

# **SERVICE MANUAL**

# **PARTS LIST**



**AKAI 4-CH STEREO TAPE DECK  
MODEL GX-630D-SS**

**THIS MANUAL MUST BE USED AS A SET  
TOGETHER WITH SEPARATELY PUBLISHED GX-  
630D SERVICE MANUAL AND PARTS LIST**



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SECTION 1

**SERVICE MANUAL**

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When making adjustment or repairs of Model GX-630D-SS, kindly refer to the following sections of Model GX-630D/DB Service Manual.

Dismantling of Unit: page - 4

Mechanism Adjustment: page - 6 to page - 9

For basic adjustments, measuring methods, and operating principles, refer to GENERAL OPERATING PRINCIPLES AND ADJUSTMENTS.

# I. SPECIFICATIONS

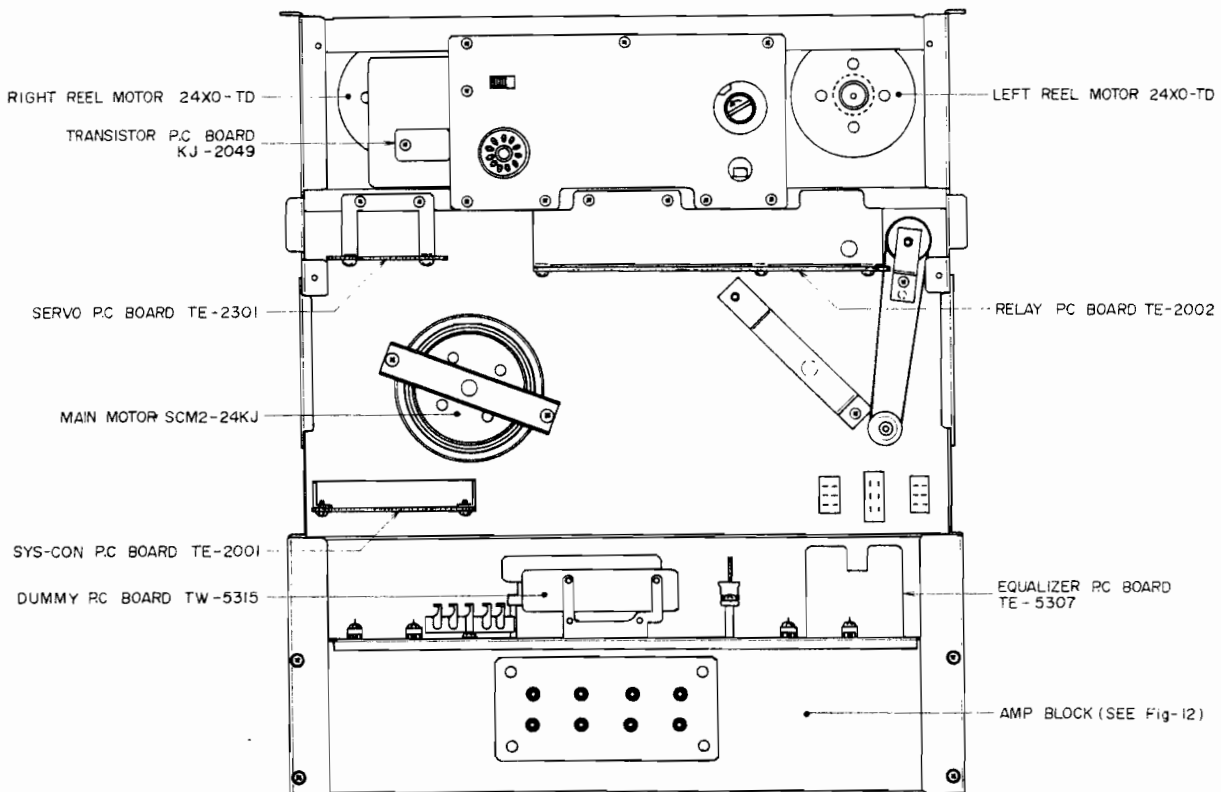
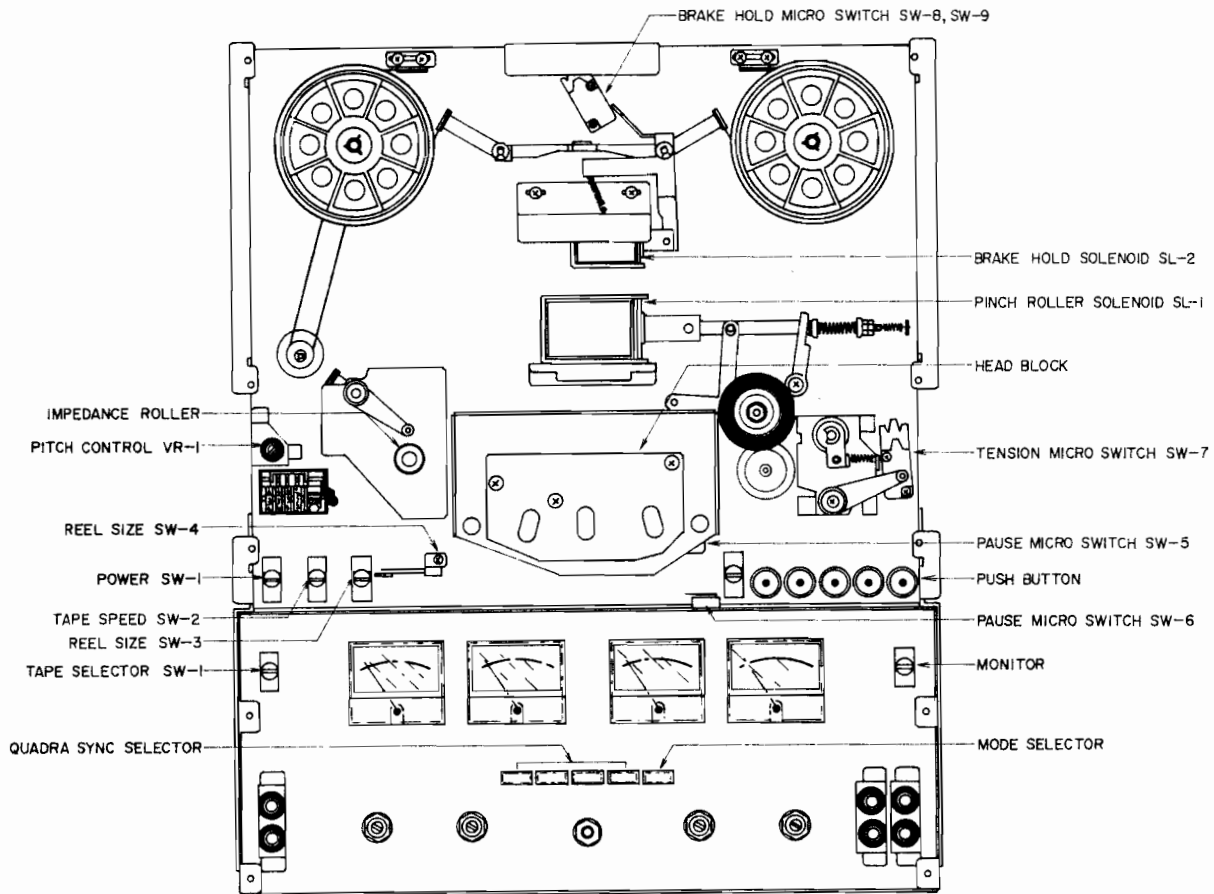
An asterisk next to a figure indicates the minimum guaranteed performance.

TRACK SYSTEM		4 track 4/2 channel compatible stereo system
TAPE SPEED		7-1/2 and 3-3/4 ips $\pm 0.7\%$ *7-1/2 and 3-3/4 ips $\pm 1.0/-1.5\%$
WOW AND FLUTTER		Less than 0.06% WRMS at 7-1/2 ips Less than 0.09% WRMS at 3-3/4 ips *Less than 0.10% RMS at 7-1/2 ips *Less than 0.15% RMS at 3-3/4 ips
TOTAL WOW AND FLUTTER		*Less than 0.12% RMS at 7-1/2 ips *Less than 0.18% RMS at 3-3/4 ips
FREQUENCY RESPONSE		30 to 21,000 Hz $\pm 3$ dB at 7-1/2 ips 30 to 15,000 Hz $\pm 3$ dB at 3-3/4 ips *30 to 20,000 Hz $\pm 3$ dB at 7-1/2 ips *30 to 13,000 Hz $\pm 3$ dB at 3-3/4 ips
DISTORTION FACTOR		Less than 0.5%
TOTAL DISTORTION FACTOR		*Less than 1.5%
SIGNAL TO NOISE RATIO		*Better than 50 dB (Normal) *Better than 42 dB (Quadra Sync)
TOTAL SIGNAL TO NOISE RATIO		*Better than 47 dB (Normal)
OUTPUT	LINE HEADPHONE	*0.775V (0 dBm $\pm 1.0$ dB) 30 mV at 8 ohm At playback of a 700 Hz "0" VU pre-recorded test tape, output volume at maximum
INPUT	MIC LINE	More than 0.5 mV/10 k ohm More than 100 mV/150 k ohm At "0" VU output, recording volume at maximum
RECORDING/PLAYBACK LEVEL		*0.775V (0 dBm $\pm 1.5$ dB)
CROSS TALK		Better than 40 dB
ERASE RATIO		Better than 70 dB
BIAS FREQUENCY		100 kHz $\pm 5\%$
BIAS LEAK		Better than -20 dB
HIGH FREQUENCY DEVIATION		Less than 3 dB At playback of an 8,000 Hz 3-3/4 ips pre-recorded test tape at 7-1/2 ips
RECORDING TIME		180 min stereo recording at 7-1/2 ips, using an 1,800 ft tape
F.FWD AND RWD TIME		Approximately 2 min and 40 sec at 50 Hz, using 3,600 ft tape
MOTOR	MAIN MOTOR  REEL MOTOR	2 speed AC servo-control outer-rotor motor Type: SCM2-24KJ 4-pole Revolutions: 615 rpm at 7-1/2 ips (19 cm/sec) 307.5 rpm at 3-3/4 ips (9.5 cm/sec)  6-pole eddy current outer-rotor motor Type: 24XO-TD Revolutions: 930 rpm at 50 Hz 1,120 rpm at 60 Hz
HEAD	ERASE HEAD  RECORDING HEAD  PLAYBACK HEAD	Type: E4-260 Gap: Double gap Impedance: 210 ohm $\pm 10\%$ at 100 kHz DC Resistance: 2 ohm Type: R4-285 Gap: 4 micron $\pm 15\%$ Impedance: 8,500 ohm $\pm 10\%$ at 100 kHz DC Resistance: 13 ohm Type: P4-280 Gap: 1.7 micron $\pm 15\%$ Impedance: 1,300 ohm $\pm 10\%$ at 1 kHz DC Resistance: 350 ohm

TRANSISTOR	2SA564(Q) (R) . . . 1 2SA696(C) (D) . . . 1 2SC458LG(C) . . . 20 2SC711(E) (F) (G) . . . 15 2SC945L(Q) (P) . . . 16	2SC968(2) (3) . . . 3 2SC1247A(B) (V) . . . 6 2SD361(D) (E) . . . 1 2SD361(D1) (D2) . . . 2 TIP47 . . . 1
DIODE	1N34A . . . 4 1N4001 . . . 4 1N4004 . . . 5 1S2473 . . . 20 1S2473VE . . . 18 1S1588 . . . 1	10D05 . . . 2 10D2 . . . 4 WG713 . . . 3 WZ192 . . . 1 RD5A(M) . . . 2 SL-103 . . . 4
POWER REQUIREMENTS AND CONSUMPTION	100 to 240V AC 50/60 Hz, 90W for Universal Models 220V AC 50 Hz, 100W for CEE Models 120V AC 60 Hz, 90W for CSA Models 100V AC 50/60 Hz, 70W for JPN Models	
DIMENSIONS	507(H) x 440(W) x 240(D) mm (20.7" x 17.4" x 9.4") Dimensions include all protruding parts	
WEIGHT	20.7 kg (45.5 lbs)	

- NOTES:** 1. Specifications determined with SCOTCH #211 Tape unless otherwise specified.  
2. Specifications subject to change without notice.

## II. ARRANGEMENT OF PRINCIPAL PARTS



### III. HEAD ADJUSTMENT

Head Adjustment (Refer to Fig. 1 and Chart 1)

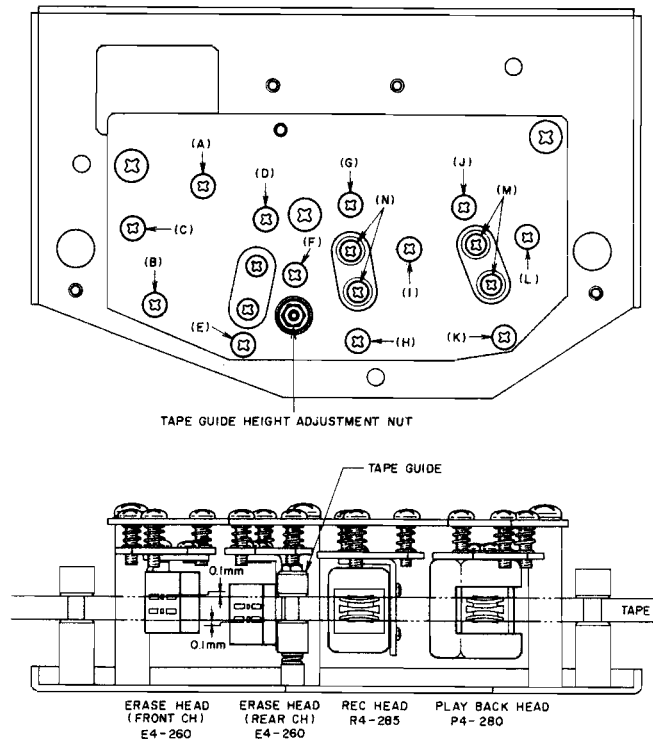


Fig. 1

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Remarks
1	Tape Guide Height Adjustment	Optional	Play	Tape Guide Height Adjustment Nut	Adjust so that tape does not twist between tape guide on head base.
2	Erase Head Height Adjustment (Front channel)	Optional	Play	(A)(B)(C)	Upper edge of channel 1 head core is 0.1mm higher than upper edge of tape.
3	Erase Head Height Adjustment (Rear channel)	Optional	Play	(D)(E)(F)	Lower edge of channel 4 head core is 0.1mm lower than lower edge of tape.
4	Recording Head Height Adjustment	Optional	Play	(G)(H)(I)	Even upper edge of channel 1 head core and upper edge of tape.
5	Playback Head Height Adjustment	Optional	Play	(J)(K)(L)	Same as Step 4 above.
6	Playback Head Azimuth Alignment Adjustment	8,000 Hz 3-3/4 ips test tape	Play	(L)	Maximum output on all channels.
7	Playback Head Gap Alignment Adjustment	8,000 Hz 3-3/4 ips test tape	Play	(M)	Adjust head gap surface so that there is no change in output level when tension is applied to the supply reel side.
8	Recording Head Azimuth Alignment Adjustment	SCOTCH #211 tape, 15,000 Hz -20 dBm	Rec	(I)	Same as Step 6 above.
9	Recording Head Gap Alignment Adjustment	SCOTCH #211 tape, 15,000 Hz -20 dBm	Rec	(N)	Same as Step 7 above.

NOTE: Set tape speed to 7-1/2 ips when making all alignment adjustments.

Chart 1

## IV. AMPLIFIER SYSTEM ADJUSTMENT

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### 1. DC POWER SUPPLY VOLTAGE ADJUSTMENT (Refer to Fig. 2 and Chart 2)

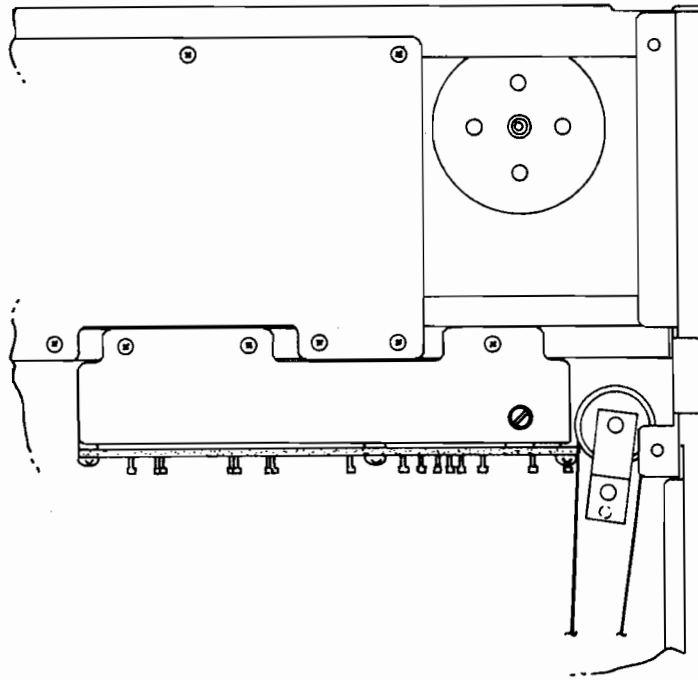


Fig. 2 REAR VIEW

### 2. TAPE SPEED ADJUSTMENT (Refer to Fig. 3 and Chart 2)

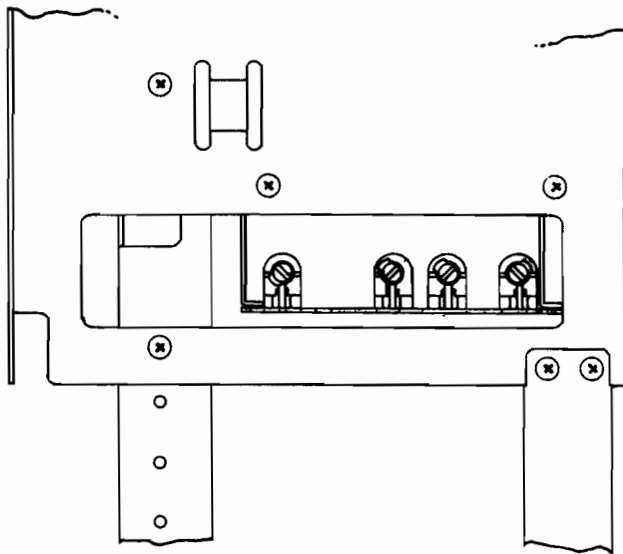


Fig. 3 RIGHT SIDE VIEW



### 3. RECORDING, PLAYBACK AMPLIFIER ADJUSTMENT (Refer to Fig. 4, 5 and Chart 2)

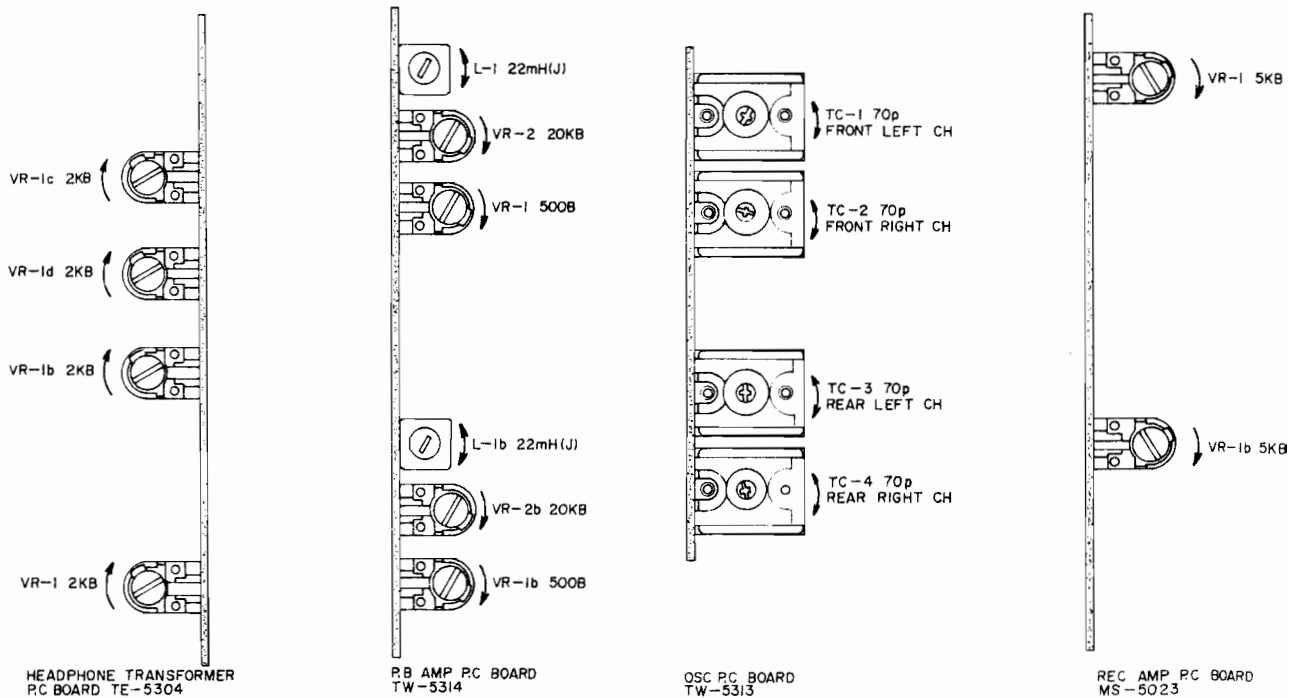
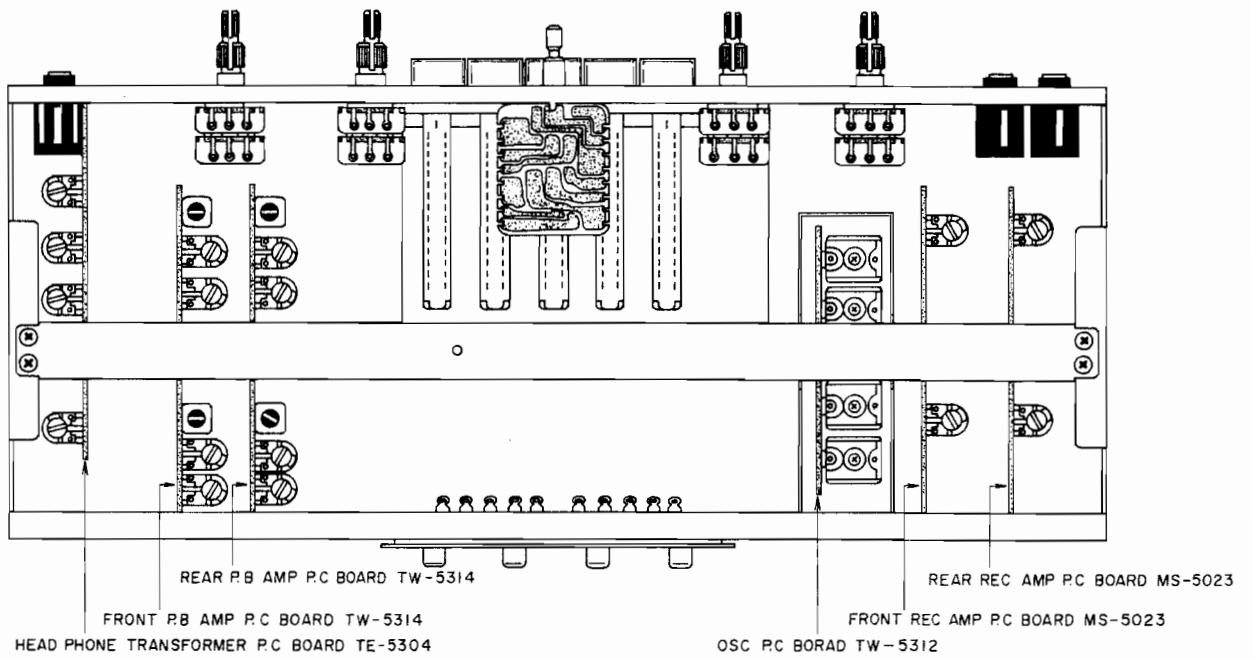


Fig. 4 BOTTOM VIEW

Step	Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Result	Remarks
1	DC Power Supply Voltage Adjustment	None	STOP	VR-1 1 kB (TE-2002)	24V	Measure at terminal (6) of Relay P.C Board
2	DC Power Supply Voltage Adjustment	None	REC	VR-3 1 kB (TE-2301)	24V	Measure at TR-7 Emitter of Servo P.C Board Quadra-Sync ON
3	DC Power Supply Voltage Adjustment	None	PLAY	VR-4 500B (TE-2301)	24V	Measure at TR-7 Emitter of Servo P.C Board
4	Tape Speed Adjustment (7-1/2 ips)	1,000 Hz 7-1/2 ips test tape	PLAY	VR-1 10 kB (TE-2301)	1,000 Hz $\pm 0.7\%$	See Note-1
5	Tape Speed Adjustment (3-3/4 ips)	1,000 Hz 7-1/2 ips test tape	PLAY	VR-2 30 kB (TE-2301)	500 Hz $\pm 0.7\%$	See Note-1
6	Playback Level Adjustment	700 Hz 7-1/2 ips 0VU tape	PLAY	VR-2 20 kB (TW-5314)	0 $\pm 1.0$ dB (0.775V)	Quadra-Sync OFF
7	Playback Level Adjustment	700 Hz 7-1/2 ips 0VU tape	PLAY	VR-1 500B (TW-5314)	0 $\pm 1.0$ dB (0.775V)	Quadra-Sync ON
8	VU Meter Sens Adjustment	700 Hz 7-1/2 ips 0VU tape	PLAY	VR-1 2 kB (TE-5304)	0 VU	
9	Recording Level Adjustment	SCOTCH #211 tape, 0 VU recording	REC	VR-1 5 kB (MS-5023)	0 $\pm 1.5$ dB (0.775V)	
10	Frequency Response Adjustment	SCOTCH #211 tape, 1,000 Hz & 10,000 Hz -20 VU recording	REC	TC-1 to TC-4 70P (TW-5313) See Fig-5	1,000 Hz to 10,000 Hz flat	Tape Selector "Low NOISE" Tape Speed "3-3/4 ips"
11	Bias Leak Adjustment	None	REC	L-1 22 mH(J) (TW-5314)	Less than -20 VU	

Chart 2

Note-1 If specified tape speed cannot be obtained, readjust by slightly lowering the DC power supply voltage adjusted to 24 volt in Step 3.

## V. DC RESISTANCE OF VARIOUS COILS

Part	Designation	DC Resistance
Main Motor	SCM2-24KJ	Between BLU-RED 100 ohm Between YLW-GRN 180 ohm Pick up Coil 635 ohm
Reel Motor	24XO-TD	Between RED-BLU 72 ohm Between YLW-GRN 160 ohm
Pinch Roller Solenoid	1660 THT3	700 ohm
Brake Solenoid	1240 PHT3	900 ohm
Relay	MY4-02-US-24DC	700 ohm
Relay	LC1-C-J1DC-24V	1,150 ohm
Relay	TECK-36	1,000 ohm
Headphone Output Transformer	N19-5921S	Primary 230 ohm $\pm 15\%$ Secondary 0.9 ohm $\pm 15\%$
Oscillator Coil	OT-204	Between 1 - 3 0.3 ohm Between 4 - 6 0.7 ohm Between 7 - 9 8.2 ohm
Erase Head	E4-260	3.5 ohm
Recording Head	R4-285	13 ohm
Playback Head	P4-280	350 ohm

Chart 3

NOTE: The resistance values shown in this chart are average values.

## VI. CLASSIFICATIONS OF VARIOUS P.C BOARDS

### 1. P.C BOARD INTERCHANGEABILITY CHART

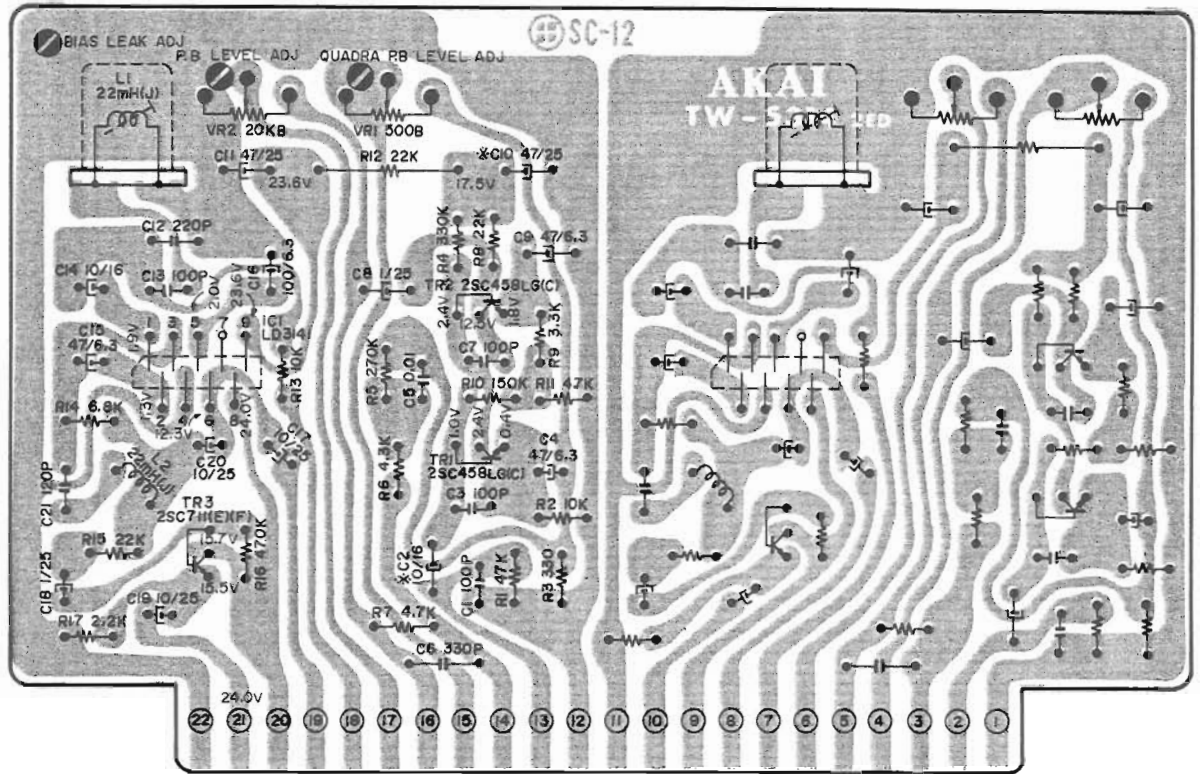
P.C Board	GX-630D-SS	GX-630D	GX-630DB
Sys. Con P.C Board	TE-2001	TE-2001	TE-2001
Relay P.C Board	*TE-2002	TE-2002	TE-2002
Servo P.C Board	TE-2301	MY-2036 2ED	MY-2036 2ED
Speed Switch P.C Board		TE-5001	TE-5001
Rec Mode P.C Board		TE-5003	TE-5003
Headphone Trans P.C Board	TE-5304		
Output Volume P.C Board	TE-5305		
Equalizer P.C Board	TE-5307		
Rec Amp P.C Board	MS-5023 2ED	*MY-5016 3ED	MY-5016 3ED
Playback Amp P.C Board	TE-5314 2ED	MY-5017	MY-5017
Osc P.C Board	TW-5313 2ED		
Selector P.C Board	TW-5311 A,B		
Dummy P.C Board	TW-5315		
Transistor P.C Board	KJ-2049	KJ-2049	KJ-2049
SRT P.C Board		*TD-5201	TD-5201
Dolby N.R. P.C Board			TD-5301 4ED
Jack Plate P.C Board		LE-5622	LE-5622

Chart 4

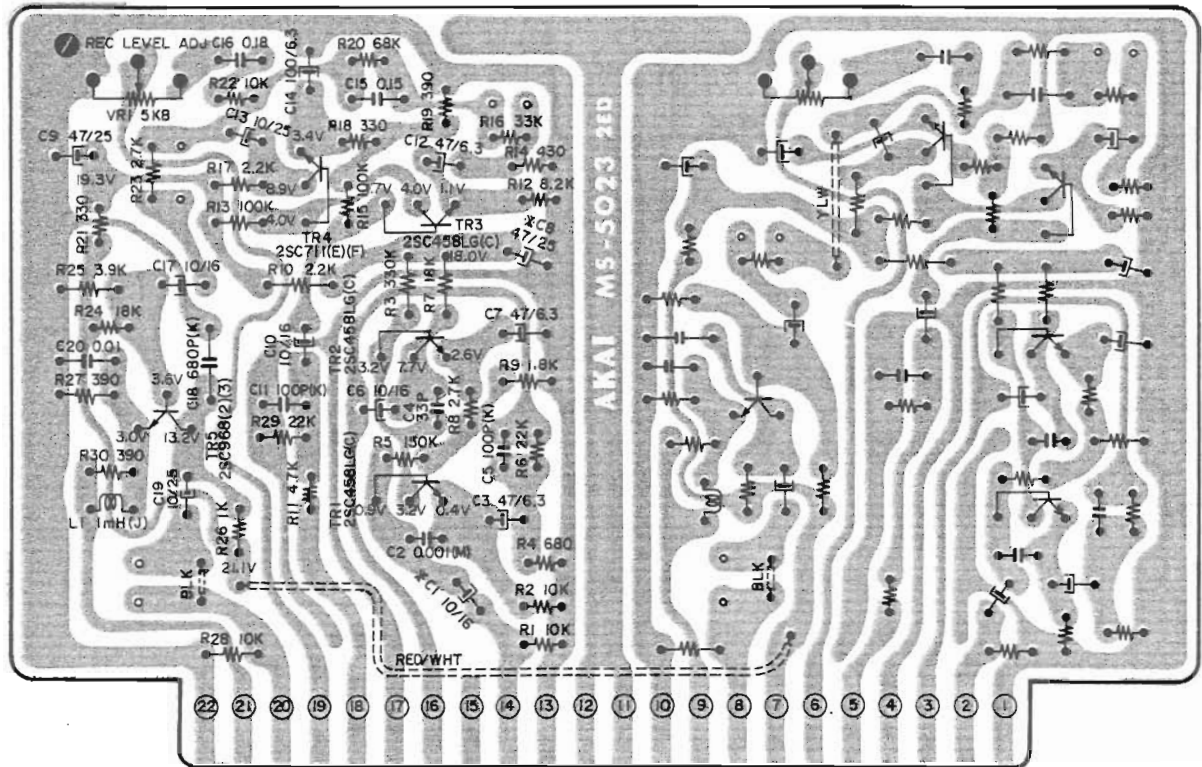
NOTE: \*Not interchangeable.

## 2. COMPOSITE VIEWS OF VARIOUS P.C BOARDS

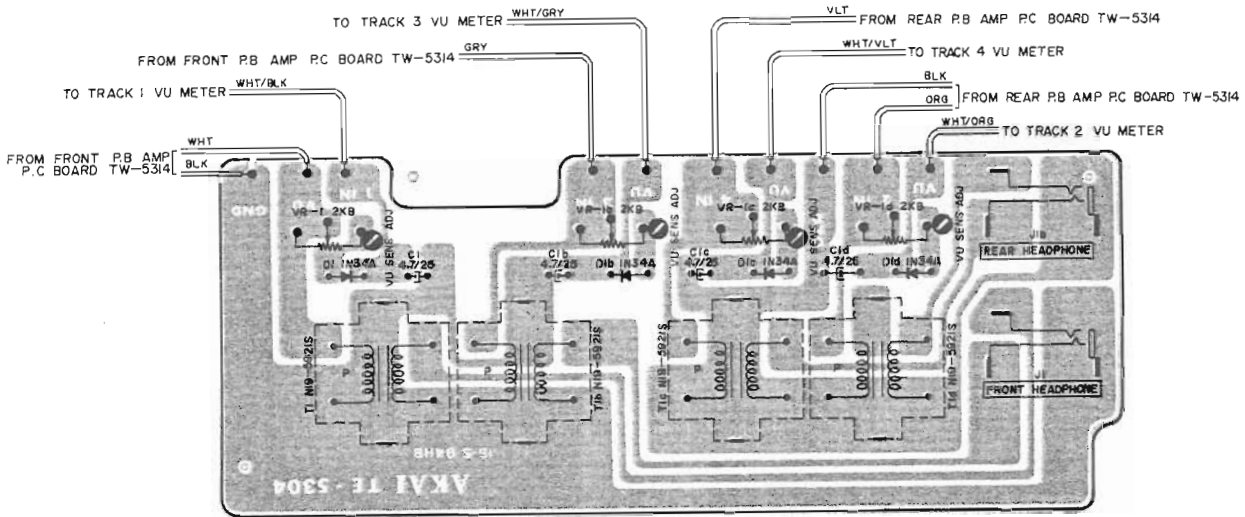
(1) P.B AMP P.C BOARD TW-5314



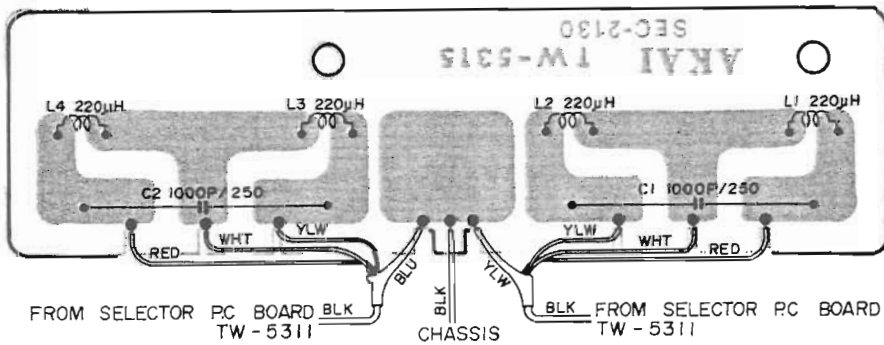
(2) REC AMP P.C BOARD MS-5023



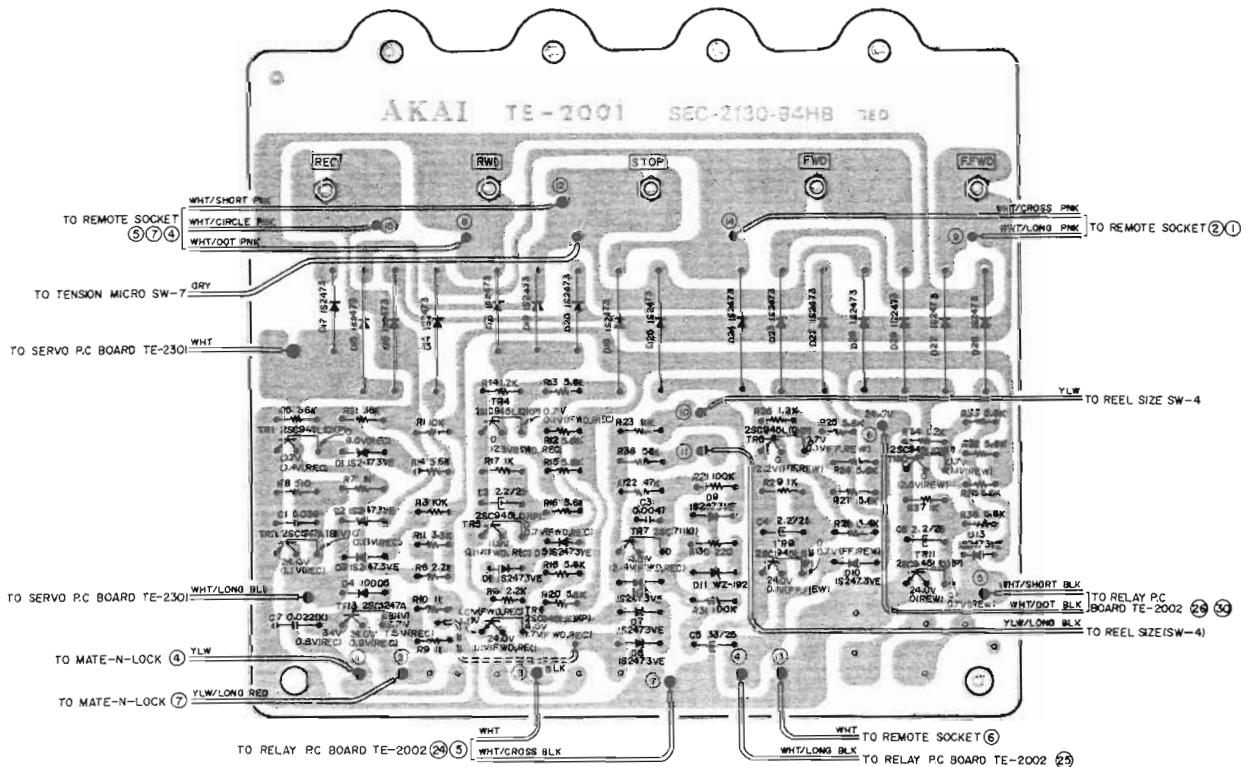
(6) HEADPHONE P.C BOARD TE-5304



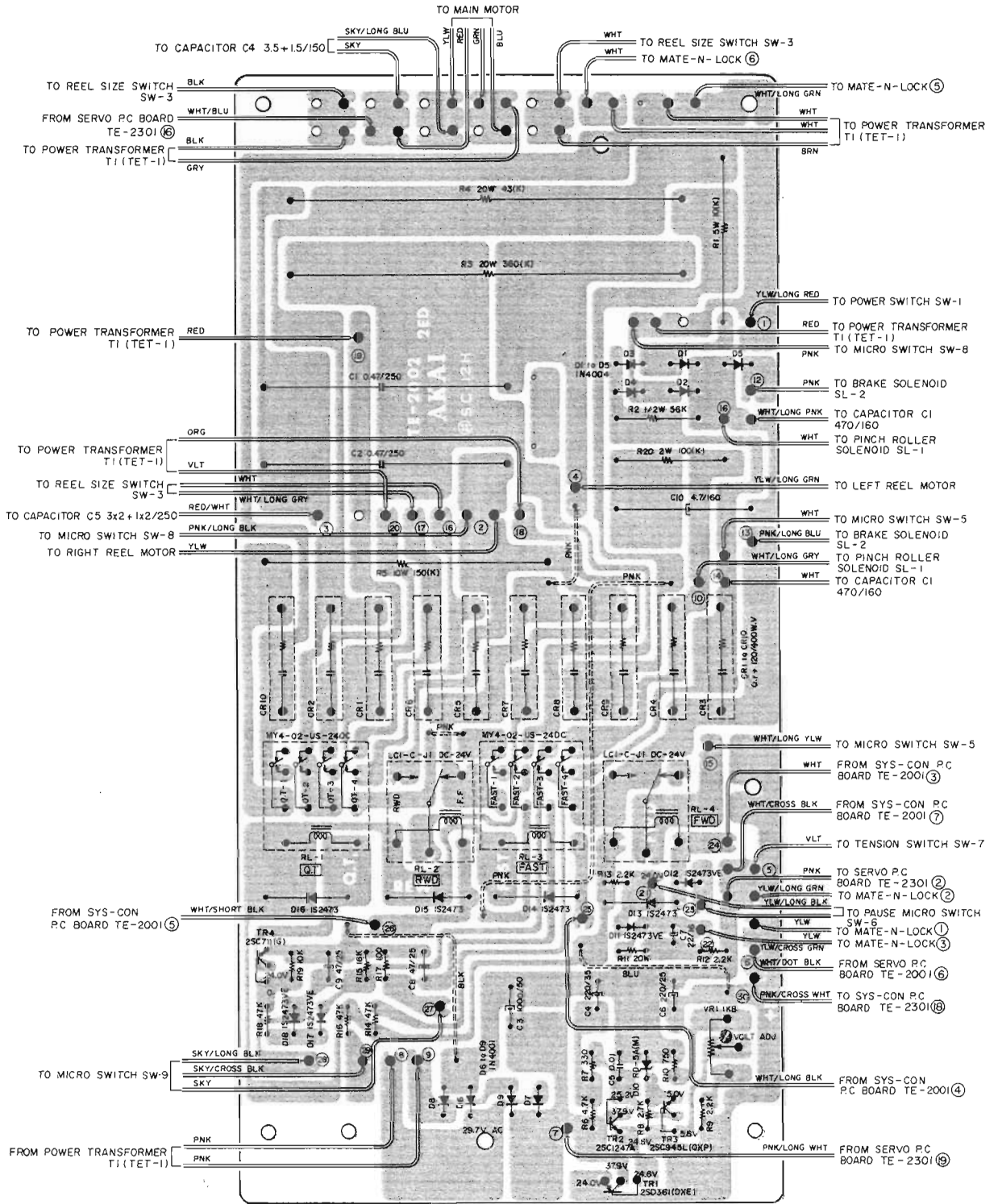
(7) DUMMY P.C BOARD TW-5315



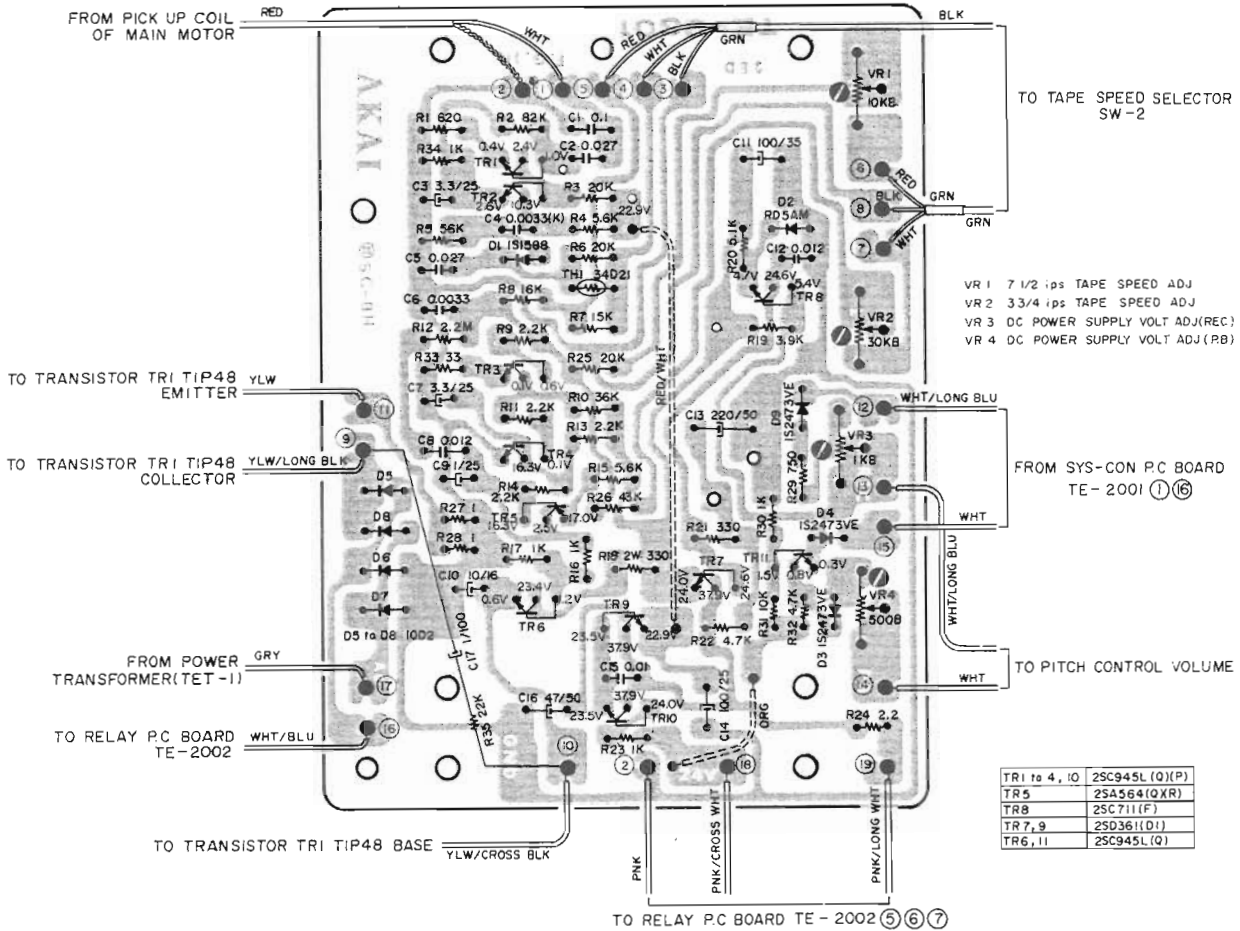
(8) SYS. CON. P.C BOARD TE-2001



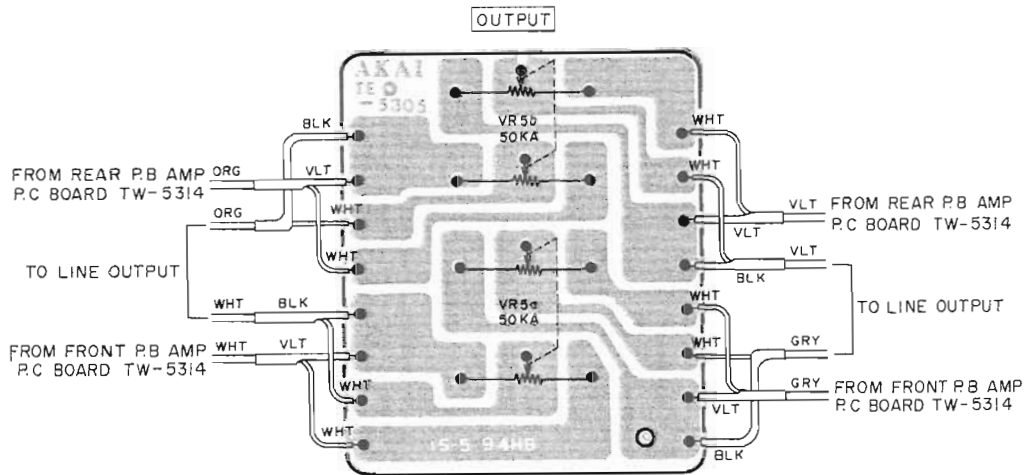
(9) RELAY P.C BOARD TE-2002



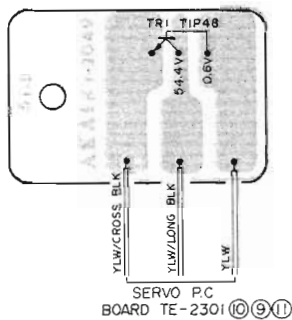
(10) SERVO P.C BOARD TE-2301



(11) OUTPUT VOL P.C BOARD TE-5305



(12) TRANSISTOR P.C BOARD KJ-2049





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SECTION 2

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Some of the parts in this parts list are only available as a complete assembly, and can not be supplied as individual parts.

## 1) HEAD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
1-1x	BH660690	Head Block Comp.	TE 3	1
1-2x	HZ653782	Head Base	TE-0301	1
1-3x	HZ803597	Tape Guide A	RD-3	2
1-4x	ZS413201	Screw, pan head 4x8		5
1-5x	MH578957	Tape Guide Prop	TD 0003	1
1-6x	ZW273756	Nut M3		2
1-7x	ZG466312	Agnel Adjust Spring E	RS-0018	7
1-8x	HZ532710	Tape Guide B	TW-0006	1
1-9x	HZ532686	Head Base Prop A	TW-0003	1
1-10x	ZW273914	Spring Washer M4		3
1-11x	EC290531	VFM/C. 100PF(K) 50WV	24-6 2	2
1-12x	HZ653793	Head Hanger Plate	TE-0302	1
1-13x	HP513281	PB. HEAD P4-280		1
1-14x	HZ532776	Shield Case	TW-0011	1
1-15x	ZS201475	Screw, pan head 2x3		8
1-16x	HZ532765	PH Retaining Base	TW-0010	2
1-17x	ZS608477	Screw, pan head 3x4		8
1-18x	ZW413256	Washer (SPC) D3.4x7.8x0.5t		5
1-19x	ZS608512	Screw, pan head 3x13		12
1-20x	HR565672	REC. HEAD R4-285		1
1-21x	HA533597	RH Angle	TW-0201	1
1-22x	HE563220	ERASE HEAD E4-260		2
1-23x	HA549944	REH Angle	TW-0301	1
1-24x	HZ653580	EH Mt. Table	TE 0303	1
1-25x	ZG540584	Angle Adjust Spring G	TW-0025	6
1-26x	HA533608	EH Angle	TW-0202	1
1-27x	HZ532732	CH Retaining Base	TW-0008	1
1-28x	EJ328320	Nylon Clip HP-5N	2 7 39	1
1-29x	ZS355522	Screw, pan head 3x6		1
1-30x	ZS201778	Screw, pan head 4x8		3
1-31x	ZW273914	Spring Washer M4		3
1-32x	EA382713	Head Connector P.C Board	RD A 8	1
1-33x	EA441685	Terminal P.C Board, 18P	KF-1003	1

## 2) P.C BOARDS

### (1) P.B P.C BOARD (TW-5314) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(1)-1	BA565740	P.B P.C Board Comp. (TW-5314)	1
(1)-IC1	E1412413	IC, Line Amp. LD-3141	2
(1)-TR1,2	ET234854	Transistor 2SC458LG(C)	4
(1)-TR3	ET398711	Transistor 2SC945(Q)(R)	2
(1)-L1	EO346230	Inductor RX22MH	2
(1)-L2	EO244012	Ferri Inductor FL9H 22MH(J)	2
(1)-VR1	EV497711	Semi-fixed/Vol. V10K8-1-5(4US) 500ΩB	2
(1)-VR2	EV497698	Semi-fixed/Vol. V10K8-1-5(4US) 20kΩB	2
(1)-2	EA496258	Inductor P.C Board (KD-A5225)	2
<b>Capacitor, Vertical Type</b>			
(1)-C1	EC290520	VFM 100PF(J) 50WV	2
(1)-C2	EC432810	Elect. 10μF 16WV NL	2
(1)-C3	EC290520	VFM 100PF(J) 50WV	2
(1)-C4	EC329771	Elect. 47μF 6.3WV	2
(1)-C5	EC250841	Mylar 0.01μF(J) 50WV	2
(1)-C6	EC336216	VFM 330PF(J) 50WV	2
(1)-C7	EC290520	VFM 100PF(J) 50WV	2
(1)-C8	EC450055	Elect. 1μF 25WV	2
(1)-C9	EC329771	Elect. 47μF 6.3WV	2
(1)-C10	EC476965	Elect. 47μF 25WV NL	2
(1)-C11	EC336126	Elect. 47μF 25WV	2
(1)-C12	EC329850	VFM 220PF(J) 50WV	2
(1)-C13	EC290520	VFM 100PF(J) 50WV	2
(1)-C14	EC320051	Elect. 10μF 16WV	2
(1)-C15	EC329771	Elect. 47μF 6.3WV	2
(1)-C16	EC336104	Elect. 100μF 6.3WV	2
(1)-C17	EC220994	Elect. 10μF 25WV	2
(1)-C18	EC450055	Elect. 1μF 25WV	2
(1)-C19,20	EC220994	Elect. 10μF 25WV	4
(1)-C21	EC310792	VFM 120PF(J) 50WV	2

Carbon Resistor Omitted

## (2) REC P.C BOARD (MS-5023) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(2)-1	BA660835	Rec P.C Board Comp. (MS-5023)	1
(2)-TR1,2,3	ET234854	Transistor 2SC458LG(C)	6
(2)-TR4	ET453486	Transistor 2SC711(E)(F)	2
(2)-TR5	ET446736	Transistor 2SC968(2)(3)	2
(2)-L1	EO243977	Ferri Inductor FL7H 1MH(J)	2
(2)-VR1	EV497700	Semi-fixed/Vol. V10K8-1-5(4US) 5kΩB	2
<b>Capacitor, Vertical Type</b>			
(2)-C1	EC432810	Elect. 10μF 16WV NL	2
(2)-C2	EC383501	Mylar 0.001μF(M) 50WV	2
(2)-C3	EC329771	Elect. 47μF 6.3WV	2
(2)-C4	EC399690	VFM 33PF(J) 50WV	2
(2)-C5	EC290531	VFM 100PF(K) 50WV	2
(2)-C6	EC320051	Elect. 10μF 16WV	2
(2)-C7	EC329771	Elect. 47μF 6.3WV	2
(2)-C8	EC476965	Elect. 47μF 25WV NL	2
(2)-C9	EC336126	Elect. 47μF 25WV	2
(2)-C10	EC320051	Elect. 10μF 16WV	2
(2)-C11	EC290531	VFM 100PF(K) 50WV	2
(2)-C12	EC329771	Elect. 47μF 6.3WV	2
(2)-C13	EC220994	Elect. 10μF 25WV	2
(2)-C14	EC336104	Elect. 100μF 6.3WV	2
(2)-C15	EC368370	Mylar 0.15μF(J) 50WV	2
(2)-C16	EC333562	Mylar 0.18μF(K) 50WV	2
(2)-C17	EC320051	Elect. 10μF 16WV	2
(2)-C18	EC423033	VFM 680PF(K) 50WV	2
(2)-C19	EC220994	Elect. 10μF 25WV	2
(2)-C20	EC250841	Mylar 0.01μF(J) 50WV	2
(2)-C21	EC427948	FM 10PF(J) 50WV	2

Carbon Resistor Omitted

### (3) OSC P.C BOARD (TW-5313) BLOCK

Symbol No.	Parts No.	Description	Q'ty
(3)-1	BA663524	Osc P.C Board Comp. (TW-5313)	1
(3)-TR1,2,3	ET520288	Transistor 2SC1247A(V)	3
(3)-D1	ED224526	Silicon Diode 10D1	1
(3)-D1to3	ED515790	Silicon Diode WG-713	3
(3)-RL1,2	EP315461	Relay TECK-19 1500Ω	2
(3)-TC1to4	EC425250	Trimmer/C A-1P3-3 70PF	4
(3)-L1	EO383365	Osc Coil OT-204	1
(3)-L2to5	EO424866	Ferri Inductor FL7H 1.2MH(J)	4
(3)-R3	ER427972	Metal Oxide Film/R 2W 68Ω(K)	1
<b>Capacitor, Vertical Type</b>			
(3)-C1,2	EC250841	Mylar 0.01μF(J) 50WV	2
(3)-C3	EC220678	Elect. 47μF 25WV	1
(3)-C4	EC346522	Plastic Film 2200PF(J) 500WV	1
(3)-C5to8	EC379765	Mylar 0.0027μF(J) 50WV	4
(3)-C9	EC350684	Elect. 22μF 25WV	1
(3)-C10,11	EC336126	Elect. 47μF 25WV	2
(3)-C12,13	EC220151	Elect. 100μF 25WV	2
(3)-C14,15	EC476324	VFM 30PF(J) 50WV	2

Carbon Resistor Omitted

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

**(4) EQ P.C BOARD (TE-5307) BLOCK**

Symbol No.	Parts No.	Description	Q.ty
(4)-1	BA660791	EQ P.C Board Comp. (TE-5307)	1
(4)-SW1,2	ES654693	Slide SW. CL-106B34	2
(4)-2	MZ653668	Eq P.C Board Holder	1
(4)-3	ZS325495	Tapping Screw #2 3x6	1
<b>Capacitor, Vertical Type</b>			
(4)-C1	EC368357	Mylar 0.056 $\mu$ F(J) 50WV	4
(4)-C2	EC399734	Mylar 0.12 $\mu$ F(J) 50WV	4
(4)-C3	EC379192	Mylar 0.039 $\mu$ F(J) 50WV	4
(4)-C4	EC438041	Mylar 0.082 $\mu$ F(J) 50WV	4

**(5) SELECTOR P.C BOARD (TW-5311) BLOCK**

Symbol No.	Parts No.	Description	Q.ty
(5)-1	BA660778	Selector P.C Board Comp. (TW-5311)	1
(5)-TR1	ET515880	Transistor 2SA696(C)(D)	1
(5)-TR2to5	ET453486	Transistor 2SC711(E)(F)	5
(5)-D1,2	ED494583	Silicon Diode 10D05	2
(5)-D8	ED384096	Zener Diode RD-9A	1
(5)-SW1	ES565536	Push SW. 5FST-50U-773-3	1
(5)-L1to4	EO575482	Ferri Inductor FL7H	4
		150 $\mu$ H(J)	4
(5)-2	EZ638932	Jumper Wire, P.C Board JPW-03	4
(5)-3	MZ653670	SW. Table	1
(5)-4	ZS422076	Screw, pan head 3x5	2
<b>Capacitor, Vertical Type</b>			
(5)-C1to4	EC302297	Mylar 0.018 $\mu$ F(K) 50WV	4
(5)-C8	EC220612	Elect. 33 $\mu$ F 25WV	1
(5)-C9	EC220994	Elect. 10 $\mu$ F 25WV	1
(5)-C10	EC220612	Elect. 33 $\mu$ F 25WV	1
(5)-C11	EC220994	Elect. 10 $\mu$ F 25WV	1
(5)-C12	EC220612	Elect. 33 $\mu$ F 25WV	1
(5)-C13	EC220994	Elect. 10 $\mu$ F 25WV	1
(5)-C16	EC220612	Elect. 33 $\mu$ F 25WV	1
(5)-C17	EC220994	Elect. 10 $\mu$ F 25WV	1

Carbon Resistor Omitted

**(6) HEADPHONE P.C BOARD (TE-5304) BLOCK**

Symbol No.	Parts No.	Description	Q.ty
(6)-1	BA660780	Headphone P.C Board Comp.	1
(6)-D1	ED219464	Germanium Diode 1N34A	4
(6)-J1	EJ654456	2-through Jack C	1
(6)-T1	BT247768	Headphone Trans. N19-5921S	4
(6)-VR1	EV498060	Semi-fixed/Vol V10K8-1.5 2kB (4US)	4
(6)-C1	EC450527	Elect. 4.7 $\mu$ F 25WV (Vert Type)	4

**(7) DUMMY P.C BOARD (TW-5315) BLOCK**

Symbol No.	Parts No.	Description	Q.ty
(7)-1	BA663221	Dummy P.C Board Comp. (TW-5315)	1
(7)-L1to4	EO679634	Ferri Inductor FL9H	4
		220 $\mu$ H(J)	4
(7)-2	EZ549808	Dummy P.C Board Angle	1
(7)-3	ZS323728	Screw, Binding head 3x5	2
(7)-4	EZ614586	Fuse Table MY	1
(7)-C1,2	EC565560	Plastic Film/C 1000PF(J)	2
		250WV	2

**(8) SYS. CON. P.C BOARD (TE-2001) BLOCK**

Symbol No.	Parts No.	Description	Q.ty
(8)-1	BA663118	Sys. Con. P.C Board Comp. (TE-2001)	1
(8)-TR1	ET639437	Transistor 2SC945L(Q)(P)	1
(8)-TR2,3	ET511920	Transistor 2SC1247A(B)(V)	2
(8)-TR4to6	ET639437	Transistor 2SC945L(Q)(P)	3
(8)-TR7	ET399870	Transistor 2SC711(G)	1
(8)-TR8to11	ET639437	Transistor 2SC945L(Q)(P)	4
(8)-D1to3	ED560913	Silicon Diode 1S2473 VE	3
(8)-D4	ED494583	Silicon Diode 10D05	1
(8)-D5to10	ED560913	Silicon Diode 1S2473 VE	6
(8)-D11	ED498150	Zener Diode WZ-192	1
(8)-D12,13	ED560913	Silicon Diode 1S2473 VE	2
(8)-D14to29	ED624903	Silicon Diode 1S2473	16
(8)-2	ZS609298	Screw, flat fillister head	3x6 5
(8)-3	ZW273802	Toothed Lock Washer M3	5
(8)-4	ZW273756	Nut M3	5
<b>Capacitor Vertical Type</b>			
(8)-C1	EC459505	Mylar 0.039 $\mu$ F(K) 50WV	1
(8)-C2	EC350684	Elect. 22 $\mu$ F 25WV	1
(8)-C3	EC362158	Mylar 0.0047 $\mu$ F(K) 50WV	1
(8)-C4	EC350684	Elect. 22 $\mu$ F 25WV	1
(8)-C5	EC220612	Elect. 33 $\mu$ F 25WV	1
(8)-C6	EC350684	Elect. 22 $\mu$ F 25WV	1
(8)-C7	EC251087	Mylar 0.022 $\mu$ F(K) 50WV	1

Carbon Resistor Omitted

## (9) RELAY P.C BOARD (TE-2002) BLOCK

Symbol No.	Parts No.	Description	Q.ty
(9)-1	BA663131	Relay P.C Board Comp. (TE-2002)	1
(9)-TR1	ET537300	Transistor 2SD361(D)(E)	1
(9)-TR2	ET511920	Transistor 2SC1247A(B)(V)	1
(9)-TR3	ET639437	Transistor 2SC945L(Q)(P)	1
(9)-TR4	ET517353	Transistor 2SC711(E)(G)	1
(9)-D1to5	ED570273	Silicon Diode 1N4004	5
(9)-D6to9	ED511097	Silicon Diode 1N4001	4
(9)-D10	ED357794	Zener Diode RD-5A(M)	1
(9)-D11,12	ED560913	Silicon Diode 1S2473 VE	2
(9)-D13to16	ED624903	Silicon Diode 1S2473	4
(9)-D17,18	ED560913	Silicon Diode 1S2473 VE	2
(9)-CR1to10	ER450786	Spark Quencher U/L 0.1 $\mu$ +120 $\Omega$ 400V	10
(9)-BR1	EV498071	Semi-fixed/Vol V10K8-1-5 1kB	1
(9)-RL1	EP616500	Relay LC1-C-JT DC24V	1
(9)-RL2	EP638763	Relay MY4-0-US DC24V	1
(9)-RL3	EP616500	Relay LC1-C-JT DC24V	1
(9)-RL4	EP638763	Relay MY4-0-US DC24V	2
(9)-2	EZ640462	Relay P.C Board Retaining	Parts 1
(9)-3	ZS325495	Tapping Screw #2 3x6	6
(9)-4	EZ640462	Relay P.C Board Retaining	Parts B 1
(9)-5	ZS421806	Screw, pan head 3x8	1
(9)-6	ZW516993	Nut M3	1
(9)-R1	ER535948	Cement/R 5W 10 $\Omega$ (K) (Wire-wound Type)	1
(9)-R3	ER664773	Cement/R 20W 360 $\Omega$ (K) (Wire-wound Type)	1
(9)-R4	ER641261	Cement/R 20W 43 $\Omega$ (K) (Wire-wound Type)	1
(9)-R5	ER573524	Cement/R 10W 150 $\Omega$ (K) (Wire-wound Type)	1
(9)-R20	ER372082	Cement/R 2W 100 $\Omega$ (K) (Wire-wound Type)	1
<b>Capacitor, Vertical Type</b>			
(9)-C1,2	EC350987	MP 0.47 $\mu$ F(M) 250V AC (Tub. Type)	2
(9)-C3	EC565345	Elect. 1000 $\mu$ F 50WV	1
(9)-C4	EC372148	Elect. 220 $\mu$ F 35WV	1
(9)-C5	EC250918	Mylar 0.01 $\mu$ F(M) 50WV	1
(9)-C6	EC313121	Elect. 220 $\mu$ F 25WV	1
(9)-C7	EC331705	Elect. 22 $\mu$ F 16WV	1
(9)-C8,9	EC220678	Elect. 4.7 $\mu$ F 25WV	2
(9)-C10	EC646031	Elect. 4.7 $\mu$ F 160WV (Tub. Type)	1

Carbon Resistor Omitted

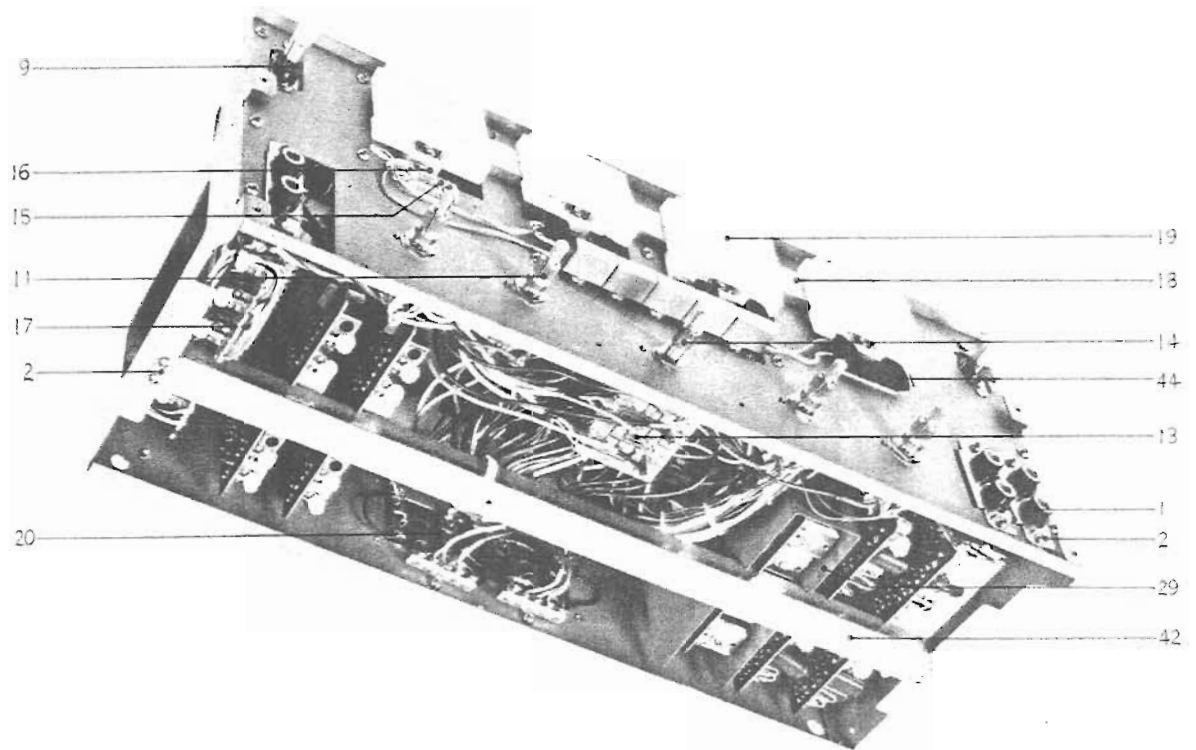
## (10) SERVO P.C BOARD (TE-2301) BLOCK

Symbol No.	Parts No.	Description	Q.ty
(10)-1	BA660688	Servo P.C Board Comp. (TE-2301)	1
(10)-TR1to4	ET639437	Transistor 2SC945L(Q)(P)	4
(10)-TR5	ET538154	Transistor 2SA564(Q)(P)	1
(10)-TR6	ET399846	Transistor 2SC945(Q)	1
(10)-TR7	ET623867	Transistor 2SD361(D1)(D2)	1
(10)-TR8	ET399881	Transistor 2SC711(F)	1
(10)-TR9	ET623867	Transistor 2SD361(D1)(D2)	1
(10)-TR10	ET399846	Transistor 2SC945(Q)	1
(10)-D1	ED557447	Silicon Diode 1S1588	1
(10)-D2	ED357794	Zener Diode RD-5A(M)	1
(10)-D3,4	ED560913	Silicon Diode 1S2473 VE	2
(10)-D5to8	ED224548	Silicon Diode 10D2	4
(10)-D9	ED560913	Silicon Diode 1S2473 VE	1
(10)-TH1	ED593357	Thermister 34D21	1
(10)-VR1	EV621955	Semi-fixed/Vol V10K8-1-5 B10K	1
(10)-VR2	EV621966	Semi-fixed/Vol. V10K8-1-5 B30K	1

Symbol No.	Parts No.	Description	Q.ty
(10)-VR3	EV498071	Semi-fixed/Vol. V10K8-1-5 (4US) 1kB	1
(10)-VR4	EV497711	Semi-fixed/Vol. V10K8-1-5 (4US) 500 $\Omega$ B	1
(10)-2	EZ615047	Heat-sink Plate A	1
(10)-3	ZS421806	Screw, pan head 3x8	1
(10)-4	ZW273756	Nut M3	1
(10)-5	ZS422076	Screw, pan head 3x5	6
(10)-6	EZ615060	P.C Board Holder B	1
(10)-7	EZ615071	P.C Board Holder C	1
<b>Capacitor, Vertical Type</b>			
(10)-C1	EC251291	Mylar 0.1 $\mu$ F(K) 50WV	1
(10)-C2	EC251122	Mylar 0.027 $\mu$ F(K) 50WV	1
(10)-C3	EC331828	Elect. 3.3 $\mu$ F 25WV	1
(10)-C4	EC250582	Mylar 0.003 $\mu$ F(K) 50WV	1
(10)-C5	EC251122	Mylar 0.027 $\mu$ F(K) 50WV	1
(10)-C6	EC250582	Mylar 0.0033 $\mu$ F(K) 50WV	1
(10)-C7	EC557166	Solid Aluminum 3.3 $\mu$ F 25WV	1
(10)-C8	EC250964	Mylar 0.012 $\mu$ F(K) 50WV	1
(10)-C9	EC450055	Elect. 1 $\mu$ F 25WV	1
(10)-C10	EC320051	Elect. 10 $\mu$ F 16WV	1
(10)-C11	EC455354	Elect. 100 $\mu$ F 35WV	1
(10)-C12	EC250885	Mylar 0.01 $\mu$ F(K) 50WV	1
(10)-C13	EC337533	Elect. 220 $\mu$ F 50WV	1
(10)-C14	EC220151	Elect. 100 $\mu$ F 25WV	1
(10)-C15	EC250885	Mylar 0.01 $\mu$ F(K) 50WV	1
(10)-C16	EC346735	Elect. 4.7 $\mu$ F 50WV	1
(10)-C17	EC522617	Elect. 1 $\mu$ F. 100WV	1

Carbon Resistor Omitted

### 3 PHOTO OF AMP ASSEMBLY BLOCK

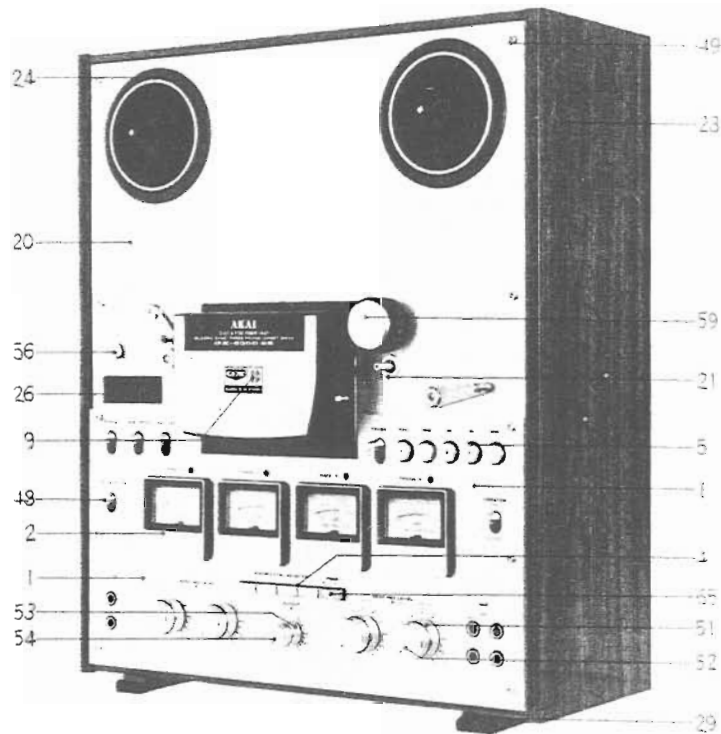


### 3) AMP ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic Q. No.	Q. ty
<b>FRONT CHASSIS BLOCK</b>				
3-1	EJ654467	2-through Jack D	31 2 64	2
3-2	ZS325495	Tapping Screw #2 3x6		23
3-3x	EZ665908	Lamp Holder	TE 5319	2
3-4x	ZS200676	Tapping Screw #2 (Countersunk)		4
3-5x	EA653692	REC Lamp P.C Board	TE 5306	2
3-6x	ED661994	Luminous Diode SL-103	45 15 2	4
3-7x	ZS327835	ISO Screw, Countersunk head 3x5		4
3-8x	ER392534	Carbon/R RD1/4 2k(J) (Insu. Type) 35 9 5		4
3-9	ES641215	Lever SW S-J6398	25 12 23	2
3-10x	ZS422076	Screw, pan head 3x5		4
3-11	EV654478	2-axial 2-throw/Vol D24N A50Kx2 36 3 53		4
3-12x	ER329308	Carbon/R RD1/4 47k(J) (Insu. Type) 35 9 5		4
3-13	EA653681	VR P.C Board	TE 5305	1
3-14	EV424743	2-axial 4-throw/Vol KJ-60R 50KAx4 36 24 2		1
3-15	EA642598	Lamp P.C Board	NE 1047	4
3-16	EL621167	Pilot Lamp 5.5V 60mA	28 2 36	4
3-17	BA660780	Headphone P.C Board Comp. GX-630D-SS TE 5304		1
3-18	EZ654737	Meter Cushion	TE 5318	1
3-19	EM558180	VU Meter KL-243S-5	46 1 74	4
<b>REAR CHASSIS BLOCK</b>				
3-20	BJ653703	Jack Plate SS	31 5 126	1
3-21x	ZW411895	Hollow Rivet 3x5	7 6 6	4
3-22x	ER213715	Carbon/R RD1/4 100K(J) (Insu. Type) 35 9 5		8
3-23x	ER329308	Carbon/R RD1/4 47k(J) (Insu. Type) 35 9 5		4
3-24x	EJ255115	Lug Plate VB2L2	33 4 3	2
3-25x	SM653714	Jack Name Plate	TE 5311	1

Ref. No.	Parts No.	Description	Schematic Q. No.	Q. ty
<b>AMP ASSEMBLY BLOCK</b>				
3-26x	EJ369077	Lug Plate VBL1	33-4-7	2
3-27x	EZ653725	Amp Chassis Support	TE 5314	1
3-28x	MZ653736	P.C Board Support	TE 5317	1
3-29	MZ653815	OSC Shield Plate	TE 5315	1
3-30x	EJ347670	Multi-Jack-3, 22P 3250-022-001S 31 1 13		4
3-31x	ZS523664	Tapping Screw #2 3x10(BR)		10
3-32x	EJ430378	Multi-Jack 14P 3252-014-001 31 4 14		1
3-33x	MZ661983	Spacer 3x13 7-2-6		4
3-34x	EJ482793	Multi-jack 10P 3250-010-001 31 4 21		1
3-35x	ZS608264	Screw, pan head 3x25		4
3-36x	ZW425002	Washer (SPC) D3.1x8x0.5t		4
3-37x	EJ310871	Multi-Jack (J-2) 18P 3250-018-001 31 4 11		1
3-38x	EJ254913	Lug Plate KP2L2	33-3 6	1
3-39x	ER664863	Carbon/R F 1/4W 100Ω(J) (Insu. Type) 35 11 12		2
3-40x	EC220151	Elect. 100μF 25WV (Vert Type) 24 12 9		2
3-41x	ZS455207	Tapping Screw #2 3x5 (BR)		1
3-42	MZ653826	Amp Card Support	TE 5316	1
3-43x	EZ654423	Amp Harness A	26 6 240	1
3-44	SZ642802	Lamp Cover B	NE 6022	4

#### 4 PHOTO OF FINAL ASSEMBLY BLOCK



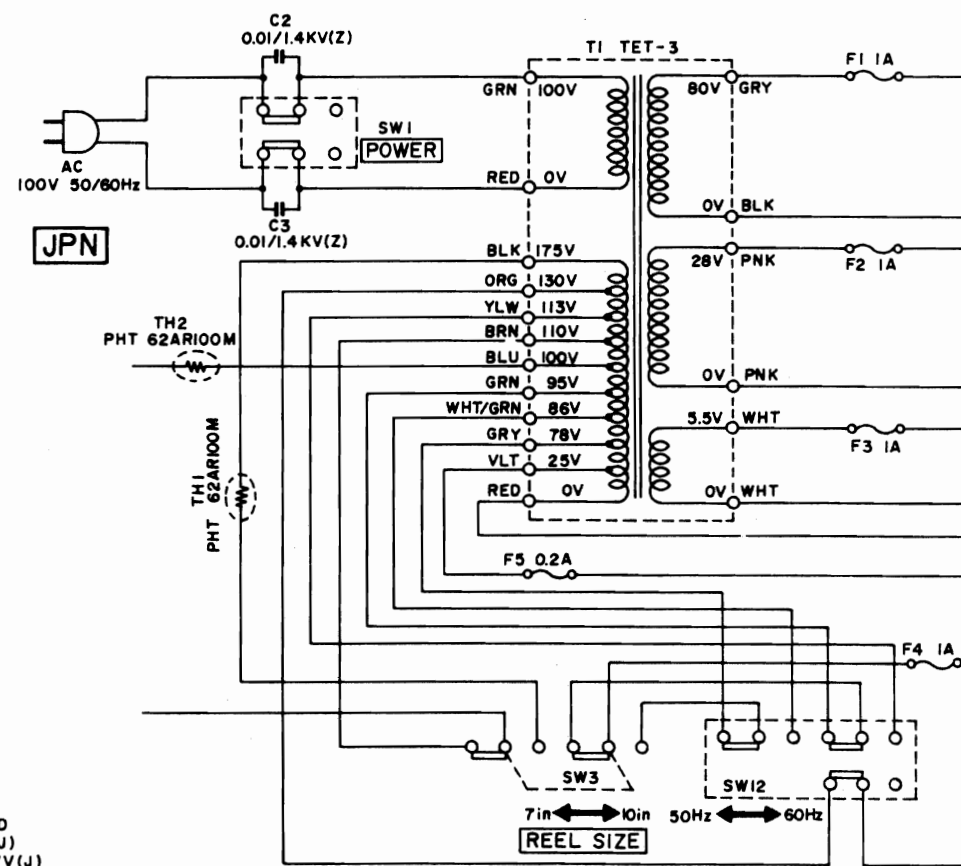
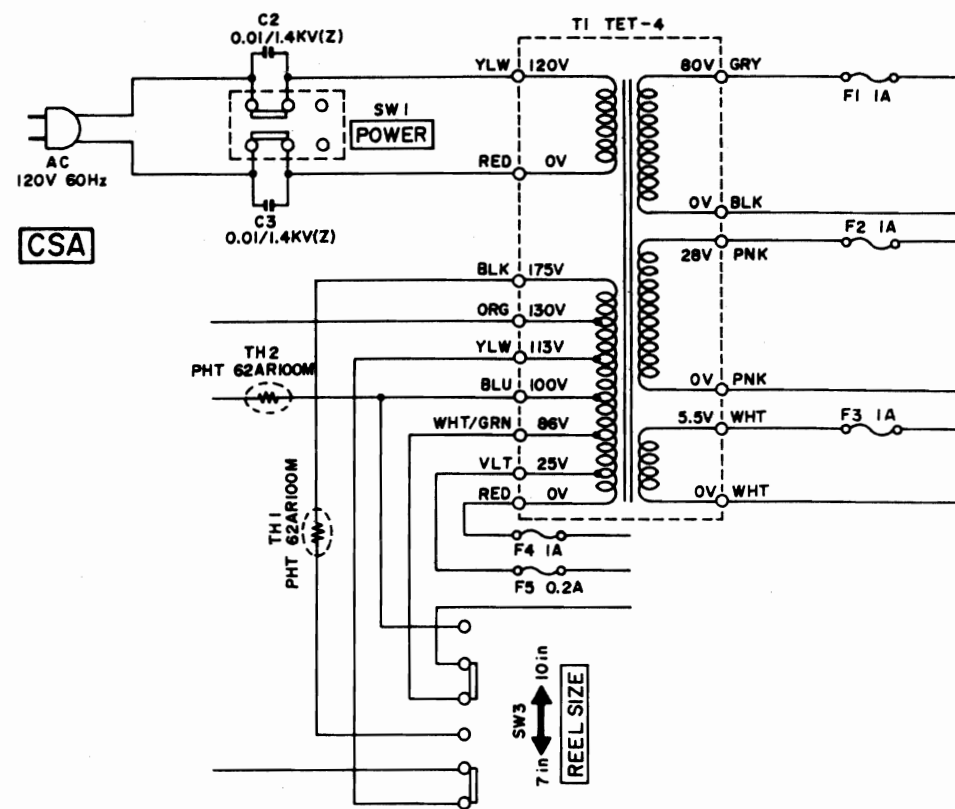
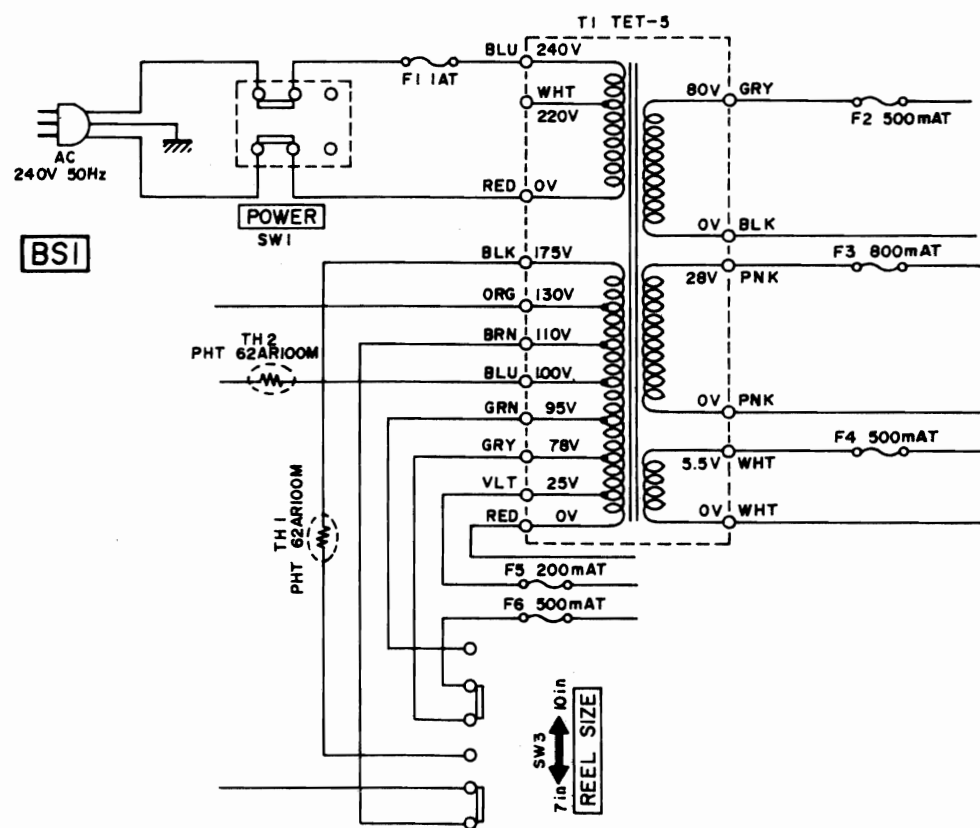
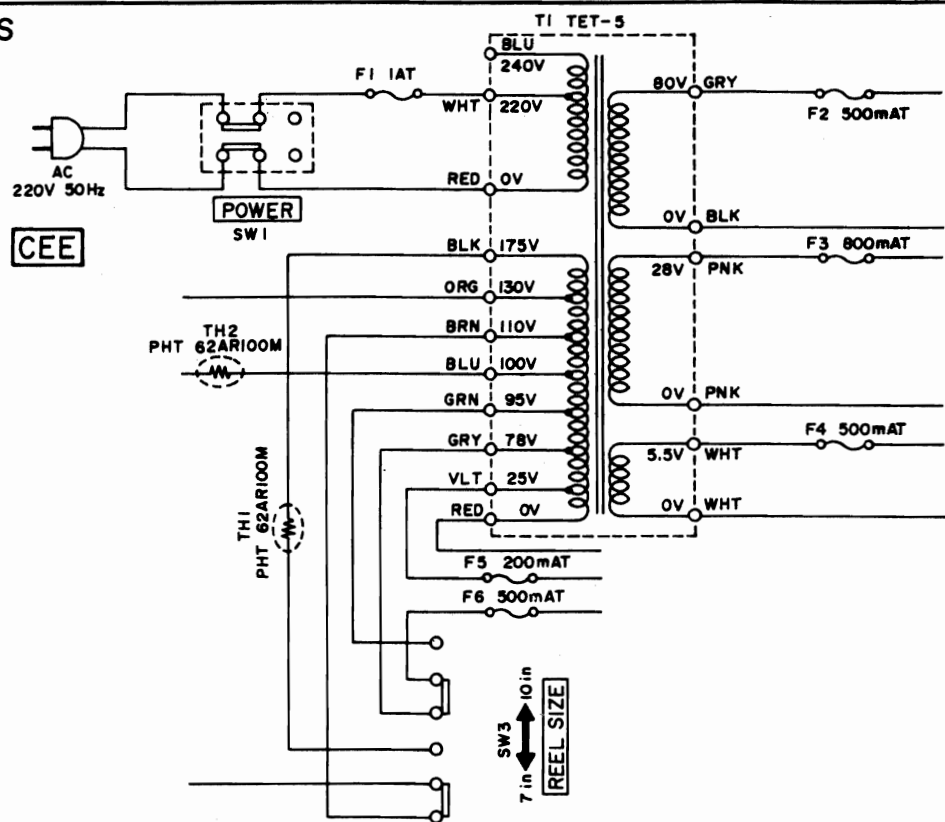
#### 4) FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic Q.ty No.	Ref. No.	Parts No.	Description	Schematic Q.ty No.
<b>AMP PANEL BLOCK</b>				<b>FINAL ASSEMBLY BLOCK</b>			
4-1	SP653894	Amp Panel	TE 6303 1	4-33x	SP653883	Lower Side Plate A	TE 6301 1
4-2	SE642767	VU Meter Escutcheon	NE 6014 4	4-34x	SP654748	Lower Side Plate B	TE 6301 1
4-3x	ZS422076	Screw, pan head 3x5	16	4-35x	ZS325495	Tapping Screw #2 3x6	31
4-4	SE653444	Escutcheon 2	TE 6013 1	4-36x	SP641046	Upper Side Plate A	TE 6014 1
4-5	SE613866	Button Escutcheon C	CW 6016 5	4-37x	SP641057	Upper Side Plate B	TE 6014 1
<b>HEAD COVER TABLE BLOCK</b>				4-38x	MZ640877	Supporting Plate	TE 6016 2
4-6x	SC654726	Head Cover Base	TE 6310 1	4-39x	ZS417150	Screw, pan head 4x6	8
4-7x	SC653905	Head Cover	TE 6309 1	4-40x	SZ529920	Reinforcement Angle A	ND 6003 1
4-8x	SZ534543	Cushion Rubber C	TW 6039 2	4-41x	MZ653771	EQ Joint	TE 6302 1
4-9	SM653837	Read Cover Name Plate	TE 6311 1	4-42x	ZS432674	Screw, pan head 3x3	1
4-10x	MZ640800	Hinge Bracket	TE 6006 1	4-43x	SA428714	LM Rubber Foot, w/screw	LM 404 4
4-11x	MZ598263	Hinge Angle, w/ball sleeve	KJ 6017 1	4-44x	ZW324281	Screw, pan head 4x25	4
4-12x	MV269965	Steel Ball D4	1	4-45x	ZW419646	Washer (SPC) D4.5x9.8x0.5t	4
4-13x	ZG249107	Ball Retaining Spring	RJ 632 1	4-46x	ZS665550	Screw, pan head 4x15,	
4-14x	ZW499893	Set Screw, hexagon socket 5x4 flat point	1			w/washer	2
4-15x	MS597431	Hinge Shaft	KJ 6015 1	4-47x	ZS664345	Screw, pan head 4x30,	
4-16x	SZ597420	Collar	KJ 6014 1			w/washer	4
4-17x	ZW420682	Washer (Nylon) D4.2x9x0.5t	1	4-48x	SK638976	Knob 1-C	CP 6013 4
4-18x	ZW270101	'E' Ring 3M	619 2	4-49	ZS613901	Panel Screw	CW 6031 10
4-19x	ZS323728	Screw, Binding head 3x5	4	4-50x	ZW653747	Panel Nut	TE 6305 1
<b>MECH PANEL BLOCK</b>				4-51	SK640923	Double Knob (Lower)	TE 6012 4
4-20	SP654568	Mech Panel SS	TE 6001 1	4-52	SK640912	Double Knob (Upper)	TE 6011 4
4-21	SE640754	Motor Escutcheon A	TE 6002 1	4-53	SK653760	Double Knob (Lower)	TE 6307 1
4-22x	MZ640787	Impedance Roller Collar	TE 6003 1	4-54	SK653758	Double Knob (Upper)	TE 6306 1
4-23x	MZ640798	Arm Collar	TE 6004 2	4-55x	ZS433001	Set Screw, hexagon socket 3x5 (cup/p.)	2
4-24	SE581602	Reel Table Escutcheon 2	TD 6021 2	4-56	SK647548	Single Knob (small)	CJ 6031 1
4-25x	ZW575730	Speed Nut (P Type) 3	6-3-6 8	4-57x	EZ653602	Speed Volume Table	TE 1301 1
4-26	SE626951	Counter Escutcheon	MS 6006 1	4-58x	EY661937	Volume VI 6L 4N 1kΩB	36-4-17 1
<b>CASE BLOCK</b>				4-59	SK645300	Pinch Roller Cap	TI 6015 1
4-27x	BC660442	Case Block Comp.	TE 3 1	4-60x	ZS411660	Screw, oval countersunk head 3x6	2
4-28	BC653916	Wood Case GX-630D-SS	TE 6312 1	4-61x	EF563681	Fuse 1A 250V	39-1-50 1
4-29	SA640934	Square Foot, w/rubber	TE 6020 2	4-62x	SE627120	Ventilator	ME 6014 1
4-30x	ZS200610	Tapping Screw #1 4x12 (Truss)	4	4-63x	ZS392141	Tapping Screw #1 3x8 (Truss)	2
4-31x	SZ480712	Dust Cover Pin	LE 6024 2	4-64x	SM642396	S. NO. Plate GX-630D-SS	501071 1
4-32	SZ654715	Case Shield	TE 6319 2	4-65	SB679860	Push Button (Square)	TE 6320 5
				4-66x	SZ642802	Lamp Cover B	NE 6022 4

# INDEX

Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
BA565740	(1)-1	EC336126	(1)-C11	E0244012	(1)-L2	HR565672	1-20x	ZS421806	(10)-3
BA660688	(10)-1	EC336126	(2)-C9	E0346230	(1)-L1	HZ332686	1-9x	ZS422076	3-10x
BA660778	(5)-1	EC336126	(3)-C10,11	E0383365	(3)-L1	HZ532710	1-8x	ZS422076	4-3x
BA660780	3-17	EC336216	(1)-C6	E0424866	(3)-L2to5	HZ532732	1-27x	ZS422076	(5)-4
BA660780	(6)-1	EC337533	(10)-C13	E0575482	(5)-L1to4	HZ532765	1-16x	ZS422076	(10)-5
BA660791	(4)-1	EC346522	(3)-C4	E0679634	(7)-L1to4	HZ532776	1-14x	ZS432674	4-42x
BA660835	(2)-1	EC346735	(10)-C16	EP315461	(3)-RL1,2	HZ653580	1-24x	ZS433001	4-55x
BA663118	(8)-1	EC350684	(3)-C9	EP616500	(9)-RL1	HZ653782	1-2x	ZS455207	3-41x
BA663131	(9)-1	EC350684	(8)-C2	EP616500	(9)-RL3	HZ653793	1-12x	ZS523664	3-31x
BA663221	(7)-1	EC350684	(8)-C4	EP638763	(9)-RL2	HZ803597	1-3x	ZS608264	3-35x
BA663524	(3)-1	EC350684	(8)-C6	EP638763	(9)-RL4	MH578957	1-5x	ZS608477	1-17x
BC653916	4-28	EC350987	(9)-C1,2	ER213715	3-22x	MS597431	4-15x	ZS608512	1-19x
BC660442	4-27x	EC362158	(8)-C3	ER329308	3-12x	MV269965	4-12x	ZS609298	(8)-2
BH660690	1-1x	EC368357	(4)-C1	ER329308	3-23x	MZ598263	4-11x	ZS613901	4-49
BJ653703	3-20	EC368370	(2)-C15	EE372082	(9)-R20	MZ640787	4-22x	ZS664345	4-47x
BT247768	(6)-T1	EC372148	(9)-C4	ER392534	3-8x	MZ640798	4-23x	ZS665550	4-46x
EA382713	1-32x	EC379192	(4)-C3	ER427972	(3)-R3	MZ640800	4-10x	ZS270101	4-18x
EA441685	1-33x	EC379765	(3)-C5to8	ER450786	(9)-CR1to10	MZ640877	4-38x	ZW273756	1-6x
EA496258	(1)-2	EC383501	(2)-C2	ER535948	(9)-R1	MZ653668	(4)-2	ZW273756	(8)-4
EA642598	3-15	EC399690	(2)-C4	ER573524	(9)-R5	MZ653670	(5)-3	ZW273756	(10)-4
EA653681	3-13	EC399734	(4)-C2	ER641261	(9)-R4	MZ653736	3-28x	ZW273802	(8)-3
EA653692	3-5x	EC423033	(2)-C18	ER664773	(9)-R3	MZ653771	4-41x	ZW273914	1-10x
EC220151	(3)-C12,13	EC425250	(3)-TC1to4	ER664863	3-39x	MZ653815	3-29	ZW273914	1-31x
EC220151	3-40x	EC427948	(2)-C21	ES565536	(5)-SW1	MZ653826	3-42	ZW324281	4-44x
EC220151	(10)-C14	EC432810	(1)-C2	ES641215	3-9	MZ661983	3-33x	ZW411895	3-21x
EC220612	(5)-C8	EC432810	(2)-C1	ES654693	(4)-SW1,2	SA428714	4-43x	ZW413256	1-18x
EC220612	(5)-C10	EC438041	(4)-C4	ET234854	(1)-TR1,2	SA640934	4-29	ZW419646	4-45x
EC220612	(5)-C12	EC450055	(1)-C8	ET234854	(2)-TR1,2,3	SB679860	4-65	ZW420682	4-17x
EC220612	(5)-C16	EC450055	(1)-C18	ET398711	(1)-TR3	SC653905	4-7x	ZW425002	3-36x
EC220612	(8)-C5	EC450055	(10)-C9	ET399846	(10)-TR6	SC654726	4-6x	ZW499893	4-14x
EC220678	(3)-C3	EC450527	(6)-C1	ET399846	(10)-TR11	SE581602	4-24	ZW516993	(9)-6
EC220678	(9)-C8,9	EC455354	(10)-C11	ET399870	(8)-TR7	SE613866	4-5	ZW575730	4-25x
EC220994	(1)-C17	EC459505	(8)-C1	ET399881	(10)-TR8	SE626951	4-26	ZW653747	4-50x
EC220994	(1)-C19,20	EC476324	(3)-C14,15	ET446736	(2)-TR5	SE627120	4-62x		
EC220994	(2)-C13	EC476965	(1)-C10	ET453486	(2)-TR4	SE640754	4-21		
EC220994	(2)-C19	EC476965	(2)-C8	ET453486	(5)-TR2to5	SE642767	4-2		
EC220994	(5)-C9	EC522617	(10)-C17	ETS11920	(8)-TR2,3	SE653444	4-4		
EC220994	(5)-C11	EC557166	(10)-C7	ETS11920	(9)-TR2	SK638976	4-48x		
EC220994	(5)-C13	EC5565345	(9)-C3	ET515880	(5)-TR1	SK640912	4-52		
EC220994	(5)-C17	EC565560	(7)-C1,2	ET517353	(9)-TR4	SK640923	4-51		
EC250582	(10)-C4	EC646031	(9)-C10	ET520288	(3)-TR1,2,3	SK645300	4-59		
EC250582	(10)-C6	ED219464	(6)-D1	ET537300	(9)-TR1	SK647548	4-56		
EC250841	(1)-C5	ED224526	(3)-D1	ET538154	(10)-TR5	SK653758	4-54		
EC250841	(2)-C20	ED224548	(10)-D5to8	ET623867	(10)-TR7	SK653760	4-53		
EC250841	(3)-C1,2	ED357794	(9)-D10	ET623867	(10)-TR9	SM642396	4-64x		
EC250885	(10)-C12	ED357794	(10)-D2	ET639437	(8)-TR1	SM653714	3-25x		
EC250885	(10)-C15	ED384096	(5)-D8	ET639437	(8)-TR4to6	SM653837	4-9		
EC250918	(9)-C5	ED494583	(5)-D1,2	ET639437	(8)-TR8to11	SP641046	4-36x		
EC250964	(10)-C8	ED494583	(8)-D4	ET639437	(9)-TR3	SP641057	4-37x		
EC251087	(8)-C7	ED498150	(8)-D11	ET639437	(10)-TR1to4	SP653883	4-33x		
EC251122	(10)-C2	ED511097	(9)-D6to9	EV424743	3-14	SP653894	4-1		
EC251122	(10)-C5	ED515790	(3)-D1to3	EV497700	(2)-VR1	SP654568	4-20		
EC251291	(10)-C1	ED557447	(10)-D1	EV497711	(1)-VR1	SP654748	4-34x		
EC290520	(1)-C1	ED560913	(8)-D1to3	EV497711	(10)-VR4	SZ480712	4-31x		
EC290520	(1)-C3	ED560913	(8)-D5to10	EV497698	(1)-VR2	SZ529920	4-40x		
EC290520	(1)-C7	ED560913	(8)-D12,13	EV498060	(6)-VR1	SZ534543	4-8x		
EC290520	(1)-C13	ED560913	(9)-D11,12	EV498071	(9)-VR1	SZ597420	4-16x		
EC290531	1-11x	ED560913	(9)-D17,18	EV498071	(10)-VR3	SZ642802	3-44		
EC290531	(2)-C5	ED560913	(10)-D3,4	EV621955	(10)-VR1	SZ642802	4-66x		
EC290531	(2)-C11	ED560913	(10)-D9	EV621966	(10)-VR2	SZ654715	4-32x		
EC302297	(5)-C1to4	ED570273	(9)-D1to5	EV654478	3-11	ZG249107	4-13x		
EC310792	(1)-C21	ED593357	(10)-TH1	EV661937	4-58x	ZG466312	1-7x		
EC313121	(9)-C6	ED624903	(8)-D14to29	EZ549808	(7)-2	ZG540584	1-25x		
EC320051	(1)-C14	ED624903	(9)-D13to16	EZ614586	(7)-4	ZS200610	4-30x		
EC320051	(2)-C6	ED661994	3-6x	EZ615047	(10)-2	ZS200676	3-4x		
EC320051	(2)-C10	EF563681	4-61x	EZ615060	(10)-6	ZS201475	1-15x		
EC320051	(2)-C17	E1412413	(1)-IC1	EZ615071	(10)-7	ZS201778	1-30x		
EC320051	(10)-C10	EJ254913	3-38x	EZ638932	(5)-2	ZS323728	4-19x		
EC329771	(1)-C4	EJ255115	3-24x	EZ640462	(9)-2	ZS323728	(7)-3		
EC329771	(1)-C9	EJ310871	3-37x	EZ640642	(9)-4	ZS325495	3-2		
EC329771	(1)-C15	EJ328320	1-28x	EZ653602	4-57x	ZS325495	(4)-3		
EC329771	(2)-C3	EJ347670	3-30x	EZ653725	3-27x	ZS325495	4-35x		
EC329771	(2)-C7	EJ369077	3-26x	EZ654423	3-43x	ZS325495	(9)-3		
EC329771	(2)-C12	EJ430378	3-32x	EZ654737	3-18	ZW327835	3-7x		
EC329850	(1)-C12	EJ482793	3-34x	EZ665908	3-3x	ZS355522	1-29x		
EC331705	(9)-C7	EJ654456	(6)-J1	HA533597	1-21x	ZS392141	4-63x		
EC331828	(10)-C3	EJ654467	3-1	HA533608	1-26x	ZS411660	4-60x		
EC333562	(2)-C16	EJ621167	3-16	HA549944	1-23x	ZS413201	1-4x		
EC336104	(1)-C16	EM558180	3-19	HE563220	1-22x	ZS417150	4-39x		
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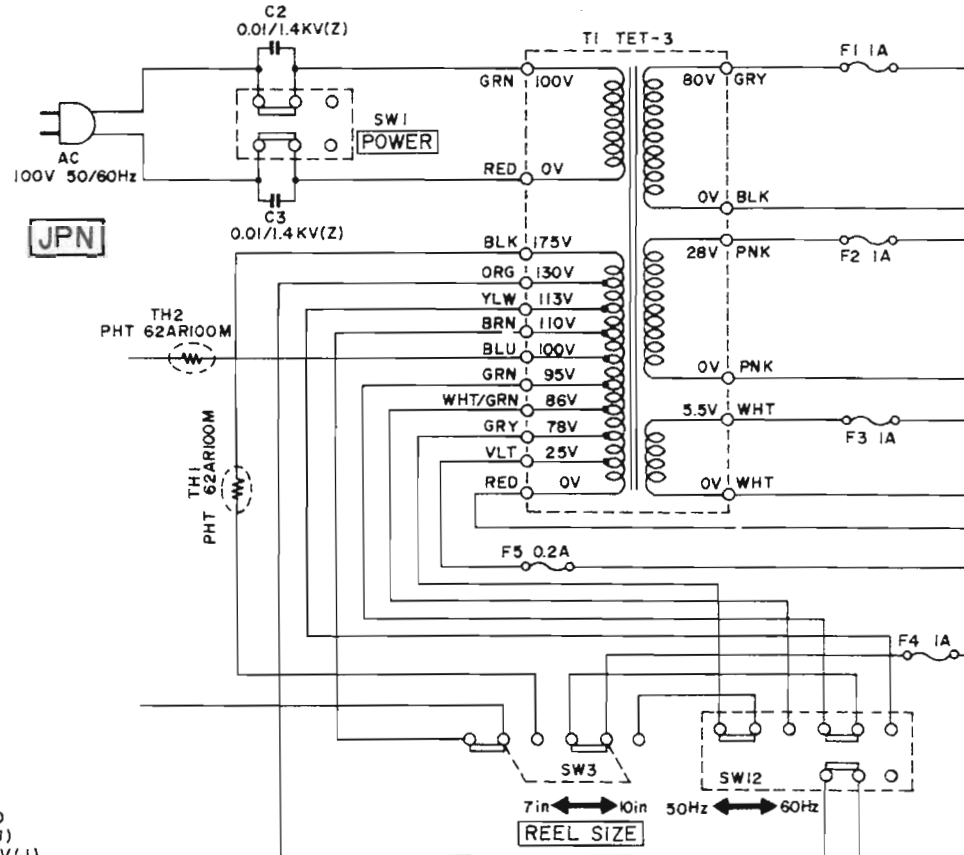
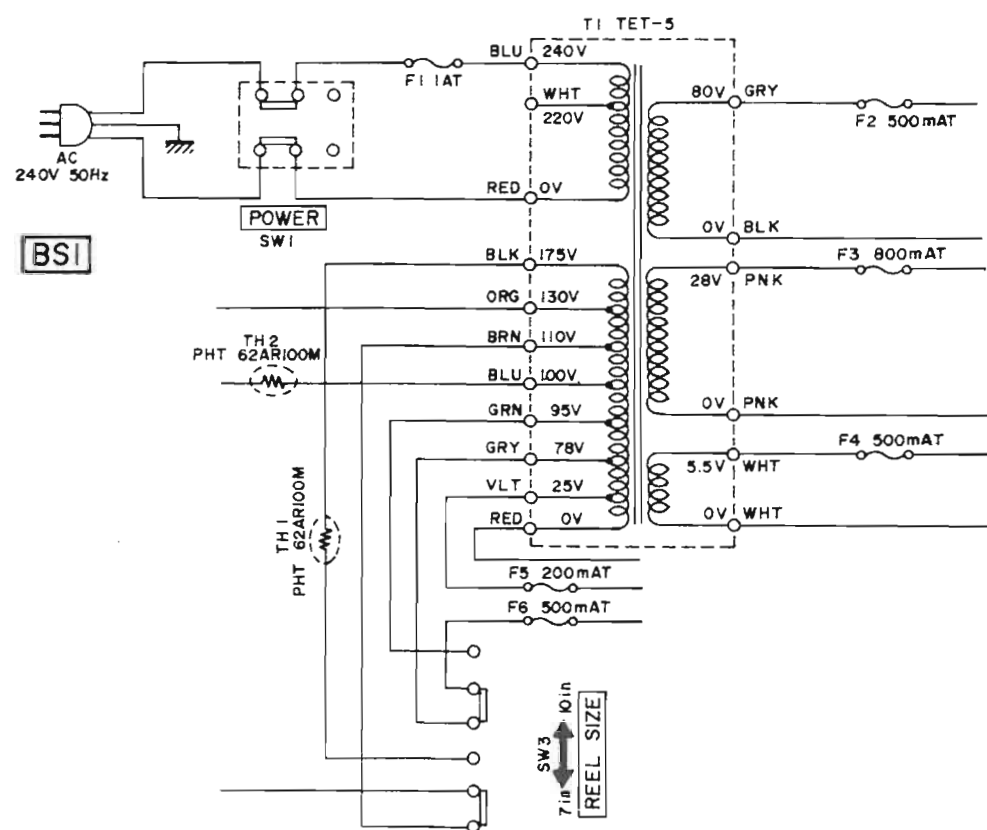
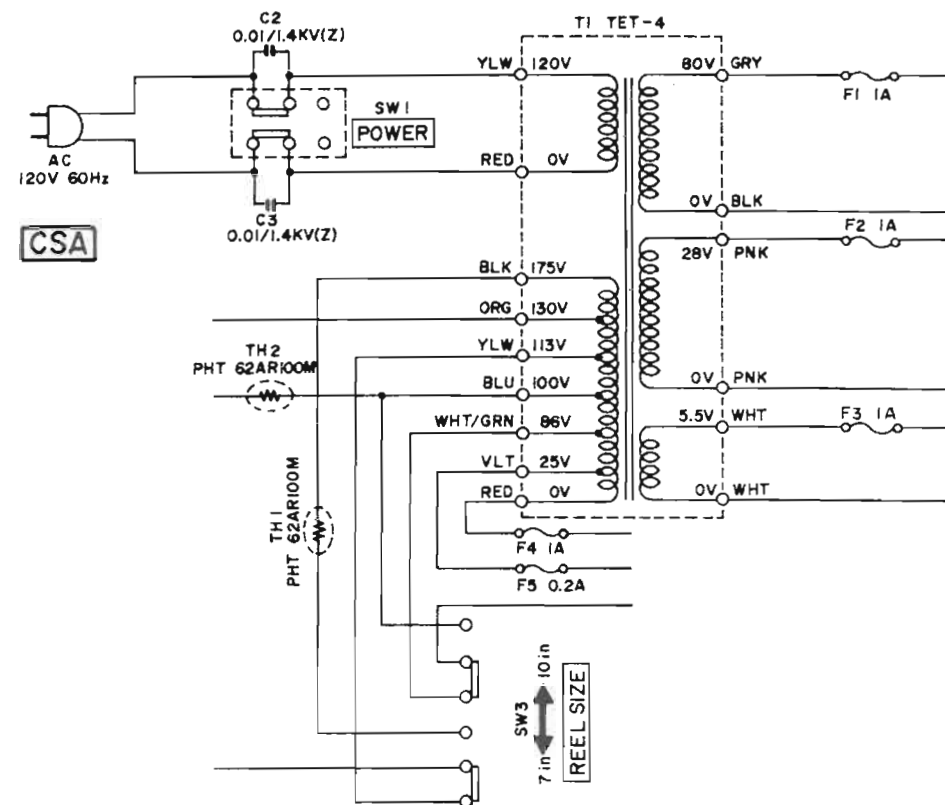
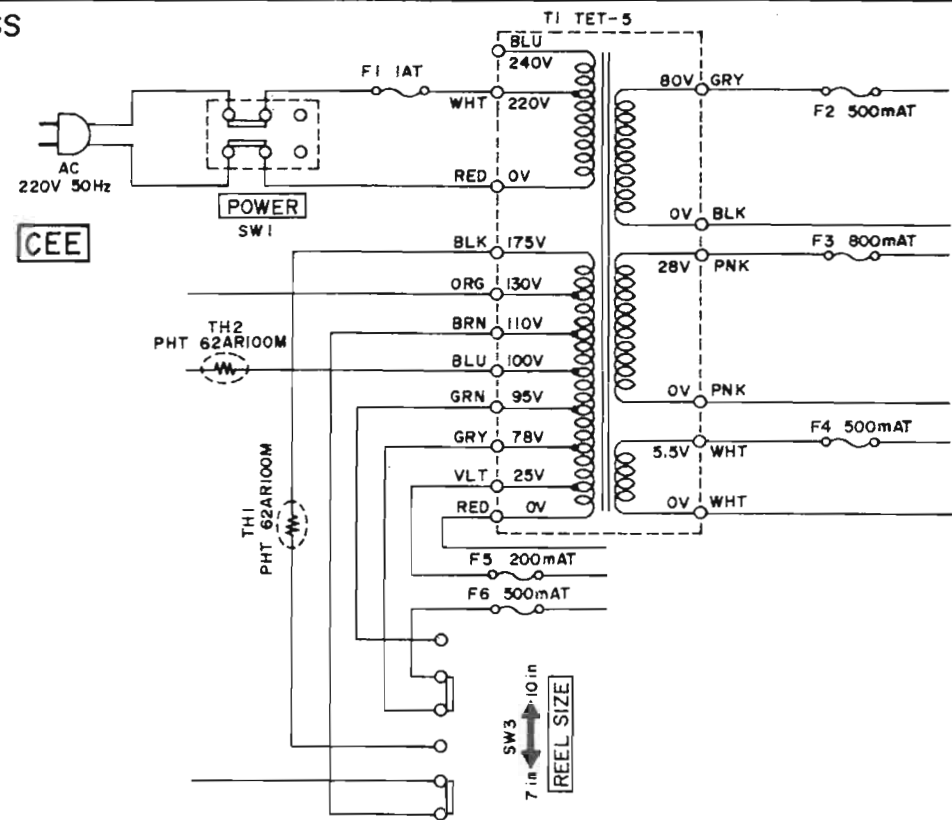
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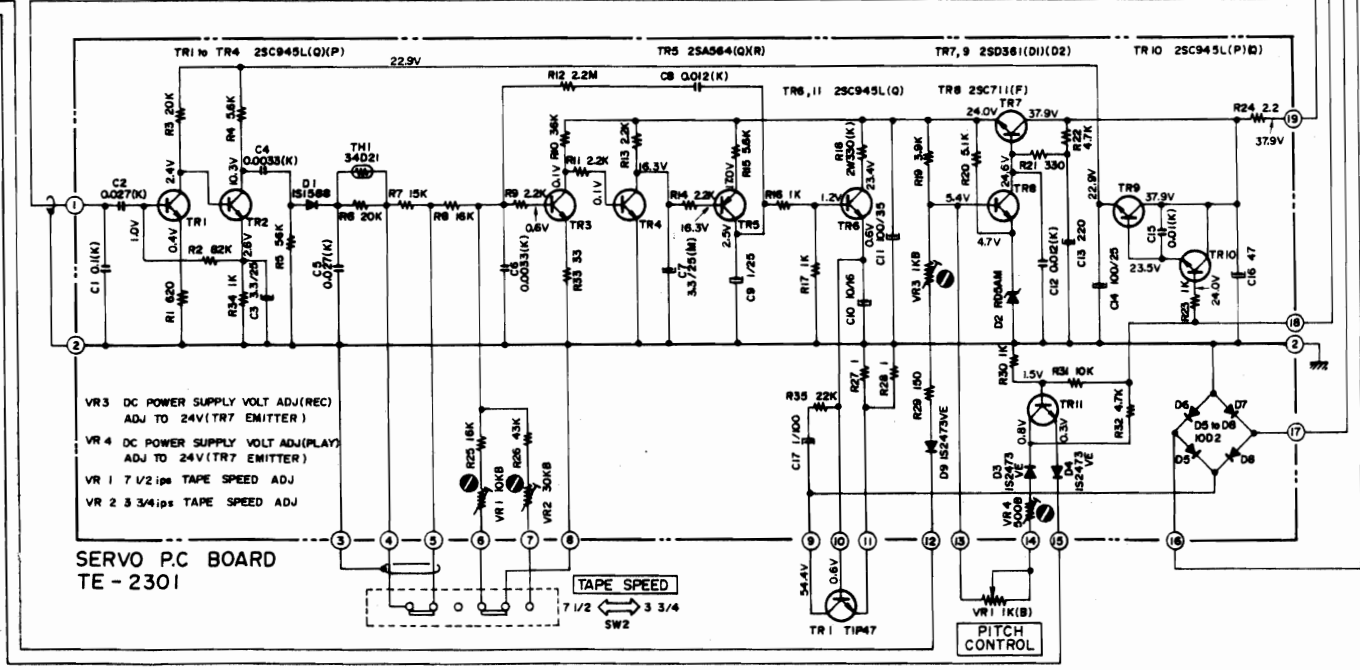
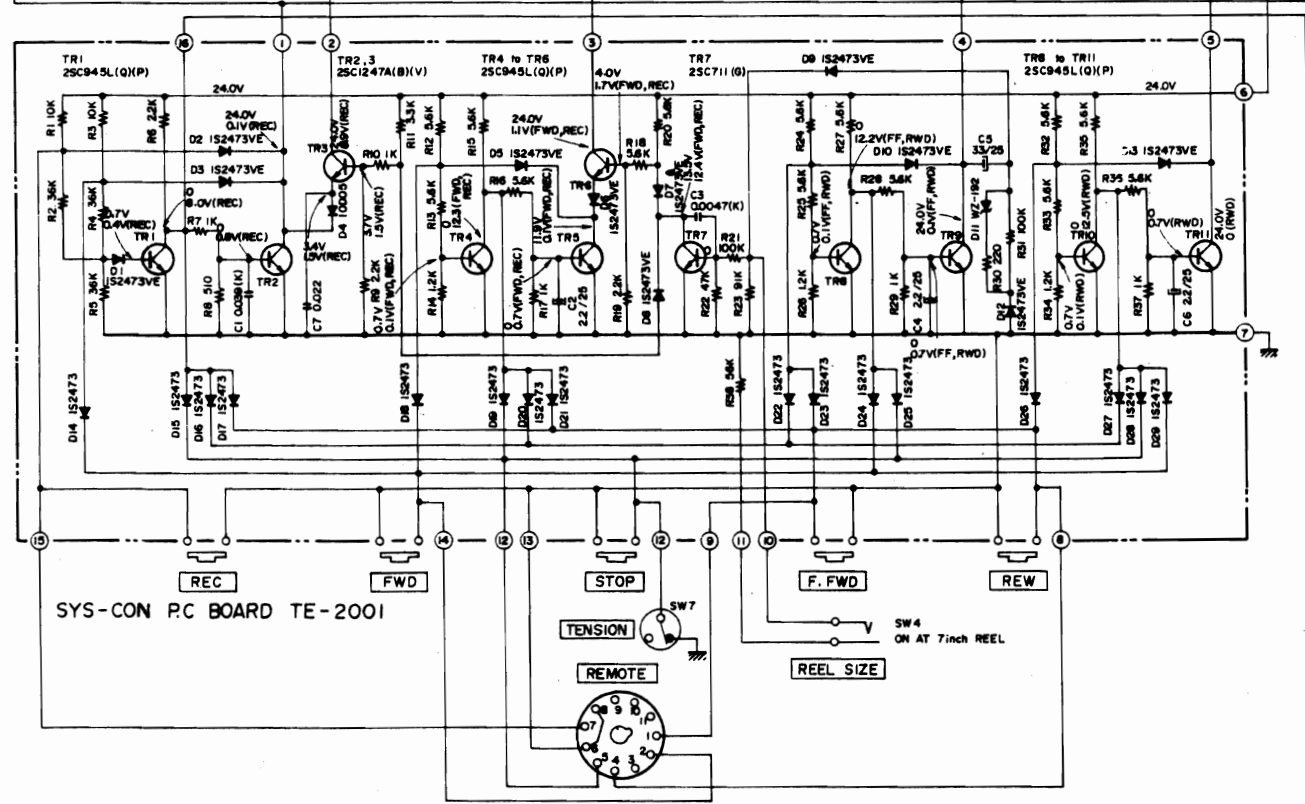
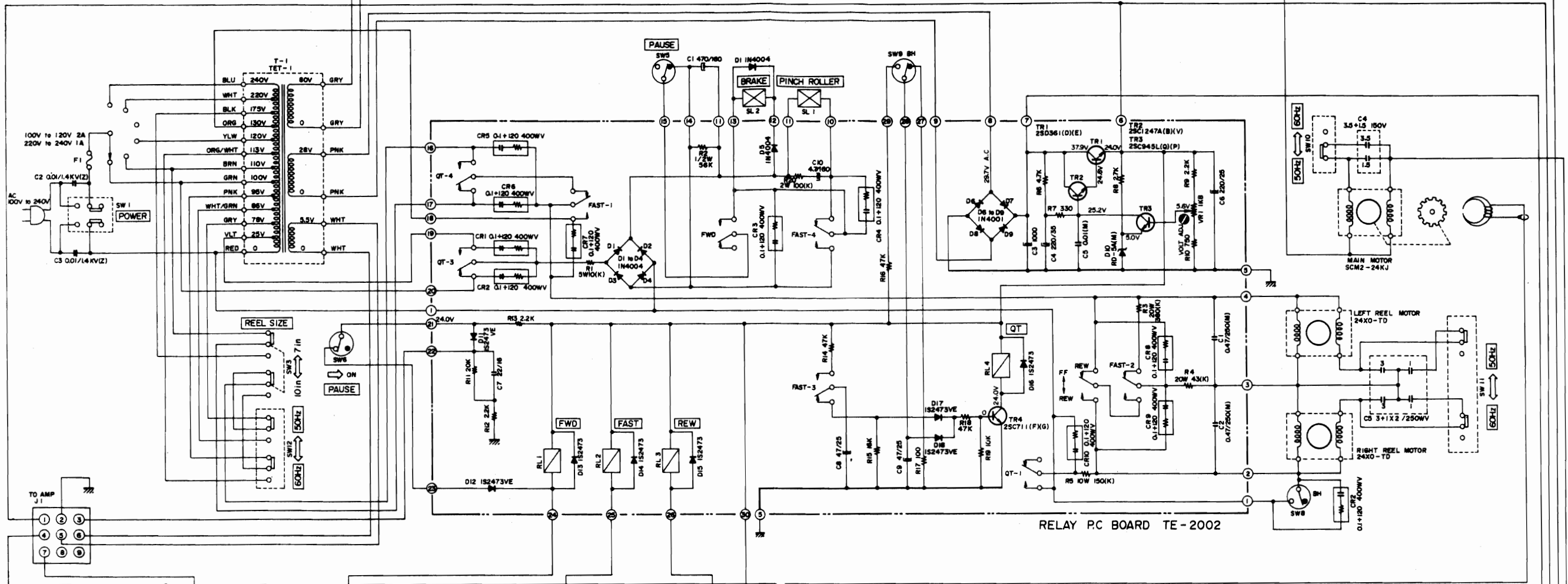
NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN  $\Omega$  1/4W(J)  
ALL CAPACITORS IN  $\mu$ F 50WV(J)



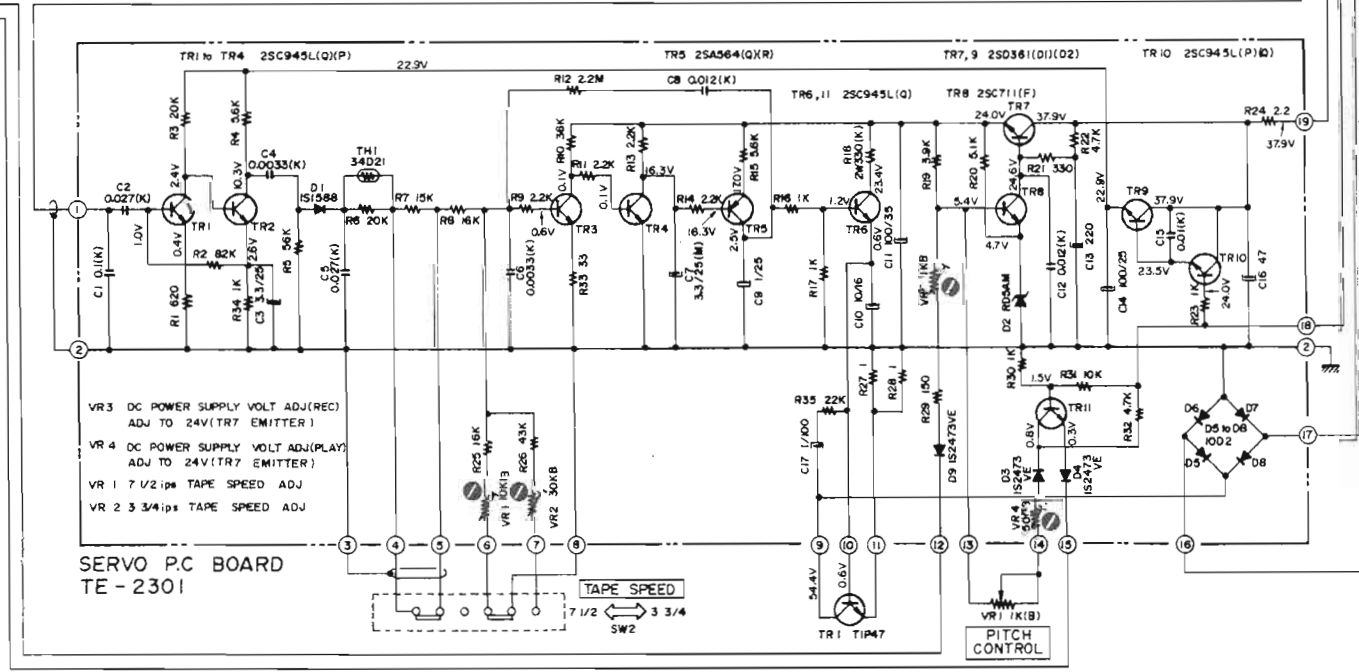
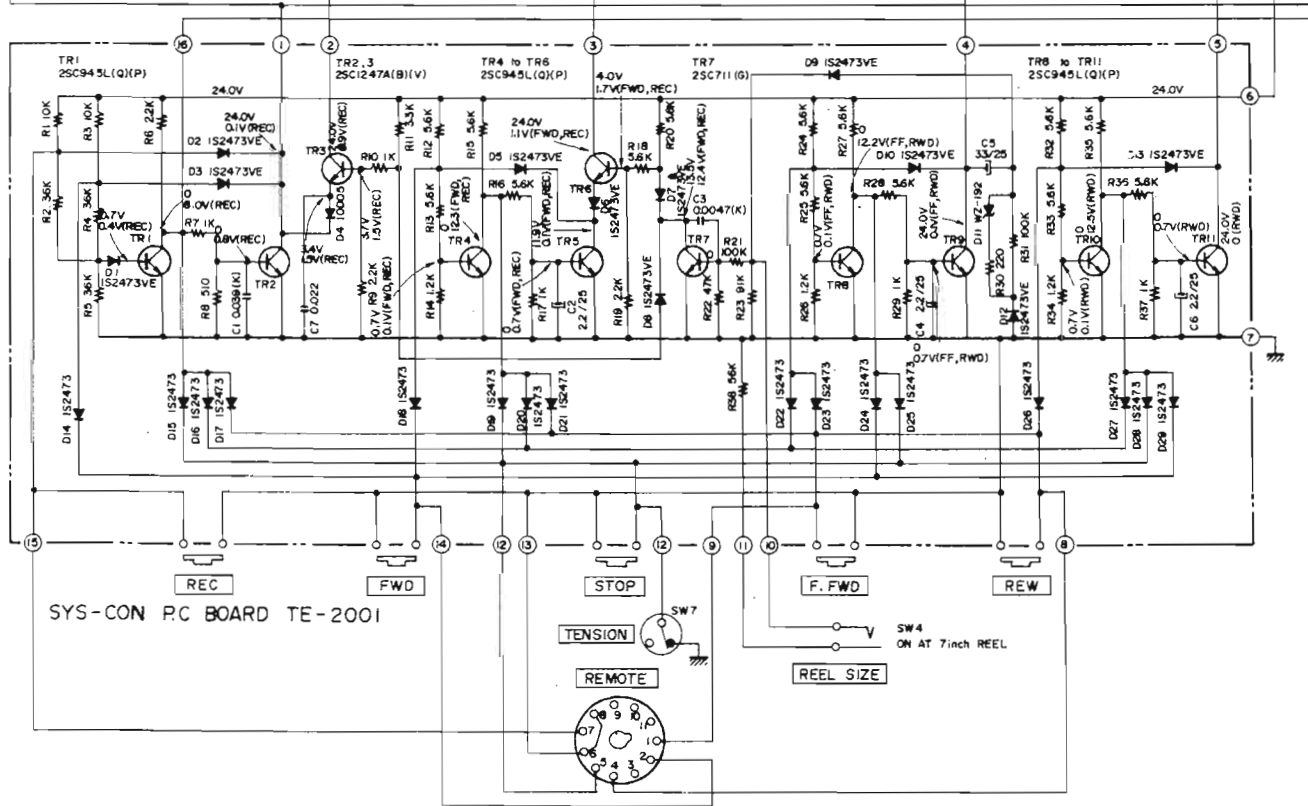
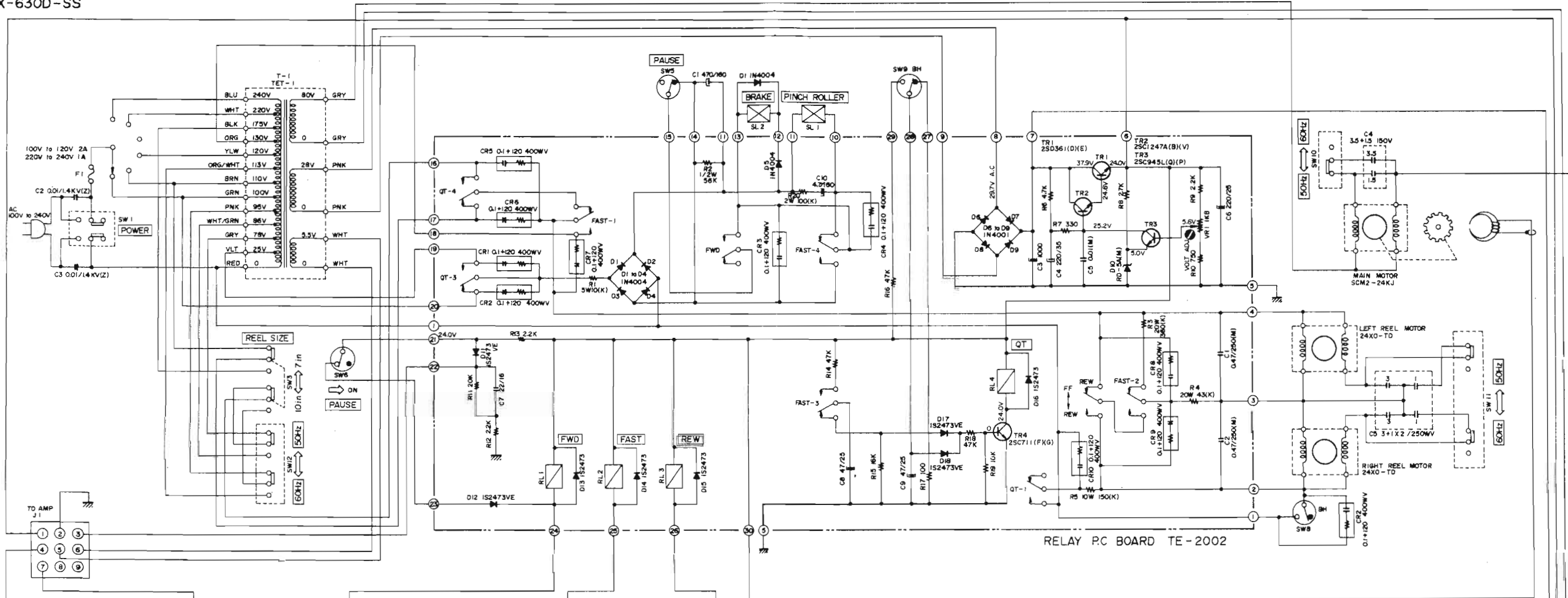
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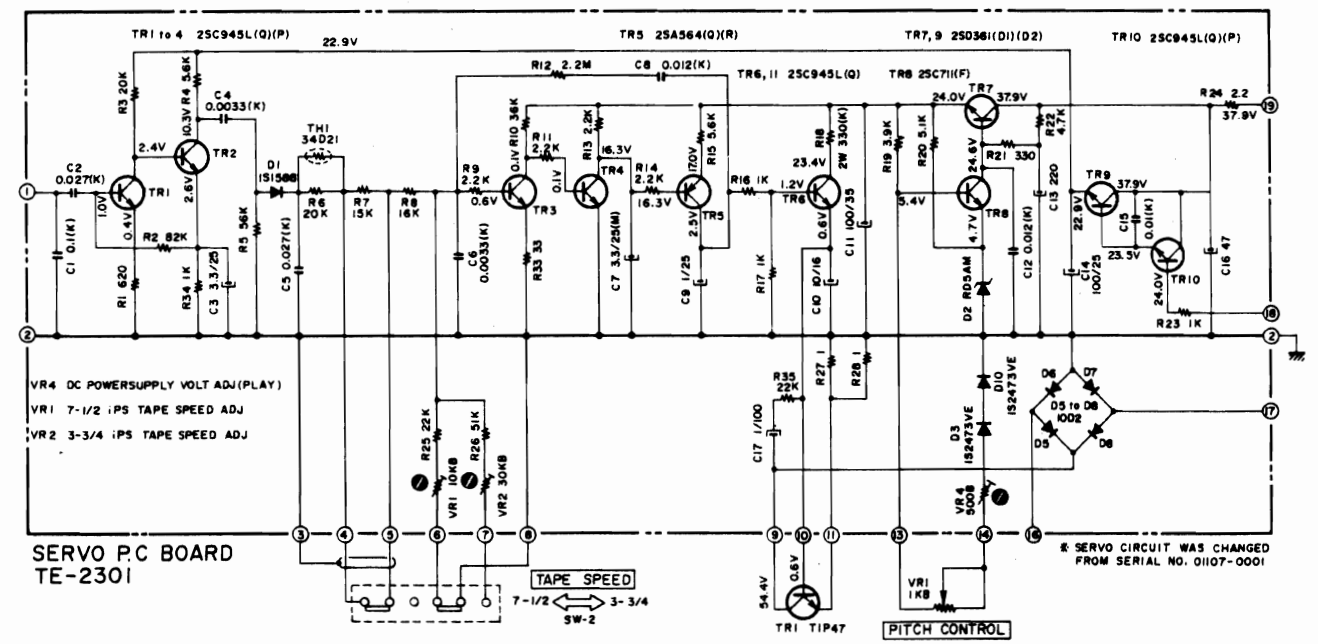
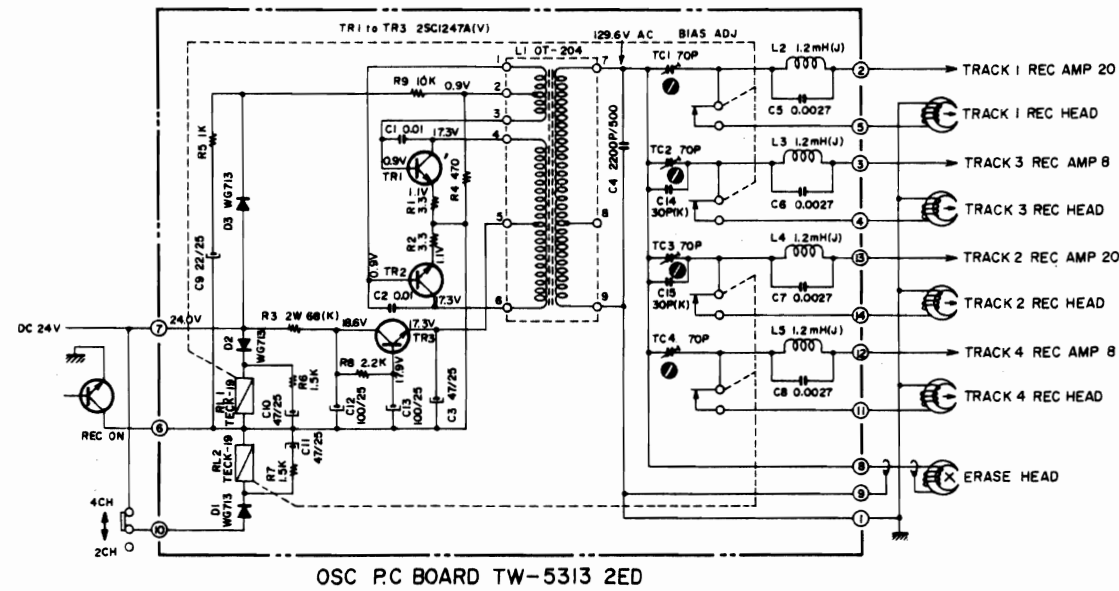
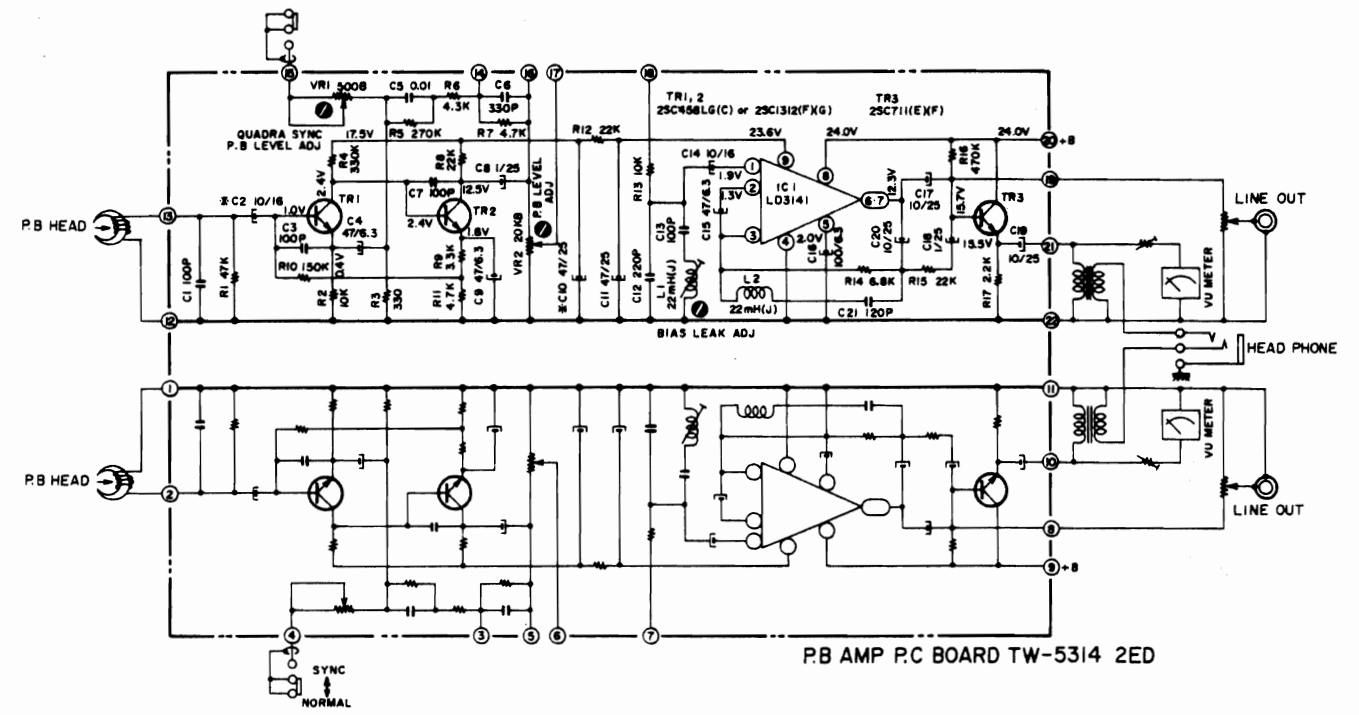
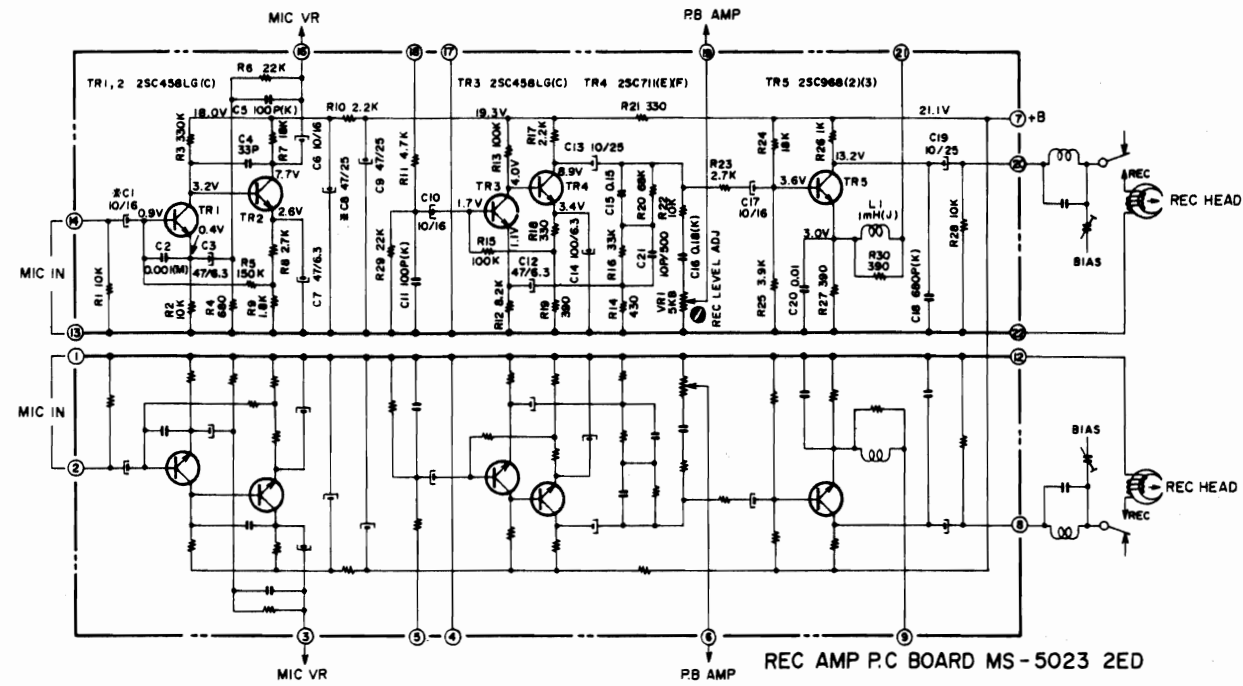
NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN  $\Omega$  1/4W(J)  
ALL CAPACITORS IN  $\mu$ F 50WV(J)



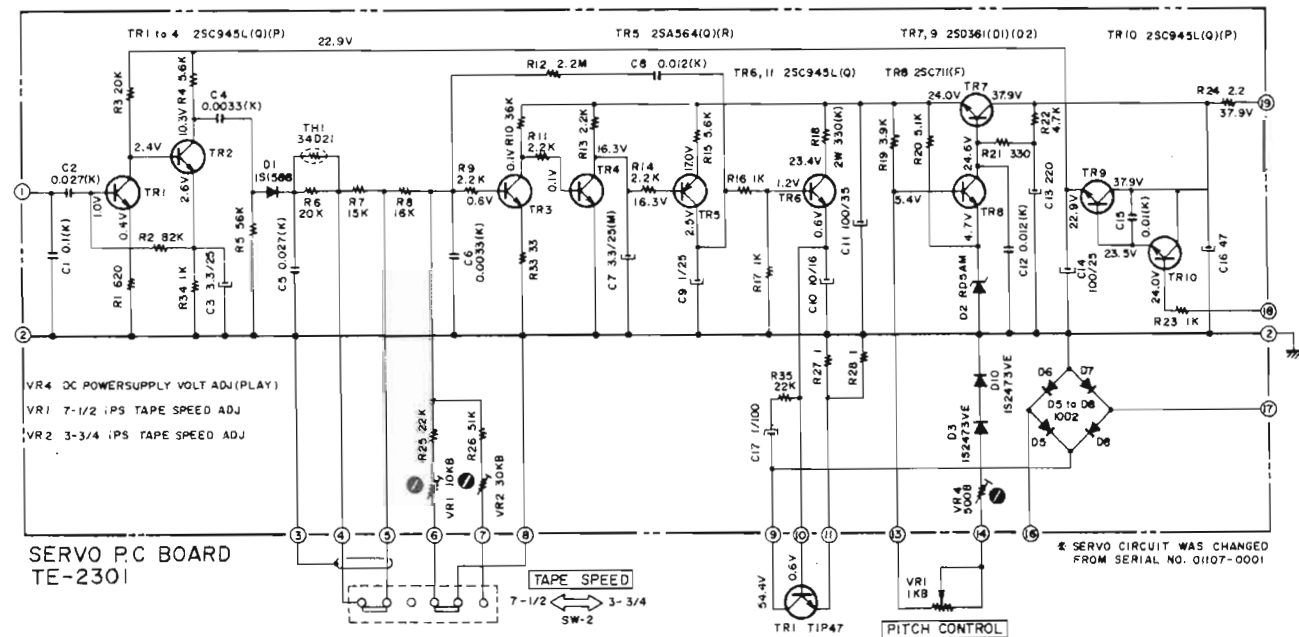
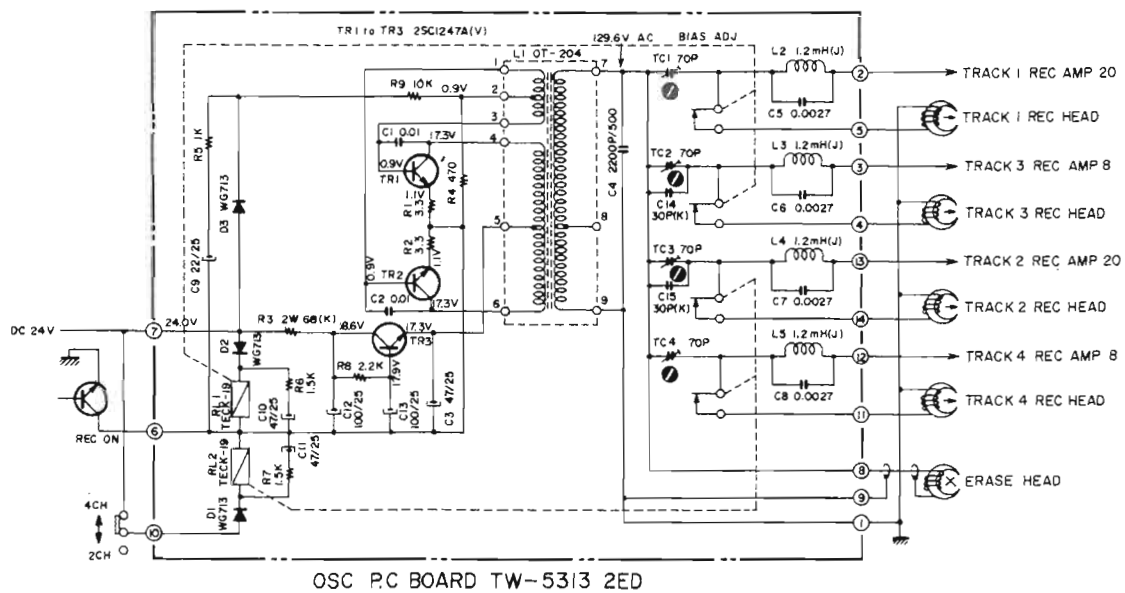
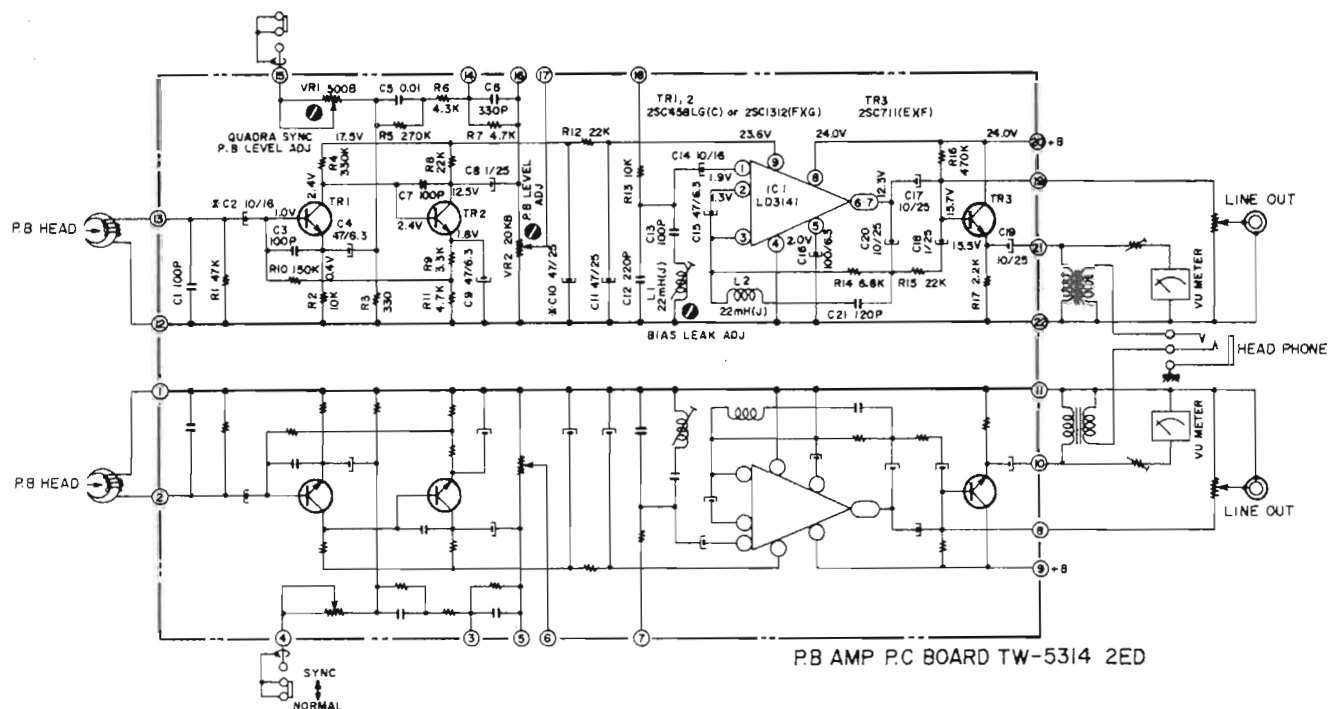
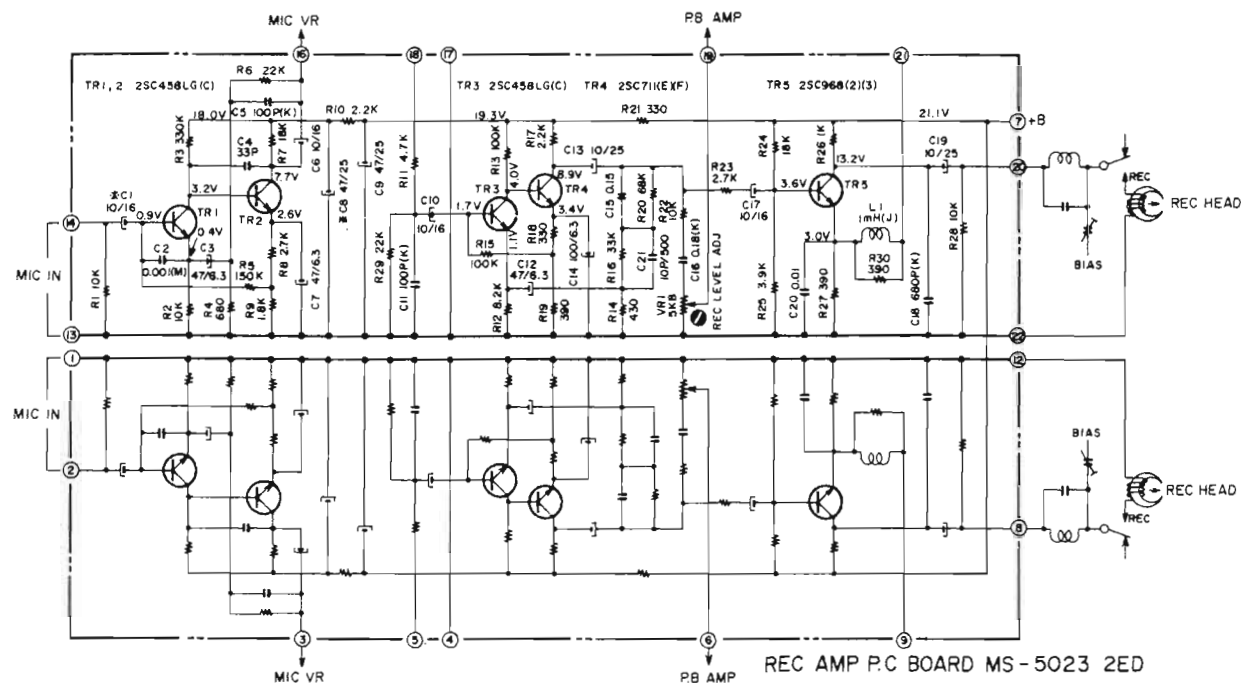
NOTE  
 1. UNLESS OTHERWISE SPECIFIED  
 ALL RESISTORS IN Ω 1/4W (J)  
 ALL CAPACITORS IN μF 50WV (J)  
 2. POWER TRANSFORMER BLOCK IS DIFFERENT  
 ACCORDING TO AREA



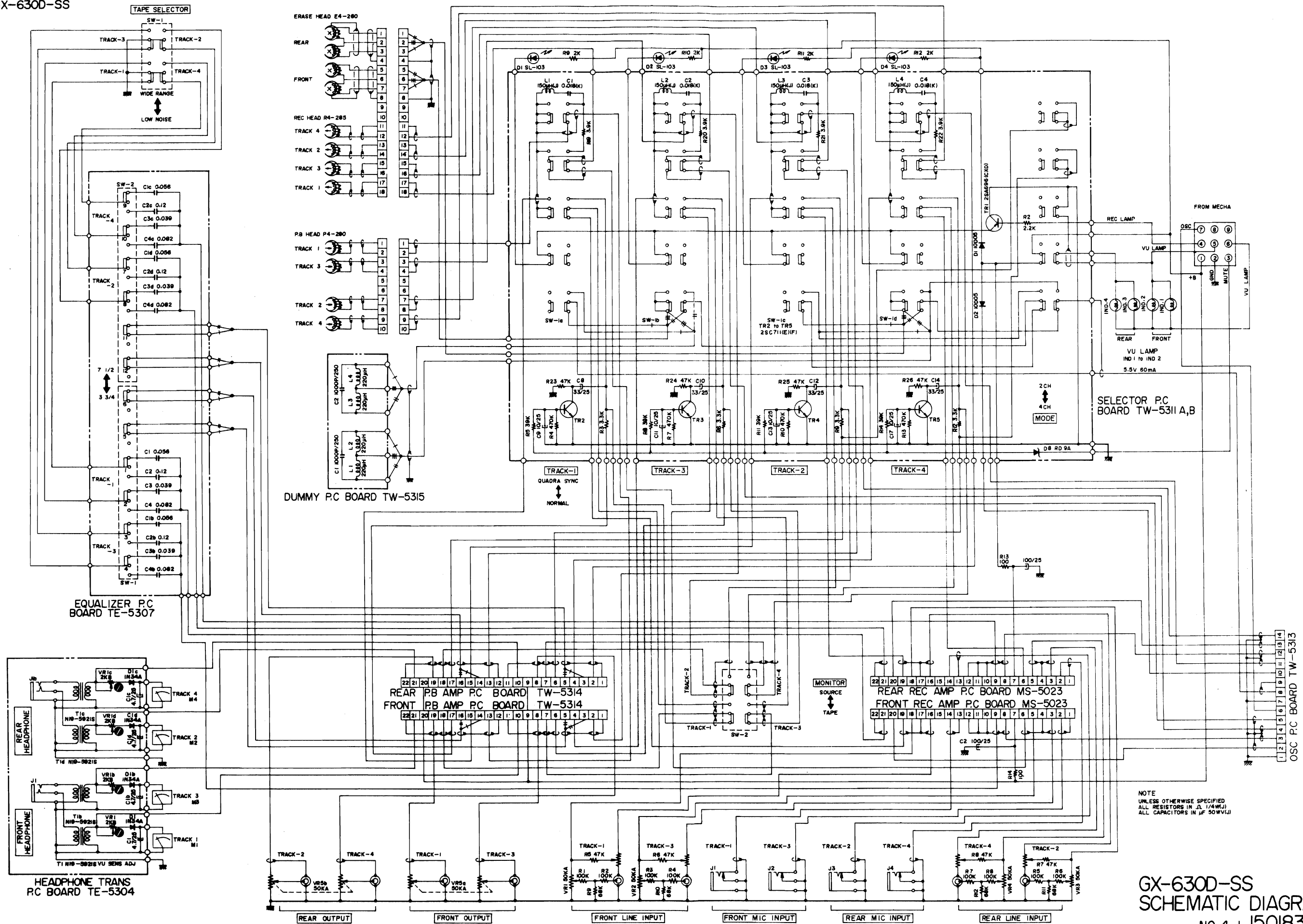
NOTE  
 1. UNLESS OTHERWISE SPECIFIED  
 ALL RESISTORS IN Ω 1/4W (J)  
 ALL CAPACITORS IN μF 50WV (J)  
 2. POWER TRANSFORMER BLOCK IS DIFFERENT  
 ACCORDING TO AREA



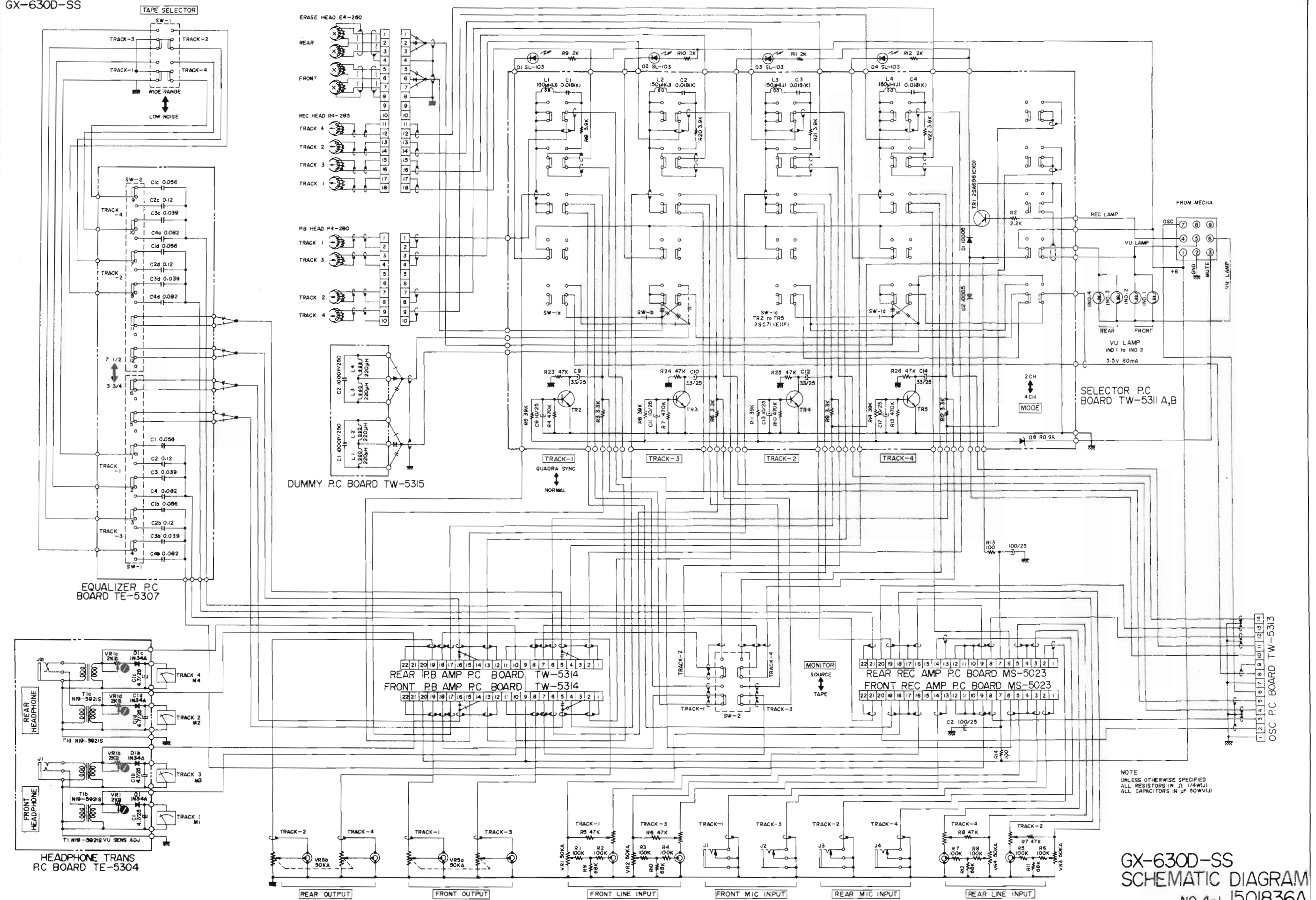
NOTE  
 1. UNLESS OTHERWISE SPECIFIED  
 ALL RESISTOR IN  $\Omega$  1/4W(J)  
 ALL CAPACITORS IN  $\mu$ F 50WV(J)  
 2. \* MARK INDICATES LOW LEAKAGE  
 CAPACITORS



NOTE  
 1. UNLESS OTHERWISE SPECIFIED  
 ALL RESISTOR IN  $\Omega$  (1/4W(J))  
 ALL CAPACITORS IN  $\mu$ F 50WV(J)  
 2. \* MARK INDICATES LOW LEAKAGE  
 CAPACITORS



NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN  $\Omega$  1/4W(J)  
ALL CAPACITORS IN  $\mu$ F 50V(VJ)



NOTE  
UNLESS OTHERWISE SPECIFIED  
ALL RESISTORS IN Ω, 1/4W/J  
ALL CAPACITORS IN μF 50V/J