HIGH VOLTAGE POWER SUPPLY

MODEL	DESCRIPTION
TPN1131A	120-volt, 60 Hz
TPN1135A	120/240-volt, 50 Hz

1. DESCRIPTION

These power supplies produces various dc voltages which are used to operate a vacuum tube type high power (rf) amplifier for the transmitter and ac voltages which are used to drive the companion TPN1132A Low Voltage Power Supply. The voltages produced for operation of the power amplifier are: +1500 V dc for the plate circuit, +300 V dc for the screen circuit and -50 V dc for the tube bias voltage. The power supplies uses a constant voltage ferro-transformer to provide the basic operating voltages to the rectification circuits. This transformer maintains the output voltages within ±3% with a ±20% change in the input line voltage.

CAUTION

The input power must maintain an operating frequency to within ±3 Hz in order to keep within the regulation characteristics of the transformer. If the input power is obtained from a source other than a commercial power company, make sure that the operating frequency is kept within the 50 or 60 Hz ±3 Hz specification.

WARNING -- HIGH VOLTAGE

Extreme care must be exercised when servicing this equipment. Do not defeat interlock switches. It is a good practice to assume that HIGH VOLTAGES are present at all times, even after the ac input power is removed from the station.

The power supply contains an interlock protection circuit which prevents high voltages from being produced unless the station interlocks are enabled (closed). In addition, a power amplifier tube overcurrent protection circuit is provided which removes the screen voltage to the tubes in event of excessive plate current.

2. FUNCTIONAL OPERATIONAL

The ac input to the power supply is routed through TB1 and F1 to T2. Two voltages are produced by half-wave rectification; the -50 V dc PA tube bias and the station safety interlock voltage. The interlock voltage is routed through the interlock switches and back to the power supply to energize K1. AC power is applied through the closed contacts of K1 to T1. The multiple winding secondary of T1 provides voltages to power the full-wave rectifier networks for the +1500 V dc and +300 V dc PA voltages, and to power the companion low voltage power supply.

The +300 V dc screen voltage is not developed until SCR gate Q51 is enabled when the station is keyed. This prevents the PA tubes from operating except when the station is keyed, thereby extending the useful life of the tubes.

The screen voltage is enabled as follows. The transmitter turn-on switched A-function is applied through inverter Q57 to Schmitt Trigger Q56 and Q55. The Schmitt Trigger sets bistable multivibrator Q53 and Q54 so that Q53 is cut off and Q54 is turned on. The high voltage on the collector of Q53 causes switch Q52 to turn on and create a current path through T3. A positive voltage is applied to the gate of SCR Q51 which conducts and passes the +300 V dc screen voltage to the output filter.

If at any time the plate circuit of the PA tubes draws excessive current, the bias on Q54 decreases which causes Q54 to cut off and Q53 to turn on. This causes Q52 to turn off removing the gate voltage to SCR Q51 which stops conducting. Bistable multivibrator Q53 and Q54 is reset each time the station is keyed ensuring proper operation of the SCR enabling circuit.

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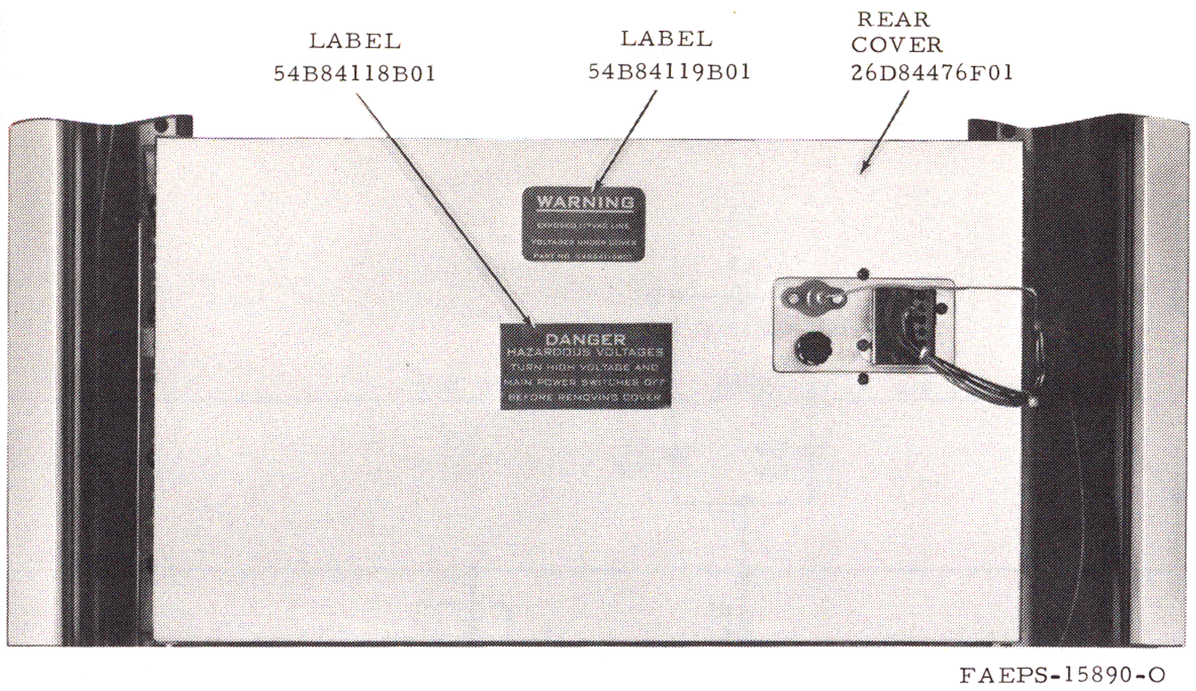

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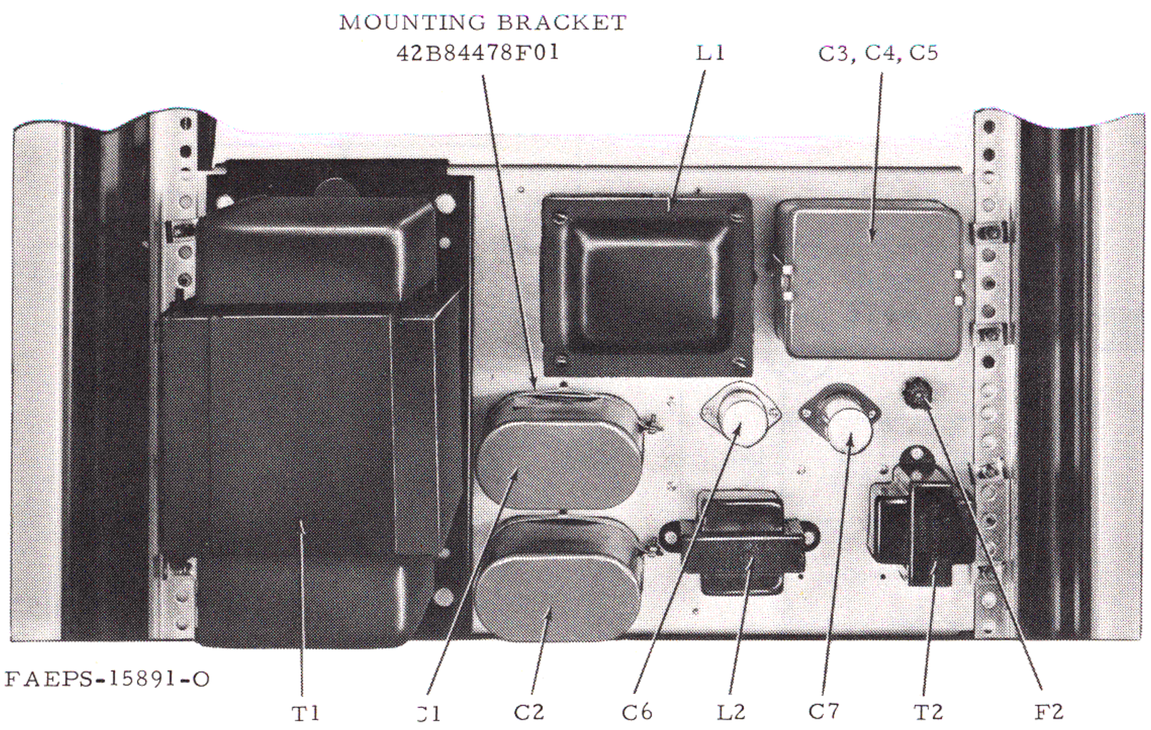

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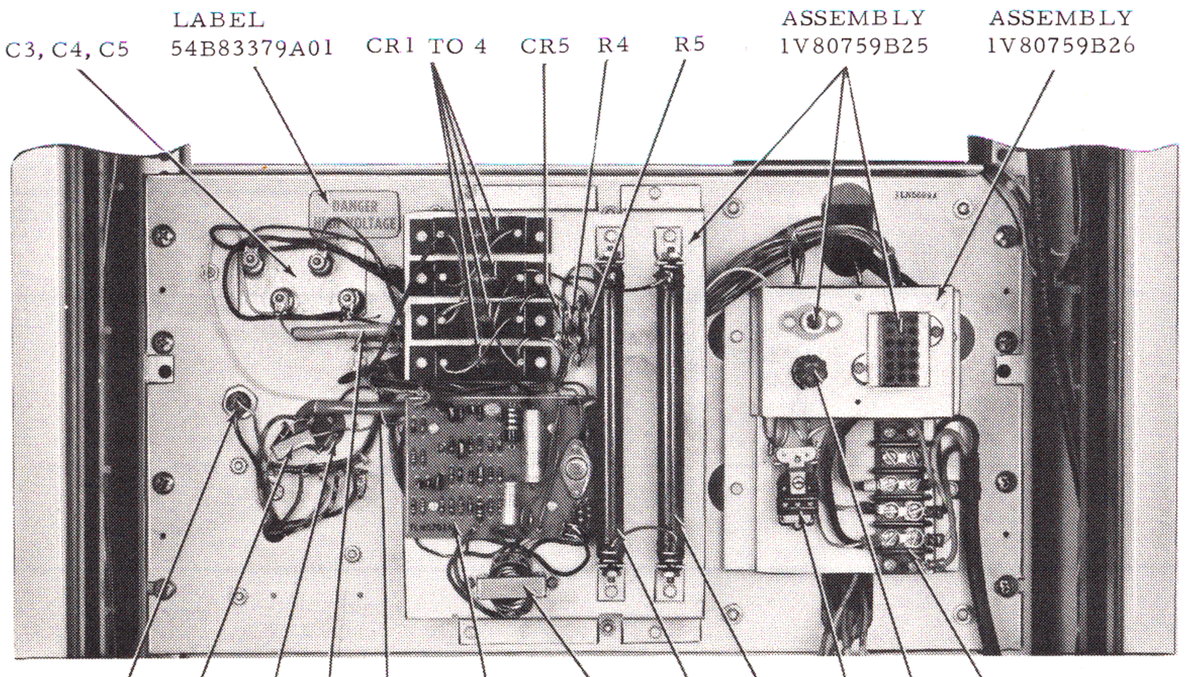


FAEPS-15892-O

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION

PARTS LIST

TLN5701A Power Control Board (Both Models) PL-2861-B

		CAPACITOR, fixed: uF ±10% unless otherwise stated
C51	23-83550B01	15 -0 +33%, 60 V
C52, 53	21-847087	220; 300 V
C54	21-82428B36	.002; 200 V
C55	23-83210A19	500 -10+100%; 20 V
C56	23-82783B26	1.0; 35 V
		SEMICONDUCTOR DEVICE, diode: (SEE NOTE)
CR51 thru 54	48-82466H18	silicon
CR55, 56	48-82392B03	silicon
CR57	48-82466H18	silicon
CR58, 59, 60	48-82392B03	silicon
CR61	48-82466H18	silicon
		TRANSISTOR: (SEE NOTE)
Q51	48-869349	silicon controlled diode; type M9349
Q52	48-869170	NPN; type M9170
Q53, 54	48-869293	NPN; type M9293
Q55, 56	48-869570	NPN; type M9570
Q57	48-869643	PNP; type M9643
		RESISTOR, fixed: ±10%; 1/4 W unless otherwise stated
R51	6-10402C19	56; 1/2 W
R52	6-10402C33	220; 1/2 W
R53	6-10402C19	56; 1/2 W
R54	6-10401C75	12k
R55	6-10401C57	2.2k
R56, 57	6-10401C73	10k
R58	6-10401C57	2.2k
R59	6-10402A53	1.5k; ±5%; 1/2 W
R60	6-10401A71	8.2k ±5%
R61	6-10402A36	300 ±5%; 1/2 W
R62	6-10401A55	1.8k ±5%
R63	6-10401C93	68k
R64, 65	6-10401C59	2.7k
R66	6-10401C69	6.8k
R67	6-10401C61	3.3k
R68	6-10401C33	220
R69	6-10401C73	10k
R70	6-10401C75	12k
R71	6-10401C73	10k
R72	6-10401C65	4.7k
R73	6-10401C57	2.2k
R74	6-476116	270; 2 W

NOTE:
For optimum performance, replacement diodes and transistors must be ordered by Motorola part number.

TKN6702A Cable, HV Power Supply (Both Models) PL-2862-A

	14-83783A01	INSULATOR, receptacle
	29-82336A01	Terminal, female; 11 req'd
	42-10217A02	STRAP, cable harness; 14 req'd

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION

TLN5699A Chassis, HV Power Supply (TPN1131A Model)
TPN6078A Chassis, HV Power Supply (TPN1135A Model) PL-2860-B

		CAPACITOR, fixed:
C1, 2	8-84717G02	7 uF ±6%; 660 V (TLN5699A Chassis only)
	or	
	8-84717G03	8.5 uF ±6%; 660 V (TPN6078A Chassis only)
C3, 4, 5	8-82744H01	3-section: 0.12 uF ±10%; 4400 V 1 uF ±10%; 4400 V 1 uF ±10%; 3600 V
C6	23-82125B14	2-section: 25 uF-10+50%;525 V 25 uF-10+50%;525 V
C7	23-82125B13	2-section: 125 uF-10+100%;100 V 125 uF-10+100%;100 V
		SEMICONDUCTOR DEVICE, diode: (SEE NOTE)
CR1 thru 4	48-83392A01	silicon
CR5	1-80759B55	4-diode potted assy.
CR6 thru 10	48-82466H18	silicon
		FUSE, cartridge:
F1	65-135013	20A
F2	65-817953	0.6A
		RELAY:
K1	80-82015H02	12 V
		COIL:
L1		(part of TLN5704A) (part of TLN5703A)
L2	25-82804H01	2.1H
		RESISTOR, fixed: ±10%: unless otherwise stated
R1	17-82476B06	4 ±1%; 3 W
R2, 3	17-82906H01	75k; 75 W
R4	6-82672B09	6.04 meg ±1%; 2W
R5	6-82672B08	4750 ±1%; 1/2 W
R6	6-6320	10k; 1/2 W
R7	6-82394D10	20k; 7 W
R8	6-5583	47; 1 W
R9	17-83027H03	1.5k; 3 W
		TRANSFORMER, power:
T1		(part of TLN5703A and TLN5704A)
T2	25-82225H01 (TLN5699A)	pri. BLK & BLK-WHT sec. GRN & GRN-YEL sec. RED & RED-YEL
	25-82599L01 (TPN6078A)	pri. 1: BLK & BLK-WHT pri. 2: BLU & BLU-WHT sec. 1: GRN & GRN-YEL sec. 2: RED & RED-YEL
T3	25-83194C01	pri. RED & BLU sec. GRN & YEL sec. BLK & BRN
		BOARD, terminal:
TB2	31-82272B05 (TPN6078A)	4-dual terminals
	NON-REFERENCED ITEMS	
	9-82083C03	FUSEHOLDER; 2 req'd.
	27-84474F01	CHASSIS
	31-811350	TERMINAL BOARD; 4 terminal
	30-82903H02	CABLE & CONNECTOR ASSY. HV

NOTE:
For optimum performance, replacement diodes must be ordered by Motorola part number.

TLN5703A Transformer Kit (Used with 25-50 MHz Stations)
(TPN1131A Model) PL-3025-A

		REACTOR:
L1	25-84480F02	power filter choke; 15H ±10%; res 68 ohms ±10%
		TRANSFORMER, power: 95 to 145 V AC:
T1	25-84507F01	pri: BLK, BLK sec No. 1: RED, RED-BLU w/ RED-YEL center tap sec No. 2: RED-WHT, RED-WHT sec No. 3: BLU, BLU w/BLU-YEL center tap sec No. 4: YEL, YEL w/YEL-GRN center tap

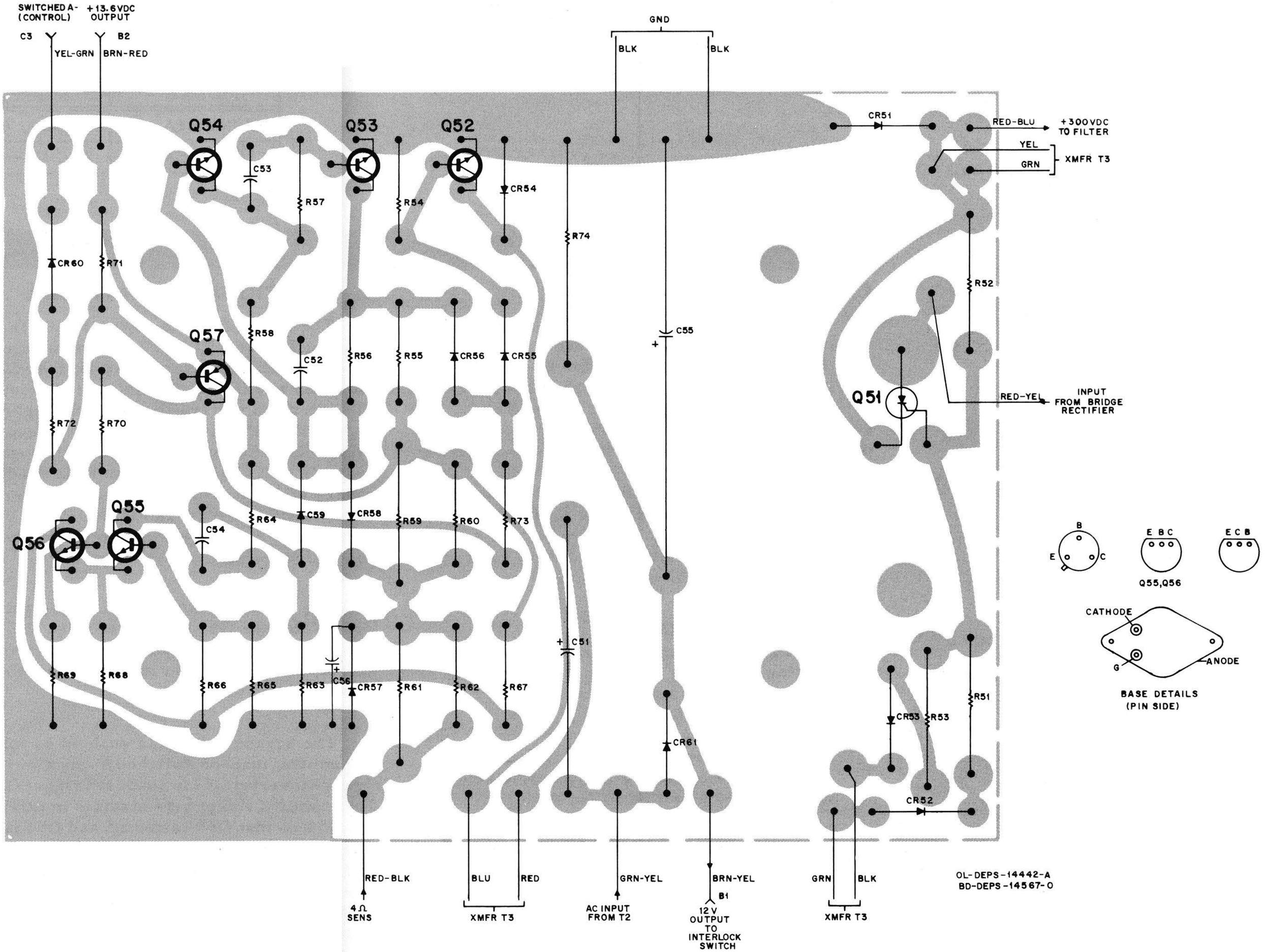
REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION

TLN5704A Transformer Kit (Used with 136-174 MHz Stations)
(TPN1131A Model) PL-3026-A

		REACTOR:
L1	25-84480F01	power filter choke; 15H ±10%; res 76 ohms ±10%
		TRANSFORMER, power: 95 to 145 V AC:
T1	25-84507F01	pri: BLK, BLK sec No. 1: RED, RED-BLU w/RED-YEL center tap sec No. 2: RED-WHT, RED-WHT sec No. 3: BLU, BLU w/BLU-YEL center tap sec No. 4: YEL, YEL w/YEL-GRN center tap

TPN6079A Transformer Kit (Used with 136-174 MHz stations) (TPN1135A Model) PL-3237-B

		REACTOR
L1	25-84480F01	power filter choke; 15 H ±10%; res 76 ohms ±10%
		TRANSFORMER, Power 120 or 240 V AC ±20%, 50 Hz
T1	25-82476K01	pri #1 BLK, WHT pri #2 BRN, GRN sec No. 1: RED, RED-BLU w/RED-YEL center tap sec No. 2: RED-WHT, RED-WHT sec No. 3: BLU, BLU w/BLU-YEL center tap sec No. 4: YEL, YEL w/YEL-GRN center tap

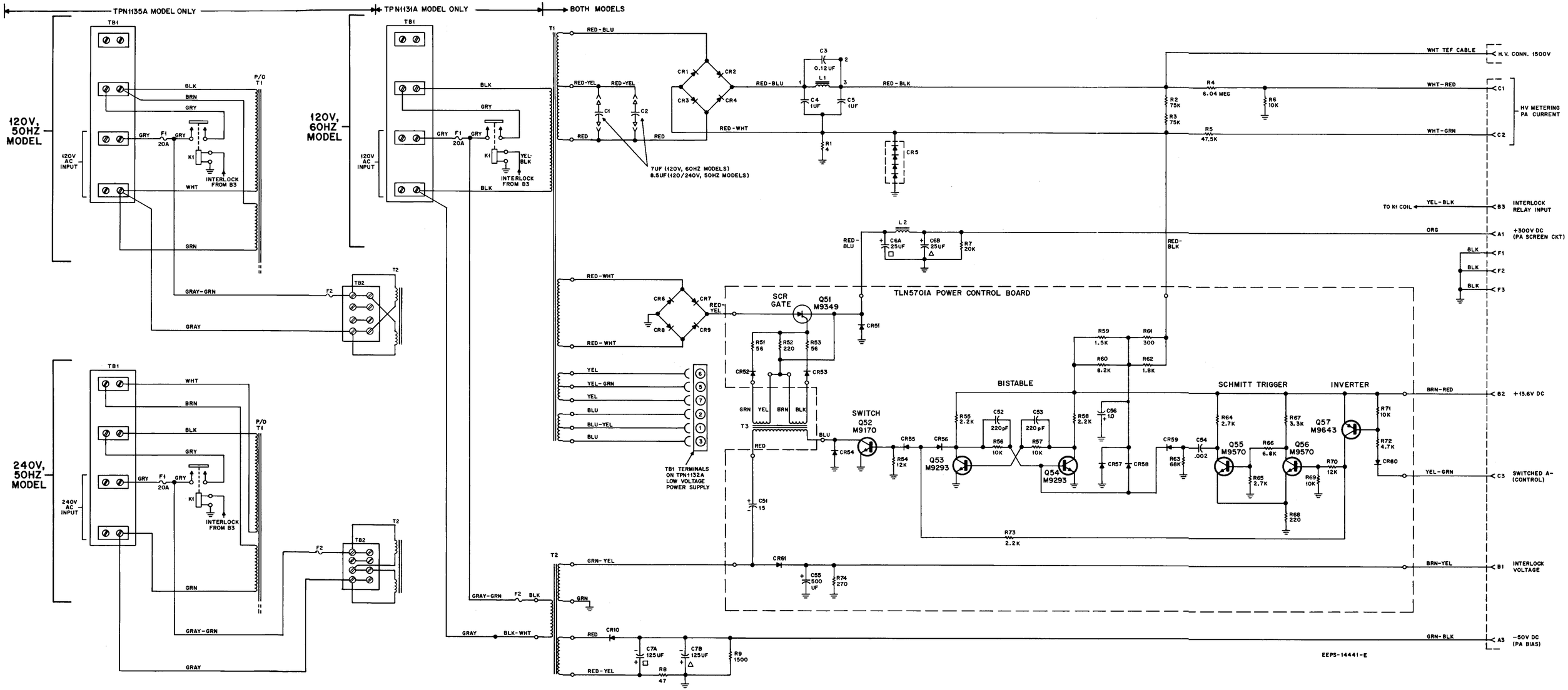


SHOWN FROM COMPONENT SIDE

MODEL TABLE

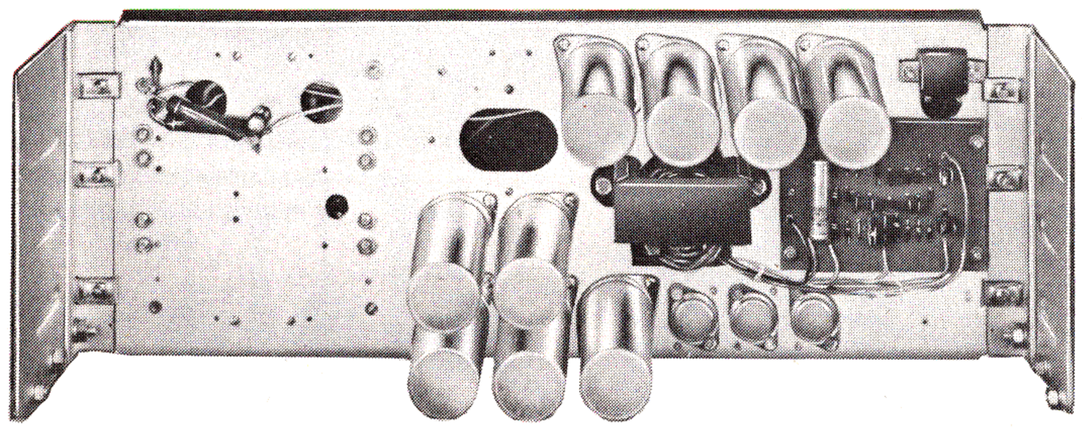
MODEL	DESCRIPTION	KITS INVOLVED
TPN1131A	120-Volt, 60 Hz Model	TLN5699A Chassis, HV Power Supply TLN5703A or TLN5704A Transformer Kit
TPN1135A	120/240-Volt, 50 Hz Model	TPN6078A Chassis, HV Power Supply TPN6079A Transformer Kit
BOTH MODELS		TLN5701A Power Control Board TKN6702A Cable, HV Power Supply

EPS-16796-O


TPN1135A MODEL ONLY
TPN1131A MODEL ONLY
BOTH MODELS
120V, 50HZ MODEL
120V, 60HZ MODEL
240V, 50HZ MODEL
TB1
T1
T2
T3
P/O T1
120V AC INPUT
240V AC INPUT
F1 20A
F2
K1
INTERLOCK FROM B3
7UF (120V, 60HZ MODELS) 8.5UF(120/240V, 50HZ MODELS)
TB1 TERMINALS ON TPN1132A LOW VOLTAGE POWER SUPPLY
TLN5701A POWER CONTROL BOARD
SCR GATE
Q51 M9349
SWITCH
Q52 M9170
Q53 M9293
Q54 M9293
BISTABLE
SCHMITT TRIGGER
INVERTER
Q55 M9570
Q56 M9570
Q57 M9643
WHT TEF CABLE
H.V. CONN. 1500V
WHT-RED
WHT-GRN
HV METERING PA CURRENT
TO K1 COIL
YEL-BLK
INTERLOCK RELAY INPUT
ORG
+300V DC (PA SCREEN CKT)
BRN-RED
+13.6V DC
YEL-GRN
SWITCHED A- (CONTROL)
BRN-YEL
INTERLOCK VOLTAGE
GRN-BLK
-50V DC (PA BIAS)
EEPS-14441-E

LOW VOLTAGE POWER SUPPLY

MODEL TPN1132A



FAEPS-15893-O

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1. DESCRIPTION

1.1 This power supply power supply provides the following output voltages:

--regulated 12 volts dc (adjustable) for the tube filaments of the high power rf amplifier.

--regulated 9.6 and 13.6 volts dc for operation of the solid state electronic circuitry contained within the station.

--filtered 13.6 volts dc for operation of the driver transistors on the exciter-driver chassis.

1.2 This low voltage power supply obtains its power from a companion high voltage power supply which provides a relatively constant input voltage regardless of primary power voltage changes. The low voltage power supply uses transistorized circuitry to provide a high degree of regulation for its three output voltages.

2. THEORY OF OPERATION

2.1 INPUT CIRCUITRY

Diodes CR1 and CR2 provide full wave rectification of the nominal 14.5 volt ac input applied to TB1-5, 6 and 7. The dc voltage is fed through a double-pie type LC filter and applied to the 12 volt regulator on the TLN5702A Filament Regulator Board, to the 9.6 volt regulator on the TLN5122A 9.6 V & 13.6 V Regulator Board, and to TB2-6 for the exciter-driver transistors. Diodes CR3 and CR4 provide full wave rectification of the nominal 18.5 volt ac input applied to TB1-1, 2 and 3. The dc voltage is capacitively filtered and applied to the 13.6 volt regulator on the TLN5122A 9.6 V & 13.6 V Regulator Board. Each regulator circuit is protected from drawing excessive current by a fuse in its input.

2.2 9.6 V AND 13.6 V REGULATORS

2.2.1 General

Except for the voltages involved, the operation of the 9.6 V and 13.6 V regulators is the same. The operation of the 9.6 V regulator is described in the following paragraphs. Refer to the schematic diagram while reading the circuit theory.

The 9.6 volt output is derived from a series regulator circuit that uses a higher level A+ as its source. An output voltage sensing circuit regulates the amount of current that is allowed to pass through the series regulator thus controlling the voltage across the load.

2.2.2 Voltage Regulation

Transistors Q1, Q3 and Q4 form the voltage regulating circuit. Regulation is achieved by changing the amount of current allowed to flow through the base Q2. If the output voltage increases, the Q2 base current is decreased, and vice versa. The regulator output voltage is developed across R8 and R9. The voltage developed across R9 reflects all fluctuations of the output load voltage and is applied to the base of Q4. Since the emitter of Q4 is held to 8.2 volts by Zener diode VR1, Q4 conducts in response to the output load voltage fluctuations. When the output load voltage is 9.6 volts, Q4 conducts at a certain level which fixes its collector voltage to a specific level. This voltage level determines the drive to the base of Q3 and thus, also determines the drive to the base of Q2. Q1 is a constant current source for the collector of Q4 and the base of Q3. Current through Q1 is held constant because of the voltage drop CR5 and CR6 which maintain a constant base to emitter bias voltage.

If the 9.6 volt output increases, the Q4 base voltage increases and Q4 conducts harder which causes its collector voltage to decrease. This causes Q3 to conduct less and Q3 collector draws less current. This decreases the amount of base current Q2 can draw, thus causing the emitter to collector impedance across Q2 to increase. The voltage dropped across Q2 increases, decreasing the output load voltage to normal. If the 9.6 volt output decreases, the above action reverses to bring the output voltage back up to the normal level. For the 9.6 V Regulator, the output voltage may range between 9.0 and 10.2 volts dc. For the 13.6 V Regulator, the output voltage may range between 12.9 and 14.5 volts dc.

2.3 12 V FILAMENT REGULATOR

The 12 V Filament Regulator operates in a manner similar to that described for the 9.6 V and 13.6 V Regulators in the preceding paragraphs. This regulator uses an additional amplifier transistor (Q52) to increase the drive voltage available to driver stage Q53. In addition, Q53 is changed to a collector follower instead of an emitter follower, This reduces the minimum voltage drop permitted across series pass stage Q54. Q55 operates as a reference amplifier for the regulating circuitry and its operating point is adjustable with resistor R9.

2.2.2 Voltage Regulation

Transistors Q1, Q3 and Q4 form the voltage regulating circuit. Regulation is achieved by changing the amount of current allowed to flow through the base Q2. If the output voltage increases, the Q2 base current is decreased, and vice versa. The regulator output voltage is developed across R8 and R9. The voltage developed across R9 reflects all fluctuations of the output load voltage and is applied to the base of Q4. Since the emitter of Q4 is held to 8.2 volts by Zener diode VR1, Q4 conducts in response to the output load voltage fluctuations. When the output load voltage is 9.6 volts, Q4 conducts at a certain level which fixes its collector voltage to a specific level. This voltage level determines the drive to the base of Q3 and thus, also determines the drive to the base of Q2. Q1 is a constant current source for the collector of Q4 and the base of Q3. Current through Q1 is held constant because of the voltage drop CR5 and CR6 which maintain a constant base to emitter bias voltage.

If the 9.6 volt output increases, the Q4 base voltage increases and Q4 conducts harder which causes its collector voltage to decrease. This causes Q3 to conduct less and Q3 collector draws less current. This decreases the amount of base current Q2 can draw, thus causing the emitter to collector impedance across Q2 to increase. The voltage dropped across Q2 increases, decreasing the output load voltage to normal. If the 9.6 volt output decreases, the above action reverses to bring the output voltage back up to the normal level. For the 9.6 V Regulator, the output voltage may range between 9.0 and 10.2 volts dc. For the 13.6 V Regulator, the output voltage may range between 12.9 and 14.5 volts dc.

2.3 12 V FILAMENT REGULATOR

The 12 V Filament Regulator operates in a manner similar to that described for the 9.6 V and 13.6 V Regulators in the preceding paragraphs. This regulator uses an additional amplifier transistor (Q52) to increase the drive voltage available to driver stage Q53. In addition, Q53 is changed to a collector follower instead of an emitter follower, This reduces the minimum voltage drop permitted across series pass stage Q54. Q55 operates as a reference amplifier for the regulating circuitry and its operating point is adjustable with resistor R9.

3. MAINTENANCE

Isolate malfunctions of this power supply following conventional troubleshooting procedures. Note that the ac input voltages to the power supply are not sinusoidal and thus, cannot be measured with a standard AC voltmeter. (The input waveforms will vary with the input and output load currents.) All voltage checks must be made where dc voltages are present.

CAUTION

Turn the power to the station off and allow time for the capacitors to discharge through the bleeder resistors before attempting to replace components or repair this power supply.

4. FILAMENT VOLTAGE ADJUSTMENT

The filament voltage must be readjusted whenever the tubes within the high power rf amplifier are replaced. To make the adjustment, two controls are set while monitoring the filament voltage at the output terminals with a volt meter. Proceed as follows:

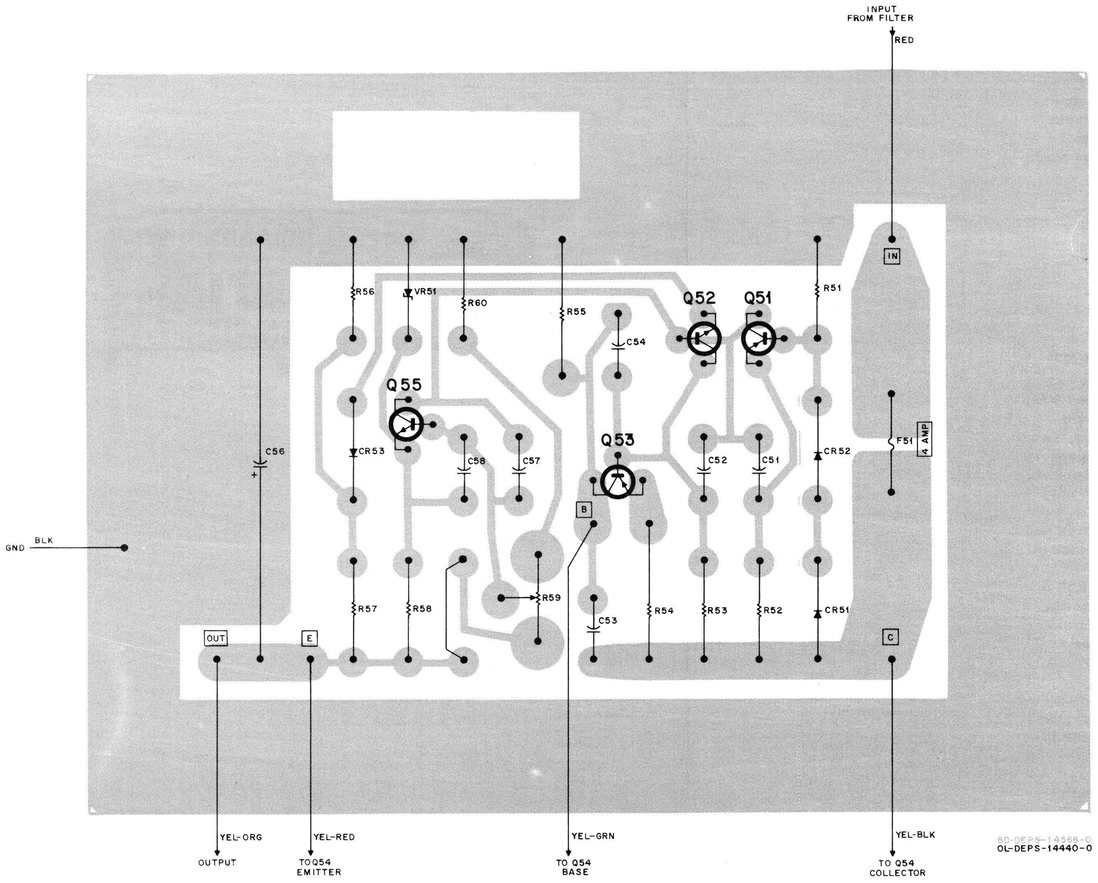
STEP 1. Turn on the power to the station and make sure that all interlock switches are closed.

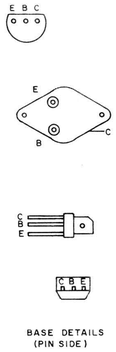
STEP 2. Set filament voltage control R59 on the TLN5702A Filament Regulator Board to its midpoint position. Allow the power amplifier tube filaments to warm-up and stabilize for a minimum of two minutes.

STEP 3. Connect the VOM across TB2-1 (+) and TB2-5 or -7 (-). Refer to the photograph on the back of the schematic diagram for the location of TB2.

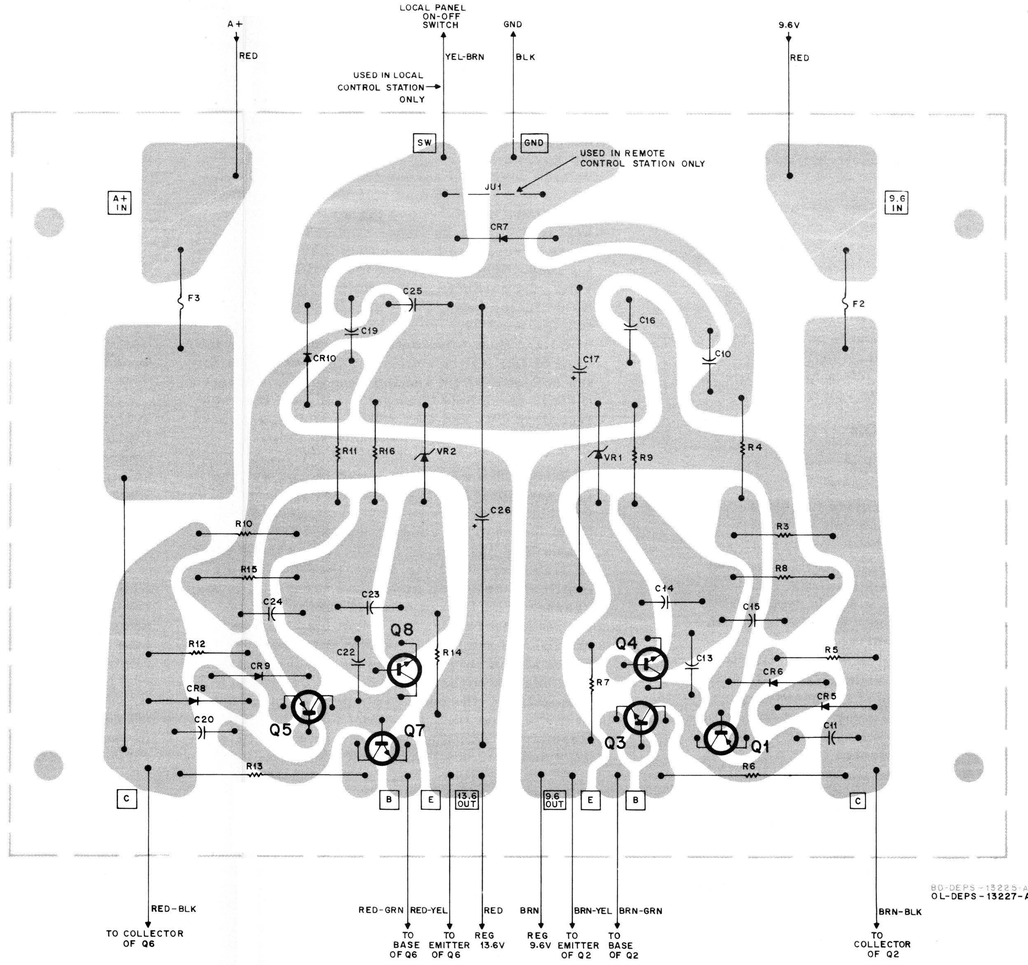
STEP 4. Set R59 to obtain 12.1 ±0.1 volts for low band (25-50 MHz) stations or 11.1 ±0.1 volts for high band (136-174 MHz) stations. Allow voltage to stabilize for one minute, after adjustment, before measurement.

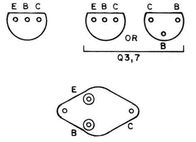
STEP 5. Connect the VOM across TB2-2 (+) and TB2-5 or -7 (-). Set the slider on R18 to obtain 6.0 ±0.1 volts for low band stations or 5.5 ±0.1 volts for high band stations. Allow voltage to stabilize for one minute, after adjustment, before measurement.





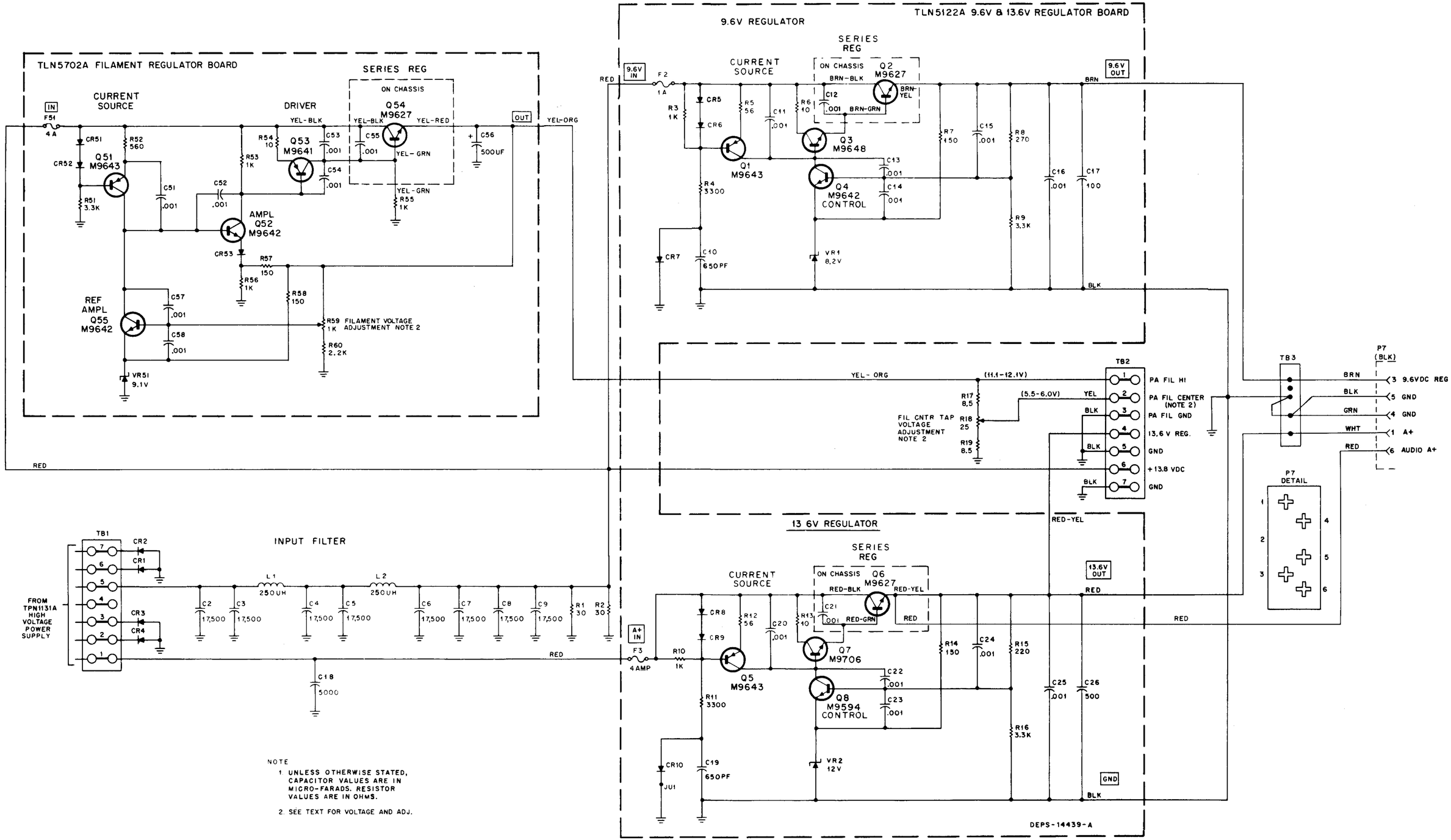
SHOWN FROM COMPONENT SIDE
FILAMENT REGULATOR BOARD





SHOWN FROM COMPONENT SIDE
9.6V AND 13.6V REGULATOR BOARD

TPN1132A Low Voltage Power Supply
Schematic Diagram and Circuit Board Detail
Motorola No. PEPS-15894-B
(Sheet 1 of 2)
8/31/78-UP



NOTE

1. UNLESS OTHERWISE STATED, CAPACITOR VALUES ARE IN MICRO-FARADS. RESISTOR VALUES ARE IN OHMS.
2. SEE TEXT FOR VOLTAGE AND ADJ.

TPN1132A MODEL COMPLEMENT		
MODELS	SUFFIX	DESCRIPTION
TKN6703A		CABLE LOW VOLTG
TLN5122A	1	9.6 V AND 13.6 V REGULATOR BOARD
TLN5700A		CHASSIS AND HARDWARE KIT
TLN5702A		FILAMENT REGULATOR BOARD

EPS-21038-A

TPN1132A Low Voltage Power Supply
Schematic Diagram and Circuit Board Detail
Motorola No. PEPS-15894-B
(Sheet 2 of 2)
8/31/78-UP

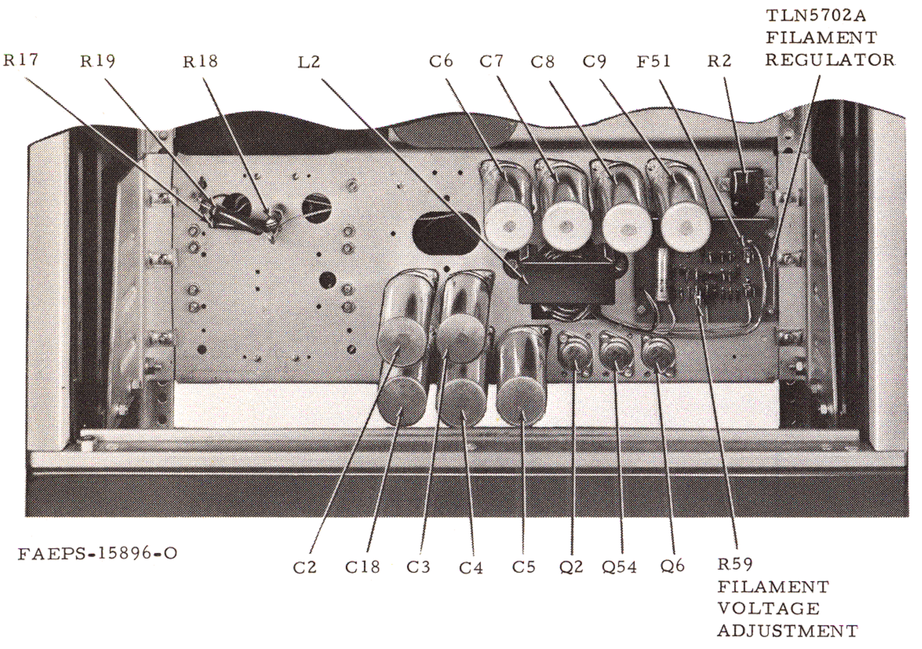


Figure 1. Chassis Mounted Parts Identification (Front View)

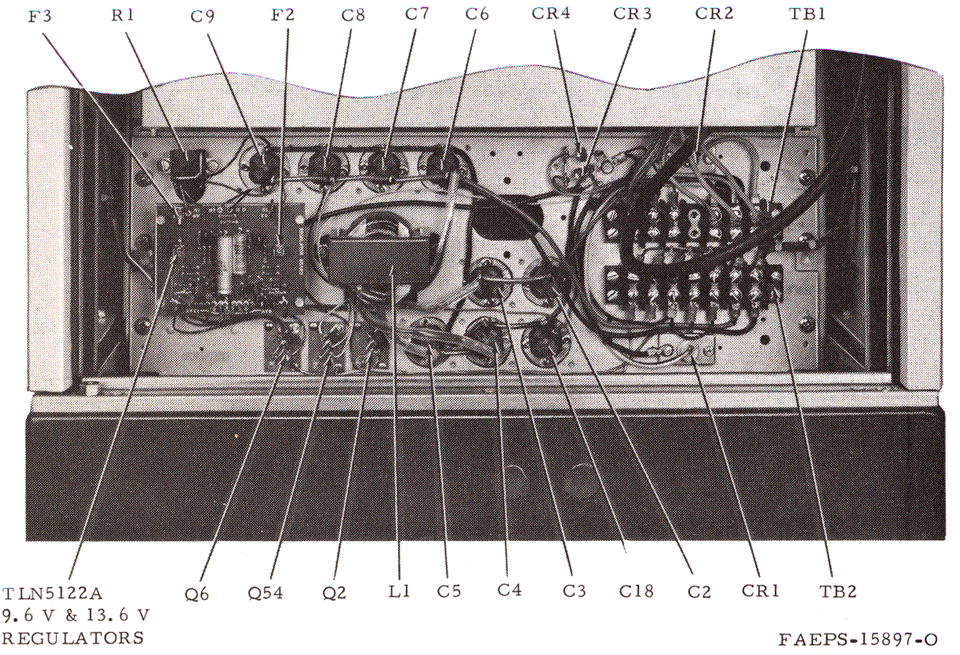


Figure 2. Chassis Mounted Parts Identification (Rear View)

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION

PARTS LIST

TLN5122A Power Supply Board PL-2420-A

		CAPACITOR, fixed: uF ±10%; 100 V unless otherwise stated
C10	21-848236	650 pF ±5%; 300 V
C11	21-82187B20	.001
C13 thru 16	21-82187B20	.001
C17	23-82601A25	100 -10+150%; 20 V
C19	21-848236	650 pF ±5%; 300 V
C20	21-82187B20	.001
C22 thru 25	21-82187B20	.001
C26	23-83210A19	500 -10+100%; 20 V
		SEMICONDUCTOR DEVICE, diode: (SEE NOTE)
CR5 thru 10	48-83654H01	Silicon
		TRANSISTOR: (SEE NOTE)
Q1	48-869643	PNP; type M9643
Q3	48-869648	NPN; type M9648
Q4	48-869642	NPN; type M9642
Q5	48-869643	PNP; type M9643
Q7	48-869706	NPN; type M9706
Q8	48-869594	NPN; type M9594
		RESISTOR, fixed: ±10%; 1/4 W unless otherwise stated
R3	6-10401C49	1k
R4	6-10401C61	3.3k
R5	6-10401C19	56
R6	6-488022	10; 1 W
R7	6-10401C29	150
R8	6-10401A35	270 ±5%
R9	6-10401A61	3.3k ±5%
R10	6-10401C49	1k
R11	6-10401C61	3.3k
R12	6-10401C19	56
R13	6-488022	10; 1 W
R14	6-10401C29	150
R15	6-10401A33	220 ±5%
R16	6-10401A61	3.3k ±5%
		SEMICONDUCTOR DEVICE, (SEE NOTE)
VR1	48-82256C08	Zener, 8.2 V
VR2	48-82256C25	Zener, 12 V
	NON-REFERENCED ITEM	
	42-82690A01	CLIP, fuse; 4 req'd.

TLN5702A Filament Regulator PL-2856-O

		CAPACITOR, fixed: uF ±10%; 100 V unless otherwise stated
C51 thru 54	21-82187B20	.001
C56	23-83210A19	500 +100-10% 20 V
C57, 58	21-82187B20	.001
		DIODE: (SEE NOTE)
CR51, 52, 53	48-82392B03	silicon
		TRANSISTOR: (SEE NOTE)
Q51	48-869643	PNP; type M9643
Q52	48-869642	NPN; type M9642
Q53	48-869641	PNP; type M9641
Q55	48-869642	NPN; type M9642
		RESISTOR, fixed: ±10%; 1/4 W unless otherwise stated
R51	6-10401C61	3.3k
R52	6-10401C43	560
R53	6-10402C49	1k; 1/2 W
R54	6-10402C01	10; 1/2 W
R55, 56	6-10401C49	1k
R57, 58	6-10401C29	150
R59	18-83083G04	variable: 1k ±30%
		VOLTAGE REGULATOR: (SEE NOTE)
VR51	48-82256C43	Zener; 9.1 V
	NON-REFERENCED ITEM	
	42-82690A01	CLIP, fuse; 2 req'd.

REFERENCE SYMBOL	MOTOROLA PART NO.	DESCRIPTION

PARTS LIST

TLN5700A Chassis & Hardware Kit PL-2859-O

		CAPACITOR, fixed: uF ±10%; 100 V unless otherwise stated
C2 thru 9	23-83093G20	17500 +150-10%; 20 V
C12	21-82187B14	.001
C18	23-82304B16	5000 +150-10% 35 V
C21	21-82187B14	.001
C55	21-82187B14	.001
		SEMICONDUCTOR DEVICE, diode: (SEE NOTE)
CR1, 2	1-80739B59	silicon
CR3, 4	48-82525G13	silicon
		FUSE, cartridge:
F1	65-61688	4A; 250 V
F2	65-52281	1A; 250 V
F3	65-61688	4A; 250 V
		COIL, choke:
L1, 2	25-84514G01	250 uH
		TRANSISTOR: (SEE NOTE)
Q2	48-869627	NPN; type M9627
Q6	48-869627	NPN; type M9627
Q54	48-869627	NPN; type M9627
		RESISTOR, fixed: ±10%; 10 W unless otherwise stated
R1, 2	17-83389G02	30 ±5%; 20 W
R17	17-82291B36	8.5
R18	17-851657	25
R19	17-82291B36	8.5
	NON-REFERENCED ITEMS	
	14-865854	INSULATOR, transistor; 3 req'd
	15-84558F02	COVER, rear
	31-82596E02	TERMINAL BOARD; 7 terminals
	42-10217A02	STRAP, cable; 5 req'd
	43-864364	SPACER, threaded; 4 req'd
	43-83620H01	SPACER, plated; 4 req'd
	43-84510G01	SPACER; 4 req'd
	9-84935D01	SOCKET, transistor; 3 req'd
	27-84135G02	CHASSIS, power supply
	31-118964	TERMINAL STRIP, 4 terminal
	31-120365	TERMINAL STRIP, 2 terminal
	31-490143	TERMINAL STRIP, 2 terminal
	64-850015	PLATE, cap. mtg.; 9 req'd

NOTE:
For optimum performance, replacement diodes and transistors must be ordered by Motorola part number.

TKN6703A Cable, Low Voltage Power Supply PL-2857-O

	9-84151B03	CONTACT, receptacle; 5 req'd
	14-84590B01	INSULATOR, connector
	42-10217A02	STRAP, cable; 11 req'd

REVISIONS

PEPS-15895-A

CHASSIS AND SUFFIX NO.	REF. SYMBOL	CHANGE	LOCATION
TLN5122A-1	Q7	FROM 48-869648, M9648 TO 48-869706, M9706	13.6 V SERIES REGULATOR
	Q8	FROM 48-869642, M9642 TO 48-869594, M9594	