., 1000 V	30850	R-24	Resistor - 3,000 ohms, 7.4 w	50879
C-11	Capacitor - 40 mfd., 150 V	31584	R-25, R-26	Resistor - 12,000 and 6,000 (MI-9257-A/B) ohms, 14.4 w	51991
C-13, C-14	Capacitor - 20 mfd., 450 V	32400	R-27, R-28	Resistor - 33 ohms, 1 w	42537
C-15, C-21	Capacitor - 80 mfd., 450 V	18950	R-29	Resistor - 18,000 ohms, 14.4 w (MI-9257-C/D/E)	51256
C-16, C-17	Capacitor - 3300 mmfd.	65760	R-30	Resistor - 82,000 ohms, 1/2 w (MI-9257-C/D)	14023
C-18	Capacitor - 150 mmfd., 500 V	47049	R-31	Resistor - 68,000 ohms, 1/2 w (MI-9257-E)	14138
C-19	Capacitor - 120 mmfd., 500 V (MI-9257-C)	50337	R-32	Resistor - 56,000 ohms, 1/2 w (MI-9257-E)	30650
F-1	Fuse - 2 Amp.	3883	T-1	Transformer - XT-2634	30183
L-1	Reactor	45492	T-2	Transformer - XT-3541	43879
R-1, R-7,	Resistor - 270,000 ohms, 1/2 w	30651	T-3	Transformer - XT-2874 (MI-9257-B)	27995
R-33 (MI-9257-A/D)	Resistor - 1500 ohms, 1/2 w	30654	T-3	Transformer - XT-2874-A (MI-9257-E)	28796
R-2	Resistor - 100,000 ohms, 1/2 w	3252			
R-3	Resistor - 250,000 ohms (R-1, R-33 MI-9257-A/B/C/E)	51260		Plate - Capacitor mounting plate for C-1, 3, 6	19820
R-4	Resistor - 1800 ohms, 1/2 w (MI-9257-B/C/E/D)	30930		Plate - Capacitor mounting plate for C-14, 15	28452
R-5	Resistor - 1.0 meg., 1/2 w	30652		Plate - Capacitor mounting plate for C-16, C-17	18469
R-6	Resistor - 470,000 ohms, 1/2 w	30648		Socket - Tube socket (Octal)	51266
R-8	Resistor - 680,000 ohms, 1/2 w (MI-9257-C)	30562		Socket - Tube socket (Octal 5U4G)	28413
R-9	Resistor - 560,000 ohms, 1/2 w	30653		Socket - Tube socket (991)	51259
R-10, R-11	Resistor - 2700 ohms, 1/2 w	30730		Fuse Holder (MI-9257-A/B/C/D)	48894
R-12, R-20	Resistor - 82,000 ohms, 1 w	30435		Fuse Holder (MI-9257-E)	65796
R-13, R-15	Resistor - 150,000 ohms, 1/2 w	30493		Knob Assembly (MI-9257-B/C/E)	30075
R-14	Resistor - 12,000 ohms, 1/2 w	30436			

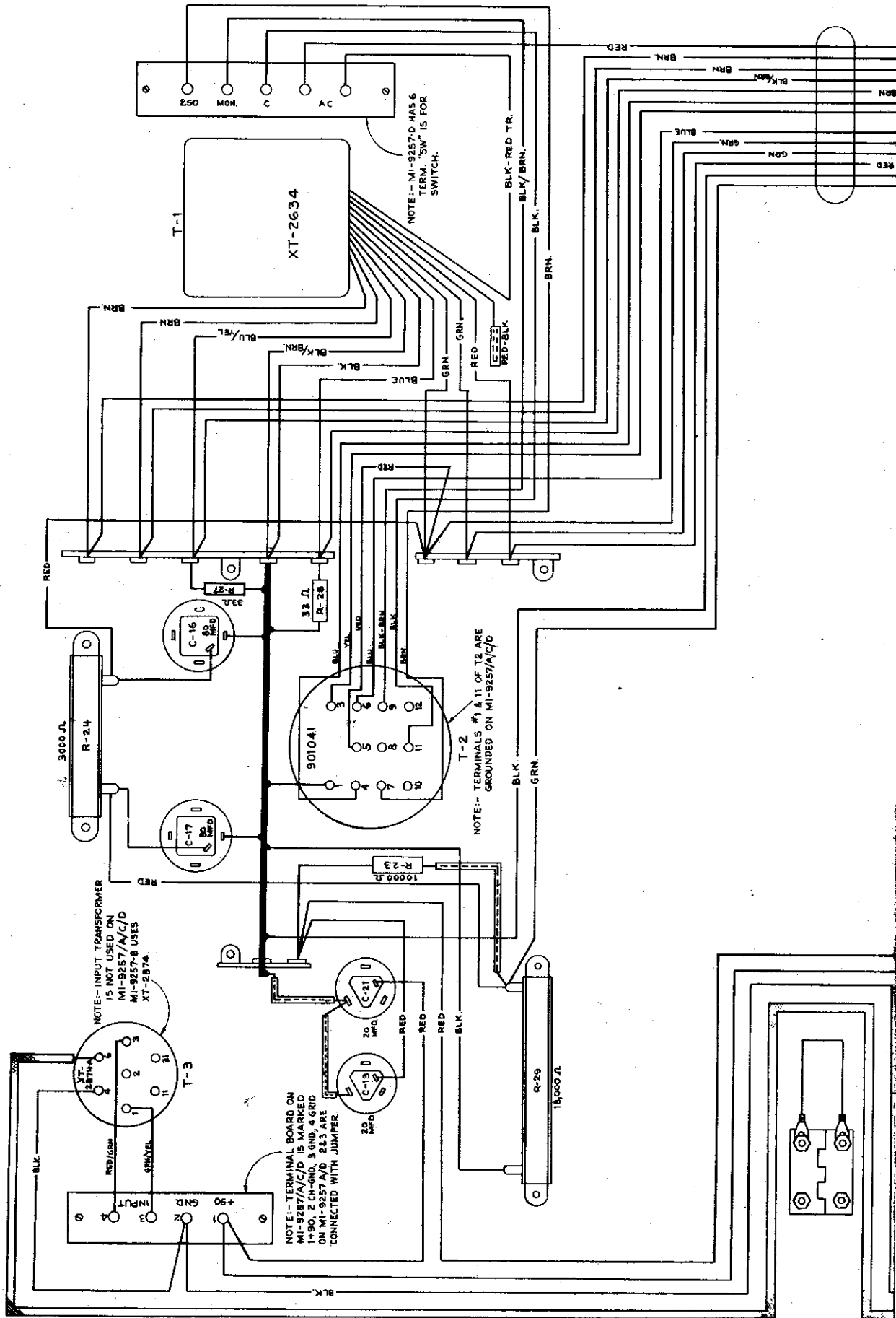


MI-9257-A Schematic Diagram



MI-9257-B Schematic Diagram



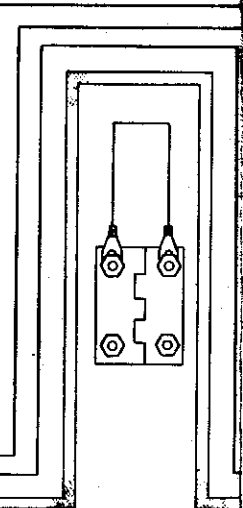
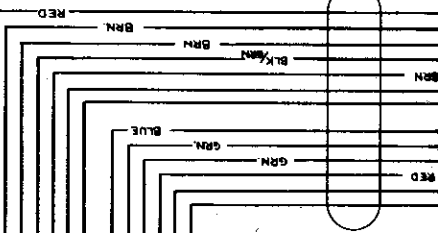
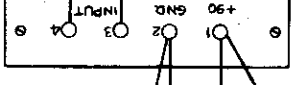
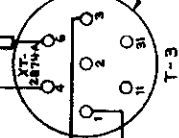
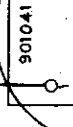
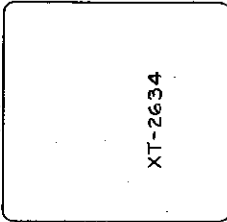
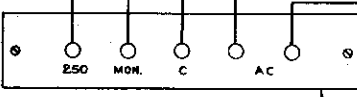


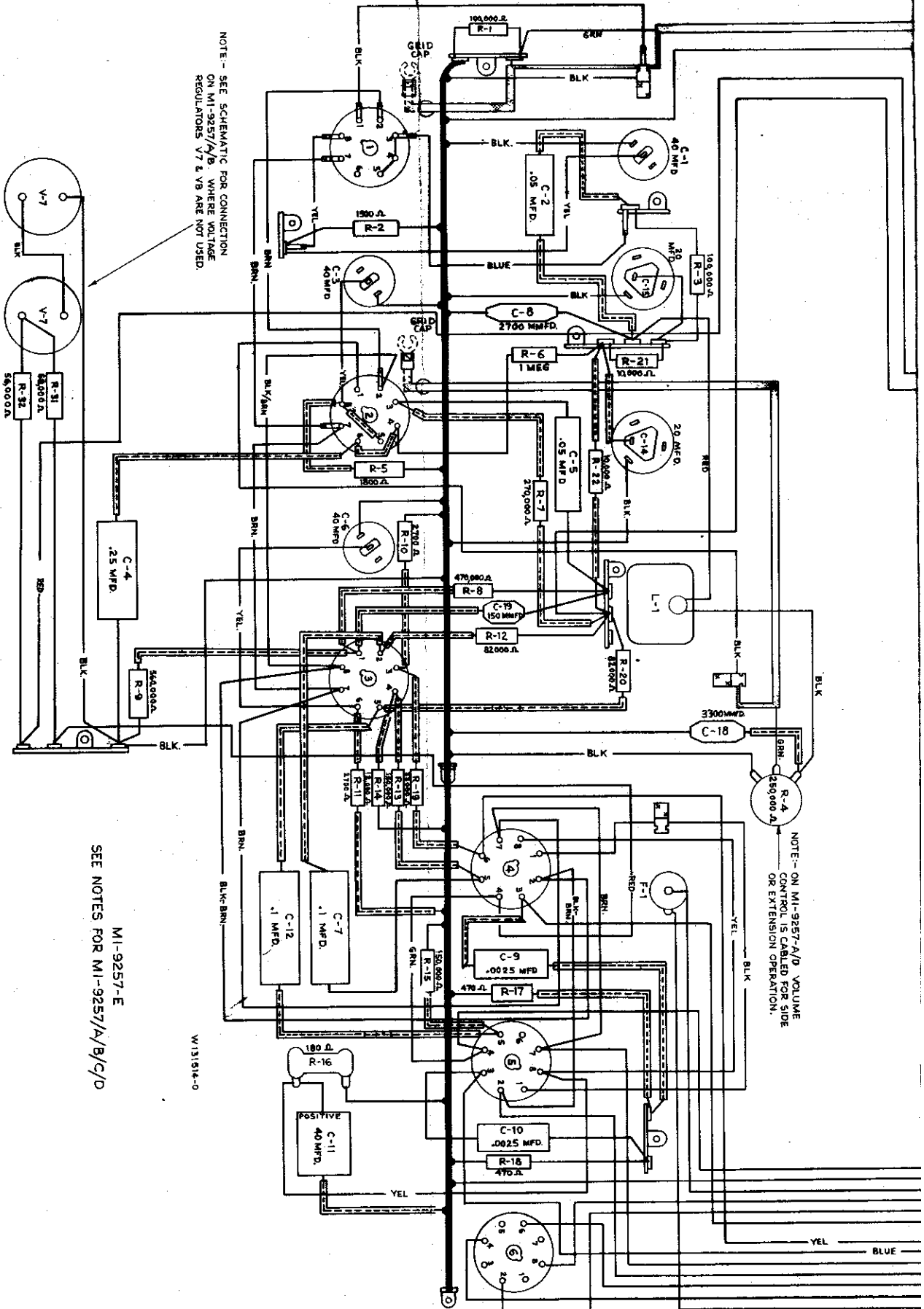
NOTE: MI-9257-D HAS 6 TERM. 'SW' IS FOR SWITCH.

NOTE: TERMINALS #1, 4, 11 OF T2 ARE GROUNDED ON MI-9257A/C/D

NOTE: INPUT TRANSFORMER IS NOT USED ON MI-9257/A/C/D MI-9257-B USES XT-2874.

NOTE: TERMINAL BOARD ON MI-9257A/C/D IS MARKED 1+90, 2 CH-GND, 3 GND, 4 GRID ON MI-9257A/D 2&3 ARE CONNECTED WITH JUMPER.





NOTE: - SEE SCHEMATIC FOR CONNECTION ON MI-9257/A/B. WHERE VOLTAGE REGULATORS V7 & V8 ARE NOT USED.

NOTE: - ON MI-9257-A/D VOLUME CONTROL IS CABLED FOR SIDE OR EXTENSION OPERATION.

MI-9257-E  
SEE NOTES FOR MI-9257/A/B/C/D

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