PIONEER
The Art of Entertainment

Service Manual

ORDER NO.
CRT2063

MULTI-CD/DSP CONTROL HIGH POWER CASSETTE PLAYER WITH FM/MW/LW TUNER

KEH-P8610 EE

- This additional service manual is designed to be used together with Model KEH-P8600R/EW Service Manual CRT2011. Refer to it for finding parts numbers and adjustment,etc. which are not shown in this manual.

NOTE:

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

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 501 Orchard Road, #10-00, Lane Crawford Place, Singapore 0923

© PIONEER ELECTRONIC CORPORATION 1997

K-ZES. JULY 1997 Printed in Belgium

ClibPDF - www.fastio.com

EXPLODED VIEWS AND PARTS LIST

PACKING

● Parts List(Page 3)

Mark	No.	Description	Part No. KEH-P8600R/EW	Part No. KEH-P8610/EE
	1-2	Owner's Manual	CRD2382	CRD2386
	1-3	Owner's Manual	CRD2383	CRD2387
	1-4	Installation Manual	CRD2385	CRD2389
	1-5	Installation Manual	CRD2415	CRD2478
	1-6	Installation Manual	CRD2416	CRD2479
	1-9	Passport	CRY1013	Not used
	2	Cord Assy	CDE5399	CDE5336
	23	Carton	CHG3302	CHG3307
	24	Contain Box	CHL3302	CHL3307
	31-1	Owner's Manual	CRD2384	CRD2388

● Owner's Manual, Installation Manual

Model	Part No.	Language
KEH-P8600R/EW	CRD2382	English, Spanish
	CRD2383	German, French
	CRD2384	Italian, Dutch
	CRD2385	English, Spanish
	CRD2415	German, French
	CRD2416	Italian, Dutch
KEH-P8610/EE	CRD2386	English, German
	CRD2387	Hungarian, Russian
	CRD2388	Polish, Czech
	CRD2389	English, German
	CRD2478	Hungarian, Russian
	CRD2479	Polish, Czech

EXTERIOR

● Parts List(Page 5)

Mark	No.	DescripMtion	Part No. KEH-P8600R/EW	Part No. KEH-P8610/EE
	4	Cord Assy	CDE5399	CDE5336
	25	Tuner Amp Unit	CWM5336	CWM5589
	48	FM/AM Tuner Unit	CWE1416	CWE1366
	55	Chassis Unit	CXB1229	CXB1529
	66	Detach Grille Assy	CXB1329	CXB1840
	77	Button(TA,PT)	CAC4981	CAC4982
	80	Keyboard Unit	CWM5062	CWM5592
	81	LCD	CAW1403	CAW1407
	90	Grille Unit	CXB1533	CXB1535

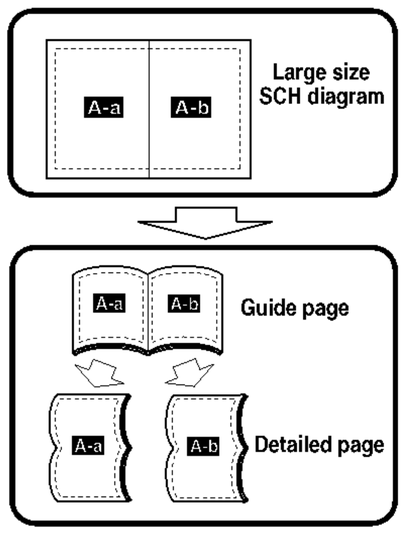
ClibPDF - www.fastio.com

CloudPDF - www.fastio.com

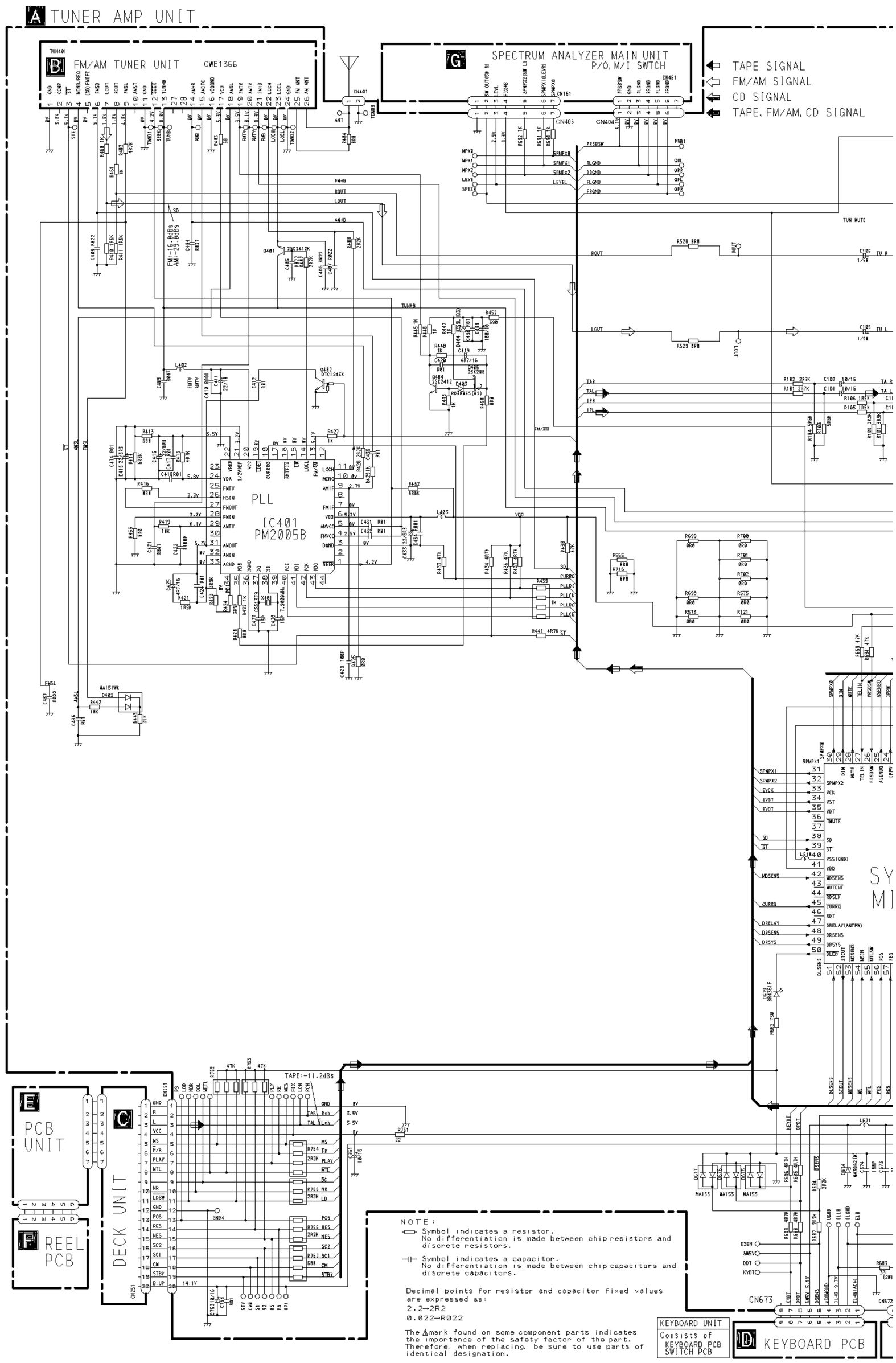
SCHEMATIC DIAGRAM

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



ClibPDF - www.fastio.com

A-b

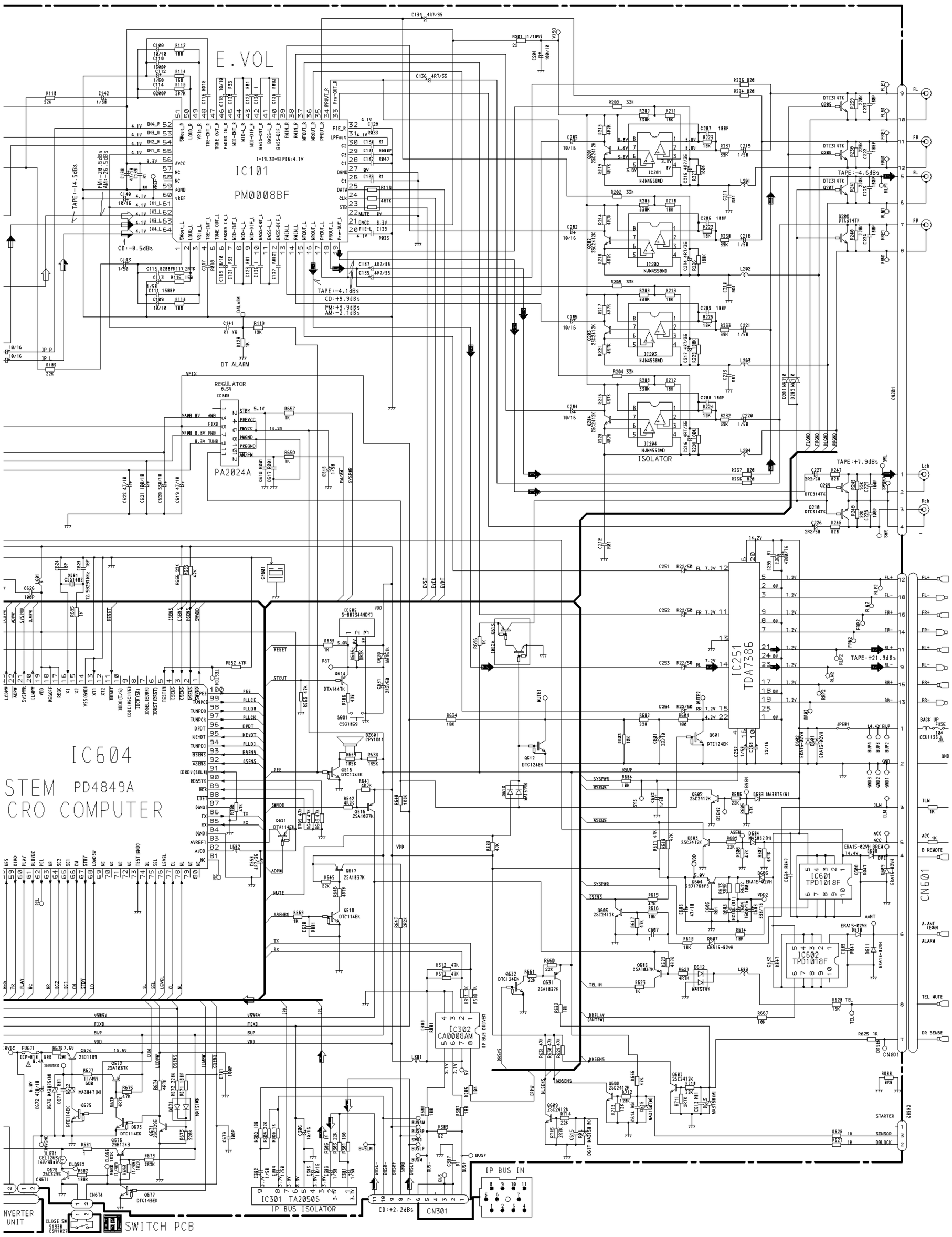
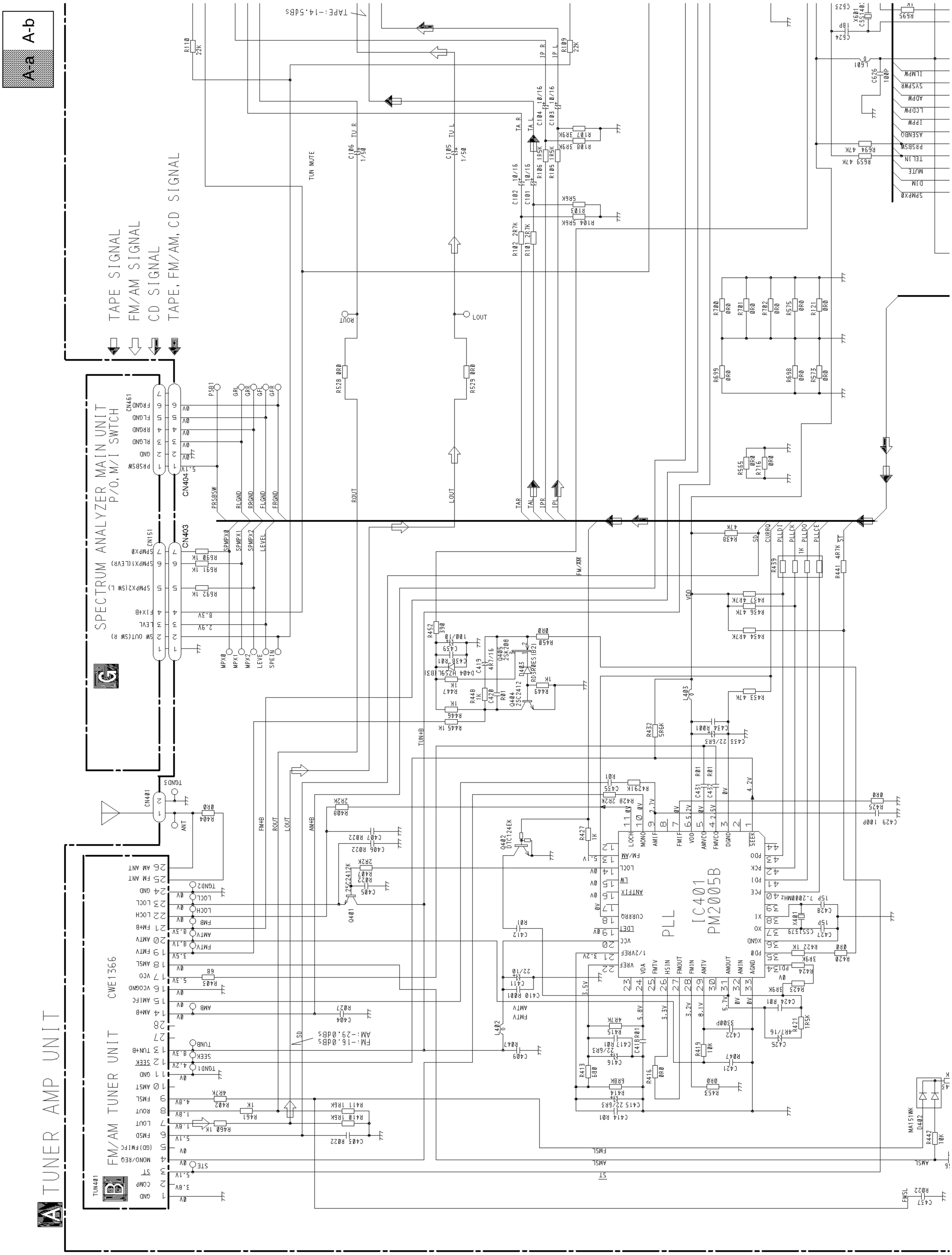


Fig. 1

ClibPDF - www.fastio.com


A-a
A-b
TAPE SIGNAL
FM/AM SIGNAL
CD SIGNAL
TAPE, FM/AM, CD SIGNAL
SPECTRUM ANALYZER MAIN UNIT
P/O, M/I SWTCH
CN404
CN403
CN151
CN461
TUNER AMP UNIT
FM/AM TUNER UNIT
CWE1366
TUN401
PLL
IC401
PM2005B
Q401
Q402
Q404
Q405
D402
D404
D403
L401
L402
L403
X401
X601
TUN MUTE
ROUT
LOUT
TAPE:-14.5dBs
FM:-16.0dBs
AM:-29.0dBs
FM/AM
TUN+B
FMSL
AMSL
ST
SD
CURRQ
PLLDI
PLLCK
PLLDO
PLLCE
VDD
SPMPX0
DIM
MUTE
TELIN
PRSBSW
ASENBO
IPPW
LCDPW
ADPW
SYSPWR
ILMPW
PRSBSW
RLGND
RRGND
FLGND
FRGND
SPMPX0
SPMPX1
SPMPX2
LEVEL
WPX0
WPX1
WPX2
SPEIN
ANT
TGND3
TGND2
TGND1
TUNB
SEEK
STE
TAR
TAL
IPR
IPL
TUN+B

A-a

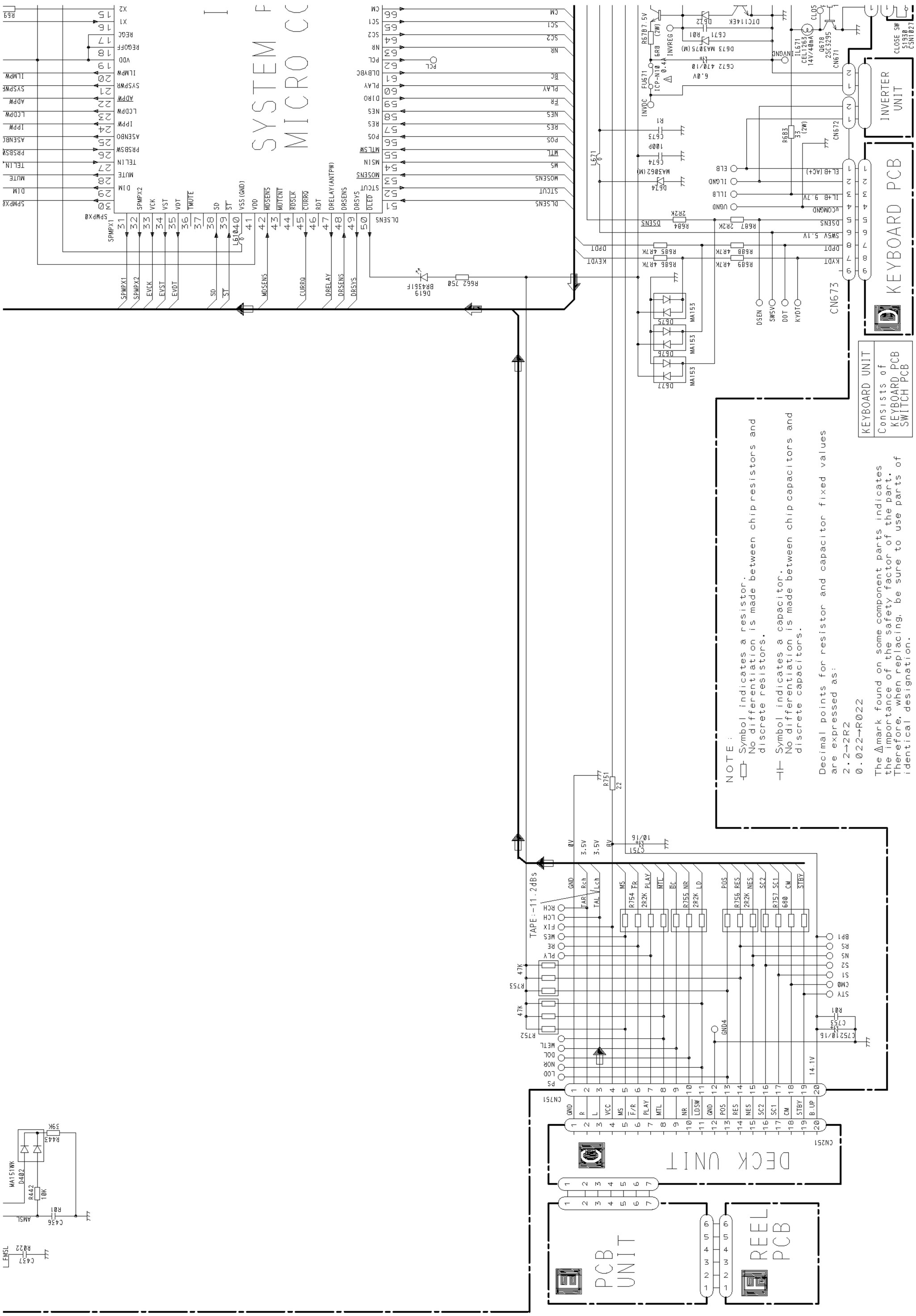
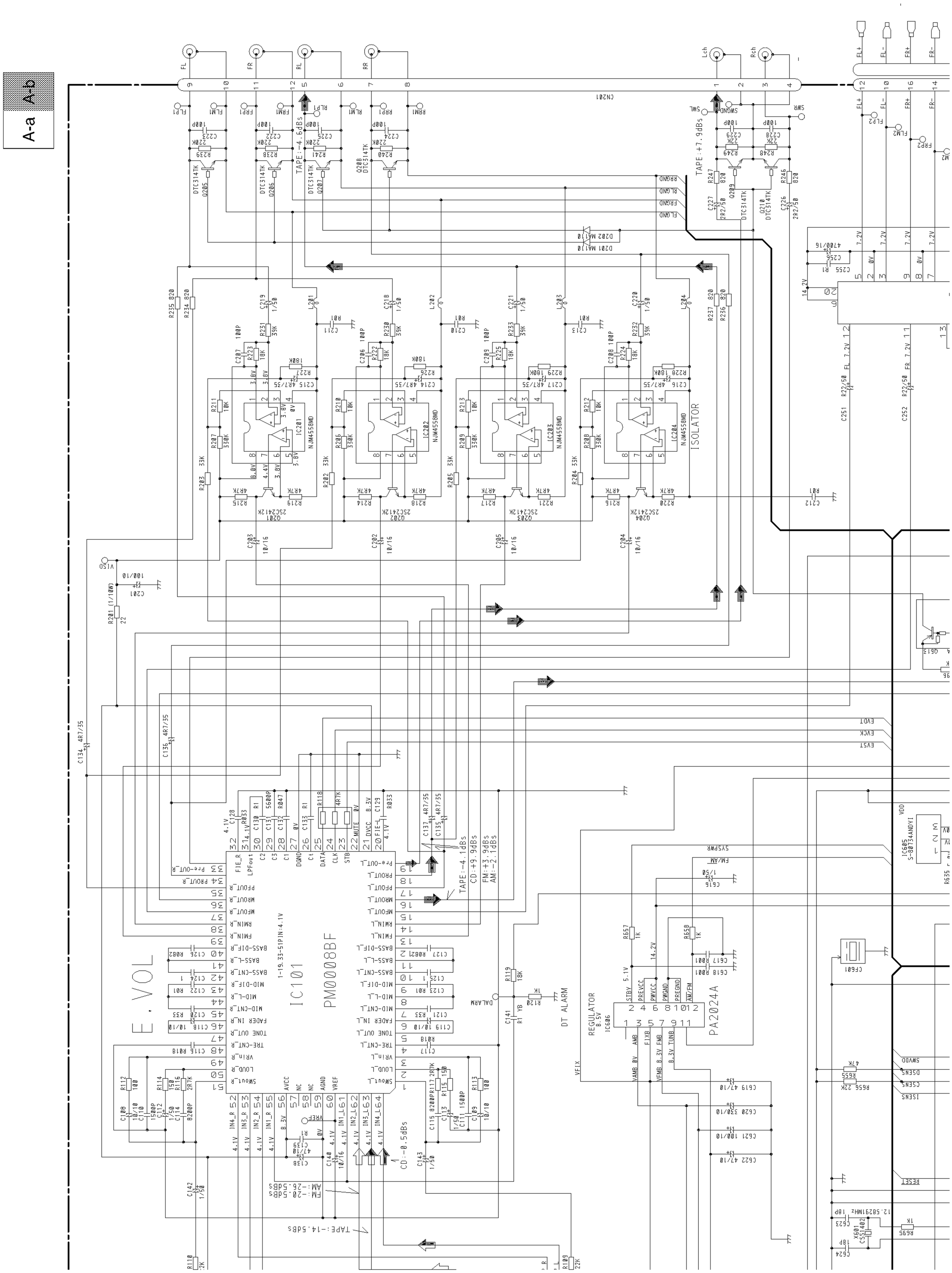

SYSTEM F
MICRO CC
INVERTER UNIT
KEYBOARD PCB
KEYBOARD UNIT
Consists of KEYBOARD PCB SWITCH PCB
DECK UNIT
PCB UNIT
REEL PCB
NOTE:
Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022
The ⚠mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 2


A-a
A-b
ISOLATOR
IC101
PM0008BF
E.VOL
REGULATOR
PA2024A
DT ALARM
TAPE:-4.6dBs
TAPE:+7.9dBs
TAPE:-4.1dBs
CD:+9.9dBs
FM:+3.9dBs
AM:-2.1dBs
CD:-0.5dBs
FM:-20.5dBs
AM:-26.5dBs
TAPE:-14.5dBs

A-b

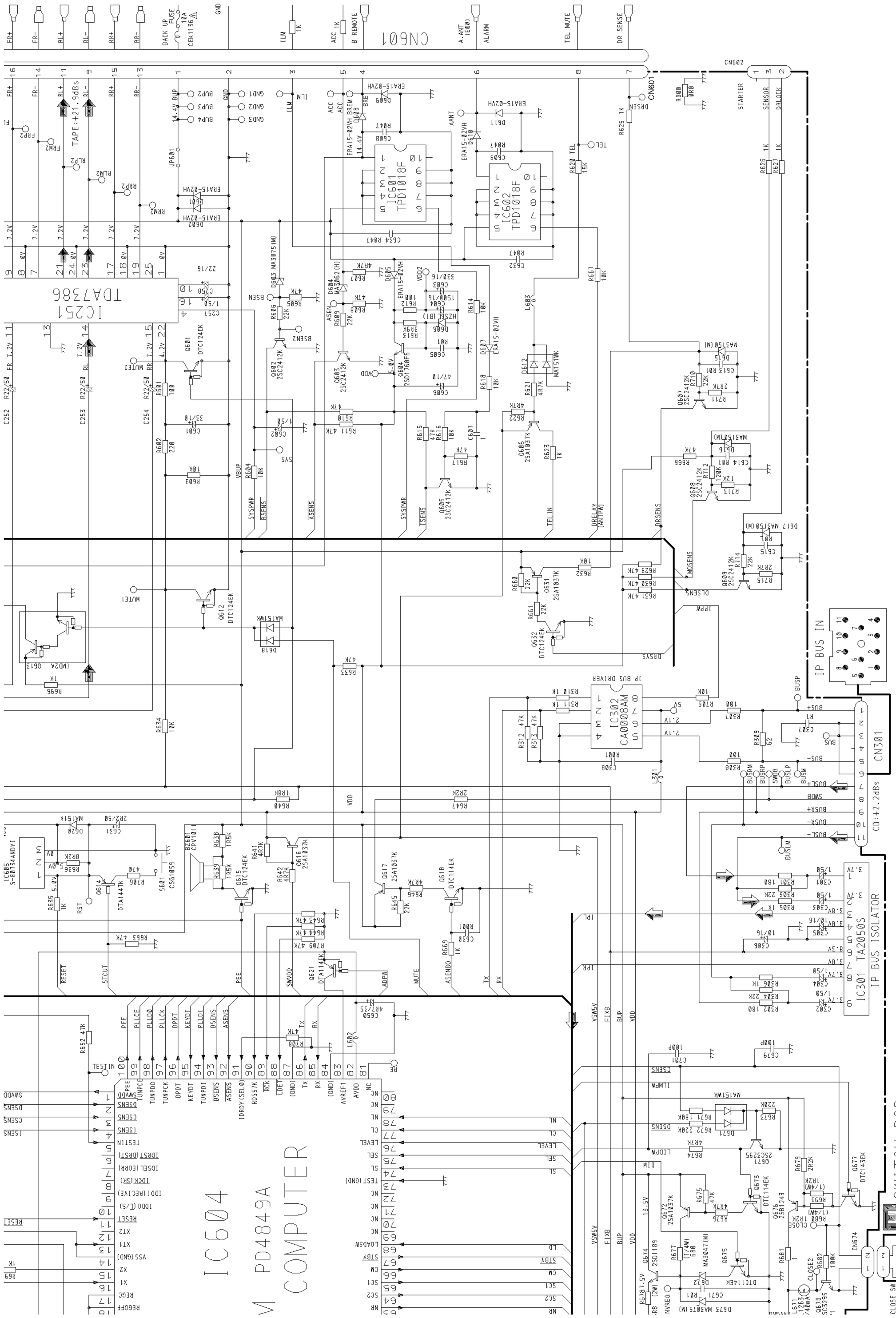
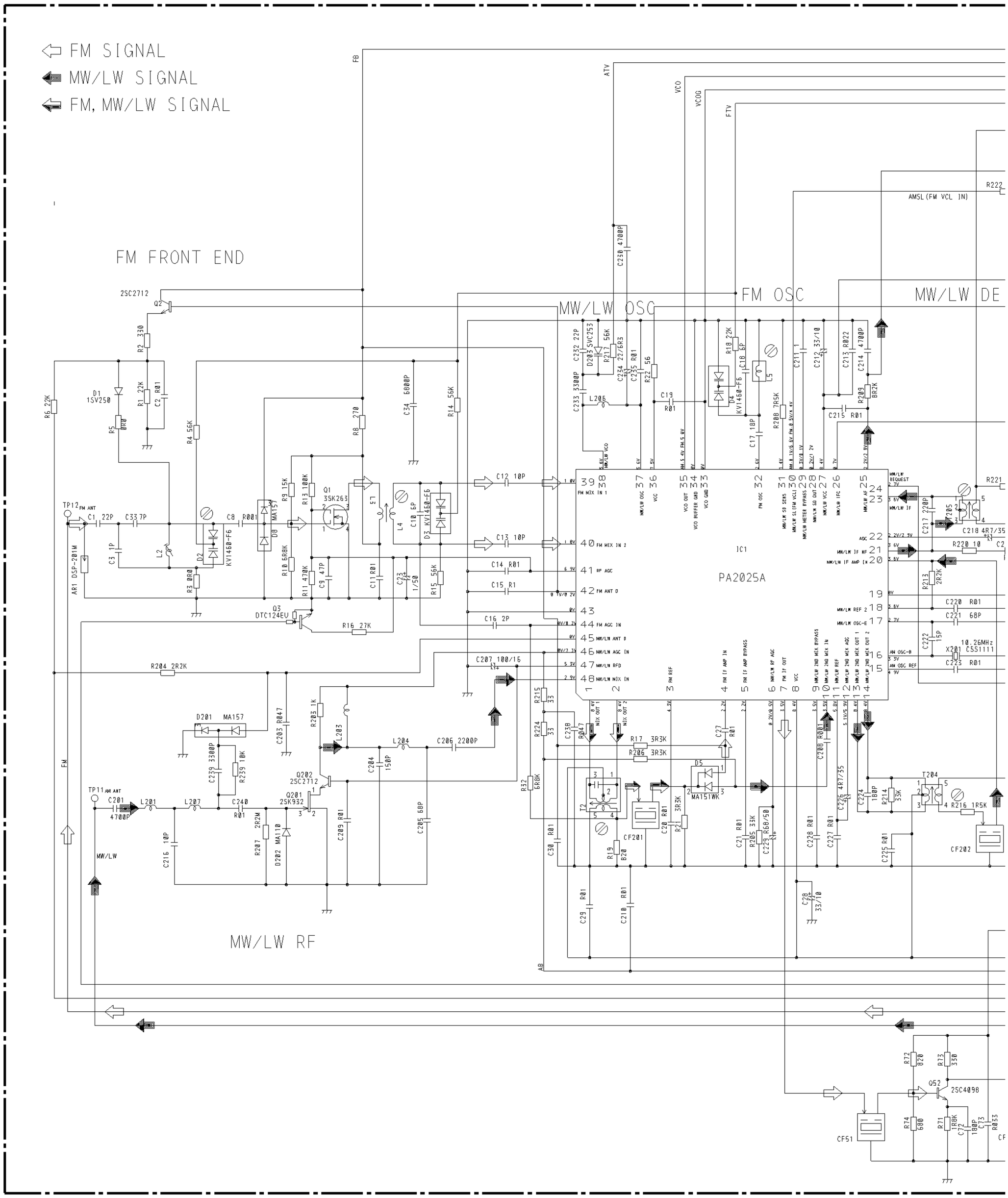

CN601
CN602
CN301
IC601 TPD1018F
IC602 TPD1018F
IC251 TDA7386
IC604 M PD4849A COMPUTER
IC302 CA0008AM
IC301 TA2050S IP BUS ISOLATOR
IP BUS IN
SWITCH PCB
A-a
A-b

Fig. 3

TUNER UNIT

B TUNER UNIT



NOTE:

Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

ClibPDF - www.fastio.com

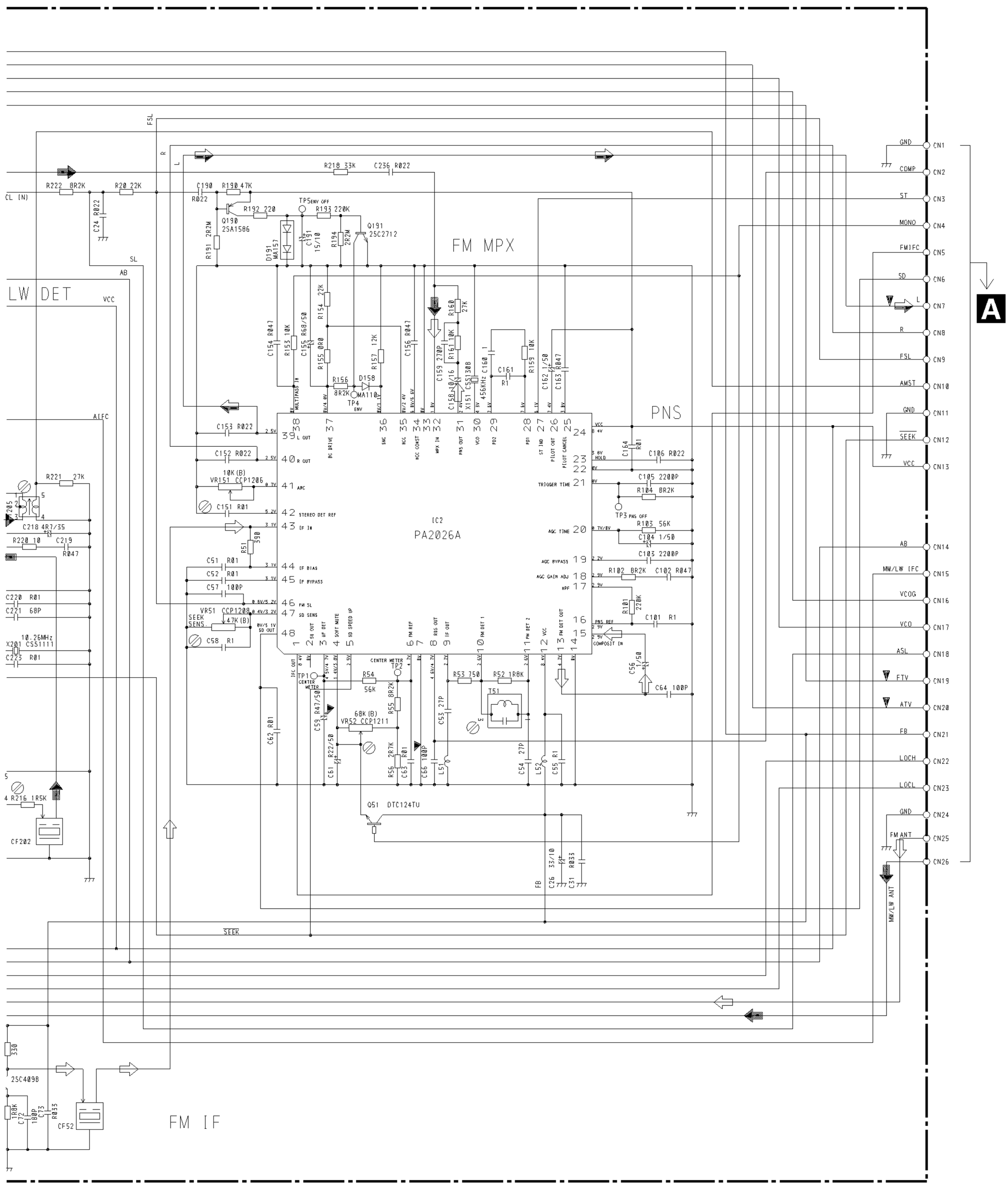


Fig. 4

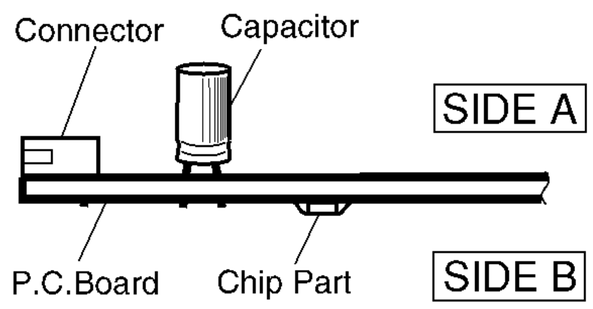
ClibPDF - www.fastio.com

PCB CONNECTION DIAGRAM

TUNER AMP UNIT

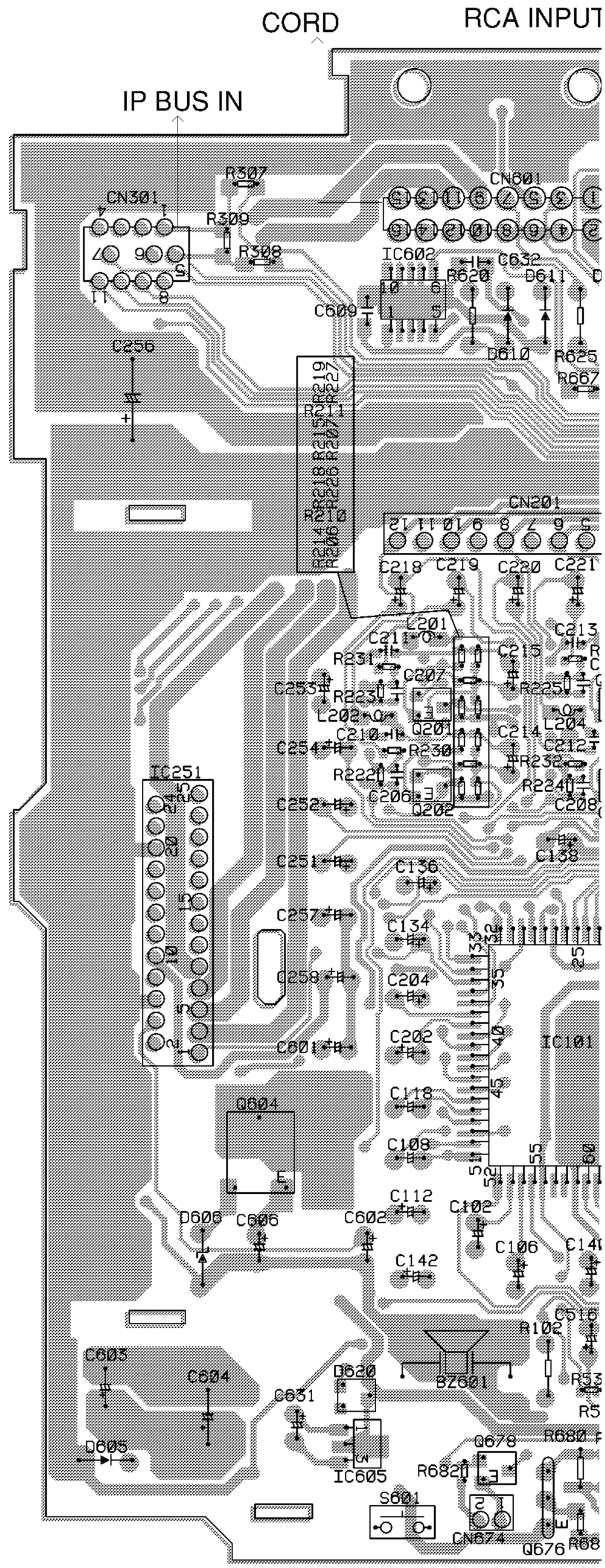
NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



IC, Q	ADJ
Q674	
IC606	
IC602	
IC601	
Q605 IC603	
Q673 Q675	
Q631 Q609	
Q617 Q606 IC302	
IC401	
Q618 Q402	
IC301 Q632	
Q203	
Q201 Q621	
IC251	
Q202 Q204	
IC604	
IC101	
IC552	
Q604	
IC502	VR501
Q502	
Q507	
IC551	
Q506 Q505	
Q678	
Q671	
IC605	
Q676 Q677	

A TUNER AMP UNIT



SIDE A

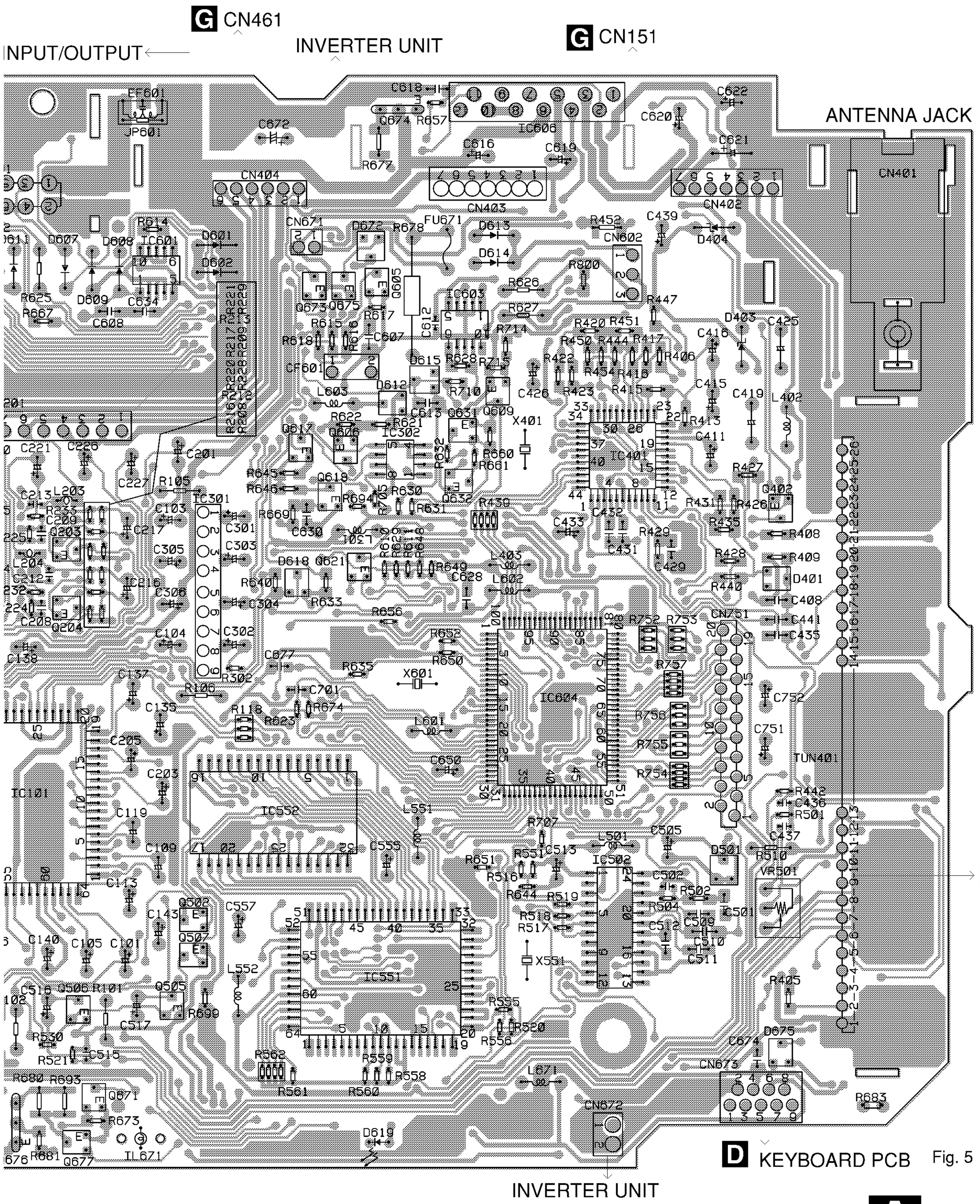
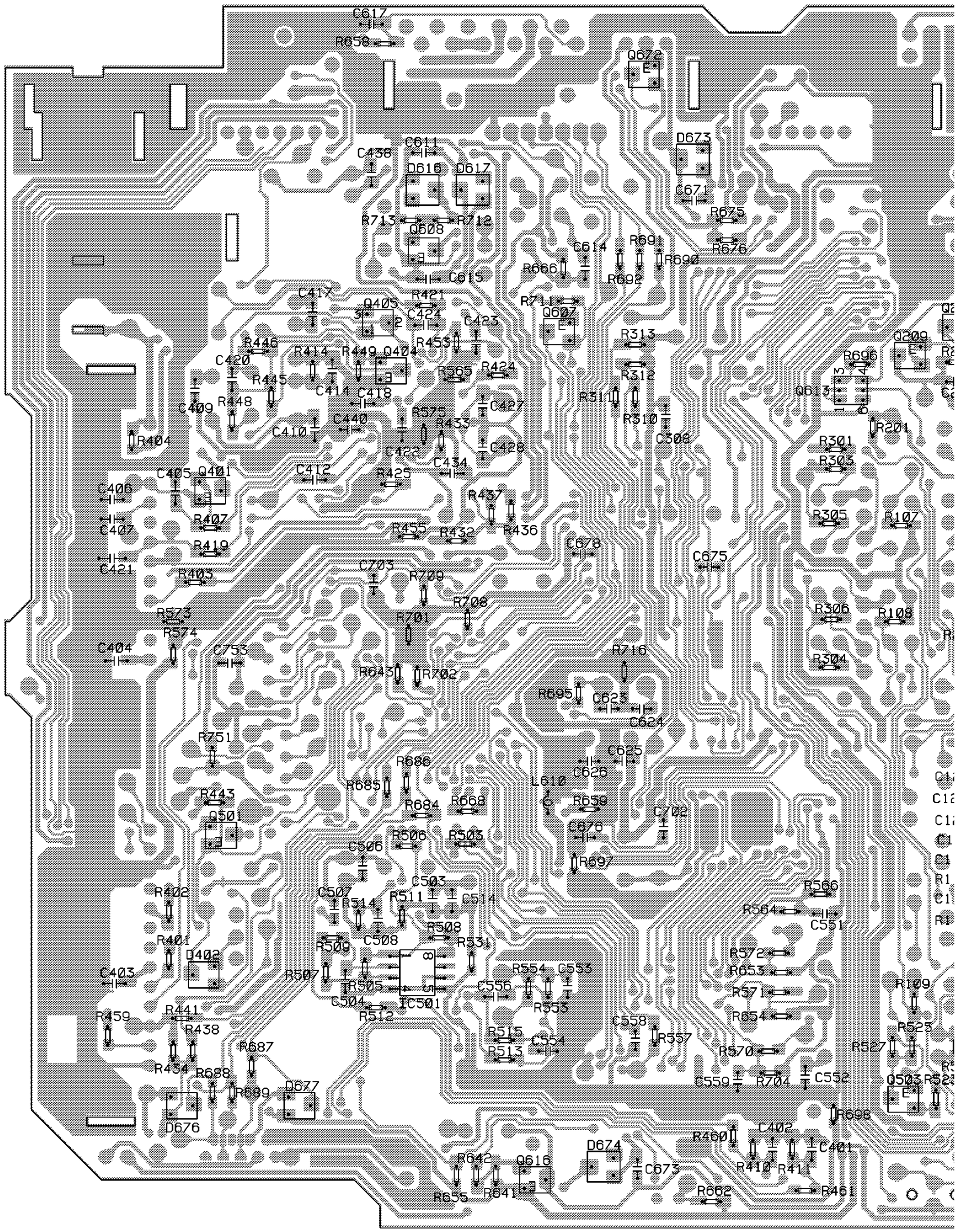

G CN461
INPUT/OUTPUT
INVERTER UNIT
G CN151
ANTENNA JACK
B
D KEYBOARD PCB
INVERTER UNIT

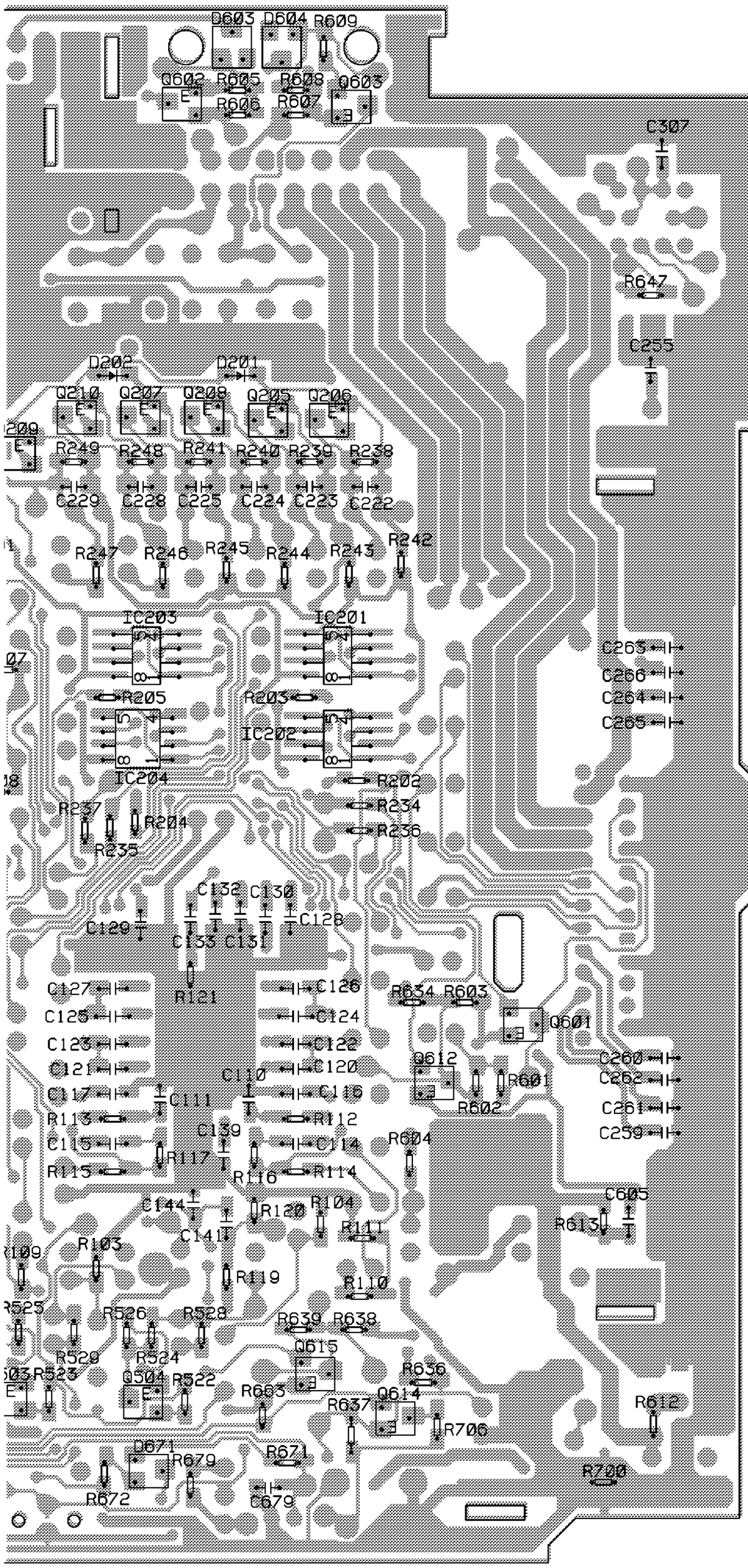
Fig. 5

A

A TUNER AMP UNIT



SIDE B



IC, Q

Q672 Q602 Q603

Q608

Q405 Q210 Q207
Q607 Q208 Q205 Q206
Q209
Q404

Q613

Q401
IC203 IC201

IC202

IC204

Q601

Q501
Q612

IC501

Q615
Q503 Q504
Q614

Q616

Fig. 6

TUNER UNIT

SIDE A

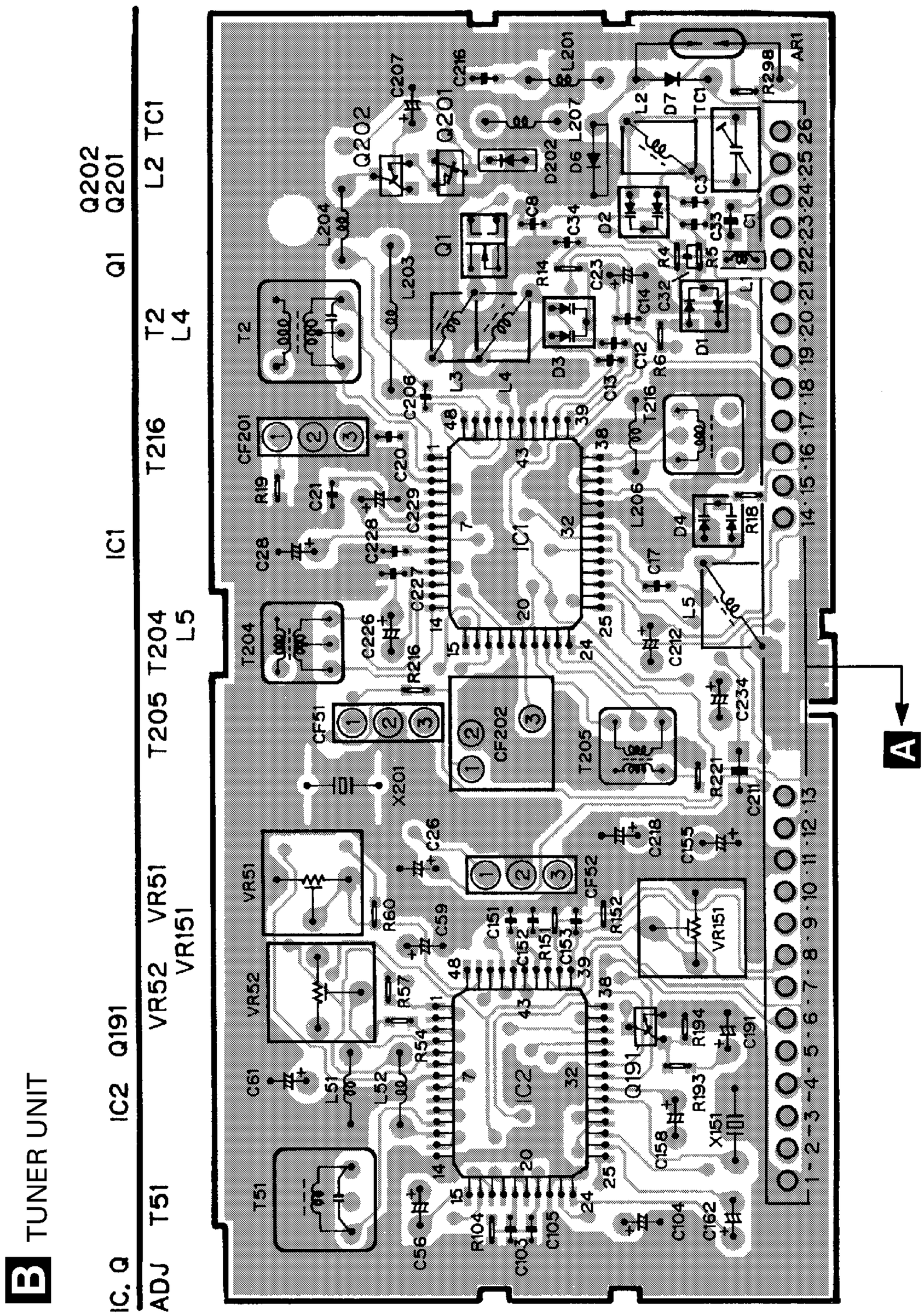


Fig. 7

SIDE B

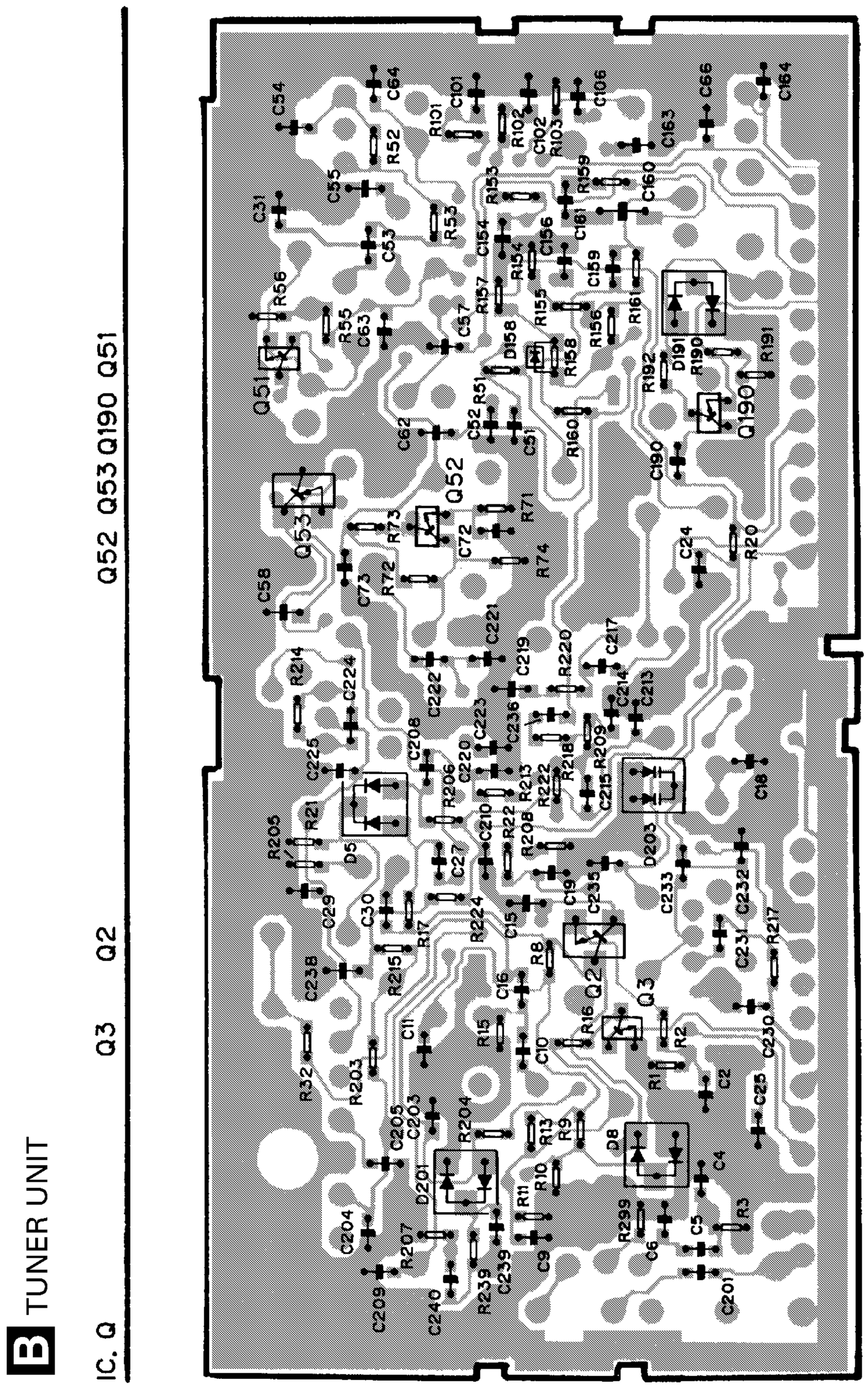


Fig. 8

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/○S○○○J,RS1/○○S○○○J

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

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

B Unit Number : CWE1366
Unit Name : Tuner Unit

MISCELLANEOUS

Circuit Symbol and No.		Part Name	Part No.
IC	1	IC	PA2025A
IC	2	IC	PA2026A
Q	1	FET	3SK263
Q	2	Transistor	2SC2712
Q	3	Transistor	DTC124EU
Q	51	Transistor	DTC124TU
Q	52	Transistor	2SC4098
Q	190	Transistor	2SA1586
Q	191	Transistor	2SC2712
Q	201	FET	2SK932
Q	202	Transistor	2SC2712
D	1	Diode	1SV250
D	2	Diode	KV1460-F6
D	3	Diode	KV1460-F6
D	4	Diode	KV1460-F6
D	5	Chip Diode	MA151WK
D	8	Diode	MA157
D	158	Diode	MA110
D	191	Diode	MA157
D	201	Diode	MA157
D	202	Diode	MA110
D	203	Diode	SVC253
L	2	Coil	CTC1112
L	3	Coil	CTC1121
L	4	Coil	CTC1122
L	5	Coil	CTC1111
L	51	Ferri-Inductor	LAU2R2K
L	52	Ferri-Inductor	LAU150K
L	201	Ferri-Inductor	LAU4R7K
L	203	Inductor 1mH	CTF1026
L	204	Ferri-Inductor	LAU151K
L	206	Inductor	LAU3R3J
L	207	Ferri-Inductor	LAU330K
T	2	Coil	CTE1077
T	51	Coil	CTC1119
T	204	Coil	CTE1112
T	205	Coil	CTE1118
CF	51	Ceramic Filter	CTF1290
CF	52	Ceramic Filter	CTF1290
CF	201	Ceramic Filter	CTF1290
CF	202	Ceramic Filter	CTF1300
X	151	456kHz	CSS1308
X	201	Crystal Resonator 10.26MHz	CSS1111
VR	51	Semi-fixed 22kΩ(B)	CCP1208
VR	52	Semi-fixed 68kΩ(B)	CCP1211
VR	151	Semi-fixed 10kΩ(B)	CCP1206
AR	1		DSP-201M

RESISTORS

Circuit Symbol & No.		Part Name	Part No.
R	1		RS1/16S223J
R	2		RS1/16S331J
R	3		RS1/16S0R0J
R	4		RS1/16S563J
R	5		RS1/16S0R0J
R	6		RS1/16S223J
R	8		RS1/16S271J
R	9		RS1/16S153J
R	10		RS1/16S682J
R	11		RS1/16S474J
R	13		RS1/16S104J
R	14		RS1/16S563J
R	15		RS1/16S563J
R	16		RS1/16S273J
R	17		RS1/16S332J
R	18		RS1/16S223J
R	19		RS1/16S821J
R	20		RS1/16S223J
R	21		RS1/16S332J
R	22		RS1/16S560J
R	32		RS1/16S682J
R	51		RS1/16S391J
R	52		RS1/16S182J
R	53		RS1/16S751J
R	54		RS1/16S563J
R	55		RS1/16S822J
R	56		RS1/16S272J
R	71		RS1/16S182J
R	72		RS1/16S821J
R	73		RS1/16S331J
R	74		RS1/16S681J
R	101		RS1/16S224J
R	102		RS1/16S822J
R	103		RS1/16S563J
R	104		RS1/16S822J
R	153		RS1/16S103J
R	154		RS1/16S223J
R	155		RS1/16S0R0J
R	156		RS1/16S822J
R	157		RS1/16S123J
R	159		RS1/16S103J
R	160		RS1/16S273J
R	161		RS1/16S103J
R	190		RS1/16S473J
R	191		RS1/16S225J
R	192		RS1/16S221J
R	193		RS1/16S224J
R	194		RS1/16S225J
R	203		RS1/16S102J
R	204		RS1/16S222J
R	205		RS1/16S333J
R	206		RS1/16S332J
R	207		RS1/16S225J
R	208		RS1/16S752J
R	209		RS1/16S822J

ClibPDF - www.fastio.com

=====Circuit Symbol and No.===Part Name		Part No.
R	213	RS1/16S222J
R	214	RS1/16S333J
R	215	RS1/16S330J
R	216	RS1/16S152J
R	217	RS1/16S563J
R	218	RS1/16S333J
R	220	RS1/16S100J
R	221	RS1/16S273J
R	222	RS1/16S822J
R	224	RS1/16S330J
R	239	RS1/16S103J
CAPACITORS		
C	1	CCSQCH220J50
C	2	CKSRYB103K50
C	3	CCSRCK1R0C50
C	8	CKSRYB102K50
C	9	CCSRCH470J50
C	10	CCSRCH6R0D50
C	11	CKSRYB103K50
C	12	CCSRCH100D50
C	13	CCSRCH100D50
C	14	CKSRYB103K50
C	15	CKSQYB104K16
C	16	CCSRCK2R0D50
C	17	CCSRCH180J50
C	18	CCSRCH6R0D50
C	19	CKSRYB103K50
C	20	CKSRYB103K50
C	21	CKSRYB103K50
C	23	CEJA1R0M50
C	24	CKSRYB223K25
C	26	CEJA330M10
C	27	CKSRYB103K50
C	28	CEJA330M10
C	29	CKSRYB103K50
C	30	CKSRYB103K50
C	31	CKSRYB333K16
C	33	CCSRCH7R0D50
C	34	CKSRYB682K50
C	51	CKSRYB103K50
C	52	CKSRYB103K50
C	53	CCSRCH270J50
C	54	CCSRCH270J50
C	55	CKSQYB104K16
C	56	CEJA1R0M50
C	57	CCSRCH101J50
C	58	CKSQYB104K16
C	59	CEJAR47M50
C	61	CEJAR22M50
C	62	CKSRYB103K50
C	63	CKSRYB103K50
C	64	CCSRCH101J50
C	66	CCSRCH101J50
C	72	CCSRCH181J50
C	73	CKSRYB333K16
C	101	CKSQYB104K16
C	102	CKSQYB473K16
C	103	CKSRYB222K50
C	104	CEJA1R0M50
C	105	CKSRYB222K50
C	106	CKSRYB223K25
C	151	CKSRYB103K50
C	152	CKSRYB223K25
C	153	CKSRYB223K25
C	154	CKSQYB473K16
C	155	CEJAR68M50
C	156	CKSQYB473K16

=====Circuit Symbol and No.===Part Name		Part No.
C	158	CEJA100M16
C	159	CCSRCH271J50
C	160	CKSYB105K16
C	161	CKSQYB104K16
C	162	CEJA1R0M50
C	163	CKSQYB473K16
C	164	CKSRYB103K50
C	190	CKSRYB223K25
C	191	CEAL150M10
C	201	CCSRCH471J50
C	203	CKSQYB473K16
C	204	CCSRCH151J50
C	205	CCSRCH680J50
C	206	CKSRYB222K50
C	207	CEJA101M16
C	208	CKSRYB102K50
C	209	CKSRYB103K50
C	210	CKSRYB103K50
C	211	CKSYB105K16
C	212	CEJA330M10
C	213	CKSRYB223K25
C	214	CKSRYB472K50
C	215	CKSRYB103K50
C	216	CCSRCH100D50
C	217	CCSRCH221J50
C	218	CEJA4R7M35
C	219	CKSQYB473K16
C	220	CKSRYB103K50
C	221	CCSRCH680J50
C	222	CCSRCH150J50
C	223	CKSRYB103K50
C	224	CCSRUJ181J50
C	225	CKSRYB103K50
C	226	CEJA4R7M35
C	227	CKSRYB103K50
C	228	CKSRYB103K50
C	229	CEJAR68M50
C	230	CKSRYB472K50
C	232	CCSRTH220J50
C	233	CKSRYB332K50
C	234	CEJA220M6R3
C	235	CKSRYB103K50
C	236	CKSRYB223K25
C	238	CKSQYB473K16
C	239	CKSRYB332K50
C	240	CKSRYB103K50

A Unit Number : CWM5589
Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC	101	IC	PM0008BF
IC	201	IC	NJM4558MD
IC	202	IC	NJM4558MD
IC	203	IC	NJM4558MD
IC	204	IC	NJM4558MD
IC	251	IC	TDA7386
IC	301	IC	TA2050S
IC	302	IC	CA0008AM
IC	401	IC	PM2005B
IC	601	IC	TPD1018F
IC	602	IC	TPD1018F
IC	604	IC	PD4849A
IC	605	IC	S-80734ANDYI
IC	606	IC	PA2024A
Q	201	Transistor	2SC2412K

ClibPDF - www.fastio.com

=====Circuit Symbol and No.===Part Name			Part No.
Q	202	Transistor	2SC2412K
Q	203	Transistor	2SC2412K
Q	204	Transistor	2SC2412K
Q	205	Transistor	DTC314TK
Q	206	Transistor	DTC314TK
Q	207	Transistor	DTC314TK
Q	208	Transistor	DTC314TK
Q	209	Transistor	DTC314TK
Q	210	Transistor	DTC314TK
Q	401	Transistor	2SC2412K
Q	402	Transistor	DTC124EK
Q	404	Transistor	2SC2412K
Q	405	Transistor	2SK208
Q	601	Transistor	DTC124EK
Q	602	Transistor	2SC2412K
Q	603	Transistor	2SC2412K
Q	604	Transistor	2SD1760F5
Q	605	Transistor	2SC2412K
Q	606	Transistor	2SA1037K
Q	607	Transistor	2SC2412K
Q	608	Transistor	2SC2412K
Q	609	Transistor	2SC2412K
Q	612	Transistor	DTC124EK
Q	613	Transistor	IMD2A
Q	614	Transistor	DTA144TK
Q	615	Transistor	DTC124EK
Q	616	Transistor	2SA1037K
Q	617	Transistor	2SA1037K
Q	618	Transistor	DTC114EK
Q	621	Transistor	DTA114EK
Q	631	Transistor	2SA1037K
Q	632	Transistor	DTC124EK
Q	671	Transistor	2SC3295
Q	672	Transistor	2SA1037K
Q	673	Transistor	DTC114EK
Q	674	Transistor	2SD1189
Q	675	Transistor	DTC114EK
Q	676	Transistor	2SB1243
Q	677	Transistor	DTC143EK
Q	678	Transistor	2SC3295
D	201	Diode	MA110
D	202	Diode	MA110
D	402	Chip Diode	MA151WK
D	403	Diode	RD3R0ES(B2)
D	404	Diode	HZS9L(B3)
D	601	Diode	ERA15-02VH
D	602	Diode	ERA15-02VH
D	603	Diode	MA3075(M)
D	604	Diode	MA3062(H)
D	605	Diode	ERA15-02VH
D	606	Diode	HZS6L(B1)
D	607	Diode	ERA15-02VH
D	608	Diode	ERA15-02VH
D	609	Diode	ERA15-02VH
D	610	Diode	ERA15-02VH
D	611	Diode	ERA15-02VH
D	612	Chip Diode	MA151WK
D	615	Diode	MA3150(M)
D	616	Diode	MA3150(M)
D	617	Diode	MA3150(M)
D	618	Chip Diode	MA151WK
D	619	LED	BR4361F
D	620	Chip Diode	MA151K
D	671	Chip Diode	MA151WK
D	672	Diode	MA3047(M)
D	673	Diode	MA3075(M)
D	674	Diode	MA3062(M)
D	675	Diode	MA153
D	676	Diode	MA153
D	677	Diode	MA153

=====Circuit Symbol and No.===Part Name			Part No.
L	201	Inductor	LCTB2R2K2125
L	202	Inductor	LCTB2R2K2125
L	203	Inductor	LCTB2R2K2125
L	204	Inductor	LCTB2R2K2125
L	301	Ferri-Inductor	LAU2R2K
L	402	Ferri-Inductor	LAU101K
L	403	Ferri-Inductor	LAU2R2K
L	601	Ferri-Inductor	LAU2R2K
L	602	Ferri-Inductor	LAU101K
L	603	Ferri-Inductor	LAU2R2K
L	610	Inductor	LCTB2R7K2125
L	671	Ferri-Inductor	LAU2R2K
CF	601	Filter	CTF1071
X	401	Crystal Resonator 7.200MHz	CSS1379
X	601	Resonator 12.58291MHz	CSS1402
S	601	Switch(Reset)	CSG1059
IL	671	Lamp 14V 40mA	CEL1263
FU	671	0.4A	ICP-N10
		Spectrum Analizer Main Unit	CWM5339
		Tuner Unit	CWE1366
BZ	601	Buzzer	CPV1011
RESISTORS			
R	101		RD1/4PU272J
R	102		RD1/4PU272J
R	103		RS1/10S562J
R	104		RS1/10S562J
R	105		RD1/4PU152J
R	106		RD1/4PU152J
R	107		RS1/10S392J
R	108		RS1/10S392J
R	109		RS1/10S223J
R	110		RS1/10S223J
R	112		RS1/10S101J
R	113		RS1/10S101J
R	114		RS1/10S151J
R	115		RS1/10S151J
R	116		RS1/10S272J
R	117		RS1/10S272J
R	118		RA3C472J
R	119		RS1/10S183J
R	120		RS1/10S102J
R	121		RS1/10S0R0J
R	201		RS1/10S220J
R	202		RS1/10S333J
R	203		RS1/10S333J
R	204		RS1/10S333J
R	205		RS1/10S333J
R	206		RS1/16S334J
R	207		RS1/16S334J
R	208		RS1/16S334J
R	209		RS1/16S334J
R	210		RS1/16S103J
R	211		RS1/16S103J
R	212		RS1/16S103J
R	213		RS1/16S103J
R	214		RS1/16S472J
R	215		RS1/16S472J
R	216		RS1/16S472J
R	217		RS1/16S472J
R	218		RS1/16S472J
R	219		RS1/16S472J
R	220		RS1/16S472J
R	221		RS1/16S472J
R	222		RS1/16S183J
R	223		RS1/16S183J
R	224		RS1/16S183J
R	225		RS1/16S183J

ClibPDF - www.fastio.com

=====Circuit Symbol and No.===Part Name		Part No.
R	226	RS1/16S184J
R	227	RS1/16S184J
R	228	RS1/16S184J
R	229	RS1/16S184J
R	230	RS1/16S393J
R	231	RS1/16S393J
R	232	RS1/16S393J
R	233	RS1/16S393J
R	234	RS1/10S821J
R	235	RS1/10S821J
R	236	RS1/10S821J
R	237	RS1/10S821J
R	238	RS1/10S224J
R	239	RS1/10S224J
R	240	RS1/10S224J
R	241	RS1/10S224J
R	246	RS1/10S821J
R	247	RS1/10S821J
R	248	RS1/10S223J
R	249	RS1/10S223J
R	301	RS1/10S181J
R	302	RS1/16S181J
R	303	RS1/10S223J
R	304	RS1/10S223J
R	305	RS1/10S102J
R	306	RS1/10S102J
R	307	RS1/10S101J
R	308	RS1/10S101J
R	309	RS1/10S620J
R	310	RS1/10S102J
R	311	RS1/10S102J
R	312	RS1/10S473J
R	313	RS1/10S473J
R	402	RS1/10S472J
R	403	RS1/10S680J
R	404	RS1/10S0R0J
R	407	RS1/10S222J
R	408	RS1/10S222J
R	410	RS1/10S162J
R	411	RS1/10S162J
R	413	RS1/10S681J
R	414	RS1/10S682J
R	415	RS1/10S472J
R	416	RS1/10S0R0J
R	419	RS1/10S103J
R	420	RS1/10S0R0J
R	421	RS1/10S152J
R	422	RS1/10S102J
R	423	RS1/10S392J
R	424	RS1/10S392J
R	425	RS1/10S0R0J
R	427	RS1/10S102J
R	428	RS1/10S222J
R	429	RS1/10S102J
R	432	RS1/10S562J
R	433	RS1/10S473J
R	434	RS1/10S472J
R	436	RS1/10S473J
R	437	RS1/10S472J
R	438	RS1/10S473J
R	439	RA4C102J
R	441	RS1/10S472J
R	442	RS1/16S103J
R	443	RS1/10S393J
R	445	RS1/10S102J
R	446	RS1/10S102J
R	447	RS1/10S102J
R	448	RS1/10S102J
R	449	RS1/10S102J
R	450	RS1/10S0R0J

=====Circuit Symbol and No.===Part Name		Part No.
R	452	RS1/4S391J
R	453	RS1/10S0R0J
R	460	RS1/10S102J
R	461	RS1/10S102J
R	528	RS1/10S0R0J
R	529	RS1/10S0R0J
R	565	RS1/10S0R0J
R	573	RS1/10S0R0J
R	575	RS1/10S0R0J
R	601	RS1/10S101J
R	602	RS1/10S221J
R	603	RS1/10S103J
R	604	RS1/10S103J
R	605	RS1/10S473J
R	606	RS1/10S223J
R	607	RS1/10S472J
R	608	RS1/10S473J
R	609	RS1/10S223J
R	610	RS1/16S473J
R	611	RS1/16S473J
R	612	RS1/10S101J
R	613	RS1/10S392J
R	614	RS1/10S103J
R	615	RS1/10S473J
R	616	RS1/10S103J
R	617	RS1/16S473J
R	618	RS1/10S103J
R	620	RD1/4PU153J
R	621	RS1/10S472J
R	622	RS1/10S472J
R	623	RS1/16S102J
R	625	RD1/4PU102J
R	626	RD1/4PU102J
R	627	RD1/4PU102J
R	629	RS1/16S473J
R	630	RS1/16S473J
R	631	RS1/16S473J
R	632	RS1/16S103J
R	633	RS1/10S473J
R	634	RS1/10S103J
R	635	RS1/16S102J
R	636	RS1/10S822J
R	638	RS1/10S152J
R	639	RS1/10S152J
R	640	RS1/10S182J
R	641	RS1/10S472J
R	642	RS1/10S472J
R	643	RS1/10S473J
R	644	RS1/16S473J
R	645	RS1/10S223J
R	646	RS1/10S472J
R	647	RS1/10S222J
R	652	RS1/16S473J
R	655	RS1/10S473J
R	656	RS1/16S223J
R	657	RS1/16S102J
R	658	RS1/10S102J
R	659	RS1/10S473J
R	660	RS1/10S223J
R	661	RS1/16S223J
R	662	RS1/10S751J
R	663	RS1/10S473J
R	666	RS1/10S473J
R	667	RS1/10S103J
R	669	RS1/10S102J
R	671	RS1/10S184J
R	672	RS1/10S224J
R	673	RS1/10S224J
R	674	RS1/16S472J
R	675	RS1/10S473J

ClibPDF - www.fastio.com

=====Circuit Symbol and No.===Part Name			Part No.
R	676		RS1/10S472J
R	677		RS1/4S681J
R	678		RS2PMF6R8J
R	679		RS1/10S222J
R	680		RS1/4S122J
R	681		RS1/10S1R0J
R	682		RS1/16S104J
R	683		RS2PMF330J
R	684		RS1/10S222J
R	685		RS1/10S472J
R	686		RS1/10S472J
R	687		RS1/10S222J
R	688		RS1/10S472J
R	689		RS1/10S472J
R	690		RS1/10S102J
R	691		RS1/10S102J
R	692		RS1/10S102J
R	693		RS1/4S122J
R	694		RS1/16S473J
R	695		RS1/10S102J
R	696		RS1/10S102J
R	698		RS1/10S0R0J
R	699		RS1/10S0R0J
R	700		RS1/10S0R0J
R	701		RS1/10S0R0J
R	702		RS1/10S0R0J
R	705		RS1/16S103J
R	706		RS1/10S471J
R	708		RS1/10S473J
R	709		RS1/10S473J
R	710		RS1/10S223J
R	711		RS1/10S272J
R	712		RS1/10S124J
R	713		RS1/10S123J
R	714		RS1/10S223J
R	715		RS1/10S272J
R	716		RS1/10S0R0J
R	751		RS1/10S220J
R	752		RA3C473J
R	753		RA3C473J
R	754		RA4C222J
R	755		RA3C222J
R	756		RA3C222J
R	757		RA4C681J
R	800		RS1/10S0R0J
CAPACITORS			
C	101		CEJA100M16
C	102		CEJA100M16
C	103		CEJA100M16
C	104		CEJA100M16
C	105		CEJA1R0M50
C	106		CEJA1R0M50
C	108		CEJANP100M10
C	109		CEJANP100M10
C	110		CKSQYB152K50
C	111		CKSQYB152K50
C	112		CEJA1R0M50
C	113		CEJA1R0M50
C	114		CKSQYB822K50
C	115		CKSQYB822K50
C	116		CKSQYB183K50
C	117		CKSQYB183K50
C	118		CEJANP100M10
C	119		CEJANP100M10
C	120		CKSQYB334K16
C	121		CKSQYB334K16

=====Circuit Symbol and No.===Part Name			Part No.
C	122		CKSQYB103K25
C	123		CKSQYB103K25
C	124		CKSYB105K16
C	125		CKSYB105K16
C	126		CKSQYB823K25
C	127		CKSQYB823K25
C	128		CKSQYB333K25
C	129		CKSQYB333K25
C	130		CKSQYB104K16
C	131		CKSQYB562K50
C	132		CKSQYB473K16
C	133		CKSQYB104K16
C	134		CEJA4R7M35
C	135		CEJA4R7M35
C	136		CEJA4R7M35
C	137		CEJA4R7M35
C	138		CEJA470M10
C	139		CKSQYB104K16
C	140		CEJA100M16
C	141		CKSQYB104K16
C	142		CEJA1R0M50
C	143		CEJA1R0M50
C	201		CEJA101M10
C	202		CEWAR100M16
C	203		CEWAR100M16
C	204		CEWAR100M16
C	205		CEWAR100M16
C	206		CCSRCH101J50
C	207		CCSRCH101J50
C	208		CCSRCH101J50
C	209		CCSRCH101J50
C	210		CKSRYB103K25
C	211		CKSRYB103K25
C	212		CKSRYB103K25
C	213		CKSRYB103K25
C	214		CEJA4R7M35
C	215		CEJA4R7M35
C	216		CEJA4R7M35
C	217		CEJA4R7M35
C	218		CEJA1R0M50
C	219		CEJA1R0M50
C	220		CEJA1R0M50
C	221		CEJA1R0M50
C	222		CCSQCH101J50
C	223		CCSQCH101J50
C	224		CCSQCH101J50
C	225		CCSQCH101J50
C	226		CEJA2R2M50
C	227		CEJA2R2M50
C	228		CCSQCH101J50
C	229		CCSQCH101J50
C	251		CEJAR22M50
C	252		CEJAR22M50
C	253		CEJAR22M50
C	254		CEJAR22M50
C	255		CKSQYB104K16
C	256	4700µF/16V	CCH1178
C	257		CEJA1R0M50
C	258		CEJA220M16
C	301		CEJA1R0M50
C	302		CEJA1R0M50
C	303		CEJA1R0M50
C	304		CEJA1R0M50
C	305		CEJA100M16
C	306		CEJA100M16

ClibPDF - www.fastio.com

=====Circuit Symbol and No.===Part Name			Part No.
C	307		CKSQYB104K16
C	308		CKSQYB102K50
C	403		CKSQYB223K25
C	404		CKSQYB273K25
C	405		CKSQYB223K25
C	406		CKSQYB223K25
C	407		CKSQYB223K25
C	409		CKSQYB473K16
C	410		CKSQYB102K50
C	411		CEJA220M10
C	412		CKSQYB103K25
C	414		CKSQYB103K25
C	415		CEJA220M6R3
C	416		CEJA220M6R3
C	417		CKSQYB103K25
C	418		CKSQYB103K25
C	419		CFTLA474J50
C	420		CKSQYB103K25
C	421		CKLSR473K16
C	422		CKSQYB332K50
C	424		CKSQYB103K25
C	425	4.7μF/16V	CCH1250
C	427		CCSQCH150J50
C	428		CCSQCH150J50
C	429		CCSQCH101J50
C	431		CKSQYB103K25
C	432		CKSQYB103K25
C	433		CEJA220M6R3
C	434		CKSQYB102K50
C	435		CKSQYB103K25
C	436		CKSRYB103K25
C	437		CKSRYB223K25
C	438		CKSQYB103K25
C	439		CEAS101M10
C	601		CEJA330M10
C	602		CEJA1R0M50
C	603		CEAS331M16
C	604	1500μF/16V	CCH1201
C	605		CKSQYB103K25
C	606		CEJA470M10

=====Circuit Symbol and No.===Part Name			Part No.
C	607		CKSYB105K16
C	608		CKSQYB473K16
C	609		CKSQYB473K16
C	613		CKSQYB103K25
C	614		CKSQYB103K25
C	615		CKSQYB103K25
C	616		CEJA1R0M50
C	617		CKSQYB102K50
C	618		CKSQYB102K50
C	619		CEAS470M10
C	620	330μF/10V	CCH1181
C	621		CEAS101M10
C	622		CEAS470M10
C	623		CCSQCH180J50
C	624		CCSQCH180J50
C	626		CCSQCH101J50
C	630		CKSQYB102K50
C	631		CEJA2R2M50
C	632		CKSQYB473K16
C	634		CKSQYB473K16
C	650		CEJA4R7M35
C	671		CKSQYB103K25
C	672		CEAS471M10
C	673		CKSQYB104K16
C	674		CCSQCH101J50
C	679		CCSQCH101K50
C	701		CCSQCH101J50
C	751		CEJA100M16
C	752		CEJA100M16
C	753		CKSQYB103K25

● Keyboard Unit(Page 47)

Symbol and Description	Part No.	
	KEH-P8600R/EW	KEH-P8610/EE
LCD	CAW1403	CAW1407
IC1902	PD6199A	PD6233A

ClibPDF - www.fastio.com

ADJUSTMENT

● Connection Diagram

NOTE:

Select C1 so that total capacity of 80pF is attained from the direction of the receiver jack.

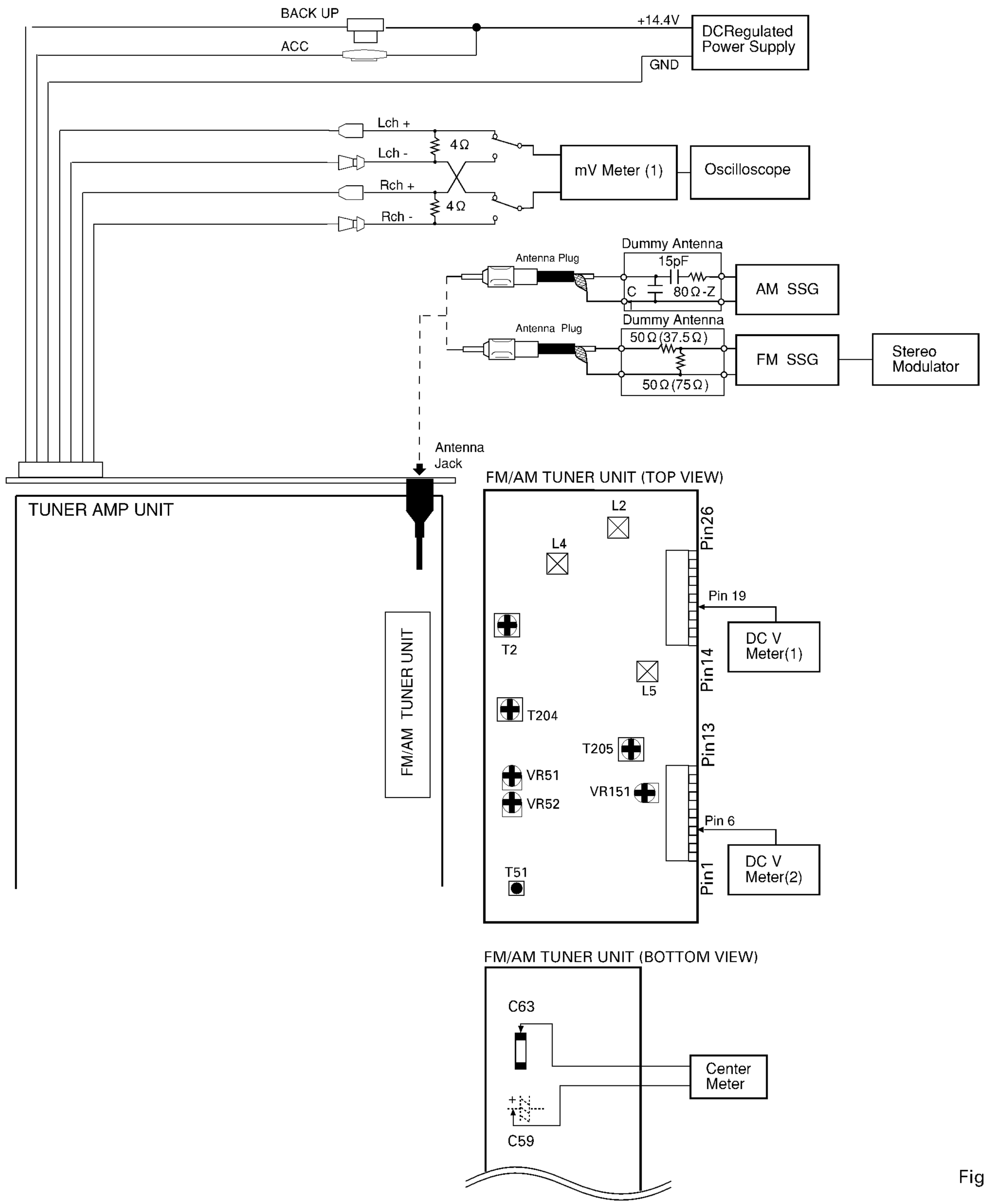


Fig. 5

FM ADJUSTMENT

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)
S:STEREO MOD., 1kHz, L or R=100%(67.5kHz+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.

	No.	FM SSG		Displayed	Adjustment	Adjustment Method
		Frequency(MHz)	Level(dBf)	Frequency(MHz)	Point	(Switch Position)
TUN Volt	1	108.0 M	65	108.0	L5	DC V Meter(1) : 8.0V±0.1V
IF	1	98.1 M	65	98.1	T51	Center Meter : 0
ANT,RF	1	106.1 M	10	106.1 M	L2,L4	mV Meter(1) : Maximum
IFT	1	98.1 M	10	98.1	T2	mV Meter(1) : Maximum (STEREO MODE)
Soft Mute	1	98.1 M	65	98.1	———	mV Meter(1) : Maximum (STEREO MODE)
	2	98.1 M	10	98.1	VR52	mV Meter(1) : A-3dB
ARC	1	98.1 S	40	98.1	VR151	mV Meter(1) : Separation 5dB
SD	1	98.1 S	22	98.1	VR51	DC V Meter(2) : Approx. 5V

AM ADJUSTMENT

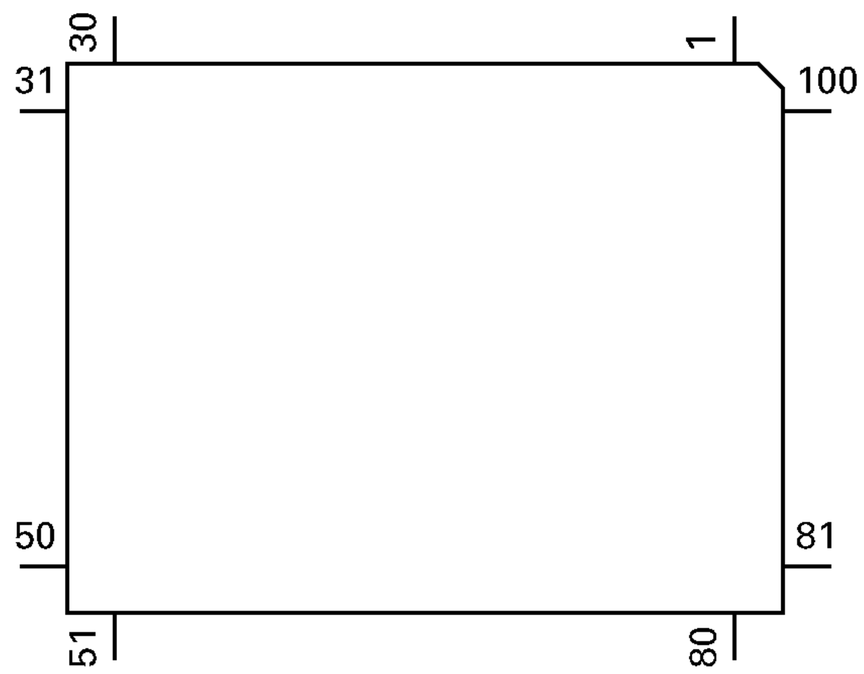
	No.	AM SSG		Displayed	Adjustment	Adjustment Method
		Frequency(MHz)	Level(dBf)	Frequency(MHz)	Point	(Switch Position)
IF	1	999	20	999	T204,T205	mV Meter(1) : Maximum

ClibPDF - www.fastio.com

GENERAL INFORMATION

IC

*PD4849A



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

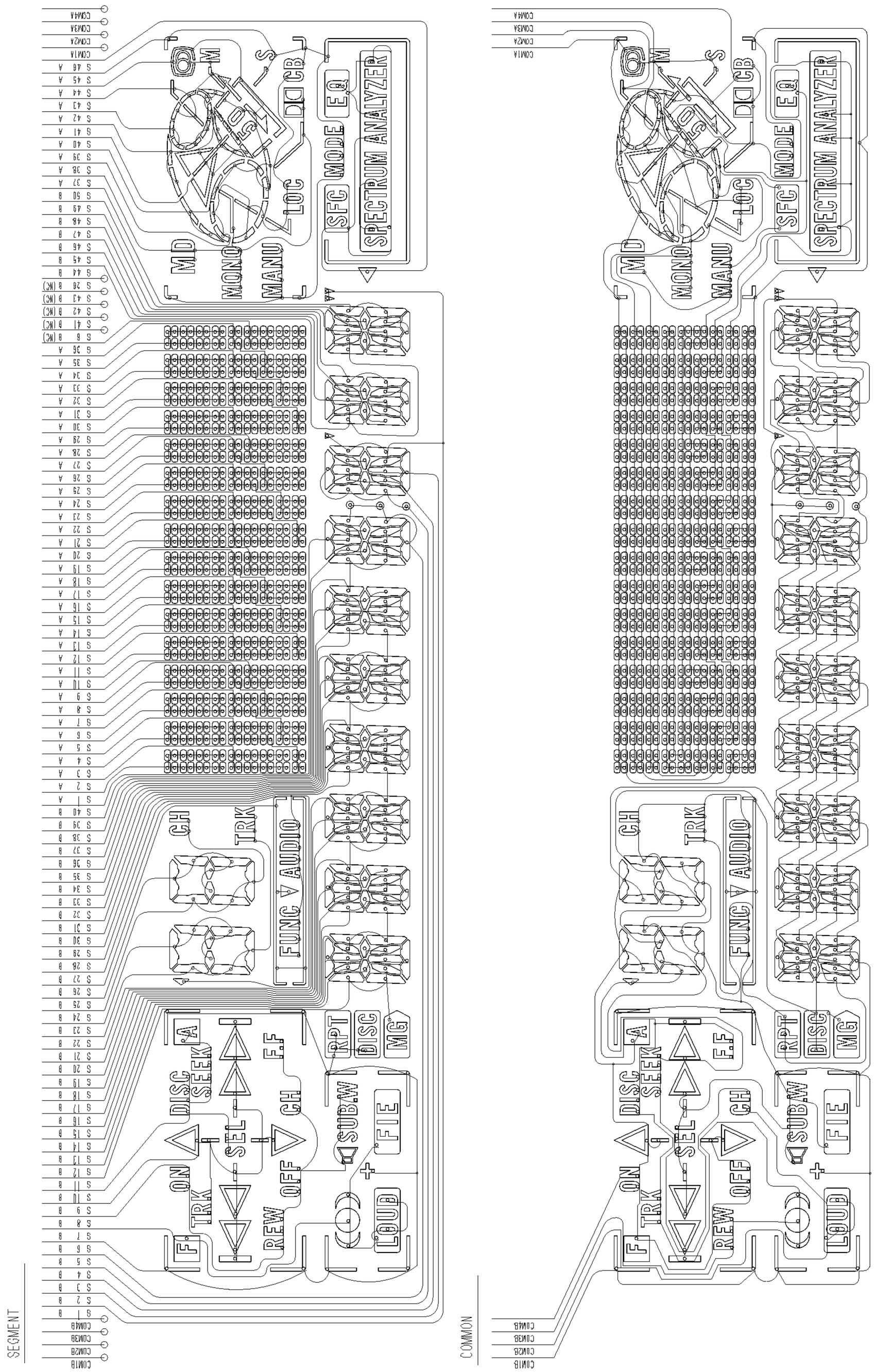
● Pin Functions (PD4849A)

Pin No.	Pin Name	I/O	Function and Operation
1	$\overline{\text{SWVDD}}$	O	Keyboard unit power supply control output
2	$\overline{\text{DSENS}}$	I	Grille detach sense
3	$\overline{\text{CSENS}}$	I	Flap close sense input
4	$\overline{\text{ISENS}}$	I	Illumination sense input
5	TESTIN	I	Test program mode input
6-10	NC		Not used
11	$\overline{\text{RESET}}$	I	Reset input
12	XT2		(open)
13	XT1	I	(VSS)
14	VSS		(GND)
15	X2		Crystal oscillator connection pin
16	X1	I	Crystal oscillator connection pin
17	REGC		(VDD)
18	REGOFF		(VDD)
19	VDD		Power supply
20	ILMPW	O	Illumination power supply control output
21	SYSPWR	O	System power control output
22	$\overline{\text{ADPW}}$	O	A/D converter power output
23	LCDPW	O	LCD back light power supply control output
24	IPPW	O	Power supply control output for IP BUS interface IC
25	ASENBO	O	Slave power supply control output
26	PRSBSW	I	PRE OUT/MAIN IN select input
27	TELIN	I	TEL mute signal input
28	MUTE	O	Mute output
29	DIM	O	Dimmer select output
30	SPMPX0	O	MPX output for spectrum analyzer 0
31	SPMPX1	O	MPX output for spectrum analyzer 1
32	SPMPX2	O	MPX output for spectrum analyzer 2
33	VCK	O	Clock output for electronic volume
34	VST	O	Strobe pulse output for electronic volume
35	VDT	O	Data output for electronic volume
36,37	NC		Not used
38	SD	I	Station detector input
39	$\overline{\text{ST}}$	I	FM stereo input
40	VSS		GND
41	VDD		Power supply
42	$\overline{\text{MDSENS}}$	I	Modulation detect input

ClibPDF - www.fastio.com

Pin No.	Pin Name	I/O	Function and Operation
43,44	NC		Not used
45	$\overline{\text{CURRQ}}$	O	Tuner voltage FIX output
46	NC		Not used
47	DRELAY	O	External relay output
48	DRSENS	I	Door open/close sense input
49	DRSYS	O	Door system select output
50	$\overline{\text{DLED}}$	O	Alarm LED output
51	DLSENS	I	Door lock sense input
52	STCUT	O	Starter cut off output
53	$\overline{\text{MOSENS}}$	I	Motion/window damage sensor input
54	MSIN	I	MS sense input
55	$\overline{\text{MTLSW}}$	I	Metal sense input
56	POS	I	Position sense input
57	RES	I	Cassette mechanism reverse end sense input
58	NES	I	Cassette mechanism foward end sense input
59	DIRO	O	Head F/R select output
60	PLAY	O	MS gain select output
61	DLBYBC	O	Dolby $\overline{\text{B}}$/C select output
62	PCL	O	Clock adjustment output
63	NR	O	NR output
64	SC2	O	Cassette mechanism sub motor control2 output
65	SC1	O	Cassette mechanism sub motor control1 output
66	CM	O	Cassette mechanism capstan motor control output
67	$\overline{\text{STBY}}$	O	Drive control output
68	LOADSW	I	Tape loading input
69–72	NC		Not used
73	TEST	I	Test terminal
74	SL	I	Signal level input
75	SEL	I	Select input for the destination
76	LEVEL	I	Level input for spectrum analyzer
77	CL	I	Synchronizing signal input of display data latch
78	NL	I	Noise level input
79–81	NC		Not used
82	AVDD		A/D converter analog power supply (VDD)
83	AVREF1		(VDD)
84	GND		GND
85	RX	I	IP BUS data input
86	TX	O	IP BUS data output
87	GND		GND
88	$\overline{\text{LDET}}$	I	PLL lock sense input
89	$\overline{\text{RCK}}$	I	RDS clock input
90	RDS57K	I	57kHzBP-OUT sense input
91	SEL0		Not used
92	$\overline{\text{ASENS}}$	I	ACC power sense input
93	$\overline{\text{BSENS}}$	I	Back up power sense input
94	TUNPDI	I	PLL IC data input
95	KEYDT	I	Display data input
96	DPDT	O	Display data output
97	TUNPCK	O	PLL IC clock
98	TUNPDO	O	PLL data output
99	TUNPCE	O	PLL IC chip enable
100	PEE	O	Beep tone output

ClibPDF - www.fastio.com

DISPLAY

● CAW1407