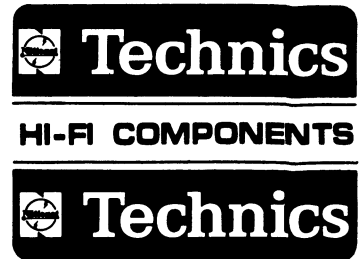


Service Manual



CD-4 FM/AM
4 CHANNEL/2 CHANNEL RECEIVER



MODEL SA-8000X

TECHNICAL SPECIFICATIONS (IHf) Specifications are subject to change without notice for further improvement.

AUDIO SECTION

Music power:		
4 CH operation		160W (4Ω)
2 CH Balanced Transformerless operation		160W (8Ω)
1 kHz RMS (continuous) power:		
4 CH operation (Each ch. driven)		30W/30W/30W/30W (4Ω)
(All ch. driven)		22W/22W/22W/22W (8Ω)
		18W+18W+18W+18W (4Ω)
		16W+16W+16W+16W (8Ω)
2 CH Balanced Transformerless (Each ch. driven)		57W/57W (8Ω)
(Both ch. driven)		42W+42W (8Ω)
20 Hz~20 kHz RMS (continuous) power:		
4 CH operation all ch. driven		13W+13W+13W+13W (8Ω)
2 CH Balanced Transformerless operation Both ch. driven		36W+36W (8Ω)
Power bandwidth (all ch. driven 8Ω):		5 Hz~40 kHz, -3 dB
Frequency response:	PHONO	RIAA standard curve ±1 dB
	AUX	10 Hz~50 kHz, +0 dB -3 dB
Residual hum & noise:		1.5 mV
Input sensitivity & impedance:	PHONO MM	1.5 mV/50 kΩ
	AUX, PLAYBACK	150 mV/60 kΩ
	MIC	2 mV/50 kΩ
S/N (IHf, A):	PHONO	70 dB
	AUX	90 dB
Tone control:	BASS	50 Hz, +13 dB -13 dB
	TREBLE	10 kHz, +10 dB -10 dB
Loudness control: (Volume at -30 dB)		50 Hz, +10 dB
REC OUT:		150 mV
Damping factor:		30 (8Ω)
Load impedance:	4 CH (4~16Ω)	Balanced Transformerless (8~16Ω)

Total harmonic distortion: 0.5%
Intermodulation distortion: (60 Hz : 7 kHz = 4 : 1, SMPTE) 0.7%

FM TUNER SECTION

Frequency range:		88~108 MHz
FM sensitivity (IHf):		1.9 μV
Alternate channel selectivity:		65 dB
Harmonic distortion:	MONO 0.3%	STEREO 0.4%
S/N:		65 dB
Frequency response:		20 Hz~13 kHz, ±1 dB
Image rejection (at 98 MHz):		55 dB
IF rejection (at 98 MHz):		60 dB
Spurious response rejection (at 98 MHz):		60 dB
Capture ratio:		1.8 dB
AM suppression:		50 dB
Stereo separation (at 1 kHz):		40 dB
Leak carrier (19 kHz, 38 kHz):		50 dB

AM TUNER SECTION

Frequency range:		520~1610 kHz
Sensitivity:		20 μV
Selectivity:		25 dB
Image rejection (at 1000 kHz):		40 dB
IF rejection (at 1000 kHz):		40 dB

GENERAL

Power consumption:		345 W
Power supply:		50/60 Hz 110/120/200/240 V
Dimensions (W x H x D):		495 x 160 x 400 mm (19 3/4" x 6 3/8" x 15 3/4")
Weight:		13.5 kg (29.8 lb)

TECHNISCHE DATEN (DIN 45 500) Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

VERSTÄRKERTEIL

Musikleistung:	4-Kanal Betrieb	4 x 40W (4Ω)
	Transformatorlos Ausgeglichen Betrieb	2 x 80W (8Ω)
Nennleistung 1 kHz:		
4-Kanal Betrieb Alle Kanäle in Betrieb	4 x 18W (4Ω)	4 x 16W (8Ω)
Transformatorlos Ausgeglichen Betrieb Beide Kanäle in Betrieb	2 x 42W (8Ω)	
Nennleistung 20 Hz~20 kHz:		
4-Kanal Betrieb Alle Kanäle in Betrieb	4 x 15W (4Ω)	4 x 13 W (8Ω)
Transformatorlos Ausgeglichen Betrieb Beide Kanäle in Betrieb	2 x 36W (8Ω)	
Harmonische Verzerrung: Nennleistung, bei 1000 Hz 4Ω		0.5%
Intermodulations Verzerrung: Nennleistung, bei 250 Hz: 8000 Hz = 4 : 1		0.7%
Leistungsbandsbreite (Alle Kanäle in Betrieb 4Ω):		5 Hz~40 kHz -3 dB
Frequenzgang:		10 Hz~50 kHz, -3 dB
Eingangsempfindlichkeit und-Impedanz:	PHONO MM	1.5 mV/50 kΩ
	AUX	150 mV/60 kΩ
	MIC	2 mV/50 kΩ
Tonband-Cinchbuchse:	PLAYBACK	150 mV/60 kΩ
	REC OUT	150 mV
Fremdspannungsabstand:		
bei Nennleistung	PHONO	60 dB
	AUX	78 dB
bei 50 mW Ausgangsleistung	PHONO	50 dB
	AUX	56 dB
Klangregler:	Tiefen-Bereich	+13 dB, -13 dB bei 50 Hz
	Höhen-Bereich	+10 dB, -10 dB bei 10 kHz
Loudness-Regler:		50 Hz, +10 dB
Dämpfungsfaktor:		15 bei 4Ω, 30 bei 8Ω
Ausgänge Lautsprecher:	4-Kanal Betrieb	4~16Ω
	Transformatorlos Ausgeglichen Betrieb	8~16Ω

UKW-TUNERTEIL

Empfangsbereich:		88~108 MHz
Antennenanschluß:		300 Ω (symmetrisch) 75 Ω (unsymmetrisch)
Empfindlichkeit (bei ±40 kHz Hub):		1.8 μV, 30 dB Fremdspannungsabstand 300 Ω
		1.5 μV, 20 dB Fremdspannungsabstand 300 Ω
		1.0 μV, 20 dB Fremdspannungsabstand 75 Ω
Klirrfaktor (bei =40 kHz Hub):	MONO 0.3%	STEREO 0.7%
Fremdspannungsabstand:	MONO 52 dB	STEREO 50 dB
Selektivität bei 400 kHz:		65 dB
Spiegelselektion (bei 98 MHz):		55 dB
ZF-Festigkeit (bei 98 MHz):		60 dB
Verzerrungsfestigkeit (bei 98 MHz):		60 dB
Gleich wellen-Selektion:		1.8 dB
AM-Unterdrückung:		50 dB
Stereo-Übersprechdämpfung:		40 dB bei 1 kHz
Pilotton-Unterdrückung:		48 dB bei 19 kHz, 58 dB bei 38 kHz
Begrenzung, Einsatzpunkt:		1.2 μV
Bandbreite:	ZF-Verstärker	350 kHz
	UKW-Demodulator	700 kHz

MW-TUNERTEIL

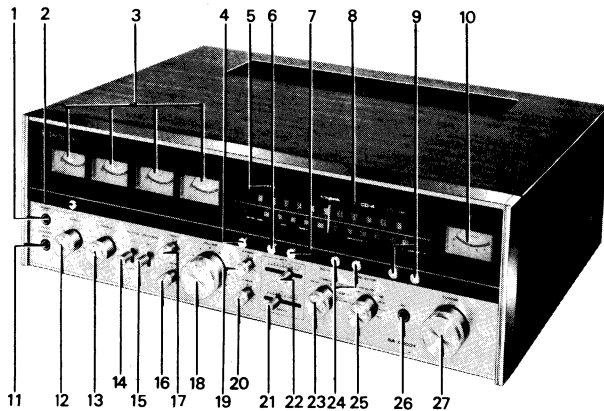
Empfangsbereich:		520~1610 kHz
Empfindlichkeit:		20 μV
Selektivität:		25 dB
Spiegelselektion:		40 dB
ZF-Festigkeit:		40 dB

ALLGEMEINE DATEN

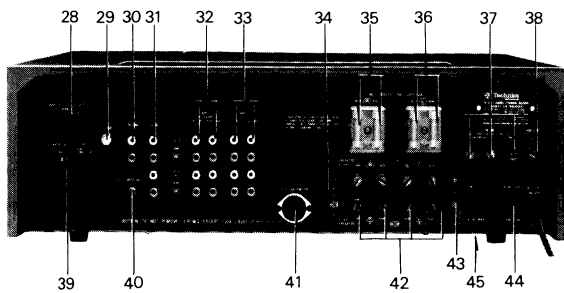
Leistungsaufnahme:		345 W
Netzspannung umschaltbar:		50/60 Hz, 110/120/200/240 V
Abmessungen (B x H x T):		495 x 160 x 400 mm
Gewicht:		13.5 kg

MATSUSHITA ELECTRIC
MATSUSHITA ELECTRIC TRADING CO., LTD.
P. O. Box 288, Central Osaka, Japan

LOCATION OF CONTROLS

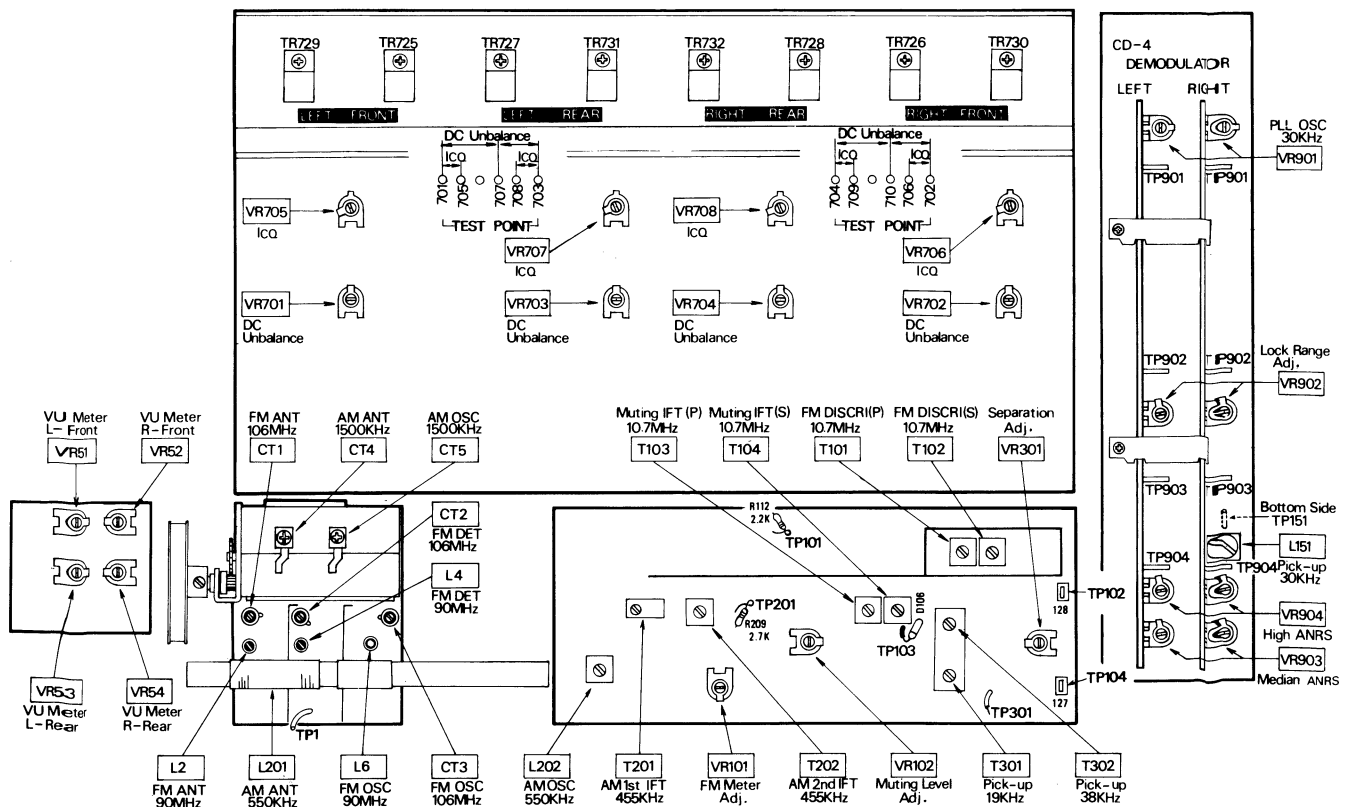


1. HEADPHONES JACK Front Channel
2. POWER SOURCE SWITCH (S8)
3. V.U. [OUTPUT LEVEL] METER
4. V.U. METER RANGE SWITCH (S11)
5. FM STEREO INDICATOR
6. TAPE MONITOR SWITCH TAPE 1 (S3)
7. TAPE MONITOR SWITCH TAPE 2 (S4)
8. CD-4 CHANNEL RADAR
9. CD-4 CARRIER LEVEL ADJUSTMENT [Left and Right] (VR7, 8)
10. SIGNAL STRENGTH METER
11. HEADPHONES JACK Rear Channel
12. BASS CONTROL (VR602)
13. TREBLE CONTROL (VR603)
14. MUTING SWITCH (S5)
15. LOUDNESS SWITCH (S6)
16. LEFT REAR LEVEL CONTROL (VR4)
17. LEFT FRONT LEVEL CONTROL (VR3)
18. MAIN VOLUME CONTROL (VR601)
19. RIGHT FRONT LEVEL CONTROL (VR5)
20. RIGHT REAR LEVEL CONTROL (VR6)
21. AFD [DEPTH] CONTROL (VR2)
22. AFD [WIDTH] CONTROL (VR1)
23. MODE SWITCH (S2)
24. CD-4 SEPARATION ADJUSTMENT [Left and Right] (VR9, 10)
25. SELECTOR SWITCH (S1)
26. MICROPHONE JACK
27. TUNING CONTROL



28. CARRIER LEVEL ADJUSTMENT SWITCH (S9)
29. GROUND TERMINAL
30. PHONO INPUT TERMINALS
31. AUX INPUT TERMINALS
32. TAPE MONITOR TERMINALS TAPE 1
33. TAPE MONITOR TERMINALS TAPE 2
34. BALANCED TRANSFORMER LESS SWITCH (S7)
35. RIGHT CHANNEL CIRCUIT PROTECTION FUSES
36. LEFT CHANNEL CIRCUIT PROTECTION FUSES
37. EXT FM ANTENNA TERMINALS
38. EXT AM ANTENNA TERMINAL
39. CARTRIDGE SELECTOR SWITCH (S10)
40. 4CH MPX OUTPUT TERMINAL
41. 4CH REMOTE BALANCER CONNECTION SOCKET
42. SPEAKER TERMINALS
43. AC POWER OUTLET Switched
44. AC POWER OUTLET Unswitched
45. VOLTAGE SELECTOR SWITCH (S12).....(Set Bottom Side)

ALIGNMENT POINTS



■ CD-4 RECORD PLAY

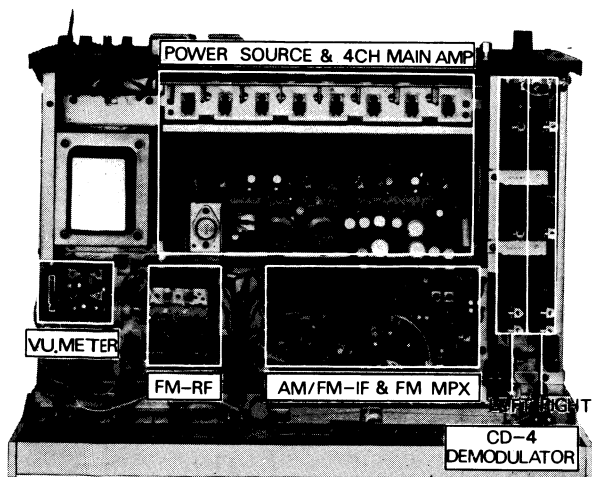
Before playing

1. Connect all of the equipment required for CD-4 play. (Refer to the instruction booklets.)
2. According to the cartridge to be used, set the CARTRIDGE SELECTOR switch of the unit to the proper position.
3. Set the MODE switch to the 4CH DISCRETE position.
4. Set the SELECTOR switch to the CD-4 position.
5. While playing the included CD-4 test record (No. SPR111-1), assure that the sounds are emitted from the speakers of each channel.

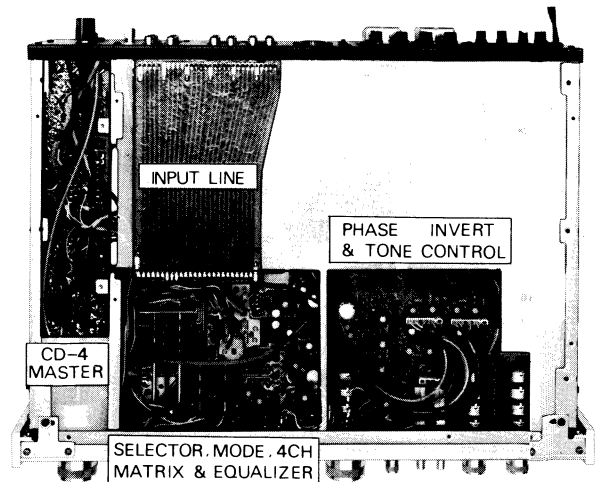
MAIN VOLUME (VR601) CHANNEL LEVEL (VR3, 4, 5, 6)	CARRIER LEVEL CONTROL L(VR7), R(VR8)	SEPARATION CONTROL L(VR9), R(VR10)	CARRIER LEVEL ADJUST SWITCH (S9)	PORTION OF THE INCLUDED TEST RECORD TO BE PLAYED	REMARKS
CARRIER LEVEL ALIGNMENT					
Minimum	Turn completely counterclockwise (to minimum)	Optional Position	L	SIDE A BAND 1	Slowly turn the(L) carrier level control clockwise until the 4 CH RADAR light just illuminates.
			R	SIDE A BAND 1	Slowly turn the(R) carrier level control clockwise until the 4 CH RADAR light just illuminates.
Notes : 1. If the carrier level controls (VR7, VR8) are turned too far, return them to the minimum position and carefully repeat the carrier level control adjustment from the beginning. 2. After the carrier level control adjustment has been completed, set the carrier level adjust switch (S9) to the NORMAL position.					
SEPARATION ALIGNMENT					
Turn VR601 to the max. position. Turn only L _F (VR3) & R _F (VR4) to their min. positions.	Remaining at the position where the carrier level was adjusted.	Variable	NORMAL	SIDE A BAND 2	Turn the left side separation control until the left rear sound becomes minimum.
				SIDE A BAND 3	Turn the right side separation control until the right rear sound becomes minimum.

Note : When the adjustment procedure is completed, set L_F, R_F, L_R, R_R, and the main volume controls back to their original positions.

■ LOCATION OF CIRCUIT BOARDS



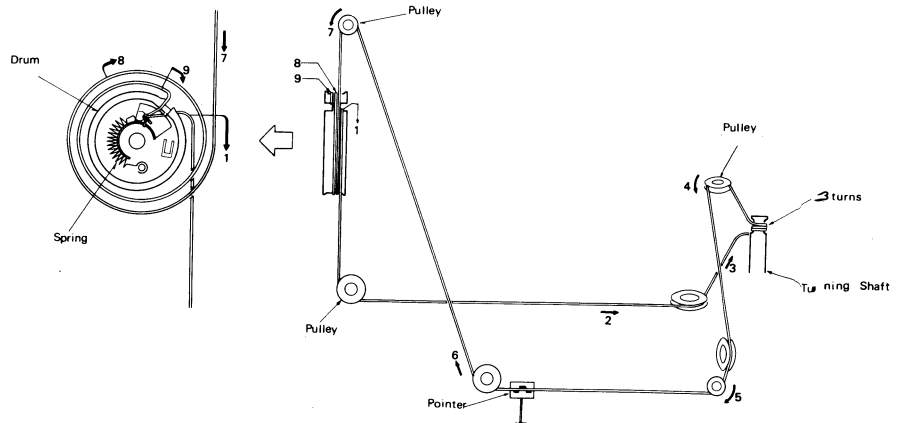
Top View



Bottom View

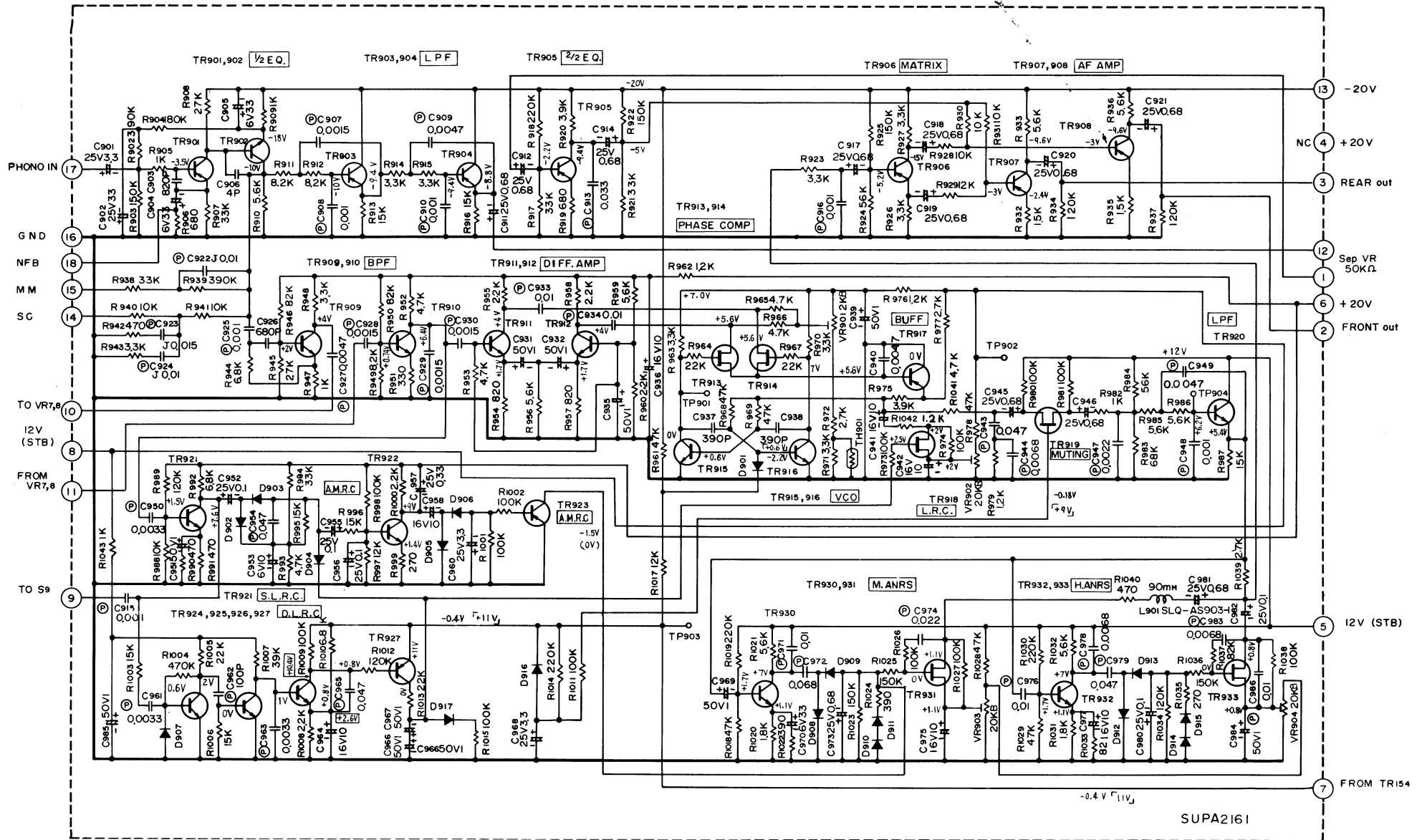
■ DIAL CORD INSTALLATION GUIDE

1. Dial cord length is 63 3/4" (160cm)
2. Tuning gang is positioned at maximum capacity. (Frequency is minimum)
3. Arrow marks (1 ~ 9) indicate correct order and direction of stringing dial cord.



Schematic Diagram Model SA-8000X

CD-4 Demodulator



TR 917, 923, 927 2SA 564
 TR 901, 903, 904, 905 2SA 721
 906, 907, 908 2SA 721
 TR 909, 910, 911, 912, 915, 916, 921 2SC 828
 922, 924, 925, 926, 930, 932 2SC 828
 TR 902, 920 2SC 1327

TR 913, 914, 918, 919, 931, 933 2SK 30
 D 910, 911, 914, 915 MA 26-1
 D 901, 917 MA 150
 D 902, 903, 904, 905, 906 OA 99
 907, 908, 909, 912, 913, 916

TH 901 RRT 202-2

STANDARD VOLTAGE
 [Symbol] CD 4 Operation
 [Symbol] DLRC Operation
 [Symbol] AMRC Operation

ALIGNMENT INSTRUCTIONS.....READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Notes :

- | | |
|--|--|
| 1. Volume control Minimum | 5. The adjustment should be started 1~2 minutes after setting the power switch to the ON position. |
| 2. Balanced transformer less switch..... 4CH | 6. Before adjusting, Icq adjusting volumes (VR805, VR806, VR807 and VR808) as shown in Alignment |
| 3. Other controls Optional position | Point Location. Refer to page 2. |
| 4. Maintain line voltage at rated voltage. | |

CIRCUIT	VTVM CONNECTION	ADJUSTMENT POINTS	REMARKS
MAIN AMP ALIGNMENT			
1	DC Unbalance Connect DC VTVM to TP702 and TP710 (R-Front) , TP701 and TP707 (L-Front) terminal. Connect DC VTVM to TP704 and TP710 (R-Rear) , TP703 and TP707 (L-Rear) terminal.	VR702 (R-Front) VR701 (L-Front) VR704 (R-Rear) VR703 (L-Rear)	Make sure that DC VTVM becomes 0mV.
2	Icq Connect DC VTVM to TP702 and TP706 (R-Front) , TP701 and TP705 (L-Front) terminal. Connect DC VTVM to TP704 and TP709 (R-Rear) , TP703 and TP708 (L-Rear) terminal.	VR706 (R-Front) VR705 (L-Front) VR708 (R-Rear) VR707 (L-Rear)	Make adjustments so that the indication on DC VTVM becomes 4mV.

Notes :

- | | |
|---|--|
| 1. Volume control Maximum (AM-RF)
Minimum (AM-IF, FM-IF)
Variable (FM-RF) | 5. Muting switch OFF |
| 2. Bass and treble control Center | 6. Balanced transformer less switch..... 4CH |
| 3. Band selector switch AM
FM-Auto (FM-RF, FM-IF) | 7. Tape-monitor switch Source |
| 4. Loudness switch OFF | 8. Mode switch Stereo |
| | 9. Maintain line voltage at rated voltage. |
| | 10. Output of signal generator should be no higher than necessary to obtain an output reading. |

SIGNAL GENERATOR or SWEEP GENERATOR		RECEIVER DIAL SETTING [DISTANCE]	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
CONNECTION	FREQUENCY				
AM ALIGNMENT					
3	High side through 0.001 μ F to antenna terminal. Common to chassis. 455 kHz (20kHz Sweep)	Point of non-interference	Connect vert. amp. of scope to TP201 .	T201 (1st IFT) T202 (2nd IFT)	Adjust for maximum output.
4	Fashion loop of several turns of wire and radiate signal into loop of receiver. 550 kHz (30% Mod. with 400Hz)	550 kHz [4.6mm ($\frac{3}{16}$ ")]	Connect meter to speakers terminal of set.	L202 (OSC Coil) L201 (ANT Coil)	Adjust for maximum output. Adjust L201 by moving coil bobbin along ferrite core.
5	Fashion loop of several turns of wire and radiate signal into loop of receiver. 1500 kHz (30% Mod. with 400 Hz)	1500 kHz [131mm ($5\frac{1}{2}$ ")]	Connect meter to speakers terminal of set.	CT5 (OSC Trimmer) CT4 (ANT Trimmer)	Adjust for maximum output. Repeat steps (4) and (5).

FM-IF ALIGNMENT

6	/	Point of non-interference.	Connect DC VTVM between TP102 and TP104 .	T102 (FM DISCRI IFT)(S)	Make sure that VTVM becomes 0V.
7	High side through 0.001 μ F to TP1 . Common to chassis. 10.7 MHz (400kHz Sweep)	Point of non-interference.	Connect vert. amp. of scope through detector to TP101 . Refer to figure 1.	/	Confirm center frequency.
8	High side through 0.001 μ F to TP1 . Common to chassis. 10.7 MHz (400kHz Sweep)	Point of non-interference.	Connect vert. amp. of scope to TP103 .	T103 (Muting IFT) (P) T104 (Muting IFT) (S)	Adjust for maximum sharp and proper linearity. Adjust to center frequency as step 7. Refer to figure 2.

FM-RF ALIGNMENT

9	Connect to FM antenna terminal through FM dummy antenna. (Refer to fig. 3) 90 MHz (100% Mod. with 400 Hz)	90 MHz [17.3mm ($\frac{9}{32}$ ")]	Output meter across speaker terminals.	L6 (FM OSC Coil) * L4 (FM DET Coil) L2 (FM ANT Coil)	Adjust for maximum output.
10	Connect to FM antenna terminal through FM dummy antenna. (Refer to fig. 3) 106 MHz (100% Mod. with 400 Hz)	106 MHz [122.7mm ($4\frac{7}{32}$ ")]	Output meter across speaker terminals.	CT3 (FM OSC Trimmer) CT2 (FM DET Trimmer) CT1 (FM ANT Trimmer)	Adjust for maximum output. Repeat steps (9) and (10).

* Use six cornered alignment tool for aligning FM OSC coil (L6).

MUTING LEVEL ALIGNMENT

Note : Muting switch.....ON

11	Connect to FM antenna terminal through FM dummy antenna. 98 MHz (100% Mod. with 400 Hz) Output 28 dB	98 MHz	Output meter or speaker across speaker terminals.	VR102 (Muting Level)	Adjust so that output can be obtained.
----	--	--------	---	----------------------	--

SIGNAL GENERATOR		RECEIVER DIAL SETTING	INDICATOR (DISTORTION METER and SIGNAL METER)	ADJUSTMENT POINTS	REMARKS
CONNECTION	FREQUENCY				
FM-MONO DISTORTION ALIGNMENT					
Note: Muting switch OFF					
12	Connect to FM antenna terminal through FM dummy antenna.	98 MHz (100% Mod. with 400 Hz) Output 72 dB	98 MHz	Connect distortion meter to speaker terminals.	T101 (FM DISCRI IFT) (P) Adjust for minimum distortion.
SIGNAL METER ALIGNMENT					
13	Connect to FM antenna terminal through FM dummy antenna.	98 MHz (30% Mod. with 400 Hz) Output 72 dB	98 MHz	Signal meter of set.	VR101 (Indicated Position) Adjust for about 4.6 point of signal meter indication.
Notes:					
Stereo-modulator Connect stereo-modulator output to EXT. MOD. terminal of signal generator. Internal OSC 1kHz. Pilot signal modulation 10%.					
Signal generator Frequency approximately 98 MHz. Output level 72 dB. Modulation mode to FM.					
1. Band selector FM-Auto					
2. Bass and treble control Center					
3. Balanced transformer less switch 4CH					
4. Mode switch Stereo					
5. Maintain line voltage at rated voltage					
6. Muting switch OFF					
7. Loudness-switch OFF					
8. Tape monitor switch Source					
9. Dummy load Source					
19kHz COIL and PHASE ALIGNMENT					
SIGNAL GENERATOR CONNECTION		STEREO MODULATOR MODE and MOD. RATE	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
14	FM antenna terminal through dummy antenna.	Pilot signal to ON.	Connect scope to TP ₃₀₁ , Common to chassis.	T ₃₀₁ (19 kHz Coil)	Adjust for maximum output.
15	"	L (or R) 30% Mod.	Connect scope to speaker terminals.	T ₃₀₂ (38 kHz Coil) (Phase Alignment)	Adjust for minimum right (or left) output.
SEPARATION ALIGNMENT					
16	FM antenna terminal through dummy antenna.	L (and R) 30% Mod.	Output meter across speaker terminals through low pass filter. (Refer to fig. 4)	VR ₃₀₁ (Separation)	Adjust for minimum right (and left) output.

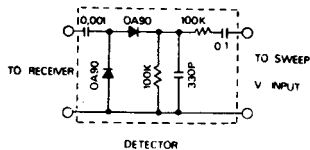


Fig. 1

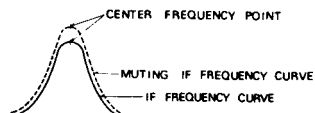
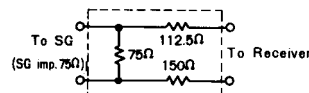
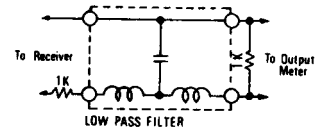


Fig.2



300Ω FM Dummy Antenna

Fig. 3



LOW PASS FILTER (fc=15kHz-19kHz)

Fig.4

FM-RF ALIGNMENT INSTRUCTIONS Only set for Germany

ABGLEICHANWEISUNGEN.....VOR DEM ABGLEICH SORGFÄLTIG DURCHLESEN					
MESSENDER		SKALENZEIGER-EINSTELLUNG DES EMPFANGERS [ABSTAND]	ANGEIGE (RÖHRENVOLTMETER ODER OSZILLOGRAPH)	ABGLEICH	BEMERKUNGEN
SCHALTUNG	FREQUENZ				
FM HF-ABGLEICH					
Anschluß an den FM Antennenanschluß über die künstliche FM Antenne	87.5 MHz (100% Mod bei 400Hz)	87.5MHz [0mm]	Output meter über Lautsprecher-schwingspule anschließen	L ₆ (Oszillatorspule)	Auf max. Ausgang abgleichen
"	90 MHz (")	90 MHz	"	L ₄ (Zwischenkreis) L ₂ (Antennenspule)	"
"	106 MHz (")	106 MHz [122.7mm]	"	CT ₃ (OSZ. Trimmer) CT ₂ (DET. Trimmer) CT ₁ (ANT. Trimmer)	"

CD-4 DEMODULATOR ALIGNMENT INSTRUCTIONS

Notes :

- | | |
|--|---|
| 1. Volume control..... Minimum (ANRS, MUTING)
2. Channel level control Maximum
3. Balanced transformer less switch..... 4 CH
4. Cartridge selector switch MM (or SC)
5. Carrier level adjustment switch..... NORMAL
6. Selector switch..... CD-4
7. Mode switch 4 CH DISCRETE
8. Tape monitor switch 1 & 2 Source | 9. Bass & treble control..... Flat
10. Loudness switch..... OFF
11. Separation control (L & R) Minimum
12. Maintain line voltage at rated voltage.
13. Before adjusting, turn volume control VR901, VR902, VR903 and VR904 as shown in the Alignment Points Location. Refer to pag 2.
14. CD-4 demodulator alignment record No. RG-1256, RG-1257
15. Use a player and MM (or SC) cartridge for CD-4 play. |
|--|---|

OSCILLATOR (or CD-4 ALIGNMENT RECORD) CONNECTION	INPUT FREQUENCY & INPUT LEVEL	INDICATOR (VTVM & SCOPE)	ADJUSTMENT POINTS	REMARKS
--	-------------------------------	--------------------------	-------------------	---------

AUTOMATIC NOISE REDUCTION SYSTEM (ANRS) ALIGNMENT

1 Connect oscillator to TP904 (Right & Left) through electrolytic capacitor (25V, 10 μ F). Refer to fig. 1.	1 kHz (92 mV)	Connect VTVM to R _F & L _F REC OUT terminals through ATT 2. Refer to fig. 1.	ATT 2 (Attenuator)	Adjust ATT 2 until the output of R _F becomes 0dB when the right input is applied, and until the output of L _F becomes 0dB when the left input is applied.
2 Connect oscillator to TP904 (Right & Left) through electrolytic capacitor (25V, 10 μ F). Refer to fig. 1.	6.3 kHz (-10dB from Step 1)	Connect VTVM to R _F & L _F REC OUT terminals through ATT 2. Refer to fig. 1.	VR904 (High ANRS)	Adjust VR904 until the output becomes -15 dB (right & left sides).
3 Connect oscillator to TP904 (Right & Left) through electrolytic capacitor (25V, 10 μ F). Refer to fig. 1.	630 Hz (-10dB from Step 1)	Connect VTVM to R _F & L _F REC OUT terminals through ATT 2. Refer to fig. 1.	VR903 (Median ANRS)	Adjust VR903 until the output becomes -16.4dB (right & left sides).

MUTING COIL ALIGNMENT

4 Connect oscillator to PHONO input of set's left terminal. Or play CD-4 alignment record (RG-1256 BAND 9). Refer to fig. 2.	30 kHz \pm 50 Hz (1 mV)	Connect scope to TP151 *	VR7 (Left Carrier Level)	Adjust VR7 until a sine wave with the best appearance can be obtained.
5 Connect oscillator to PHONO input of set's left terminal. Or play CD-4 alignment record (RG-1256 BAND 9). Refer to fig. 2.	30 kHz \pm 50 Hz (1 mV)	Connect scope to TP151 *	L151 ** (Muting Coil)	Adjust for maximum proper linearity.

* TP151 is on the rear side of the CD-4 MASTER P.C.B.

** L151 can be easily adjusted if the right side of the CD-4 DEMODULATOR is pulled out.

PLL FREE RUNNING FREQUENCY ALIGNMENT

Notes :

1. Be sure to connect the right side demodulator **TP902** with **TP903***, and that the CD-4, 4 CH RADAR light is illuminated. Adjust the left side in the same manner as described above.
2. Correctly adjust the rotational speed of the player to 33-1/3 rpm.
3. Set the CARRIER LEVEL ADJUST switch (S9) to the NORMAL position.
4. Connect the probe (Impedance more than 1M Ω , less than 30 pF) to scope.

SCOPE or SPEAKER CONNECTION	CD-4 ALIGNMENT RECORD	ADJUSTMENT POINTS	REMARKS
6 Connect scope to POINT A of S9 through probe. Refer to fig. 3.	RG-1256 BAND 9	VR8 (Right Carrier Level Control)	Adjust VR8 until a 50 mV P-P wave is measured using the scope.
7 Connect speaker or scope to R _R (or R _F) speaker terminals.	RG-1256 BAND 9	VR901 (Right PLL Free Running)	Listening to the beat sound from speakers, or by observing the beat wave form, adjust VR901 until the beat frequency disappears.
8 Connect scope to POINT B of S9 through probe. Refer to fig. 3.	RG-1256 BAND 9	VR7 (Left Carrier Level Control)	Adjust VR7 until a 50 mV P-P wave is measured using the scope.
9 Connect speaker or scope to L _R (or L _F) speaker terminals.	RG-1256 BAND 9	VR901 (Left PLL Free Running)	Listening to the beat sound from speakers, or by observing the beat wave form, adjust VR901 until the beat frequency disappears.

* Disconnect **TP902** from **TP903** after the adjustment has been completed.

SCOPE or SPEAKER CONNECTION	CD-4 ALIGNMENT RECORD	ADJUSTMENT POINTS	REMARKS
STATIC LOCK RANGE CONTROL ALIGNMENT			
Note: Adjust the carrier level using the included CD-4 test record (SPR111-1). (Refer to "CD-4 RECORD PLAY" for the adjusting method.) Set the CARRIER LEVEL ADJUST switch to the NORMAL position after adjustment has been made.			
10	Connect scope to POINT [A] of S9 through probe. Refer to fig. 3.	RG-1257 BAND 4 (The second from the inner side)	Measure the voltage level of the wave using the scope. This is defined as the specified voltage. Refer to fig. 4.
11	Connect scope to POINT [A] of S9 through probe. Refer to fig. 3.	RG-1257 BAND 4 (The second from the inner side)	VR8 (Right Carrier Level Control)
12	Connect scope to R _R (or R _F) speaker terminals.	RG-1257 BAND 4 (The second from the inner side)	VR902 (Right Static Lock Range)
13	Connect scope to POINT [B] of S9 through probe. Refer to fig. 3.	RG-1257 BAND 4 (The second from the inner side)	Measure the voltage level of the wave using the scope. This is defined as the specified voltage. Refer to fig. 4.
14	Connect scope to POINT [B] of S9 through probe. Refer to fig. 3.	RG-1257 BAND 4 (The second from the inner side)	VR7 (Left Carrier Level Control)
15	Connect scope to L _R (or L _F) speaker terminals.	RG-1257 BAND 4 (The second from the inner side)	VR902 (Left Static Lock Range)

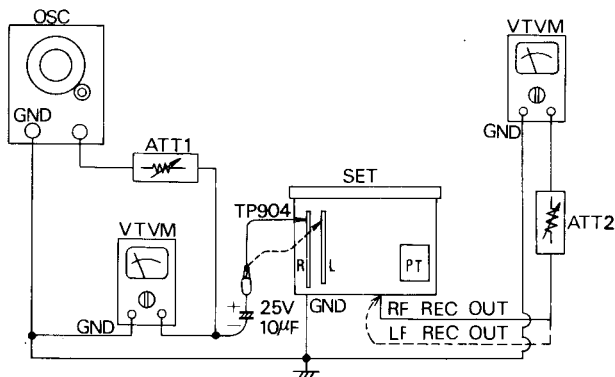


Fig. 1

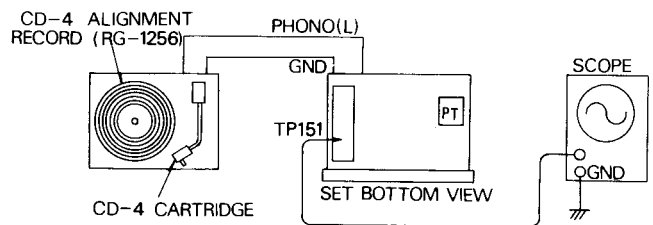


Fig. 2

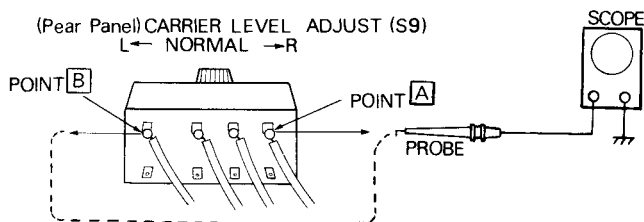


Fig. 3



Fig. 6

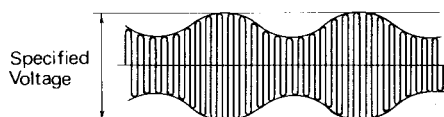
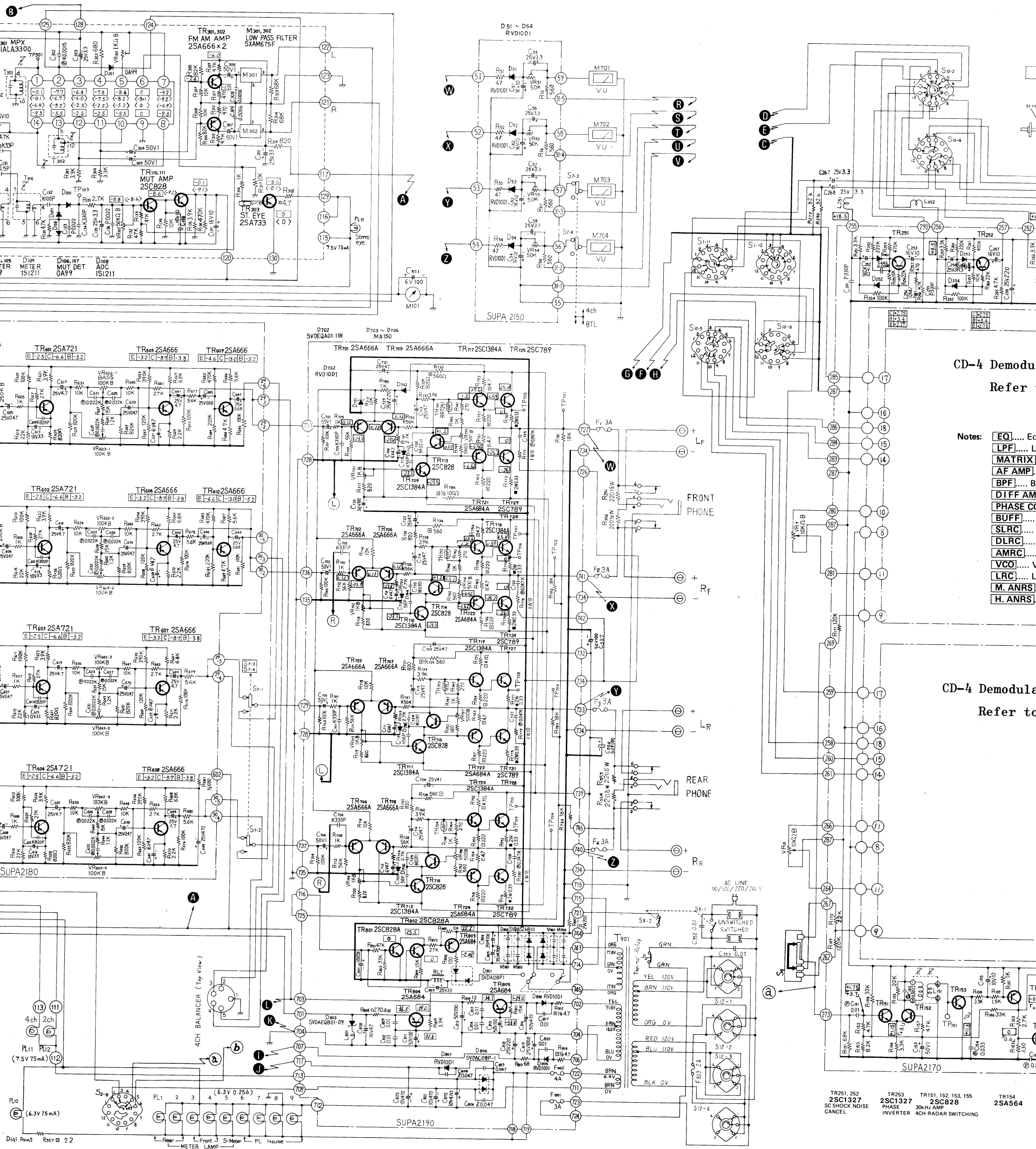


Fig. 4



Fig. 5

Diagram may be modified at any time with the development of new technology.)



CD-4 Demodulator
Refer to

- Notes:
- [EQ]..... E
 - [LFP]..... L
 - [MATRIX]..... M
 - [AF AMP]..... A
 - [BPF]..... B
 - [DIFF AM]..... D
 - [PHASE CO]..... P
 - [BUFF]..... U
 - [SLRC]..... S
 - [DLRC]..... L
 - [AMRC]..... A
 - [VCO]..... V
 - [LRC]..... L
 - [M. ANRS]..... M
 - [H. ANRS]..... H

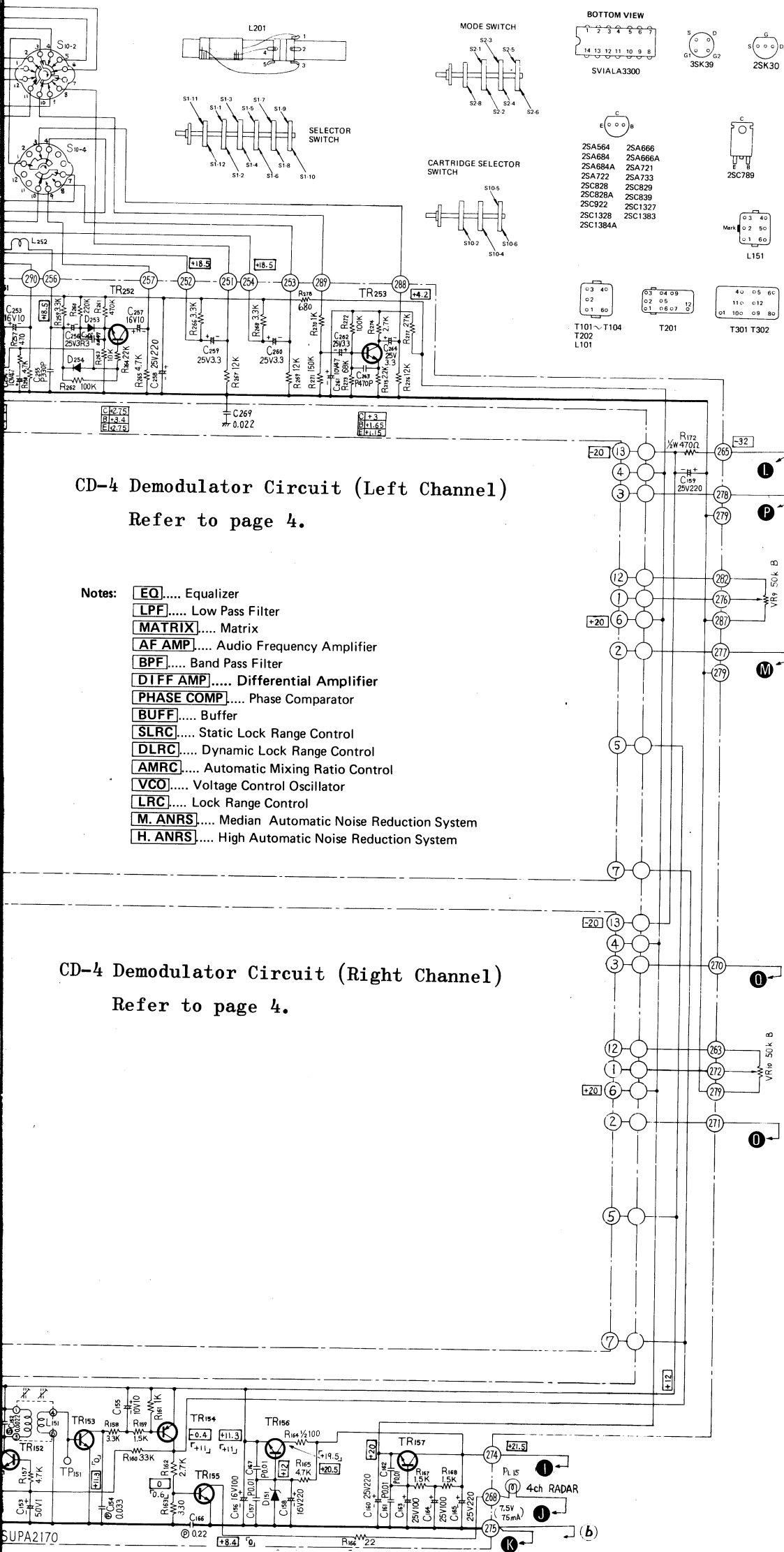
CD-4 Demodulator
Refer to

TR251 252
2SC1327
3C SHOCK NOISE
CANCEL

TR253
2SC1327
PHASE
INVERTER

TR151, 152, 153, 155
2SC828
30kHz AMP

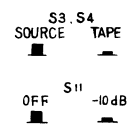
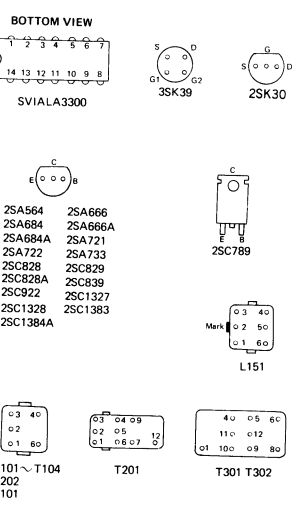
TR154
2SA564
4CH RADAR SWITCHING



CD-4 Demodulator Circuit (Left Channel)
Refer to page 4.

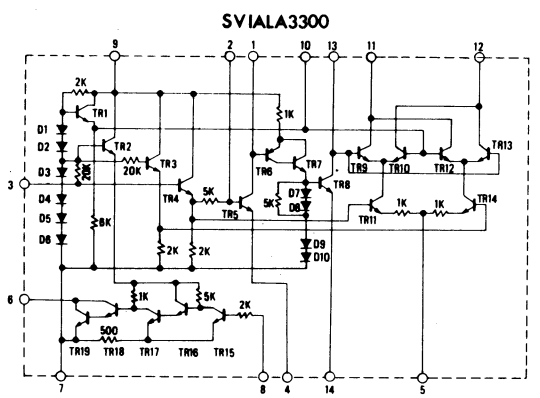
- Notes:**
- EQ**..... Equalizer
 - LPF**..... Low Pass Filter
 - MATRIX**..... Matrix
 - AF AMP**..... Audio Frequency Amplifier
 - BPF**..... Band Pass Filter
 - DIFF AMP**..... Differential Amplifier
 - PHASE COMP**..... Phase Comparator
 - BUFF**..... Buffer
 - SLRC**..... Static Lock Range Control
 - DLRC**..... Dynamic Lock Range Control
 - AMRC**..... Automatic Mixing Ratio Control
 - VCO**..... Voltage Control Oscillator
 - LRC**..... Lock Range Control
 - M. ANRS**..... Median Automatic Noise Reduction System
 - H. ANRS**..... High Automatic Noise Reduction System

CD-4 Demodulator Circuit (Right Channel)
Refer to page 4.



- Notes:**
1. S1-1 ~ S1-12: Selector switch in "AM" position
AM → FM AUTO → PHONO → CD-4 → AUX → MIC
 2. S2-1 ~ S2-8: Mode switch in "MONO" position.
MONO → STEREO → PHASE 90° → PHASE 0° → 4CH DISCRETE
- 4CH MATRIX
3. S3-1 ~ S3-4: Tape monitor (TAPE 1) switch in "SOURCE" position.
 4. S4-1 ~ S4-4: Tape monitor (TAPE 2) switch in "SOURCE" position.
 5. S5: Muting switch in "OFF" position.
 6. S6-1 ~ S6-4: Loudness switch in "OFF" position.
 7. S7-1 ~ S7-4: Balanced transformerless switch in "4CH" position.
 8. S8-1, S8-2: Power source switch in "OFF" position.
 9. S9: Carrier level adjustment switch in "NORMAL" position.
L → NORMAL → R
 10. S10-1 ~ S10-4: Cartridge selector switch in "MM" position.
MM → SEMI CONDUCTOR A → SEMI CONDUCTOR B
 11. S11-1 ~ S11-4: VU meter range switch in "OFF" position.
 12. S12-1 ~ S12-4: Voltage selector switch in "110V" position
MARK 110V → 120V → 220V → 240V
 13. RLY: Speakers protection relay in "OFF" position.
 14. DC voltage measurements are taken with DC voltmeter from chassis ground.
- FM/AM No signal condition.
 < > FM stereo signal reception or FM muting to "ON" position.
 ▭ CD-4 operation

- VR1: AFD control WIDTH
- VR2-1, VR2-2: AFD control DEPTH
- VR3 ~ VR6: Channel level control
- VR7, VR8: Carrier level control
- VR9, VR10: Separation control
- VR101: FM meter adjustment
- VR102: FM muting level adjustment
- VR301: FM separation adjustment
- VR601-1 ~ VR601-4: Main volume control
- VR602-1 ~ VR602-4: Bass control
- VR603-1 ~ VR603-4: Treble control
- VR701 ~ VR704: DC unbalance adjustment
- VR705 ~ VR708: ICQ adjustment
- VR901 (Left & Right): PLL free running frequency adjustment
- VR902 (Left & Right): Lock range control adjustment
- VR903 (Left & Right): Median automatic noise reduction system adjustment
- VR904 (Left & Right): High automatic noise reduction system adjustment



- TR151, 152, 153, 155
- 27 2SC828
- 30KHz AMP
- ER 4CH RADAR SWITCHING
- TR154 2SA564
- TR156, 157 2SC1383
- 251-D254 MA150
- D151 SVDAEQA0112R

■ TO REMOVE TUNER

1. Remove four (4) cabinet mounting screws.
(Refer to Cabinet and Chassis Parts Location on page 19.)
2. Remove cabinet from chassis.
3. Remove fourteen (14) control knobs from front panel.
4. Remove six (6) front panel mounting black screws.
(Refer to Cabinet and Chassis Parts Location on page 19.)
5. Remove front panel from chassis.
6. Remove ten (10) tuner mounting black screws.
nos. 1 ~ 10 as figure 1 and 2.
7. Loosen power switch mounting screws, nos. 11, 12 and slide
power switch as figure 1.
8. Then tuner can be moved in front of chassis as figure 3.

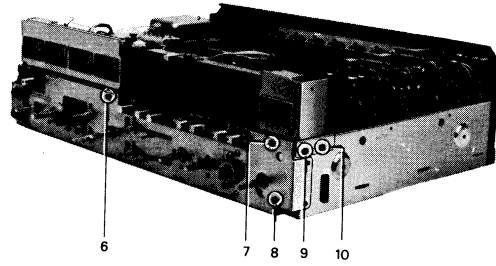


Fig. 2

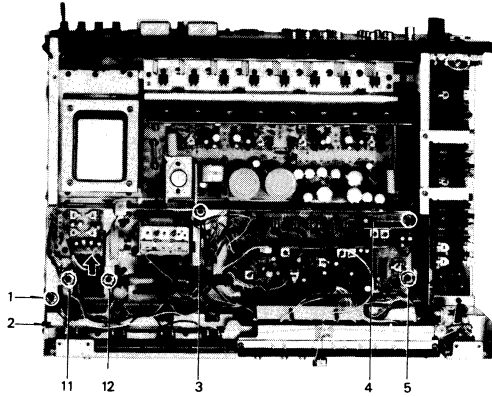


Fig. 1

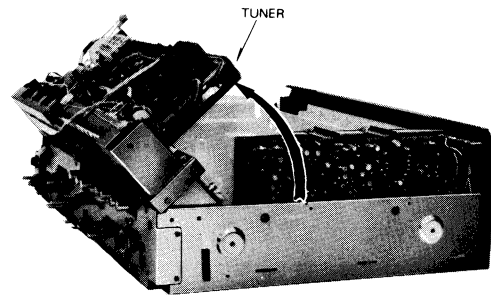
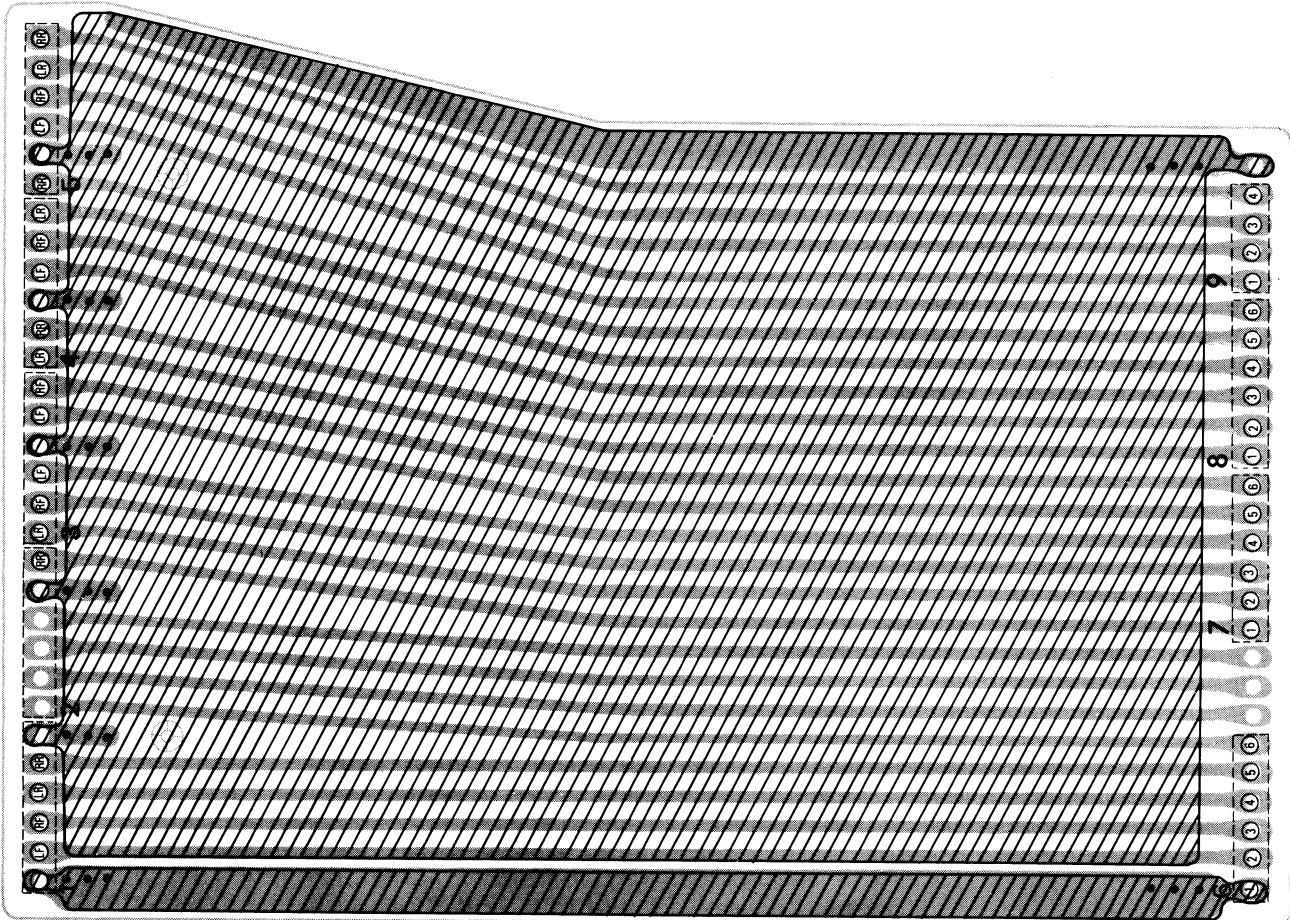


Fig. 3

INPUT LINE Circuit Board

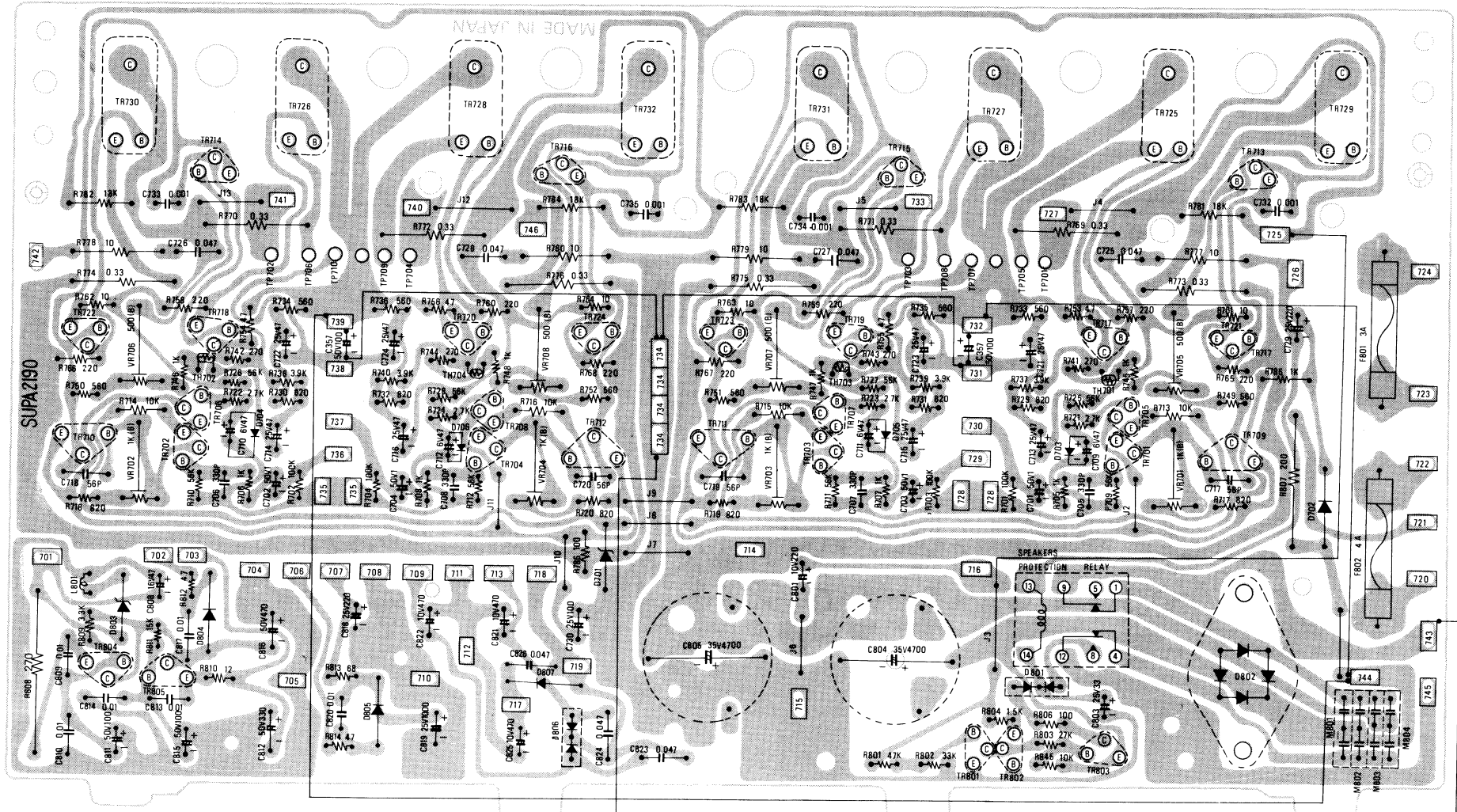
 Printed Circuit View on Top of p.c.b.

 Printed Circuit View on Bottom of p.c.b.



POWER SOURCE & 4CH MAIN AMPLIFIER Circuit Board

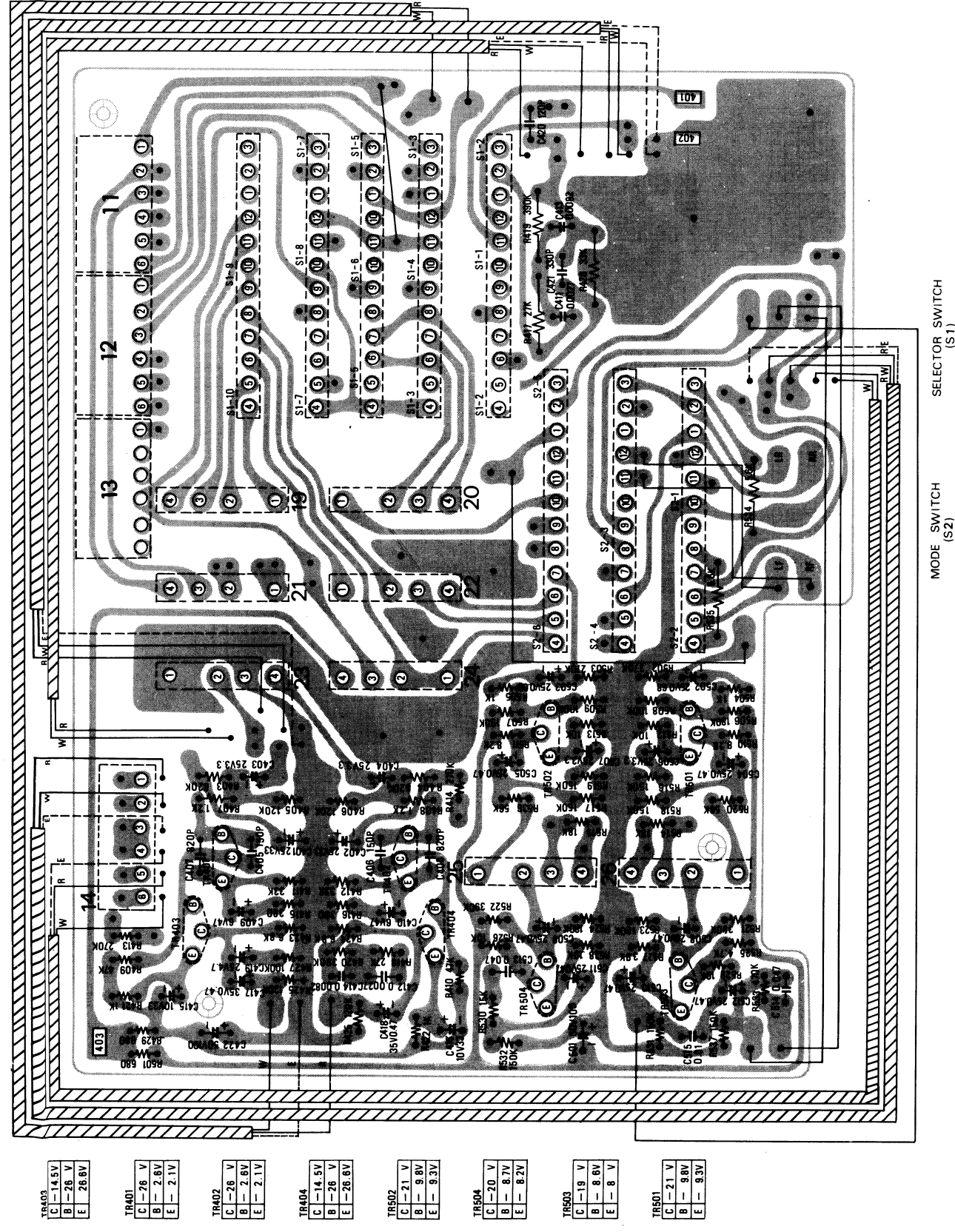
TR722 C -25.2 V B -0.62V E -0.02V	TR730 C 0 V B -25.2 V E -26 V	TR714 C +12 V B +0.01 V E -0.82 V	TR726 C +25.8 V B +0.59V E 0 V	TR720 C +25.6 V B +12 V E +0.59V	TR728 C +25.8 V B +0.59 V E 0 V	TR716 C +12 V B +0.01 V E -0.82 V	TR724 C -25.2 V B -0.62 V E -0.02 V	TR732 C 0 V B -25.2 V E -26 V	TR723 C -25.2 V B -0.62 V E -0.02 V	TR731 C 0 V B -25.2 V E -26 V	TR715 C +12 V B +0.01 V E -0.62 V	TR727 C +25.8 V B +0.59 V E 0 V	TR717 C +25.6 V B +12 V E +0.59 V	TR725 C +25.8 V B +0.59 V E 0 V	TR721 C -25.2 V B -0.62 V E -0.02 V	TR713 C +12 V B +0.01 V E -0.62 V	TR729 C 0 V B -25.2 V E -26 V
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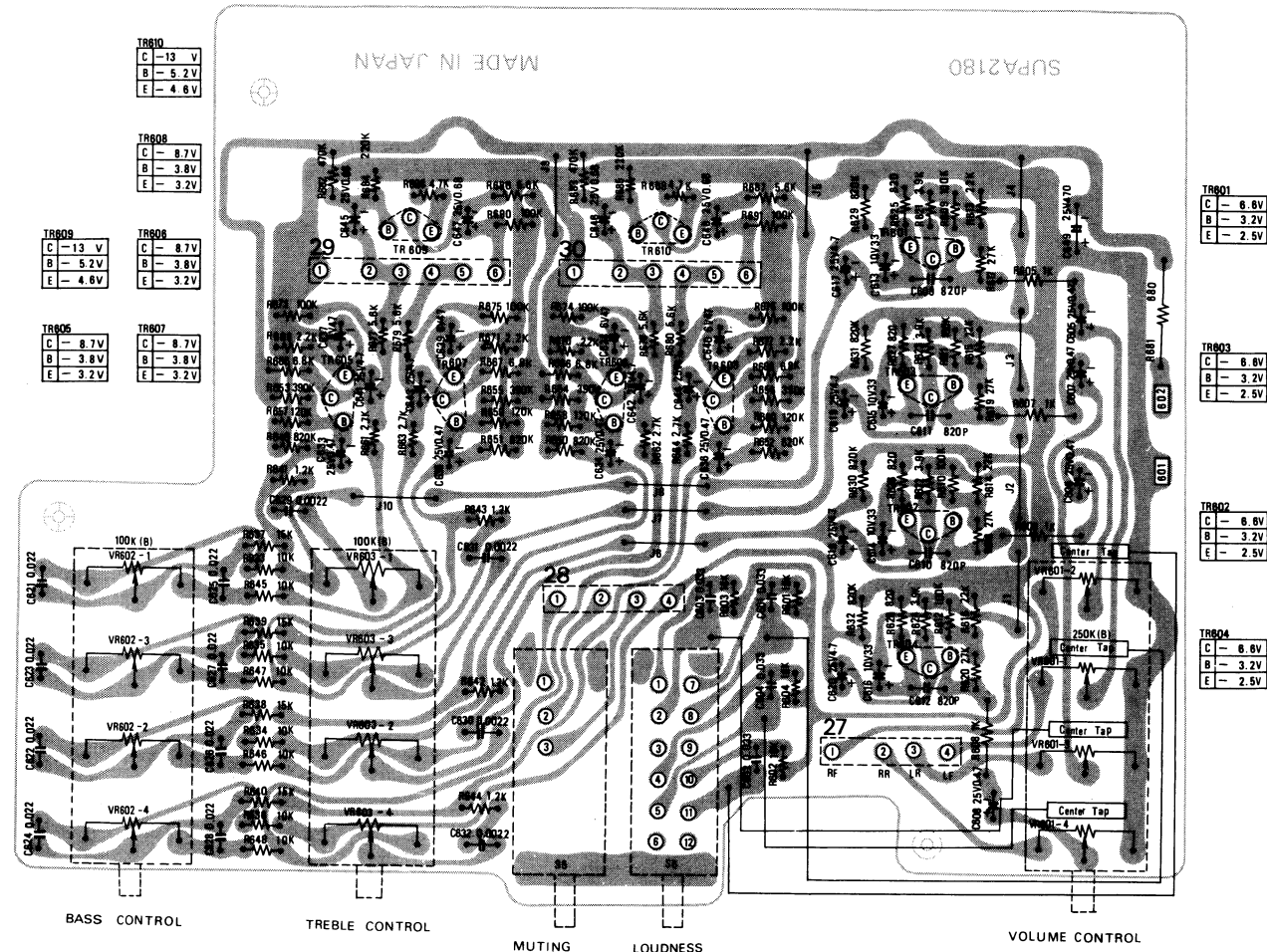
TR710 C -0.62 V B -23.1 V E -23.5 V	TR804 C -39 V B -37.1 V E -36.5 V	TR805 C -39 V B -35.3 V E -34.7 V	TR702 C -23.1 V B +0.12 V E +0.73 V	TR706 C -23.8 V B +0.12 V E +0.73 V	TR718 C +25.6 V B +12 V E +0.59 V	TR704 C -23.1 V B +0.12 V E +0.73 V	TR708 C -23.8 V B +0.12 V E +0.73 V	TR72 C -0.62 V B -23.1 V E -23.5 V	TR711 C -0.62 V B -23.1 V E -23.5 V	TR703 C -23.1 V B +0.12 V E +0.73 V	TR707 C -23.8 V B +0.12 V E +0.73 V	TR719 C +25.6 V B +12 V E +0.59 V	TR801 C +25.5 V B 0 V E 0 V	TR802 C +25.5 V B 0 V E 0 V	TR803 C +208V B +25.5 V E +25.5 V	TR701 C -23.1 V B +0.12 V E +0.73 V	TR705 C -23.8 V B +0.12 V E +0.73 V	TR709 C -0.62 V B -23.1 V E -23.5 V
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SELECTOR/MODE SWITCH, 4 CH MATRIX & EQUALIZER Circuit Board

Bottom View



PHASE INVERT & TONE CONTROL Circuit Board



TR808	C - 13 V
	B - 5.2 V
	E - 4.8 V

TR808	C - 8.7 V
	B - 3.8 V
	E - 3.2 V

TR805	C - 8.7 V
	B - 3.8 V
	E - 3.2 V

TR807	C - 8.7 V
	B - 3.8 V
	E - 3.2 V

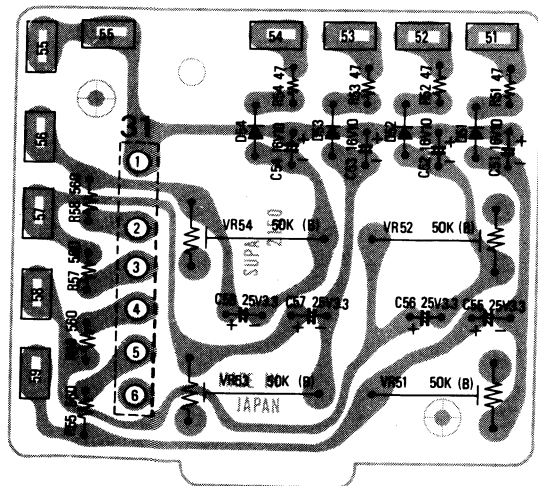
TR801	C - 8.8 V
	B - 3.2 V
	E - 2.5 V

TR803	C - 8.8 V
	B - 3.2 V
	E - 2.5 V

TR802	C - 8.8 V
	B - 3.2 V
	E - 2.5 V

TR804	C - 8.8 V
	B - 3.2 V
	E - 2.5 V

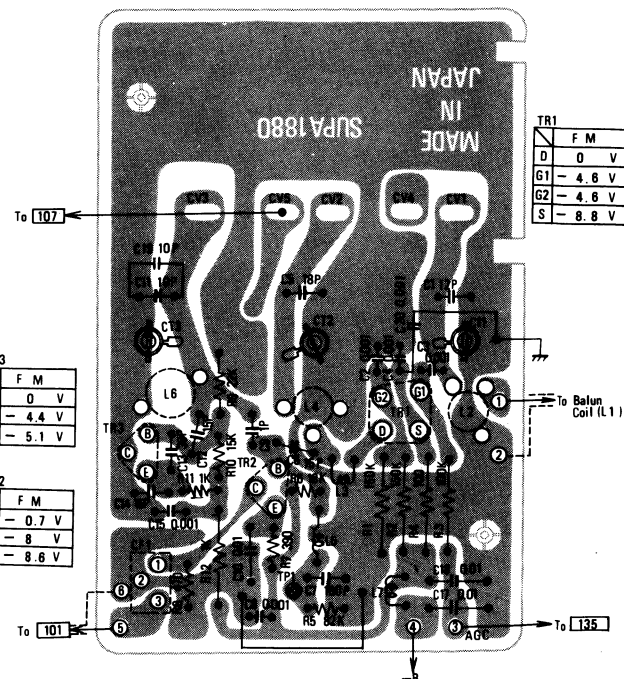
VU METER Circuit Board



TR3	F M
C	0 V
B	- 4.4 V
E	- 5.1 V

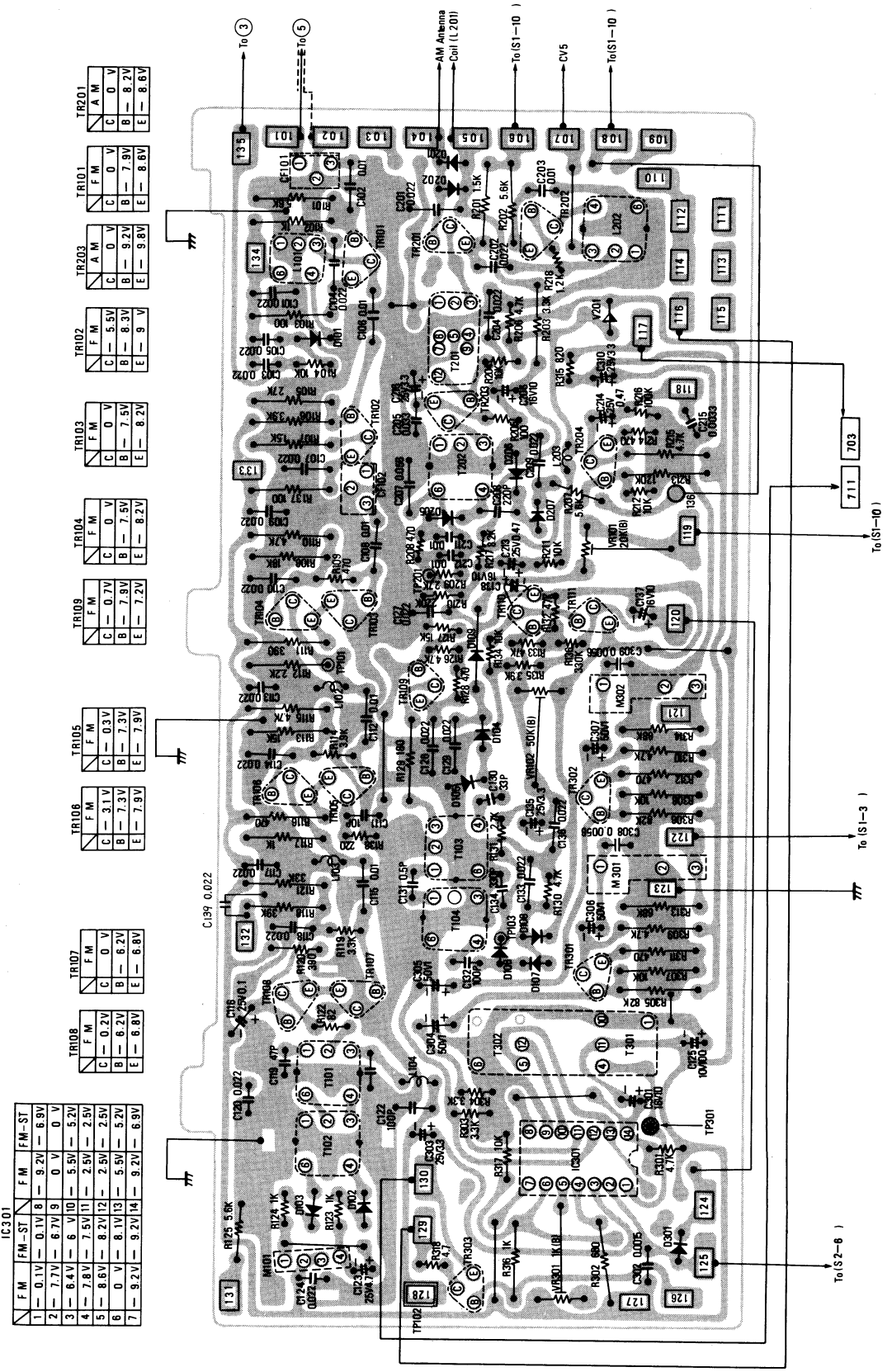
TR2	F M
C	0.7 V
B	- 8 V
E	- 8.8 V

FM-RF Circuit Board



TR1	F M
D	0 V
G1	- 4.6 V
G2	- 4.6 V
S	- 8.8 V

AM, FM-IF & FM MPX Circuit Board



IC3 01	F M	F M	F M	F M	F M	F M	F M
1	- 0.1 V	- 0.1 V	8	- 9.2 V	- 6.9 V		
2	- 7.7 V	- 6.7 V	9	0 V	0 V		
3	- 6.4 V	- 6 V	10	- 5.5 V	- 5.2 V		
4	- 2.8 V	- 7.5 V	11	- 2.5 V	- 2.5 V		
5	- 8.6 V	- 8.2 V	12	- 2.5 V	- 2.5 V		
6	0 V	- 8.1 V	13	- 5.5 V	- 5.2 V		
7	- 9.2 V	- 9.2 V	14	- 9.2 V	- 6.9 V		

TR108	F M
C	- 0.2 V
B	- 6.2 V
E	- 6.8 V

TR107	F M
C	0 V
B	- 6.2 V
E	- 6.8 V

TR105	F M
C	- 0.3 V
B	- 7.3 V
E	- 7.9 V

TR104	F M
C	0 V
B	- 7.5 V
E	- 8.2 V

TR103	F M
C	0 V
B	- 8.3 V
E	- 8.9 V

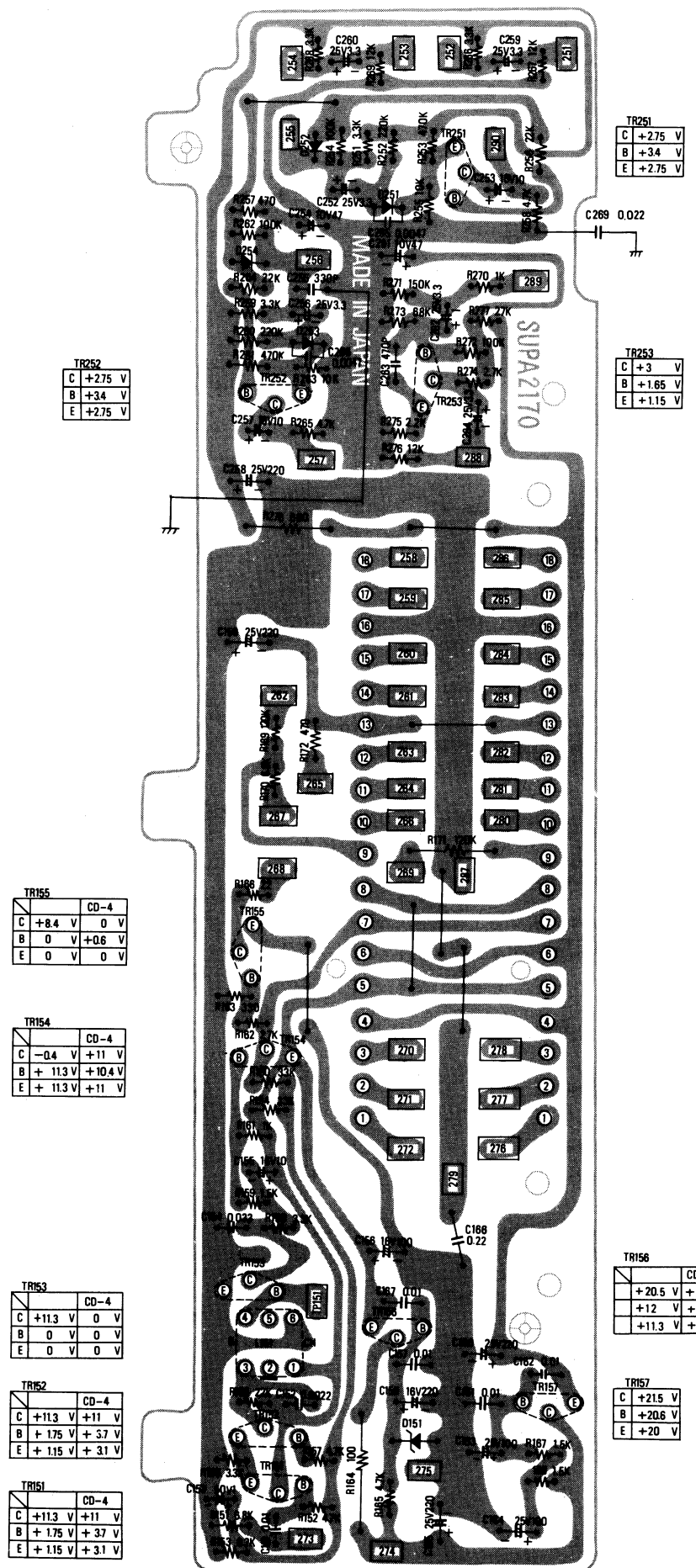
TR102	F M
C	- 5.5 V
B	- 8.3 V
E	- 9 V

TR101	F M
C	0 V
B	- 7.5 V
E	- 8.6 V

TR201	A M
C	0 V
B	- 7.5 V
E	- 8.6 V

TR & IC	IC301	TR302	TR303	TR304	TR305	TR306	TR307	TR308	TR309	TR310	TR311	TR312	TR313	TR314	TR315	TR316	TR317	TR318	TR319	TR320	TR321	TR322	TR323	TR324	TR325	TR326	TR327	TR328	TR329	TR330	TR331	TR332	TR333	TR334	TR335	TR336	TR337	TR338	TR339	TR340	TR341	TR342	TR343	TR344	TR345	TR346	TR347	TR348	TR349	TR350	TR351	TR352	TR353	TR354	TR355	TR356	TR357	TR358	TR359	TR360	TR361	TR362	TR363	TR364	TR365	TR366	TR367	TR368	TR369	TR370	TR371	TR372	TR373	TR374	TR375	TR376	TR377	TR378	TR379	TR380	TR381	TR382	TR383	TR384	TR385	TR386	TR387	TR388	TR389	TR390	TR391	TR392	TR393	TR394	TR395	TR396	TR397	TR398	TR399	TR400	TR401	TR402	TR403	TR404	TR405	TR406	TR407	TR408	TR409	TR410	TR411	TR412	TR413	TR414	TR415	TR416	TR417	TR418	TR419	TR420	TR421	TR422	TR423	TR424	TR425	TR426	TR427	TR428	TR429	TR430	TR431	TR432	TR433	TR434	TR435	TR436	TR437	TR438	TR439	TR440	TR441	TR442	TR443	TR444	TR445	TR446	TR447	TR448	TR449	TR450	TR451	TR452	TR453	TR454	TR455	TR456	TR457	TR458	TR459	TR460	TR461	TR462	TR463	TR464	TR465	TR466	TR467	TR468	TR469	TR470	TR471	TR472	TR473	TR474	TR475	TR476	TR477	TR478	TR479	TR480	TR481	TR482	TR483	TR484	TR485	TR486	TR487	TR488	TR489	TR490	TR491	TR492	TR493	TR494	TR495	TR496	TR497	TR498	TR499	TR500	TR501	TR502	TR503	TR504	TR505	TR506	TR507	TR508	TR509	TR510	TR511	TR512	TR513	TR514	TR515	TR516	TR517	TR518	TR519	TR520	TR521	TR522	TR523	TR524	TR525	TR526	TR527	TR528	TR529	TR530	TR531	TR532	TR533	TR534	TR535	TR536	TR537	TR538	TR539	TR540	TR541	TR542	TR543	TR544	TR545	TR546	TR547	TR548	TR549	TR550	TR551	TR552	TR553	TR554	TR555	TR556	TR557	TR558	TR559	TR560	TR561	TR562	TR563	TR564	TR565	TR566	TR567	TR568	TR569	TR570	TR571	TR572	TR573	TR574	TR575	TR576	TR577	TR578	TR579	TR580	TR581	TR582	TR583	TR584	TR585	TR586	TR587	TR588	TR589	TR590	TR591	TR592	TR593	TR594	TR595	TR596	TR597	TR598	TR599	TR600	TR601	TR602	TR603	TR604	TR605	TR606	TR607	TR608	TR609	TR610	TR611	TR612	TR613	TR614	TR615	TR616	TR617	TR618	TR619	TR620	TR621	TR622	TR623	TR624	TR625	TR626	TR627	TR628	TR629	TR630	TR631	TR632	TR633	TR634	TR635	TR636	TR637	TR638	TR639	TR640	TR641	TR642	TR643	TR644	TR645	TR646	TR647	TR648	TR649	TR650	TR651	TR652	TR653	TR654	TR655	TR656	TR657	TR658	TR659	TR660	TR661	TR662	TR663	TR664	TR665	TR666	TR667	TR668	TR669	TR670	TR671	TR672	TR673	TR674	TR675	TR676	TR677	TR678	TR679	TR680	TR681	TR682	TR683	TR684	TR685	TR686	TR687	TR688	TR689	TR690	TR691	TR692	TR693	TR694	TR695	TR696	TR697	TR698	TR699	TR700	TR701	TR702	TR703	TR704	TR705	TR706	TR707	TR708	TR709	TR710	TR711	TR712	TR713	TR714	TR715	TR716	TR717	TR718	TR719	TR720	TR721	TR722	TR723	TR724	TR725	TR726	TR727	TR728	TR729	TR730	TR731	TR732	TR733	TR734	TR735	TR736	TR737	TR738	TR739	TR740	TR741	TR742	TR743	TR744	TR745	TR746	TR747	TR748	TR749	TR750	TR751	TR752	TR753	TR754	TR755	TR756	TR757	TR758	TR759	TR760	TR761	TR762	TR763	TR764	TR765	TR766	TR767	TR768	TR769	TR770	TR771	TR772	TR773	TR774	TR775	TR776	TR777	TR778	TR779	TR780	TR781	TR782	TR783	TR784	TR785	TR786	TR787	TR788	TR789	TR790	TR791	TR792	TR793	TR794	TR795	TR796	TR797	TR798	TR799	TR800	TR801	TR802	TR803	TR804	TR805	TR806	TR807	TR808	TR809	TR810	TR811	TR812	TR813	TR814	TR815	TR816	TR817	TR818	TR819	TR820	TR821	TR822	TR823	TR824	TR825	TR826	TR827	TR828	TR829	TR830	TR831	TR832	TR833	TR834	TR835	TR836	TR837	TR838	TR839	TR840	TR841	TR842	TR843	TR844	TR845	TR846	TR847	TR848	TR849	TR850	TR851	TR852	TR853	TR854	TR855	TR856	TR857	TR858	TR859	TR860	TR861	TR862	TR863	TR864	TR865	TR866	TR867	TR868	TR869	TR870	TR871	TR872	TR873	TR874	TR875	TR876	TR877	TR878	TR879	TR880	TR881	TR882	TR883	TR884	TR885	TR886	TR887	TR888	TR889	TR890	TR891	TR892	TR893	TR894	TR895	TR896	TR897	TR898	TR899	TR900	TR901	TR902	TR903	TR904	TR905	TR906	TR907	TR908	TR909	TR910	TR911	TR912	TR913	TR914	TR915	TR916	TR917	TR918	TR919	TR920	TR921	TR922	TR923	TR924	TR925	TR926	TR927	TR928	TR929	TR930	TR931	TR932	TR933	TR934	TR935	TR936	TR937	TR938	TR939	TR940	TR941	TR942	TR943	TR944	TR945	TR946	TR947	TR948	TR949	TR950	TR951	TR952	TR953	TR954	TR955	TR956	TR957	TR958	TR959	TR960	TR961	TR962	TR963	TR964	TR965	TR966	TR967	TR968	TR969	TR970	TR971	TR972	TR973	TR974	TR975	TR976	TR977	TR978	TR979	TR980	TR981	TR982	TR983	TR984	TR985	TR986	TR987	TR988	TR989	TR990	TR991	TR992	TR993	TR994	TR995	TR996	TR997	TR998	TR999	TR1000
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CD-4 MASTER Circuit Board



TR252	C +2.75 V
	B +3.4 V
	E +2.75 V

TR155	CD-4
C	+8.4 V
B	0 V
E	+0.6 V

TR154	CD-4
C	-0.4 V
B	+11.3 V
E	+11.3 V

TR153	CD-4
C	+11.3 V
B	0 V
E	0 V

TR152	CD-4
C	+11.3 V
B	+1.75 V
E	+3.1 V

TR151	CD-4
C	+11.3 V
B	+1.75 V
E	+3.1 V

TR251	C +2.75 V
	B +3.4 V
	E +2.75 V

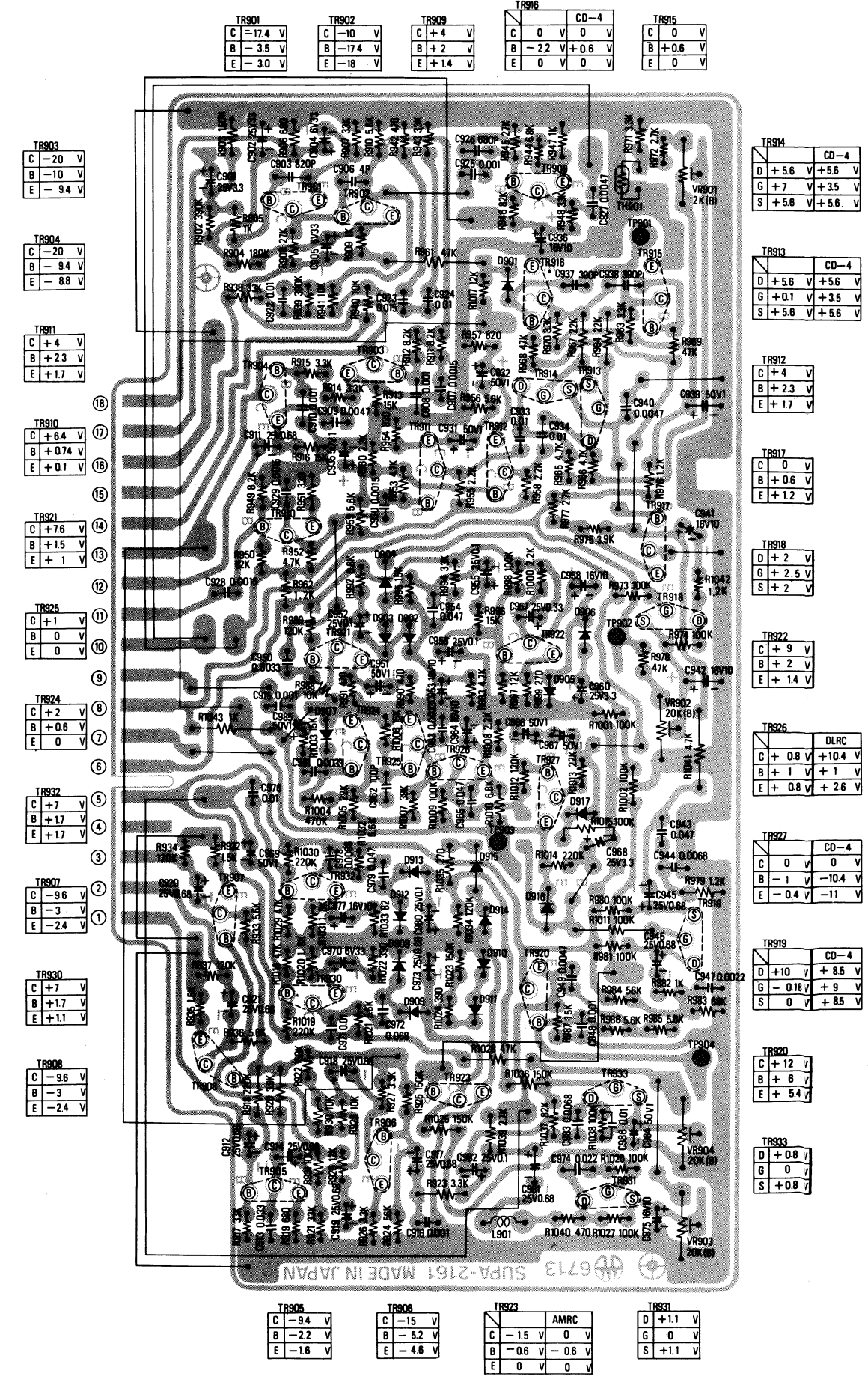
TR253	C +3 V
	B +1.65 V
	E +1.15 V

TR156	CD-4
C	+20.5 V
B	+12 V
E	+11.3 V

TR157	C +21.5 V
	B +20.6 V
	E +20 V

CD-4 DEMODULATOR (Left or Right) Circuit Board

Left channel is same as Right channel



TR903	C -20 V
	B -10 V
	E -9.4 V

TR904	C -20 V
	B -9.4 V
	E -8.8 V

TR911	C +4 V
	B +2.3 V
	E +1.7 V

TR910	C +8.4 V
	B +0.74 V
	E +0.1 V

TR921	C +7.6 V
	B +1.5 V
	E +1 V

TR925	C +1 V
	B 0 V
	E 0 V

TR924	C +2 V
	B +0.6 V
	E 0 V

TR932	C +7 V
	B +1.7 V
	E +1.7 V

TR907	C -9.6 V
	B -3 V
	E -2.4 V

TR930	C +7 V
	B +1.7 V
	E +1.1 V

TR908	C -9.6 V
	B -3 V
	E -2.4 V

TR901	C -17.4 V
	B -3.5 V
	E -3.0 V

TR902	C -10 V
	B -17.4 V
	E -1.8 V

TR909	C +4 V
	B +2 V
	E +1.4 V

TR916	CD-4
C	0 V
B	-2.2 V
E	0 V

TR915	C 0 V
	B +0.6 V
	E 0 V

TR914	CD-4
D	+5.6 V
G	+7 V
S	+5.6 V

TR913	CD-4
D	+5.6 V
G	+0.1 V
S	+5.6 V

TR912	C +4 V
	B +2.3 V
	E +1.7 V

TR917	C 0 V
	B +0.6 V
	E +1.2 V

TR918	D +2 V
	G +2.5 V
	S +2 V

TR922	C +9 V
	B +2 V
	E +1.4 V

TR926	DLRC
C	+0.8 V
B	+1 V
E	+0.8 V

TR927	CD-4
C	0 V
B	-1 V
E	-0.4 V

TR919	CD-4
D	+10 V
G	-0.18 V
S	0 V

TR920	C +12 V
	B +6 V
	E +5.4 V

TR933	D +0.8 V
	G 0 V
	S +0.8 V

TR905	C -9.4 V
	B -2.2 V
	E -1.6 V

TR906	C -15 V
	B -5.2 V
	E -4.6 V

TR923	AMRC
C	-1.5 V
B	-0.6 V
E	0 V

TR931	D +1.1 V
	G 0 V
	S +1.1 V

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
R419	ERD14TJ394	390kΩ, ¼W ±5% Carbon	1	Y	R207,677,678,	ERD14VJ562	5.6kΩ, ¼W ±5% Carbon	25	Y
R356	ERD14FJ2R2	2.2Ω, ¼W ±5% Carbon	1	Y	679,680,686,				
R318,753,754,	ERD14FJ4R7	4.7Ω, ¼W ±5% Carbon	9	Y	687,1910,933,				
755,756,761,					936,956,959,				
762,763,764					985,986,1021,				
R757,758,759,	ERD14FJ221	220Ω, ¼W ±5% Carbon	8	Y	1032)x2				
760,765,766,					R151,170,423,	ERD14VJ682	6.8kΩ, ¼W ±5% Carbon	14	Y
767,768					424,665,666,				
R733,734,735,	ERD14FJ561	560Ω, ¼W ±5% Carbon	4	Y	667,668,1944,				
736					992,1010)x2				
R812,814	ERD18FJ4R7	4.7Ω, ¼W ±5% Carbon	2	Y	R153,217,510,	ERD14VJ822	8.2kΩ, ¼W ±5% Carbon	10	Y
R786	ERD12FJ101	100Ω, ¼W ±5% Carbon	1	Y	511,1911,912,				
					949)x2				
					R104,134,204,	ERD14VJ103	10kΩ, ¼W ±5% Carbon	38	Y
R164	ERD12TJ101	100Ω, ¼W ±5% Carbon	1	Y	211,212,255,				
R351,352,353,	ERD12TJ221	220Ω, ¼W ±5% Carbon	4	Y	263,317,512,				
354					513,526,528,				
R172	ERD12TJ471	470Ω, ¼W ±5% Carbon	1	Y	529,633,634,				
R681	ERD12TJ681	680Ω, ¼W ±5% Carbon	1	Y	635,636,645,				
					646,647,648,				
R810	ERD14FJ120	12Ω, ¼W ±5% Carbon	1	Y	713,714,715,				
R166	ERD14VJ220	22Ω, ¼W ±5% Carbon	1	Y	716,845,				
R51,52,53,54	ERD14VJ470	47Ω, ¼W ±5% Carbon	4	Y	(928,930,931,				
R813	ERD14FJ680	68Ω, ¼W ±5% Carbon	1	Y	940,941,988)				
R122,	ERD14VJ820	82Ω, ¼W ±5% Carbon	3	Y	x2				
(1033) x 2					R267,269,276,	ERD14VJ123	12kΩ, ¼W ±5% Carbon	9	Y
R205,806	ERD14VJ101	100Ω, ¼W ±5% Carbon	2	Y	(929,997,				
R138	ERD14VJ221	220Ω, ¼W ±5% Carbon	1	Y	1017)x2				
R741,742,743,	ERD14VJ271	270Ω, ¼W ±5% Carbon	8	Y	R9,127,530,	ERD14VJ153	15kΩ, ¼W ±5% Carbon	22	Y
744, (999,					637,638,639,				
1035) x 2					640,811,				
R163,(951)x2	ERD14VJ331	330Ω, ¼W ±5% Carbon	3	Y	(913,916,987,				
R7,120,415,	ERD14VJ391	390Ω, ¼W ±5% Carbon	8	Y	995,996,1003,				
416,(1022,					1006)x2				
1024) x 2					R6,514,515,	ERD14VJ183	18kΩ, ¼W ±5% Carbon	7	Y
R8,109,128,	ERD14VJ471	470Ω, ¼W ±5% Carbon	14	Y	601,602,603,				
208,214,257,					604				
(942,990,991,					R10,155,170,	ERD14VJ223	22kΩ, ¼W ±5% Carbon	13	Y
1040)x2					256,264,1964				
R55,56,57,58,	ERD14VJ561	560Ω, ¼W ±5% Carbon	8	Y	967,1005				
749,750,751,					1013)x2				
752					R613,614,615,	ERD14VSJ223	22kΩ, ¼W ±5% Carbon	4	Y
R429,501,	ERD14VJ681	680Ω, ¼W ±5% Carbon	6	Y	616				
(906,919)x2					R617,618,619,	ERD14VSJ273	27kΩ, ¼W ±5% Carbon	4	Y
R315,625,626,	ERD14VJ821	820Ω, ¼W ±5% Carbon	17	Y	620				
627,628,717,					R277,418,803,	ERD14VJ273	27kΩ, ¼W ±5% Carbon	7	Y
718,719,720,					(908,945)x2				
729,730,731,					R154,160,411,	ERD14VJ333	33kΩ, ¼W ±5% Carbon	11	Y
732 (954,					412,802,(907,				
957)x2					938,994)x2				
R11,123,124,	ERD14VJ102	1kΩ, ¼W ±5% Carbon	26	Y	R(917,921)x2	ERD14VSJ333	33kΩ, ¼W ±5% Carbon	4	Y
161,270,421,					R132,133,409,	ERD14VJ473	47kΩ, ¼W ±5% Carbon	15	Y
422,504,505,					410,801,(968,				
705,706,707,					969,978,1018				
708,745,746,					1029)x2				
747,748,785,					R520,536,709,	ERD14VJ563	56kΩ, ¼W ±5% Carbon	14	Y
(905,909,947,					710,711,712,				
982)x2					725,726,727,				
R218,407,408,	ERD14VJ122	1.2kΩ, ¼W ±5% Carbon	15	Y	728,(924,				
641,642,643,					984)x2				
644,(962,976,					R273,(983)x2	ERD14VJ683	68kΩ, ¼W ±5% Carbon	3	Y
979,1042)x2					R5,(946,950,	ERD14VJ823	82kΩ, ¼W ±5% Carbon	7	Y
R159,167,168,	ERD14VJ152	1.5kΩ, ¼W ±5% Carbon	8	Y	1037)x2				
804,(932,					R216,254,262,	ERD14VJ104	100kΩ, ¼W ±5% Carbon	37	Y
935)x2					272,427,637,				
R11020,	ERD14VJ182	1.8kΩ, ¼W ±5% Carbon	4	Y	674,675,676,				
1031)x2					690,691,701,				
R275,669,670,	ERD14VJ222	2.2kΩ, ¼W ±5% Carbon	15	Y	702,703,704				
671,672,(955,					(973,974,980,				
958,960,1000					981,998,1001				
1008)x2					1002,1009,				
R131,162,274,	ERD14VJ272	2.7kΩ, ¼W ±5% Carbon	17	Y	1026,1027				
661,662,663,					1038)x2				
664,721,722,					R508,509,609,	ERD14VSJ104	100kΩ, ¼W ±5% Carbon	6	Y
723,724,					610,611,612				
(972,977,					R405,406,657,	ERD14VSJ124	120kΩ, ¼W ±5% Carbon	6	Y
1039)x2					658,659,660				
R119,156,158,	ERD14VJ332	3.3kΩ, ¼W ±5% Carbon	30	Y	R169,425,426,	ERD14VJ124	120kΩ, ¼W ±5% Carbon	13	Y
251,259,266,					(934,937,989,				
268,303,304,					1012,1034)x2				
809,(914,915,					R271,516,517,	ERD14VJ154	150kΩ, ¼W ±5% Carbon	16	Y
923,926,927,					518,519,531,				
943,948,963,					532,537,(925,				
970,971)x2					1023,1025,				
R114,135,527,	ERD14VJ392	3.9kΩ, ¼W ±5% Carbon	15	Y	1036)x2				
621,622,623,					R(903,922)x2	ERD14VSJ154	150kΩ, ¼W ±5% Carbon	4	Y
624,737,738,					R506,507,523,	ERD14VSJ184	180kΩ, ¼W ±5% Carbon	6	Y
739,740,					524,(904)x2				
(920,975)x2					R684,685,	ERD14VSJ224	220kΩ, ¼W ±5% Carbon	4	Y
R126,130,152,	ERD14VJ472	4.7kΩ, ¼W ±5% Carbon	22	Y	(918)x2				
157,165,206,					R210,252,260,	ERD14VJ224	220kΩ, ¼W ±5% Carbon	9	Y
258,265,301,					(1014,1019,				
525,688,689,					1030)x2				
(952,953,965,					R502,503	ERD14VJ274	270kΩ, ¼W ±5% Carbon	2	Y
966,993)x2					R413,414	ERD14VSJ274	270kΩ, ¼W ±5% Carbon	2	Y
					R(1007)x2	ERD14VJ393	39kΩ, ¼W ±5% Carbon	2	Y

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
R521, 522, 653, 654, 655, 656, (902)x2	ERD14VSJ394	390kΩ, ¼W ±5% Carbon	8	Y	C10, 17, 18, 102, 106, 108, 112, 115, 157, 161, 162, 167, 809, 810, 813, 814, 820	ECKE1H103PF	0.01µF, 50WV, +100%, -0% Ceramic	17	Z
R420, (939)x2	ERD14VJ394	390kΩ, ¼W ±5% Carbon	3	Y	C817	ECKD2H103PF	0.01µF, 500WV, +100%, -0% Ceramic	1	Z
R136, 253, 261, 533, (1004)x2	ERD14VJ474	470kΩ, ¼W ±5% Carbon	6	Y	C104, 107, 110, 114, 120, 126, 129, 133, 136, 201, 204, 209, 269	ECKE1H223PF	0.022µF, 50WV, +100%, -0% Ceramic	13	Z
R682, 683	ERD14VSJ474	470kΩ, ¼W ±5% Carbon	2	Y	C823, 824, 826	ECKD1H473ZF	0.047µF, 50WV, +80%, -20% Ceramic	3	Z
R403, 404	ERD14VSJ824	820kΩ, ¼W ±5% Carbon	2	Y	C(908, 910, 915, 916, 925, 948) x2	ECQG05102KZN	0.001µF, 50WV, +10%, Polyester	12	Z
R629, 630, 631, 632, 649, 650, 651, 652	ERD14VJ824	820kΩ, ¼W ±5% Carbon	8	Y	C302, (907, 928, 929, 930)x2	ECQG05152KZN	0.0015µF, 50WV, ±10%, Polyester	9	Z
R769, 770, 771, 772, 773, 774, 775, 776	ERX2ANKR33	0.33Ω, 2W ±10% Metallic	8	Y	C629, 630, 631, 632, (947)x2	ECQG05222KZN	0.0022µF, 50WV, ±10%, Polyester	6	Z
R777, 778, 779	ERX1ANJ100	10Ω, 1W, ±5%, Metallic	4	Y	C411, 412	ECQG05272JZN	0.0027µF, 50WV, ±5%, Polyester	2	Z
R807	ERM2P201	200Ω, 2W, ±5% Wire	1	Z	C215, (950, 961, 963)x2	ECQG05332KZN	0.0033µF, 50WV, ±10%, Polyester	7	Z
R808	ERM4P271	270Ω, 4W, ±5% Wire	1	Z	C265, 266, (909, 927, 940, 949)x2	ECQG05472KZN	0.0047µF, 50WV, ±10%, Polyester	10	Z
VARIABLE RESISTORS					C308, 309	ECQG05562JZN	0.0056µF, 50WV, ±5%, Polyester	2	Z
VR1	EVB17AA1654U	50kΩ (ZU), AFD Control (WIDTH)	1	X	C(944, 978, 983)x2	ECQG05682KZN	0.0068µF, 50WV, ±10%, Polyester	6	Z
VR2-1, 2-2	EVA77AA16D55	500kΩ (D), AFD Control (DEPTH)	1	X	C413, 414	ECQG05822JZN	0.0082µF, 50WV, ±5%, Polyester	2	Z
VR3, 4, 5, 6	EVHB8A034BF5	250kΩ (B), Channel Level Control	4	X	C151, 203, 211, 212, 515, (933, 934, 971, 976, 986)x2	ECQG05103KZN	0.01µF, 50WV, ±10%, Polyester	13	Z
VR7, 8	EVHB8A018B14	10kΩ (B), Carrier Level Control	2	X	C(922, 924)x2	FCQG05103JZN	0.01µF, 50WV, ±5%, Polyester	4	Z
VR9, 10	EVHB8A018B54	50kΩ (B), CD-4 Separation Control	2	X	C(923)x2	ECQG05153JZN	0.015µF, 50WV, ±5%, Polyester	2	Z
VR51, 52, 53, 54, 102	EVLS3AA00B54	50kΩ (B), VU Meter & Muting Level Adj.	5	X	C101, 103, 105, 109, 113, 117, 118, 124, 127, 139, 202, 621, 622, 623, 624, 625, 626, 627, 628, (974)x2	ECQG05223KZN	0.022µF, 50WV, ±10% Polyester	21	Z
VR101	EVLS3AA00B24	20kΩ (B), Signal Meter Adjustment	1	X	C154, 205, 601, 602, 603, 604 (913)x2	FCQG05333KZN	0.033µF, 50WV, ±10%, Polyester	8	Z
VR601-1 ~ 601-4	EVB83A030BF5	250kΩ (B), Main Volume Control	1	X	C513, 514, (943, 954, 965, 979) x2	ECQG05473KZN	0.047µF, 50WV, ±10%, Polyester	10	Z
VR602-1 ~ 602-4	EVB84A030B15	100kΩ (B) Bass & Treble Control	2	X	C725, 726, 727, 728	ECQM05473KZ	0.047µF, 50WV, ±10%, Polyester	4	Z
VR603-1 ~ 603-4	EVLS3AA00B13	1kΩ (B), FM Separation & DC Balance Adjustment	5	X	C207	ECQG05563KZN	0.056µF, 50WV, ±10%, Polyester	1	Z
VR301, 701, 702, 703, 704	EVLS3AA00B52	500Ω (B), ICQ Adjustment	4	X	C(972)x2	ECQG05683KZN	0.068µF, 50WV, ±10%, Polyester	2	Z
VR705, 706, 707, 708	EVLS0AA00B23	2kΩ (B), Free Running Frequency Adjustment	2	X	C166	ECQG05224KZN	0.22µF, 50WV, ±10%, Polyester	1	Z
VR(901)x2	EVLS0AA00B24	20kΩ (B), Lock Range Control & Automatic Noise Reduction System Adj.	6	X	C352, 353	ECQU2A103MD	0.01µF, 250VAC, ±20%, Polyester	2	Z
VR(902, 903, 904)x2					C(937, 938)x2	ECQS1391KZ-K	390pF, 125WV, ±10%, Styro	4	Z
THERMISTORS					C152	ECQS1222JZ	2200pF, 125WV, ±5%, Styro	1	Z
TH701, 702, 703, 704	RRT251	Driver Circuit	4	Y	C252, 256, 259, 260, 262, 264, 267, 268, 403, 404, 506, 507, (901)x2	ECSZ25EF3R3	3.3µF, 25WV, Electrolytic	14	Y
TH(901)x2	RRTA202-2	Phase Locked Loop Circuit	2	Y	C419, 617, 618, 619, 620, 641, 642, 643, 644, C417, 418	ECSZ25EF4R7	4.7µF, 25WV, Electrolytic	9	Y
CAPACITORS					C116, 213, 214, (952, 955, 956, 980, 982)x2	ECSZ35EFR47	0.47µF, 35WV, Electrolytic	2	Y
C131	ECCD1HOR5CC	0.5pF, 50WV, ±0.25pF, Ceramic	1	Z	C116, 213, 214, (952, 955, 956, 980, 982)x2	ECAG25ER1X	0.1µF, 25WV, Electrolytic	13	Y
C9	ECCD1H010CC	1pF, 50WV, ±0.25pF, Ceramic	1	Z	C(957)x2	ECAG25ER33X	0.33µF, 25WV, Electrolytic	2	Y
C(906)x2	ECCD1H040CC	4pF, 50WV, ±0.25pF, Ceramic	2	Z	C504, 505, 508, 509, 510, 511, 512, 605, 606, 607, 608, 633, 634, 635, 636	ECAG25ER68X	0.68µF, 25WV, Electrolytic	30	Y
C217	ECCD1H050CC	5pF, 50WV, ±0.25pF, Ceramic	1	Z	C502, 503, 645, 646, 647, 648, (911, 912, 914, 917, 918, 919, 920, 921, 945, 946, 973, 981) x2	ECEA6V33	33µF, 6.3WV, Electrolytic	6	Y
C111	ECCD1H100KC	10pF, 50WV, ±10%, Ceramic	1	Z	C(904, 905, 970)x2	ECEA6V47	47µF, 6.3WV, Electrolytic	10	Y
C11	ECCD1H100KU	10pF, 50WV, ±10%, Ceramic	1	Z	C409, 410, 637, 638, 639, 640, 709, 710, 711, 712	ECEA6V100	100µF, 6.3WV, Electrolytic	1	Y
C19	ECCD1H100KT	10pF, 50WV, ±10%, Ceramic	1	Z	C351	ECEA10V33	33µF, 10WV, Electrolytic	6	Y
C1	ECCD1H120KC	12pF, 50WV, ±10%, Ceramic	1	Z	C415, 416, 613, 614, 615, 616				
C6, 12, 14	ECCD1H150KC	15pF, 50WV, ±10%, Ceramic	3	Z					
C5	ECCD1H180KC	18pF, 50WV, ±10%, Ceramic	1	Z					
C130	ECCD1H330KC	33pF, 50WV, ±10%, Ceramic	1	Z					
C13	ECCD1H390KC	39pF, 50WV, ±10%, Ceramic	1	Z					
C119	ECCD1H470KU	47pF, 50WV, ±10%, Ceramic	1	Z					
C717, 718, 719, 720	ECCD1H560K	56pF, 50WV ±10%, Ceramic	4	Z					
C121, 122, 132, (962)x2	ECCD1H101K	100pF, 50WV, ±10%, Ceramic	5	Z					
C420	ECCD1H121K	121pF, 50WV, ±10%, Ceramic	1	Z					
C405, 406	ECCD1H151K	150pF, 50WV, ±10%, Ceramic	2	Z					
C7	ECCD1H181K	180pF, 50WV, ±10%, Ceramic	1	Z					
C208	ECCD1H221K	220pF, 50WV, ±10%, Ceramic	1	Z					
C134, 251, 255, 421, 705, 706, 707, 708	ECCD1H331K	330pF, 50WV, ±10%, Ceramic	8	Z					
C263, 356	ECKD1H471KB	470pF, 50WV, ±10%, Ceramic	2	Z					
C(926)x2	ECKD1H681KB	680pF, 50WV, ±10%, Ceramic	2	Z					
C407, 408, 609, 610, 611, 612, (903)x2	ECKD1H821KB	820pF, 50WV, ±10%, Ceramic	8	Z					
C2, 3, 48, 15, 20	ECKD1H102PF	0.001µF, 50WV, +100%, -0% Ceramic	6	Z					
C732, 733, 734, 735	ECKE1H102MD	0.001µF, 50WV, ±20%, Ceramic	4	Z					

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
C254,261	ECEA10V47	47µF, 10WV, Electrolytic	2	Y	F802	XBA1K40NS5	4A, Power Source	1	X
C125	ECEA10V100	100µF, 10WV, Electrolytic	1	Y	F803	XBAS1B2002	2A, Power Source	1	X
C801	ECEA10V220	220µF, 10WV, Electrolytic	1	Y					
C821,822,825	ECEA10V470	470µF, 10WV, Electrolytic	3	Y					
C51,52,53,54, 137,138,155, 206,253,257, 301,936,941, 942,953,958, 964,975,977	ECEA16V10	10µF, 16WV, Electrolytic	27	Y					
LIGHTS									
					PL1,2,3,4,5,6, 7,8,9,	XAM35K	Meter & Dial Lamp. (6.3V 0.25A)	9	X
					PL10	XAMR33S400	Pointer Lamp. (6.3V 75mA)	1	X
					PL11,12,13	XAM37K250	Stereo & Channel Indicator. (7.5V 75mA)	3	X
					PL14,15	XAM37K75	CD-4 Indicator & 4 ch. Radar (7.5V 75mA)	2	X
CABINET PARTS									
					CA1	SKAA630	Cabinet, Complete	1	Y
					CA2	SKPA3	Hole, Ventilation Not Available	(1)	
					CA2	SKMA190	Wooden Cabinet Order SKAA630	(1)	
					CA3	SJB4+16BVCS	Screw, Cabinet M'tg.	4	Z
					CA4	SNTA502	Washer, Cabinet M'tg.	4	Z
						SYPA191AS	Rear Panel, Complete	1	Y
					CA5	SSSA6S	Switch, Carrier Level (S9)	1	Y
					CA6	SNEA404	Nut, Ground Terminal (Outer)	1	Z
					CA7	SNEA204-2S	Volt, Ground Terminal	1	Z
					CA7	SJFA3012	Terminal, PHONO, AUX, Tape Monitor 1&2, 4 CH MPX OUT	1	Z
					CA8	SGPA330B	Rear Panel Only	1	Z
					CA9	SJFA5201	Holder, Circuit Protection Fuses	2	Z
					CA10	SGTA1550	Name Plate	1	Z
					CA11	SJFA4401	Terminal, FM/AM Ext. Antenna	1	Z
					CA12	RJ37A	Socket, 4ch. Remote Balancer	1	Y
					CA13	SSSA7S	Switch, Balanced Transformerless (S7)	1	Y
					CA14	SJFA4806	Terminal, Speakers	1	Z
					CA15	SJSA1	Socket, AC Outlet	2	Z
					CA15	SMKA3S	Mounting, AC Outlet	1	Z
					CA16	SBSA7	Knob, Cartridge Selector Switch	1	X
						SJFA5202	Cap, Protection Fuse Holder	2	Z
						XSN26+12	Screw, Protection Fuse Holder Cap	2	Z
						SJAA3	Cord, AC Power Source	1	Z
					CA18	RHR111	Bushing, AC Cord	1	Z
					CA19	SHGA906	Rubber Cushion, Rear Panel	2	Z
					CA20	SHGA639	Rubber Cushion, Rear Panel	2	Z
					CA21	SUPA1980	Printed Circuit Board Only	1	Z
					CA22	XTV3D8CR	Red Screw, Bottom Board M'tg.	10	Z
						SYUA71A	Bottom Board, Complete	1	Y
						SKLA2-1	Leg, Bottom Board	4	Z
						SHEA3-1	Lock Pin, Leg	4	Z
						SKUA330-2	Bottom Board Only (Order SYUA71A)	(1)	
					CA26	SBNA113	Knob, Carrier & Separation Control	4	X
VARIABLE CAPACITORS									
CV1,2,3,4,5 (CT4,5)	ECV5MX25X14G	Tuning Gang, FM/AM (Trimmer, AM ANT & AM OSC)	1	X					
CT1,2	ECV1ZW10P32	Trimmer, FM ANT & FM DET, 10pF Type	2	X					
CT3	ECV1ZW06P35	Trimmer, FM OSC, 6pF Type	1	X					
COMPONENT COMBINATIONS									
M101	EXA5DL04C	FM Discriminator Circuit	1	X	CA27	SYWA111A	Front Panel, Complete	1	Y
M301,302	SXAM675F	Low Pass Filter, 19kHz & 38kHz	2	X	CA28	XTV3D8C	Screw, Panel M'tg.	12	Z
M801,802,803 804	RXAF103P22HD	Hum Cancel, 0.01µF(x2), 500WV	4	Y	CA29	SGXA54	Side Panel, Right	1	Z
					CA30	SUSA42-2	Spring, Dial Panel	2	Z
						SULA45	Mounting, Panel, Right Side	1	Z
						SULA43	Mounting, Panel, Left Side	1	Z
					CA31	SHGA969	Rubber, Panel	2	Z
					CA32	SGWA1120	Panel (Order SYWA111A)	(1)	Z
					CA33	SGBA45	Badge, CD-4	1	Z
					CA34	SULA42	Mounting, Panel	2	Z
					CA35	SGUA14	Panel, Dial	1	Z
					CA36	SGBA46	Badge, National Technics	1	Z
					CA37	LSGX455	Side Panel, Left	1	Z
					CA38	XTV3D8CK	Black Screw, Panel & Tuner M'tg.	16	Z
					CA39	XWG3F10	Washer, Panel M'tg.	2	Z
					CA40	SBNA111	Knob, Tuning Control	1	Z
					CA41	SBNA103	Knob, Mode, Selector, Bass & Treble	4	X
					CA42	SBDA1	Knob, AFD Control	2	X
					CA43	SBNA101	Knob, Channel Level Control	4	X
					CA44	SBNA102	Knob, Main Volume Control	1	X
					CA45	SBLA2	Button, Lever Switch	2	X
						SBCA47	Button, Power Source Switch	1	X
SWITCHES									
S1-1 ~ S1-12	SSRA51	Selector Switch	1	X					
S2-1 ~ S2-8	SSRA50	Mode Switch	1	X					
S3-1 ~ S3-4	SSHA37S	Tape Monitor 1 Switch	1	X					
S4-1 ~ S4-4		Tape Monitor 2 Switch							
S11-1 ~ S11-4		VU Meter Range Switch							
		Button (Not Available Order SSHA37S)			(3)				
S5	SSLA18S	Muting Switch	1	X					
S6-1 ~ S6-4	SSLA19S	Loudness Switch	1	X					
S7-1 ~ S7-4		Balanced Transformerless Switch	1	X					
S8-1, S8-2	ESB7025	Refer to Ref. No. CA13	1	X					
S9		Power Source Switch Only							
		Carrier Level Adjustment Switch	1	X					
		Refer to Ref. No. CA5							
S10-1 ~ S10-4	SSRA52	Cartridge Selector Switch	1	X					
S12-1 ~ S12-4	SSRA7S	Voltage Selector Switch	1	X					
SPEAKER PROTECTION RELAY									
	SSYA1	Relay, Speaker Protection	1	X					
FUSES									
F1,2,3,4	XBA51A3001	3A, Circuit Protection	4	X	CH10	SJSA5	Socket, CD-4 Demodulator P.C.B.	2	Z
F801	XBA51B3001	3A, Power Source	1	X	CH2	SULA44	Mounting, CD-4 Demodulator P.C.B.	2	Z
					CH3	SUPA2000	Printed Circuit Board Only	1	Z
					CH4	SJTA307	Pin Terminal, Circuit Connection	160	Z
					CH5	SMYA36	Hear Sink, Power Transistor	1	Z
					CH6	SJSA65	Socket, Circuit Connection Pin Terminal	17	Z
					CH7	SDR5	Pulley, Dial Cord	4	Z
					CH8	SMCA83-1	Shield Plate, FM-IF P.C.B.	1	Z
						SDTA5S	Tuning Shaft, Complete	1	Z
					CH9	SDXA304	Mounting	(1)	Z
						SDTA6005	Shaft Only Not Available	(1)	Z
						SDXA705S	Flywheel Order SDTA5S	(1)	Z
					CH10	SHGA624	Rubber Cushion, Cabinet	½	Z
					CH11	SMA19-2	Meter, Signal Strength	1	X
					CH12	SHGA202	Bracket, Stereo Eye, 4CH/2CH Indicator	3	Z

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
CH13	SDPA1009	Slider, Dial Pointer	1	Y	ACCESSORIES				
CH14	SHGA203	Bracket, CD-4 Eye & CD-4 Indicator	1	Y					
CH15	SDPA5018	Pointer Only, Dial	1	Y	A1	SSAA1	Cord, FM Antenna	1	Y
CH16	RHG5-1	Rubber Cushion, Variable Capacitor	1	Z	A2	XBAS1A3001	Fuse, Circuit Protection [3A]	4	X
CH17	RDR20	Pulley, Dial Cord, Small Size	2	Z	A3	SPR111-1	Record, CD-4 Test	1	Y
	RDR23	Pulley, Dial Cord, Large Size	2	Z	A4	RJP16AS	Plug, AC Power Source	1	Y
CH18	SKDA360	Scale, Dial	1	Y	A5	RJP17AS	Plug, AC Power Source	1	Y
CH19	SUMA7	Mounting, Dial Scale	1	Y	A6	RJP5	Pin Plug	8	Y
CH20	SDDA321S	Drum, Dial Cord	1	Z	PACKING PARTS				
	SDSA4141	Spring, Dial Cord	1	Z					
	XXAR3H6S	Screw, Durm M'tg.	2	Z	P1	SPPA30	Soft Cover	1	Z
	RDZ05-5	Cord, Dial, 160cm (63-1/8")	1 roll	Z		SPEA3	Cover, AC Plug	1	Z
CH21	SJSA64	Socket, Circuit Connection, 6 pin	3	Z	P2	SPHA6008	Polyethylene Sheet	1	Z
	SJSA63	Socket, Circuit Connection, 4 pin	10	Z	P3	SPSA63	Pad, Upper & Lower	2	Z
CH22	SHGA635	Rubber Cushion, VU Meter	1	Z	P4	SPSA61	Pad, Inside	1	Z
CH23	RJV1A	Holder, Meter Light	5	X	P5	SPSA62	Pad, Right & Left Side	2	Z
CH24	SSMA21	Volume Unit (Output Level) Meter	4	X	P6	SPNA150A	Carton Box [Inner]	1	Z
CH25	SJJA13	Jack, Microphone	1	Z	P7	SQFA160	Printed Matter, Complete	1	Y
CH26	SNWA121	Nylon Sheet, Mic & Headphone Jack	3	Z		SQXA5102	Instructions Book (Order SQFA160)	(1)	Z
CH27	SJJA14	Jack, Headphones	2	Z	P8	SPSA71	Pad, Carton Box	1	Z
CH28	RNW150-2	Lock Washer, Pulley	3	Z	P9	SPGA232A	Carton Box [Outer]	1	Z
CH29	RDY34	Shaft, Small Pulley	2	Z					
	RDY32	Shaft, Large Pulley	1	Z					
CH30	SUR3A6	Mounting, Pulley	1	Z					
CH31	SDY11	Shaft, Pulley Lock	4	Z					
CH32	SDY9	Bracket, Pulley & Pulley Shaft	4	Z					
	SJSA202	Holder, Dial Light	1	Z					

PACKINGS

