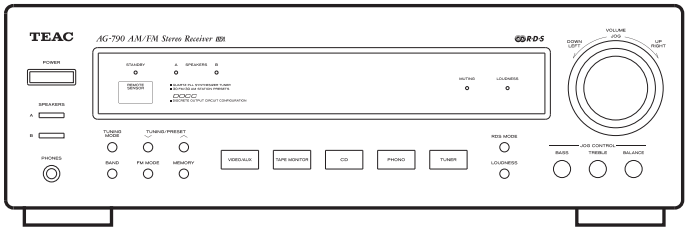
TEAC



SERVICE MANUAL

AG-790E

AM/FM STEREO RECEIVER

Model name of the AG-790 has been changed to AG-790E from S/N 0AL0001 and higher to cope with Eco Power requirement. Use this service manual according to the S/N of the unit.

CONTENTS

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams supplied pripor to this manual.
- ⚠ Parts marked with this sign are safety critical components. They must be replaced with designated components.
- Destination of product is expressed by [ ] mark and ensure exact replacement: **[EUR]: EUROPE, [UK]: U.K., [USA]: U.S.A.**

Effective : June 2010

G-1008A

1. SPECIFICATIONS

Amplifier Section

Output Power ..... 90 + 90 watts RMS (0.9 % THD, 1 kHz, 8 ohms)
Total Harmonic Distortion 0.05 % (at 80 watts,1 kHz)
Input Sensitivity/Impedance PHONO: 6.5 mV/22 kohms
LINE: 230 mV/22 kohms
Signal-to-Noise Ratio ..... PHONO: 75 dB (IHF-A)
LINE: 90 dB (IHF-A)
Tone Control ..... BASS: ±10 dB at 100 Hz
TREBLE: ±10 dB at 10 kHz
Loudness Control ..... +4 dB at 100 Hz

FM Tuner Section

Tuning Range ..... 87.5 MHz to 108.0 MHz
Usable Sensitivity ..... Mono: 10 dBµV/m
50 dB Quieting Sensitivity ..... Mono: 15 dBµV/m
Stereo: 33 dBµV/m
Image Rejection Ratio ..... 35 dB
AM Suppresion Ratio ..... 50 dB
Harmonic Distortion (1 kHz) Mono: 0.5 %, Stereo: 0.5 %
Frequency Response ..... 20 Hz to 15 kHz, –3 dB
Stereo Separation (1 kHz) ..... 35 dB
Signal-to-Noise Ratio ..... Mono: 70 dB
Stereo: 65 dB (IHF-A)

AM Tuner Section

Tuning Range ..... 522 kHz to 1,620 kHz, 9 kHz steps [EUR], [UK]
530 kHz to 1,720 kHz, 10 kHz steps [USA]
Usable Sensitivity..... 55 dB
Total Harmonic Distortion ..... 1 % at 100 dBµV/m
Signal-to-Noise Ratio ..... 40 dB at 100 dBµV/m

General

Power Requirements
230 V AC, 50 Hz [EUR], [UK]
120 V AC, 60 Hz [USA]
Power Consumption ..... 280 W [EUR], [UK]
2.5A [USA]
0.6 W (standby)
AC Outlet (Total 100 W max) ..... Unswitched x 1
Dimensions (W x H x D) ..... 435 x 144 x 330 mm
Weight (net) ..... 7.4 kg (16.31 lb)

Operating temperature ..... +5°C - +35°C
Operating humidity ..... 5% - 85% (no condensation)
Storage temperature ..... -20°C - +55°C

Standard Accessories

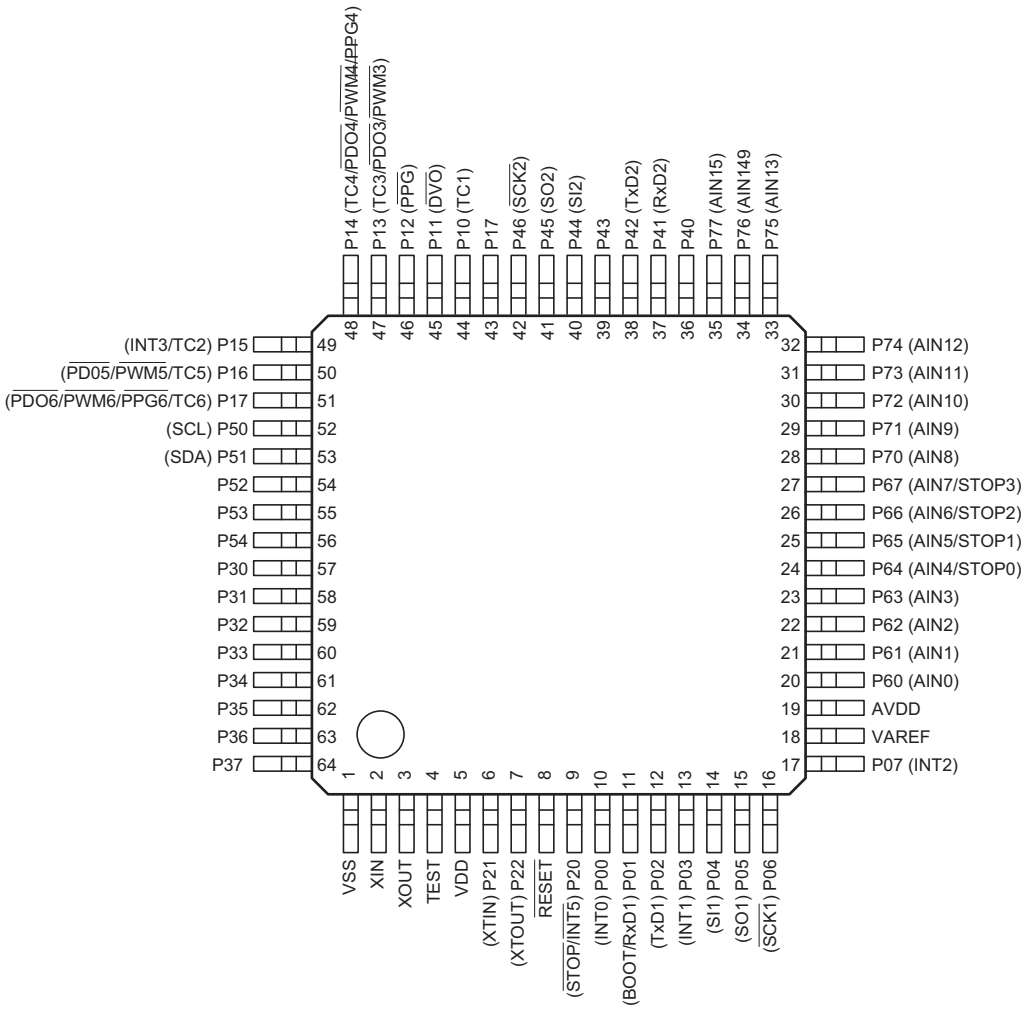
AM Loop Antenna x 1
FM Antenna x 1
Remote Control Unit (UR-415B) x 1
Battery (AA, R6, SUM-3) x 2
Owner's manual x 1
Warranty card x 1

*LINE means CD, TAPE MONITOR , VIDEO/AUX.

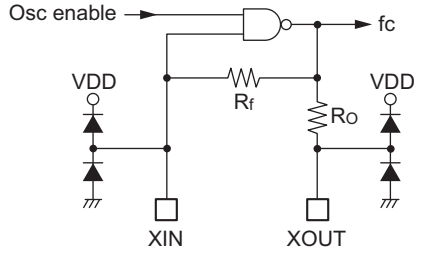
2. BRIEF OVERVIEW OF LSI

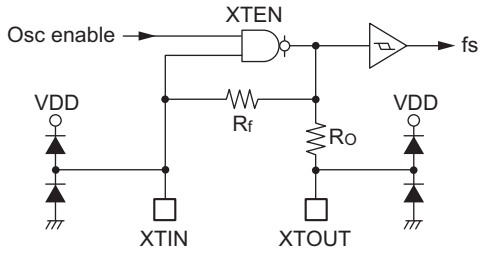
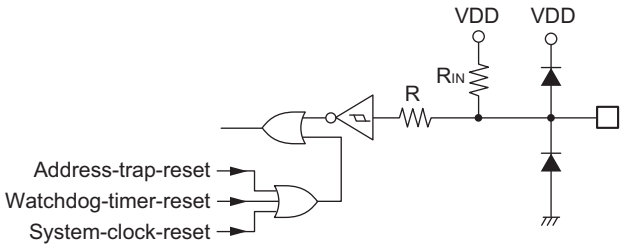
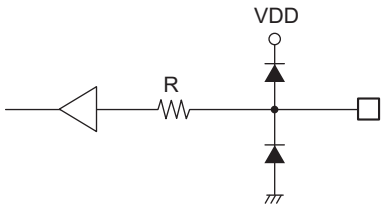
CMOS 8-Bit MCU with 61440 bytes Flash memory (PQFP64) TOSHIMA T5CB5, FRONT PCBA IC91

Pin Configuration (Top View)



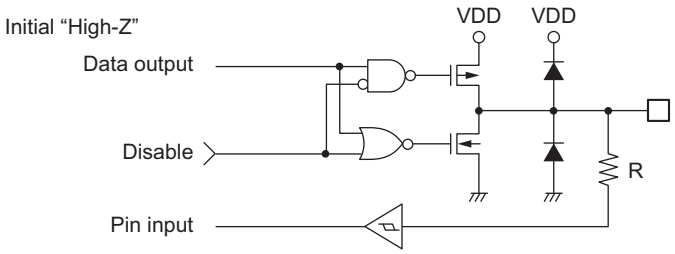
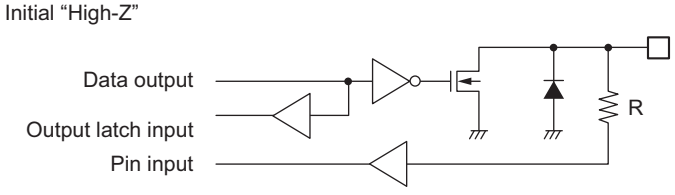
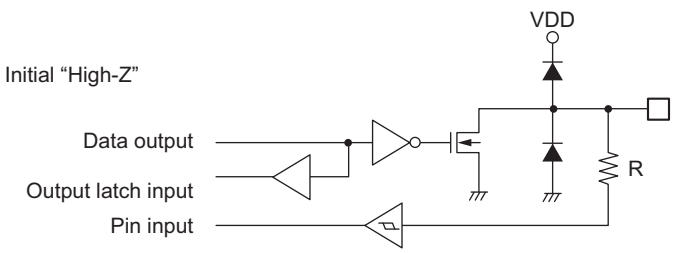
Control pins

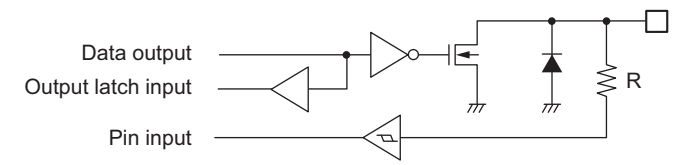
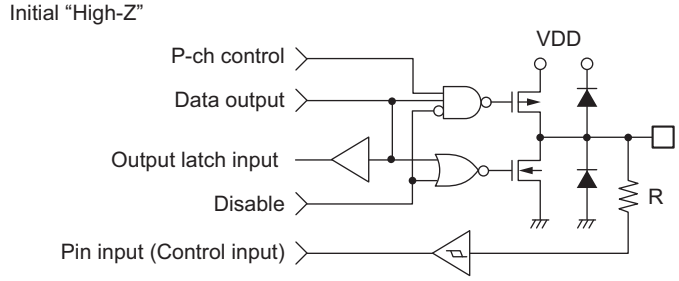
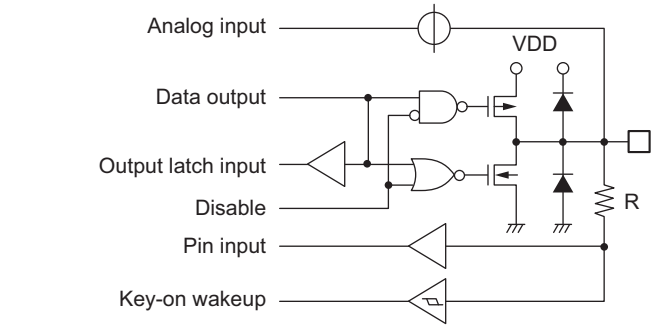
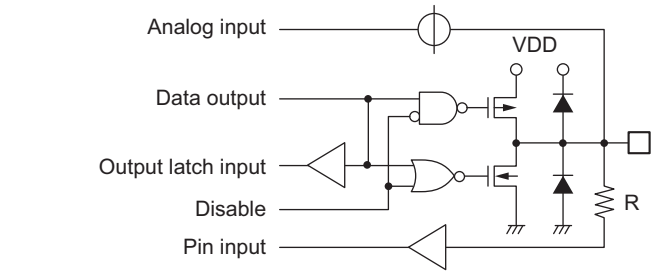
Pin No.	Control Pin	Input/Output	Input/Output Circuitry	Remarks
2	XIN	Input		Resonator connecting pins (High frequency) R_f = 1.2 MΩ (typ.) R_O = 0.5 MΩ (typ.)
3	XOUT	Output		

6	XTIN	Input		Resonator connecting pins (Low frequency) R_f = 6 MΩ (typ.) R_O = 220 kΩ (typ.)
7	XTOUT	Output		
8	$\overline{\text{RESET}}$	Input		Hysterisis input Pull-up resistor R_{IN} = 220 kΩ (typ.) R = 100 Ω (typ.)
3	TEST	Input		R = 100 Ω (typ.)

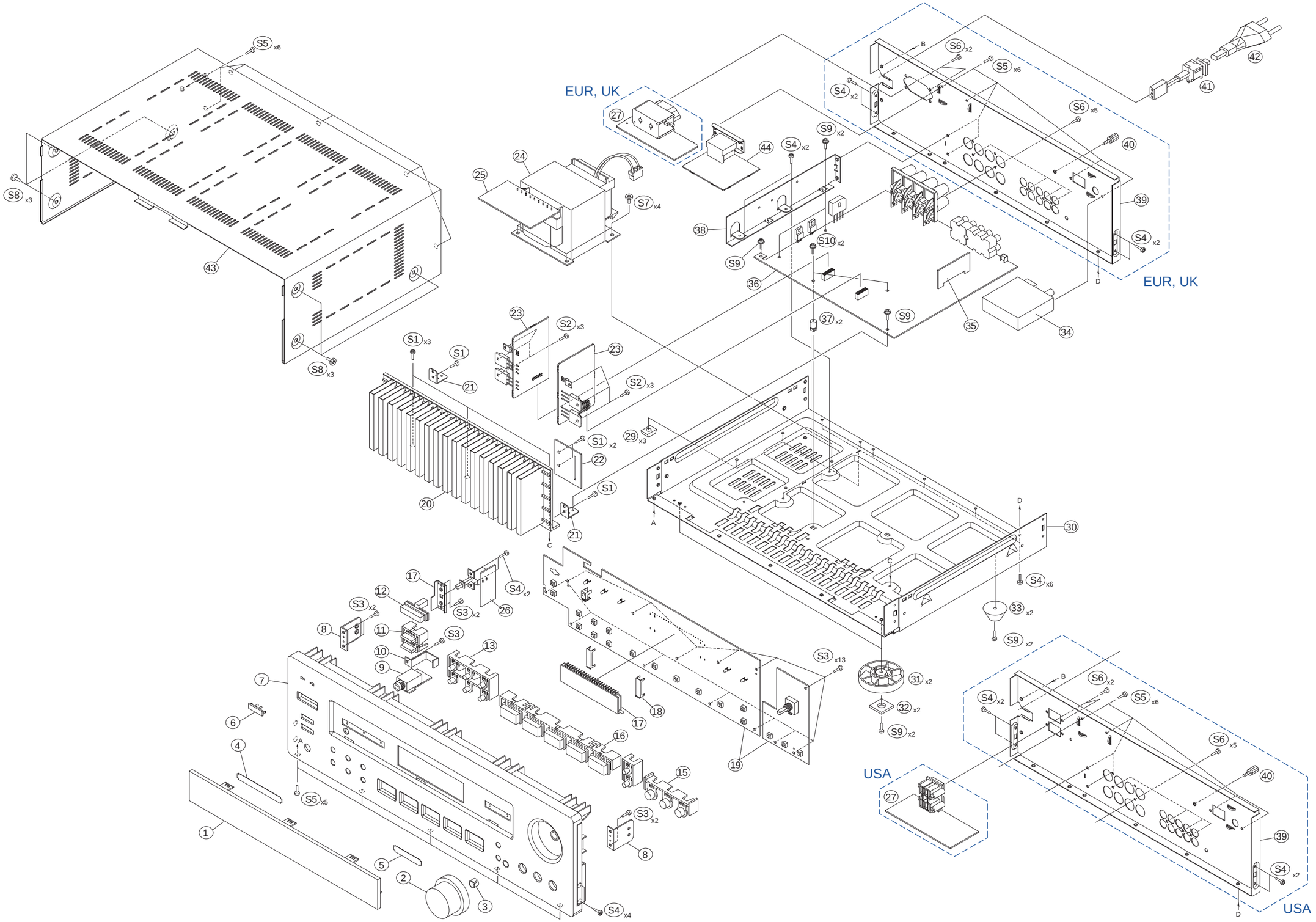
Note: The TEST pin of the T5CB5 does not have a pull-down resistor. Fix the TEST pin at low-level.

Input/Output Ports

Pin No.	Port	I/O	Input/Output Circuitry	Remarks
11	P1	I/O		Tri-state I/O Histerisis input R = 100 Ω (typ.)
13	P3	I/O		Sink open drain output High current output R = 100 Ω (typ.)
12	P2	I/O		Sink open drain output Histerisis input R = 100 Ω (typ.)

15	P5	I/O	Initial “High-Z” 	Sink open drain output High current output Histerisis input R = 100 Ω (typ.)
10	P0	I/O	Initial “High-Z” 	Sink open drain output or C-MOS output Histerisis input R = 100 Ω (typ.)
14	P4	I/O		
27	P67	I/O	Initial “High-Z” 	Tri-state I/O R = 100 Ω (typ.)
26	P66	I/O		
25	P65	I/O		
24	P64	I/O		
23	P63	I/O	Initial “High-Z” 	Tri-state I/O R = 100 Ω (typ.)
22	P62	I/O		
21	P61	I/O		
26	P60	I/O		
17	P7	I/O		

3. EXPLODED VIEWS AND PARTS LISTS

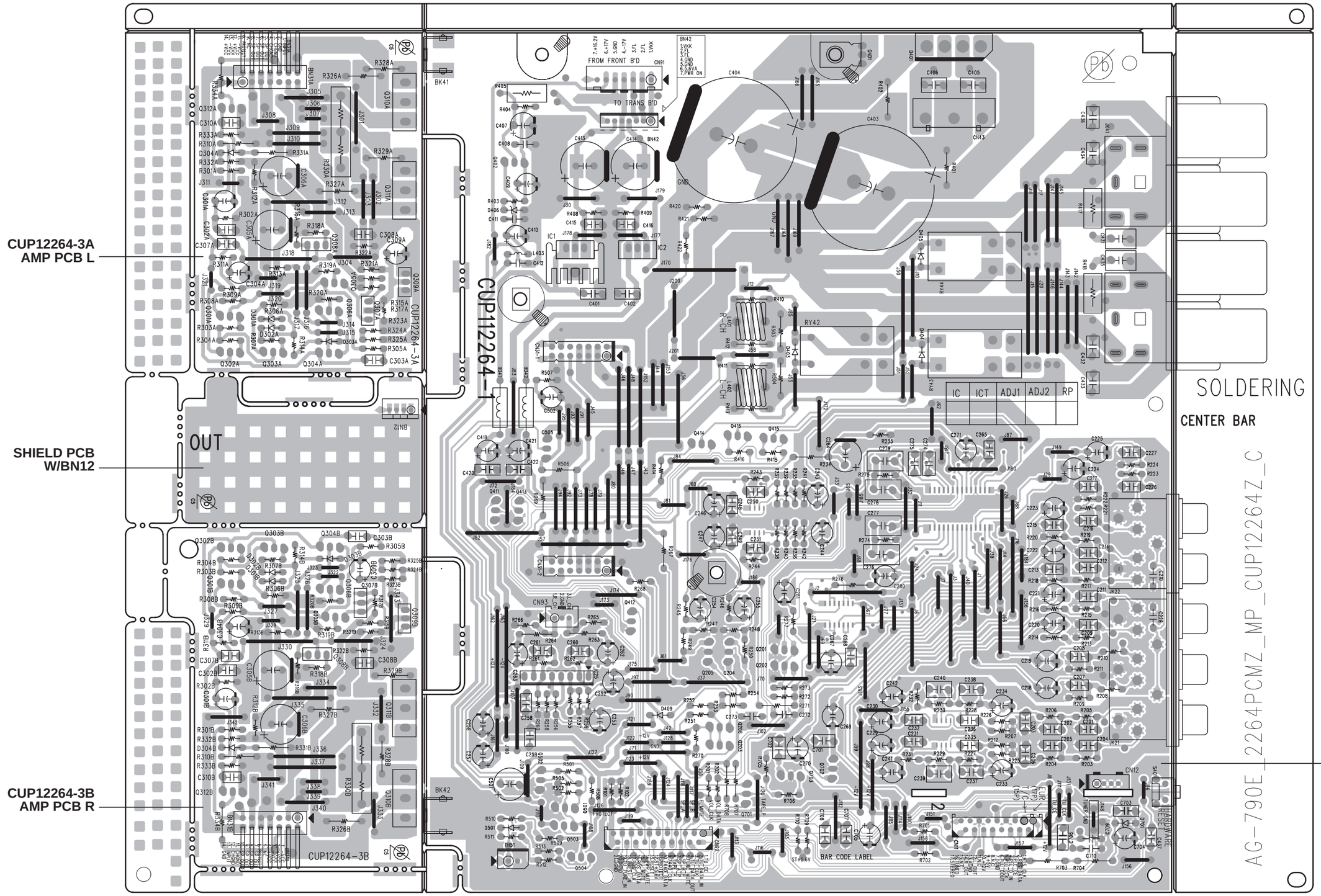


EXPLODED VIEW

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1	CGU1A375Y	WINDOW AG-790	
2	CBN1A122	KNOB, VOLUME	
3	CMC1A140	RING, SHAFT	
4	CGX1A369Z	SHEET, LED	
5	CGX1A370Z	SHEET, LED	
6	CGB1A165H8	BADGE, TEAC	
7	CGW1A405R4WH10	PANEL, FRONT AG-790 [EUR], [UK]	
	CGW1A405R4XH10	PANEL, FRONT AG-790 [USA]	
8	CMD2A563	BRACKET	
9		H/P PCB ASSY	United on FRONT PCBA, see page 11
10	CMK2A010	BRACKET, PCB	
11	CBT1A991	KNOB, SPEAKER	
12	CBC1A152	KNOB, POWER	
13	CBT1A992	KNOB, TUNING	
14	CMD1A334	BRACKET, POWER	
15	CBT1A994	KNOB, BASS	
16	CBT1A993Y	KNOB, FUNCTION AG-790	
17	HFLSVA09MS10	F.I.P, SVA09MS10	
18	CMD1A374	BRACKET, FIP	
19	COP12263B	FRONT PCB ASSY AG-790MK2 [EUR], [UK]	
	COP12263D	FRONT PCB ASSY AG-790MK2 [USA]	
20	CMY1A347	HEATSINK	
21	CMD1A387	BRACKET, PCB	
22		PCB, FFC SUPPORT	United on FRONT PCBA, see page 11
23		AMP PCB ASSY, L/R	United on MAIN PCBA, see page 8
24	⚠ CLT5U038ZE	TRANS, POWER AG-790MK2 [EUR], [UK]	
	⚠ CLT5U038ZU	TRANS, POWER AG-790MK2 [USA]	
25		POWER SECONDARY PCB ASSY	United on FRONT PCBA, see page 11
26	⚠	POWER SW PCB ASSY	United on FRONT PCBA, see page 11
27	⚠	POWER PRIMARY PCB ASSY	United on FRONT PCBA, see page 11
28	Not in use		
29	CHG1A113	RUBBER	
30	CUA2A168	CHASSIS, BOTTOM	
31	CKL2A042H11	FOOT, FRONT	
32	CHG1A360	CUSHION, FOOT	
33	CKL1A012	FOOT, RUBBER BLACK	
34	CNVMB114MA18L	TUNER MODULE [EUR], [UK]	
	CNVMB014MA0J8LS	TUNER MODULE [USA]	
35		SHIELD PCB W/BN12	United on MAIN PCBA, see page 8
36	COP12264B	MAIN PCB ASSY AG-790MK2 [EUR], [UK]	
	COP12264D	MAIN PCB ASSY AG-790MK2 [USA]	
37	CHE1A023	MOUNT, PCB	
38	CMD1A392	BRACKET, PCB	
39	CKF8A172Z	PANEL, REAR [EUR], [UK]	
	CKF9A172Z	PANEL, REAR [USA]	
40	KMA2A001	TERMINAL, GROUND	
41	KHR1A028	BUSHING, AC CORD	
42	⚠ CJA2B043ZA	CORD, POWER [EUR], [UK]	
	⚠ CJA523FBYA	CORD, POWER [USA]	
43	CKC1A098B25	CABINET, TOP AG-790	
44	⚠	SUB TRANS PCB ASSY	United on FRONT PCBA, see page 11
S1	CTW3+8JR	SCREW	
S2	CHD1A012R	SCREW, SPECIAL	
S3	CTB3+10JR	SCREW	
S4	CTB3+6JR	SCREW	
S5	CTB3+8JFZR	SCREW	
S6	CTB3+10JFZR	SCREW	
S7	CTB4+8FR	SCREW	
S8	CTB4+6FFZR	SCREW	
S9	CTW3+8J	SCREW	
S10	CTW3+16G	SCREW	

4. PC BOARDS AND PARTS LISTS

MAIN PCB



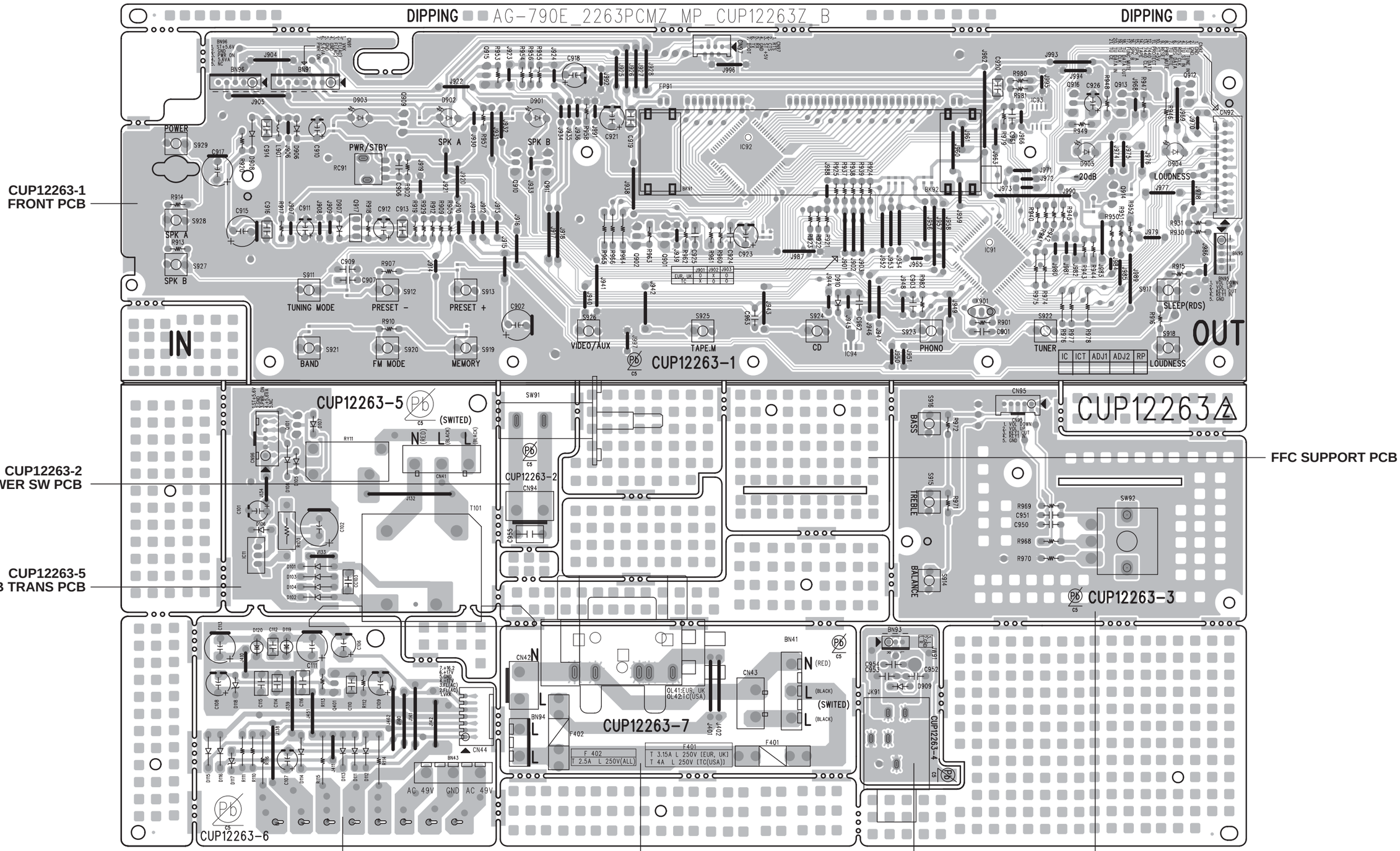
MAIN PCB-A ASSY

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	COP12264B	MAIN PCB ASSY AG-790MK2 [EUR], [UK]	
	COP12264D	MAIN PCB ASSY AG-790MK2 [USA]	
	└CUP12264Z	PCB, MAIN AG-790MK2 (330x247 FR1/1)	
	CUP12264-1	MAIN PCB	
BK41,42	CMD1A387	BRACKET, PCB	
BN42	CWB1C00710047	WIRE ASSY, 7 P 100 MM BLACK (RED)	
C264	CCEA1EH331T	CAP, ELECT 330 UF/25V	
C403,404	CCET80VKL5682NK	CAP, ELECT 6800 UF/80 V	
C407,409,410,704 C705	CCEA1EH101T	CAP, ELECT 100 UF/25V	
C413,414	CCEA1EH222E	CAP, ELECT 2200 UF/25 V	
CN11	CJP17GA115ZY	WAFER, CARD CABLE [EUR], [UK]	
	CJP15GA115ZY	WAFER, CARD CABLE [USA]	
CN12	CJP04GA98ZM	WAFER	
CN31-1,31-2	CJP14GA221ZB	FEMALE HEADER, 14P 2.54 MM STRAIGHT	
CN43	CJP03GA89ZY	WAFER	
CN91	CJP07GI237ZW	WAFER, LOCKING TYPE STRAIGHT 2.5 MM	
CN92	CJP21GA115ZY	WAFER, CARD CABLE	
CN93	CJP03GI236ZW	WAFER, LOCKING TYPE,STRAIGHT 2 MM	
D401	HVDKBU804F	DIODE, BRIDGE KBU804F	
D403~405,409,501	CVD1SS133MT	DIODE, 1SS133	
D406	HVDMTZJ6.2BT	DIODE, ZENER MTZJ6.2B 1/2 W	
D701	HVDMTZJ5.1BT	DIODE, ZENER MTZJ5.1B 1/2 W	
GND1	HJT1A025	PALTE, EARTH	
IC1	CVIKIA7812APIJA	I.C HEAT SINK ASSY (CMY2A223)	
	└HVIKIA7812API	I.C, REGULATOR KIA7812API	
	CMY2A223	HEATSINK	
	CTB3+8JR	SCREW	
IC2	HVIKIA7912PI	I.C, REGULATOR KIA79XXPI	
IC21,22	HVINJM2068MDTE1	I.C, OP AMP NJM2068MD-TE1	
IC23	CVITDA7440D	I.C, VOLUME TDA7440D SO-28P	
IC24	HVICD4066BM96	I.C, SWITCH CD4066BM96	
IC25	HVINJM4556AL	I.C, H/P NJM4556AL	
JK21	CJJ4R019W	TERMINAL, IN/OUT	
JK22	CJJ4P014W	JACK, IN/OUT	
JK41	CJJ5Q006Z	TERMINAL, SPEAKER	
L401,402	CLEY0R5KAK	COIL, SPEAKER 0.5UH	
L403	HLQ02C100KT	COIL, AXAIL (10UH)	
Q201,202,414,415 Q416	HVTKRC107MT	T.R, KRC107M	
Q203,206,411~413 Q503	HVTKRA107MT	T.R, KRA107M	
Q205,501,502,702 Q703	HVTKTC2874BT	T.R, MUTE KTC2874B	
Q402	CVTKTC1027YT	T.R, KTC1027Y	
Q504	HVTKTC3198YT	T.R, KTC3198Y	
Q505	HVTKTA1268GRT	T.R, KTA1268GR	
Q701	HVTKTA1267YT	T.R, KTA1267Y	
R405,417,418	CRG1ANJ680H	RES, METAL OXIDE FILM 68 OHM 1W J	
RY42~44	CSL3A018ZE	RELAY G5PA-28-MC , DC12V	
S401	CST1A010Z	SW, TACT	
TH51	CRTMM8003	POSISTOR ASSY	

MAIN PCB-A ASSY

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	CUP12264-3A	AMP PCB L	
BN31A	CJP14GB142ZB	PIN HEADER (14PIN, 2.54 MM, ANGLE)	
C305A,306A	CCEA2AH101E	CAP, ELECT 100 UF/100 V	
D301A~304A	CVD1SS133MT	DIODE, 1SS133	
Q301A~303A,312A	HVTKTC3200GRT	T.R, KTC3200GR	
Q304A,305A	HVTKTA1024YT	T.R, KTA1024Y	
Q306A	HVTKTC3206YAT	T.R, KTC3206YA	
Q307A	HVTKTA1360Y	T.R, PRE DRIVE KTA1360Y	
Q308A	HVTKTC3423Y	T.R, PRE DRIVE KTC3423Y	
Q309A	HVTKTC3114A	T.R, BIAS KTC3114A	
Q310A	HVT2SD2560	T.R, POWER 2SD2560	
Q311A	HVT2SB1647	T.R, POWER 2SB1647	
R330A	CRF5EKR27HX2K	RES, CEMENT 0.27 OHM	
	CUP12264-3B	AMP PCB R	
BN31B	CJP14GB142ZB	PIN HEADER (14PIN, 2.54 MM, ANGLE)	
C305B,306B	CCEA2AH101E	CAP, ELECT 100 UF/100 V	
D301B~304B	CVD1SS133MT	DIODE, 1SS133	
Q301B~303B,312B	HVTKTC3200GRT	T.R, KTC3200GR	
Q304B,305B	HVTKTA1024YT	T.R, KTA1024Y	
Q306B	HVTKTC3206YAT	T.R, KTC3206YA	
Q307B	HVTKTA1360Y	T.R, PRE DRIVE KTA1360Y	
Q308B	HVTKTC3423Y	T.R, PRE DRIVE KTC3423Y	
Q309B	HVTKTC3114A	T.R, BIAS KTC3114A	
Q310B	HVT2SD2560	T.R, POWER 2SD2560	
Q311B	HVT2SB1647	T.R, POWER 2SB1647	
R330B	CRF5EKR27HX2K	RES, CEMENT 0.27 OHM	
		SHIELD W/BN12 PCB	
BN12	CJP04GB99ZM	WAFER	
	CMY1A347A	HEATSINK ASSY	
	└CHD1A012R	SCREW, SPECIAL	
	CMY1A347	HEATSINK	
	CTB3+8JR	SCREW	
	CTW3+8JR	SCREW	

FRONT PCB


DIPPING
AG-790E_2263PCMZ_MP_CUP12263Z_B
DIPPING
CUP12263-1
FRONT PCB
CUP12263-2
POWER SW PCB
CUP12263-5
SUB TRANS PCB
FFC SUPPORT PCB
CUP12263-6
POWER SECONDARY PCB
CUP12263-7
POWER PRIMARY PCB
CUP12263-4
H/P PCB
CUP12263-3
VOLUME ENCODER PCB
POWER
PWR/STBY
SPK A
SPK B
TUNING MODE
PRESET -
PRESET +
BAND
FM MODE
MEMORY
VIDEO/AUX
TAPE.M
CD
PHONO
TUNER
SLEEP(RDS)
LOUDNESS
20dB
IN
OUT
BASS
TREBLE
BALANCE
(SWITED)
AC 49V
GND
AC 49V

FRONT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	COP12263B	FRONT PCB ASSY AG-790MK2 [EUR], [UK]	
	COP12263D	FRONT PCB ASSY AG-790MK2 [USA]	
	└CUP12263Z	PCB, FRONT AG-790MK2 (330x247 FR1/1)	
	CUP12263-1	FRONT VFD & MCU PCB	
BK91,92	CMD1A374	BRACKET, FLT	
BN91	CWB1B00725058	WIRE ASSY, LOCKING TYPE	
BN95	CWB1B00505047	WIRE ASSY, 5 P LOCKING TYPE 50 MM	
BN96	CWB1B00535058	WIRE ASSY, 9 P STRAIGHT 350 MM	
C902,915,917,923	CCEA0JH102T	CAP, ELECT 1000 UF/6.3 V	
CN92	CJP21GB116ZY	WAFER	
CN97	CJP07GB113ZY	WAFER, CARD CABLE	
D901~905	HVD342VCTB7T089	L.E.D, RED SLR342VCTB7T089	
D906,907,910	CVD1SS133MT	DIODE, 1SS133	
D908	HVD1N5819T	DIODE, SCHOTTKY 1N5819	
FP91	HFLSVA09MS10	F.I.P, SVA09MS10	
IC91	CVIANAM1505AT	I.C, U-COM ASSY AG-790MK2 (T5CB5PQ)	
	└CVIT5CB5PQ	I.C, MCU (FLASH 61440 bytes PQFP64)	
IC92	HVILC75725E	I.C, VFL DRIVER LC75725E	
IC93	CVIAT24C04BNSHB	I.C, EEPROM AT24C04BNSHB 4K	
IC94	CVIML61C452PR	I.C, RESET ML61C452PR 4.5V	
L901	HLQ02C100KT	COIL, AXAIL (10UH)	
Q901,902,915	HVTKRC102MT	T.R, KRC102M	
Q909,910,911,914	HVTKRC107MT	T.R, KRC107M	
Q916			
Q912,913	HVTKRA107MT	T.R, KRA107M	
Q917	CVTKTA1272YT	T.R, KTA1272Y-AP/P	
RC91	CRVKSM603TH5B	SENSOR, REMOCON	
S911~913,917~928	CST1A012ZT	SW, TACT SKHV10910G	
X901	CVFCSTLS16M0X53A0	RESONATOR, CERAMIC (16 MZ 15 PF)	
	CUP12263-2	POWER SW PCB	
CN94	CJP02KA060ZY	WAFER	
SW91	KSH1A001ZV	SW, PUSH MOMS	
	CUP12263-3	VOLUME ENCODER PCB	
CN95	CJP05GI236ZW	WAFER, LOCKING TYPE STRAIGHT 2 MM	
S914~916	CST1A012ZT	SW, TACT SKHV10910G	
SW92	CSR2A036Z	ENCODER VR	
	CUP12263-4	H/P PCB	
BN93	CWB1B00345047001	WIRE ASSY, 3P LOCKING TYPE 450 MM	
D909	CVD1SS133MT	DIODE, 1SS133	
JK91	CJJ2E020Z	JACK, PHONES	
JW91	CWE7202100RV	WIRE ASSY CR-H130	
	CUP12263-5	SUB TRANS PCB	
C101	CCEA1CH101T	CAP, ELECT 100 UF/16 V	
C102	CCEA1EH471E	CAP, ELECT 470 UF/25 V	
CN41	CJP03GA89ZY	WAFER	
CN96	CJP05GI237ZW	WAFER, LOCKING TYPE, STRAIGHT 2.5 MM	
D101~104	CVD1N4003ST	DIODE, RECT 1N4003	
D105~107	CVD1SS133MT	DIODE, 1SS133	
D108	HVD1N5819T	DIODE, SCHOTTKY 1N5819	
IC11	HVIKIA7805API	IC, REGULATOR, 7805API +5V	
Q101	HVTKRC107MT	T.R, KRC107M	

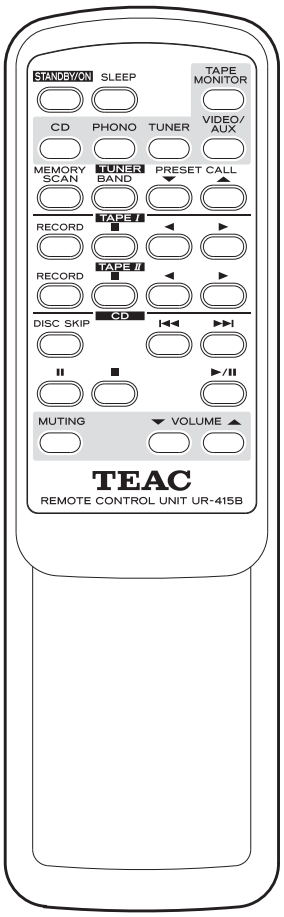
FRONT PCB ASSY

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
R103	CRG1ANJ100H	RES, METAL OXIDE FILM	
RY11	CSL1E002ZE	RELAY, POWER G5PA-1 (DC 6V)	
T101	CLT5J040ZE	SUB TRANS, VISO FIVE [EUR], [UK]	
	CLT5J040ZU	SUB TRANS AG-790MK2 [USA]	
	CUP12263-6	POWER SECONDARY PCB	
BN43	CWB4D053200UZ	WIRE ASSY, 5P 200 MM 3W BLACK (RED)	
CN44	CJP07GJ247ZW	WAFER, 9 P LOCK ANGLE 2.0 MM	
C111,113	CCEA1HH101T	CAP, ELECT 100 UF/50 V	
D111~116,119,120	CVD1N4003ST	DIODE, RECT 1N4003	
D117	HVDMTZJ6.2BT	DIODE, ZENER MTZJ6.2B 1/2 W	
D118	CVDZJ30BT	DIODE, ZENER ZJ30B 1/2 W	
Q401	HVTKTA1271YT	T.R, KTA1271Y	
R114~116	KRQ1AJR47H	RES, FUSE 0.47 OHM 1W J	
	CUP12263-7	POWER PRIMARY PCB	
BN41	CWB4F053100UZ	WIRE ASSY, 5 P 200 MM 3W BLACK (RED)	
BN94	CWB4D232300VZ	WIRE ASSY, 2 P 300 MM 3.96 MM PITCH	
CN42	CJP02KA060ZY	WAFER	
CN43	CJP02GA89ZY	WAFER	
F401	KJCFC5S	HOLDER, FUSE	
	└KBA2C3150TLEZ	FUSE, T 3.15 A L 250 V [EUR], [UK]	
	KBA2C4000TLEY	FUSE, T 4 A L 250 V [USA]	
F402	KJCFC5S	HOLDER, FUSE	
	└KBA2C2500TLEY	FUSE, 2.5A 250 V 218 SERIES	
OL41	CJJ7A021Z	JACK, AC OUTLET 230 V 2 P [EUR], [UK]	
OL42	CJJ7A015Z	JACK, AC OUTLET 120 V 2 P [USA]	

5. INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	CQX1A1519Z	OWNER'S MANUAL (EFS) [UK], [USA]	
	CQX1A1512Z	OWNER'S MANUAL (EFSGIN) [EUR]	
	CSA1A007	ANT, FM WIRE (PIGTAIL) [EUR], [UK]	
	CSA1A019Z	FM 1 POL ANT (UL) [USA]	
	CSA1A020Z	ANT, AM LOOP	
	CABR6PPB	BATTERY, AA 2 PCS IN PACK	
	CARTAG790B	REMOTE CONTROL UNIT	

REMOTE CONTROL UNIT
UR-415B



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TEAC

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TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (323) 726-0303
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TEAC UK LIMITED	Unit 19 & 20, The Courtyards, Hatters Lane, Watford, Hertfordshire, WD18 8TE, U.K. Phone: (0845) 130-2511
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TEAC

SCHEMATIC DIAGRAMS

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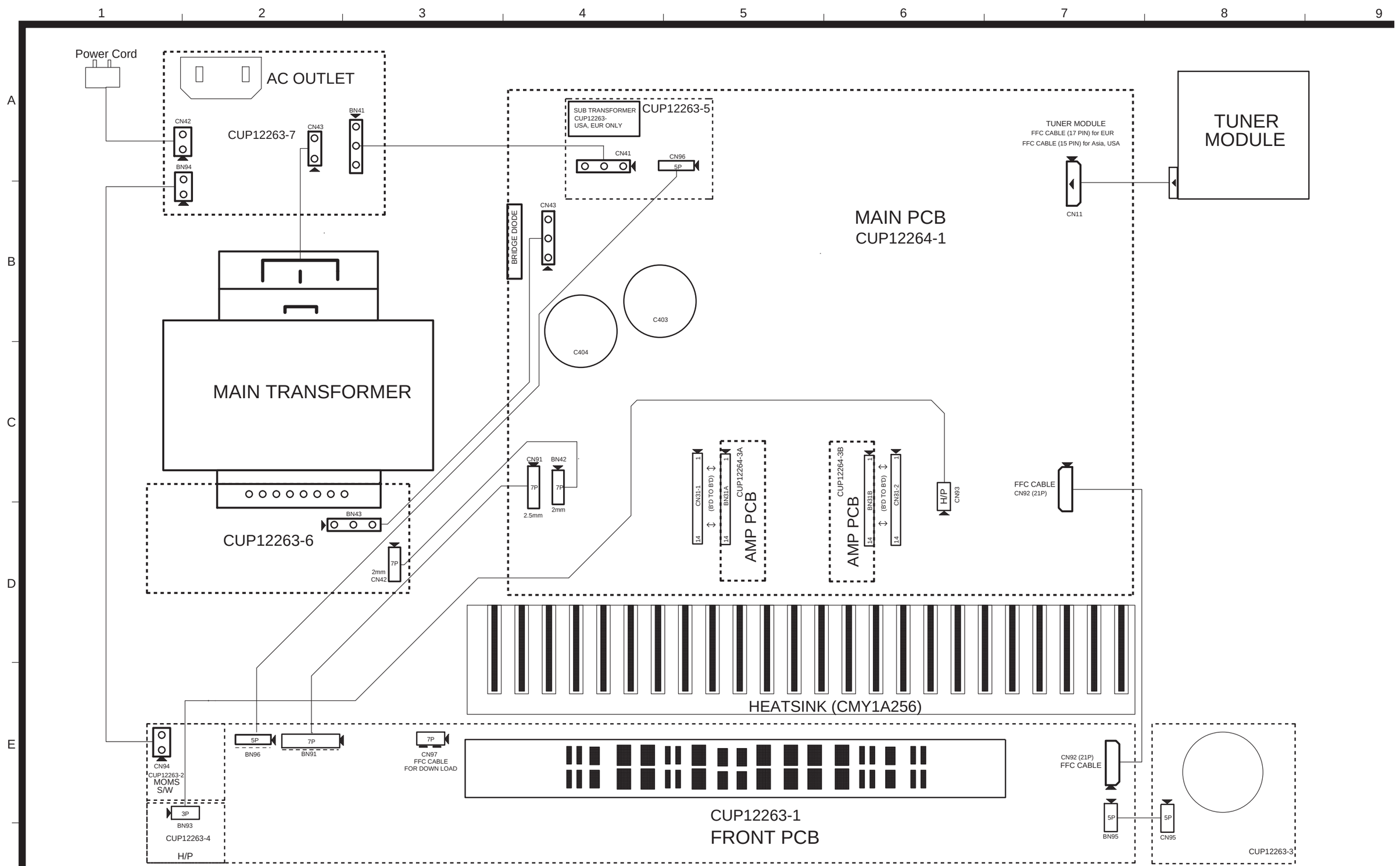

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1 2 3 4 5 6 7 8 9

A B C D E F

V.F.D

DRIVE IC
LC75725

+5V

+5.6V

ANTENNA
(AM+FM)

TUNER MODULE
(AM+FM)

RDS DATA
RDS CLK
DATA IN
CLK
PLL CE
DATA OUT
TUNED
TUNER MUTE
STEREO IN

REMOTE
SENSOR

VFD CE
VFD DATA
VFD CLK
VFD BLK

+5.6V
REGULATOR

SUB
TRANSFORMER

POWER
SWITCH

VOLUME
TONE
CONTROL

TDA7440D

EQ AMP

PHONO IN

CD IN

AUX IN

TAPE OUT
TAPE IN

PHONO
TUNER
CD
AUX
OUT

Resonator
16MHz

PIN 2

U-COM
T5CB5

RESET/
Tx
Rx

KEY MATRIX

ST+5V

AC3V
DC-28V

VFD POWER
AC 3V
DC-28V

+5.6V

REGULATED
+5.6V

+12V
-12V

REGULATED
+12V,-12V

+B
-B

MAIN-AMP
POWER

MAIN
POWER
TRANSFORMER

PRIMARY FUSE

RELAY

L
N

AC INLET

EUR : AC230V/50Hz
USA : AC110V/60Hz

*CONTROL
- POWER CONTROL
(POWER DOWN, POWER MUTE)
- RMC DATA IN
- TUNER CONTROL
- VFD Driver control
- SPK A,B SWITCH CONTROL
- AUDIO MUTE
- TUNER Option
- SW IC (CD4066BM96) CONTROL

VOLUME
TREBLE
BASS
SPK ATT

+10V
R222
270
+12V

+12V
+15dB
-12V

MUTE

+12V
+8.7dB
-12V

HEADPHONE

+B
DISCRETE
MAIN AMP
+28dB
-B

RELAY (POWER MUTE)

PROTECT

SPK

CD4066BM96

+12V

OUT

CONTROL BY U-COM

RIGHT CHANNEL
(SAME AS LEFT CHANNEL)

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AMP BOARD

FROM AMP BOARD

FROM FRONT BOARD 1.25 mm pitch

CN11 OPTION
USA VER. / ASIA VER. 15PIN USE
EUR VER. 17PIN USE

EUR VERSION
TC VERSION

R CHANNEL

L CHANNEL

OVER CURRENT PROTECT
(2009.08.13)

DC PROTECT
(2006.11.29)

THERMAL PROTECT (102'C)

POSISTOR

- L_CH AUDIO SIGNAL FLOW
- R_CH AUDIO SIGNAL FLOW

PHONO
CD
R/O
TAPE
P/B
AUX

FROM POWER SEC TRANS
3.96mm pitch wafer

FROM HEAD PHONE
2.5mm pitch wire

TO POWER SEC BOARD
2.0mm pitch wafer

FROM FRONT BOARD
2.5 mm pitch wafer

**IMPORTANT SAFETY NOTICE.

COMPONENTS IDENTIFIED BY MARK ⚠ HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS.
USE ONLY MANUFACTUREY'S SPECIFIED PARTS.

**THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM

**THE UNIT OF CAPACITANCE IS MICROFARAD (uF)
1pF = 10 uF

**THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME
WITH THE IMPROVEMENT OF PERFORMANCE

AG-790E
AM/FM Stereo Receiver

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1 2 3 4 5 6 7 8 9

A B C D E F

2.5mm pitch wafer
FRONT B'D <--> SUB TRANS B'D

BN96 CWB05

NC +5.6VA PWR ON GND ST+5.6V

CUP12263-1
VFD & MICOM PART

ST+5.6V

*AREA OPTION

	A	B	C
EUR 50K , 9K WELCOME RDS(X)	L	L	H
EUR 50K , 9K WELCOME RDS(O)	L	H	L
EUR 50K , 9K , 1K WELCOME RDS(O)	L	H	H
USA 100K , 10K , WELCOME	H	L	L

2.5mm pitch wafer
FRONT B'D <--> MAIN B'D

BN99: VKK, FL(AC), FL(AC), GND, GND, 5.6VA, PWR ON

MICOM

IC91
CVIT5CB5PQ

IC33
AT24C04BNSHB

VFD

IC92
HVILC75725E

FP91
HFLSVA09MS10

CN97
UPDATE CARD CABLE WAFER

FRONT B'D <--> MAIN B'D
CARD CABLE WAFER
CN92

S/W B'D <--> PWR PRI B'D

CUP12263-2
POWER S/W PART

CN94
470P C955
SW91 KSH1A0012V

CUP12263-3
VOLUME PART

VOL DOWN
VOL UP
KEY1 IN
KEY1 OUT
GND
CN95

SW92 CSR2A036Z
BALANCE
TREBLE
BASS

2mm LOCKING TYPE
FRONT B'D <--> VOLUME B'D
BN95

CUP12263-4
HEADPHONE PART

JW01
JK91 CJJ2E020Z
L GND R
BN93

FROM MAIN B'D

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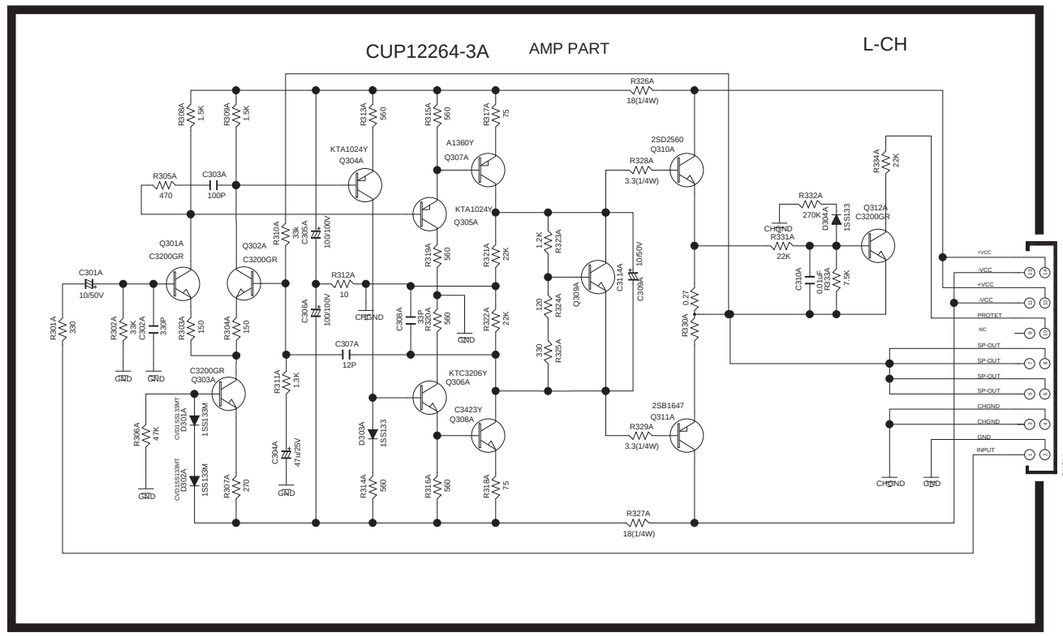

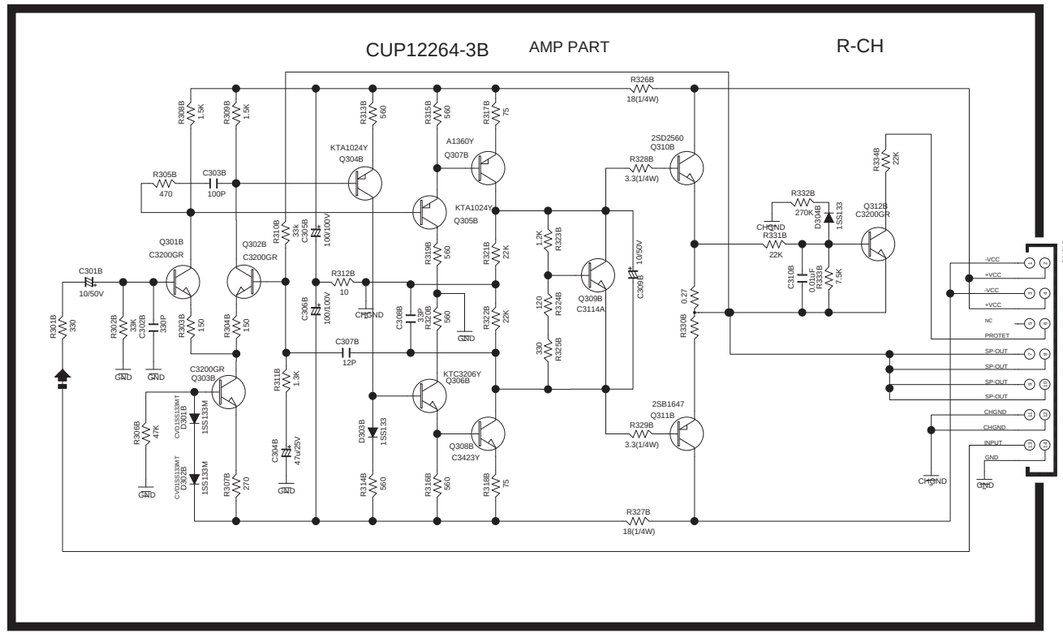

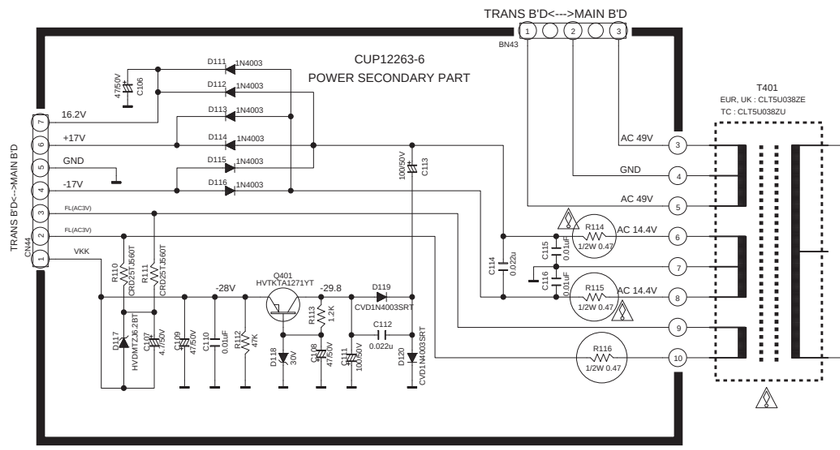

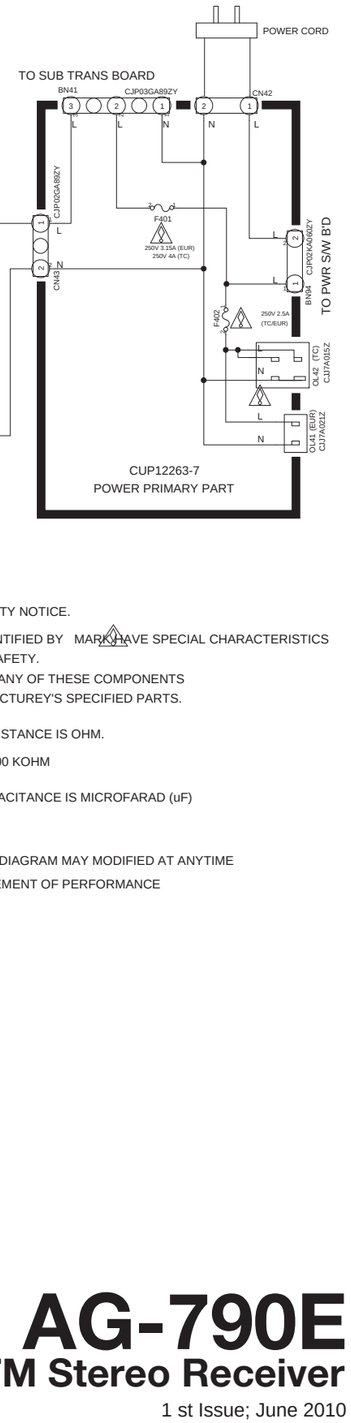

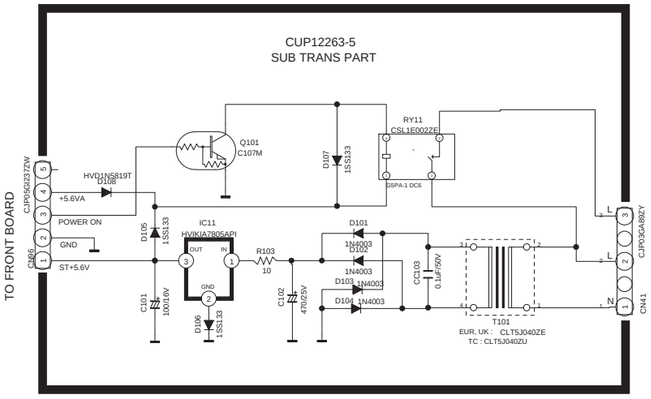

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WITH THE IMPROVEMENT OF PERFORMANCE
TO POWER CORD

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