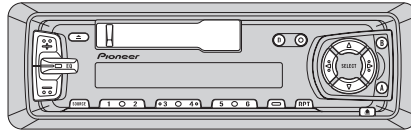


Service Manual

Pioneer

KEH-P4850/X1M/ES



ORDER NO.
CRT2261

MULTI-CD CONTROL HIGH POWER CASSETTE PLAYER WITH FM/AM TUNER

KEH-P4800

KEH-P4850 X1M/ES

X1M/UC

NOTE:

- See the separate manual CX-631(CRT1640) for the cassette mechanism description.
- The cassette mechanism assy employed in this model is one of 2L series.
- This service manual does not describe the CD test mode.

For the operations in the CD test mode, refer to the CD player's Service Manual.

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PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 501 Orchard Road, #10-00, Wheelock Place, Singapore 238880

(1) EXTERIOR SECTION PARTS LIST

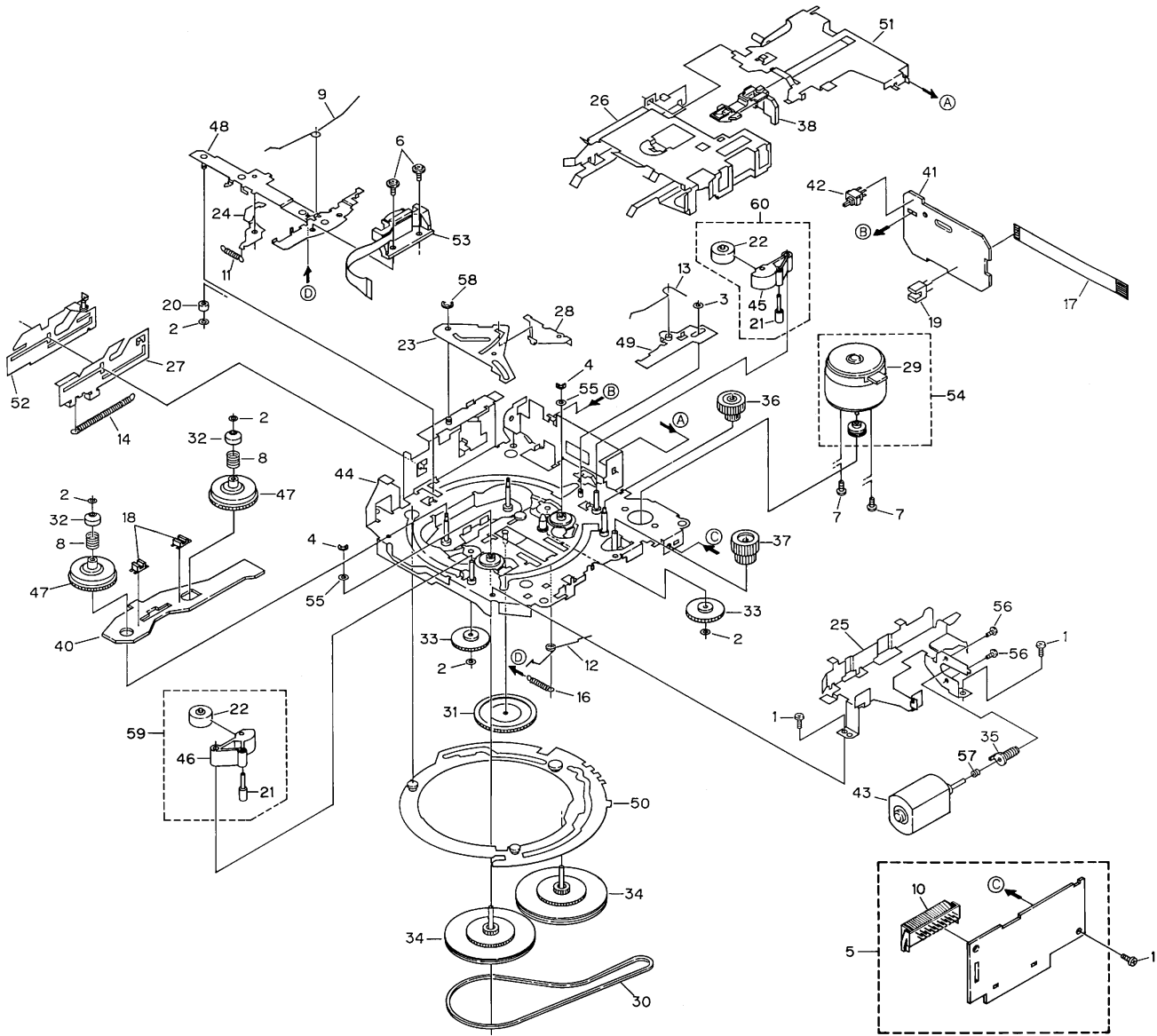
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ26P050FMC	36	Button(1-6)	CAC5794
2	Screw	BSZ30P050FMC	37	Button(-)	CAC5930
3	Cord Assy	CDE5798	38	Button(EQ)	CAC6135
4	Fuse(10A)	CEK1136	39	Button(+)	CAC5783
5	Case	CNB2350	40	Button(Eject)	CAC5793
6	Panel	CNS5132	41	Button(Display)	CAC5788
7	Screw	BSZ30P050FMC	42	Button(Cross)	CAC5786
8	Screw	BSZ30P200FMC	43	Button(A,B)	CAC5787
9	Holder	CNC5704	44	Spring	CBH2103
10	Cushion	CNM5210	45	Cover	CNS5130
11	Insulator	CNM5963	46	Housing	CNV5528
12	Tuner Amp Unit	See Contrast table(2)	47	Keyboard Unit	See Contrast table(2)
13	Screw	BPZ26P080FMC	48	LCD(LCD1901)	CAW1543
14	Screw	BSZ26P080FMC	49	Connector(CN1901)	CKS3580
15	Screw	BSZ26P160FMC	50	Holder	CNC7981
16	FM/AM Tuner Unit	See Contrast table(2)	51	Sheet	CNM5941
17	Holder	CNC6554	52	Lighting Conductor	CNV5527
18	Pin Jack(CN301)	CKB1035	53	Connector	CNV5531
19	Plug(CN603)	CKM1270	54	Grille Unit	See Contrast table(2)
20	Connector(CN701)	CKS3408	55	Button	CAC4836
21	Connector(CN602)	CKS3568	56	Spring	CBH1834
22	Connector(CN601)	CKS3581	57	Spring	CBH1835
23	Antenna Jack(CN402)	CKX1056	58	Spring	CBH2182
24	Panel	CNB2343	59	Bracket	CNC6135
25	Holder	CNC5399	60	Bracket	CNC6791
26	Holder	CNC6845	61	Arm	CNV4692
27	Holder	CNC7996	62	Arm	CNV4693
28	Heat Sink	CNR1505	63	Arm	CNV4728
29	Chassis Unit	CXB3012	64	Panel Unit	CXB3019
30	Screw	ISS26P055FUC	65	Door	CAT2028
31	Holder Unit	CXB2687	66	Spring	CBH1838
32	Detach Grille Assy	See Contrast table(2)	67	Screw	IMS20P030FZK
33	Screw	BPZ20P060FMC	68	Case Assy	CXB3520
34	Screw	BPZ20P100FZK	69	Cassette Mechanism Module	EXK3695
35	Button(Detach)	CAC5789	70	IC(IC302)	TDA7384
			71	Transistor(Q904)	2SD2396

(2) CONTRAST TABLE

KEH-P4800/X1M/UC and KEH-P4850/X1M/ES have the same construction except for the following:

Mark No. Description	Part No.	
	KEH-P4800/X1M/UC	KEH-P4850/X1M/ES
12 Tuner Amp Unit	CWM6248	CWM6249
16 FM/AM Tuner Unit	CWE1467	CWE1486
32 Detach Grille Assy	CXB3322	CXB3323
47 Keyboard Unit	CWM6259	CWM6260
54 Grille Unit	CXB4065	CXB4066

2.3 CASSETTE MECHANISM MODULE



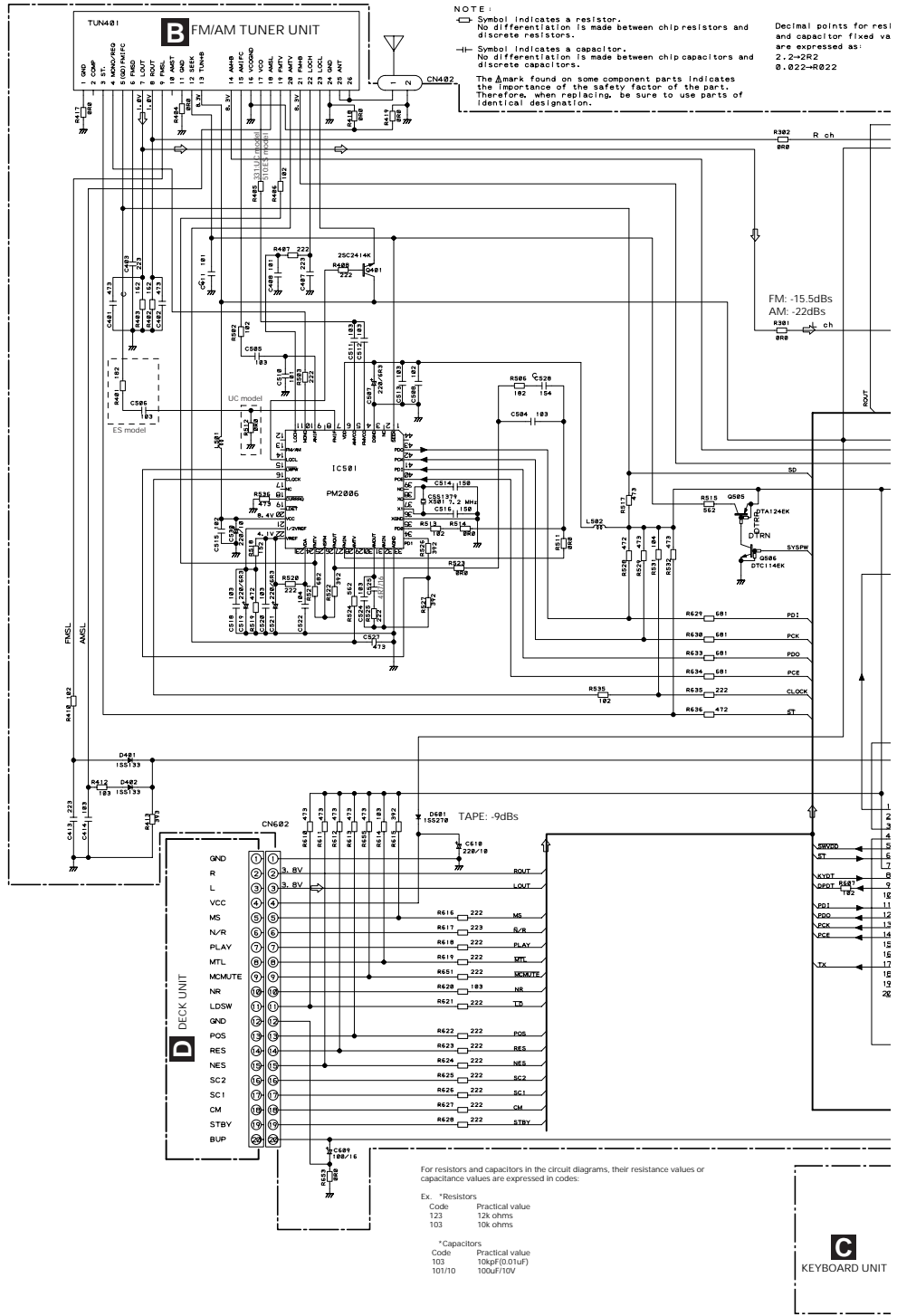
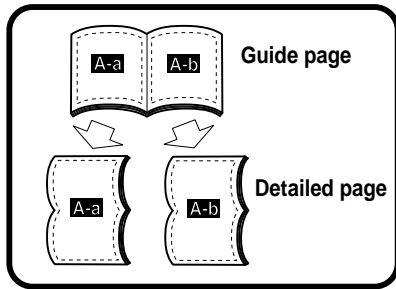
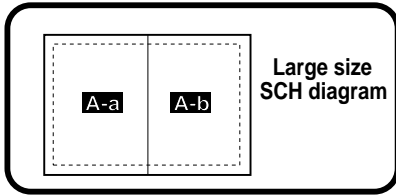
● CASSETTE MECHANISM MODULE SECTION PARTS LIST

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw	BSZ20P040FMC	46	Pinch Holder	ENV1486
2	Washer	CBF1037	47	Reel Unit	EXA1543
3	Washer	CBF1038	48	Head Base Unit	EXA1457
4	Washer	CBG1003	49	Lever Unit	EXA1438
5	Deck Unit	EWM1021	50	Gear Unit	EXA1574
6	Screw	EBA1028	51	Frame Unit	EXA1458
7	Screw	EBA1037	52	Lever Unit	EXA1439
8	Spring	EBH1531	53	Head Assy(HD1)	EXA1506
9	Spring	EBH1575	54	Motor Unit(M1)	EXA1490
10	Plug(CN251)	CKS3540	55	Washer	HBF-179
11	Spring	EBH1515	56	Screw	BMZ20P022FMC
12	Spring	EBH1587	57	Spring	EBH1545
13	Spring	EBH1517	58	Washer	YE20FUC
14	Spring	EBH1518	59	Pinch Holder Unit	EXA1529
15	.....		60	Pinch Holder Unit	EXA1528
16	Spring	EBH1537			
17	Cord	EDD1020			
18	Photo-interrupter(EGN2,3)	EGN1006			
19	Photo-interrupter(EGN1)	EGN1005			
20	Roller	ENR1031			
21	Shaft	ELA1373			
22	Pinch Roller	ENV1518			
23	Arm	ENC1489			
24	Arm	ENC1397			
25	Guide	ENC1481			
26	Holder	ENC1417			
27	Lever	ENC1448			
28	Arm	ENC1488			
* 29	Motor	EXM1031			
30	Belt	ENT1027			
31	Gear	ENV1347			
32	Collar	ENV1508			
33	Gear	ENV1350			
34	Flywheel	ENV1500			
35	Worm Gear	ENV1439			
36	Worm Wheel	ENV1440			
37	Gear	ENR1028			
38	Lever	ENV1442			
39	.....			
40	Gathering PCB	ENX1037			
41	Gathering PCB	ENX1042			
42	Switch(S1)	ESG1004			
43	Motor Unit(M2)	EXA1485			
44	Chassis Unit	EXA1511			
45	Pinch Holder	ENV1485			

3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



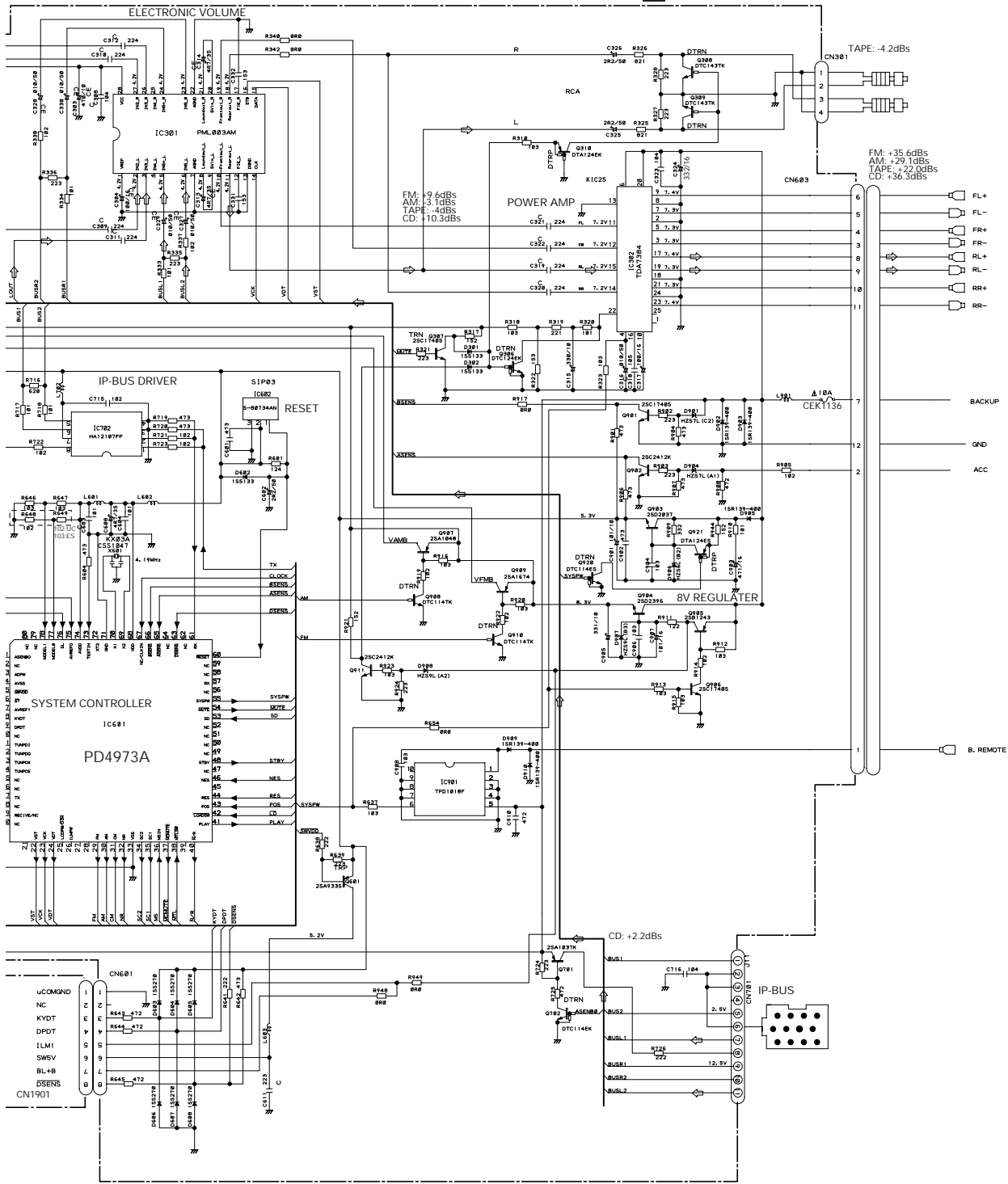
A-a

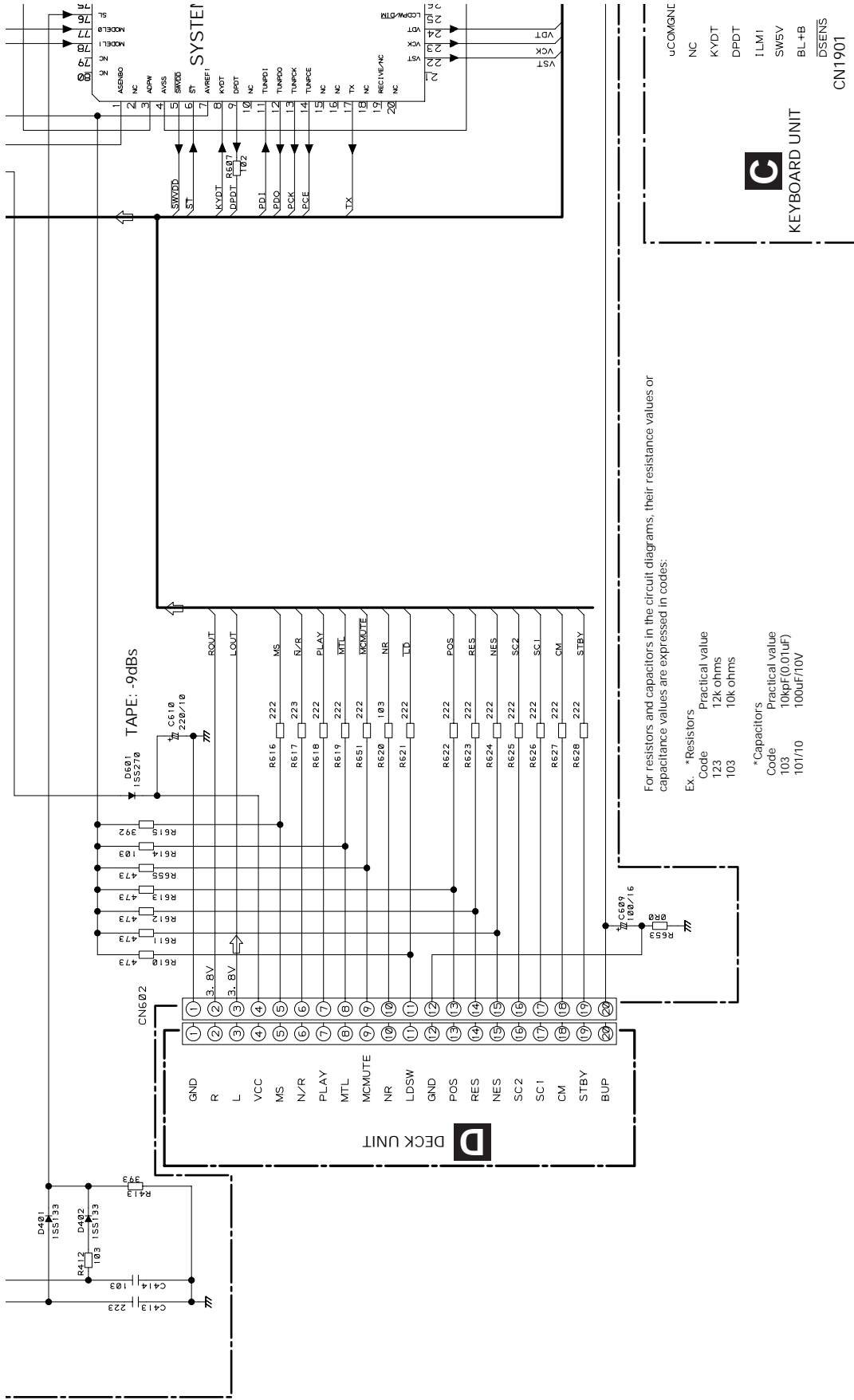
C

A

A-b

A TUNER AMP UNIT





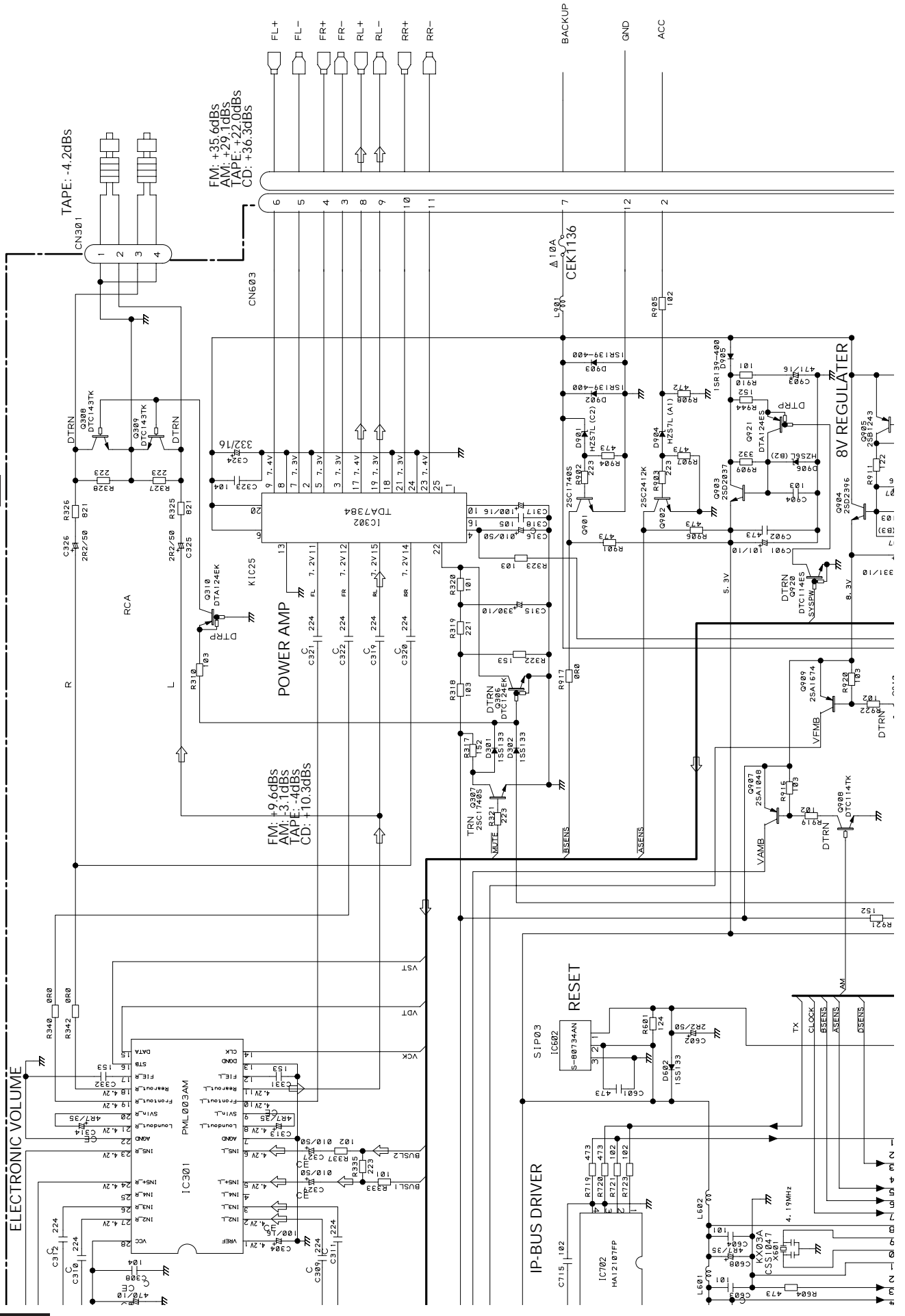
A-a A-b

A B C D

TUNER AMP UNIT

A-b

A-a A-b



A

B

C

D

3.2 FM/AM TUNER UNIT

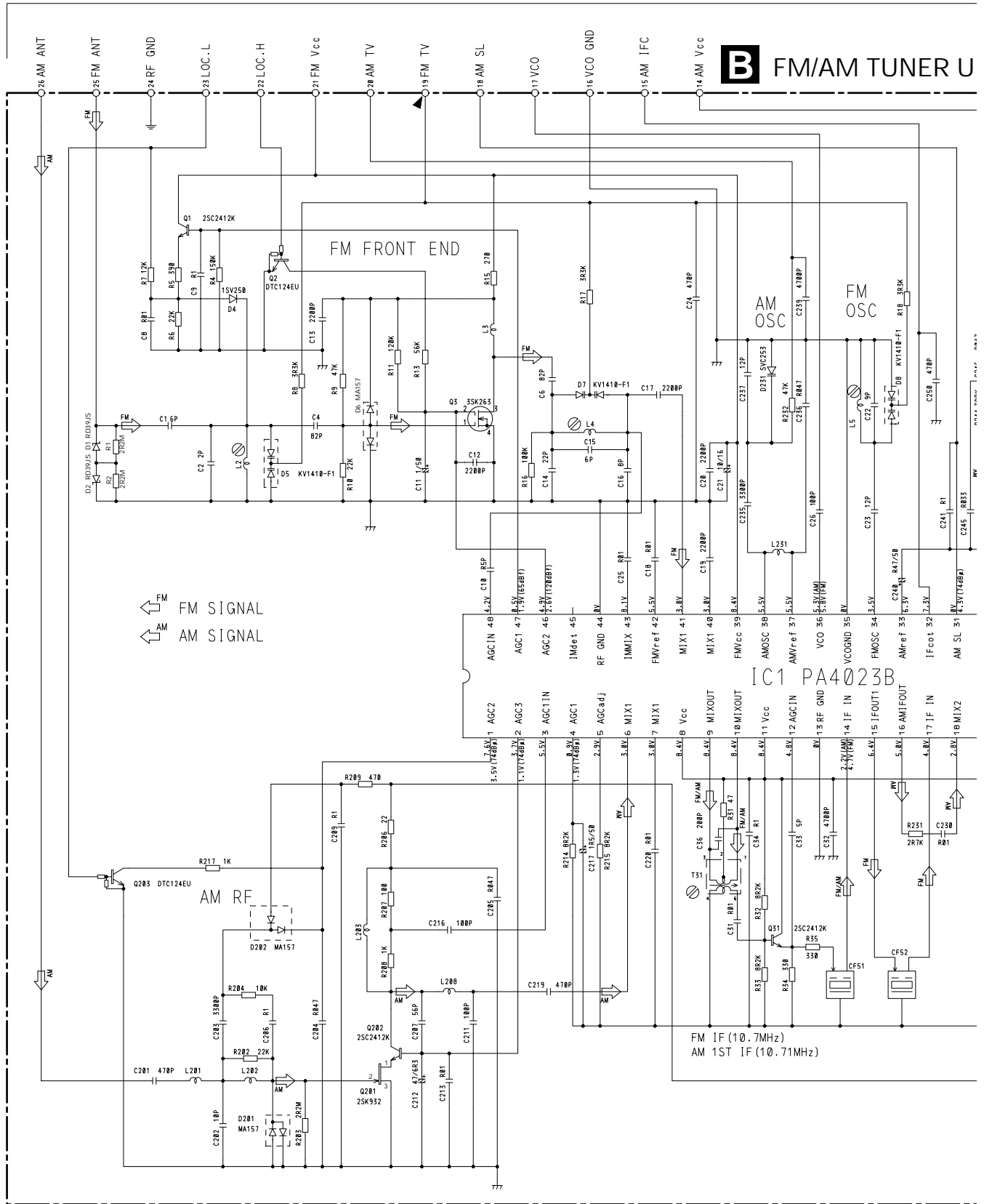
● KEH-P48000/X1M/UC

A

B

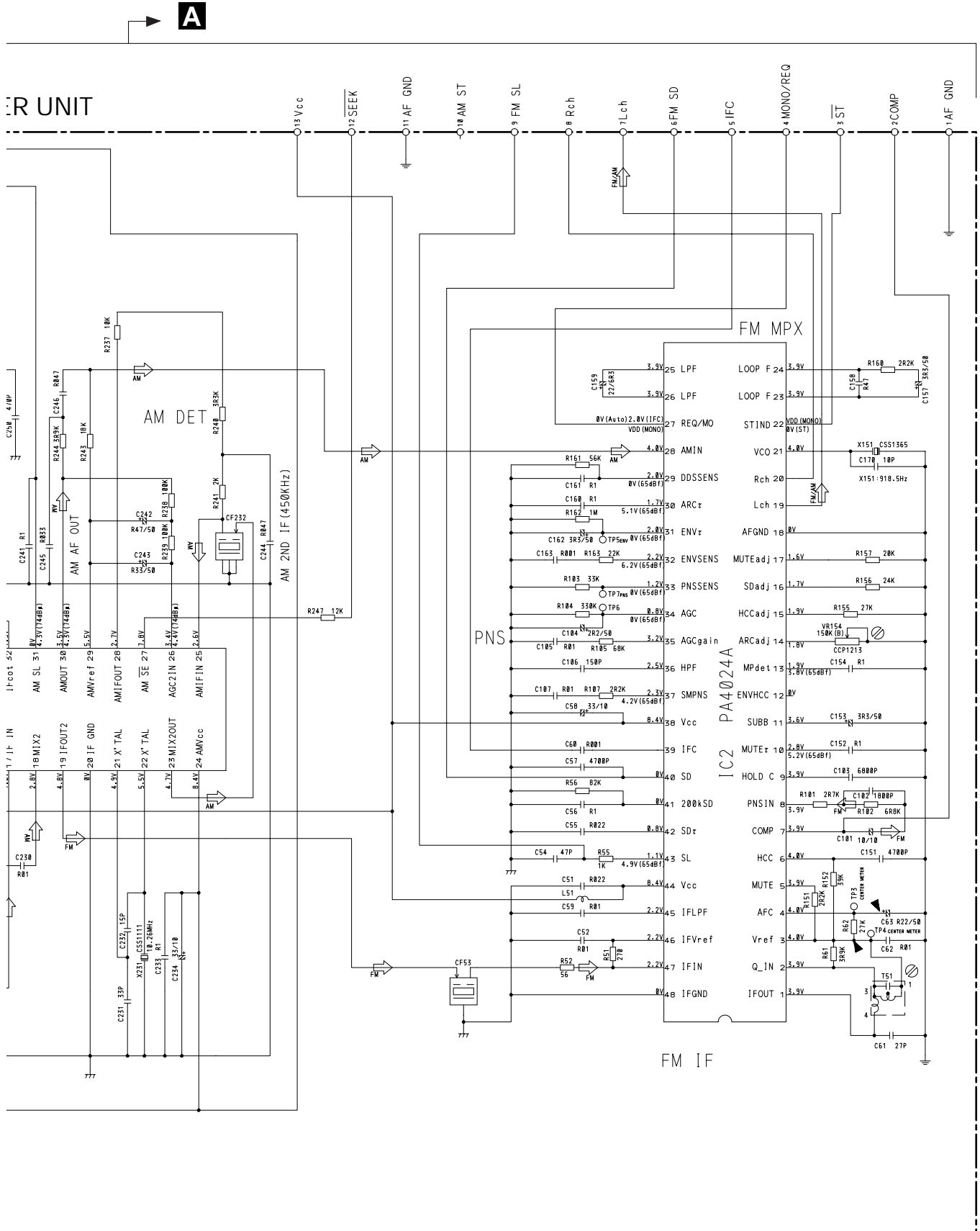
C

D



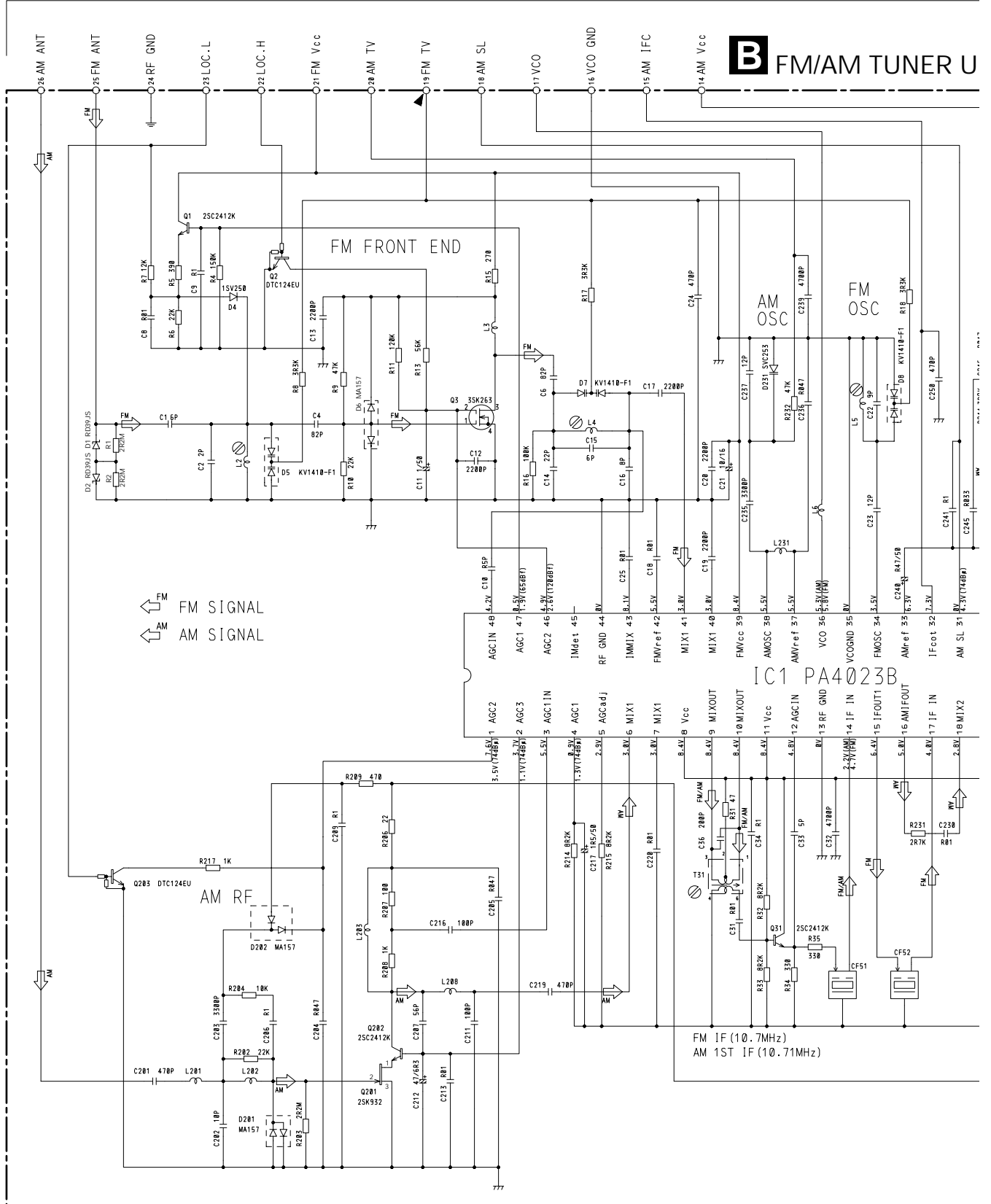
B FM/AM TUNER U

B

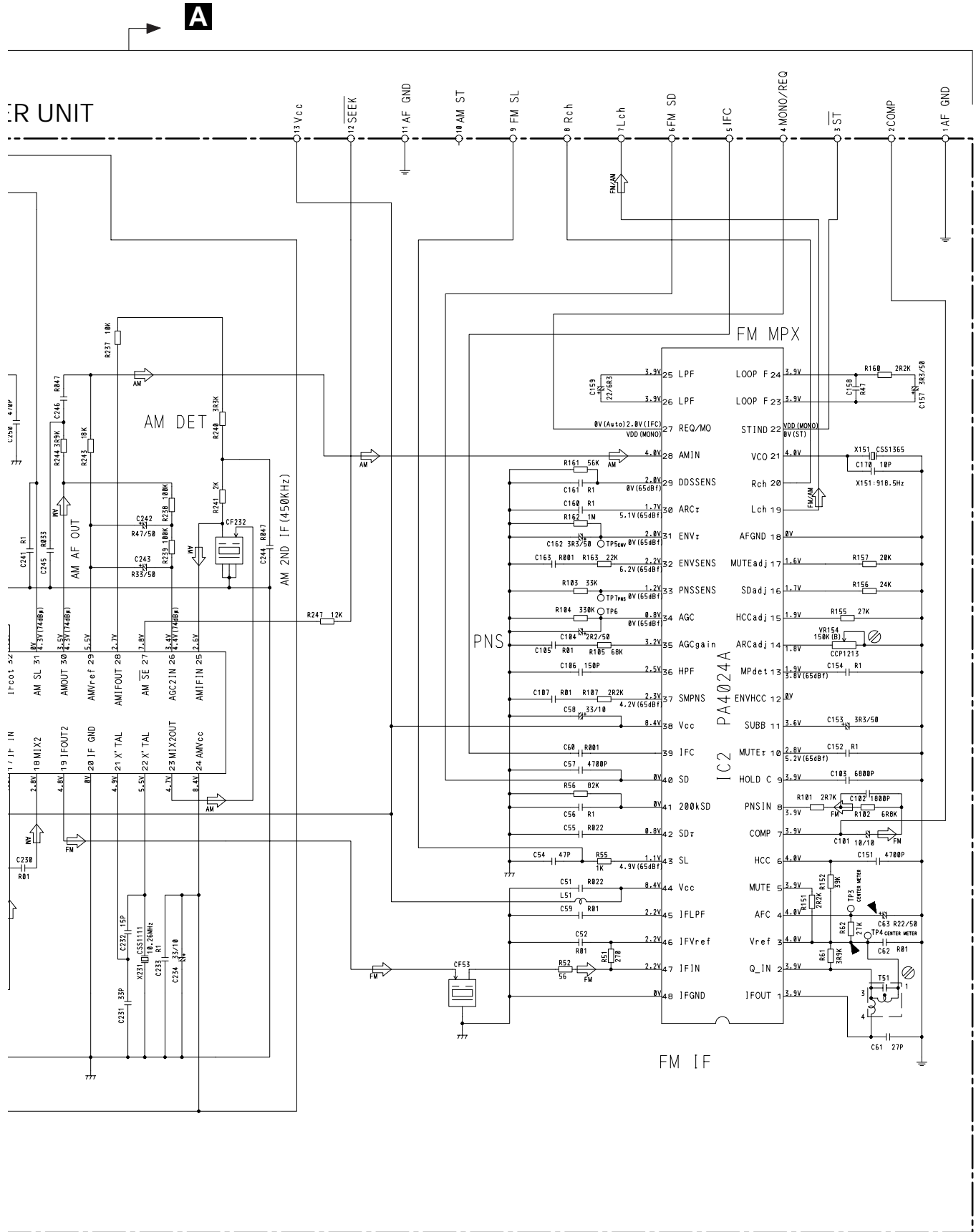


● KEH-P4850/X1M/ES

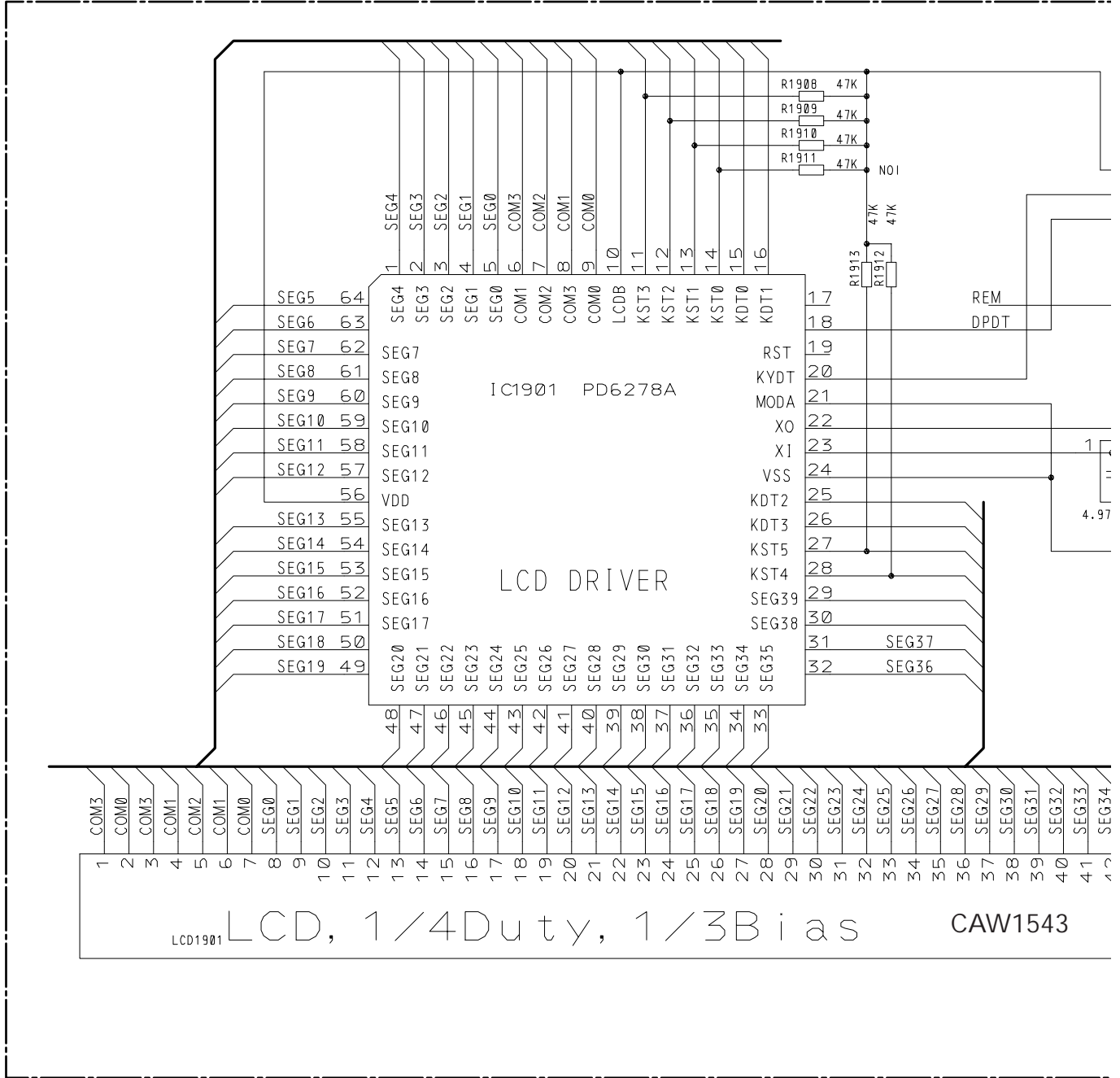
B FM/AM TUNER U



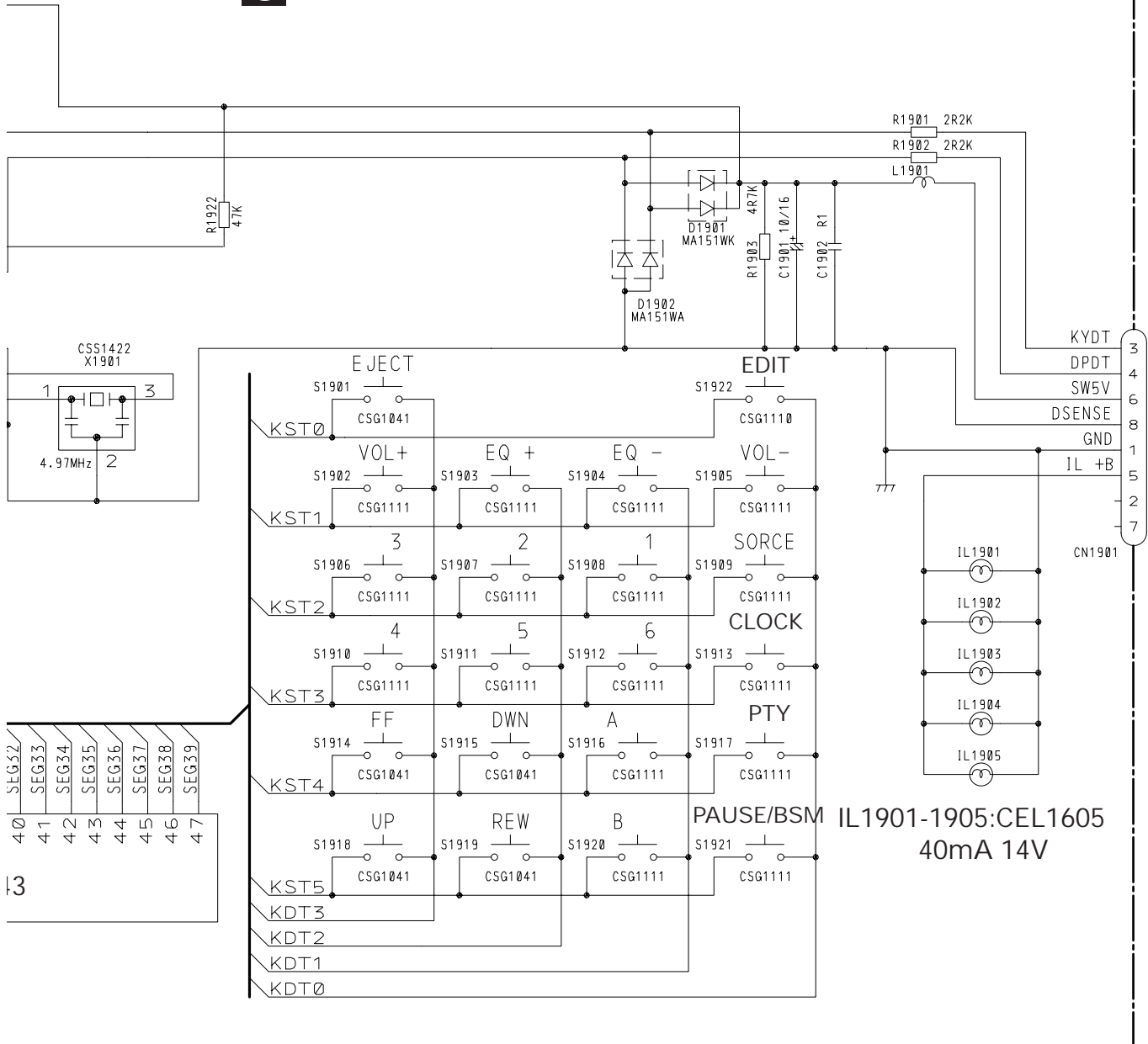
B



3.3 KEYBOARD UNIT



C KEYBOARD UNIT



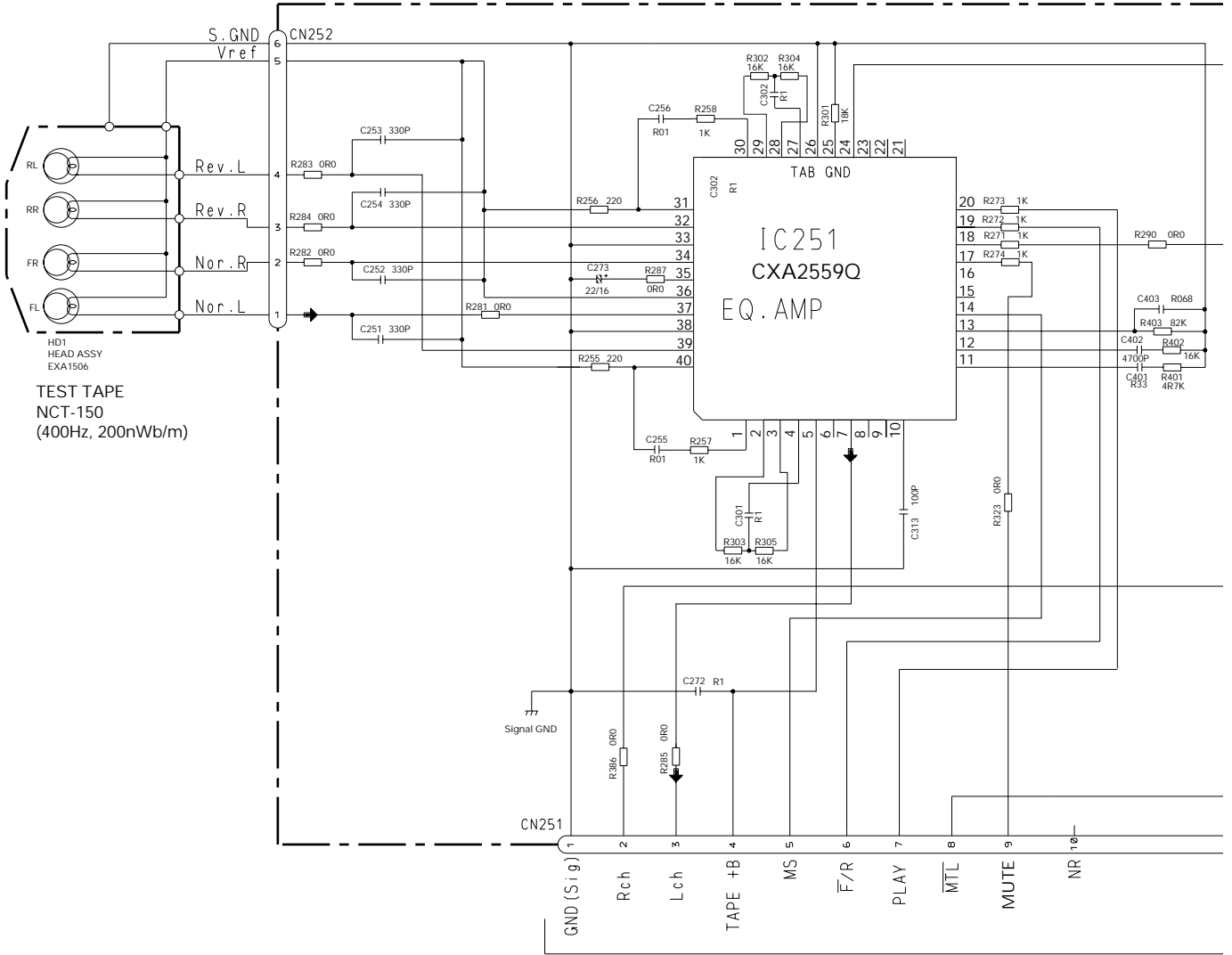
A CN601

IL1901-1905:CEL1605
40mA 14V



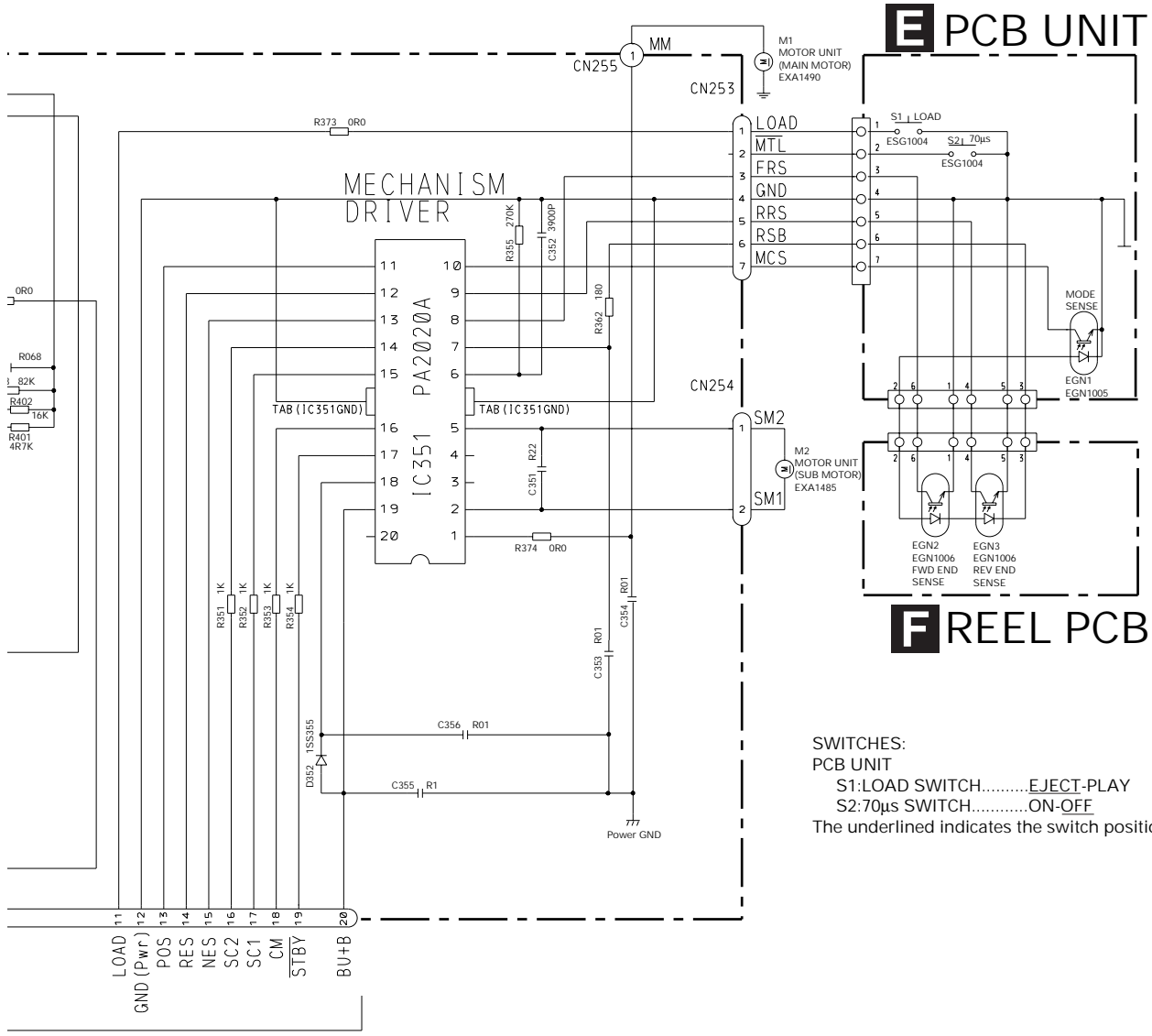
3.4 CASSETTE MECHANISM MODULE

D DECK UNIT



-6dBs(388mV)±1dB

A CN602

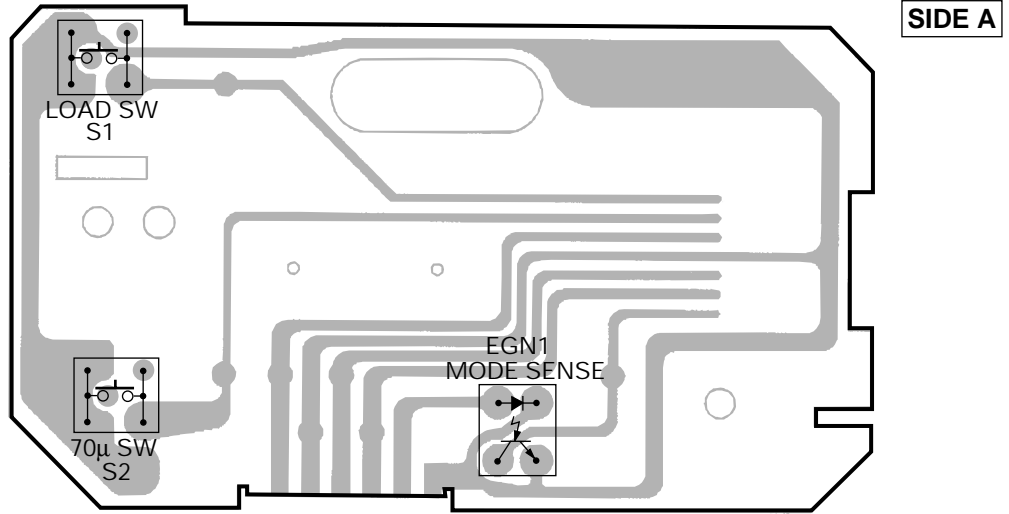


PCB UNIT

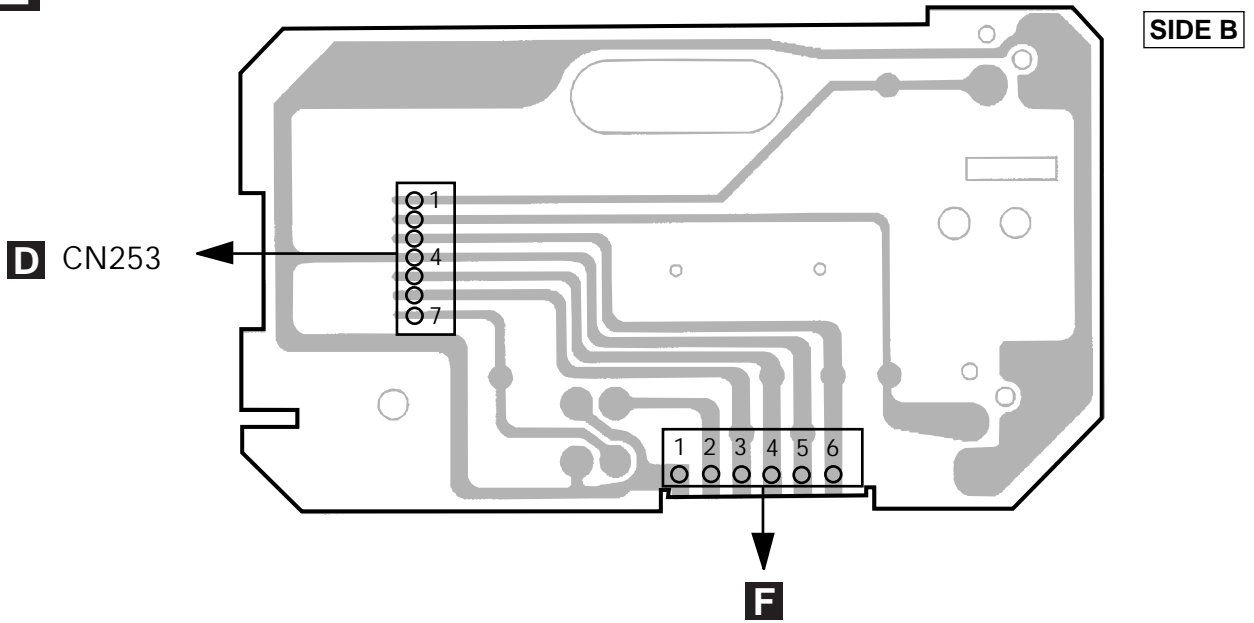
REEL PCB

SWITCHES:
 PCB UNIT
 S1:LOAD SWITCH.....EJECT-PLAY
 S2:70µs SWITCH.....ON-OFF
 The underlined indicates the switch position.

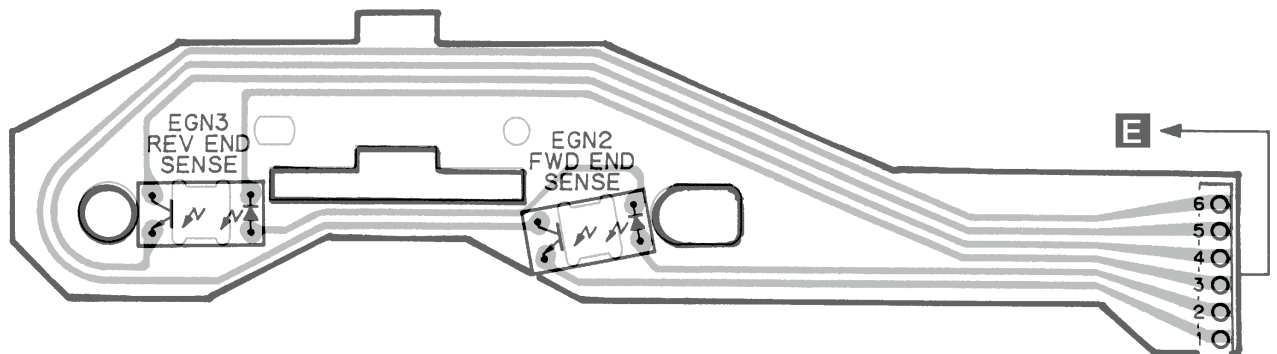
E PCB UNIT



E PCB UNIT



F REEL PCB



5. ELECTRICAL PARTS LIST

NOTE:

● Parts whose parts numbers are omitted are subject to being not supplied.

● The part numbers shown below indicate chip components.

Chip Resistor

RS1/OS○○○○J,RS1/○○S○○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
A Unit Number : CWM6248(KEH-P4800/X1M/UC)		D 604 Diode	1SS270
Unit Name : Tuner Amp Unit		D 605 Diode	1SS270
		D 606 Diode	1SS270
		L 501 Ferri-Inductor	LAU2R2K
		L 502 Ferri-Inductor	LAU2R2K
		L 601 Ferri-Inductor	LAU2R2K
		L 602 Ferri-Inductor	LAU2R2K
		L 603 Ferri-Inductor	LAU2R2K
		L 702 Ferri-Inductor	LAU2R2K
		L 901 Choke Coil 600μH	CTH1168
		X 501 Crystal Resonator 7.200MHz	CSS1379
		X 601 Ceramic Resonator 4.194MHz	CSS1047
MISCELLANEOUS		RESISTORS	
D 607 Diode	1SS270	R 301	RS1/10S0R0J
D 608 Diode	1SS270	R 302	RS1/10S0R0J
D 901 Diode	HZS7L(C2)	R 310	RS1/10S103J
D 902 Diode	1SR139-400	R 317	RS1/10S152J
D 903 Diode	1SR139-400	R 318	RS1/10S103J
D 904 Diode	HZS7L(A1)	R 319	RS1/10S221J
D 905 Diode	1SR139-400	R 320	RS1/10S101J
D 906 Diode	HZS6L(B2)	R 321	RS1/10S223J
D 907 Diode	HZS9L(B3)	R 322	RS1/10S153J
D 908 Diode	HZS9L(A2)	R 323	RS1/10S103J
D 909 Diode	1SR139-400	R 325	RS1/10S821J
D 910 Diode	1SR139-400	R 326	RS1/10S821J
IC 301 IC	PML003AM	R 327	RS1/10S223J
IC 302 IC	TDA7384	R 328	RS1/10S223J
IC 501 IC	PM2006A	R 333	RS1/10S101J
IC 601 IC	PD4973A	R 334	RS1/10S101J
IC 602 IC	S-80734AN	R 335	RS1/10S223J
IC 702 IC	CA0008AM	R 336	RS1/10S223J
IC 901 IC	TPD1018F	R 337	RD1/4PU102J
Q 306 Transistor	DTC124EK	R 338	RD1/4PU102J
Q 307 Transistor	2SC1740S	R 340	RS1/10S0R0J
Q 308 Transistor	DTC143TK	R 342	RS1/10S0R0J
Q 309 Transistor	DTC143TK	R 401 (ES model)	RS1/10S182J
Q 310 Transistor	DTA124EK	R 402	RS1/10S162J
Q 401 Transistor	2SC2412K	R 403	RS1/10S162J
Q 505 Transistor	DTA124EK	R 404	RS1/10S0R0J
Q 506 Transistor	DTC114EK	R 405 (UC model)	RS1/10S331J
Q 601 Transistor	2SA933S	R 405 (ES model)	RS1/10S510J
Q 701 Transistor	2SA1037K	R 406	RS1/10S102J
Q 702 Transistor	DTC114EK	R 407	RD1/4PU222J
Q 901 Transistor	2SC1740S	R 408	RS1/10S222J
Q 902 Transistor	2SC2412K	R 410	RS1/10S102J
Q 903 Transistor	2SD2037	R 412	RD1/4PU103J
Q 904 Transistor	2SD2396	R 413	RS1/10S393J
Q 905 Transistor	2SB1243	R 417	RS1/10S0R0J
Q 906 Transistor	2SC1740S	R 418	RS1/10S0R0J
Q 907 Transistor	2SA1048	R 419	RS1/10S0R0J
Q 908 Transistor	DTC114TK	R 502	RS1/10S102J
Q 909 Transistor	2SA1674	R 503	RS1/10S222J
Q 910 Transistor	DTC114TK	R 506	RS1/10S182J
Q 911 Transistor	2SC2412K		
Q 920 Transistor	DTC114ES		
Q 921 Transistor	DTA124ES		
D 301 Diode	1SS270		
D 302 Diode	1SS270		
D 401 Diode	1SS270		
D 402 Diode	1SS270		
D 601 Diode	1SS270		
D 602 Diode	1SS270		
D 603 Diode	1SS270		

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 511	RS1/10S0R0J	R 655	RS1/10S473J
R 512 (UC model)	RS1/10S0R0J	R 716	RS1/10S620J
R 513	RS1/10S102J	R 717	RS1/10S101J
R 514	RS1/8S0R0J	R 718	RS1/10S101J
R 515	RS1/10S562J	R 719	RS1/10S473J
R 517	RS1/10S473J	R 720	RS1/10S473J
R 518	RS1/10S152J	R 721	RS1/10S102J
R 519	RS1/10S472J	R 722	RS1/10S102J
R 520	RS1/10S222J	R 723	RS1/10S102J
R 521	RS1/10S822J	R 724	RS1/10S223J
R 522	RS1/10S392J	R 725	RD1/4PU472J
R 523	RS1/10S0R0J	R 726	RS1/10S222J
R 524	RS1/10S562J	R 901	RS1/10S473J
R 525	RS1/10S222J	R 902	RS1/10S223J
R 526	RS1/10S392J	R 903	RS1/10S223J
R 527	RS1/10S392J	R 904	RS1/10S473J
R 528	RS1/10S472J	R 905	RD1/4PU102J
R 529	RS1/10S473J	R 906	RD1/4PU473J
R 531	RS1/10S104J	R 907	RS1/10S473J
R 532	RS1/10S473J	R 908	RS1/10S472J
R 535	RD1/10S102J	R 909	RS1/10S332J
R 536	RS1/10S473J	R 910	RD1/4PU101J
R 601	RS1/10S124J	R 911	RS1/10S122J
R 604	RS1/10S473J	R 912	RS1/10S103J
R 607	RD1/4PU102J	R 913	RS1/10S103J
R 610	RS1/10S473J	R 914	RS1/10S102J
R 611	RS1/10S473J	R 915	RS1/10S103J
R 612	RS1/10S473J	R 916	RS1/10S103J
R 613	RS1/10S473J	R 917	RS1/10S0R0J
R 614	RS1/8S103J	R 919	RS1/10S102J
R 615	RS1/10S392J	R 920	RS1/10S103J
R 616	RD1/4PU222J	R 921	RS1/10S152J
R 617	RD1/4PU223J	R 922	RS1/10S102J
R 618	RD1/4PU222J	R 923	RS1/10S103J
R 619	RD1/4PU222J	R 924	RS1/10S223J
R 621	RS1/10S222J	R 944	RS1/10S152J
R 622	RS1/10S222J	R 948	RS1/10S0R0J
R 623	RD1/4PU222J	R 949	RS1/8S0R0J
R 624	RS1/10S222J		
R 625	RD1/4PU222J		
R 626	RD1/4PU222J	CAPACITORS	
R 627	RD1/4PU222J	C 303	CEJA470M10
R 628	RD1/4PU222J	C 304	CEJA100M16
R 629	RD1/4PU681J	C 308	CKSQYB104K50
R 630	RS1/10S681J	C 309	CKSQYB224K16
		C 310	CKSQYB224K16
R 633	RD1/4PU681J	C 311	CKSQYB224K16
R 634	RD1/4PU681J	C 312	CKSQYB224K16
R 635	RD1/4PU222J	C 313	CEJA4R7M35
R 636	RS1/10S472J	C 314	CEJA4R7M35
R 637	RS1/10S103J	C 315	CEJA330M10
R 638	RD1/4PU222J		
R 639	RS1/10S223J	C 316	CEJA1R0M50
R 641	RD1/4PU222J	C 317	CEJA100M16
R 642	RS1/10S473J	C 318	CKSYB105K16
R 643	RS1/10S472J	C 319	CKSQYB224K16
		C 320	CKSQYB224K16
R 644	RS1/10S472J		
R 645	RS1/10S472J	C 321	CKSQYB224K16
R 646	RS1/10S103J	C 322	CKSQYB224K16
R 647	RS1/10S103J	C 323	CKSQYB104K50
R 648 (ES model)	RS1/10S183J	C 324	CCH1169
		C 325	CEJA2R2M50
R 649 (UC model)	RS1/10S102J		
R 649 (ES model)	RS1/10S103J	C 326	CEJA2R2M50
R 651	RD1/4PU222J	C 327	CEJA1R0M50
R 653	RS1/8S0R0J	C 328	CEJA1R0M50
R 654	RS1/10S0R0J	C 329	CEJA1R0M50
		C 330	CEJA1R0M50

KEH-P4800,P4850

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
C 331	CKSQYB153K50	S 1906	Switch
C 332	CKSQYB153K50	S 1907	Switch
C 401	CKSQYB473K50	S 1908	Switch
C 402	CKSQYB473K50	S 1909	Switch
C 403	CKSQYB223K25	S 1910	Switch
C 407	CKSQYB223K50	S 1911	Switch
C 408	CCSQSL101J50	S 1912	Switch
C 411	CCSQSL101J50	S 1913	Switch
C 413	CKSQYB223K50	S 1914	Switch
C 414	CKSQYB103K50	S 1915	Switch
C 504	CKSQYB103K50	S 1916	Switch
C 505	CKSQYB103K50	S 1917	Switch
C 506 (ES model)	CKSQYB103K50	S 1918	Switch
C 507	CEJA220M6R3	S 1919	Switch
C 508	CKSQYB102K50	S 1920	Switch
C 510	CCSQSL101J50	S 1921	Switch
C 511	CKSQYB103K50	S 1922	Switch
C 512	CKSQYB103K50	IL 1901	Lamp 40mA 14V
C 513	CKSQYB103K50	IL 1902	Lamp 40mA 14V
C 514	CCSQCH150J50	IL 1903	Lamp 40mA 14V
C 515	CKSQYB102K50	IL 1904	Lamp 40mA 14V
C 516	CCSQCH150J50	IL 1905	Lamp 40mA 14V
C 518	CKSQYB103K50	LCD1901	LCD
C 519	CEJA220M6R3		
C 520	CKSQYB103K50		
RESISTORS			
C 521	CEJA220M6R3	R 1901	RS1/10S222J
C 522	CKSQYB104K50	R 1902	RS1/10S222J
C 524	CKSQYB103K50	R 1903	RS1/10S472J
C 525 4.7μF/16V	CCH1250	R 1908	RS1/10S473J
C 527	CKLSR473K16	R 1909	RS1/10S473J
C 528	CKSQYB154K16	R 1910	RS1/10S473J
C 530	CEJA220M10	R 1911	RS1/10S473J
C 601	CKSQYB473K50	R 1912	RS1/10S473J
C 602	CEJA2R2M50	R 1913	RS1/10S473J
C 603	CCSQCH101J50	R 1922	RS1/10S473J
C 604	CCSQCH101J50		
C 608	CEJA4R7M35		
C 609	CEJA100M16		
C 610	CEJA220M10		
C 611	CKSQYB223K50		
C 715	CKSQYB102K50		
C 716	CKSQYB104K50		
C 901	CEJA101M10		
C 902	CKSQYB473K50		
C 903 470μF/16V	CCH1183		
C 904	CKSQYB103K50		
C 905 330μF/10V	CCH1181		
C 906	CKSQYB103K50		
C 907 100μF/16V	CCH1179		
C 908	CKSQYB103K50		
C 910	CKSQYB472K50		
C Unit Number : CWM6259(KEH-P4800/X1M/UC) CWM6260(KEH-P4850/X1M/ES) Unit Name : Keyboard Unit			
MISCELLANEOUS			
D 1901	Chip Diode	MA151WK	
D 1902	Diode	MA151WA	
IC 1901	IC	PD6278A	
L 1901	Ferri-Inductor	LAU101K	
X 1901	Ceramic Resonator 4.97MHz	CSS1422	
S 1901	Switch	CSG1041	
S 1902	Switch	CSG1111	
S 1903	Switch	CSG1111	
S 1904	Switch	CSG1111	
S 1905	Switch	CSG1111	
B Number : CWE1467(UC model) Unit Name : FM/AM Tuner Unit			
MISCELLANEOUS			
IC 1	IC		PA4023B
IC 2	IC		PA4024A
Q 1	Transistor		2SC2412K
Q 2	Transistor		DTC124EU
Q 3	FET		3SK263
Q 31	Transistor		2SC2412K
Q 201	FET		2SK932
Q 202	Transistor		2SC2412K
Q 203	Transistor		DTC124EU
D 1	Diode		RD39JS
D 2	Diode		RD39JS
D 4	Diode		1SV250
D 5	Diode		KV1410-F1
D 6	Diode		MA157
D 7	Diode		KV1410-F1
D 8	Diode		KV1410-F1
D 201	Diode		MA157
D 202	Diode		MA157
D 231	Diode		SVC253
L 2	Coil		CTC1133

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
L 3 Inductor	LCTB2R2K2125	R 207	RS1/16S101J
L 4 Coil	CTC1133	R 208	RS1/16S102J
L 5 Coil	CTC1132	R 209	RS1/16S471J
L 51 Ferri-Inductor	LAU150K	R 214	RS1/16S822J
L 201 Ferri-Inductor	LAU4R7K	R 215	RS1/16S822J
L 202 Ferri-Inductor	LAU330K	R 217	RS1/16S102J
L 203 Inductor	CTF1287	R 231	RS1/16S272J
L 208 Inductor	LAU121K	R 232	RS1/16S473J
L 231 Inductor	LCTA3R3J3225	R 237	RS1/16S103J
T 31 Coil	CTE1117	R 238	RS1/16S104J
T 51 Coil	CTC1159	R 239	RS1/16S104J
CF 51 Ceramic Filter	CTF1441	R 240	RS1/16S332J
CF 52 Ceramic Filter	CTF1441	R 241	RS1/16S202J
CF 53 Ceramic Filter	CTF1441	R 243	RS1/16S183J
CF 232 Ceramic Filter	CTF1348	R 244	RS1/16S392J
X 151 Radiator 918.5Hz	CSS1365	R 247	RS1/16S123J
X 231 Crystal Resonator 10.26MHz	CSS1111		
VR 154 Semi-fixed 150kΩ(B)	CCP1213		
		CAPACITORS	
RESISTORS		C 1	CCSQCH6R0D50
R 1	RS1/16S225J	C 2	CCSRCK2R0C50
R 2	RS1/16S225J	C 4	CCSRCH820J50
R 4	RS1/16S154J	C 6	CCSRCH820J50
R 5	RS1/16S391J	C 8	CKSRYB103K25
R 6	RS1/16S223J	C 9	CKSQYB104K16
R 7	RS1/16S123J	C 10	CCSRCKR50C50
R 8	RS1/16S332J	C 11	CEJA1R0M50
R 9	RS1/16S473J	C 12	CKSRYB222K50
R 10	RS1/16S223J	C 13	CKSRYB222K50
R 11	RS1/16S124J	C 14	CCSRCH220J50
R 13	RS1/16S563J	C 15	CCSRCH6R0D50
R 15	RS1/16S271J	C 16	CCSRCH8R0D50
R 16	RS1/16S104J	C 17	CKSRYB222K50
R 17	RS1/16S332J	C 18	CKSRYB103K25
R 18	RS1/16S332J	C 19	CKSRYB222K50
R 31	RS1/16S470J	C 20	CKSRYB222K50
R 32	RS1/16S822J	C 21	CEJA100M16
R 33	RS1/16S822J	C 22	CCSRTH9R0D50
R 34	RS1/16S331J	C 23	CCSRTH120J50
R 35	RS1/16S331J	C 24	CCSRCH471J50
R 51	RS1/16S271J	C 25	CKSRYB103K25
R 52	RS1/16S560J	C 26	CCSRCH101J50
R 55	RS1/16S102J	C 31	CKSRYB103K25
R 56	RS1/16S823J	C 32	CKSQYB472K50
R 61	RS1/16S392J	C 33	CCSRCH5R0C50
R 62	RS1/16S273J	C 34	CKSQYB104K16
R 101	RS1/16S272J	C 36	CCSRRH201J50
R 102	RS1/16S682J	C 51	CKSRYB223K25
R 103	RS1/16S333J	C 52	CKSRYB103K25
R 104	RS1/16S334J	C 54	CCSRCH470J50
R 105	RS1/16S683J	C 55	CKSQYB223K25
R 107	RS1/16S222J	C 56	CKSQYB104K16
R 151	RS1/16S222J	C 57	CKSRYB472K50
R 152	RS1/16S393J	C 58	CEJA330M10
R 155	RS1/16S273J	C 59	CKSRYB103K25
R 156	RS1/16S243J	C 60	CKSRYB102K50
R 157	RS1/16S203J	C 61	CCSRCH270J50
R 160	RS1/16S222J	C 62	CKSRYB103K25
R 161	RS1/16S563J	C 63	CEJAR22M50
R 162	RS1/16S105J	C 101	CEJANP100M10
R 163	RS1/16S223J	C 102	CKSRYB182K50
R 202	RS1/16S223J	C 103	CKSRYB682K25
R 203	RS1/16S225J	C 104	CEJA2R2M50
R 204	RS1/16S103J	C 105	CKSRYB103K25
R 206	RS1/16S220J		

====Circuit Symbol and No.===Part Name	Part No.	====Circuit Symbol and No.===Part Name	Part No.	
C 106	CCSRCH151J50	D 8	Diode	KV1410-F1
C 107	CKSRYB103K25	D 201	Diode	MA157
C 151	CKSRYB472K50	D 202	Diode	MA157
C 152	CKSQYB104K16	D 231	Diode	SVC253
C 153	CEJA3R3M50	L 2	Coil	CTC1133
C 154	CKSQYB104K16	L 3	Inductor	LCTB2R2K2125
C 157	CEJA3R3M50	L 4	Coil	CTC1133
C 158	CKSYB474K16	L 5	Coil	CTC1132
C 159	CEJA220M6R3	L 6	Inductor	LCTBR15K1608
C 160	CKSQYB104K16	L 51	Ferri-Inductor	LAU150K
C 161	CKSQYB104K16	L 201	Ferri-Inductor	LAU4R7K
C 162	CEJA3R3M50	L 202	Ferri-Inductor	LAU330K
C 163	CKSRYB102K50	L 203	Inductor	CTF1287
C 170	CCSRCH100D50	L 208	Inductor	LAU121K
C 201	CCSRCH471J50	L 231	Inductor	LCTA3R3J3225
C 202	CCSRCH100D50	T 31	Coil	CTE1117
C 203	CKSRYB332K50	T 51	Coil	CTC1159
C 204	CKSQYB473K16	CF 51	Ceramic Filter	CTF1441
C 205	CKSQYB473K16	CF 52	Ceramic Filter	CTF1441
C 206	CKSQYB104K16	CF 53	Ceramic Filter	CTF1441
C 207	CCSRCH560J50	CF 232	Ceramic Filter	CTF1348
C 209	CKSQYB104K16	X 151	Radiator 918.5Hz	CSS1365
C 211	CCSRCH101J50	X 231	Crystal Resonator 10.26MHz	CSS1111
C 212	CEJA470M6R3	VR 154	Semi-fixed 150kΩ(B)	CCP1213
C 213	CKSRYB103K25			
C 216	CCSRCH101J50		RESISTORS	
C 217	CEJA1R5M50	R 1		RS1/16S225J
C 219	CCSRCH471J50	R 2		RS1/16S225J
C 220	CKSRYB103K25	R 4		RS1/16S154J
C 230	CKSRYB103K25	R 5		RS1/16S391J
C 231	CCSRCH330J50	R 6		RS1/16S223J
C 232	CCSRCH150J50	R 7		RS1/16S123J
C 233	CKSQYB104K16	R 8		RS1/16S332J
C 234	CEJA330M10	R 9		RS1/16S473J
C 235	CKSRYB332K50	R 10		RS1/16S223J
C 236	CKSQYB473K16	R 11		RS1/16S124J
C 237	CCSRCH120J50	R 13		RS1/16S563J
C 239	CKSRYB472K50	R 15		RS1/16S271J
C 240	CEJAR47M50	R 16		RS1/16S104J
C 241	CKSQYB104K16	R 17		RS1/16S332J
C 242	CEJAR47M50	R 18		RS1/16S332J
C 243	CEJAR33M50	R 31		RS1/16S470J
C 244	CKSQYB473K16	R 32		RS1/16S822J
C 245	CKSRYB333K16	R 33		RS1/16S822J
C 246	CKSQYB473K16	R 34		RS1/16S331J
C 250	CCSRCH471J50	R 35		RS1/16S331J
		R 51		RS1/16S271J
		R 52		RS1/16S560J
		R 55		RS1/16S102J
		R 56		RS1/16S823J
		R 61		RS1/16S392J
		R 62		RS1/16S273J
		R 101		RS1/16S272J
		R 102		RS1/16S682J
		R 103		RS1/16S333J
		R 104		RS1/16S334J
		R 105		RS1/16S683J
		R 107		RS1/16S222J
		R 151		RS1/16S222J
		R 152		RS1/16S393J
		R 155		RS1/16S273J
		R 156		RS1/16S243J
		R 157		RS1/16S203J
		R 160		RS1/16S222J
		R 161		RS1/16S563J
		R 162		RS1/16S105J

B Unit Number : CWE1486(ES model)
Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

IC 1	IC	PA4023B	R 62	RS1/16S273J
IC 2	IC	PA4024A	R 101	RS1/16S272J
Q 1	Transistor	2SC2412K	R 102	RS1/16S682J
Q 2	Transistor	DTC124EU	R 103	RS1/16S333J
Q 3	FET	3SK263	R 104	RS1/16S334J
Q 31	Transistor	2SC2412K	R 105	RS1/16S683J
Q 201	FET	2SK932	R 107	RS1/16S222J
Q 202	Transistor	2SC2412K	R 151	RS1/16S222J
Q 203	Transistor	DTC124EU	R 152	RS1/16S393J
D 1	Diode	RD39JS	R 155	RS1/16S273J
D 2	Diode	RD39JS	R 156	RS1/16S243J
D 4	Diode	1SV250	R 157	RS1/16S203J
D 5	Diode	KV1410-F1	R 160	RS1/16S222J
D 6	Diode	MA157	R 161	RS1/16S563J
D 7	Diode	KV1410-F1	R 162	RS1/16S105J

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 163	RS1/16S223J	C 102	CKSRYP182K50
R 202	RS1/16S223J	C 103	CKSRYP682K25
R 203	RS1/16S225J	C 104	CEJA2R2M50
R 204	RS1/16S103J	C 105	CKSRYP103K25
R 206	RS1/16S220J	C 106	CCSRCH151J50
R 207	RS1/16S101J	C 107	CKSRYP103K25
R 208	RS1/16S102J	C 151	CKSRYP472K50
R 209	RS1/16S471J	C 152	CKSQYB104K16
R 214	RS1/16S822J	C 153	CEJA3R3M50
R 215	RS1/16S822J	C 154	CKSQYB104K16
R 217	RS1/16S102J	C 157	CEJA3R3M50
R 231	RS1/16S272J	C 158	CKSYB474K16
R 232	RS1/16S473J	C 159	CEJA220M6R3
R 237	RS1/16S103J	C 160	CKSQYB104K16
R 238	RS1/16S104J	C 161	CKSQYB104K16
R 239	RS1/16S104J	C 162	CEJA3R3M50
R 240	RS1/16S332J	C 163	CKSRYP102K50
R 241	RS1/16S202J	C 170	CCSRCH100D50
R 243	RS1/16S183J	C 201	CCSRCH471J50
R 244	RS1/16S392J	C 202	CCSRCH100D50
R 247	RS1/16S123J	C 203	CKSRYP332K50
CAPACITORS			
C 1	CCSQCH6R0D50	C 204	CKSQYB473K16
C 2	CCSRCK2R0C50	C 205	CKSQYB473K16
C 4	CCSRCH820J50	C 206	CKSQYB104K16
C 6	CCSRCH820J50	C 207	CCSRCH560J50
C 8	CKSRYP103K25	C 209	CKSQYB104K16
C 9	CKSQYB104K16	C 211	CCSRCH101J50
C 10	CCSRCKR50C50	C 212	CEJA470M6R3
C 11	CEJA1R0M50	C 213	CKSRYP103K25
C 12	CKSRYP222K50	C 216	CCSRCH101J50
C 13	CKSRYP222K50	C 217	CEJA1R5M50
C 14	CCSRCH220J50	C 219	CCSRCH471J50
C 15	CCSRCH6R0D50	C 220	CKSRYP103K25
C 16	CCSRCH8R0D50	C 230	CKSRYP103K25
C 17	CKSRYP222K50	C 231	CCSRCH330J50
C 18	CKSRYP103K25	C 232	CCSRCH150J50
C 19	CKSRYP222K50	C 233	CKSQYB104K16
C 20	CKSRYP222K50	C 234	CEJA330M10
C 21	CEJA100M16	C 235	CKSRYP332K50
C 22	CCSRTH9R0D50	C 236	CKSQYB473K16
C 23	CCSRTH120J50	C 237	CCSRCH120J50
C 24	CCSRCH471J50	C 239	CKSRYP472K50
C 25	CKSRYP103K25	C 240	CEJAR47M50
C 31	CKSRYP103K25	C 241	CKSQYB104K16
C 32	CKSQYB472K50	C 242	CEJAR47M50
C 33	CCSRCH5R0C50	C 243	CEJAR33M50
C 34	CKSQYB104K16	C 244	CKSQYB473K16
C 36	CCSRRH201J50	C 245	CKSRYP333K16
C 51	CKSRYP223K25	C 246	CKSQYB473K16
C 52	CKSRYP103K25	C 250	CCSRCH471J50
C 54	CCSRCH470J50	D Unit Number : EWM1021 Unit Name : Deck Unit	
MISCELLANEOUS			
C 55	CKSQYB223K25	IC 251	IC CXA2559Q
C 56	CKSQYB104K16	IC 351	IC PA2020A
C 57	CKSRYP472K50	D 352	Diode 1SS355
C 58	CEJA330M10	RESISTORS	
C 59	CKSRYP103K25	R 255	RS1/16S221J
C 60	CKSRYP102K50	R 256	RS1/16S221J
C 61	CCSRCH270J50	R 257	RS1/16S102J
C 62	CKSRYP103K25	R 258	RS1/16S102J
C 63	CEJAR22M50	R 271	RS1/16S102J
C 101	CEJANP100M10		

KEH-P4800,P4850

====Circuit Symbol and No.====	Part Name	Part No.
R 272		RS1/16S102J
R 273		RS1/16S102J
R 274		RS1/16S102J
R 281		RS1/8S0R0J
R 282		RS1/8S0R0J
R 283		RS1/8S0R0J
R 284		RS1/8S0R0J
R 285		RS1/16S0R0J
R 286		RS1/16S0R0J
R 287		RS1/8S0R0J
R 290		RS1/8S0R0J
R 301		RS1/16S183J
R 302		RS1/16S163J
R 303		RS1/16S163J
R 304		RS1/16S163J
R 305		RS1/16S163J
R 323		RS1/8S0R0J
R 351		RS1/16S102J
R 352		RS1/16S102J
R 353		RS1/16S102J
R 354		RS1/16S102J
R 355		RS1/10S274J
R 362		RS1/8S181J
R 373		RS1/8S0R0J
R 374		RS1/8S0R0J
R 401		RS1/16S472J
R 402		RS1/16S163J
R 403		RS1/16S823J

CAPACITORS

C 251		CKSRYB331K50
C 252		CKSRYB331K50
C 253		CKSRYB331K50
C 254		CKSRYB331K50
C 255		CKSRYB103K25
C 256		CKSRYB103K25
C 272		CKSQYB104K16
C 273		CEJA220M16
C 301		CKSYB104K50
C 302		CKSYB104K50
C 313		CCSQCH101K50
C 351		CKSYB224K25
C 352		CKSQYB392K50
C 353		CKSQYB103K50
C 354		CKSQYB103K50
C 355		CKSYB104K50
C 356		CKSQYB103K50
C 401		CKSQYB334K16
C 402		CKSQYB472K50
C 403		CKSQYB683K16

E Unit Number :
Unit Name : PCB Unit

S 1	Switch (Load)	ESG1004
EGN 1	Photo-Interrupter	EGN1005

F Unit Number :
Unit Name : Reel PCB

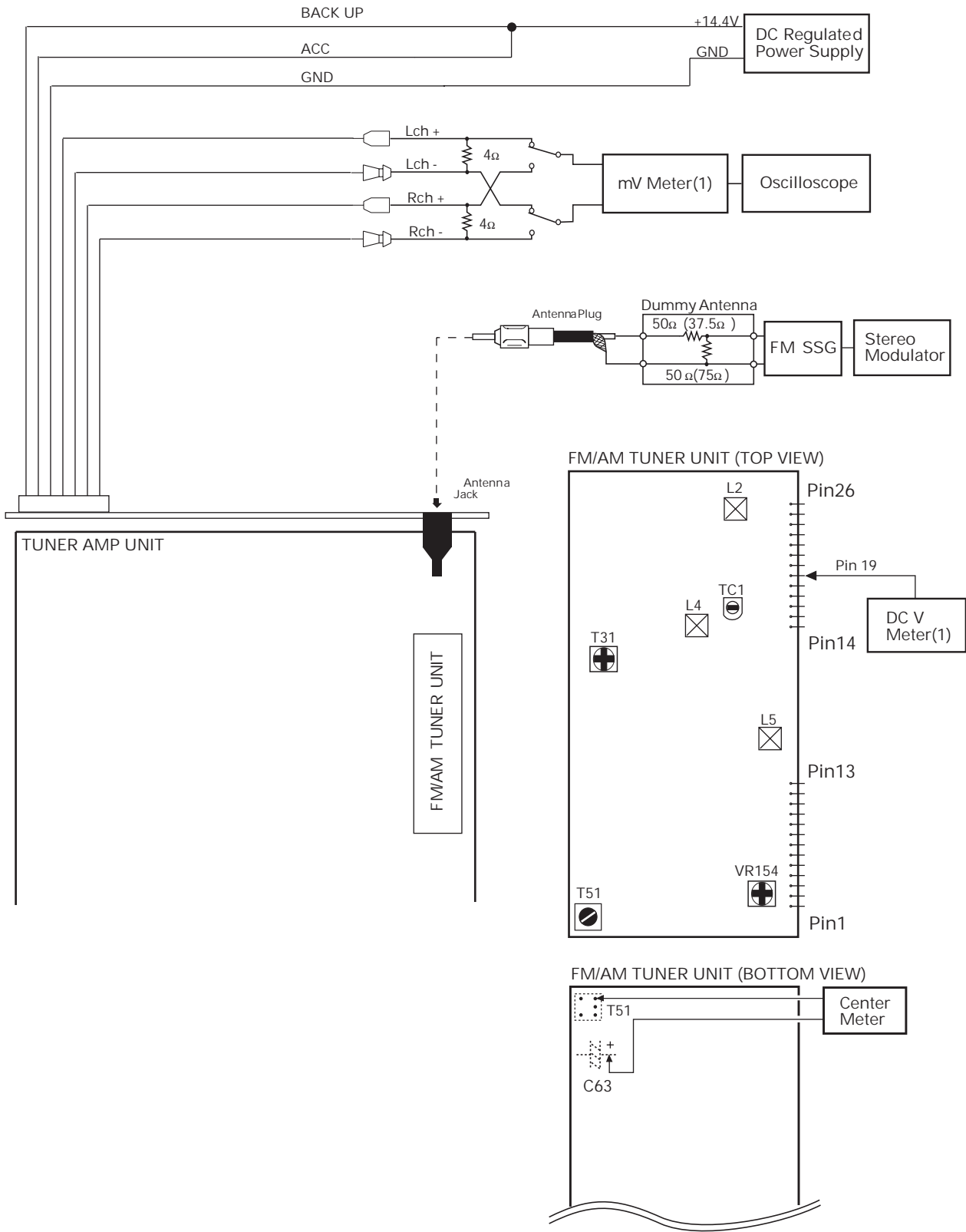
EGN 2	Photo-Interrupter	EGN1006
EGN 3	Photo-Interrupter	EGN1006

Miscellaneous Parts List

M 1	Motor Unit (Main)	EXA1490
M 2	Motor Unit (Sub)	EXA1485
HD 1	Head Assy	EXA1506

6. ADJUSTMENT

● Connection Diagram



KEH-P4800,P4850

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)

S:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

FM ADJUSTMENT(UC MODEL)

	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	.....	.....	107.9	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60—100	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
IFT	5	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	6	98.1 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

FM ADJUSTMENT(ES MODEL)

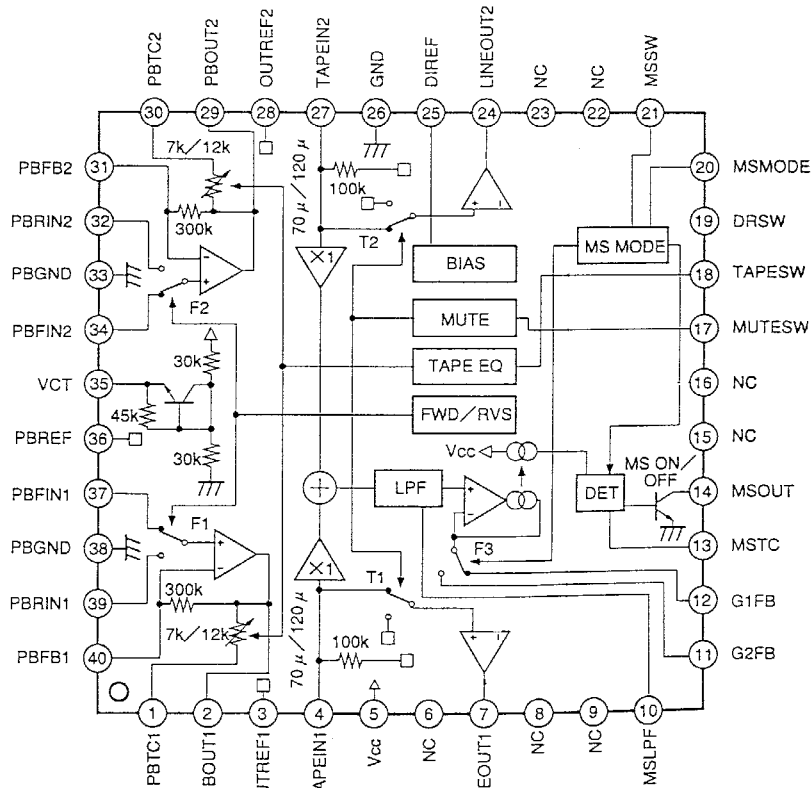
	No.	FM SSG		Displayed Frequency(MHz)	Adjustment Point	Adjustment Method (Switch Position)
		Frequency(MHz)	Level(dBf)			
TUN Volt	1	.....	.....	108.0	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60—100	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
IFT	5	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	6	98.1 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

CXA2559Q

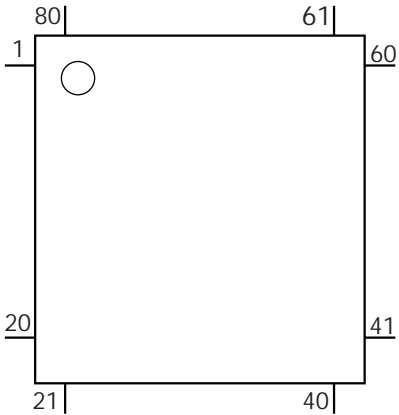


● Pin Functions(PD4973A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	ASENBO	O	C	Slave power supply control output
2	NC			Not used
3	ADPW	O	C	A/D converter power output
4	AVSS			GND
5	$\overline{\text{SWVDD}}$	O	C	Grille power supply control output
6	$\overline{\text{ST}}$	I		FM stereo input
7	AVREF1			D/A converter standard voltage
8	KYDT	I		Grille MicroComputer data input
9	DPDT	O	C	Grille MicroComputer data output
10	NC			Not used
11	TUNPDI	I		PLL IC data input
12	TUNPDO	O	C	PLL IC data output
13	TUNPCK	O	C	PLL IC clock output
14	TUNPCE	O	C	PLL IC chip enable output
15,16	NC			Not used
17	TX	O	C	IP BUS data output
18,19	NC			Not used
20	DIMMER	O	C	Dimmer select output
21	DRELAY	O	C	Detach alarm relay output
22	VST	O	C	Strobe pulse output for electronic volume
23	VCK	O	C	Clock output for electronic volume
24	VDT	O	C	Data output for electronic volume
25	LCDPW	O	C	LCD back light power supply control output
26	ILMPW	O	C	Illumination power supply control output
27	DRSENS	I		Door open/close sense input
28	DRSYS	O	C	Door system select output
29	FM	O	C	FM power control output
30	AM	O	C	AM power control output
31	CM	O	C	Cassette mechanism capstan motor control output
32	NC			Not used
33	VSS			GND
34	SC2	O	C	Cassette mechanism sub motor control output
35	SC1	O	C	Cassette mechanism sub motor control output
36	MSIN	I		Cassette mechanism MS sense input
37	RIMUTE	O	N	RI output port
38	$\overline{\text{MTLSW}}$	I		Metal sense input
39	$\overline{\text{DLED}}$	O	N	Alarm LED output
40	$\overline{\text{N/R}}$	O	C	Normal reverse output
41	PLAY	O	C	Tape MS filter select output
42	$\overline{\text{LOADSW}}$	I		Tape loading input
43	POS	I		Cassette mechanism position sense input
44	RES	I		Cassette mechanism reverse end sense input
45	PEE	O	C	Beep tone output
46	NES	I		Cassette mechanism forward end sense input
47	NC			Not used
48	STBY	O	C	Stand-by output
49-52	NC			Not used
53	SD	I		SD input
54	MUTE	O	C	Mute output
55	SYSPW	O	C	System power supply control output
56-59	NC			Not used
60	RESET	I		Reset input
61	RX	I		IP BUS data input
62	NC			Not used
63	$\overline{\text{DSENS}}$	I		Grille detach sense input
64	TELIN	I		TEL mute signal input
65	ASENS	I		ACC power sense input
66	BSENS	I		Back up power sense input
67	CLKIN	I		Clock input

Pin No.	Pin Name	I/O	Format	Function and Operation
68	VDD			VDD
69	X2			Oscillator output
70	X1			Oscillator input
71	IC			Connect to GND
72	XT2			Sub Clock terminal
73	TESTIN	I		Test program mode input
74	AVDD			A/D converter analog power supply (VDD)
75	AVREF0	I		A/D converter standard voltage input
76	SL	I		Signal level input
77	MODEL0	I		Model select input
78	MODEL1	I		Model select input
79,80	NC			Not used

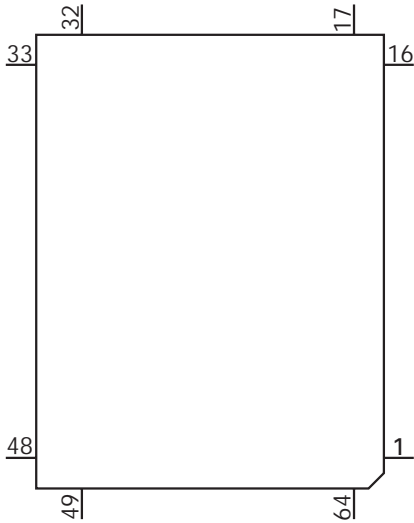
*PD4973A



Format	Meaning
C	C MOS
N	N Channel open drain

IC's marked by* are MOS type.
 Be careful in handling them because they are very liable to be damaged by electrostatic induction.

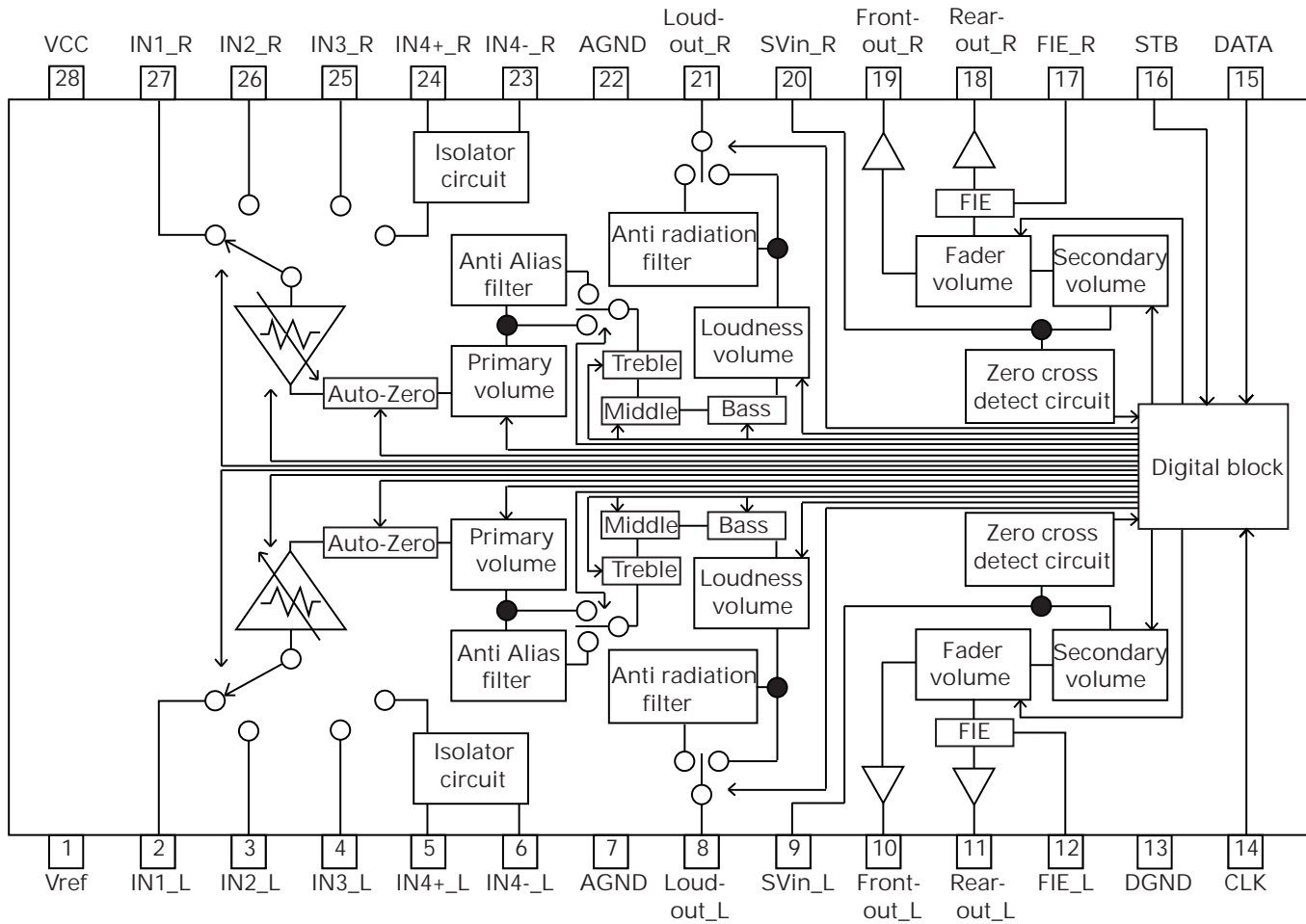
*PD6278A



● Pin Functions (PD6278A)

Pin No.	Pin Name	I/O	Function and Operation
1-5	SEG4-0	O	LCD segment output
6-9	COM3-0	O	LCD common output
10	V3		LCD drive power supply
11-14	KS4-1	O	Key strobe output
15,16	KD1,2	I	Key data input (analogue input)
17	REM	I	Remote control reception
18	RXD	I	System micro computer UART communication data input
19	RST	I	System reset
20	TXD	O	System micro computer UART communication data output
21	MODA		GND
22	X0		Crystal oscillator connection pin
23	X1		Crystal oscillator connection pin
24	VSS		GND
25,26	KD3,4	I	Key data input
27,28	KS6,5	O	Key strobe output
29-55	SEG39-13	O	LLCD segment output
56	VCC		Power supply
57-64	SEG12-5	O	LCD segment output

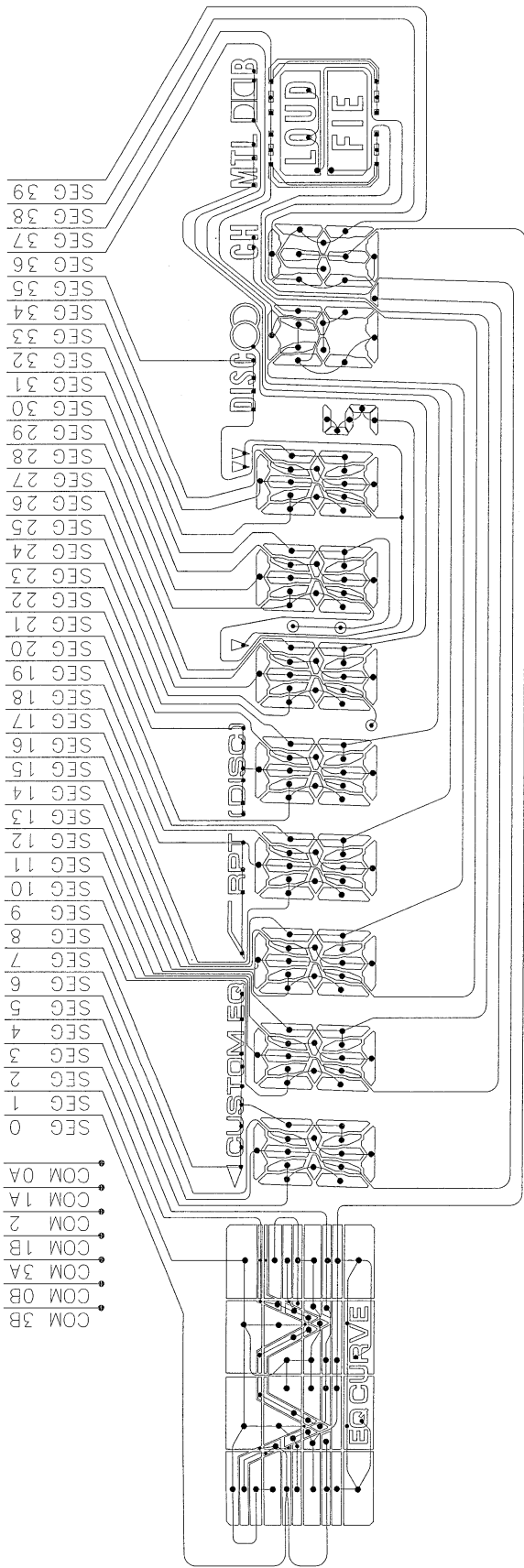
PML003AM



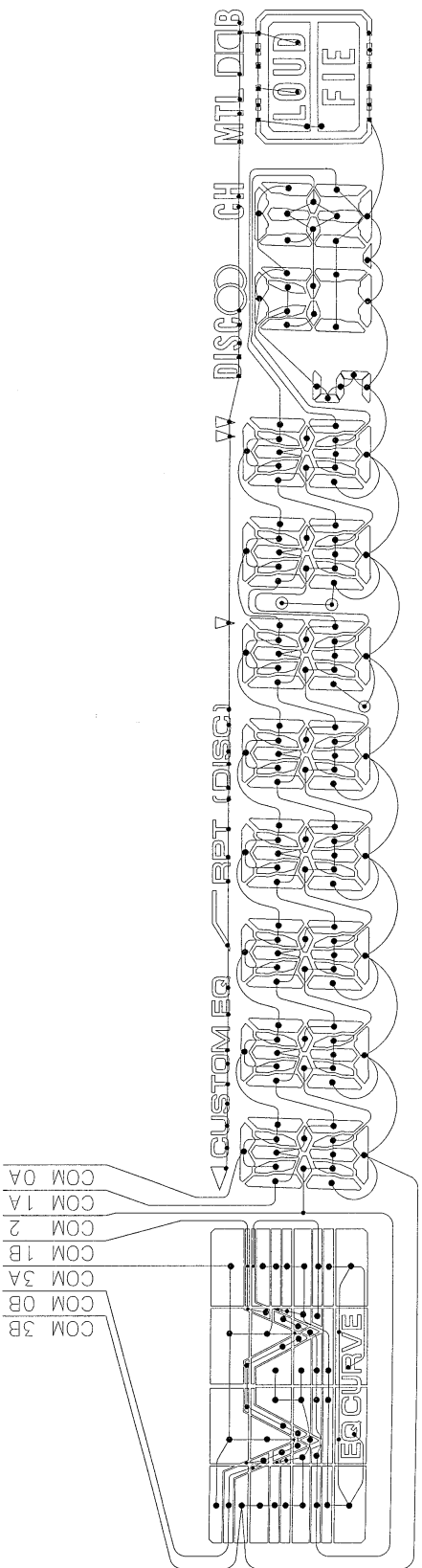
7.1.2 DISPLAY

● CAW1543

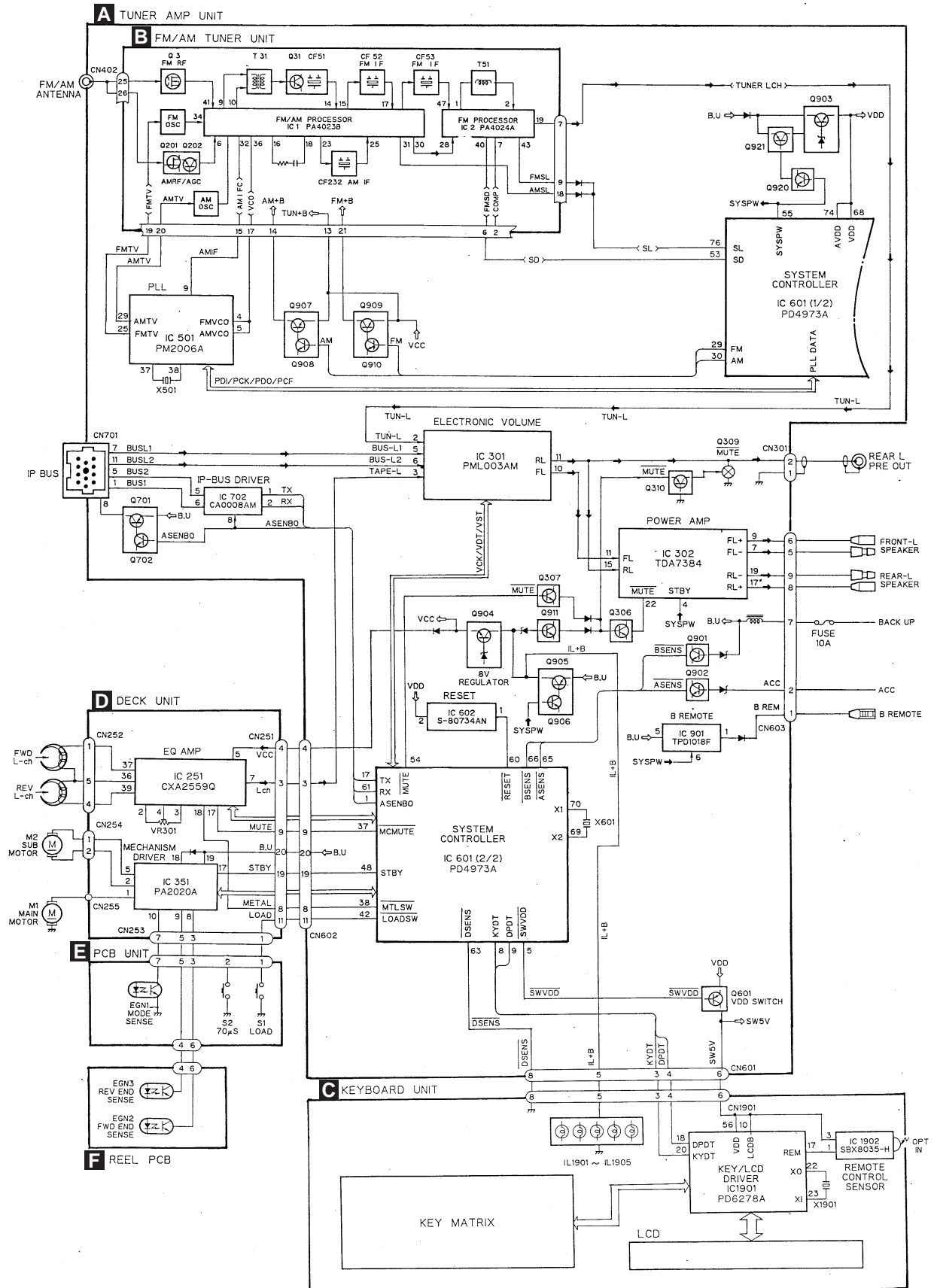
SEGMENT



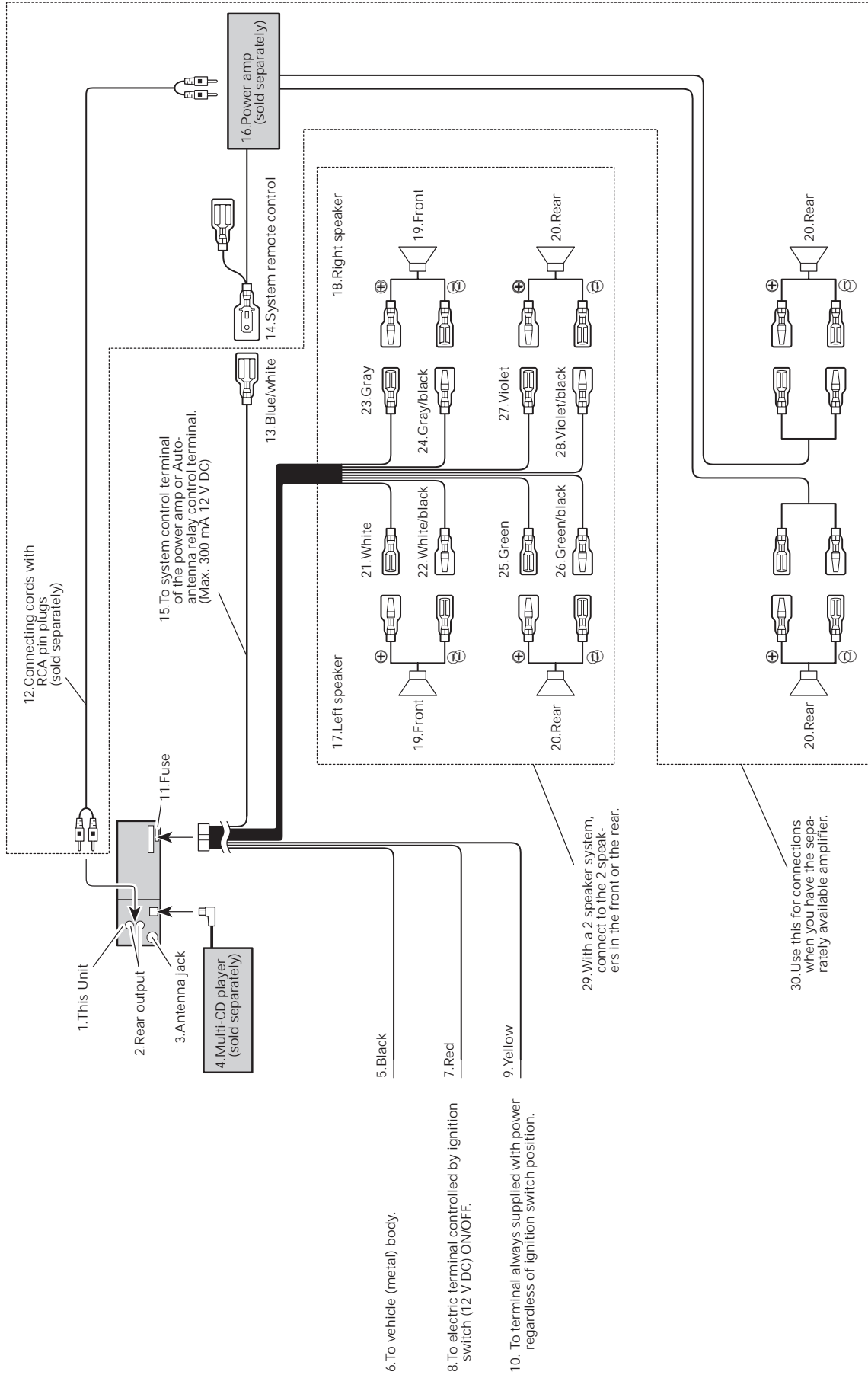
COMMON



7.3 BLOCK DIAGRAM



8. OPERATIONS AND SPECIFICATIONS



8.2. SPECIFICATIONS

General

Power source	14.4 V DC (10.8 – 15.1 V allowable)
Grounding system	Negative type
Max. current consumption	8.5 A
Dimensions	
(DIN) (chassis)	178 (W) × 50 (H) × 155 (D) mm
(nose)	188 (W) × 58 (H) × 19 (D) mm
(D) (chassis)	178 (W) × 50 (H) × 160 (D) mm
(nose)	170 (W) × 48 (H) × 14 (D) mm
Weight	1.2 kg

Amplifier

Continuous power output is 17 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.	
Maximum power output	40 W × 4
Load impedance	4 Ω (4 – 8 Ω allowable)
Preout maximum output level/output impedance	2.2 V _{p-p} /1 kΩ
Equalizer (3 band equalizer)	
(Low)	±12 dB
(Mid)	±12 dB
(High)	±12 dB
Loudness contour	
(Low)	+3.5 dB (100 Hz), +3 dB (10 kHz)
(Mid).....	+10 dB (100 Hz), +6.5 dB (10 kHz)
(High).....	+11 dB (100 Hz), +11 dB (10 kHz)
	(volume: -30 dB)

Cassette player

Tape	Compact cassette tape (C-30 – C-90)
Tape speed	4.76 cm/sec.(+0.14cm/sec.,-0.05cm/sec.)
Fast forward/rewinding time	Approx. 100 sec. for C-60
Wow & flutter	0.09% (WRMS)
Frequency response	Metal: 30 – 16,000 Hz (±3 dB)
Stereo separation	45 dB
Signal-to-noise ratio	61 dB (IEC-A network)

FM tuner

Frequency range(UCmodel)	87.5 – 107.9 MHz
(ESmodel)	87.5 – 108 MHz
Usable sensitivity	11 dBf
	(1.0 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	16 dBf (1.7 μV/75 Ω, mono)
Signal-to-noise ratio	70 dB (IEC-A network)
Distortion	0.3% (at 65 dBf, 1 kHz, stereo)
Frequency response	30 – 15,000 Hz (±3 dB)
Stereo separation	40 dB (at 65 dBf, 1 kHz)
Selectivity(UCmodel).....	70dB(2ACA)
Three-signal intermodulation(UCmodel)	
(desired signal level)	50dBf
(two undesire signal level : 100 dBf)	

AM tuner

Frequency range	531 – 1,602 kHz (9 kHz)
(ESmodel)	530 – 1,710 kHz (10 kHz)
Usable sensitivity	18 μV (S/N: 20 dB)
Selectivity (ESmodel)	50 dB (±9 kHz)
	50 dB (±10 kHz)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.