

Service Manual

AUTO PRODUCTS
CQ-D50LEEP

Digital Control Receiver / Cassette Player



SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ
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 BLOCK DIAGRAM\БЛОК-СХЕМА
 OPERATION OF LSI\ФУНКЦИОНАЛЬНОЕ НАЗНАЧЕНИЕ ВЫВОДОВ
 ПРОЦЕССОРА УПРАВЛЕНИЯ ЖКИ ПАНЕЛИ
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 ИНТЕГРАЛЬНЫХ СХЕМ
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 EXPLODED VIEW (DECK)\СБОРОЧНЫЙ ЧЕРТЕЖ (ДЕКА)

Panasonic

SPECIFICATIONS*

General

Power Supply	: DC 12V (11-16V), Test Voltage 14.4V, Negative Ground
Tone Control	: Bass ± 10 dB (at 100Hz) Treble ± 10 dB (at 10kHz)
Loudness Control	: ± 8 dB (at 100Hz) ± 8 dB (at 10kHz)
Current Consumption	: Less than 2.0A (Tape mode, 0.5W, 4-Speaker)
Maximum Power Output	: 2×25 W, 4×15 W (at 4Ω)
Power Output	: 2×15 W, 4×8 W (DIN45 324 at 4Ω)
Speaker Impedance	: 4- 8Ω

FM Stereo Radio

Frequency Range	: 64.0-74.0MHz / 87.5-108MHz
Usable Sensitivity	: 6dB/ μ V (S/N 30dB) [87.5-108MHz] : 9dB/ μ V (S/N 30dB) [64.0-74.0MHz]
Stereo Separation	: 35dB (at 1kHz)

MW Radio

Frequency Range	: 531kHz-1,602kHz
Usable Sensitivity	: 28dB/ μ V (S/N 20dB)

LW Radio

Frequency Range	: 153kHz-279kHz
Usable Sensitivity	: 32dB/ μ V (S/N 20dB)

Cassette Player

Reproduction System	: 4-Track, 2-Program Stereo
Tape Speed	: 4.75 cm/sec.
F/F Rewind Time	: Less than 100sec.
Frequency Response	: 35 to 14,00Hz ± 3 dB (Normal) : 35 to 17,00Hz ± 3 dB (Metal)
Wow and Flutter	: 0.12% (WRMS)
Signal to Noise Ratio	: 52dB

Dimensions** (Main Unit) : 178(W) $\times$ 50(H) $\times$ 150(D) mm
(Bracket) : 182(W) $\times$ 53(H) $\times$ 155(D) mm

Weight** (Main Unit) : 1.45kg
(Bracket) : 0.35kg

* Specifications and the design are subject to modification without notice due to improvements in technology.

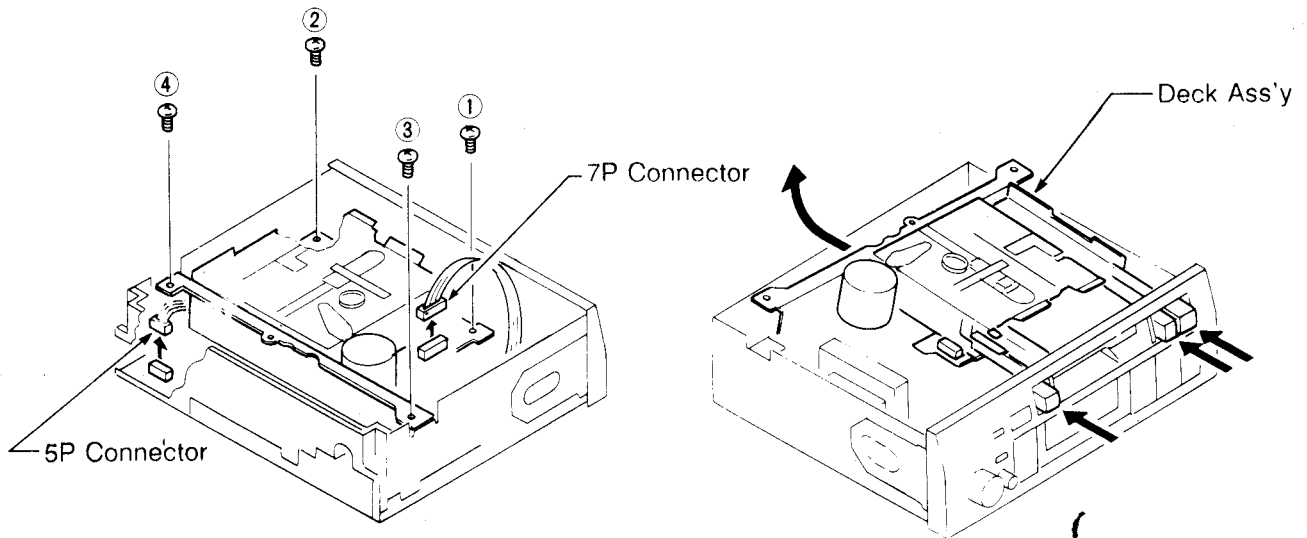
** Dimensions and Weight shown are approximate.

DISASSEMBLY INSTRUCTIONS

DECK ASS'Y REMOVAL

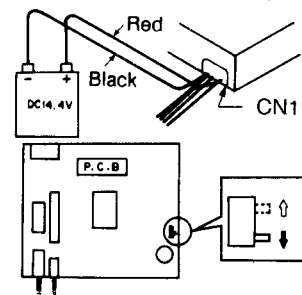
To remove the Upper Cover, Under and Escutcheon Ass'y, refer to EXPLODED VIEW (UNIT) on page 16.

- (1) Disconnect the 7P and 5P connectors before disconnecting the deck.
- (2) When the deck is mounted back in place, reconnect them after tightening the Screws.
- (3) Tighten the screws in the order of ①, ②, ③, and ④.



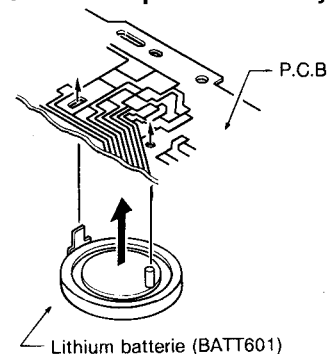
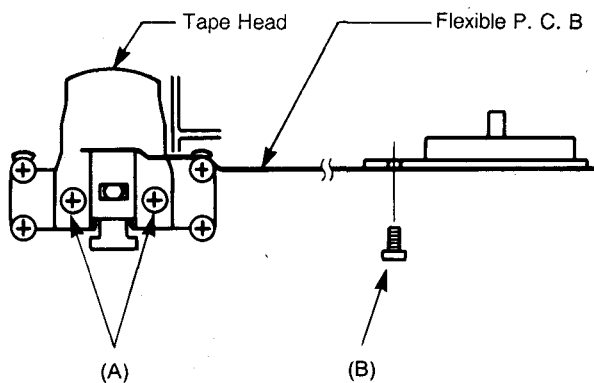
BATTERY (BATT601) REPLACEMENT

- (1) Remove the top cover, and deck assembly.
- (2) Use the connector CN1 (EMCQRE58B33V) connect 14.4V to Red-lead and Black-lead to ground, and set power switch is ON.
- (3) Keep SW601 to the arrow ↑ direction.
- (4) Unsolder the battery terminals on the pattern end and replace the battery with a new one.
- (5) Keep SW601 to the arrow ↓ direction.

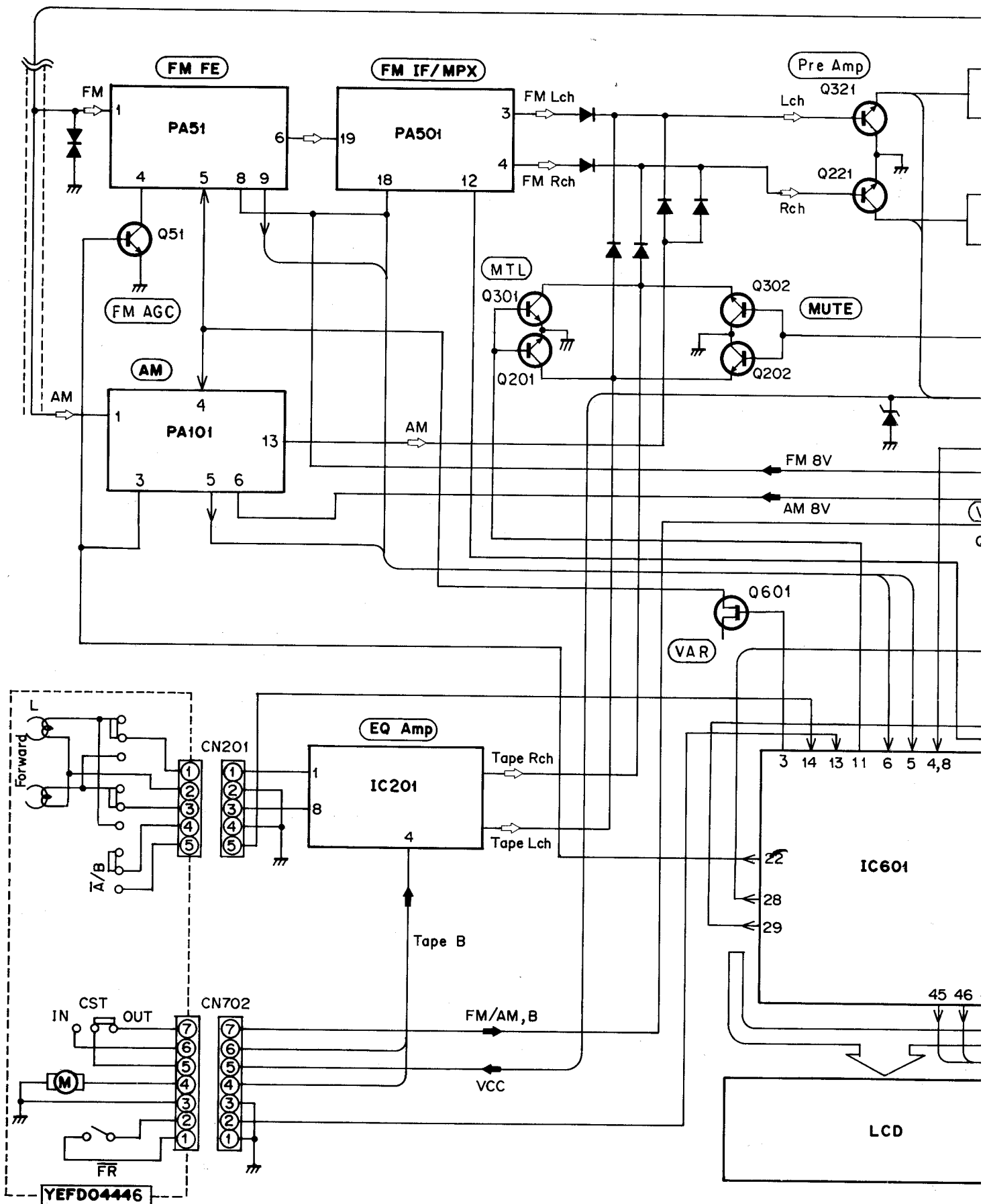


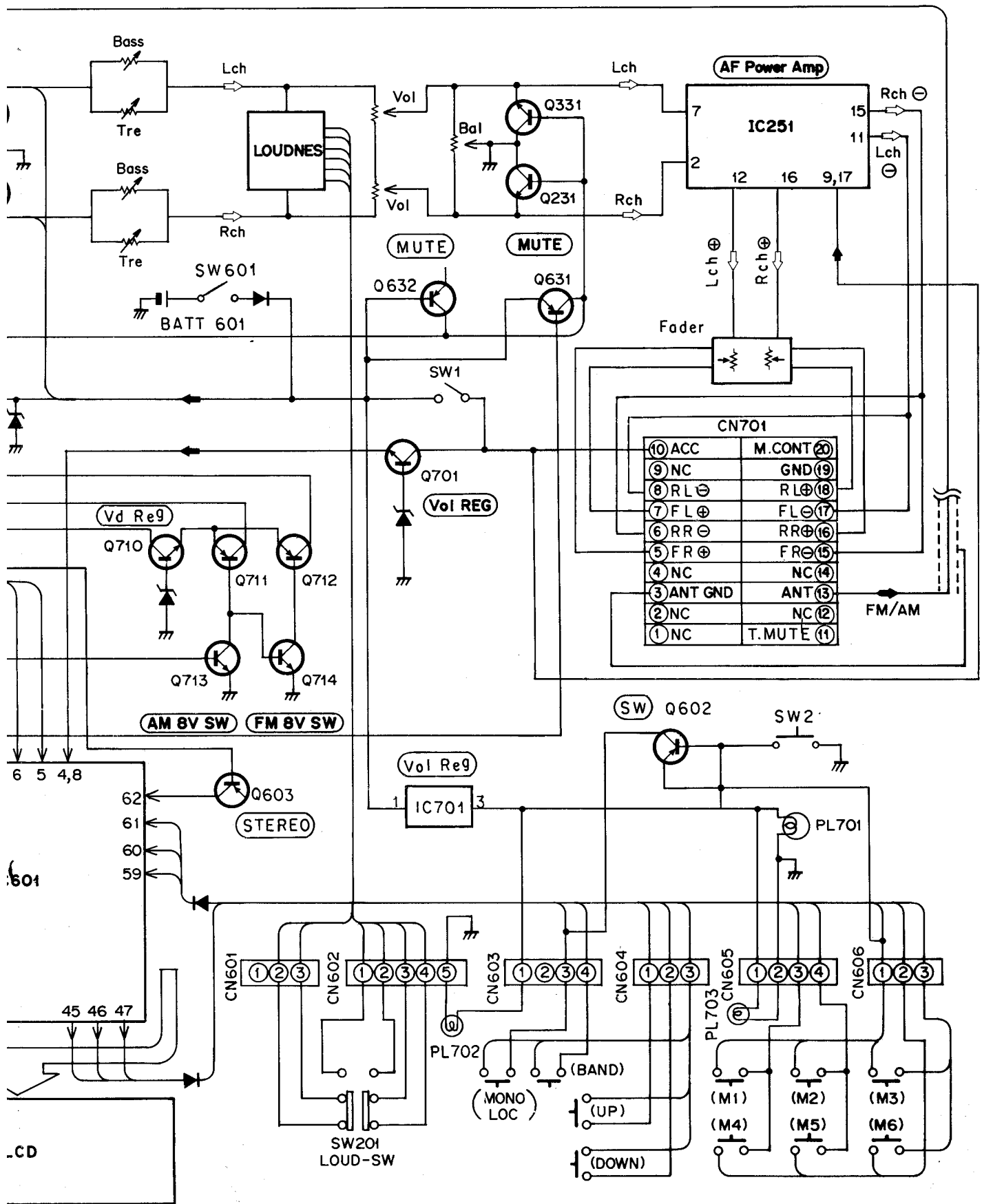
NOTES :

After the battery replacement, install the deck assembly and check that all the functions of the set operate normally.



BLOCK DIAGRAM MODEL CQ-D50LEEP

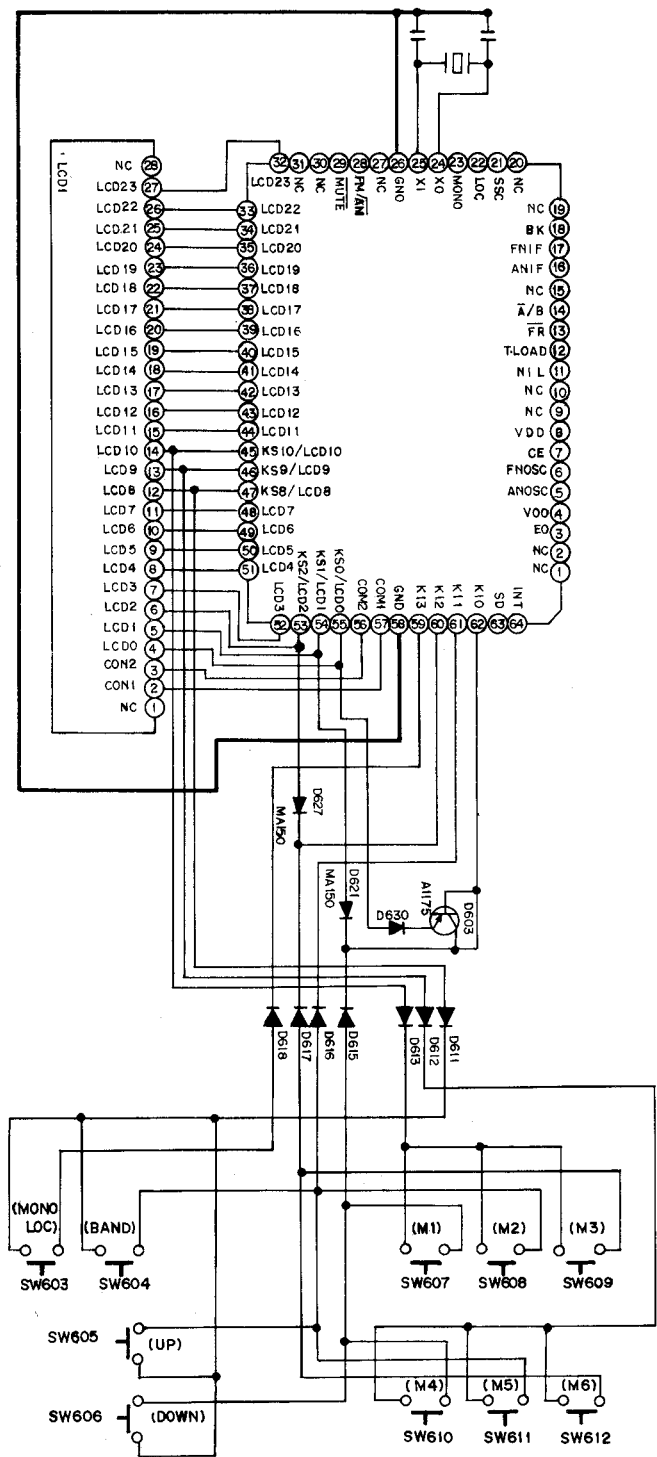




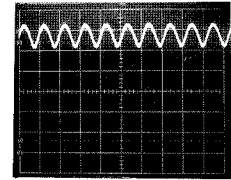
Digital Control Receiver / Cassette Player

OPERATION OF LSI

IC601, YEAM1723G663

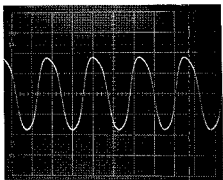


⑤ AM OSC



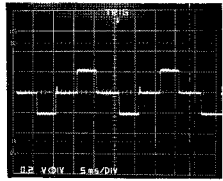
0.1V/DIV, 0.2μS/DIV

⑭ XO



1V/DIV, 0.1μS/DIV

⑦ COM1



0.2V/DIV, 5mS/DIV

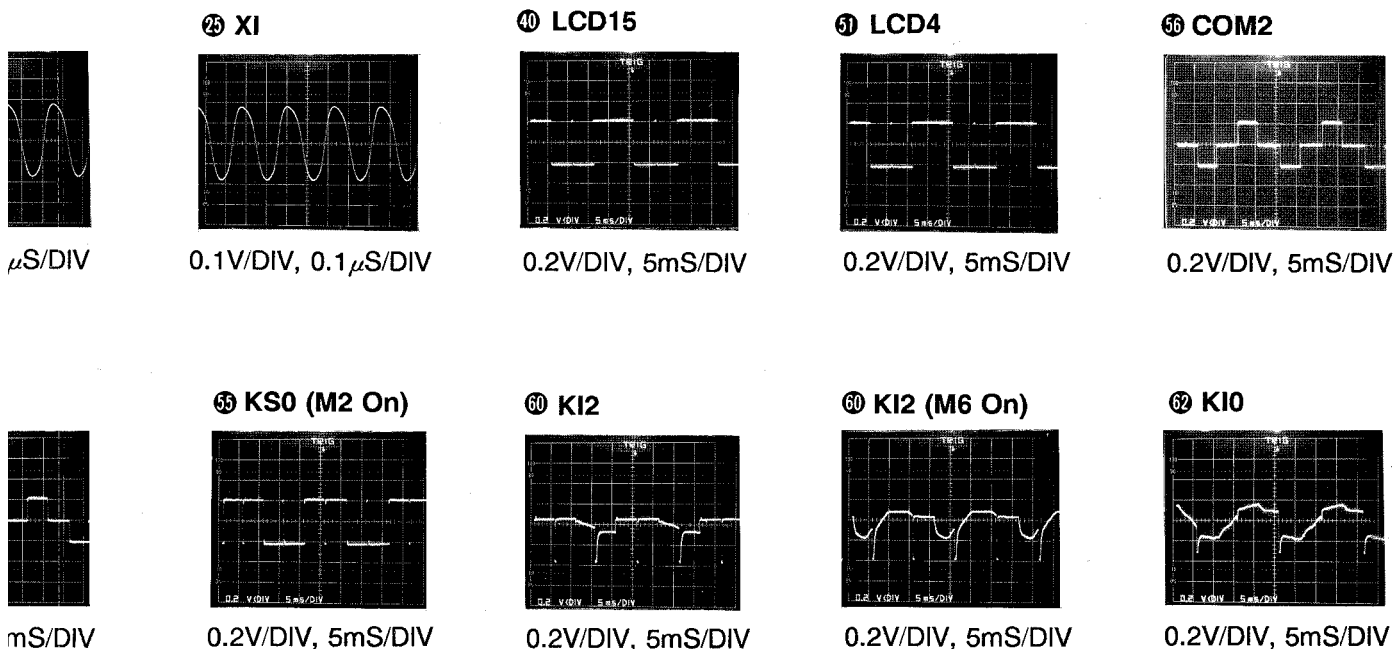
Pin No.	Port	Description	P
1	NC	No Connection	
2	NC		
3	E02	Output, PLL Phase detection Error	
4	VDD	+5V Power Supply	
5	AM OSC	Input, AM Local Oscillate Signal	
6	FM OSC	Input, FM Local Oscillate Signal	
7	CE	Input, Power Supply detection	
8	VDD	+5V Power Supply	
9	NC	No Connection	
10	NC		
11	MTL	Output, Equalizer Change	
12	T · LOAD	Input, tape Insert detection	
13	FR	Input, tape FF / REW Detection	
14	A / B	Input, tape A / B Program Detection	
15	NC	No Connection	
16	AM IF		
17	FM IF	Input, FM IF Counter	
18	BK	Input, BK Signal Counter	
19	NC	No Connection	
20	NC		
21	SSC	Output, Search Control	
22	LOC	Output, Local Search Sensitivity Control	

PRECAUTION IN HANDLING

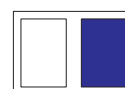
(For Prevention of electrostatic fracture)

- 1. Except during operation keep all terminals in contact with conductive member. (The device is in this condition.)
- 2. Always connect the tip of soldering iron, tools, and tester to the ground when using.
- 3. Do not plug or unplug with the power supplied.
- 4. Never apply signal or voltage with the power off.
- 5. Keep all unused terminals at Vcc or Vdd.
- 6. Never apply the voltage exceeding the line voltage to the input terminal.

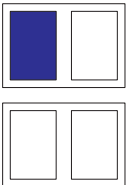
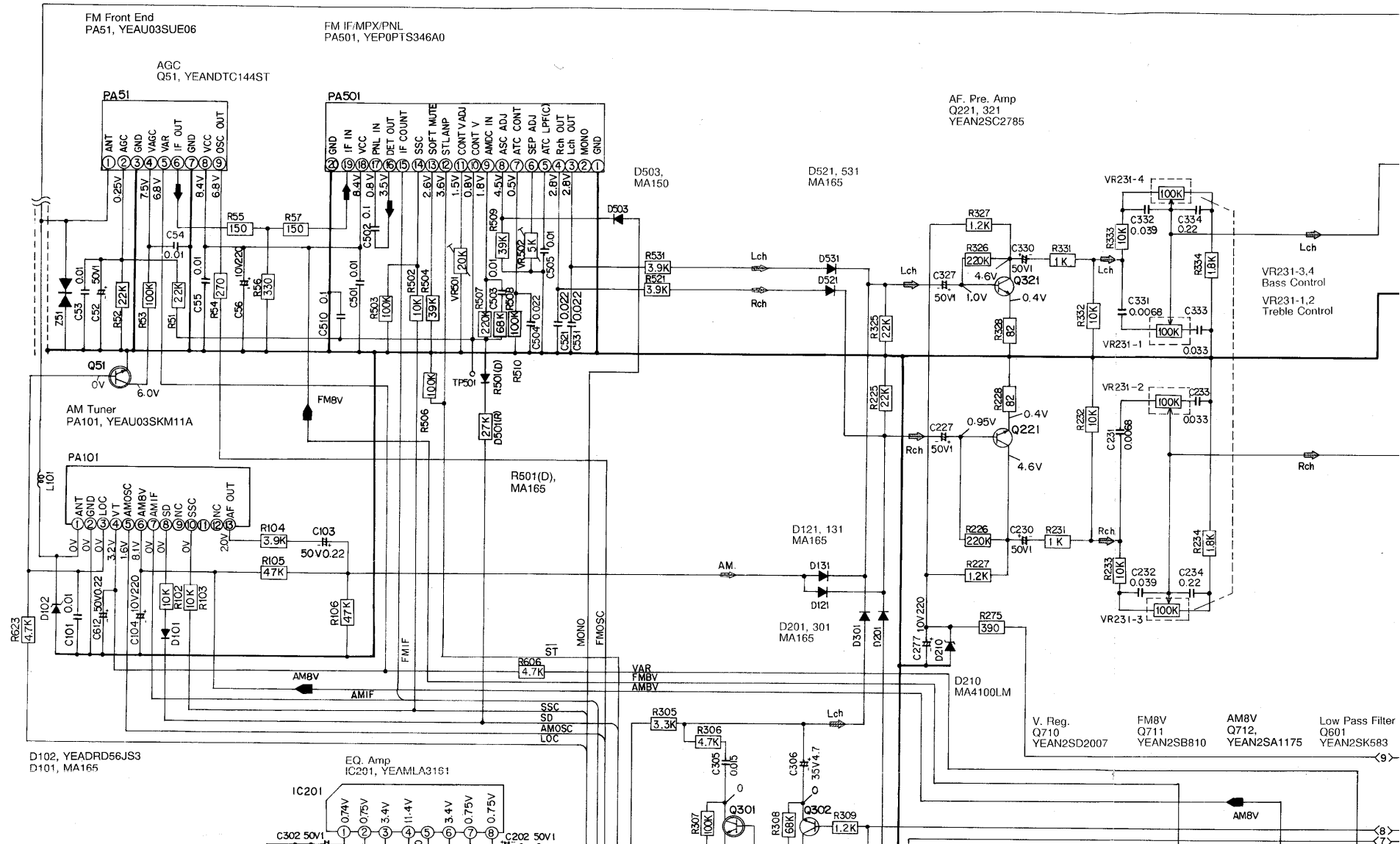


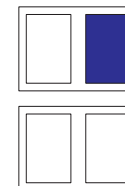
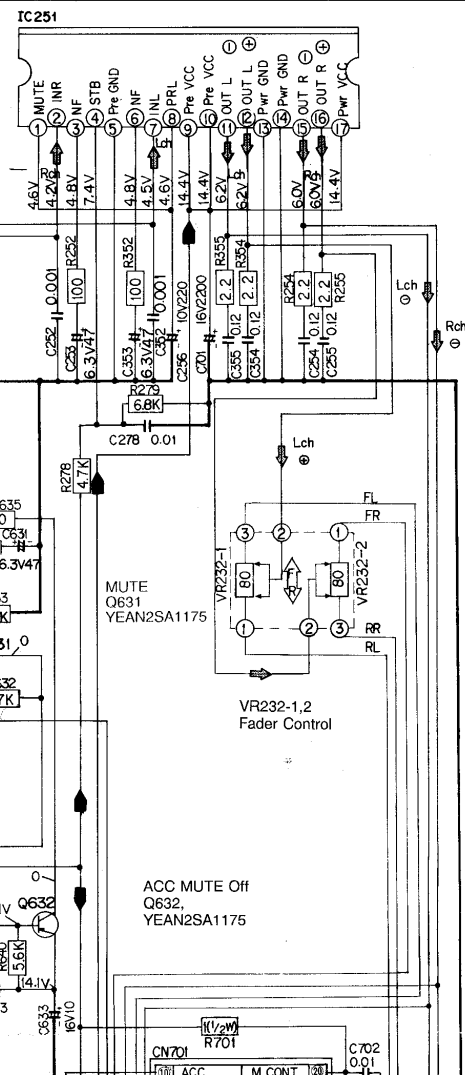
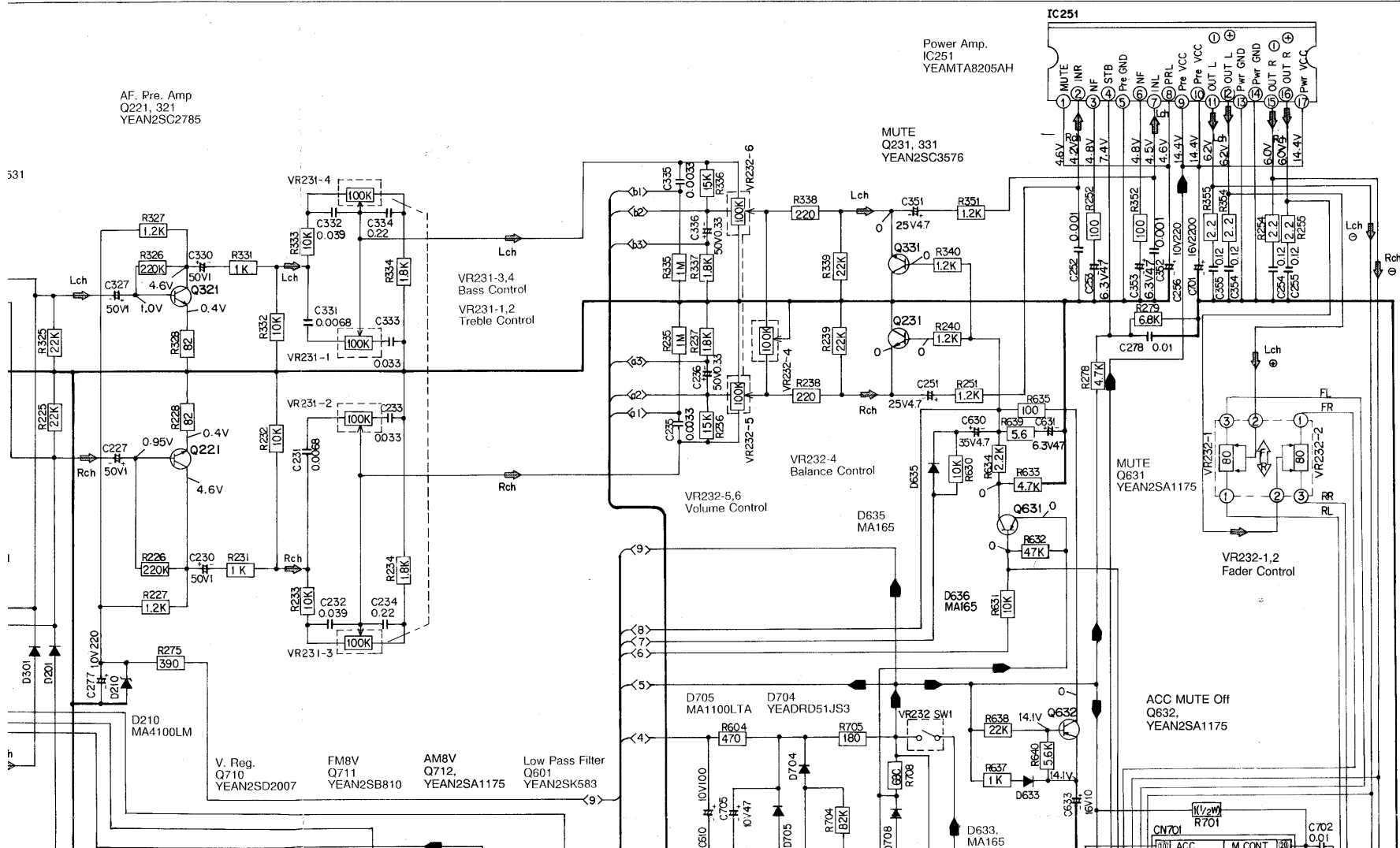


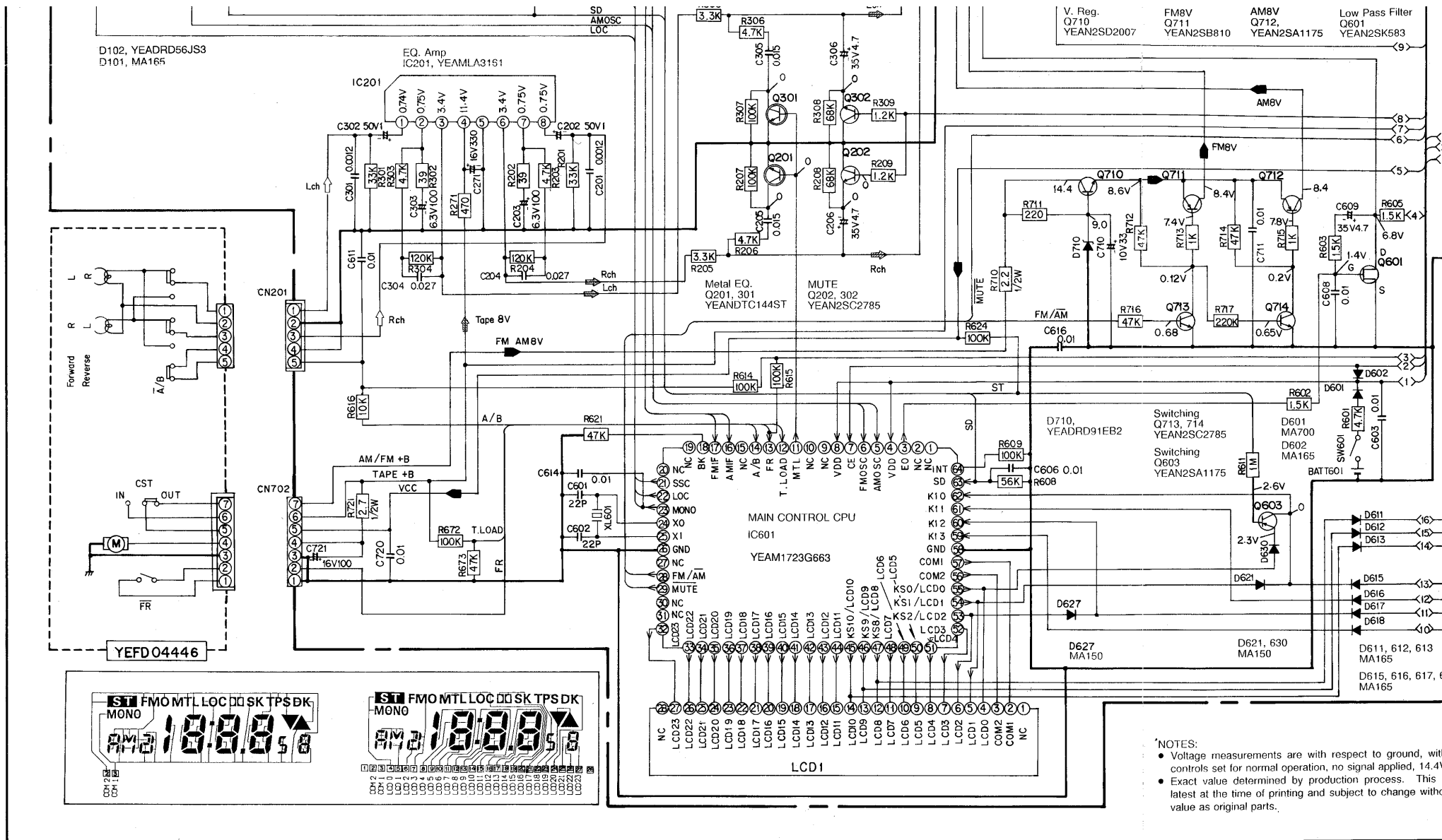
	Pin No.	Port	Description	Pin No.	Port	Description
Error	23	MONO	Output, Mono / $\overline{\text{FMO}}$ Change over	45	KS10/LCD10	Output, LCD Segment Drive Signal and Scan Signal
	24	X ₀	4.5MHz Crystal Osilator	46	KS9/LCD9	
	25	X ₁		47	KS8/LCD8	
Signal	26	GND	Ground	48	LCD 7	Output, LCD Segment Drive Signal
	27	NC	No Connection	49	LCD 6	
	28	FM / $\overline{\text{AM}}$	Output, FM / AM Band Selector	50	LCD 5	
	29	$\overline{\text{MUTE}}$	Output, Muting	51	LCD 4	
	30	LCD INH	Output, LCD Driver INH	52	LCD 3	Output, LCD Segment Drive Signal and Scan Signal
	31	LDC CE	Output, LCD Driver CE	53	LCD2/KS2	
	32	LCD 23	Output, LCD Segment Drive Signal	54	LCD1/KS1	
	33	LCD 22		55	LCD0/KS0	Output, LCD Common Signal
	34	LCD 21		56	COM 1	
on	35	LCD 20		57	COM 2	Ground
etection	36	LCD 19		58	GND	
	37	LCD 18		59	KI 3	Input, Key Return
	38	LCD 17		60	KI 2	
	39	LCD 16		61	KI 1	
	40	LCD 15		62	KI 0	
	41	LCD 14		63	SD	Input, Sensitivity Level
	42	LCD 13		64	INT	
	43	LCD 12				
Control	44	LCD 11				

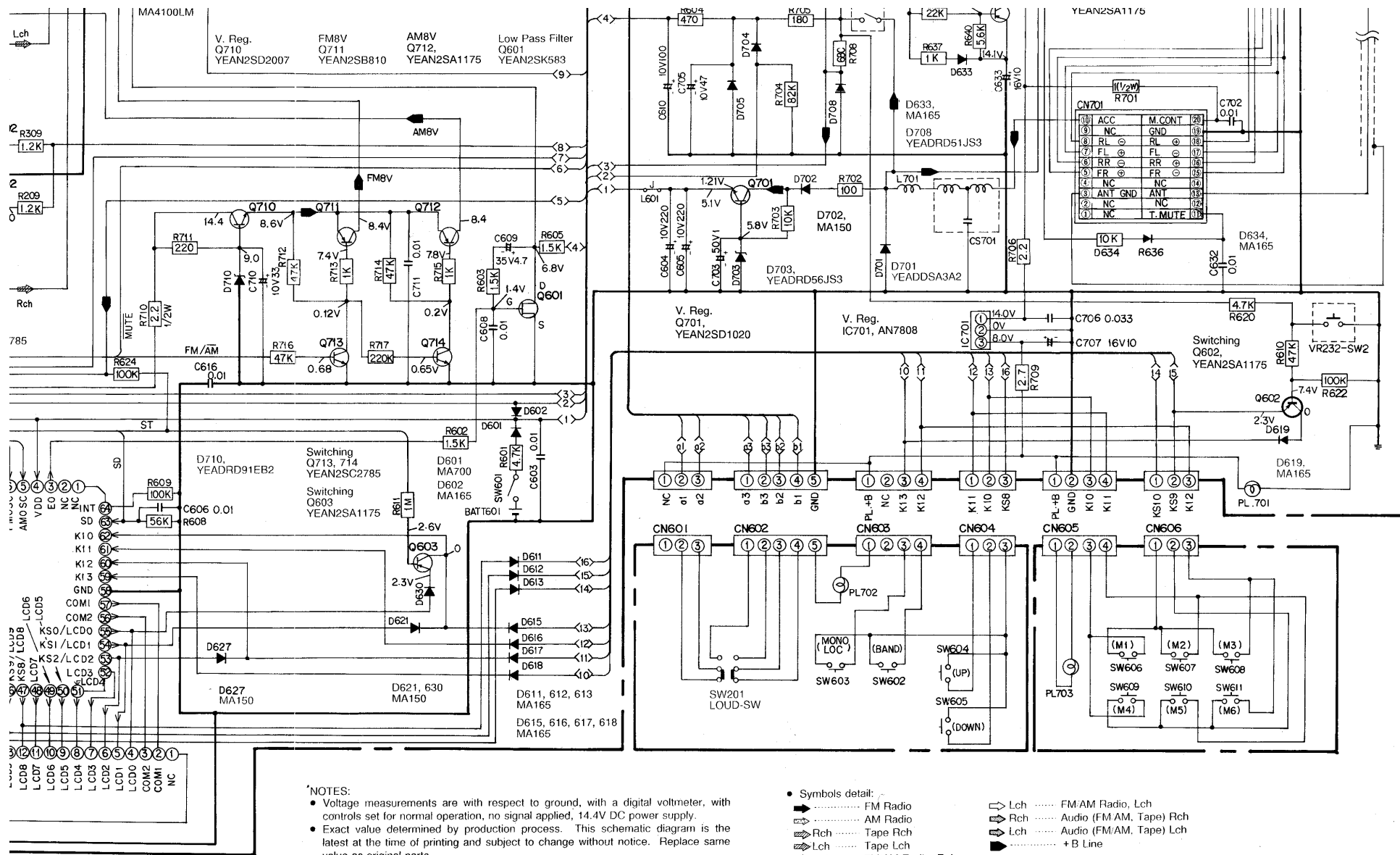


SCHEMATIC DIAGRAM MODEL **CQ-D50LEEP**

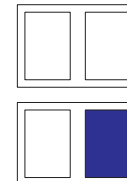








Digital Control Receiver / Cassette Player



ALIGNMENT INSTRUCTION

- | | |
|---|---|
| <ul style="list-style-type: none"> ● Power Supply Voltage : DC 14.4V ● Output Impedance : 4Ω ● Output Power : 0.5W | <ul style="list-style-type: none"> ● Balance Control : Center ● Tone Control (BassTre) : Center ● Loudness : OFF |
|---|---|

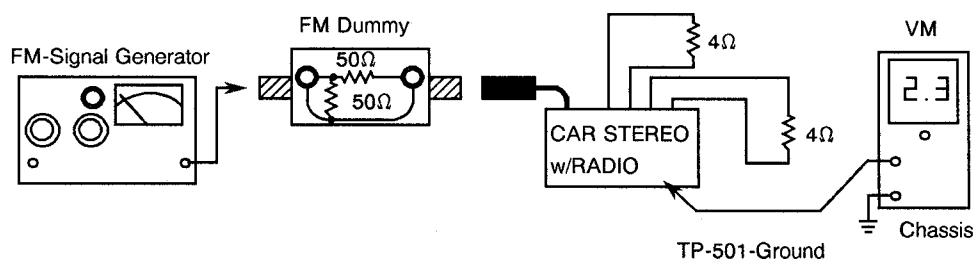
NOTE :

Do not align the AM, FM and FM MPX package blocks. When the package block is necessary, it will be supplied already aligned at the factory.

1. FM CONTROL VOLTAGE ALIGNMENT

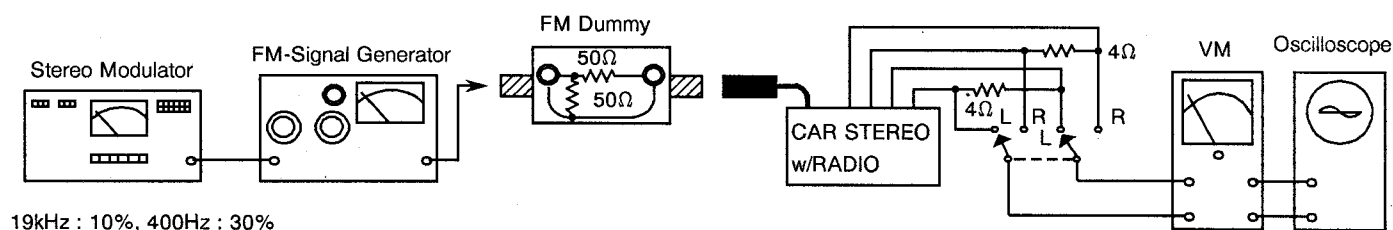
[Note] :This alignment must be completed within 30 seconds after power on.

Step	Alignment Item	BandS elect	Signal Generator	Input Terminal	VM Connection	Display	Adjust	Remarks
1	FM CONTROL VOLTAGE	FM	70.0 MHz 24 dB/μV	Antenna Receptacle	TP501	70.0 MHz	VR501	Adjust for 2.3V ± 0.05V.



2. FM MULTIPLEX SEPARATION ALIGNMENT

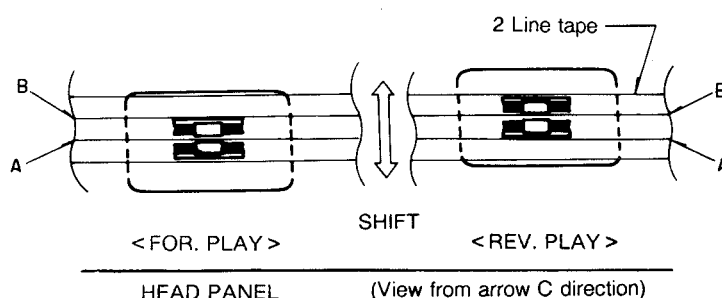
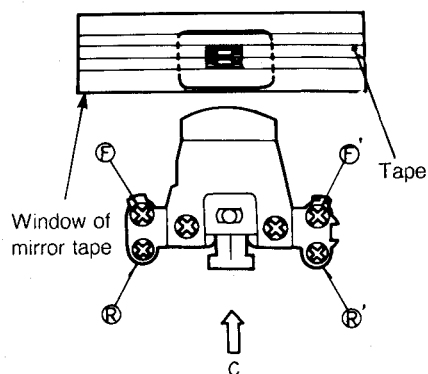
Step	Alignment Item	BandS elect	Signal Generator	Input Terminal	VM Connection	Display	Adjust	Remarks
2	FM MPX	FM	70.0 MHz 74 dB/μV [400Hz Mod.]	Antenna Receptacle	Speaker Terminal	70.0 MHz	VR502	Adjust for-maximum separation.



19kHz : 10%, 400Hz : 30%

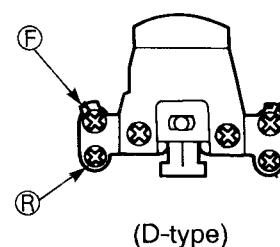
3. HEAD HEIGHT ALIGNMENT

- 2-Line Tape (Mirror tape) → A-BEX SCC-1659
- At forward play mode, adjust ⑤ and ⑤' screws so that A-line on the mirror tape runs on the center of head shield plate.
- At reverse play mode, adjust ⑥ and ⑥' screws so that B-line runs on the center of head shield plate.
- Then, again at forward play mode, check if or not A-line runs on the center. If not, re-adjust ⑤ and ⑤' screws under the same way as the above.

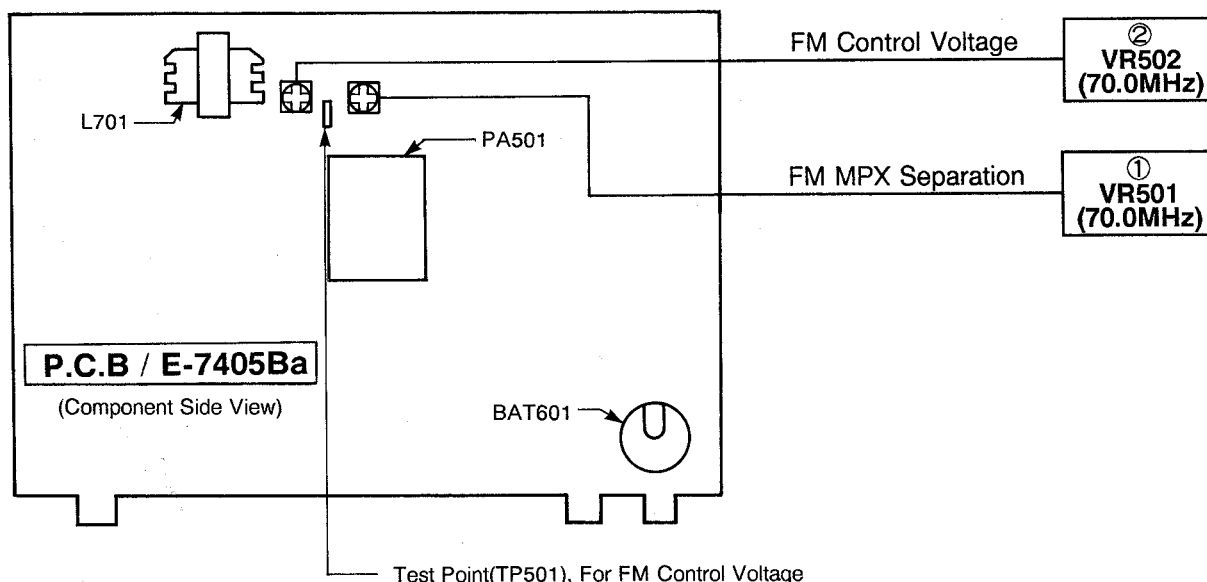


4. HEAD AZIMUTH ALIGNMENT

- Test tape is TCC-153.
- If you do not have a test tape, use a tape whose recording level is than 6 kHz for head adjustment. After the above adjustment apply bonding agent to the adjustment screw.
- At forward play mode, adjust ⑤ screw only so that speaker terminal level shows max value.
- At reverse play mode, adjust ⑥ screw only so that speaker terminal level shows max value.
- Then, again at forward play mode, check if or not speaker terminal level still shows max value.
- After the above adjustment apply bonding agent to the adjustment screw.

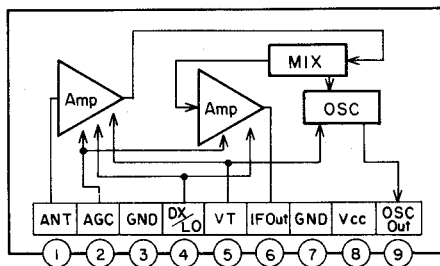


ALIGNMENT POINTS

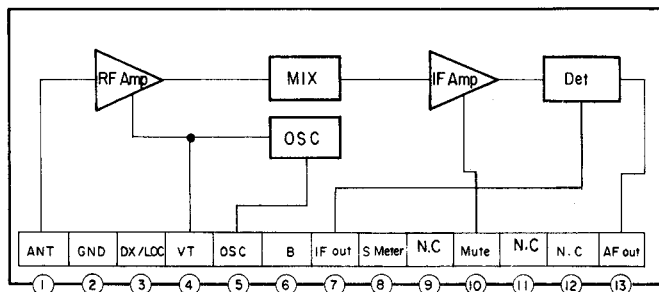


PACKAGE AND IC BLOCK DIAGRAM

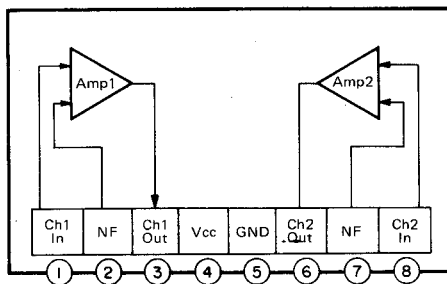
• P51 YEAU03SUE06



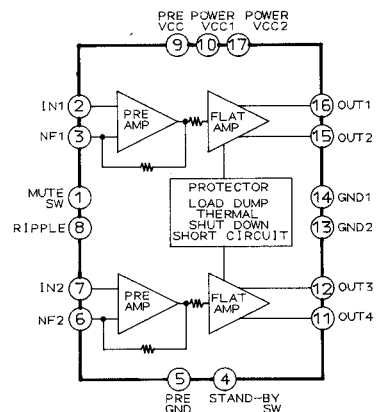
• PA101 YEAU03SKM11A



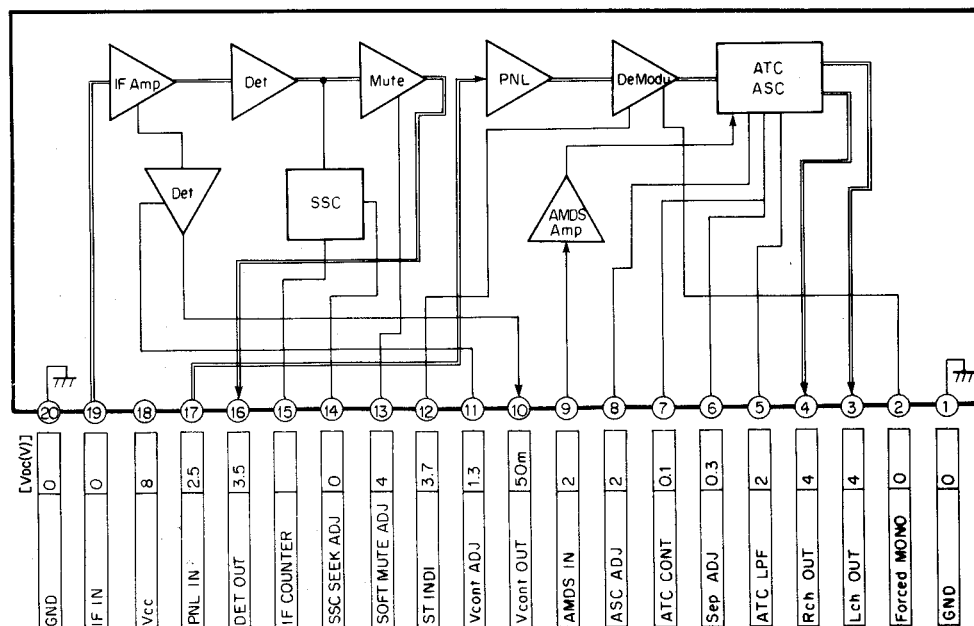
• IC201 YEAMLA3161



• IC251 YEAMTA8205AH



• PA501 YEP0PTS346A0



1. Be sure to make your orders of replacement parts according to this list.
2. 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.
3. Next to the Ref. No. in the parts list is a location key, to show the general location of the parts shown in the exploded drawing, as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

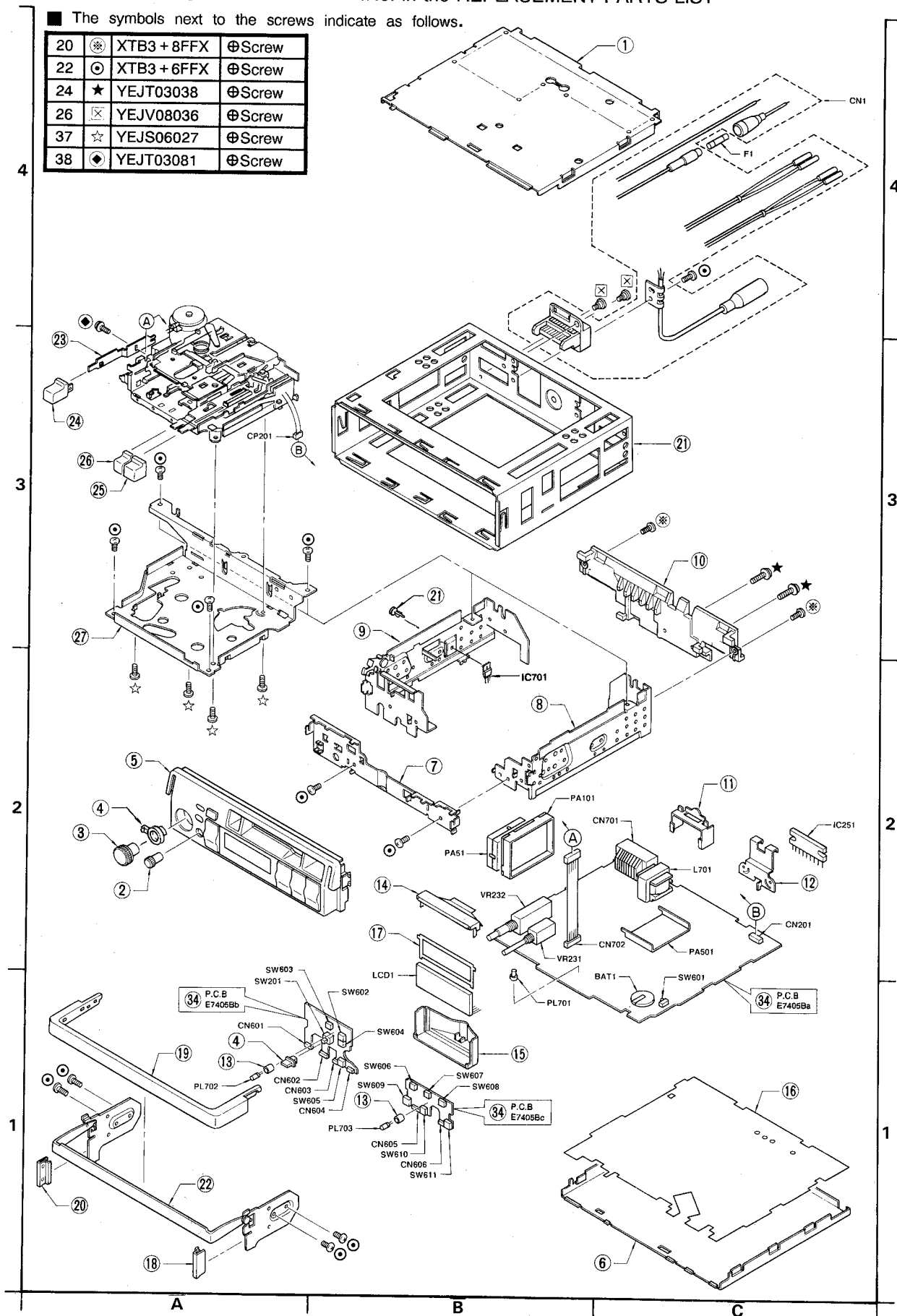
[illegible]

EXPLODED VIEW (UNIT)

Numbers in ○ are indicated REF.No. in the REPLACEMENT PARTS LIST

The symbols next to the screws indicate as follows.

20	※	XTB3 + 8FFX	⊕Screw
22	⊙	XTB3 + 6FFX	⊕Screw
24	★	YEJT03038	⊕Screw
26	⊗	YEJV08036	⊕Screw
37	☆	YEJS06027	⊕Screw
38	◆	YEJT03081	⊕Screw



MODEL CQ-D50LEEP

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
ICs AND TRANSISTORS					
PA51	YEAU03SUE06		FM Front End	1	
PA101	YEAU03SKM11A		AM Tunner	1	
PA501	YEP0PTS343A0		PCB w/Component	1	
IC201	YEAMLA3161		IC	1	
IC251	YEAMTA8205AH		IC	1	
IC601	YEAM1723G663		IC	1	
IC701	AN7808		IC	1	
Q51	YEANDTC144ST		Transistor	1	
Q201	YEANDTC144ST		Transistor	1	
Q202	YEAN2SC2785		Transistor	1	
Q221	YEAN2SC2785		Transistor	1	
Q231	YEAN2SC3576		Transistor	1	
Q301	YEANDTC144ST		Transistor	1	
Q302	YEAN2SC2785		Transistor	1	
Q321	YEAN2SC2785		Transistor	1	
Q331	YEAN2SC3576		Transistor	1	
Q601	YEAN2SK583		Transistor	1	
Q602	YEAN2SA1175		Transistor	1	
Q603	YEAN2SA1175		Transistor	1	
Q631	YEAN2SA1175		Transistor	1	
Q632	YEAN2SA1175		Transistor	1	
Q701	YEAN2SD1020		Transistor	1	
Q710	YEAN2SD2007		Transistor	1	
Q711	YEAN2SB810		Transistor	1	
Q712	YEAN2SA1175		Transistor	1	
Q713	YEAN2SC2785		Transistor	1	
Q714	YEAN2SC2785		Transistor	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
DIODES					
D101	MA165		Diode	1	
D102	YEARDR56JS3		Diode	1	
D121	MA165		Diode	1	
D131	MA165		Diode	1	
D201	MA165		Diode	1	
D210	MA4100LM		Diode	1	
D301	MA165		Diode	1	
D503	MA150		Diode	1	
D521	MA165		Diode	1	
D531	MA165		Diode	1	
D601	MA700		Diode	1	
D602	MA165		Diode	1	
D611	MA165		Diode	1	
D612	MA165		Diode	1	
D613	MA165		Diode	1	
D615	MA165		Diode	1	
D616	MA165		Diode	1	
D617	MA165		Diode	1	
D618	MA165		Diode	1	
D619	MA165		Diode	1	
D621	MA150		Diode	1	
D630	MA150		Diode	1	
D633	MA165		Diode	1	
D634, 635	MA165		Diode	2	
D701	YEADDSA3A2		Diode	1	
D702	MA150		Diode	1	
D703	YEARDR56JS3		Diode	1	
D704	YEARDR51JS3		Diode	1	
D705	MA1100LTA		Diode	1	
D708	YEARDR51JS3		Diode	1	
D710	YEARDR91EB2		Diode	1	
R501	MA165		Diode	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
CAPACITORS					
C52	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C53, 54	ECBT1C103NS		Ceramic, 0.01MFD 16WV	2	
C55	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C56	ECEA1AKS221		Electrolytic AL, 220MFD 10WV	1	
C101	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C103	ECEA1HKS010		Electrolytic AL, 0.22MFD 50WV	1	
C104	ECEA1AKS221		Electrolytic AL, 220MFD 10WV	1	
C201	ECBT1C122MR		Ceramic, 0.0012MFD 16WV	1	
C202	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C203	ECEA0JKS101		Electrolytic AL, 100MFD 6.3WV	1	
C204	ECQB1H273JF4		Polyester, 0.027MFD 50WV	1	
C205	ECQB1H153JF4		Polyester, 0.015MFD 50WV	1	
C206	ECEA1VKS4R7		Electrolytic AL, 4.7MFD 35WV	1	
C227	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C230	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C231	ECBT1C682MR		Ceramic, 0.0068MFD 16WV	1	
C232	ECQB1H393JF4		Polyester, 0.039MFD 50WV	1	
C233	ECQB1H333JF4		Polyester, 0.033MFD 50WV	1	
C234	ECQV1H224JF2		Polyester, 0.22MFD 50WV	1	
C235	ECBT1C332MR		Ceramic, 0.0033MFD 16WV	1	
C236	ECEA1HUR33		Electrolytic AL, 0.33MFD 50WV	1	
C251	ECEA1EKS4R7		Electrolytic AL, 4.7MFD 25WV	1	
C252	ECBT1H102KB5		Ceramic, 0.001MFD 50WV	1	
C253	ECEA0JU470		Electrolytic AL, 47MFD 6.3WV	1	
C254	ECQV1H124JM2		Polyester, 0.12MFD 50WV	1	
C255	ECQV1H124JM2		Polyester, 0.12MFD 50WV	1	
C256	ECEA1AU221		Electrolytic AL, 220MFD 10WV	1	
C271	ECEA1CU331		Electrolytic AL, 330MFD 16WV	1	
C277	ECEA1AKS221		Electrolytic AL, 220MFD 10WV	1	
C278	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C301	ECBTC122MR		Ceramic, 0.0012MFD 16WV	1	
C302	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C303	ECEA0JKS101		Electrolytic AL, 100MFD 6.3WV	1	
C304	ECQB1H273JF4		Polyester, 0.027MFD 50WV	1	
C305	ECQB1H153JF4		Polyester, 0.015MFD 50WV	1	
C306	ECEA1VKS4R7		Electrolytic AL, 4.7MFD 35WV	1	
C327	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C330	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1	
C331	ECBT1C682MR		Ceramic, 0.0068MFD 16WV	1	
C332	ECQB1H393JF4		Polyester, 0.039MFD 50WV	1	
C333	ECQB1H333JF4		Polyester, 0.033MFD 50WV	1	
C334	ECQV1H224JM3		Polyester, 0.022MFD 50WV	1	
C335	ECBT1C332MR		Ceramic, 0.0033MFD 16WV	1	
C336	ECEA1HUR33		Electrolytic AL, 0.33MFD 50WV	1	
C351	ECEA1EKS4R7		Electrolytic AL, 4.7MFD 25WV	1	
C352	ECBT1H102KB5		Ceramic, 0.001MFD 50WV	1	
C353	ECEA0JU470		Electrolytic AL, 47MFD 6.3WV	1	
C354	ECQV1H124JM4		Polyester, 0.12MFD 50WV	1	
C355	ECQV1H124JM4		Polyester, 0.12MFD 50WV	1	
C501	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C502	ECQV1H104JM2		Polyester, 0.1MFD 50WV	1	
C503	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C504	ECQB1H223JF4		Polyester, 0.022MFD 50WV	1	
C505	ECQB1H223JF4		Polyester, 0.022MFD 50WV	1	
C510	YEU05F104Z		Ceramic, 0.1MFD 50WV	1	
C521	ECQB1H223JF4		Polyester, 0.022MFD 50WV	1	
C531	ECQB1H223JF4		Polyester, 0.022MFD 50WV	1	
C601	ECBT1H220J5		Ceramic, 22PF 50WV	1	
C602	ECBT1H220J5		Ceramic, 22PF 50WV	1	
C603	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C604	ECEA1AKS221		Electrolytic AL, 220MFD 10WV	1	
C605	ECEA1AKS221		Electrolytic AL, 220MFD 10WV	1	
C606	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C608	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1	
C609	ECEA1VKS4R7		Electrolytic AL, 4.7MFD 35WV	1	
C610	ECEA1AKS101		Electrolytic AL, 100MFD 10WV	1	

MODEL CQ-D50LEEP

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks	Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
C611	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1		R203	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
C612	ECEA1HKSR22B		Electrolytic AL, 0.22MFD 50WV	1		R204	ERDS2TJ124		Carbon, 120k ohms 0.25W	1	
C614	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1		R205	ERDS2TJ332		Carbon, 3.3k ohms 0.25W	1	
C616	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1		R206	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
C630	ECEA1VKS4R7		Electrolytic AL, 4.7MFD 35WV	1		R207	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
C631	ECEA0JKS470		Electrolytic AL, 47MFD 6.3WV	1		R208	ERDS2TJ683		Carbon, 68k ohms 0.25W	1	
C632	YECCD1E103KB		Ceramic, 0.01MFD 25WV	1		R209	ERDS2TJ122		Carbon, 1.2k ohms 0.25W	1	
C633	ECEA1CU100		Electrolytic AL, 10MFD 16WV	1		R225	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
C701	ECA1CUG222YB		Electrolytic AL, 2200MFD 16WV	1		R226	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
C702	YECCD1E103KB		Ceramic, 0.01MFD 25WV	1		R227	ERDS2TJ122		Carbon, 1.2k ohms 0.25W	1	
C703	ECEA1HKS010		Electrolytic AL, 1MFD 50WV	1		R228	ERDS2TJ820		Carbon, 82 ohms 0.25W	1	
C705	ECEA1AKS470		Electrolytic AL, 47MFD 10WV	1		R231	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
C706	YECCD1E333KB		Ceramic, 0.033MFD 25WV	1		R232	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
C707	ECEA1CK100		Electrolytic AL, 10MFD 16WV	1		R233	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
C709	ECEA1HKSR47		Electrolytic AL, 0.47MFD 50WV	1		R234	ERDS2TJ182		Carbon, 1.8k ohms 0.25W	1	
C710	ECEA1AKS330		Electrolytic AL, 33MFD 10WV	1		R235	ERDS2TJ105		Carbon, 1M ohms 0.25W	1	
C711	ECBT1C103NS		Ceramic, 0.01MFD 16WV	1		R236	ERDS2TJ153		Carbon, 15k ohms 0.25W	1	
C720	YECCD1E103KB		Ceramic, 0.01MFD 25WV	1		R237	ERDS2TJ182		Carbon, 1.8k ohms 0.25W	1	
C721	ECEA1CU101		Electrolytic AL, 100MFD 16WV	1		R238	ERD25TJ221		Carbon, 220 ohms 0.25W	1	
CS701	YECCL55S222T		Shild through Capacitor 2200PF	1		R239	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
RESISTORs						R240	ERDS2TJ122		Carbon, 1.2k ohms 0.25W	1	
R51, 52	ERDS2TJ223		Carbon, 22k ohms 0.25W	2		R251	ERD25TJ122		Carbon, 1.2k ohms 0.25W	1	
R53	ERDS2TJ104		Carbon, 100k ohms 0.25W	1		R252	ERDS2TJ101		Carbon, 100 ohms 0.25W	1	
R54	ERDS2TJ271		Carbon, 270 ohms 0.25W	1		R254	ERDS2TJ2R2		Carbon, 2.2 ohms 0.25W	1	
R55	ERDS2TJ151		Carbon, 150 ohms 0.25W	1		R255	ERDS2TJ2R2		Carbon, 2.2 ohms 0.25W	1	
R56	ERD25TJ331		Carbon, 330 ohms 0.25W	1		R271	ERDS2TJ471		Carbon, 470 ohms 0.25W	1	
R57	ERD25TJ151		Carbon, 150 ohms 0.25W	1		R275	ERDS2TJ391		Carbon, 390 ohms 0.25W	1	
R102, 103	ERDS2TJ103		Carbon, 10k ohms 0.25W	2		R278	ERD25TJ472		Carbon, 4.7k ohms 0.25W	1	
R104	ERDS2TJ392		Carbon, 3.9k ohms 0.25W	1		R279	ERDS2TJ682		Carbon, 6.8k ohms 0.25W	1	
R105, 106	ERDS2TJ473		Carbon, 47k ohms 0.25W	2		R301	ERDS2TJ333		Carbon, 33k ohms 0.25W	1	
R201	ERDS2TJ333		Carbon, 33k ohms 0.25W	1		R302	ERDS2TJ390		Carbon, 39 ohms 0.25W	1	
R202	ERDS2TJ390		Carbon, 39 ohms 0.25W	1		R303	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
						R304	ERDS2TJ124		Carbon, 120k ohms 0.25W	1	
						R305	ERDS2TJ332		Carbon, 3.3k ohms 0.25W	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R306	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R307	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R308	ERDS2TJ683		Carbon, 68k ohms 0.25W	1	
R309	ERDS2TJ122		Carbon, 1.2k ohms 0.25W	1	
R325	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R326	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R327	ERDS2TJ122		Carbon, 1.2k ohms 0.25W	1	
R328	ERDS2TJ820		Carbon, 82 ohms 0.25W	1	
R331	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
R332	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R333	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R334	ERDS2TJ182		Carbon, 1.8k ohms 0.25W	1	
R335	ERDS2TJ105		Carbon, 1M ohms 0.25W	1	
R336	ERDS2TJ153		Carbon, 15k ohms 0.25W	1	
R337	ERDS2TJ182		Carbon, 1.8k ohms 0.25W	1	
R338	ERD25TJ221		Carbon, 220 ohms 0.25W	1	
R339	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R340	ERDS2TJ122		Carbon, 1.2k ohms 0.25W	1	
R351	ERD25TJ122		Carbon, 1.2k ohms 0.25W	1	
R352	ERDS2TJ101		Carbon, 100 ohms 0.25W	1	
R354	ERDS2TJ2R2		Carbon, 2.2 ohms 0.25W	1	
R355	ERDS2TJ2R2		Carbon, 2.2 ohms 0.25W	1	
R502	ERD25TJ103		Carbon, 10k ohms 0.25W	1	
R503	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R504	ERDS2TJ393		Carbon, 39k ohms 0.25W	1	
R506	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R507	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R508	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R509	ERDS2TJ393		Carbon, 39k ohms 0.25W	1	
R510	ERDS2TJ683		Carbon, 68k ohms 0.25W	1	
R521	ERDS2TJ392		Carbon, 3.9k ohms 0.25W	1	
R531	ERDS2TJ392		Carbon, 3.9k ohms 0.25W	1	
R601	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R602	ERDS2TJ152		Carbon, 1.5k ohms 0.25W	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R603	ERDS2TJ152		Carbon, 1.5k ohms 0.25W	1	
R604	ERDS2TJ471		Carbon, 470 ohms 0.25W	1	
R605	ERDS2TJ152		Carbon, 1.5k ohms 0.25W	1	
R606	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R608	ERDS2TJ563		Carbon, 56k ohms 0.25W	1	
R609	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R610	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R611	ERD25TJ105		Carbon, 1M ohms 0.25W	1	
R614	ERDS2TJ104		Carbon, 100k ohms 0.25W	1	
R615, 622, 624	ERDS2TJ104		Carbon, 100k ohms 0.25W	3	
R616	ERD25TJ103		Carbon, 10k ohms 0.25W	1	
R620, 621	ERDS2TJ473		Carbon, 47k ohms 0.25W	2	
R623	ERD25TJ472		Carbon, 4.7k ohms 0.25W	1	
R630, 631	ERDS2TJ103		Carbon, 10k ohms 0.25W	2	
R632	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R633	ERDS2TJ472		Carbon, 4.7k ohms 0.25W	1	
R634	ERDS2TJ222		Carbon, 2.2k ohms 0.25W	1	
R635	ERDS2TJ101		Carbon, 100 ohms 0.25W	1	
R636	ERD25TJ103		Carbon, 10k ohms 0.25W	1	
R637	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
R638	ERDS2TJ223		Carbon, 22k ohms 0.25W	1	
R639	ERDS2TJ5R6		Carbon, 5.6 ohms 0.25W	1	
R640	ERDS2TJ562		Carbon, 5.6k ohms 0.25W	1	
R672	ERD25TJ104		Carbon, 100k ohms 0.25W	1	
R673	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R701	ERD25FJ1R0		Carbon, 1 ohm 0.25W	1	
R702	ERDS2TJ101		Carbon, 100 ohms 0.25W	1	
R703	ERDS2TJ103		Carbon, 10k ohms 0.25W	1	
R704	ERDS2TJ823		Carbon, 82k ohms 0.25W	1	
R705	ERDS2TJ181		Carbon, 180 ohms 0.25W	1	
R706	ERD25FJ2R2		Carbon, 2.2 ohms 0.25W	1	
R708	ERDS2TJ681		Carbon, 680 ohms 0.25W	1	
R709	ERDS1FJ2R7		Carbon, 2.7 ohms 0.5W	1	
R710	ERDS1FJ2R2		Carbon, 2.2 ohms 0.5W	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
R711	ERDS2TJ221		Carbon, 220 ohms 0.25W	1	
R712	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R713	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
R714	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R715	ERDS2TJ102		Carbon, 1k ohms 0.25W	1	
R716	ERDS2TJ473		Carbon, 47k ohms 0.25W	1	
R717	ERDS2TJ224		Carbon, 220k ohms 0.25W	1	
R721	ERDS1FJ2R7		Carbon, 2.7 ohms 0.5W	1	
D501	ERDS2TJ273		Carbon, 27k ohms 0.25W	1	
SWITCHES					
SW201	ESB64551		Switch	1	
SW601	YEAS07169			1	
SW602 to 611	EVQ21505R		Preset	10	
VARIABLE RESISTORS					
VR231	EUWN1CSLA			1	
VR232	EUWN1AYTR			1	
VR501	EVNDXAA00B24		20k ohms	1	
VR502	EVNDXAA00B53		5k ohms	1	
CRYSTAL					
XL601	YEXL49U0450T		Crystal	1	
LCD					
LCD1	YEXDCM1017A		LCD	1	

Ref. No.	Part No.	Part Code	Part Name & Description	Pcs set	Remarks
COILs					
L101	YELT02C4R7KT		RF Coil	1	
L701	YETQ026F115		Choke Coil	1	
INSTALLATION PARTS					
2	YFEG04019		Rear Support Strap	1	
3	XVG5C25FX		Hex, Bolt (5mm ϕ $\times$ 25mm)	1	
4	XNG5AFX		Hex, Nut	2	
5	XWA5BFX		Spring Washer (5mm ϕ)	2	
6	XWG5FX		Plain Washer (5mm ϕ)	2	
7	XWC5CFX		Toothed Lock Washer (5mm ϕ)	1	
8	YEJV01060		Mounting Bolt (5mm ϕ)	1	
PRINTING					
	YEFM282084		Instruction Book	1	

EXPLODED VIEW (TAPE DECK)

■ Numbers in ○ are indicated REF.No. in the REPLACEMENT PARTS LIST

