ORDER NO. MD9104036C2

Service Manual

Portable Stereo Component System

Radio Cassette

RX-CT980

* DOLBY SYSTEM

Color

(K) . . . . . Black Type

Area

Country Code	Areas	Color
(EB)	Great Britain	(K)
(EG)	F. R. Germany/Italy	
	Continental Europe	

SG-20W MECHANISM SERIES

■ SPECIFICATIONS

General :

Power Requirement :	AC; 230 ~ 240V, 50Hz Battery; 15V (10 UM-1 "R20/LR20" Batteries) DC IN; 13.2V (12 ~ 15V) Memory Back-up Battery for Computer/ Clock; 6V (4 UM-3 "AA" size batteries)
Power Comsumption :	55W (AC only)
Power Output :	80W (40Wx2) . . . . PMPO 40W (20Wx2) . . . . MPO
Speaker :	Woofer; 12cm PM Dynamic Speaker (2.7 Ω) Tweeter; 8cm Speaker
Jacks :	
Input ;	CD/AUX IN; 316mV, 47kΩ EXT. MIC; 2.5mV (200 ~ 600 Ω)
Output ;	EXT. SP; Woofer : 2.7 ~ 8Ω Tweeter : 8 ~ 16Ω HEADPHONES; 32Ω, Ø 3.5
Dimensions(WxHxD) :	624 x 256 x 206mm Main Unit ; 293 x 256 x 206mm Speaker Box ; 174 x 254 x 188mm
Weight :	7.4kg without batteries

Radio Section :

Frequency Range :	FM; 87.5 ~ 108 MHz LW; 144 ~ 288 kHz MW; 522 ~ 1611 kHz
Intermediate Frequency :	FM; 10.7 MHz AM; 459 kHz
Sensitivity :	FM; 1.8 uV/50 mW output (-3 dB Limit Sens.) LW; 158 uV/m/50 mW output MW; 112 uV/m/50 mW output

Tape Deck Section : TAPE 1

Frequency Range :	Normal; 30 ~ 16,000 Hz CrO_2 ; 30 ~ 17,000 Hz
Tape Speed :	4.8 cm/s
Track System :	4-track 2-channel stereo playback

TAPE 2

Frequency Response :	Normal; 30 ~ 16,000 Hz CrO_2 ; 30 ~ 17,000 Hz
Recording System :	AC bias, AC erase
Tape Speed :	4.8 cm/s
Track System :	4-track 2-channel stereo recording and playback

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

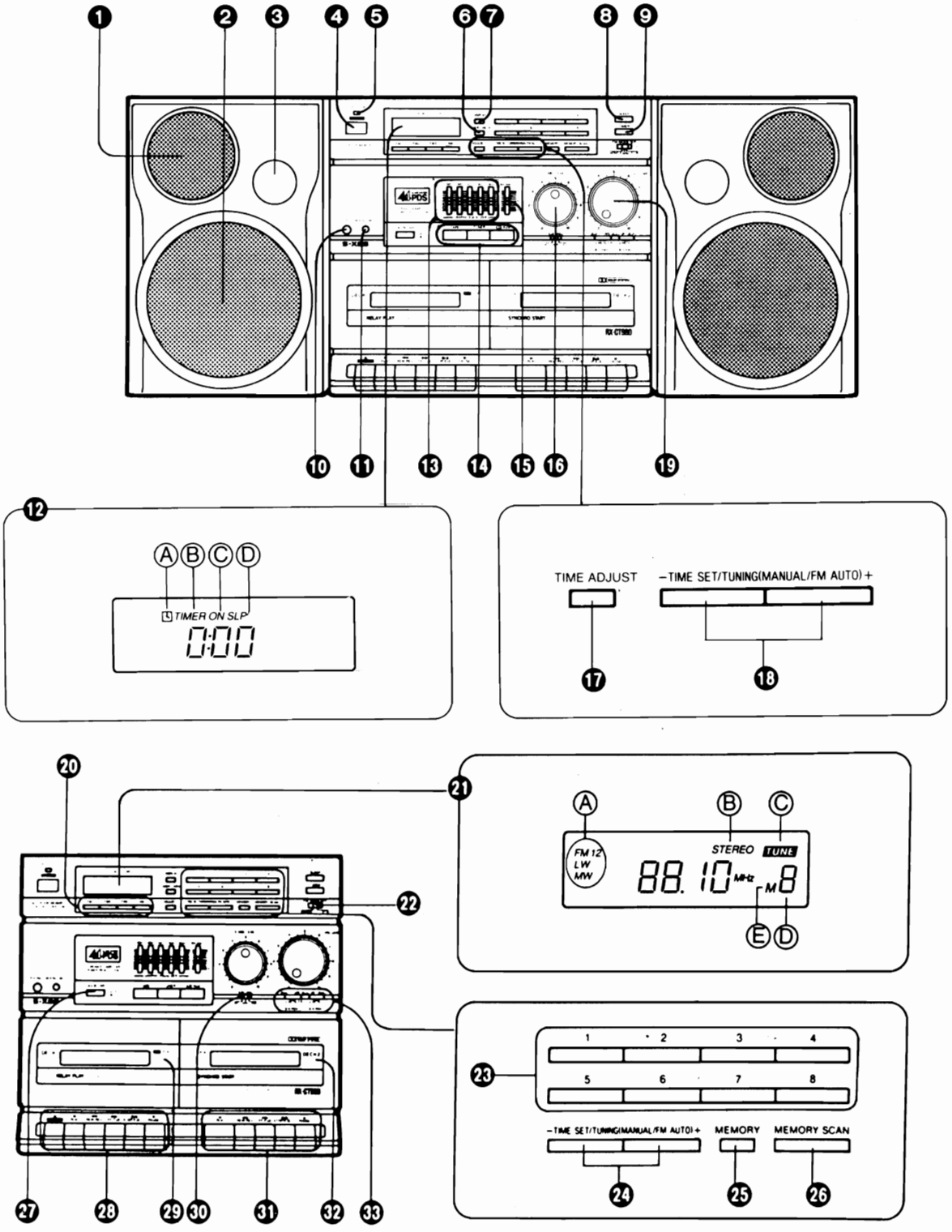
Notes :

1. Weights and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

Panasonic

■ CONTENTS

■ LOCATION OF CONTROLS



GENERAL/TIMER CONTROLS

❶ Speakers [Tweeter] 8 cm

❷ Speakers [Woofer] 12 cm / 2.7Ω

❸ Bass Reflex Ports

❹ Operation Switch (OPERATION)

❺ Operation/Battery Check/AC connection Indicator (OPR/BATT-STDBY ⏻)

❻ Timer Check Button (TIMER CHECK)

❼ Display Select Button (DISPLAY)

❽ Sleep Button (SLEEP)

❾ Timer Button (TIMER)

❿ Headphones Jack (PHONES) φ3.5 / 32Ω
- When using the headphones, avoid listening to sound at excessive volume levels, because it may injure your ears.
- Speakers are automatically cut off when the headphones are connected.

⓫ Mixing Microphone Jack (MIXING MIC) 2.5 mV/200~600Ω

⓬ Display section
- Ⓐ Timer Display (◷)
- Ⓑ Timer Indicator (TIMER)
- Ⓒ Timer On Indicator (TIMER ON)
- Ⓓ Sleep Indicator (SLP)

⓭ Graphic Equalizer Controls (GRAPHIC EQUALIZER)

⓮ Mode Select Buttons (TAPE • TUNER • CD /AUX)

⓯ Balance Control (BALANCE)

⓰ Super Extra Bass System Control (S-XBS LEVEL)

⓱ Time Adjust Button (TIME ADJUST)

⓲ Time Set Buttons [– TIME SET/TUNING (MANUAL/FM AUTO) +]

⓳ Volume Control (VOLUME)

TUNER CONTROLS

⓴ Band Select Buttons (FM1, FM2, LW, MW)

㉑ Display section
- Ⓐ Band Indicators (FM1 • FM2 • LW • MW)
- Ⓑ FM Stereo Indicator (STEREO)
- Ⓒ Tuning Indicator (TUNE)
- Ⓓ Memory Station Indicator
- Ⓔ Memory Indicator (M)

㉒ FM Mode/Beat Proof Switch (FM MODE/B.P)

㉓ Memory Station Buttons (1, 2, 3, 4, 5, 6, 7, 8)

㉔ Tuning Buttons [– TIME SET/TUNING (MANUAL/FM AUTO) +]

㉕ Memory Button (MEMORY)

㉖ Memory Scan Button (MEMORY SCAN)

DECK CONTROLS

㉗ *Dolby Noise Reduction Switch (DOLBY NR)

㉘ Deck 1 Tape Operation Buttons
- Record Button (● RECORD)
- Playback Button (▶ PLAY)
- Rewind/Review Button (◀◀ REW/REV)
- Fast Forward/Cue Button (▶▶ FF/CUE)
- Stop/Eject Button (■/▲ STOP/EJECT)
- Pause Button (❚❚ PAUSE)

㉙ Deck 1 Cassette Compartment

㉚ Editing Mode Switch (EDITING)

㉛ Deck 2 Tape Operation Buttons
- Playback Button (▶ PLAY)
- Rewind/Review Button (◀◀ REW/REV)
- Fast Forward/Cue Button (▶▶ FF/CUE)
- Stop/Eject Button (■/▲ STOP/EJECT)
- Pause Button (❚❚ PAUSE)

㉜ Deck 2 Cassette Compartment

㉝ Deck 1, 2 Tape Select Switch (DECK 1/TAPE SELECTOR/DECK 2)

REAR PANEL

㉞ Speaker Cable Compartments

㉟ Speaker Release Levers (RELEASE)

㊱ Handle

㊲ CD/AUX Input Jacks (CD/AUX IN)

㊳ Speaker Terminals (SPEAKERS)

㊴ Telescopic Antenna

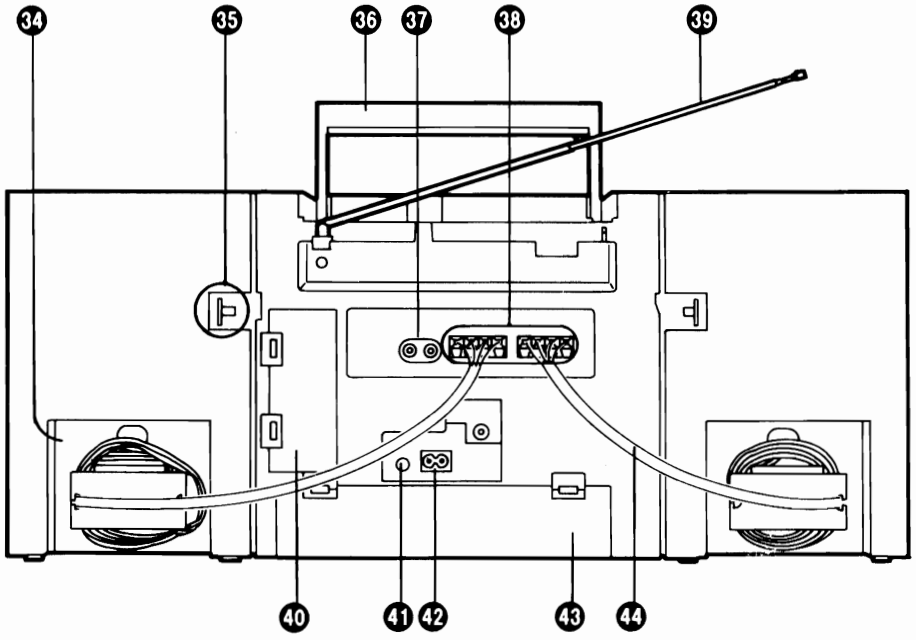
㊵ Memory Back-up Battery Compartment Cover

㊶ DC Input Jack (DC IN 13.2 V)

㊷ AC Socket (AC IN ~)

㊸ Battery Compartment Cover

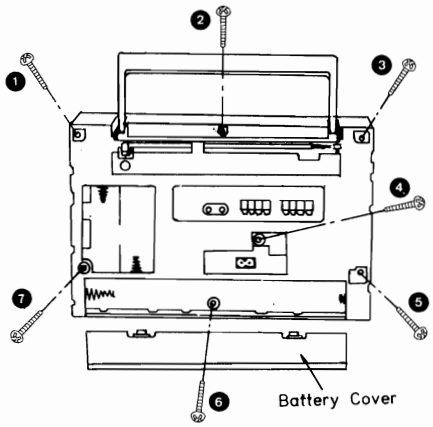
㊹ Speaker Cables



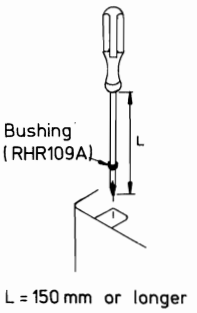
■ DISASSEMBLY INSTRUCTIONS

Ref. No. 1	Removal of the Front Cabinet
Procedure 1	

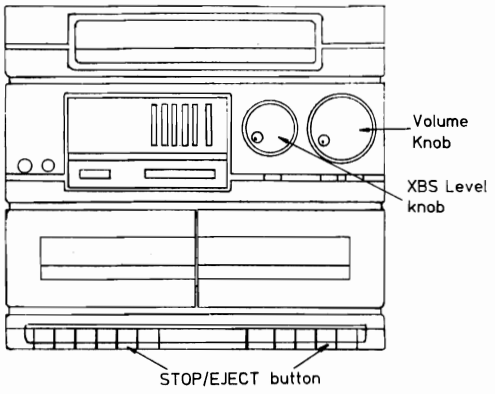
[Removal of Screws]
•Use a screwdriver similar to the one in the figure.



1. Remove the battery cover.
2. Remove the 7 screws (❶~❼).



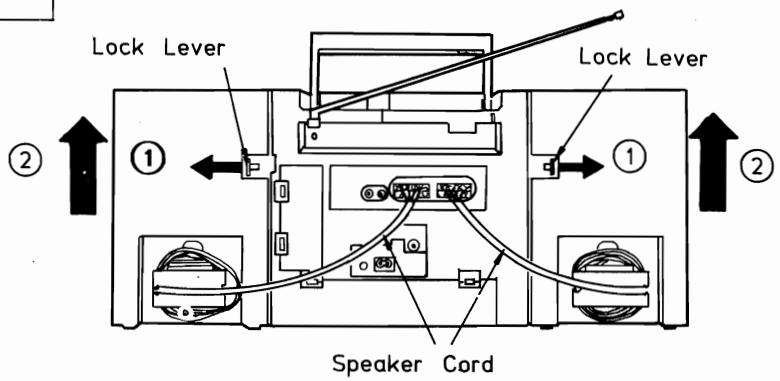
•If you attach a bushing (part number: RHR109A) to the tip of the screwdriver as shown in the figure, the screwdriver tip will easily fit in the screw heads and you will be able to remove the screws with ease.



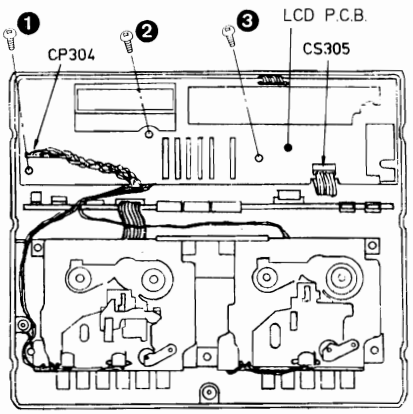
3. Pull out the volume knob and S-XBS Level knob.
4. Press the STOP/EJECT button and then open the cassettle lid.

Ref. No. 2	Removal of the Speaker Box
Procedure 2	

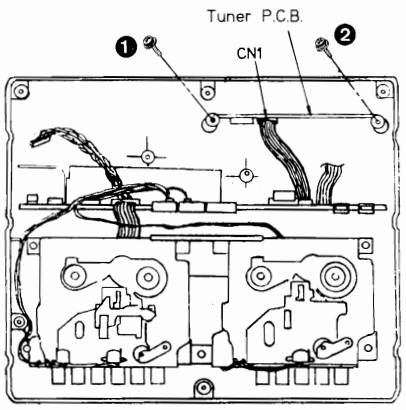
1. Remove the speaker cord from the jacks.
2. Press the Lock lever in the direction of arrow ❶
3. Remove the Speakers in the direction of arrow ❷



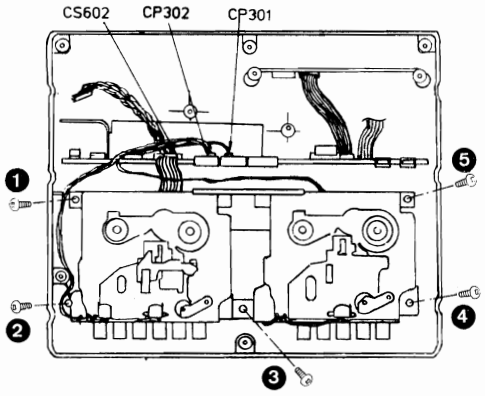
Ref. No. 3	Removal of the Operation LCD P.C.B.
Procedure 1 → 3	1. Remove 3 screws (❶~❸). 2. Remove 2 connectors (CP304, CS305).



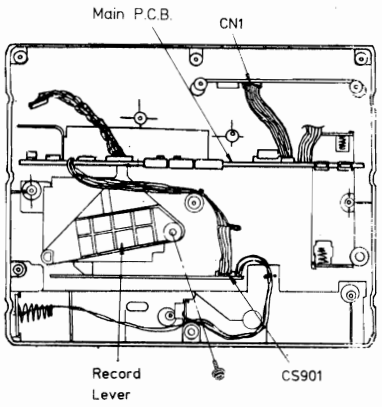
Ref. No. 4	Removal of the Tuner P.C.B.
Procedure 1 → 3 → 4	1. Remove 2 screws (❶~❷). 2. Remove 1 connector (CN1).



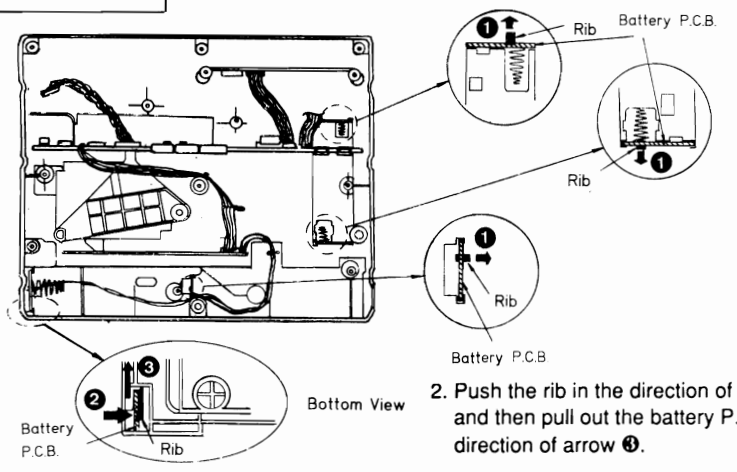
Ref. No. 5	Removal of the Mechanism
Procedure 1 → 3 → 5	1. Remove 5 screws (❶~❺). 2. Remove 3 connectors (CS602, CP301, CP302).



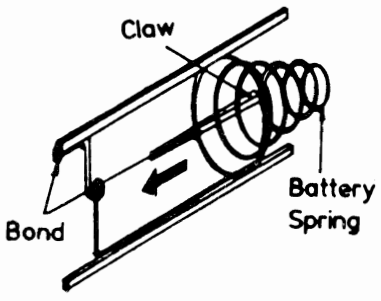
Ref. No. 6	Removal of the Main P.C.B.
Procedure 1 → 3 → 5→ 6	1. Remove 1 screw (❶) and then remove the record lever. 2. Remove connectors (CS901, CN1) and then pull out the main P.C.B.



Ref. No. 7	Removal of the battery P.C.B.
Procedure 1 → 3 → 5 → 7	1. Release the ribs in the direction of arrow ❶ and then pull out the battery P.C.B.

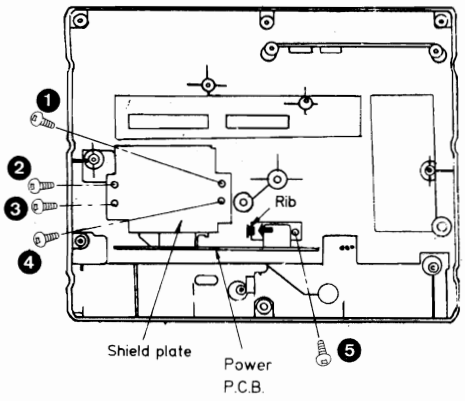


2. Push the rib in the direction of arrow ❷ and then pull out the battery P.C.B. in the direction of arrow ❸.

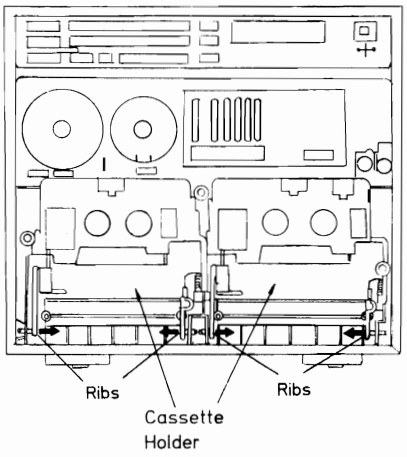


3. Remove the bond.
4. Cut away the claw and pull out the battery spring in the direction of arrow.

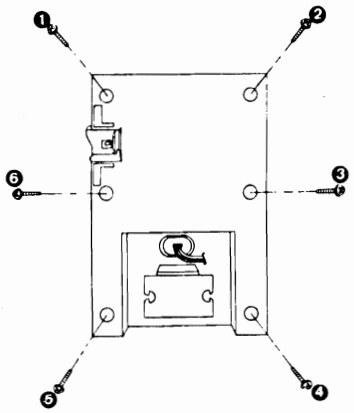
Ref. No. 8	Removal of the Power P.C.B.
Procedure 1 → 3 → 5 → 6 → 7 → 8	1. Remove 5 screws (❶~❺) and then remove the shield plate. 2. Release the rib in the direction of arrow and then pull out the Power P.C.B.



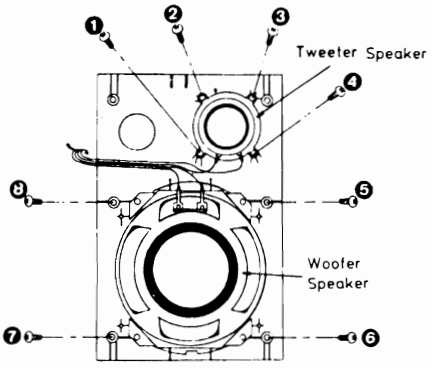
Ref. No. 9	Removal of the Cassette Holder
Procedure 1 → 9	• Release 4 ribs in the direction of arrows



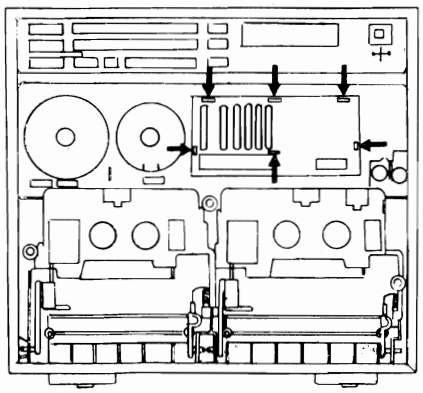
Ref. No. 10	Removal of the Speaker Front Cabinet
Procedure 10	• Remove 6 screws (❶~❻).



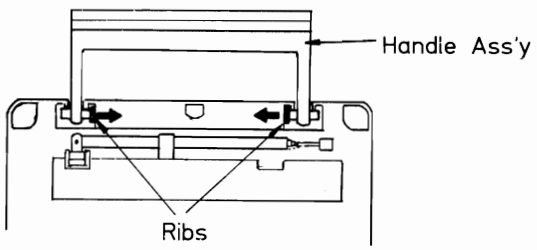
Ref. No. 11	Removal of the Speaker and Tweeter
Procedure 10 → 11	• Remove 8 screws (❶~❽).



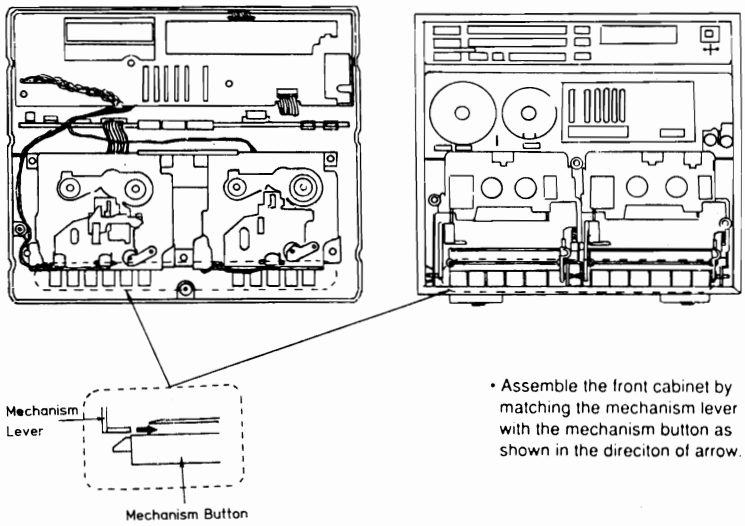
Ref. No. 12	Removal of the G. EQ. Ornament Ass'y
Procedure 1 → 12	• Release 6 ribs in the direction of arrows.



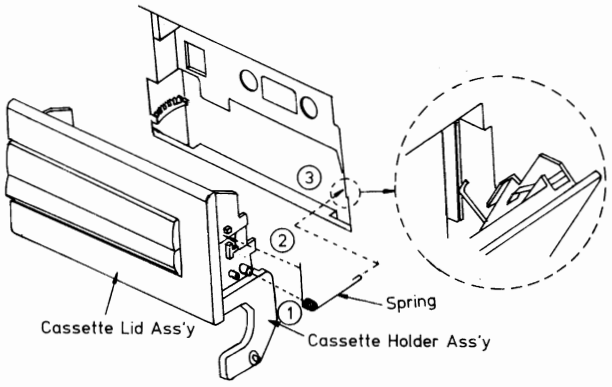
Ref. No. 13	Removal of the Handle Ass'y
Procedure 13	



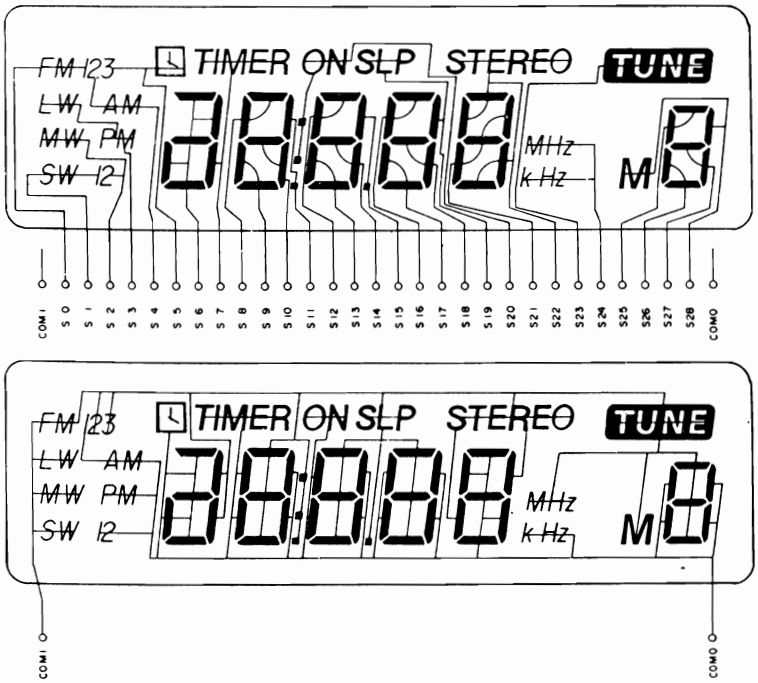
■ FRONT CABINET ASSEMBLY



■ CASSETTE LID ASSEMBLY



■ LIQUID CRYSTAL DISPLAY (LCD)



■ FUNCTIONS OF IC TERMINALS

Terminal Number	Name	I/O	Function
1 - 20	S12 - S31	O	Output the LCD segment drive signal.
21 - 22	COM0, COM1	O	Output the common signal.
23 - 24	COM2, COM3	-	-----
25	BIAS	-	LCD power supply bias control.
26 - 28	VLC0 - VLC2	-	LCD power supply.
29 - 30	P40 - P41	-	-----
31	FM (SW2)	O	Output the FM/AM switch signal (AM: HIGH, FM: LOW).
32	CE	O	Output the data transfer control to the PLL IC (can be transferred at HIGH).
33	VSS	-	GND.
34	STEREO	I	Input the stereo display signal (displays "STEREO" on the LCD at LOW).
35	SIGNAL	I	Display "TUNE" and input the auto stop detection signal (Display "TUNE" and auto stop function at LOW).
36 - 37	P52 - P53	-	-----
38	P00	-	-----
39	CLOCK	O	Clock output of the data transfer to the PLL IC.
40	DATA	O	Output data to the PLL IC.
41	P03	-	-----
42	RADIO	I	Operation selector switch; input the "RADIO" detection signal.
43	BATTERY	I	Input the main power supply detection signal (prevents the power from being tuned ON at LOW).
44, 46 - 48	KEY	I	Key matrix signal source.
45, 49	P13, P23	-	-----
50	MUTE	O	Output the audio mute signal.
51	POWER OUT	O	Output the main power supply control signal (turns the power ON at HIGH).
52	STANDBY	O	When Power switch (S821) is pressed, this pin will output a signal to turn ON Q322.
53	P33	-	-----
54	VDD	-	+B
55	XT1		
		I	Crystal connection terminal for the oscillation of the subsystem clock.
56	XT2		
57	NC	-	+B
58	X1		
		I	Crystal connection terminal for the oscillation of the main system clock.
59	X2		
60 - 67	P60 - P23,	I	Input the key matrix signal.
	P70 - P73		
68	RESET	I	Input the system reset signal.
69 - 71	S0 - S2	-	-----
72 - 80	S3 - S11	O	Output the LCD segment drive signal.

Notes:

For Tuner Circuit

1. VR1 : **FM VCO** adjustment VR.

For PLL and GEQ Circuit

1. S801 : Station memory switch (8).
2. S802 : Station memory switch (4).
3. S803 : **MW** switch.
4. S804 : Station memory switch (7).
5. S805 : Station memory switch (3).
6. S806 : **LW** switch.
7. S807 : Station memory switch (6).
8. S808 : Station memory switch (2).
9. S809 : FM2 switch.
10. S810 : Station memory switch (5).
11. S811 : Station memory switch (1).
12. S812 : FM1 switch.
13. S813 : Adjust switch.
14. S814 : Down switch.
15. S815 : Sleep switch.
16. S816 : Up switch.
17. S817 : Display switch.
18. S818 : Timer switch.
19. S819 : On-time switch.
20. S820 : Memory switch.
21. S821 : Power switch.
22. S822 : Memory scan switch.
23. S823-1~S823-2 : FM mode select switch in "BP" position. (BP...Beat Proof/Stereo, M... Mono)
24. VR301-1~VR301-2 : Graphic equalizer control VR (100Hz).
25. VR302-1~VR302-2 : Graphic equalizer control VR (330Hz).
26. VR303-1~VR303-2 : Graphic equalizer control VR (1kHz).
27. VR304-1~VR304-2 : Graphic equalizer control VR (3.3kHz).
28. VR305-1~VR305-2 : Graphic equalizer control VR (10kHz).
29. VR306-1~VR306-2 : XBS level control VR.
30. VR307 : Balance control VR.
31. VR308-1~VR308-2 : Volume control VR.

For Main, Mechanism and Power circuit

1. S301-1~S301-7 : Record/Playback switch in "Playback" position. (P...Playback, R... Record)
2. S302-1~S302-2 : Deck 1 tape select switch in "Normal" position. (N...Normal, Cr...Metal/CrO_2)
3. S303 : Deck 2 tape select switch in "Normal" position. (N...Normal, Cr...Metal/CrO_2)
4. S304-1~S304-3 : Function select switch in "TAPE" position.
   S304-1-1~S304-1-2: TAPE mode switch.
   S304-2-1~S304-2-2: TUNER mode switch.
   S304-3-1~S304-3-2: CD/AUX IN mode switch.
5. S305 : Dolby select switch.
6. S306 : Editing mode switch in "MIC" position. (M...MIC, N...Normal speed, H...High speed)
7. S601 : Deck 1 playback switch.
8. S602 : Deck 2 playback switch.
9. S603 : Deck 1 FWD/REV switch.
10. S604 : Deck 2 FWD/REV switch.
11. S605 : Deck 1 motor switch.
12. S606 : Deck 2 motor switch.
13. S901 : AC/DC switch in "DC" position.
14. VR101 : Deck 1 playback gain adjustment VR (Lch).
15. VR102 : Deck 2 playback gain adjustment VR (Lch).
16. VR103 : Record level adjustment VR (Lch).
17. VR201 : Deck 1 playback gain adjustment VR (Rch).
18. VR202 : Deck 2 playback gain adjustment VR (Rch).
19. VR203 : Record level adjustment VR (Rch).
20. VR601 : Tape speed adjustment VR.

... FM SIGNAL LINE

... PLAYBACK SIGNAL LINE

... RECORD SIGNAL LINE

.... PLAYBACK/FM SIGNAL LINE

... AM OSC SIGNAL LINE

... AM SIGNAL LINE

... + B LINE

... MIC SIGNAL LINE

DC voltage measurements are taken with electronics voltmeter.
The negative terminal of the battery provides negative meter connection point.
No mark...PLAYBACK, [ ]...RECORD, ( )...AM, < > ...FM.

Battery current:

Vol min.....	186mA	(FM)
	183mA	(AM)
	236mA	(Playback)
	157mA	(CD/AUX IN)
Vol max.....	630mA	(FM)
	630mA	(AM)
	1,020mA	(Playback)
	1,080mA	(Recording)
	860mA	(CD/AUX IN)

Measurement instruction
Radio: FM 60dB, 30% mod.
AM 74dB/m, 30% mod.
Tape: 315Hz, 0dB

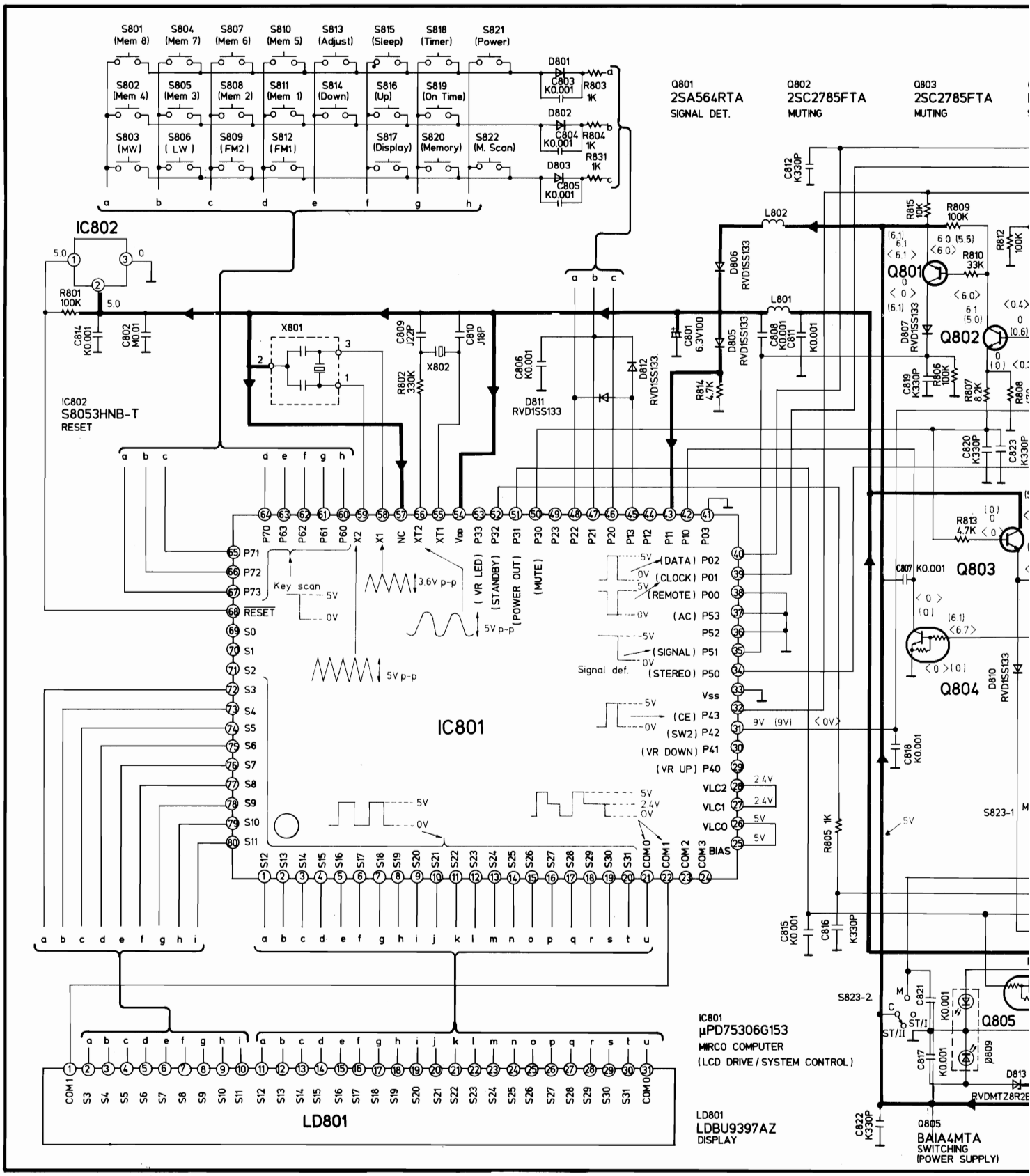
The mark (■) shows test point eg. TP1 = test point 1.
Important safety notice:
Component identified by ⚠ mark have special characteristics important for safety.
When replacing any of these component, use only manufacturer's parts.

• **This schematic diagram may be modified at any time with the development of new technology.**

■ SCHEMATIC DIAGRAM

(Part list shown in page 34 ~ 38)

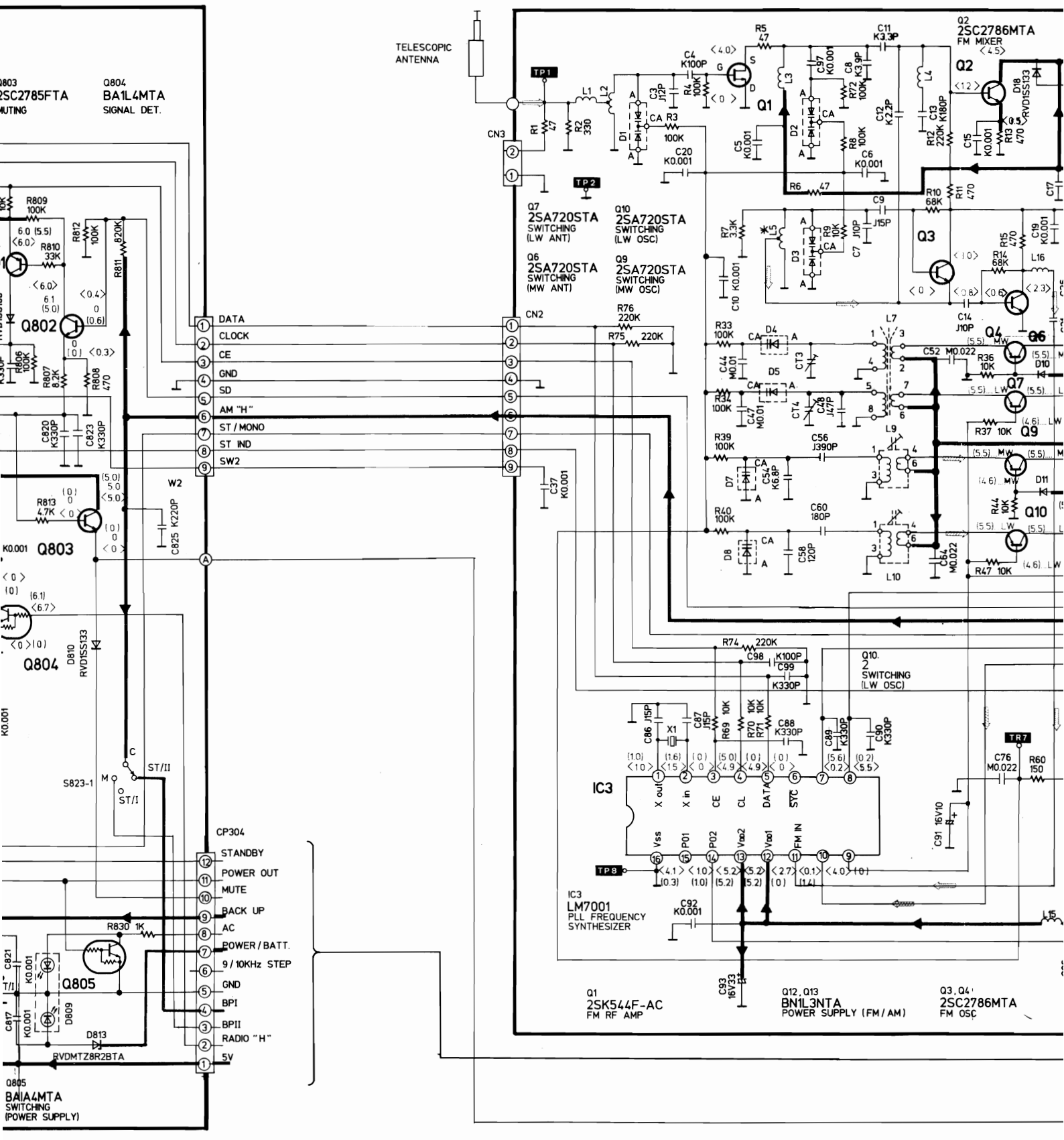
A OPERATION SWITCH CIRCUIT



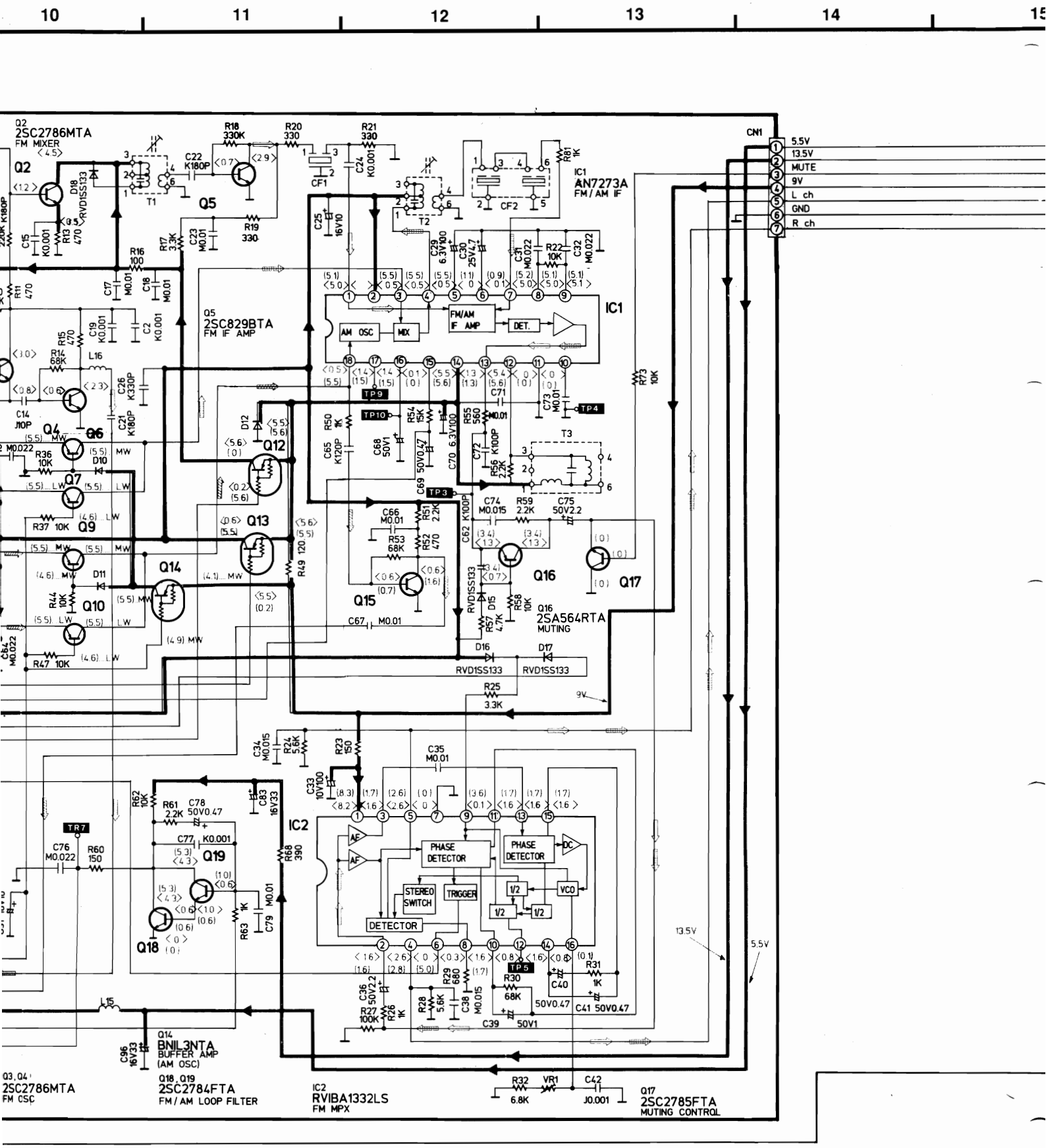
... FM SIGNAL LINE ... PLAYBACK SIGNAL LINE ... RECORD SIGNAL LINE

6 7 8 9 10

B TUNER CIRCUIT



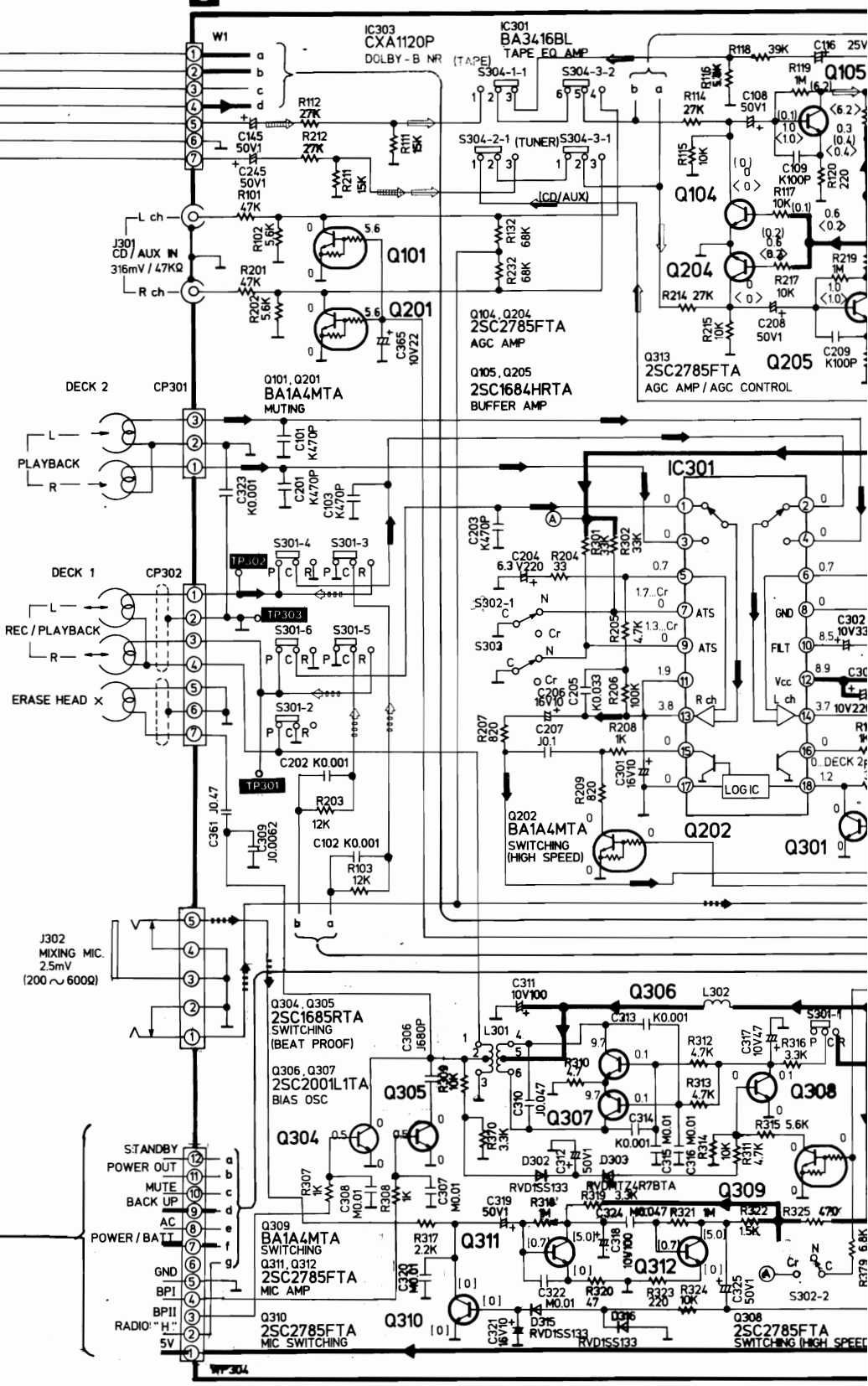
SIGNAL LINE ... PLAYBACK/FM SIGNAL LINE ... AM OSC SIGNAL LINE

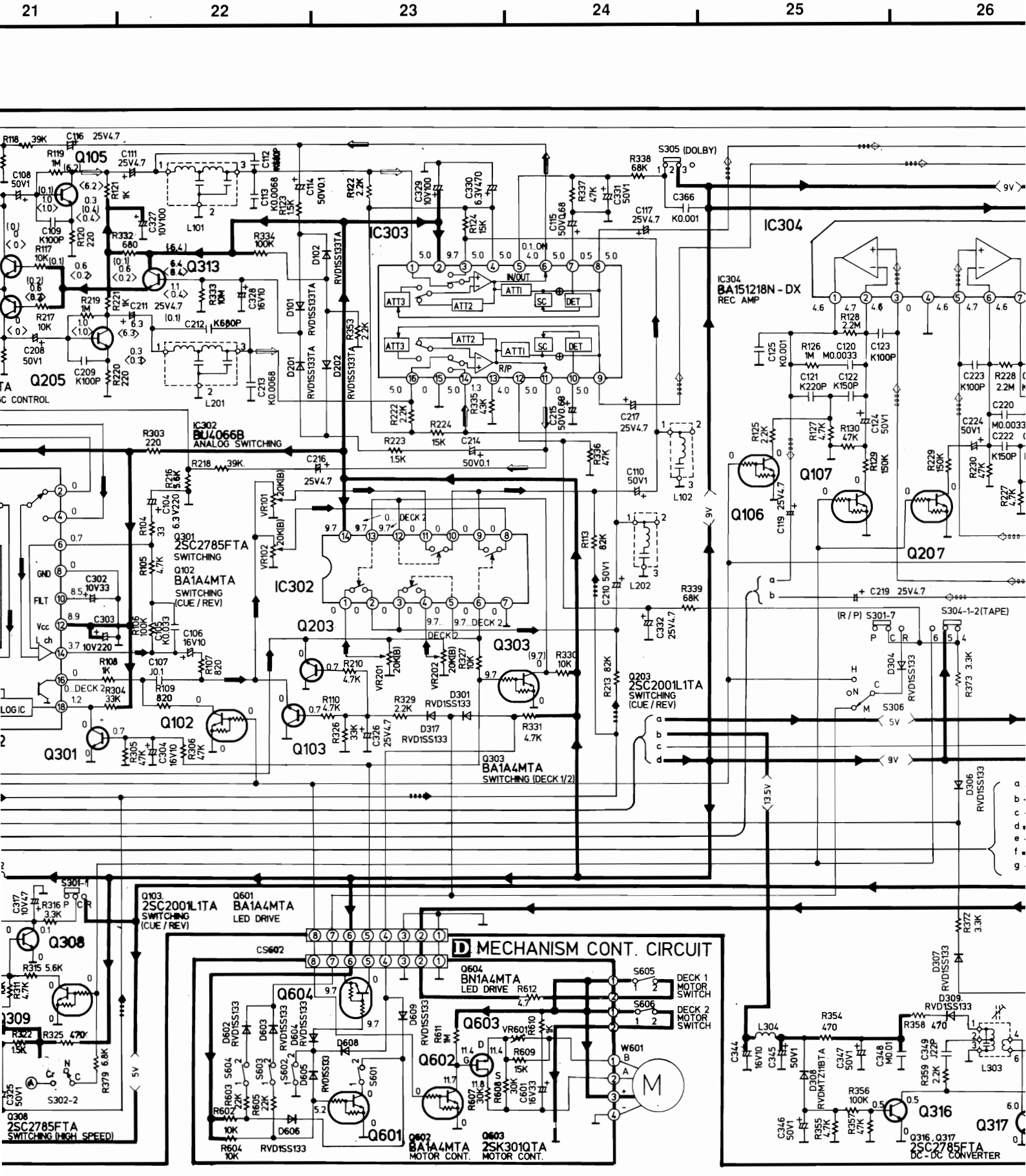


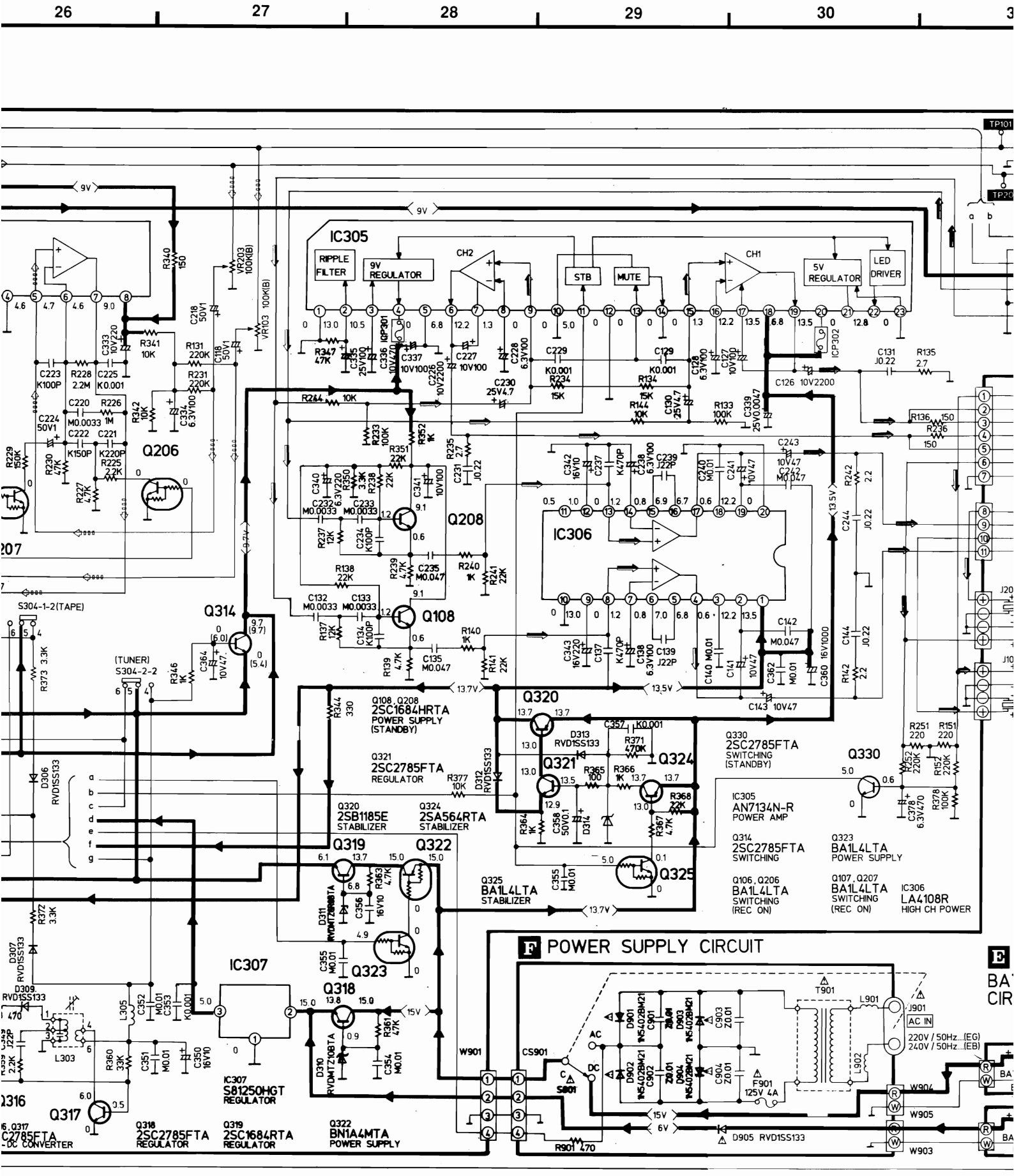
. . . AM SIGNAL LINE . . . + B LINE . . . MIC SIGNAL LINE

17 18 19 20 21

C MAIN CIRCUIT




21
22
23
24
25
26
IC303
IC304
IC304
BA151218N - DX
REC AMP
IC302
BU4066B
ANALOG SWITCHING
Q105
Q313
Q205
Q301
2SC2785FTA
SWITCHING
Q102
BA1A4MTA
SWITCHING
(CUE / REV)
Q203
2SC2001L1TA
SWITCHING
(CUE / REV)
Q303
BA1A4MTA
SWITCHING (DECK 1/2)
Q106
Q107
Q207
S305 (DOLBY)
S304-1-2(TAPE)
(R / P) S301-7
S306
L101
L102
L201
L202
L303
L304
D MECHANISM CONT. CIRCUIT
Q604
BN1A4MTA
LED DRIVE
Q603
Q602
Q601
Q308
2SC2785FTA
SWITCHING (HIGH SPEED)
Q103.
2SC2001L1TA
SWITCHING
(CUE / REV)
Q601
BA1A4MTA
LED DRIVE
Q602
BA1A4MTA
MOTOR CONT.
Q603
2SK301QTA
MOTOR CONT.
DECK 1
MOTOR
SWITCH
DECK 2
MOTOR
SWITCH
Q316
Q317
Q316, Q317
2SC2785FTA
DC-DC CONVERTER
CONTROL
LOGIC
9V
5V
13.5V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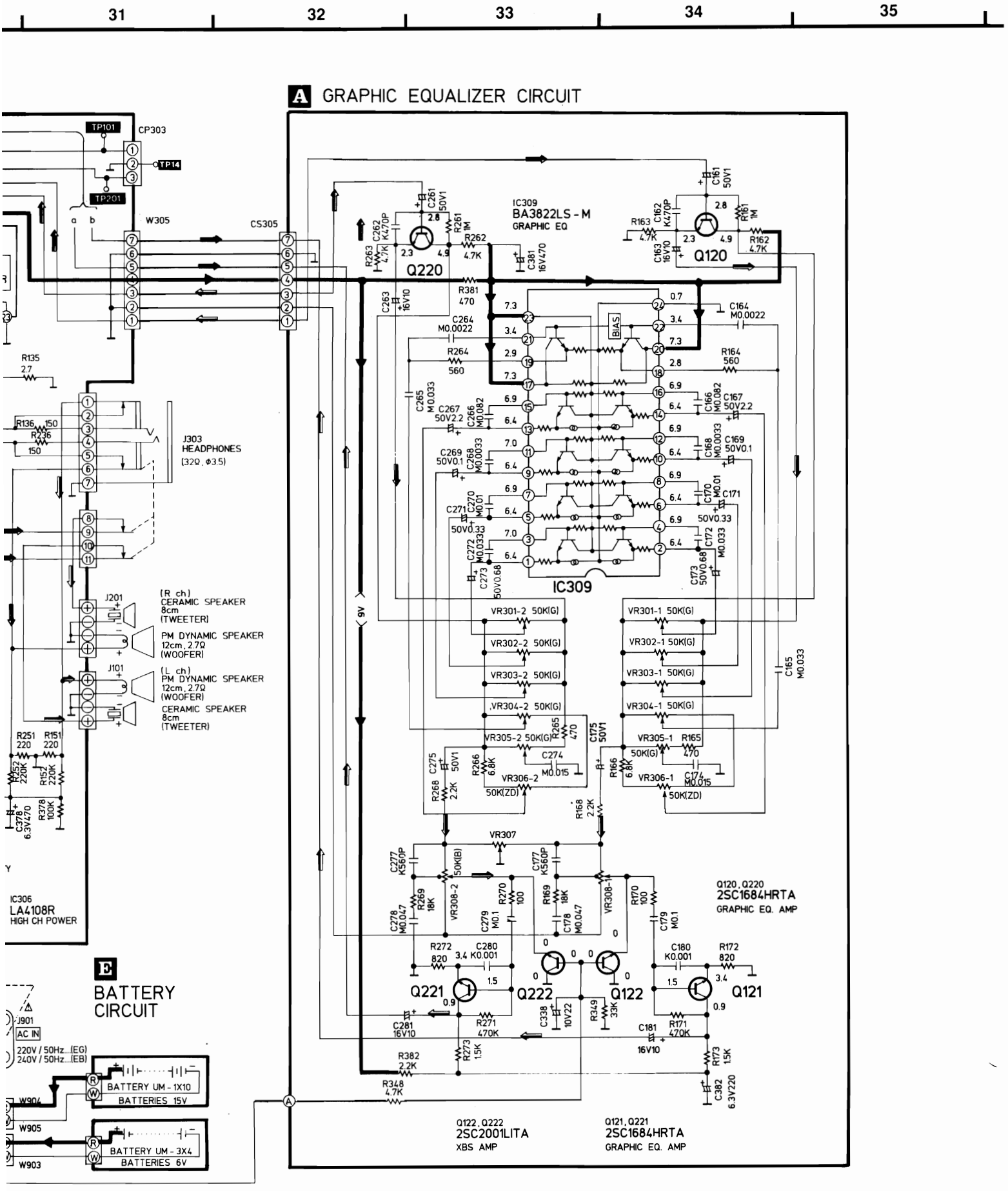
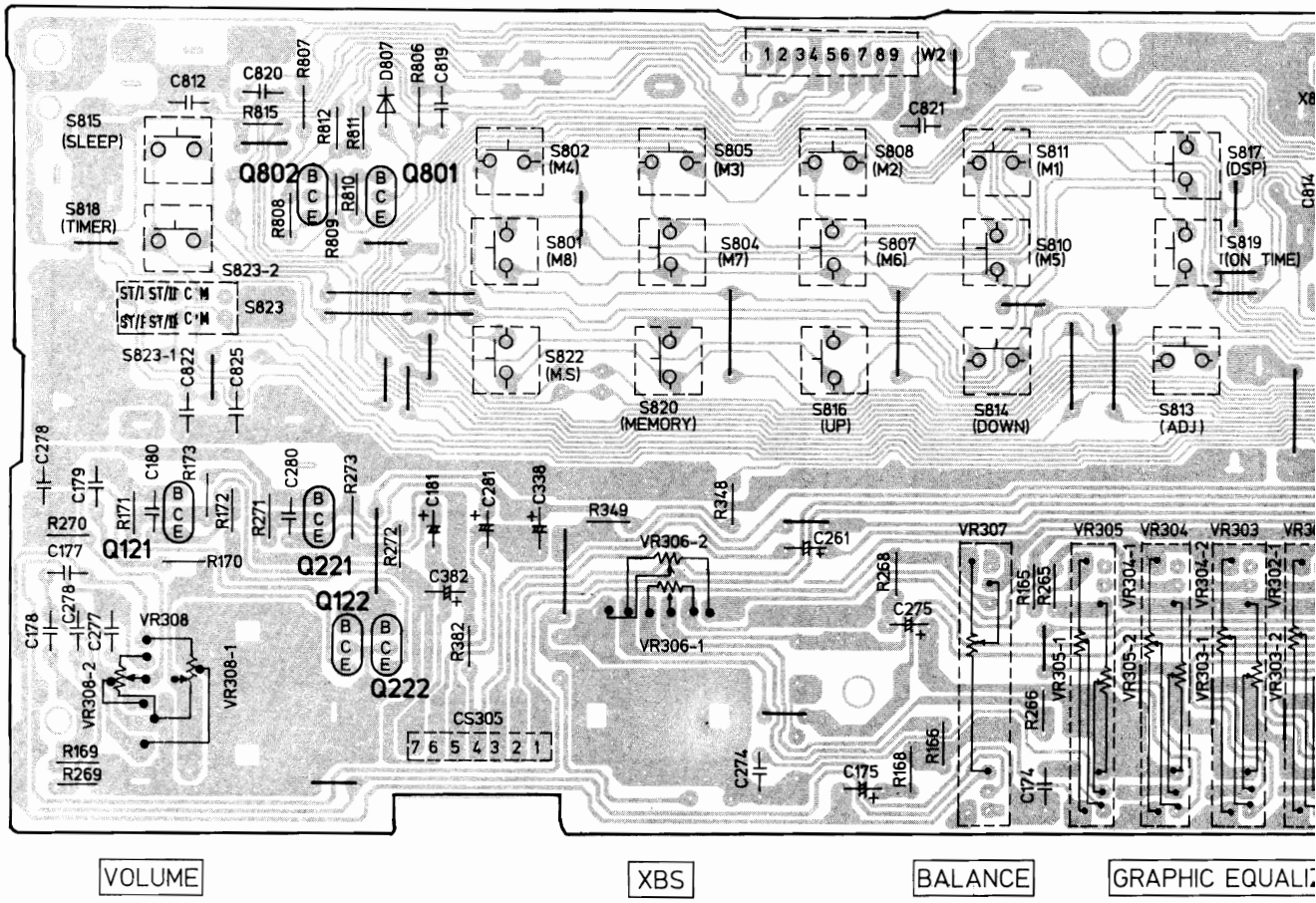
IC305
RIPPLE FILTER
9V REGULATOR
CH2
STB
MUTE
CH1
5V REGULATOR
LED DRIVER
IC306
Q206
Q208
Q108
Q314
Q320
Q321
Q324
Q330
Q319
Q322
Q323
Q318
Q317
Q325
IC307
S81250HGT
REGULATOR
Q108, Q208
2SC1684HRTA
POWER SUPPLY
(STANDBY)
Q321
2SC2785FTA
REGULATOR
Q320
2SB1185E
STABILIZER
Q324
2SA564RTA
STABILIZER
Q325
BA1L4LTA
STABILIZER
IC305
AN7134N-R
POWER AMP
Q314
2SC2785FTA
SWITCHING
Q323
BA1L4LTA
POWER SUPPLY
Q106, Q206
BA1L4LTA
SWITCHING
(REC ON)
Q107, Q207
BA1L4LTA
SWITCHING
(REC ON)
IC306
LA4108R
HIGH CH POWER
Q330
2SC2785FTA
SWITCHING
(STANDBY)
S304-1-2(TAPE)
(TUNER)
S304-2-2
F POWER SUPPLY CIRCUIT
AC IN
220V / 50Hz...(EG)
240V / 50Hz...(EB)
F901
125V 4A
D905 RVD1SS133
Q316
Q317
2SC2785FTA
-DC CONVERTER
Q318
2SC2785FTA
REGULATOR
Q319
2SC1684RTA
REGULATOR
Q322
BN1A4MTA
POWER SUPPLY

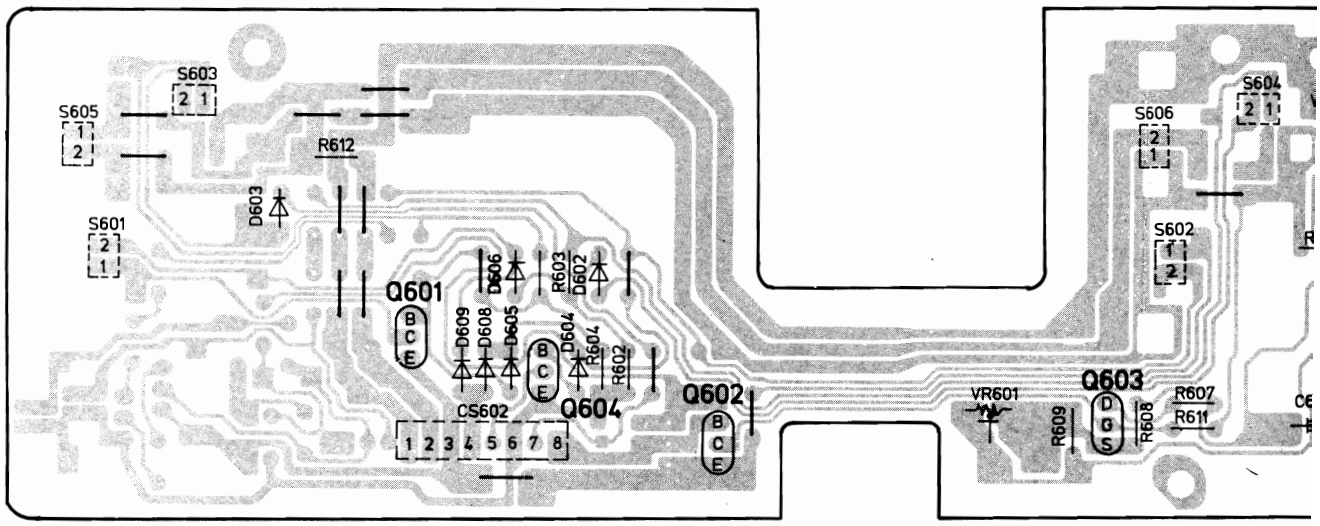

31
32
33
34
35
A GRAPHIC EQUALIZER CIRCUIT
TP101
CP303
TP14
TP201
W305
CS305
IC309
BA3822LS-M
GRAPHIC EQ
Q220
Q120
BIAS
IC309
R135
2.7
R136 150
R236
150
J303
HEADPHONES
(32Ω, φ3.5)
J201
(R ch)
CERAMIC SPEAKER
8cm
(TWEETER)
PM DYNAMIC SPEAKER
12cm, 2.7Ω
(WOOFER)
J101
(L ch)
PM DYNAMIC SPEAKER
12cm, 2.7Ω
(WOOFER)
CERAMIC SPEAKER
8cm
(TWEETER)
VR301-2 50K(G)
VR302-2 50K(G)
VR303-2 50K(G)
VR304-2 50K(G)
VR305-2 50K(G)
VR306-2 50K(ZD)
VR301-1 50K(G)
VR302-1 50K(G)
VR303-1 50K(G)
VR304-1 50K(G)
VR305-1 50K(G)
VR306-1 50K(ZD)
VR307
VR308-2
VR308-1
IC306
LA4108R
HIGH CH POWER
Q120, Q220
2SC1684HRTA
GRAPHIC EQ. AMP
Q221
Q222
Q122
Q121
E
BATTERY
CIRCUIT
J901
AC IN
220V / 50Hz (EG)
240V / 50Hz (EB)
BATTERY UM-1X10
BATTERIES 15V
BATTERY UM-3X4
BATTERIES 6V
W904
W905
W903
Q122, Q222
2SC2001LITA
XBS AMP
Q121, Q221
2SC1684HRTA
GRAPHIC EQ. AMP

■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM (Part list sl

A OPERATION SWITCH AND GRAPHIC EQUALIZER P.C.B



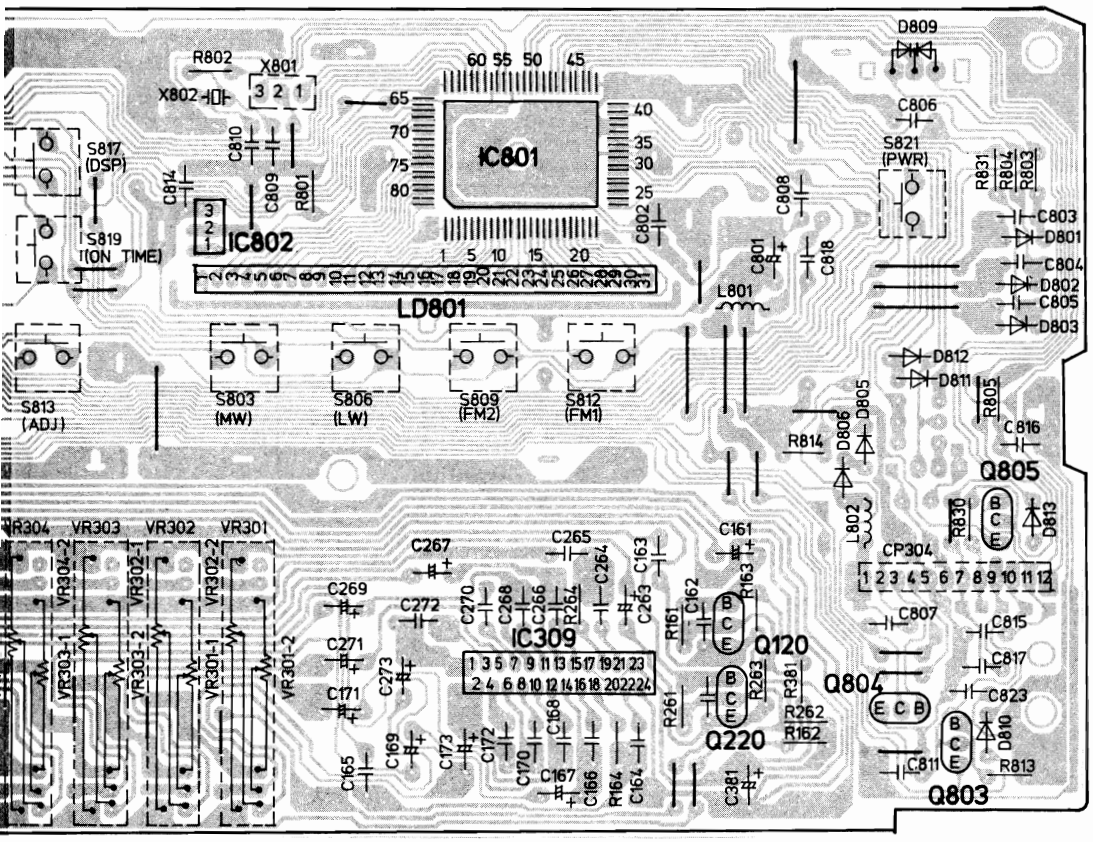
D MECHANISM CONTROL P.C.B

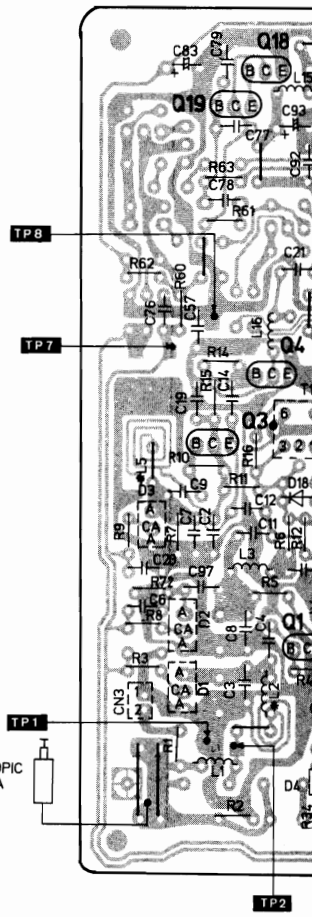


AM (Part list shown in page 34 ~ 38)

5 6 7 8 9 10

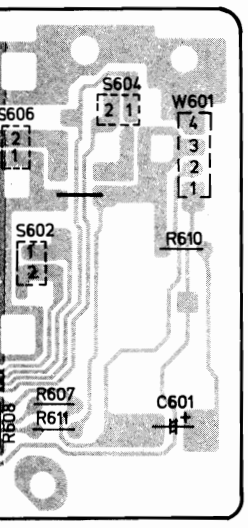
B TUNER P.

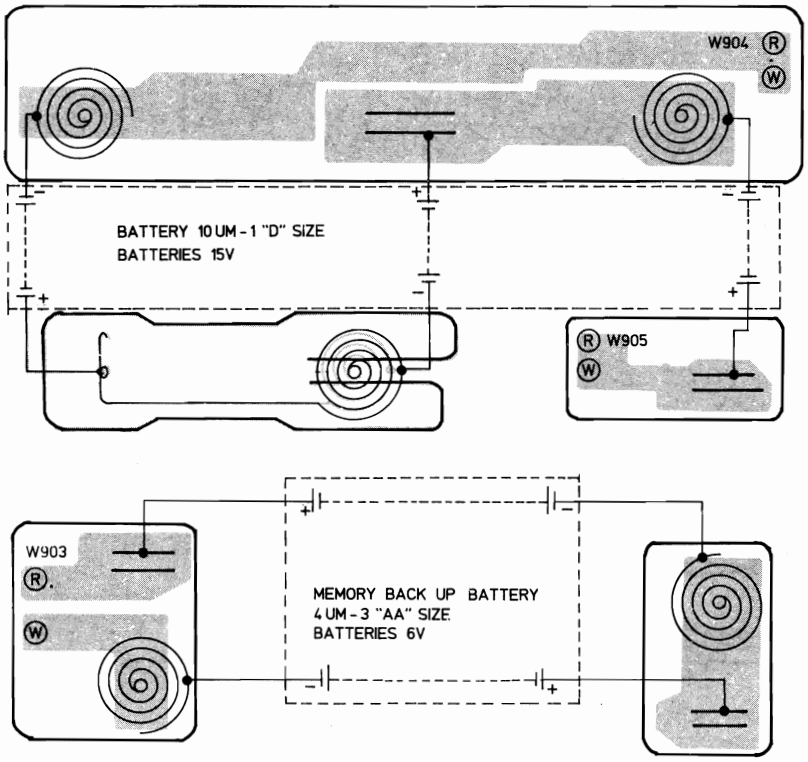




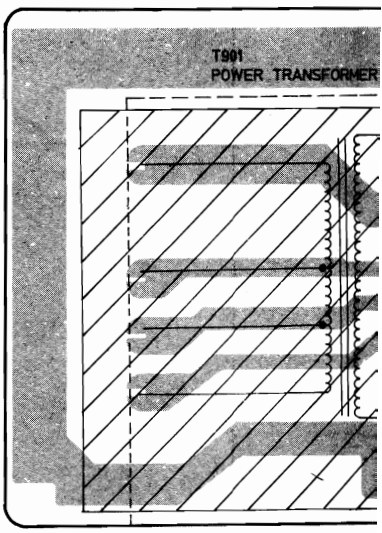
RAPHIC EQUALIZER

E BATTERY P.C.B



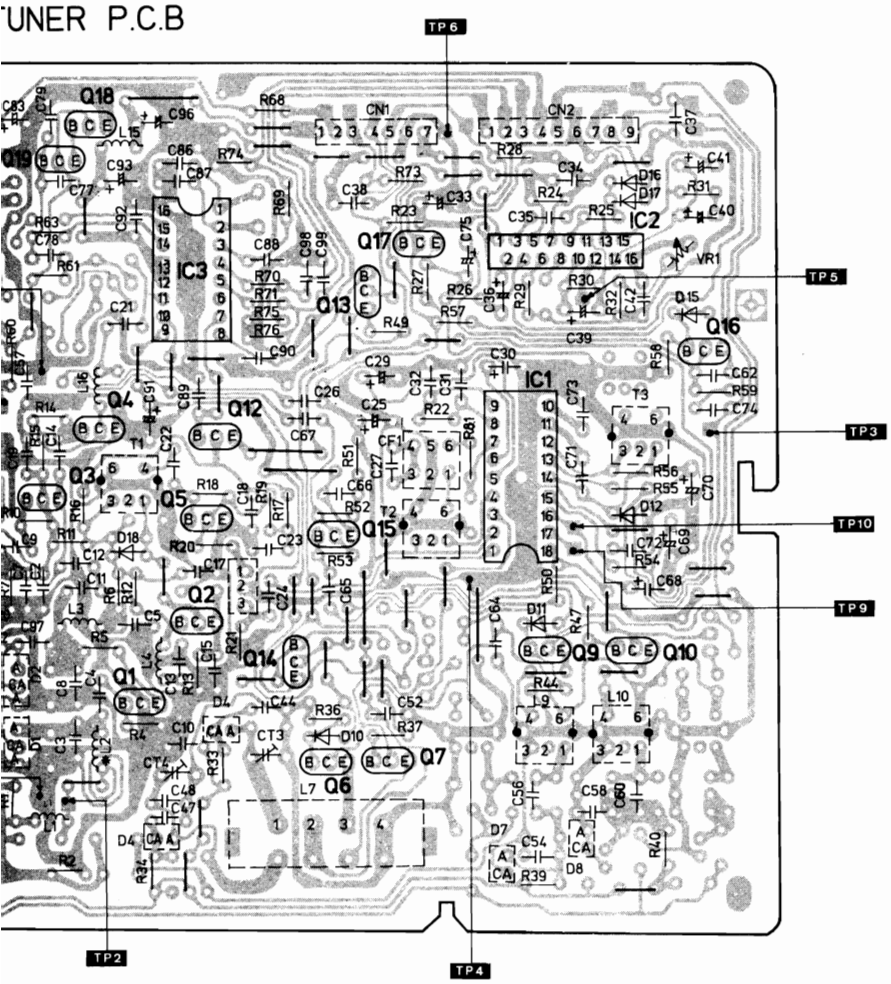


F POWER SUPPLY

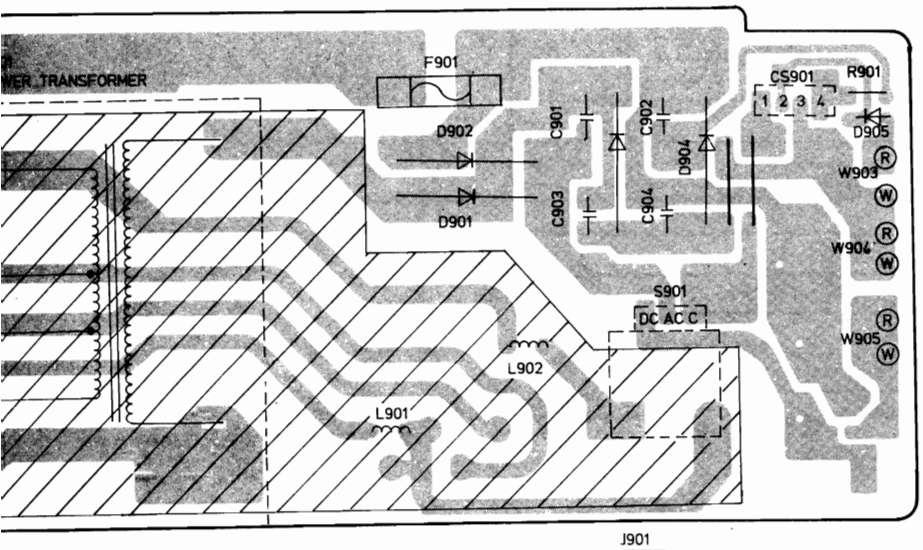


10 11 12 13 14 15

TUNER P.C.B

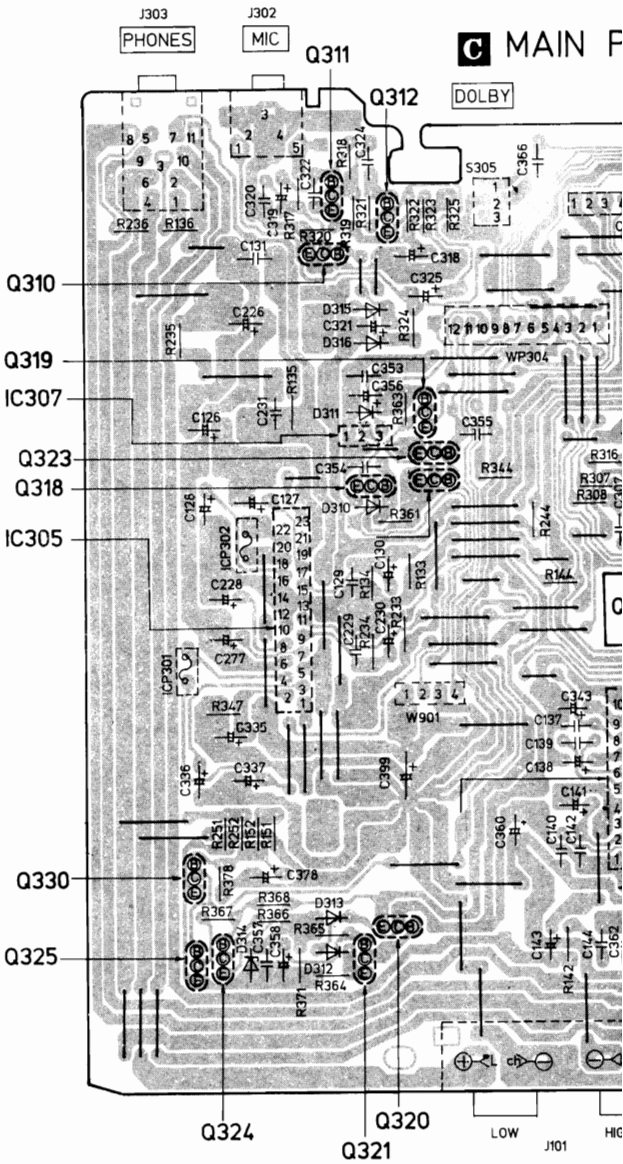


SUPPLY P.C.B



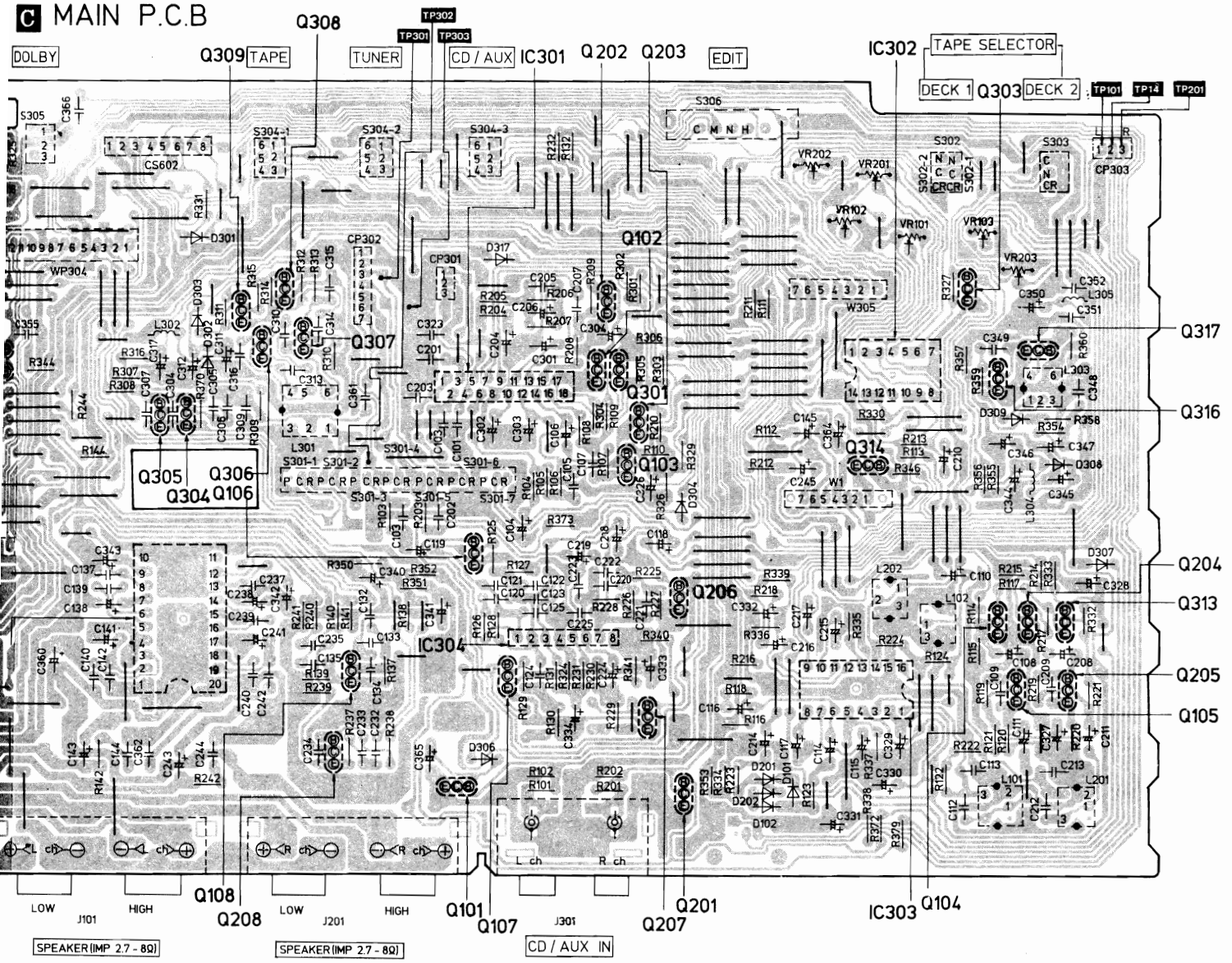
J901
AC IN
220V / 50Hz...(EG)
240V / 50Hz...(EB)

C MAIN P

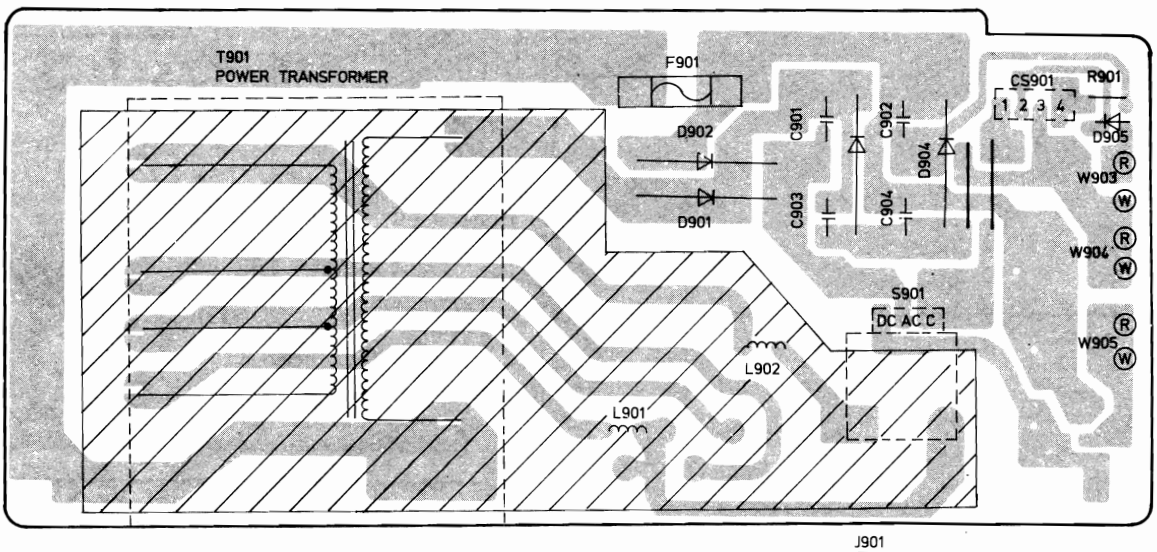


15 16 17 18 19

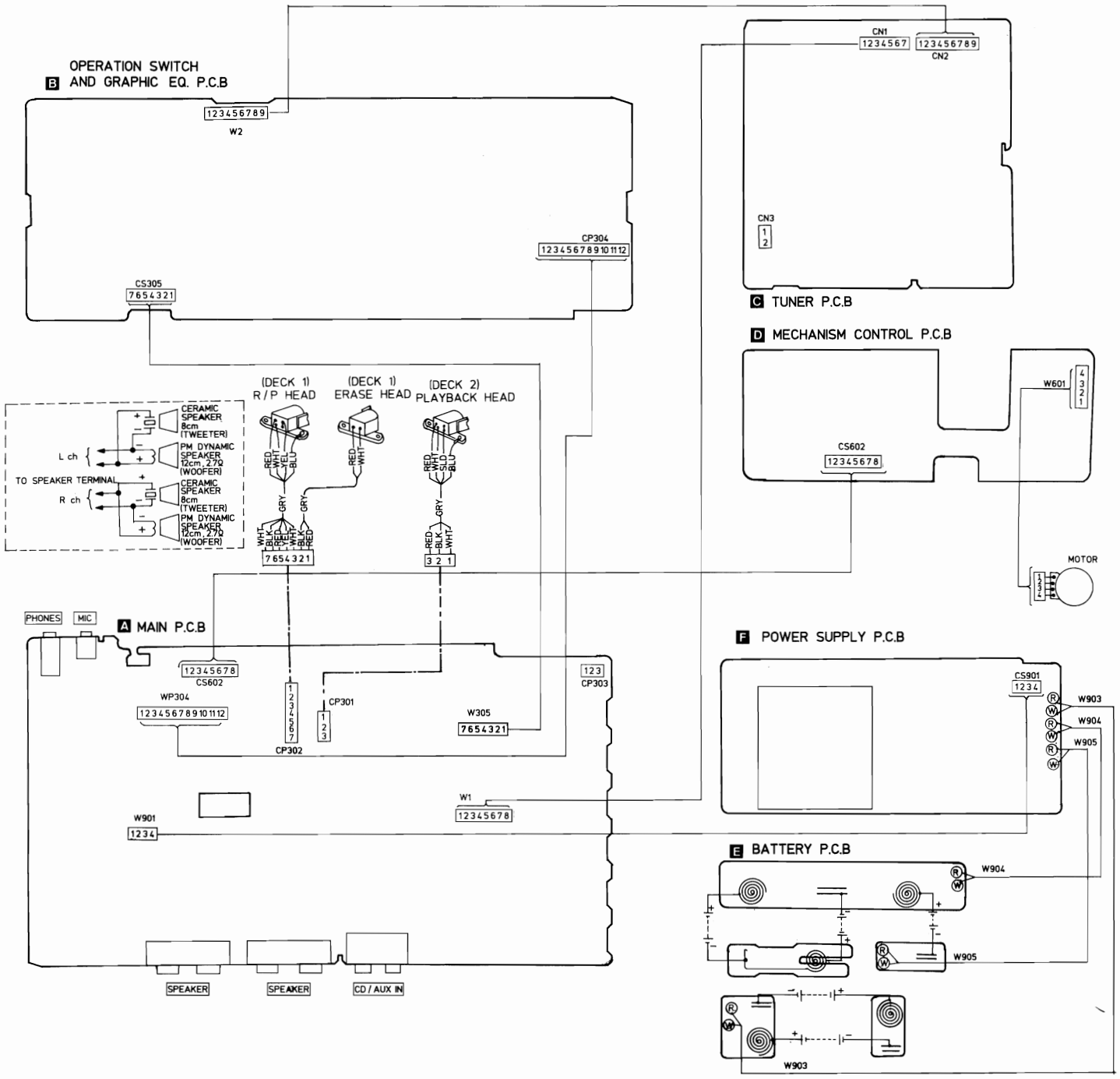
C MAIN P.C.B



F POWER SUPPLY P.C.B



■ WIRING CONNECTION DIAGRAM



■ TERMINAL GUIDE OF IC'S TRANSISTORS AND DIODES

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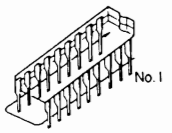
<td colspan="2"> 

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<tr><td>CXA1102P</td><td>16 Pin</td></tr>
<tr><td>LM7001</td><td>16 Pin</td></tr>
<tr><td>AN7273A</td><td>18 Pin</td></tr>
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 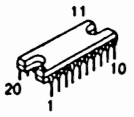
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<td>BA3416L
 
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 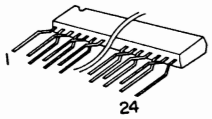
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 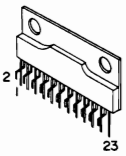
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 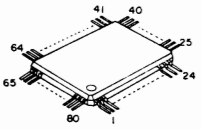
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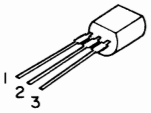
S81250HGT
 
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 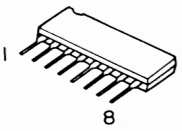
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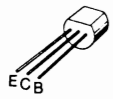
<td colspan="2"> 

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2SC829BTA
2SC1684RTA
2SC1685RTA
2SC2001L1TA
2SC829CTA
2SC1684HRTA</td>
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 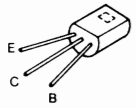
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 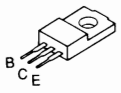
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 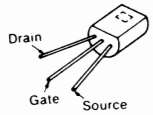
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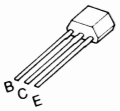
<td colspan="2"> 

BN1A4MTA
BA1L4LTA
BN1L3NTA
BA1A4MTA
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 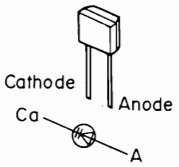
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 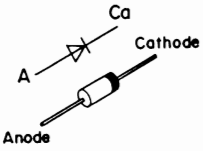
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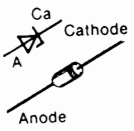
<td colspan="2"> 

RVDMTZ11BTA
RVDMTZ15BTA
RVDMTZ5R6BTA
RVDMTZ6R8BTA
RVDMTZ8R2BTA
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 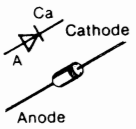
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 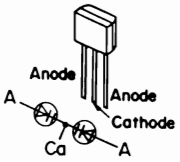
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 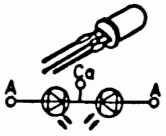
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WIRE COLOR

BRN : BROWN	RED : RED
BLK : BLACK	BLU : BLUE
WHT : WHITE	GRY : GREY
YEL : YELLOW	SLD : SHIELD WIRE

■ MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTIONS

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set FM mode selector switch to FM ST III. 3. Set band switch to AM/FM/LW. 4. Set function selector to TUNER or TAPE.	5. Set power source voltage to 15 V DC. 6. Set G.E.Q. control to center. 7. Output of signal generator should be no higher than necessary to obtain an output reading.

■ AM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 5.)	REMARKS
CONNECTIONS	FREQUENCY				
Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	459 kHz 30% Mod. at 400 Hz	Point of non-interference. (on/about 600 kHz	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1. and then connect the lead wires of the plug to the measuring instrument.	T2 (AM IFT)	Adjust for maximum output.

■ MW-RF ALIGNMENT

Fashion a loop of several turns of wire and radiate a signal into the loop ant. of receiver.	522 kHz	Tuning capacitor fully closed.	TP3 . . (+) TP4 . . . (-)	L9 (MW OSC Coil)	Adjust L9, for 1.2 ± 0.15 V reading on DC voltmeter.
"	1611 kHz	Tuning capacitor fully closed.	"	—	7.7 V ± 0.8 V
"	603 kHz	Tune to signal	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 1. and then connect the lead wires of the plug to the measuring instrument.	(*1) L7 (MW ANT Coil)	Adjust for maximum output. Adjust L7 by moving coil along the ferrite core.
"	1,404 kHz	"	"	CT3 (MW ANT Trimmer)	Adjust for maximum output.
(*1) Fix antenna coil with wax after completing alignment.					

■ FM-IF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 5.)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point TP11 through ceramic capacitor (0.001 uF). Negative side to test point TP2	10.7 MHz (SWEEP)	Point of interference (on/about 90 MHz)	Connect vert. amp. scope to test point TP3 Negative side to test point TP4	T1 (FM 1st)	Waveform is shown in Fig. 4.
"	"	"	"	T3 (FM 2nd)	Waveform is shown in Fig. 5.

■ FM DC BALANCE ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 5.)	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) Connect to test point TP1 throught FM dummy antenna. Negative side to TP2	TP9 . . (+) TP10 . . (-)	T3	0 ± 30 mV	Adjust T3, for 0 ± 30 mV reading on DC voltmeter.

■ FM-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 5.)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2	87.50 MHz	Tune to signal	TP3 . . . (+) TP4 . . . (-)	—	2.4 V ± 0.8 V
"	108.00 MHz	"	"	—	5.5 V ± 0.8 V
"	90.00 MHz	"	Headphones Jack (32Ω) Fabricate the plug as shown in Fig. 1. and then connect the lead wires of the plug to the measuring instrument.	—	(*2) Adjust for Maximum output.
"	106.00 MHz	"	"	—	"
(*2) Four output responses will be present; proper tuning is the center frequency.					

■ SEPARATION ALIGNMENT

FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 5.)	SPECIFICATION	REMARKS
98 MHz, 60 dB (CW) Connect to test point TP1 through FM dummy antenna. Negative side to TP2	TP5 . . . (+) TP6 . . . (-)	VR1	19 kHz	Adjust VR1, for 19 kHz ± 50 Hz reading on frequency counter.

■ LW-RF ALIGNMENT

SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONIC VOLTMETER or OSCILLOSCOPE)	ADJUSTMENT (Refer to Fig. 5.)	REMARKS
CONNECTIONS	FREQUENCY				
Connect to test point TP1 through FM dummy antenna. Negative side to test point TP2	144 kHz	Tune to signal	TP3 . . . (+) TP4 . . . (-)	L10 (LW OSC Coil)	1.2 ± 0.15 V
"	288 kHz	"	"	—	6.8 ± 0.8 V
"	162 kHz	"	Headphones Jack (32Ω) Fabricate the plug as shown in Fig. 1. and then connect the lead wires of the plug to the measuring instrument.	L7 (LW ANT Coil)	(*3) Adjust for Maximum output.
"	270 kHz	"	"	CT4 (LW ANT Trimmer)	"
(*3) Four output responses will be present; proper tuning is the center frequency.					

■ HEAD AZIMUTH ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCFM (8 khz, -20 dB)	Headphones Jack (32 Ω) Fabricate the plug as shown in Fig. 1. and then connect the lead wires of the plug to the measuring instrument.	Azimuth screw (Shown in Fig. 4.)	1. Test equipment connection is shown in Fig. 7. 2. Playback the azimuth adjusted part (8 kHz, -20 dB) of the test tape (QZZCFM) and regulate the angle adjusting screw so that the outputs of L-CH and R-CH are maximized. (When the adjusting positions are different with L-CH and R-CH, find a position where the outputs of L-CH and R-CH are balanced, and then make the adjustment.) 3. At the same time, draw a lissajous waveform and eliminate phase deflection. (Shown in Fig. 7.) 4. After the adjustment, apply screw-lock to the angle adjusting value.

■ PLAYBACK GAIN ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 6.)	REMARKS
QZZCFM (315 Hz OdB)	**TP101** . . . Lch **TP14** . . . GND **TP201** . . . Rch	DECK 1 (Lch) . . . VR101 (Rch) . . . VR201 DECK 2 (Lch) . . . VR102 (Rch) . . . VR202	1. Playback mode. 2. Adjust VR, for 245 ± 10 mV

■ RECORD BIAS VOLTAGE MEASUREMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT (Refer to Fig. 1.)	REMARKS
Use CrO_2 tape	**TP301** . . . (+) **TP303** . . . (−)	(for checking only)	1. Test equipment connection is shown in Fig. 7. 2. Record mode. 3. Adjust L301, for AC 27.5 ± 1.0 mV.
Use Normal tape	"	(for checking only)	1. Test equipment connection is shown in Fig. 7. 2. Record mode. 3. Adjust L301, for AC 19.8 ± 1.0 mV.

■ RECORD/PLAYBACK LEVEL ALIGNMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC VOLTMETER or OSCILLOSCOPE	ADJUSTMENT	REMARKS
QZZCFM (315Hz 0dB) QZZCRA (Normal Tape)	TP101 ... Lch TP14 ... GND TP201 ... Rch	VR103 ... Lch VR203 ... Rch	1. Insert a test tape (QZZCFM) in DECK 2 and Test tape (QZZCRA) in DECK 1. 2. Set the unit to the Editing mode at normal speed. 3. Adjust each alignment Volume until the difference between the playback level for DECK 2 and the recording level for DECK 1 is within 1 dB.

■ TAPE SPEED ADJUSTMENT

TEST TAPE	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	REMARKS
QZZCWAT (3 kHz)	Headphones Jack (32Ω) (Fabricate the plug as shown in Fig. 3, and then connect the lead wires of the plug to the measuring instrument.)	VR601 (Shown in Fig. 1)	**Normal Speed Adjustment** 1. Insert a test tape (QZZCWAT) in Deck 2 and play it back. 2. Adjust **VR601** until the measured value becomes **3000±30Hz**.
	3. Check Deck 1 in the same way to make sure it satisfies the specification. Deck 1 ... ±50 Hz of the speed of Deck 2. If it doesn't repeat steps 1 and 2 above. **Note:** This set uses one drive motor, so be sure to perform the adjustment in Deck 2. **High Speed Measurement** 4. Insert the playback tape into Deck 2 and the editing tape into Deck 1. 5. Set the Editing Mode Selector to the "HIGH" position. 6. Press the Deck 1 Pause button, then press the Record Button. 7. Press the Deck 2 Playback Button. • Editing is started by means of the Synchro-Start function. 8. Check be sure that the measured speed is within 5100~5700.		

■ ADJUSTMENT POINT

• Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

Fig. 1

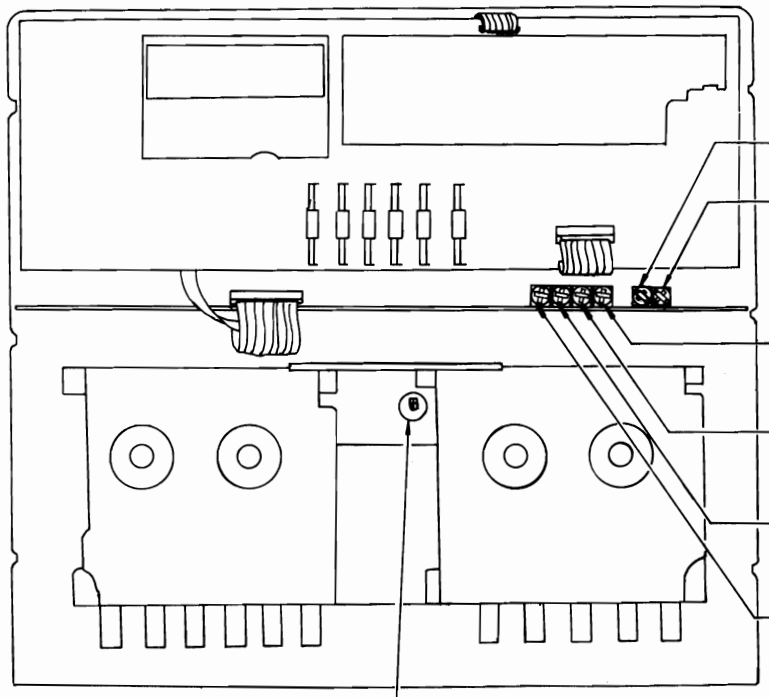
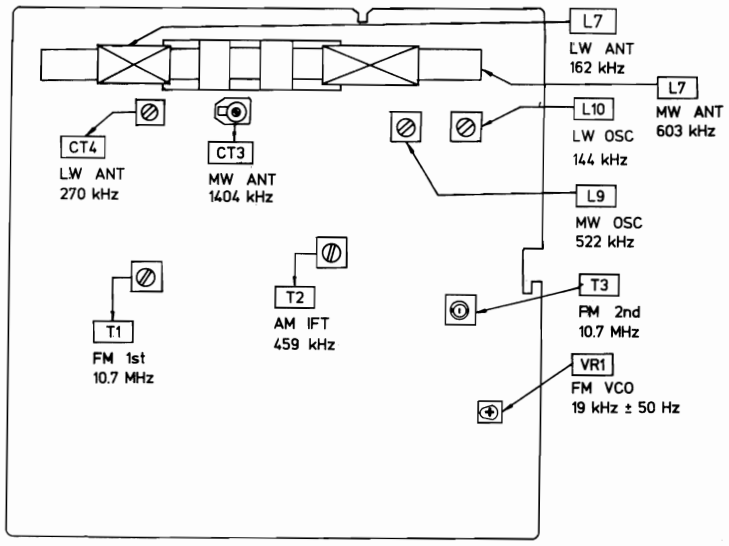


Fig. 2



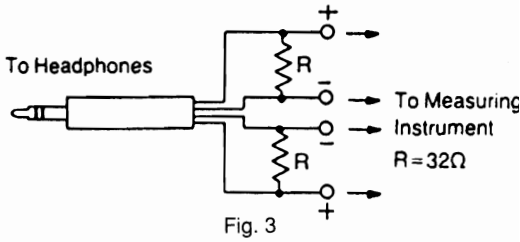


Fig. 3

Fig. 4

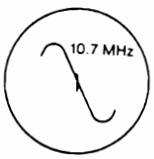
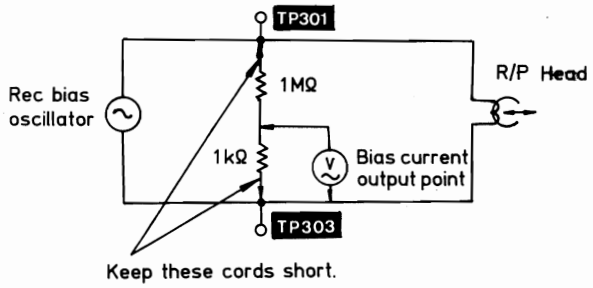


Fig. 5



• In order not to influence the bias oscillation, divide the voltage with 1 MΩ and 1KΩ resistors, and measure the voltage across the 1KΩ resistor.

Fig. 7

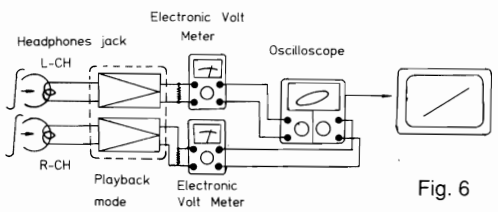


Fig. 6

Deck 1 and 2

Fig. 8

■ MECHANISM PARTS LOCATION

(Part list shown in page 39)

1 2 3 4 5

A B C D E F

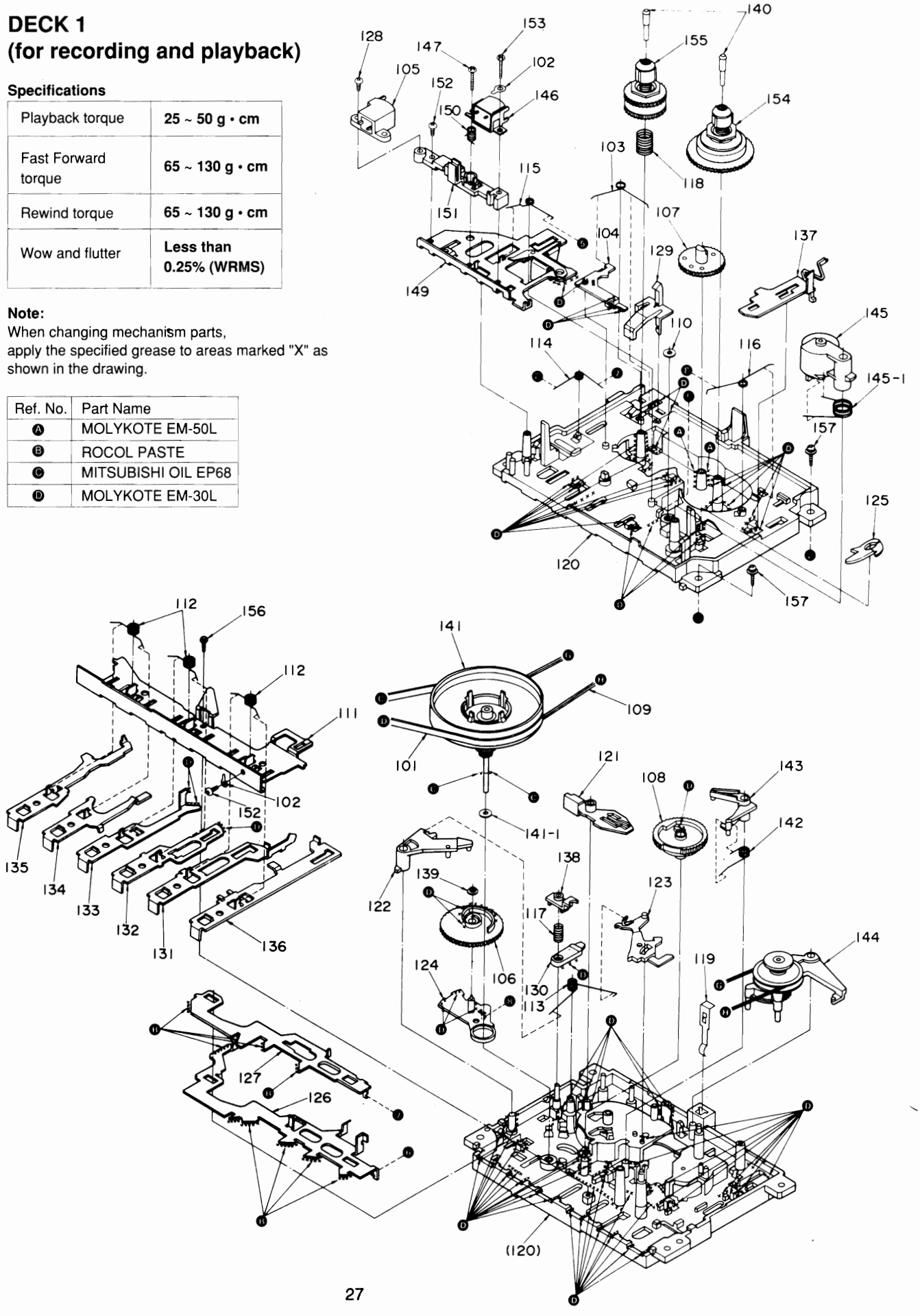
DECK 1
(for recording and playback)

Specifications

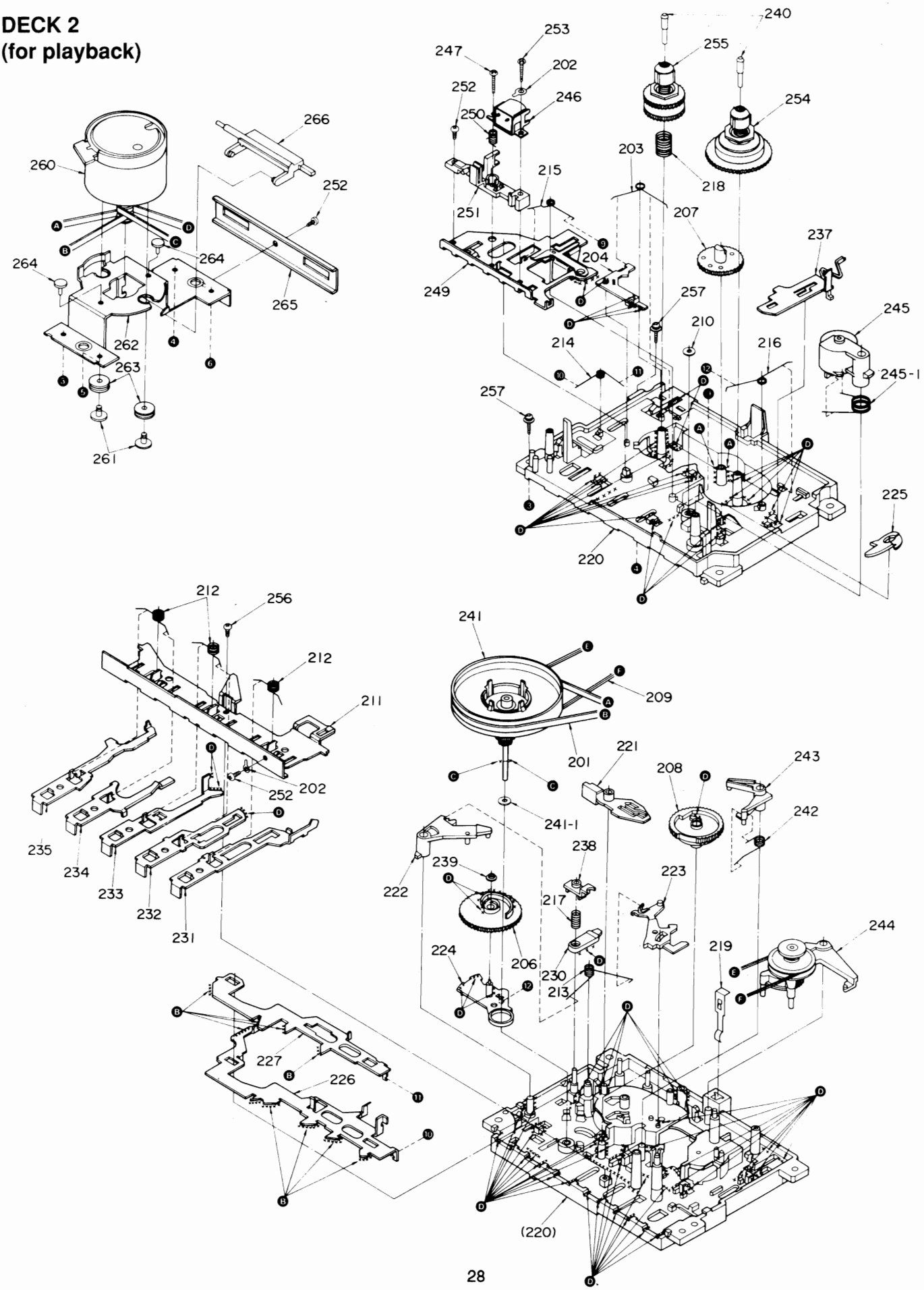
Playback torque	**25 ~ 50 g • cm**
Fast Forward torque	**65 ~ 130 g • cm**
Rewind torque	**65 ~ 130 g • cm**
Wow and flutter	**Less than 0.25% (WRMS)**

Note:
When changing mechanism parts,
apply the specified grease to areas marked "X" as shown in the drawing.

Ref. No.	Part Name
Ⓐ	MOLYKOTE EM-50L
Ⓑ	ROCOL PASTE
Ⓒ	MITSUBISHI OIL EP68
Ⓓ	MOLYKOTE EM-30L

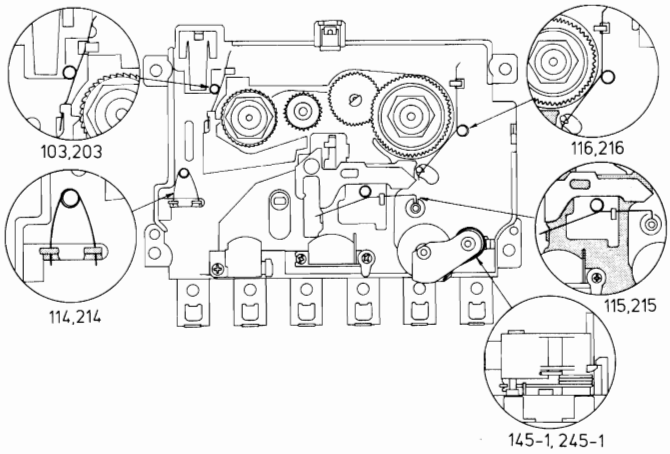


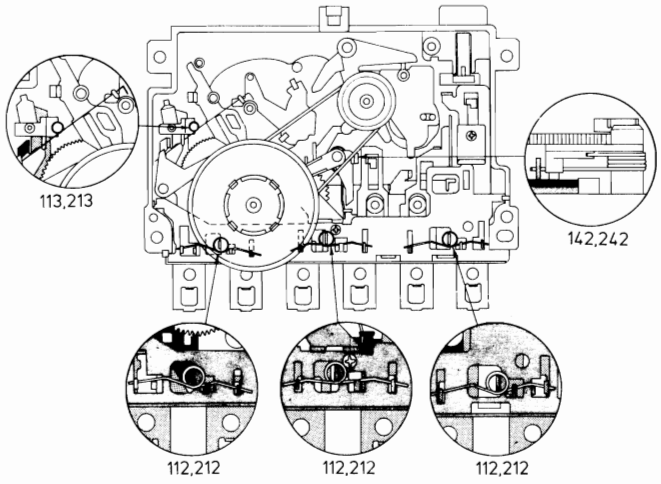
DECK 2
(for playback)



■ SPRING LOCATION

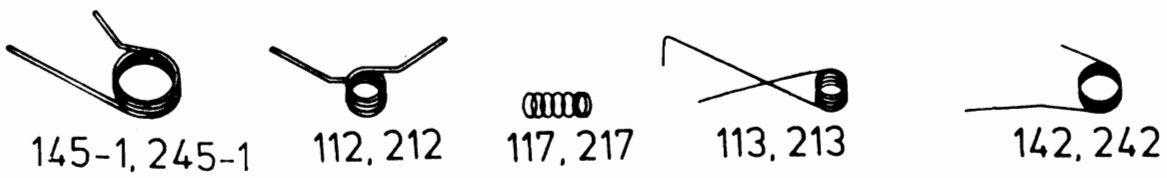
<DECK 1, 2>





■ SPRING ILLUSTRATION

- The illustration shows the actual size of the springs so it can be used to check their shapes. (The illustration shows the springs separated from the mechanism).



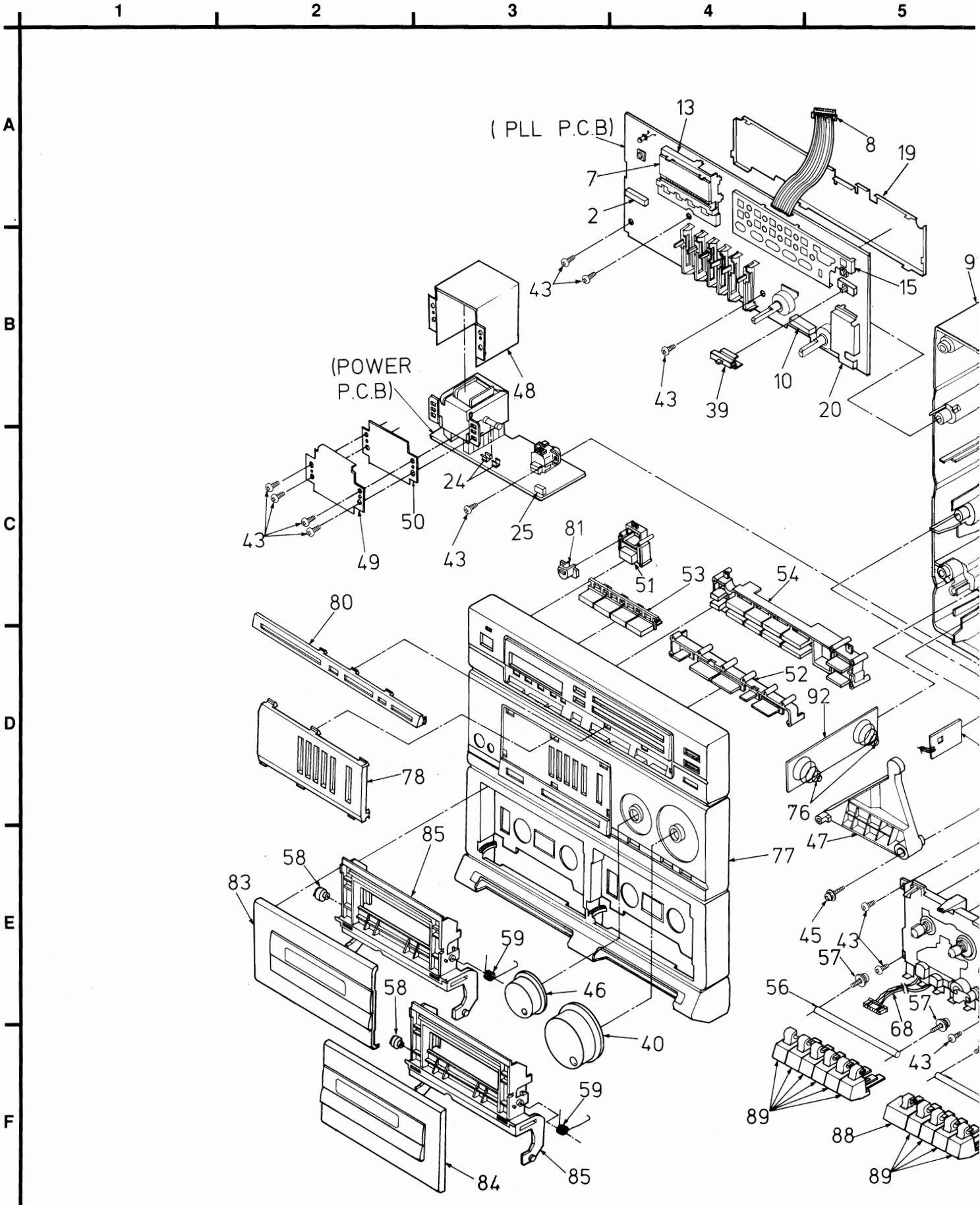
■ REPLACEMENT PARTS LIST

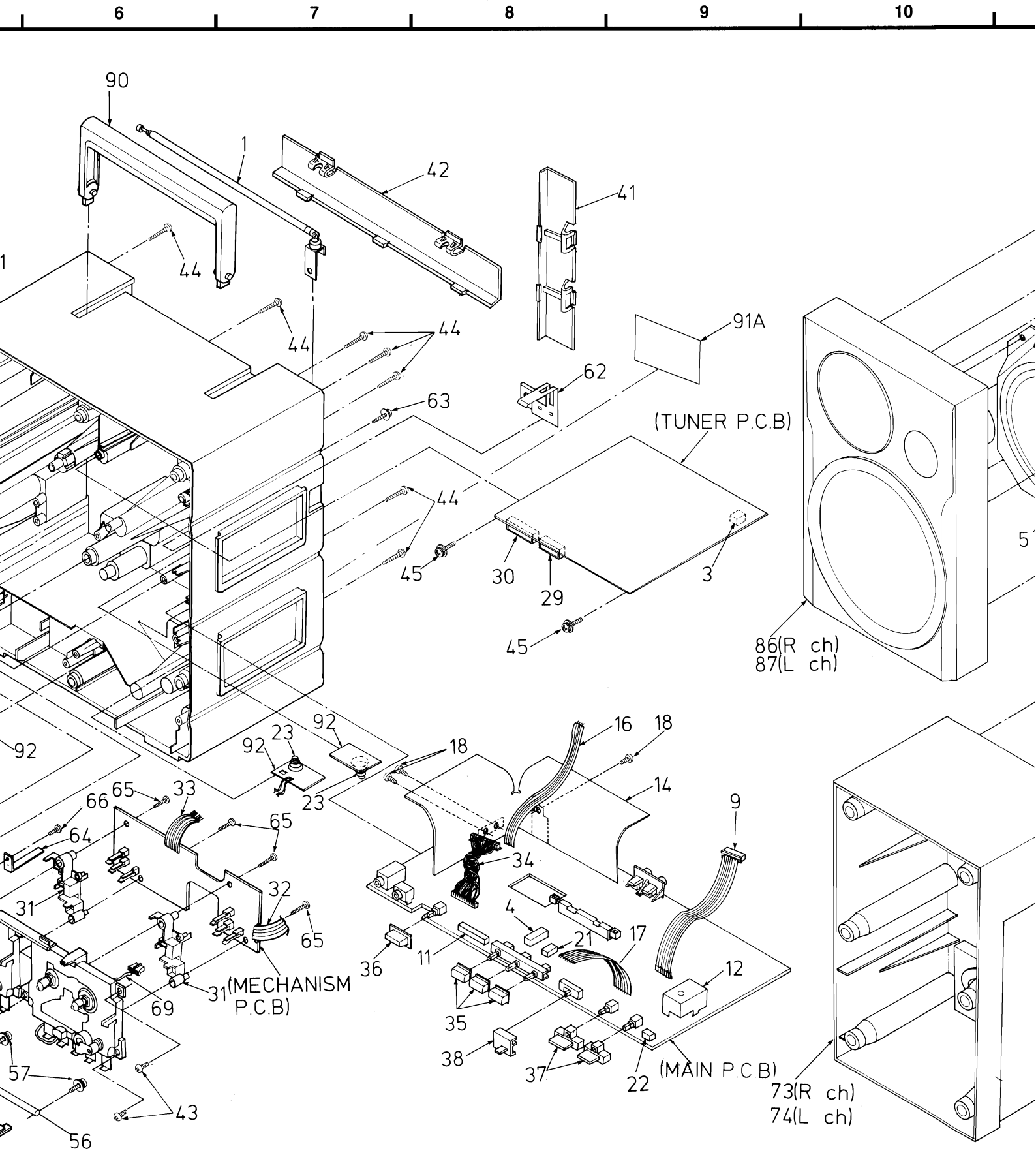
Notes : * Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* The Parenthesized indications in the Remarks columns specify the areas. (Refer to the first page for area.)
Parts without these indications can be used for all areas.
* [M] indicates parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	XEARR175FD-Y	TELESCOPIC ANTENNA	[M]
2	RJP12G18ZA	CONNECTOR	
3	RJP2G18ZA	CONNECTOR	
4	RJP7G18ZA	CONNECTOR	
5	EAS12P463A-G	SPEAKER WOOFER	[M]
6	EAS8PH63D-G	TWEETER	[M]
7	LDBU9397AZ	L.C.D. DISPLAY	[M]
8	REX0278	CONNECTOR (9P)	[M]
9	REX0279	CONNECTOR (7P)	[M]
10	RJS7T5ZA	SOCKET	
11	RJS8T6ZA	SOCKET	[M]
12	RMC1227ZA	SHIELD PLATE	[M]
13	RMN0106	LCD HOLDER	[M]
14	RMY0056	HEAT SINK	[M]
15	RSC0164	SHIELD PLATE	[M]
16	RWJ0104320KQ	FLAT CABLE	
17	RWJ0107120KQ	FLAT CABLE	[M]
18	XTV3+8F	SCREW	
20	RSC0215	SHIELD PLATE	[M]
21	RJP3G18ZA	CONNECTOR	
22	RJP3G17ZA	CONNECTOR	
23	RJC70031YA	BATTERY SPRING (UM-3)	[M]
24	RJF28ZA	FUSE HOLDER	
25	RJS4T6ZA	CONNECTOR	
29	SJT3711	CONNECTOR	
30	SJT3909	CONNECTOR	
31	RMR0368	CHASSIS	[M]
32	RWJ0104065KX	FLAT CABLE	[M]
33	RWJ0108120KQ	FLAT CABLE	[M]
34	REX0276	WIRE LEAD	[M]
35	RGU0483-H	BUTTON, FUNCTION	[M]
36	RGU0484-H	BUTTON, DOLBY	[M]
37	RGU0485-K	BUTTON, TAPE SELECTOR	[M]
38	RGV0069-K	KNOB, EDITING	[M]
39	RGV0070-K	KNOB, FM MODE	[M]
40	RGW0102-H	KNOB, VOLUME	[M]
41	RKK0035-H	BATTERY COVER (UM-3)	[M]
42	RKK347ZB-7	BATTERY COVER (UM-1)	[M]
43	XTV3+12G	SCREW	
44	XTV3+20G	SCREW	
45	XTWS3+10Q	SCREW	
46	RGW0103-H	KNOB, XBS	[M]
47	RML0197	R/P LEVER	[M]
48	RFKNXCT980P3	SHIELD PLATE ASS'Y	[M]

Ref No.	Part No.	Part Name & Description	Remarks
49	RSC0094	TRANSORMER SHIELD PLATE	[M]
50	RMC1257ZA	TRANSFORMER SHIELD PLATE	[M]
51	RGZ0004-H	BUTTON, POWER	[M]
52	RGZ0005-H	BUTTON, TUNING/TIMER	[M]
53	RGZ0006-H	BUTTON, BAND	[M]
54	RGZ0008-K	BUTTON, PRESET	[M]
56	SUX102	MECHANISM BUTTON SHAFT	[M]
57	XTWS3+8T	SCREW	
58	RDG5782YC	GEAR	[M]
59	RMB0203	OPENING SPRING	[M]
62	RJR0072	ANTENNA TERMINAL	[M]
63	XYN3+F12FY	SCREW	
64	RMC0076	RECORD ANGLE	[M]
65	XTN2+14GF	SCREW	[M]
66	XTN2+4F	SCREW	
68	REX0274	HEAD WIRE (7P)	[M]
69	REX0275	HEAD WIRE (3P)	[M]
70	RMG0166	CORD BUSHING	[M]
71	RMR0407	LOCK LEVER (R)	[M]
73	RKP0016-H	SPEAKER REAR CABINAT (R)	[M]
74	RKP0018-H	SPEAKER REAR CABINET (L)	[M]
75	RMR0408	LOCK LEVER (L)	[M]
76	RJC511ZB	BATTERY SPRING (UM-1)	[M]
77	RFKGXCT980EG	FRONT CABINET ASS'Y	[M]
78	RFKNXCT980P5	G. EQ. ORNAMENT ASS'Y	[M]
79	XTV3+10G	SCREW	
80	RGK0323A-H	DISPLAY ORNAMENT	[M]
81	RGL0097-Q	LED PANEL	[M]
82	RJL4W001W22	SPEAKER CORD	[M]
83	RFKLXCT980P1	CASS. LID ASS'Y (L)	[M]
84	RFKLXCT980P2	CASS. LID ASS'Y (R)	[M]
85	RFKNXCT980PK	CASS. HOLDER ASS'Y	[M]
86	RFKAXCT980P2	SP. FRONT CAB. ASS'Y (R)	[M]
87	RFKAXCT980P1	SP. FRONT CAB. ASS'Y (L)	[M]
88	RGU0482-H	PLAY BUTTON	[M]
89	RGUO481-H	MECH. BUTTON	[M]
90	RFKNXCT980P4	HANDLE ASS'Y	[M]
91	RFKHXCT980EB	REAR CABINET ASS'Y	[M] [EB]
91	RFKHXCT980EG	REAR CABINET ASS'Y	[M] [EG]
91A	RGN0316A-K	NAME PLATE	[M] [EB]
91A	RGN0316B-K	NAMEPLATE	[M] [EG]
92	RJB0566G	BATTERY P.C.B.	[M]
93	RMN0136	LED HOLDER	[M]
94	RSC0193	SHIELD PLATE	[M]

■ CABINET PARTS LOCATION




6
7
8
9
10
90
1
42
41
44
44
44
91A
62
63
(TUNER P.C.B)
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45
30
29
3
45
86(R ch)
87(L ch)
92
92
23
23
92
18
16
18
14
9
65
66
33
65
64
34
32
31
4
21
17
65
36
11
12
31
(MECHANISM P.C.B)
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(MAIN P.C.B)
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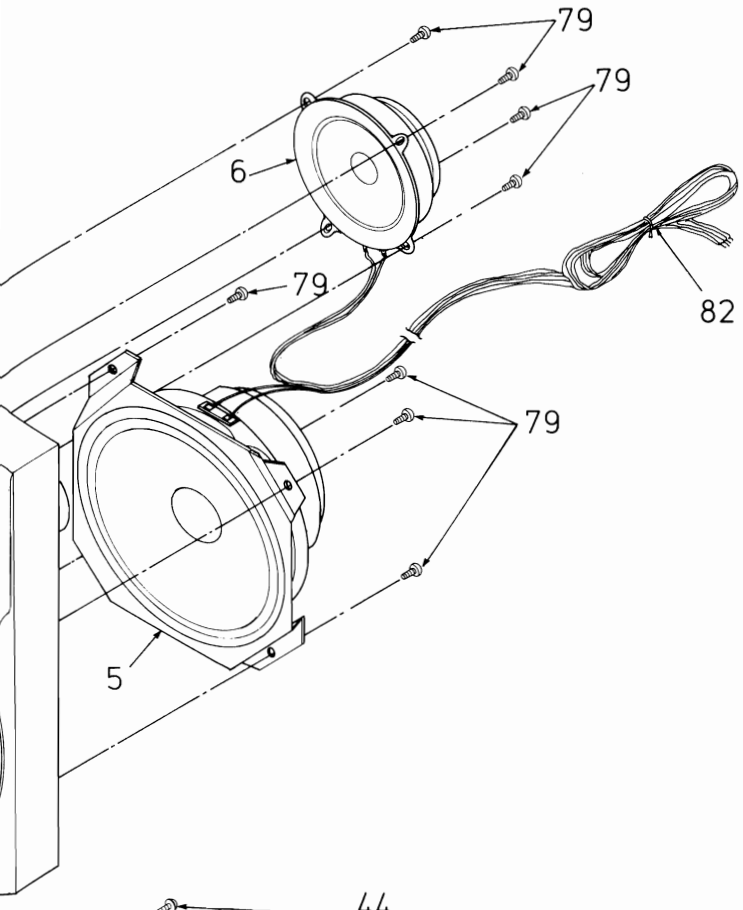
56
73(R ch)
74(L ch)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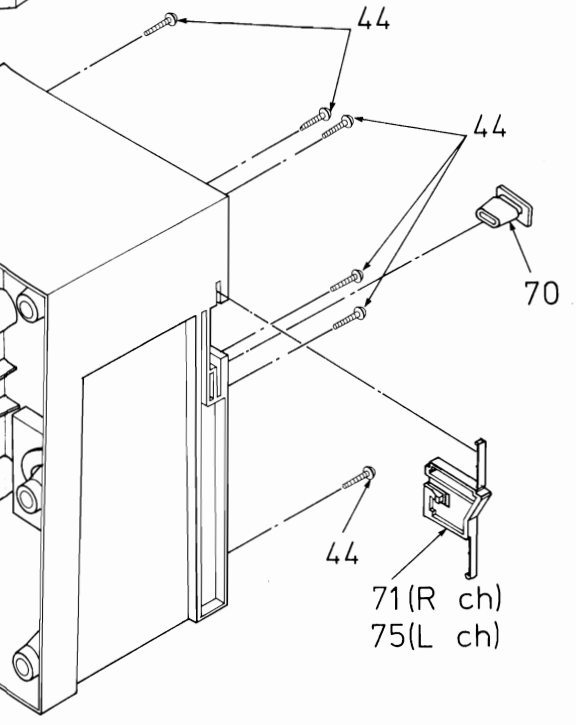
44
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71(R ch)
75(L ch)

■ REPLACEMENT PARTS LIST

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* [M] indicates parts that are supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT (S)	
IC1	AN7273A	IC, FM/AM IF	
IC2	RVIBA1332L	IC, FM MPX	
IC3	LM7001	IC, PLL	
IC301	BA3416BL	IC, TAPE EQ AMP	
IC302	BU4066B	IC, ANALOG SW	
IC303	CXA1102P	IC, BOLBY-B NR	
IC304	BA15218N-DX	IC, REC AMP	
IC305	AN7134N-R	IC, POWER AMP	
IC306	LA4108R	IC, HIGH CH POWER	
IC307	S81250HGT	IC, REGULAR	
IC309	BA3822LS-M	IC, GRAPHIC EQ.	[M]
IC801	UPD75306G153	IC, PLL MICRO-COM	[M]
IC802	S8053HNB-T	IC, RESET	
		TRANSISTOR(S)	
Q1	2SK544F-AC	TRANSISTOR	
Q2	2SC2786MTA	TRANSISTOR	
Q3	2SC2786MTA	TRANSISTOR	
Q4	2SC2786MTA	TRANSISTOR	
Q5	2SC829BTA	TRANSISTOR	
Q6	2SA720STA	TRANSISTOR	[M]
Q9	2SA720STA	TRANSISTOR	[M]
Q10	2SA720STA	TRANSISTOR	[M]
Q12	BN1L3NTA	TRANSISTOR	[M]
Q13	BN1L3NTA	TRANSISTOR	[M]
Q14	BN1L3NTA	TRANSISTOR	[M]
Q15	2SC829CTA	TRANSISTOR	
Q16	2SA564RTA	TRANSISTOR	
Q17	2SC2785FTA	TRANSISTOR	
Q18	2SC2784FTA	TRANSISTOR	[M]
Q19	2SC2784FTA	TRANSISTOR	[M]
Q101	BA1A4MTA	TRANSISTOR	[M]
Q102	BA1A4MTA	TRANSISTOR	[M]
Q103	2SC2001L1TA	TRANSISTOR	
Q104	2SC2785FTA	TRANSISTOR	
Q105	2SC1684HRTA	TRANSISTOR	
Q106	BA1L4LTA	TRANSISTOR	[M]
Q107	BA1L4LTA	TRANSISTOR	[M]
Q108	2SC1684HRTA	TRANSISTOR	
Q120	2SC1684HRTA	TRANSISTOR	
Q121	2SC1684HRTA	TRANSISTOR	
Q122	2SC2001L1TA	TRANSISTOR	
Q201	BA1A4MTA	TRANSISTOR	[M]
Q202	BA1A4MTA	TRANSISTOR	[M]
Q203	2SC2001L1TA	TRANSISTOR	
Q204	2SC2785FTA	TRANSISTOR	
Q205	2SC1684HRTA	TRANSISTOR	
Q206	BA1L4LTA	TRANSISTOR	[M]
Q207	BA1L4LTA	TRANSISTOR	[M]
Q208	2SC1684HRTA	TRANSISTOR	
Q220	2SC1684HRTA	TRANSISTOR	
Q221	2SC1684HRTA	TRANSISTOR	
Q222	2SC2001L1TA	TRANSISTOR	
Q301	2SC2785FTA	TRANSISTOR	
Q303	BA1A4MTA	TRANSISTOR	[M]
Q304	2SC1685RTA	TRANSISTOR	[M]
Q305	2SC1685RTA	TRANSISTOR	[M]
Q306	2SC2001L1TA	TRANSISTOR	
Q307	2SC2001L1TA	TRANSISTOR	
Q308	2SC2785FTA	TRANSISTOR	
Q309	BA1A4MTA	TRANSISTOR	[M]
Q310	2SC2785FTA	TRANSISTOR	
Q311	2SC2785FTA	TRANSISTOR	
Q312	2SC2785FTA	TRANSISTOR	
Q313	2SC2785FTA	TRANSISTOR	
Q314	2SC2785FTA	TRANSISTOR	
Q316	2SC2785FTA	TRANSISTOR	
Q317	2SC2785FTA	TRANSISTOR	
Q318	2SC2725FTA	TRANSISTOR	
Q319	2SC1684RTA	TRANSISTOR	
Q320	2SB1185E	TRANSISTOR	
Q321	2SC2785FTA	TRANSISTOR	
Q322	BN1A4MTA	TRANSISTOR	[M]
Q323	BA1L4LTA	TRANSISTOR	[M]
Q324	2SA564RTA	TRANSISTOR	
Q325	BA1L4LTA	TRANSISTOR	[M]
Q330	2SC2785FTA	TRANSISTOR	
Q601	BA1A4MTA	TRANSISTOR	[M]
Q602	BA1A4MTA	TRANSISTOR	[M]
Q603	2SK301QTA	TRANSISTOR	[M]
Q604	BN1A4MTA	TRANSISTOR	[M]
Q801	2SA564RTA	TRANSISTOR	
Q802	2SC2785FTA	TRANSISTOR	
Q803	2SC2785FTA	TRANSISTOR	
Q804	BA1L4MTA	TRANSISTOR	[M]
Q805	BA1A4MTA	TRANSISTOR	[M]
		DIODE(S)	
D1	1SV147T4MATU	DIODE	
D2	1SV147T4MATU	DIODE	
D3	1SV147T4MATU	DIODE	
D4	RVDSVC321	DIODE	
D5	RVDSVC321	DIODE	
D7	RVDSVC321	DIODE	
D8	RVDSVC321	DIODE	
D10	RVD1SS133	DIODE	
D11	RVD1SS133	DIODE	
D12	RVDMTZ5R6BTA	DIODE	
D15	RVD1SS133	DIODE	
D16	RVD1SS133	DIODE	
D17	RVD1SS133	DIODE	
D18	RVD1SS133	DIODE	
D101	RVD1SS133	DIODE	
D102	RVD1SS133	DIODE	
D202	RVD1SS133	DIODE	
D301	RVD1SS133	DIODE	
D302	RVD1SS133	DIODE	
D303	RVDMTZ4R7BTA	DIODE	
D304	RVD1SS133	DIODE	
D306	RVD1SS133	DIODE	
D307	RVD1SS133	DIODE	
D308	RVDMTZ11BTA	DIODE	
D309	RVD1SS133	DIODE	
D310	RVDMTZ10BTA	DIODE	
D311	RVDMTZ6R8BTA	DIODE	
D312	RVD1SS133	DIODE	
D313	RVD1SS133	DIODE	
D314	RVDMTZ15BTA	DIODE	
D315	RVD1SS133	DIODE	
D316	RVD1SS133	DIODE	
D317	RVD1SS133	DIODE	
D602	RVD1SS133	DIODE	
D603	RVD1SS133	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks
D604	RVD1SS133	DIODE	
D605	RVD1SS133	DIODE	
D606	RVD1SS133	DIODE	
D608	RVD1SS133	DIODE	
D609	RVD1SS133	DIODE	
D801	RVD1SS133	DIODE	
D802	RVD1SS133	DIODE	
D803	RVD1SS133	DIODE	
D804	RVD1SS133	DIODE	
D805	RVD1SS133	DIODE	
D806	RVD1SS133	DIODE	
D807	RVD1SS133	DIODE	
D809	LN11CP23	LED	[M]
D810	RVD1SS133	DIODE	
D811	RVD1SS133	DIODE	
D812	RVD1SS133	DIODE	
D813	RVDMTZ8R2BTA	DIODE	[M]
D901	SVDS3V20LF	DIODE	[M]
D902	SVDS3V20LF	DIODE	[M]
D903	SVDS3V20LF	DIODE	[M]
D904	SVDS3V20LF	DIODE	[M]
D905	RVD1SS133	DIODE	
		VARIABLE RESISTOR(S)	
VR1	EVNDXAA00B14	VR, TRIMMER POT.	
VR101	RVNCC24B1T-A	VR, TRIMMER POT.	
VR102	RVNCC24B1T-A	VR, TRIMMER POT.	
VR103	RVNCC15B1T-A	VR, TRIMMER POT.	[M]
VR201	RVNCC24B1T-A	VR, TRIMMER POT.	
VR202	RVNCC24B1T-A	VR, TRIMMER POT.	
VR203	RVNCC15B1T-A	VR, TRIMMER POT.	[M]
VR301	EWAJQAW05G54	VR, GRAPHIC EQUALIZER	[M]
VR302	EWAJQAW05G54	VR, GRAPHIC EQUALIZER	[M]
VR303	EWAJQAW05G54	VR, GRAPHIC EQUALIZER	[M]
VR304	EWAJQAW05G54	VR, GRAPHIC EQUALIZER	[M]
VR305	EWAJQAW05G54	VR, GRAPHIC EQUALIZER	[M]
VR306	EWC2UAF2054D	VR, XBS	[M]
VR307	EWAJUAW05G15	VR, BALANCE	[M]
VR308	EWCT5AF20B54	VR, VOLUME	[M]
VR601	EVNDXAA00B24	VR, TRIMMER POT.	
		VARIABLE CAPACITOR(S)	
CT3	RCV10AF1T-3	TRIMMER CAPACITOR	[M]
CT4	ECRLA030E53R	TRIMMER CAPACITOR	
		COIL(S) & TRANSFORMER(S)	
L1	RLQY30S4W-0	COIL, FM RF CHOKE	[M]
L2	RLA4Y001-E	COIL, FM ANT	[M]
L3	RLA4Y002-E	COIL, FM ANT	[M]
L4	RLQZP1R2KT-Y	COIL	
L7	RLV6C004-0	COIL, F. ANTENNA	[M]
L9	RL02B126-M	COIL, AM OSC	[M]
L10	RL01B15-M	COIL, LW OSC	[M]
L15	RLQZP101KT-Y	COIL	
L16	RLQZP1R2KT-Y	COIL	
L101	RLE2B001-1M	COIL, 19kHz TRAP	[M]
L102	RLE9B001-1M	COIL, BIAS TRAP	[M]
L201	RLE2B001-1M	COIL, 19kHz TRAP	[M]
L202	RLE9B001-1M	COIL, BIAS TRAP	[M]
L301	RL08C004-T	COIL, BIAS OSC	[M]
L302	RLQZB470KT-D	COIL, RF CHOKE	
L303	RL09B18-M	COIL, DD CONVERTER	
L304	RLQZP100KT-Y	COIL, RF CHOKE	
L305	RLQZP221KT-Y	COIL, RF CHOKE	
L801	RLQZP101KT-Y	COIL, RF CHOKE	
L802	RLQZP101KT-Y	COIL, RF CHOKE	
L901	RLQZB220KT-D	COIL, RF CHOKE	
L902	RLQZB220KT-D	COIL, RF CHOKE	
T1	RLI4B153-M	FM IFT	
T2	RLI2B153-M	AM IFT	
T3	SLI4B524-Z	FM IFT	
T901	RTP1M1B001-X	POWER TRANSFORMER	[M] ⚠

Ref No.	Part No.	Part Name & Description	Remarks
		CERAMIC FILTER(S)	
CF1	RLFFETWNAO1L	CERAMIC FILTER	
CF2	RVFSFZ459HL3	CERAMIC FILTER	[M]
		FUSE(S)	
F901	XBA2C40TBO	FUSE	⚠
F902	XBA1C40NBAL	FUSE	[M] ⚠
ICP301	RAHICPN10TA	I.C. PROTECTOR	
ICP302	RAHICPN15TA	I.C. PROTECTOR	
		SWITCH(ES)	
S301	RSH2G03WA-A	SW, REC/PLAY	[M]
S302	RSH2B25ZA-A	SW, DOLBY ON/OFF	
S303	RSH2B25ZA-A	SW, DOLBY ON/OFF	
S304	RSP3001-A	SW, FUNCTION	[M]
S305	RSH2B25ZA-A	SW, DOLBY ON/OFF	
S306	RSS3A24ZA-H	SW, EDITING	
S601	RSH1A004-1	SW, LEAF SWITCH	[M]
S602	RSH1A004-1	SW, LEAF SWITCH	[M]
S603	RSH1A004-1	SW, LEAF SWITCH	[M]
S604	RSH1A004-1	SW, LEAF SWITCH	[M]
S605	RSH1A013-J	SW, LEAF SWITCH	[M]
S606	RSH1A013-J	SW, LEAF SWITCH	[M]
S801	EVQ21405R	SW, TACT SWITCH	
S802	EVQ21405R	SW, TACT SWITCH	
S803	EVQ21405R	SW, TACT SWITCH	
S804	EVQ21405R	SW, TACT SWITCH	
S805	EVQ21405R	SW, TACT SWITCH	
S806	EVQ21405R	SW, TACT SWITCH	
S807	EVQ21405R	SW, TACT SWITCH	
S808	EVQ21405R	SW, TACT SWITCH	
S809	EVQ21405R	SW, TACT SWITCH	
S810	EVQ21405R	SW, TACT SWITCH	
S811	EVQ21405R	SW, TACT SWITCH	
S812	EVQ21405R	SW, TACT SWITCH	
S813	EVQ21405R	SW, TACT SWITCH	
S814	EVQ21405R	SW, TACT SWITCH	
S815	EVQ21405R	SW, TACT SWITCH	
S816	EVQ21405R	SW, TACT SWITCH	
S817	EVQ21405R	SW, TACT SWITCH	
S818	EVQ21405R	SW, TACT SWITCH	
S819	EVQ21405R	SW, TACT SWITCH	
S820	EVQ21405R	SW, TACT SWITCH	
S821	EVQ21405R	SW, TACT SWITCH	
S822	EVQ21405R	SW, TACT SWITCH	
S823	RSS3B37ZA-H	SW, FM MODE	[M]
S905	RJJ1SE01-H	JACK W/SW (J901)	⚠
		JACK(S)	
J101	RJF1098YA-H	JACK, SPEAKER	[M]
J201	RJF1098YA-H	JACK, SPEAKER	[M]
J301	RJF1099ZA	JACK, PIN	
J302	RJJ1D25ZA-C	JACK, MIC	
J303	RJJ3BT01-H	JACK, HEADPHONES	[M]
J901	RJJ1SE01-H	JACK, AC IN (S905)	⚠
J902	RJJB3ZD-C	JACK, DC IN	
		OSCILLATOR(S)	
X1	SVQ49U722T-D	OSCILLATOR, RESONATOR	[M]
X801	RSXY4M19M03T	OSCILLATOR, RESONATOR	[M]
X802	RSXD32K7S02	OSCILLATOR, RESONATOR	
		PACKING MATERIAL(S)	
P1	RPH3SZA	MIRAMAT SHEET	[M]
P2	RPK0251	GIFT BOX	[M]
P3	RPN0440	POLYFOAM	[M]
		ACCESSORIES	
A1	RQT0939-G	INSTRUCTION MANUAL	[M]
A2	SFDAC05E03	AC CORD	[EG]
A2	RJA86ZB-K	AC CORD	[EB]

■ RESISTORS & CAPACITORS

Notes : * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF), F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref No.	Part No.	Values & Remarks	
R1	ERDS2TJ470T	47	1/4W
R2	ERDS2TJ331T	330	1/4W
R3	ERDS2TJ104T	100K	1/4W
R4	ERDS2TJ104T	100K	1/4W
R5	ERDS2TJ470T	47	1/4W
R6	ERDS2TJ470T	47	1/4W
R8	ERDS2TJ104T	100K	1/4W
R9	ERDS2TJ103T	10K	1/4W
R10	ERDS2TJ683T	68K	1/4W
R11	ERDS2TJ471T	470	1/4W
R12	ERDS2TJ224T	220K	1/4W
R13	ERDS2TJ471T	470	1/4W
R14	ERDS2TJ683T	68K	1/4W
R15	ERDS2TJ471T	470	1/4W
R16	ERDS2TJ101T	100	1/4W
R17	ERDS2TJ332T	3.3K	1/4W
R18	ERDS2TJ334T	330K	1/4W
R19	ERDS2TJ331T	330	1/4W
R20	ERDS2TJ331T	330	1/4W
R21	ERDS2TJ331T	330	1/4W
R22	ERDS2TJ103T	10K	1/4W
R23	ERDS2TJ151T	150	1/4W
R24	ERDS2TJ562T	5.6K	1/4W
R25	ERDS2TJ332T	3.3K	1/4W
R26	ERDS2TJ102T	1K	1/4W
R27	ERDS2TJ104T	100K	1/4W
R28	ERDS2TJ562T	5.6K	1/4W
R29	ERDS2TJ681T	680	1/4W
R30	ERDS2TJ683T	68K	1/4W
R31	ERDS2TJ102T	1K	1/4W
R32	ERDS2TJ682T	6.8K	1/4W
R33	ERDS2TJ104T	100K	1/4W
R34	ERDS2TJ104T	100K	1/4W
R36	ERDS2TJ103T	10K	1/4W
R37	ERDS2TJ103T	10K	1/4W
R39	ERDS2TJ104T	100K	1/4W
R40	ERDS2TJ104T	100K	1/4W
R44	ERDS2TJ103T	10K	1/4W
R47	ERDS2TJ103T	10K	1/4W
R49	ERDS2TJ121T	120	1/4W
R50	ERDS2TJ102T	1K	1/4W
R51	ERDS2TJ222T	2.2K	1/4W
R52	ERDS2TJ471T	470	1/4W
R53	ERDS2TJ683T	68K	1/4W
R54	ERDS2TJ153T	15K	1/4W
R55	ERDS2TJ561T	560	1/4W
R56	ERDS2TJ222T	2.2K	1/4W
R57	ERDS2TJ472T	4.7K	1/4W
R58	ERDS2TJ103T	10K	1/4W
R59	ERDS2TJ222T	2.2K	1/4W
R60	ERDS2TJ151T	150K	1/4W
R61	ERDS2TJ222T	2.2K	1/4W
R62	ERDS2TJ103T	10K	1/4W
R63	ERDS2TJ102T	1K	1/4W
R68	ERDS2TJ391T	390	1/4W
R69	ERDS2TJ103T	10K	1/4W
R70	ERDS2TJ103T	10K	1/4W
R71	ERDS2TJ103T	10K	1/4W
R72	ERDS2TJ104T	100K	1/4W
R73	ERDS2TJ103T	10K	1/4W
R74	ERDS2TJ224T	220K	1/4W
R75	ERDS2TJ224T	220K	1/4W
R76	ERDS2TJ224T	220K	1/4W

Ref No.	Part No.	Values & Remarks	
R81	ERDS2TJ102T	1K	1/4W
R101	ERDS2TJ473T	47K	1/4W
R102	ERDS2TJ562T	5.6K	1/4W
R103	ERDS2TJ123T	12K	1/4W
R104	ERDS2TJ330T	33	1/4W
R105	ERDS2TJ472T	4.7K	1/4W
R106	ERDS2TJ104T	100K	1/4W
R107	ERDS2TJ821T	820	1/4W
R108	ERDS2TJ102T	1K	1/4W
R109	ERDS2TJ821T	820	1/4W
R110	ERDS2TJ472T	4.7K	1/4W
R111	ERDS2TJ153T	15K	1/4W
R112	ERDS2TJ273T	27K	1/4W
R113	ERDS2TJ823T	82K	1/4W
R114	ERDS2TJ273T	27K	1/4W
R115	ERDS2TJ103T	10K	1/4W
R116	ERDS2TJ562T	5.6K	1/4W
R117	ERDS2TJ103T	10K	1/4W
R118	ERDS2TJ393T	39K	1/4W
R119	ERDS2TJ105T	1M	1/4W
R120	ERDS2TJ221T	220	1/4W
R121	ERDS2TJ102T	1K	1/4W
R122	ERDS2TJ222T	2.2K	1/4W
R123	ERDS2TJ152T	1.5K	1/4W
R124	ERDS2TJ153T	15K	1/4W
R125	ERDS2TJ222T	2.2K	1/4W
R126	ERDS2TJ105T	1M	1/4W
R127	ERDS2TJ472T	4.7K	1/4W
R128	ERDS2TJ225T	2.2M	1/4W
R129	ERDS2TJ154T	150K	1/4W
R130	ERDS2TJ473T	47K	1/4W
R131	ERDS2TJ224T	220K	1/4W
R132	ERDS2TJ683T	68K	1/4W
R133	ERDS2TJ104T	100K	1/4W
R134	ERDS2TJ153T	15K	1/4W
R135	ERDS2TJ2R7T	2.7	1/4W
R136	ERDS2TJ151T	150	1/4W
R137	ERDS2TJ123T	12K	1/4W
R138	ERDS2TJ223T	22K	1/4W
R139	ERDS2TJ472T	4.7K	1/4W
R140	ERDS2TJ102T	1K	1/4W
R141	ERDS2TJ223T	22K	1/4W
R142	ERDS2TJ2R2T	2.2	1/4W
R144	ERDS2TJ103T	10K	1/4W
R151	ERDS2TJ221T	220	1/4W
R152	ERDS2TJ224T	220K	1/4W
R161	ERDS2TJ105T	1M	1/4W
R162	ERDS2TJ472T	4.7K	1/4W
R163	ERDS2TJ472T	4.7K	1/4W
R164	ERDS2TJ561T	560	1/4W
R165	ERDS2TJ471T	470	1/4W
R166	ERDS2TJ682T	6.8K	1/4W
R168	ERDS2TJ222T	2.2K	1/4W
R169	ERDS2TJ183T	18K	1/4W
R170	ERDS2TJ101T	100	1/4W
R171	ERDS2TJ474T	470K	1/4W
R172	ERDS2TJ821T	820	1/4W
R173	ERDS2TJ152T	1.5K	1/4W
R201	ERDS2TJ473T	47K	1/4W
R202	ERDS2TJ562T	5.6K	1/4W
R203	ERDS2TJ123T	12K	1/4W
R204	ERDS2TJ330T	33	1/4W
R205	ERDS2TJ472T	4.7K	1/4W

Ref No.	Part No.	Values & Remarks	
R206	ERDS2TJ104T	100K	1/4W
R207	ERDS2TJ821T	820	1/4W
R208	ERDS2TJ108T	1K	1/4W
R209	ERDS2TJ821T	820	1/4W
R210	ERDS2TJ472T	4.7K	1/4W
R211	ERDS2TJ153T	15K	1/4W
R212	ERDS2TJ273T	27K	1/4
R213	ERDS2TJ823T	82K	1/4W
R214	ERDS2TJ273T	27K	1/4W
R215	ERDS2TJ103T	10K	1/4W
R216	ERDS2TJ562T	5.6K	1/4W
R217	ERDS2TJ103T	10K	1/4W
R218	ERDS2TJ393T	39K	1/4W
R219	ERDS2TJ105T	1M	1/4W
R220	ERDS2TJ221T	220	1/4W
R221	ERDS2TJ102T	1K	1/4W
R222	ERDS2TJ222T	2.2K	1/4W
R223	ERDS2TJ152T	1.5K	1/4W
R224	ERDS2TJ153T	15K	1/4W
R225	ERDS2TJ222T	2.2K	1/4W
R226	ERDS2TJ105T	1M	1/4W
R227	ERDS2TJ472T	4.7K	1/4W
R228	ERDS2TJ225T	2.2M	1/4W
R229	ERDS2TJ154T	150K	1/4W
R230	ERDS2TJ473T	47K	1/4W
R231	ERDS2TJ224T	220K	1/4W
R232	ERDS2TJ683T	68K	1/4W
R233	ERDS2TJ104T	100K	1/4W
R234	ERDS2TJ153T	15K	1/4W
R235	ERDS2TJ2R7T	2.7	1/4W
R236	ERDS2TJ151T	150	1/4W
R237	ERDS2TJ123T	12K	1/4W
R238	ERDS2TJ223T	22K	1/4W
R239	ERDS2TJ472T	4.7K	1/4W
R240	ERDS2TJ102T	1K	1/4W
R241	ERDS2TJ223T	22K	1/4W
R242	ERDS2TJ2R2T	2.2	1/4W
R244	ERDS2TJ103T	10K	1/4W
R251	ERDS2TJ221T	220	1/4W
R252	ERDS2TJ224T	220K	1/4W
R261	ERDS2TJ105T	1M	1/4W
R262	ERDS2TJ472T	4.7K	1/4W
R263	ERDS2TJ472T	4.7K	1/4W
R264	ERDS2TJ561T	560	1/4W
R265	ERDS2TJ471T	470	1/4W
R266	ERDS2TJ682T	6.8K	1/4W
R268	ERDS2TJ222T	2.2K	1/4W
R269	ERDS2TJ183T	18K	1/4W
R270	ERDS2TJ101T	100	1/4W
R271	ERDS2TJ474T	470K	1/4W
R272	ERDS2TJ821T	820	1/4W
R273	ERDS2TJ152T	1.5K	1/4W
R301	ERDS2TJ333T	33K	1/4W
R302	ERDS2TJ333T	33K	1/4W
R303	ERDS2TJ221T	220	1/4W
R304	ERDS2TJ333T	33K	1/4W
R305	ERDS2TJ473T	47K	1/4W
R306	ERDS2TJ473T	47K	1/4W
R307	ERDS2TJ102T	1K	1/4W
R308	ERDS2TJ102T	1K	1/4W
R309	ERDS2TJ103T	10K	1/4W
R311	ERDS2TJ472T	4.7K	1/4W
R312	ERDS2TJ472T	4.7K	1/4W

Ref No.	Part No.	Values & Remarks	
R313	ERDS2TJ472T	4.7K	1/4W
R314	ERDS2TJ103T	10K	1/4W
R315	ERDS2TJ562T	5.6K	1/4W
R316	ERDS2TJ332T	3.3K	1/4W
R317	ERDS2TJ222T	2.2K	1/4W
R318	ERDS2TJ105T	1M	1/4W
R319	ERDS2TJ332T	3.3K	1/4W
R320	ERDS2TJ470T	47	1/4W
R321	ERDS2TJ105T	1M	1/4W
R322	ERDS2TJ152T	1.5K	1/4W
R323	ERDS2TJ221T	220	1/4W
R324	ERDS2TJ103T	10K	1/4W
R325	ERDS2TJ471T	470	1/4W
R326	ERDS2TJ333T	33K	1/4W
R327	ERDS2TJ103T	10K	1/4W
R329	ERDS2TJ222T	2.2K	1/4W
R330	ERDS2TJ103T	10K	1/4W
R331	ERDS2TJ472T	4.7K	1/4W
R332	ERDS2TJ681T	680	1/4W
R333	ERDS2TJ106T	10M	1/4W
R334	ERDS2TJ104T	100K	1/4W
R335	ERDS2TJ433T	43K	1/4W
R336	ERDS2TJ473T	47K	1/4W
R337	ERDS2TJ473T	47K	1/4W
R338	ERDS2TJ683T	68K	1/4W
R339	ERDS2TJ683T	68K	1/4W
R340	ERDS2TJ151T	150	1/4W
R341	ERDS2TJ103T	10K	1/4W
R342	ERDS2TJ103T	10K	1/4W
R344	ERDS2TJ331T	330	1/4W
R345	ERDS2TJ221T	220	1/4W
R346	ERDS2TJ102T	1K	1/4W
R347	ERDS2TJ473T	47K	1/4W
R348	ERDS2TJ472T	4.7K	1/4W
R349	ERDS2TJ333T	33K	1/4W
R350	ERDS2TJ332T	3.3K	1/4W
R351	ERDS2TJ223T	22K	1/4W
R352	ERDS2TJ102T	1K	1/4W
R353	ERDS2TJ222T	2.2K	1/4W
R354	ERDS2TJ471T	470	1/4W
R355	ERDS2TJ472T	4.7K	1/4W
R356	ERDS2TJ104T	100K	1/4W
R358	ERDS2TJ471T	470	1/4W
R359	ERDS2TJ222T	2.2K	1/4W
R360	ERDS2TJ333T	33K	1/4W
R361	ERDS2TJ473T	47K	1/4W
R363	ERDS2TJ472T	4.7K	1/4W
R364	ERDS2TJ102T	1K	1/4W
R365	ERDS2TJ101T	100	1/4W
R366	ERDS2TJ102T	1K	1/4W
R367	ERDS2TJ472T	4.7K	1/4W
R368	ERDS2TJ223T	22K	1/4W
R370	ERDS2TJ332T	3.3K	1/4W
R371	ERDS2TJ474T	470K	1/4W
R372	ERDS2TJ332T	3.3K	1/4W
R373	ERDS2TJ332T	3.3K	1/4W
R375	ERDS2TJ101T	100	1/4W
R377	ERDS2TJ103T	10K	1/4W
R378	ERDS2TJ104T	100K	1/4W
R379	ERDS2TJ682T	6.8K	1/4W
R381	ERDS2TJ471T	470	1/4W
R382	ERDS2TJ222T	2.2K	1/4W
R602	ERDS2TJ103T	10K	1/4W
R603	ERDS2TJ223T	22K	1/4W
R604	ERDS2TJ103T	10K	1/4W
R605	ERDS2TJ223T	22K	1/4W
R607	ERDS2TJ303T	30K	1/4W

Ref No.	Part No.	Values & Remarks	
R608	ERDS2TJ303T	30K	1/4W
R609	ERDS2TJ153T	15K	1/4W
R610	ERDS2TJ102T	1K	1/4W
R611	ERDS2TJ105T	1M	1/4W
R801	ERDS2TJ104T	100K	1/4W
R802	ERDS2TJ334T	330K	1/4W
R803	ERDS2TJ102T	1K	1/4W
R804	ERDS2TJ102T	1K	1/4W
R805	ERDS2TJ102T	1K	1/4W
R806	ERDS2TJ102T	100K	1/4W
R807	ERDS2TJ822T	8.2K	1/4W
R808	ERDS2TJ471T	470	1/4W
R809	ERDS2TJ104T	100K	1/4W
R810	ERDS2TJ333T	33K	1/4W
R811	ERDS2TJ824T	820K	1/4W
R812	ERDS2TJ104T	100K	1/4W
R813	ERDS2TJ472T	4.7K	1/4W
R814	ERDS2TJ472T	4.7K	1/4W
R815	ERDS2TJ103T	10K	1/4W
R830	ERDS2TJ102T	1K	1/4W
R831	ERDS2TJ102T	1K	1/4W
R901	ERDS2TJ471T	470	1/4W
		CAPACITOR	
C2	ECBT1H102KB5	0.001	50V
C3	ECCR1H120KC5	12P	50V
C4	ERBT1H101KB5	100P	50V
C5	ECBT1H102KB5	0.001	50V
C6	ECBT1H102KB5	0.001	50V
C7	ECBT1H100JC5	10P	50V
C8	ECBT1H3R9KC5	3.9P	50V
C9	ECBT1H150JC5	15P	50V
C10	ECBT1H102KB5	0.001	50V
C11	ECBT1H3R3KC5	3.3P	50V
C12	ECBT1H2R2KC5	2.2P	50V
C13	ECBT1H181KB5	180P	50V
C14	ECBT1H100JC5	10P	50V
C15	ECBT1H102KB5	0.001	50V
C17	ECBT1C103MS5	0.01	16V
C18	ECBT1C103MS5	0.01	16V
C19	ECBT1H102KB5	0.001	50V
C20	ECBT1H102KB5	0.001	50V
C21	ECBT1H181KB5	180P	50V
C22	ECBT1H181KB5	180P	50V
C23	ECBT1C103MS5	0.01	16V
C24	ECBT1H102KB5	0.001	50V
C25	ECEA1CU100B	10	16V
C26	ECBT1H331KB5	330P	50V
C29	ECEA0JU101B	100	6.3V
C30	ECEA1EU4R7B	4.7	25V
C31	ECFR1C223MR	0.022	16V
C32	ECFR1C223MR	0.022	16V
C33	ECEA1AU101B	100	10V
C34	ECFR1C153MR	0.015	16V
C35	ECBT1C103MS5	0.01	16V
C36	ECEA1HU2R2B	2.2	50V
C37	ECBT1H102KB5	0.001	50V
C38	ECFR1C153MR	0.015	16V
C39	ECEA1HU010B	1	50V
C40	ECEA1HUR47B	0.47	50V
C41	ECEA1HUR47B	0.47	50V
C42	ECQP2A102JZT	0.001	100V
C44	ECBT1C103MS5	0.01	16V
C47	ECBT1C103MS5	0.01	16V
C48	ECBT1H470J5	47P	50V
C52	ECFR1C223MR	0.022	16V

Ref No.	Part No.	Values & Remarks	
C54	ECBT1H6R8KC5	6.8P	50V
C56	ECQP2A391JZT	390P	100V
C58	ECQP2A121GZT	120P	100V
C60	ECQP2A181GZT	180P	100V
C62	ECBT1H101KB5	100P	50V
C64	ECFR1C223MR	0.022	16V
C65	ECBT1H121KB5	120P	50V
C66	ECBT1C103MS5	0.01	16V
C67	ECBT1C103MS5	0.01	16V
C68	ECEA1HU010B	1	50V
C69	ECEA1HUR47B	0.47	50V
C70	ECEA0JU101B	100	6.3V
C71	ECKR1H103MD5	0.01	50V
C72	ECBT1H101KB5	100P	50V
C73	ECKR1H103MD5	0.01	50V
C74	ECBT0J153MS5	0.015	6.3V
C75	ECEA1HU2R2B	2.2	50V
C76	ECFW1C223MRY	0.022	16V
C77	ECBT1H102KB5	0.001	50V
C78	ECEA1HNR47SB	0.47	50V
C79	ECBT1C103MS5	0.01	16V
C83	ECEA1CU330B	33	16V
C86	ECBT1H150JC5	15P	50V
C87	ECBT1H150JC5	15P	50V
C88	ECBT1H102KB5	0.001	50V
C89	ECBT1H331KB5	330P	50V
C90	ECBT1H331KB5	330P	50V
C91	ECEA1CU100B	10	16V
C92	ECBT1H102KB5	0.001	50V
C93	ECEA1CU330B	33	16V
C96	ECEA1CU330B	33	16V
C97	ECBT1H102KB5	0.001	50V
C98	ECBT1H101KB5	100P	50V
C99	ECBT1H331KB5	330P	50V
C101	ECBT1H471KB5	470P	50V
C102	ECBT1H102KB5	0.001	50V
C103	ECBT1H471KB5	470P	50V
C104	ECEA0JU221B	220	6.3V
C105	ECFR1C333KR	0.033	16V
C106	ECEA1CU100B	10	16V
C107	ECFR1C104JR	0.1	16V
C108	ECEA1HU010B	1	50V
C109	ECBT1H101KB5	100P	50V
C110	ECEA1HU010B	1	50V
C111	ECEA1EU4R7B	4.7	25V
C112	ECBT1H681KB5	680P	50V
C113	ECBT1C682KR5	0.0068	16V
C114	ECEA1HU0R1B	0.1	50V
C115	ECEA1HFSR68T	0.68	50V
C116	ECEA1EU4R7B	4.7	25V
C117	ECEA1EU4R7B	4.7	25V
C118	ECEA1HU010B	1	50V
C119	ECEA1EU4R7B	4.7	25V
C120	ECBT1C332MR5	0.0033	16V
C121	ECBT1H221KB5	220P	50V
C122	ECBT1H151KB5	150P	50V
C123	ECBT1H101KB5	100P	50V
C124	ECEA1HU010B	1	50V
C125	ECBT1H102KB5	0.001	50V
C126	ECEA1AU222B	2200	10V
C127	ECEA1AU101B	100	10V
C128	ECEA0JU101B	100	6.3V
C129	ECBT1H102KB5	0.001	50V
C130	ECEA1EU4R7B	4.7	25V
C131	ECQV1H224JZ3	0.22	50V
C132	ECBT1C332MR5	0.0033	16V
C133	ECBT1C332MR5	0.0033	16V

Ref No.	Part No.	Values & Remarks		Ref No.	Part No.	Values & Remarks		Ref No.	Part No.	Values & Remarks	
C134	ECBT1H101KB5	100P	50V	C233	ECBT1C332MR5	0.0033	16V	C332	ECEA1EU4R7B	4.7	25V
C135	ECFR1C473MR	0.047	16V	C234	ECBT1H101KB5	100P	50V	C333	ECEA1AU221B	220	10V
C137	ECBT1H471KB5	470P	50V	C235	ECFR1C473MR	0.047	16V	C334	ECEA0JU101B	100	6.3V
C138	ECEA0JU101B	100	6.3V	C237	ECBT1H471KB5	470P	50V	C335	ECEA1EU101B	100	25V
C139	ECBT1H220J5	22P	50V	C238	ECEA0JU101B	100	6.3V	C336	ECEA1AU471B	470	10V
C140	ECBT1C103MS5	0.01	16V	C239	ECBT1H220J5	22P	50V	C337	ECEA1AU101B	100	10V
C141	ECEA1AU470B	47	10V	C240	ECBT1C103MS5	0.01	16V	C338	ECEA1AU220B	22	10V
C142	ECFR1C473MR	0.047	16V	C241	ECEA1AU470B	47	10V	C339	ECEA1EU472E	0.0047	25V
C143	ECEA1AU470B	47	10V	C242	ECFR1C473MR	0.047	16V	C340	ECEA0JU221B	220	6.3V
C144	ECQV1H224JZ3	0.22	50V	C243	ECEA1AU470B	47	10V	C341	ECEA1AU101B	100	10V
C145	ECEA1HU010B	1	50V	C244	ECQV1H224JZ3	0.22	50V	C342	ECEA1CU100B	10	16V
C161	ECEA1HU010B	1	50V	C245	ECEA1HU010B	1	50V	C343	ECEA1CU221B	220	16V
C162	ECBT1H471KB5	470P	50V	C261	ECEA1HU010B	1	50V	C344	ECEA1CU100B	10	16V
C163	ECEA1CU100B	10	16V	C262	ECBT1H471KB5	470P	50V	C345	ECEA1HU010B	1	50V
C164	ECBT1C222MRS	0.0022	16V	C263	ECEA1CU100B	10	16V	C346	ECEA1HU010B	1	50V
C165	ECFR1C333MR	0.033	16V	C264	ECBT1C222MR5	0.0022	16V	C347	ECEA1HU010B	1	50V
C166	ECFR1C823MR	0.082	16V	C265	ECFR1C333MR	0.033	16V	C348	ECBT1C103MS5	0.01	16V
C167	ECEA1HU2R2B	2.2	50V	C266	ECFR1C823MR	0.082	16V	C349	ECBT1H220J5	22P	50V
C168	ECBT1C332MR5	0.0033	16V	C267	ECEA1HU2R2B	2.2	50V	C350	ECEA1CU100B	10	16V
C169	ECEA1HU0R1B	0.1	50V	C268	ECBT1C332MR5	0.0033	16V	C351	ECBT1C103MS5	0.01	16V
C170	ECBT1C103MS5	0.01	16V	C269	ECEA1HU0R1B	0.1	50V	C352	ECBT1C103MS5	0.01	16V
C171	ECEA1HUR33B	0.33	50V	C270	ECBT1C103MS5	0.01	16V	C353	ECBT1H102KB5	0.001	50V
C172	ECFR1C333MR	0.033	16V	C271	ECEA1HUR33B	0.33	50V	C354	ECBT1C103MS5	0.01	16V
C173	ECEA1HKR68B	0.68	50V	C272	ECFR1C333MR	0.033	16V	C355	ECBT1C103MS5	0.01	16V
C174	ECBT0J153MS5	0.015	6.3V	C273	ECEA1HKR68B	0.68	50V	C356	ECEA1CU100B	10	16V
C175	ECEAIHU010B	1	50V	C274	ECBT0J153MS5	0.015	6.3V	C357	ECBT1H102KB5	0.001	50V
C177	ECBT1H561KB5	560P	50V	C275	ECEA1HU010B	1	50V	C358	ECEA1HU010B	1	50V
C178	ECFR1C473MR	0.047	16V	C277	ECBT1H561KB5	560P	50V	C360	ECEA1CU221B	220	16V
C179	ECFR1C104MR	0.1	16V	C278	ECFR1C473MR	0.047	16V	C361	ECQV1H474JZ3	0.47	50V
C180	ECBT1H102KB5	0.001	50V	C279	ECFR1C104MR	0.1	16V	C362	ECKR1H103MD5	0.01	50V
C181	ECEA1CU100B	10	16V	C280	ECBT1H102KB5	0.001	50V	C364	ECEA1AU470B	47	10V
C201	ECBT1H471KB5	470P	50V	C281	ECEA1CU100B	10	16V	C365	ECEA1AU220B	22	10V
C202	ECBT1H102KB5	0.001	50V	C301	ECEA1CU100B	10	16V	C366	ECBT1H102KB5	0.001	50V
C203	ECBT1H471KB5	470P	50V	C302	ECEA1AU330B	33	10V	C378	ECEA0JU471B	470	6.3V
C204	ECEA0JU221B	220	6.3V	C303	ECEA1AU221B	220	10V	C381	ECEA1CU471B	470	16V
C205	ECFR1C333KR	0.033	16V	C304	ECEA1CU100B	10	16V	C382	ECEA0JU221B	220	6.3V
C206	ECEA1CU100B	10	16V	C305	ECQP2A222JZT	2200P	100V	C601	ECEA1CU330B	33	16V
C207	ECFR1C104JR	0.1	16V	C306	ECQP2A681JZT	680P	100V	C801	ECEA0JU101B	100	6.3V
C208	ECEA1HU010B	1	50V	C307	ECBT1C103MS5	0.01	16V	C802	ECBT1C103MS5	0.01	16V
C209	ECBT1H101KB5	100P	50V	C308	ECBT1C103MS5	0.01	16V	C803	ECBT1H102KB5	0.001	50V
C210	ECEA1HU010B	1	50V	C309	ECQP2A622JZT	0.0062	100V[M]	C804	ECBT1H102KB5	0.001	50V
C211	ECEA1EU4R7B	4.7	25V	C310	ECQV1H473JZ3	0.047	50V	C805	ECBT1H102KB5	0.001	50V
C212	ECBT1H681KB5	680P	50V	C311	ECEA1AU101B	100	10V	C806	ECBT1H102KB5	0.001	50V
C213	ECBT1C682KR5	0.0068	16V	C312	ECEA1HU010B	1	50V	C807	ECBT1H102KB5	0.001	50V
C214	ECEA1HU0R1B	0.1	50V	C313	ECBT1H102KB5	0.001	50V	C808	ECBT1H102KB5	0.001	50V
C215	ECEA1HFSR68T	0.68	50V	C314	ECBT1H102KB5	0.001	50V	C809	ECBT1H220JC5	22P	50V
C216	ECEA1EU4R7B	4.7	25V	C315	ECBT1C103MS5	0.01	16V	C810	ECBT1H180JC5	18P	50V
C217	ECEA1EU4R7B	4.7	25V	C316	ECBT1C103MS5	0.01	16V	C811	ECBT1H102KB5	0.001	50V
C218	ECEA1HU010B	1	50V	C317	ECEA1AU470B	47	10V	C812	ECBT1H331KB5	330P	50V
C219	ECEA1EU4R7B	4.7	25V	C318	ECEA1AU101B	100	10V	C814	ECBT1H102KB5	0.001	50V
C220	ECBT1C332MR5	0.0033	16V	C319	ECEA1HK010B	1	50V	C815	ECBT1H102KB5	0.001	50V
C221	ECBT1H221KB5	220P	50V	C320	ECBT1C103MS5	0.01	16V	C817	ECBT1H102KB5	0.001	50V
C222	ECBT1H151KB5	150P	50V	C321	ECEA1CU100B	10	16V	C818	ECBT1H102KB5	0.001	50V
C223	ECBT1H101KB5	100P	50V	C322	ECBT1C103MS5	0.01	16V	C819	ECBT1H331KB5	330P	50V
C224	ECEA1HU010B	1	50V	C323	ECBT1H102KB5	0.001	50V	C820	ECBT1H331KB5	330P	50V
C225	ECBT1H102KB5	0.001	50V	C324	ECFRIC473MR	0.047	16V	C821	ECBT1H102KB5	0.001	50V
C226	ECEA1AU222B	2200	10V	C325	ECEA1HU010B	1	50V	C822	ECBT1H331KB5	330P	50V
C227	ECEA1AU101B	100	10V	C326	ECEA1EU4R7B	4.7	25V	C823	ECBT1H331KB5	330P	50V
C228	ECEA0JU101B	100	6.3V	C327	ECEA1AU101B	100	10V	C825	ECBT1H221KB5	220P	50V
C229	ECBT1H102KB5	0.001	50V	C328	ECEA1CU100B	10	16V	C901	ECQV1H683JZ3	0.068	50V
C230	ECEA1EU4R7B	4.7	25V	C329	ECEA1AU101B	100	10V	C902	ECQV1H683JZ3	0.068	50V
C231	ECQV1H224JZ3	0.22	50V	C330	ECEA0JU471B	470	6.3V	C903	ECQV1H683JZ3	0.068	50V
C232	ECBT1C332MR5	0.0033	16V	C331	ECEA1HU010B	1	50V	C904	ECQV1H683JZ3	0.068	50V

Ref No.	Part No.	Part Name & Description	Remarks
		MECHANISM	
101	RDV0007	MAIN BELT	[M]
102	RJR0033	TERMINAL	[M]
103	RMB0109-1	SPRING	[M]
104	RML0116	BRAKE	
105	RBG2CG001-M	E HEAD	[M]
106	RDG0057	GEAR	[M]
107	RDG0059	GEAR	[M]
108	RDK0005	GEAR	[M]
109	RDV0006-1	BELT	[M]
110	RHW16009	WASHER	[M]
111	RMA0109	ANGLE	[M]
112	RMB0043-1	SPRING	[M]
113	RMB0045	SPRING	[M]
114	RMB0046-1	SPRING	[M]
115	RMB0047	SPRING	[M]
116	RMB0048	SPRING	[M]
117	RMB0053	SPRING	[M]
118	RMB0125	SPRING	[M]
119	RMC0061	SPRING	[M]
120	RFKRCT090P-K	CHASSIS ASS'Y	[M]
121	RML0071	LEVER	[M]
122	RML0072	LEVER	[M]
123	RML0073-1	LEVER	[M]
124	RML0074	LEVER	[M]
125	RML0076	LEVER	[M]
126	RML0077	LEVER	[M]
127	RML0078	LEVER	[M]
128	XTN2+6J	SCREW	
129	RML0081-1	LEVER	[M]
130	RML0082	LEVER	[M]
131	RMM0023	PLAY ROD	[M]
132	RMM0024	REW ROD	[M]
133	RMM0025	FF ROD	[M]
134	RMM0026	STOP ROD	[M]
135	RMM0027	PAUSE ROD	[M]
136	RMM0028	REC ROD	[M]
137	RMM0029	EJECT ROD	[M]
138	RMR0211	STOPPER	[M]
139	RMR0227	STOPPER	[M]
140	RMS0055	PIN	[M]
141	RXF0012	FLYWHEEL ASS'Y	[M]
141-1	RHW21008	WAHER	[M]
142	RMB0044	SPRING	[M]
143	RML0075	LEVER	[M]
144	RXP0014	PULLEY ASS'Y	[M]
145	RXP0015	ROLLER ASS'Y	[M]
145-1	RMB0049	SPRING	[M]
146	RBR4CM001-M	R/P HEAD	[M]
147	RHD20003	SCREW	[M]
149	RFKRGHM09LEK	HEAD BASE ASS'Y	[M]
150	RMB0059	SPRING	[M]
151	RMR0159	GUIDE	[M]
152	XTN2+4F	SGREW	
153	XTN2+8F	SCREW	
154	RXR0004	TAKE UP REEL ASS'Y	[M]
155	RXR0005	SUPPLY REEL ASS'Y	[M]
156	XTN2+6J	SCREW	
157	XTW26+6L	SCREW	

Ref No.	Part No.	Part Name & Description	Remarks
201	RDV0009	MAIN BELT	[M]
202	RJR0033	TERMINAL	[M]
203	RMB0109-1	SPRING	[M]
204	RML0116	BRAKE	
206	RDG0057	GEAR	[M]
207	RDG0059	GEAR	[M]
208	RDK0005	GEAR	[M]
209	RDV0006-1	BELT	[M]
210	RHW16009	WASHER	[M]
211	RMA0109	ANGLE	[M]
212	RMB0043-1	SPRING	[M]
213	RMB0045	SPRING	[M]
214	RMB0046-1	SPRING	[M]
215	RMB0047	SPRING	[M]
216	RMB0048	SPRING	[M]
217	RMB0053	SPRING	[M]
218	RMB0125	SPRING	[M]
219	RMC0061	SPRING	[M]
220	RFKRCT090P-K	CHASSIS ASS'Y	[M]
221	RML0071	LEVER	[M]
222	RML0072	LEVER	[M]
223	RML0073-1	LEVER	[M]
224	RML0074	LEVER	[M]
225	RML0076	LEVER	[M]
226	RML0077	LEVER	[M]
227	RML0078	LEVER	[M]
230	RML0082	LEVER	[M]
231	RMM0023	PLAY ROD	[M]
232	RMM0024	REW ROD	[M]
233	RMM0025	FF ROD	[M]
234	RMM0026	STOP ROD	[M]
235	RMM0027	PAUSE ROD	[M]
237	RMM0029	EJECT ROD	[M]
238	RMR0211	STOPPER	[M]
239	RMR0227	STOPPER	[M]
240	RMS0055	PIN	[M]
241	RXF0012	FLYWHEEL ASS'Y	[M]
241-1	RHW21008	WASHER	[M]
242	RMB0044	SPRING	[M]
243	RML0075	LEVER	[M]
244	RXP0014	PULLEY ASS'Y	[M]
245	RXP0015	ROLLER ASS'Y	[M]
245-1	RMB0049	SPRING	[M]
246	RBR4CM001-H	P HEAD	[M]
247	RHD20003	SCREW	[M]
249	RFKRGHM09LEK	HEAD BASE	[M]
250	RMB0059	SPRING	[M]
251	RMR0149	GUIDE	[M]
252	XTN2+4F	SCREW	
253	XTN2+8F	SCREW	
254	RXR0004	TAKE UP REEL ASS'Y	[M]
255	RXR0005	SUPPLY REEL ASS'Y	[M]
256	XTN2+6J	SCREW	
257	XTW26+6L	SCREW	
260	RFKPCT090P-K	DC MOTOR ASS'Y	[M]
261	RHD26002	SCREW	
262	RMA0122	ANGLE	
263	RMG0102	RUBBER SPACER	[M]
264	RMG0131	RUBBER SPACER	[M]
265	RMA0121	ANGLE	
266	RML0085	LEVER	[M]

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