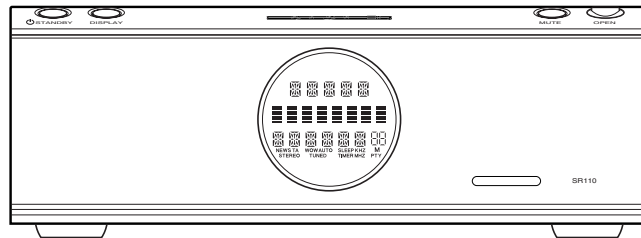


Service Manual

SR110 /F1S, /N1S, /U1S

Receiver



WOW
by **SRS** (●)

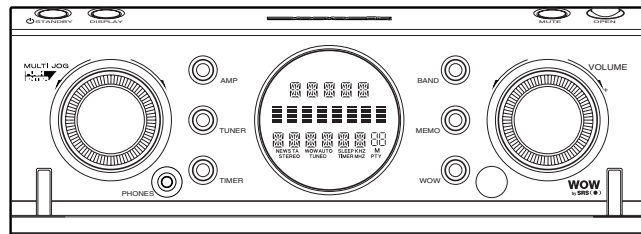


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Please use this service manual with referring to the user guide (D.F.U.) without fail.

修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

SR110

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First Issue 2001.09

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3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

FM TUNER SECTION

Frequency Range	76.0 - 90.0 MHz (F version) 87.5 - 108.0 MHz (N, U version)
Usable Sensitivity	0 dB μ
Signal to Noise Ratio	Mono/Stereo 70/65 dB
Distortion	Mono/Stereo 0.2/0.3 %
Stereo Separation	1 kHz 40 dB
Image Rejection	98 MHz 80 dB
Tuner Output Level	1 kHz, \pm 40 kHz Dev 500 mV

AM TUNER SECTION

Frequency Range	LW: 152 - 282 kHz (N version) MW: 531 - 1602 kHz (F, N version) MW: 520 - 1710 kHz (U version)
Signal to Noise Ratio	40 dB
Usable Sensitivity	Loop 500 μ V
Distortion	400 Hz, 30 % Mod. 0.5 %
Selectivity	\pm 18 kHz 30 dB

AUDIO SECTION

THD 10 %	6 ohms 25W / Ch
Continuous Power Output (40 Hz - 20 kHz)	8 ohms 21W / Ch
THD (40 Hz - 20 kHz) at 21 W output	8 ohms 0.08 %
Input Sensitivity/Impedance Linear	200 mV/ 47 Kohms
Signal to Noise Ratio Linear (1 W)	80 dB

GENERAL

Power Requirement	AC 100 V 50 / 60 Hz (F version) AC 230 V 50 Hz (N version) AC 120 V 60 Hz (U version)
Power Consumption (STEREO MODE RATED POWER)	58 W (0.7A)
Dimension (MAX) Width	210 mm (8-1/4 inches)
Height	71.5 mm (2-3/4 inches)
Depth	310 mm (12-3/16 inches)
Weight	4.3 kg (9.5 lbs)

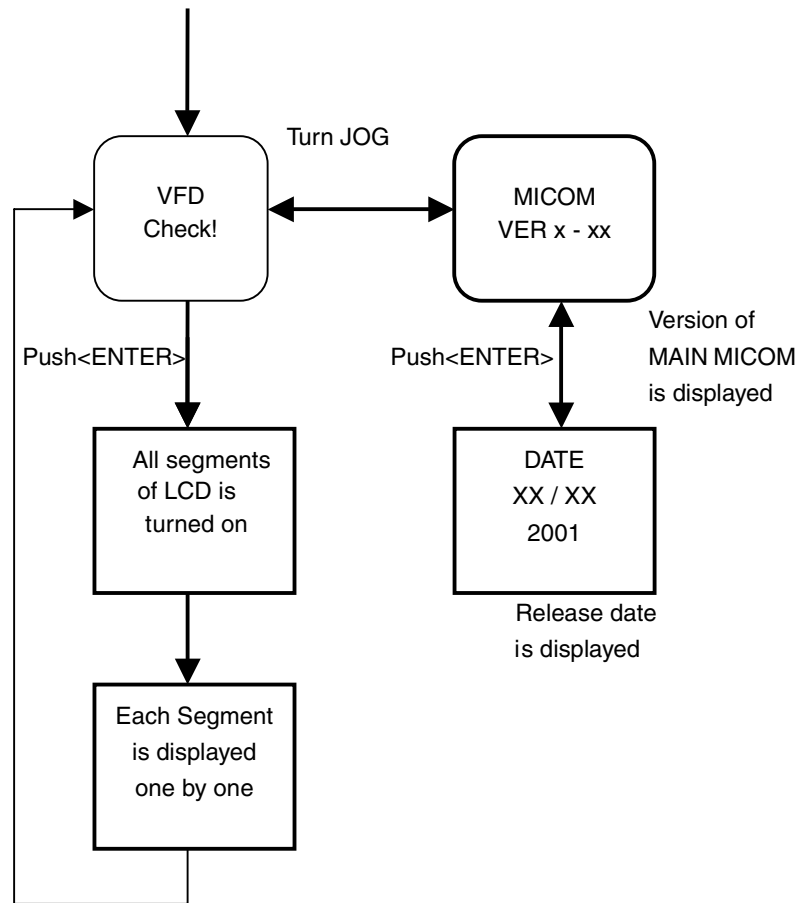
ACCESSORIES

Remote Control Unit (RC110SR)	1
Dimension (W x H x D) (MAX)	57 x 196.5 x 27 mm (2-1/2 x 7-3/4 x 1-1/8 inches)
Weight	90 g (0.2 lbs)
AA Type Batteries	2
FM Feeder Antenna	1
AM Loop Antenna	1

Specifications subject to change without prior notice.

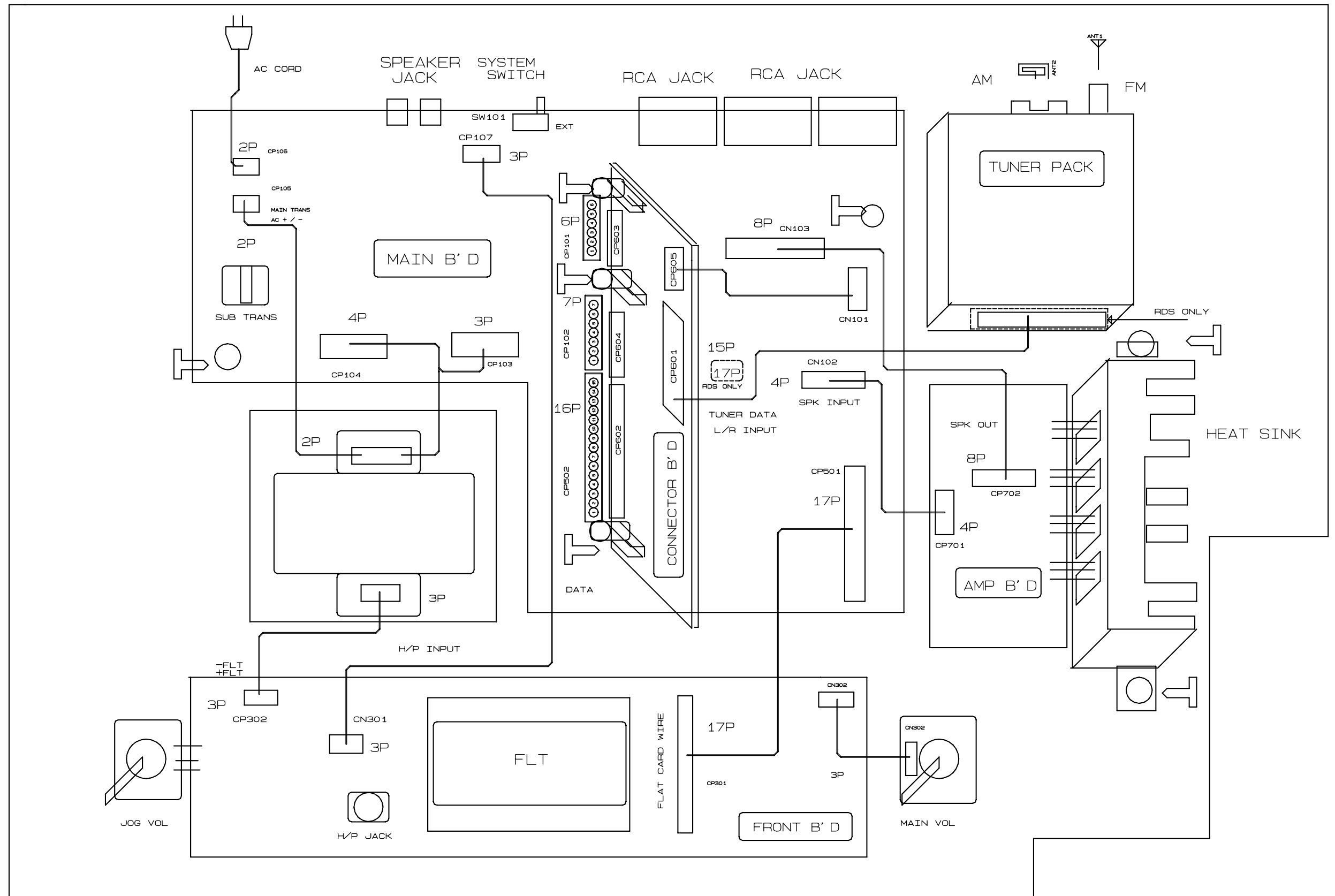
2. SERVICE MODE

While pressing <DISPLAY> plug in the Mains cord.

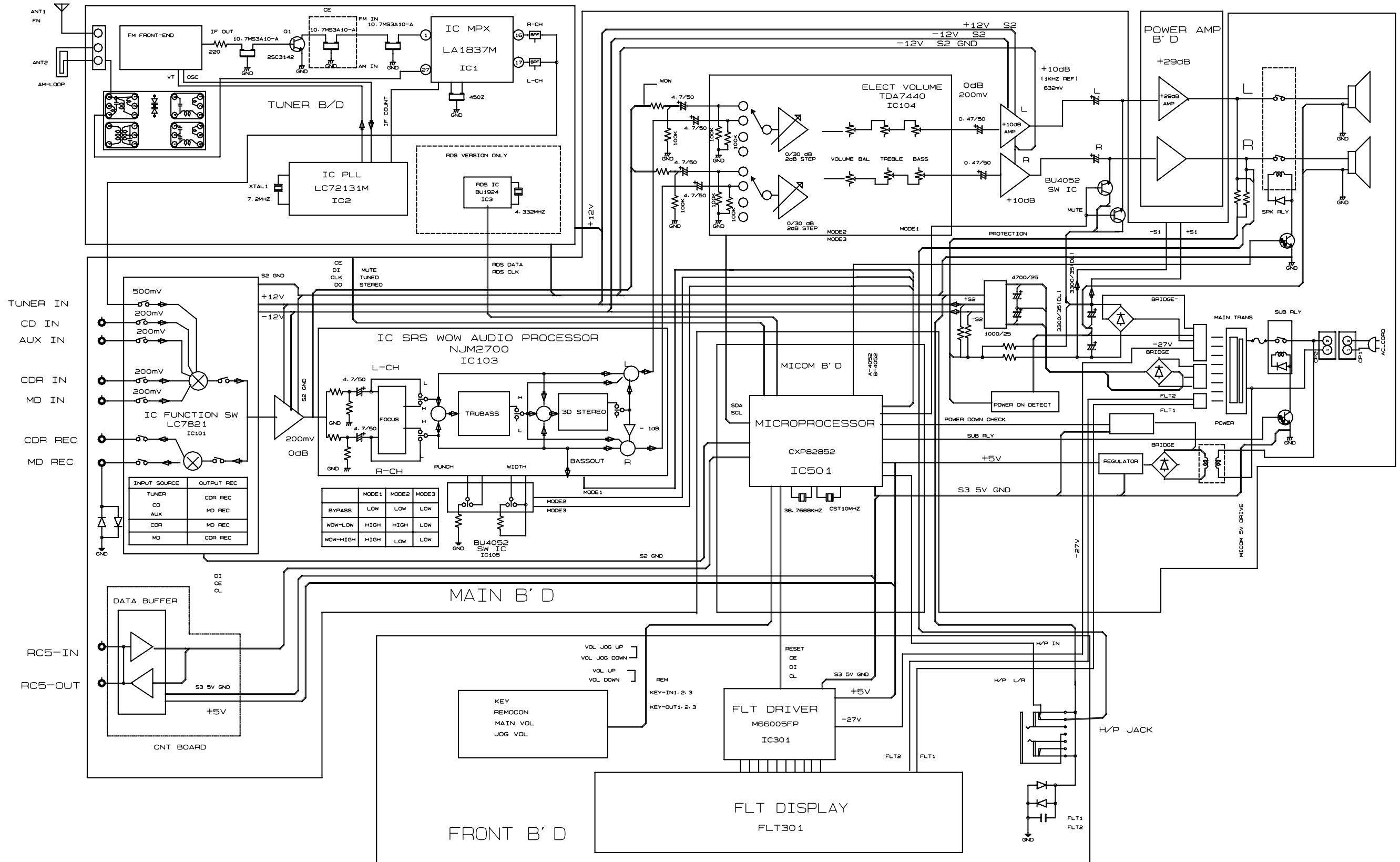


Push <STANDBY> to quit Service mode

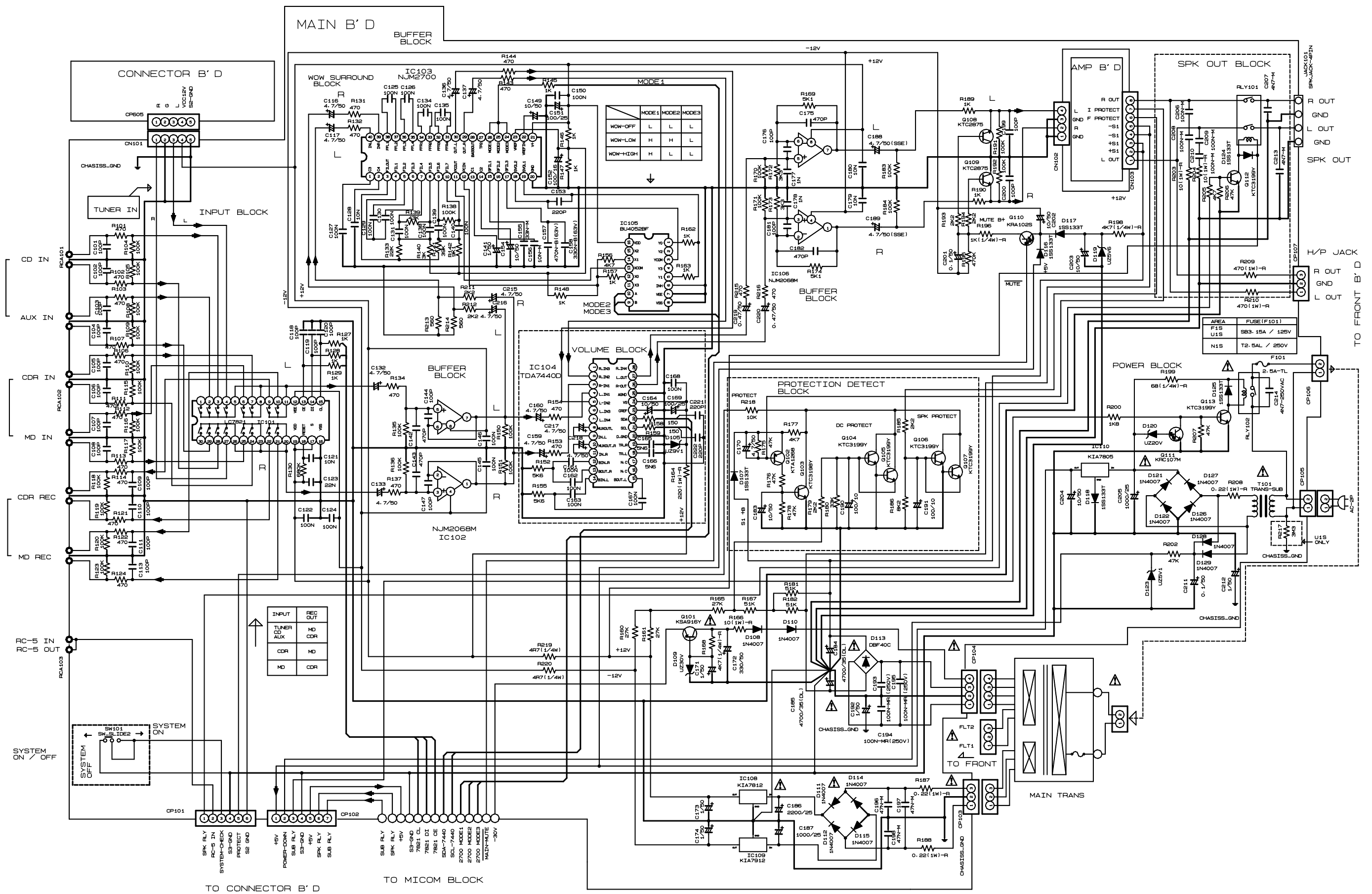
3. WIRING DIAGRAM

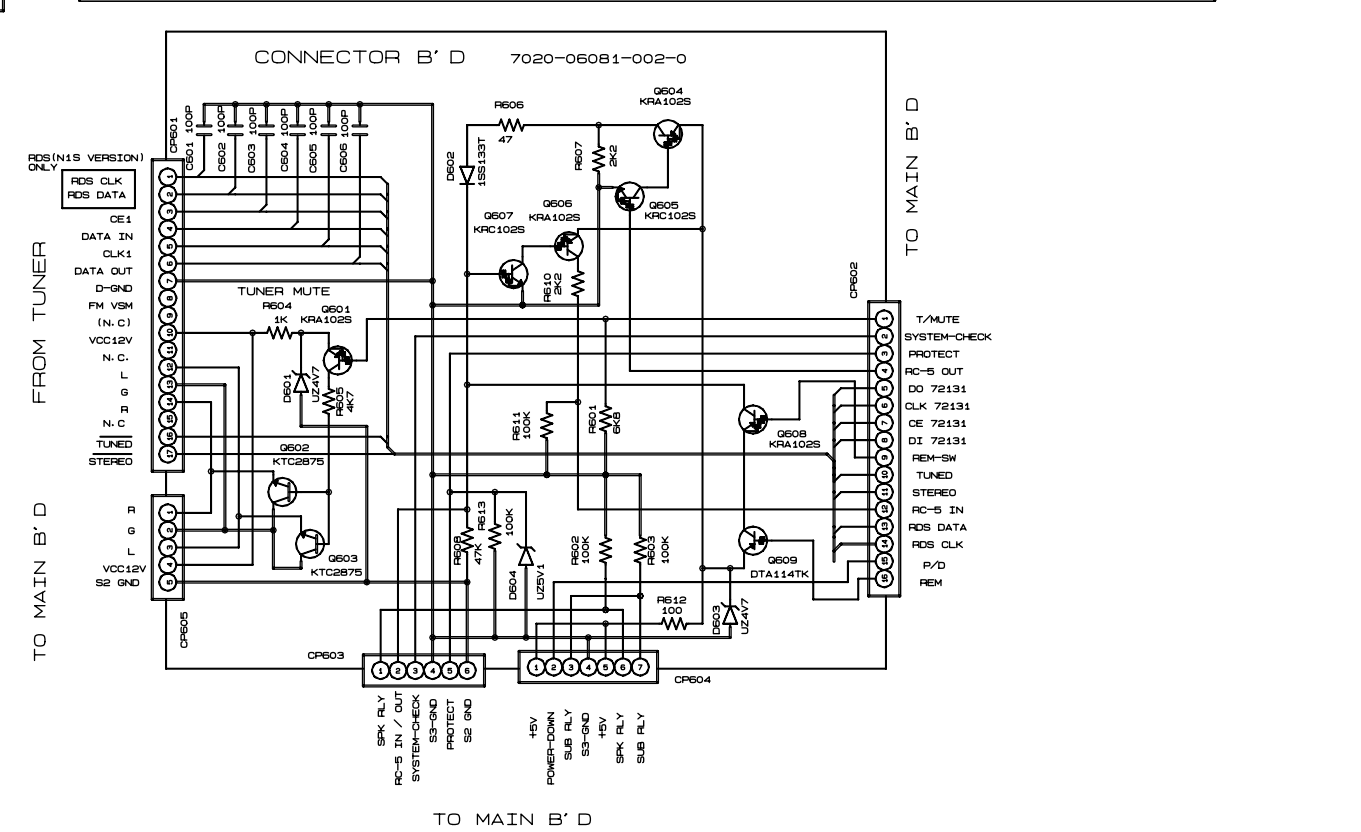
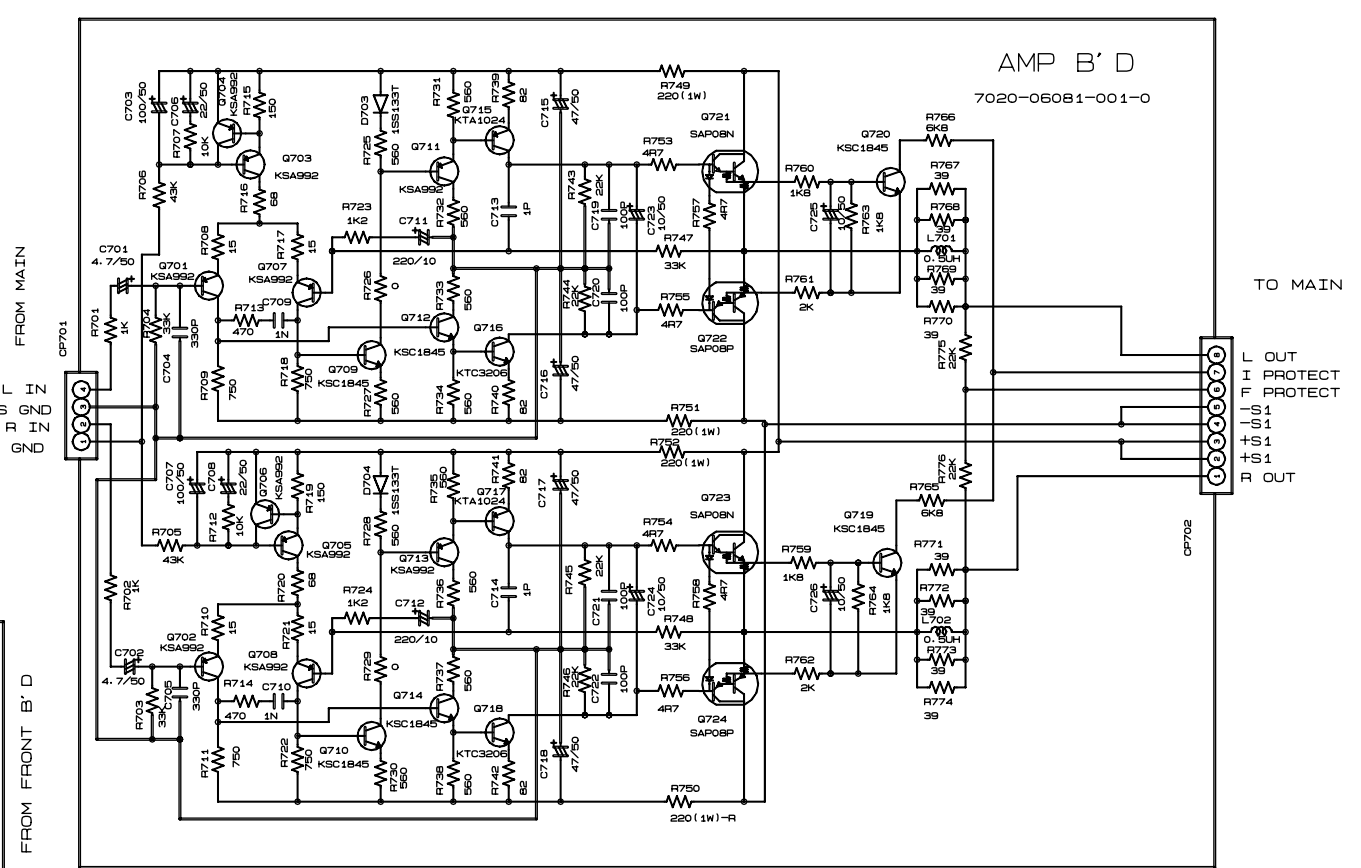
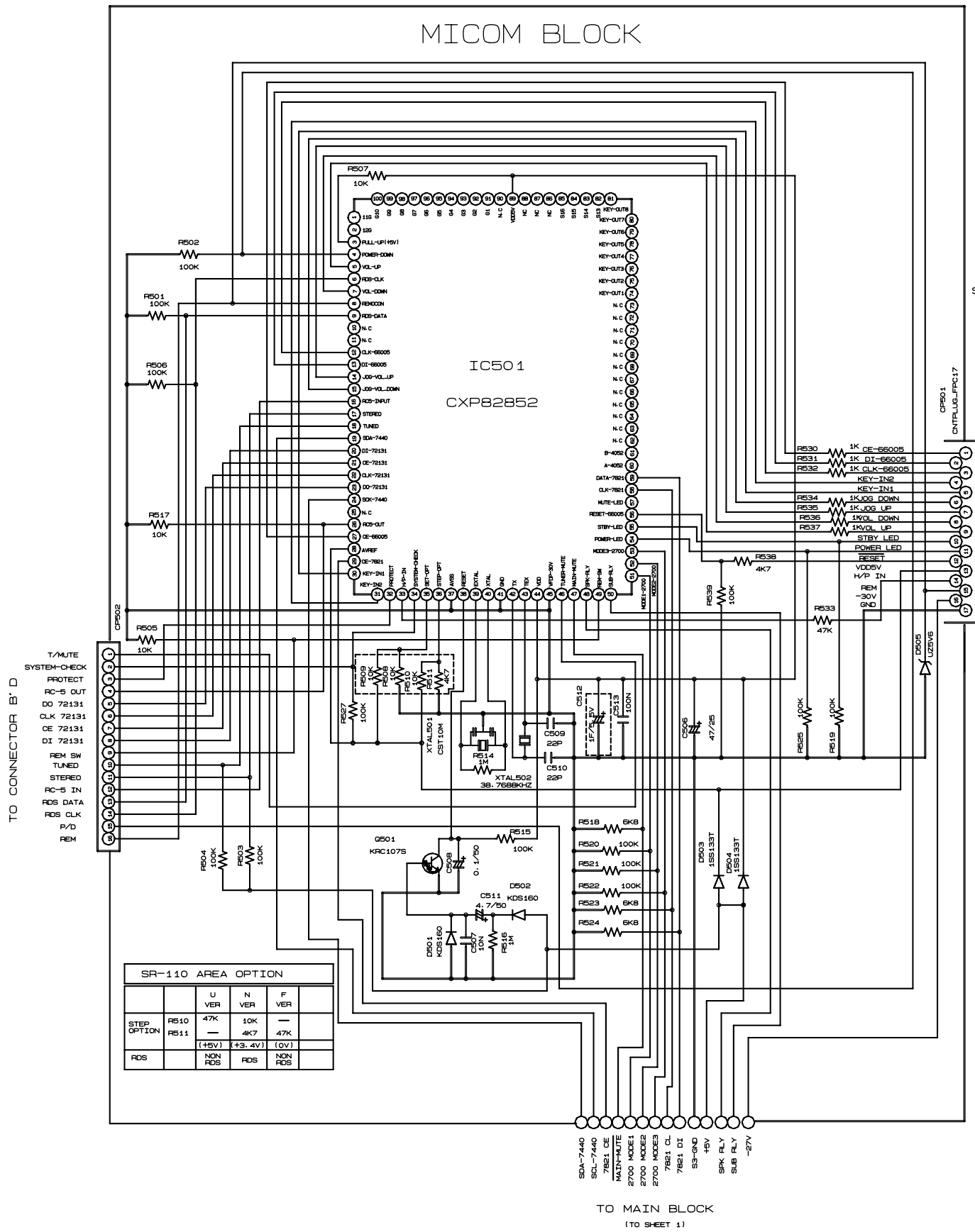


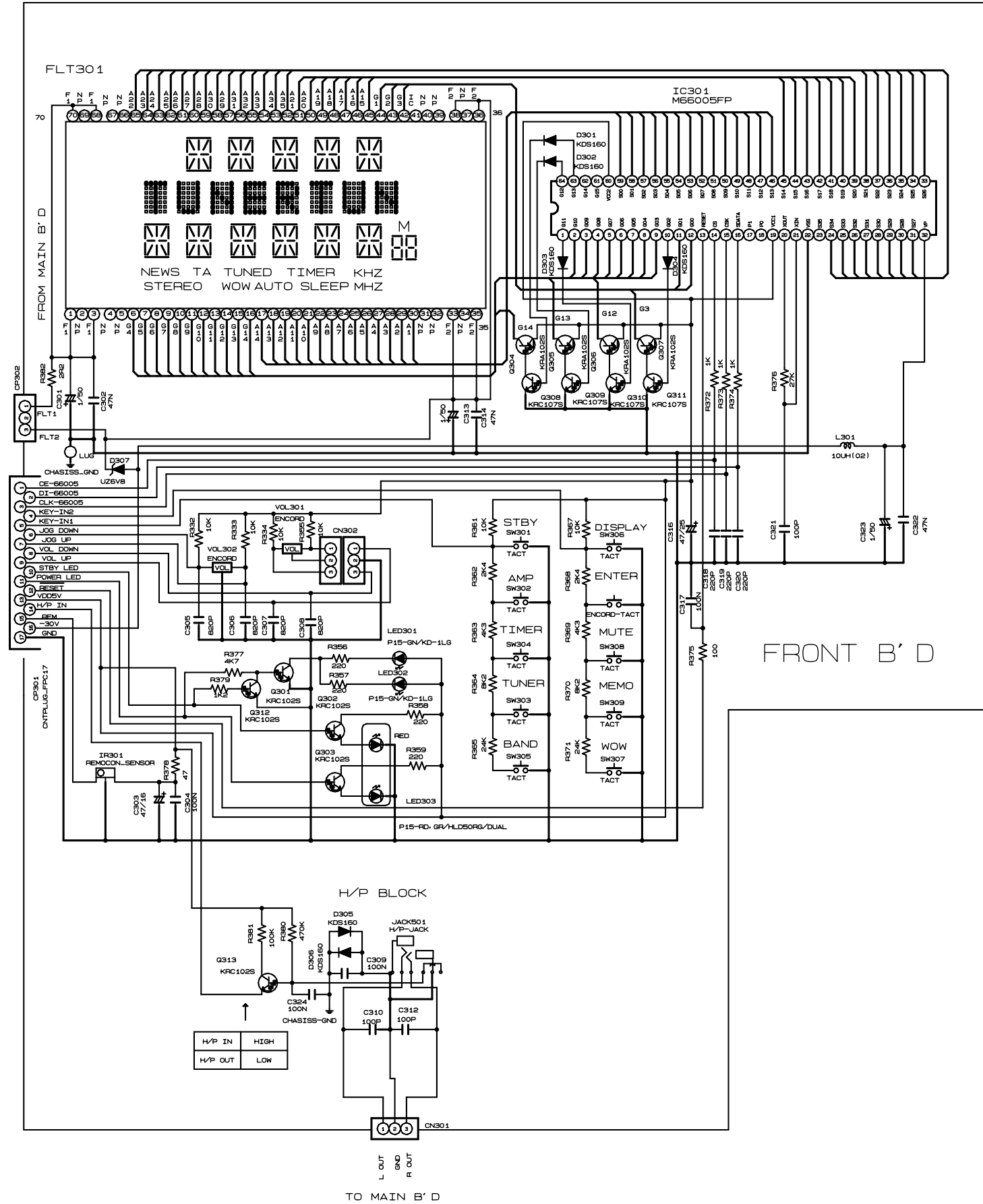
4. BLOCK DIAGRAM

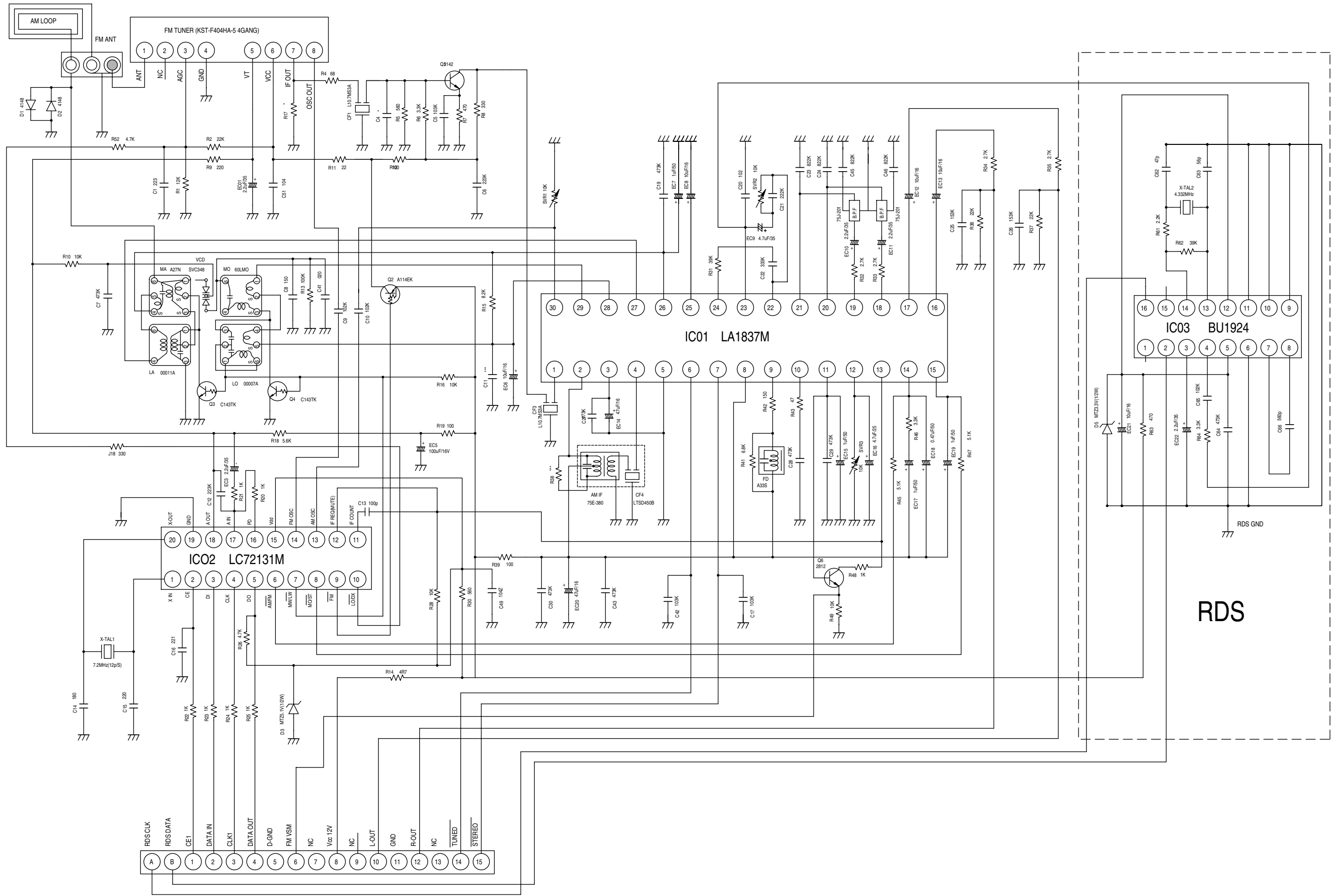


5. SCHEMATIC DIAGRAM

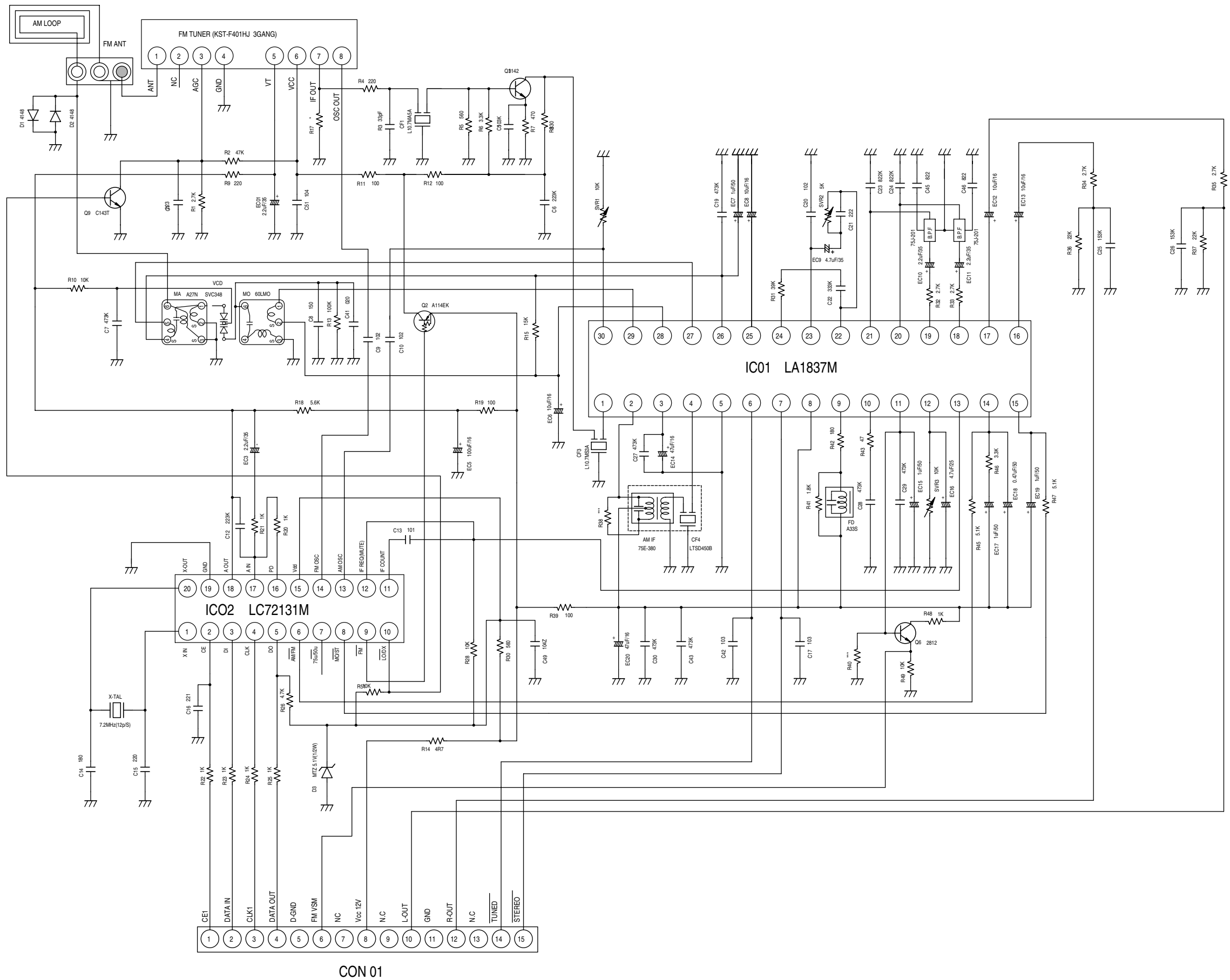


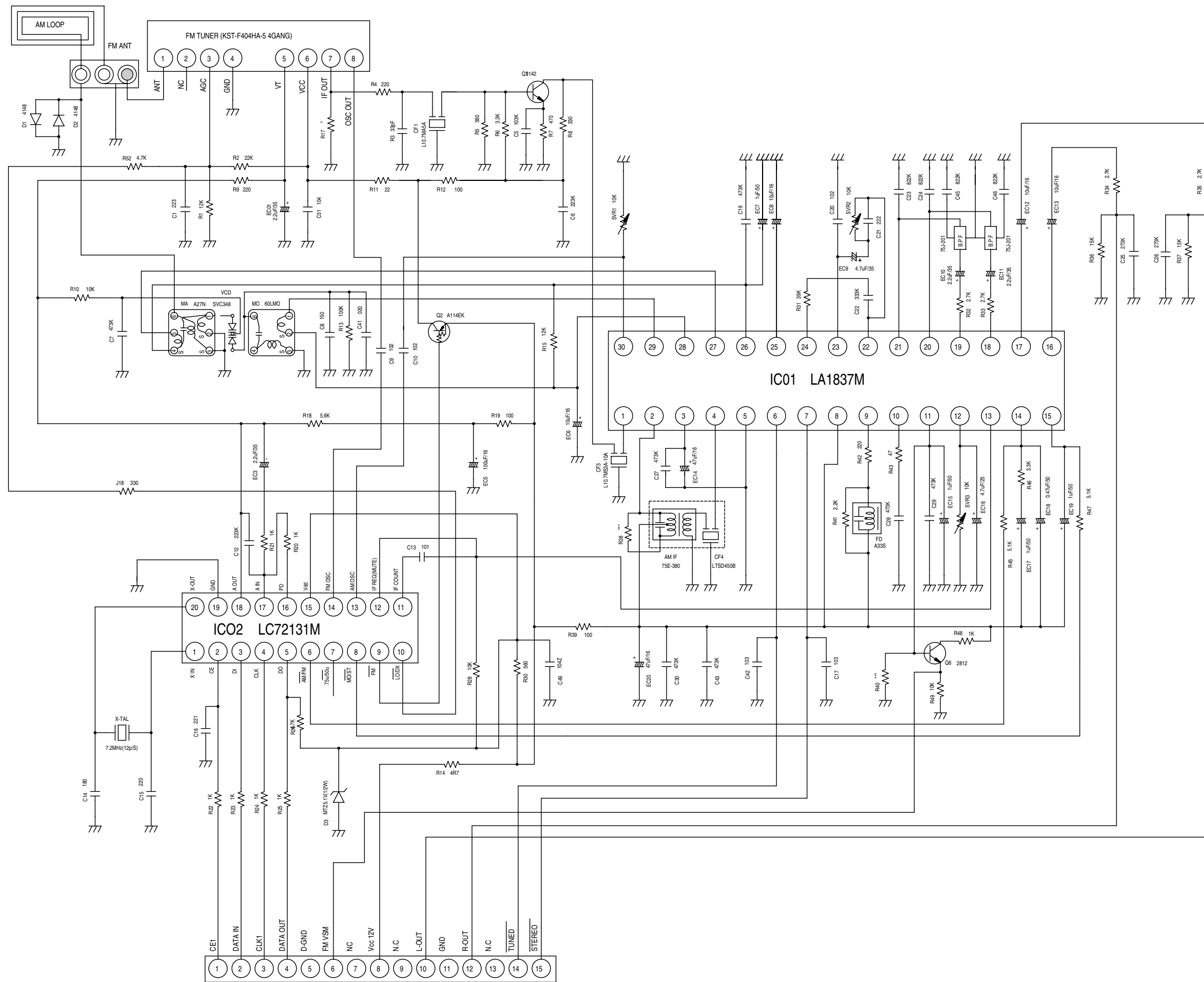






CON 01

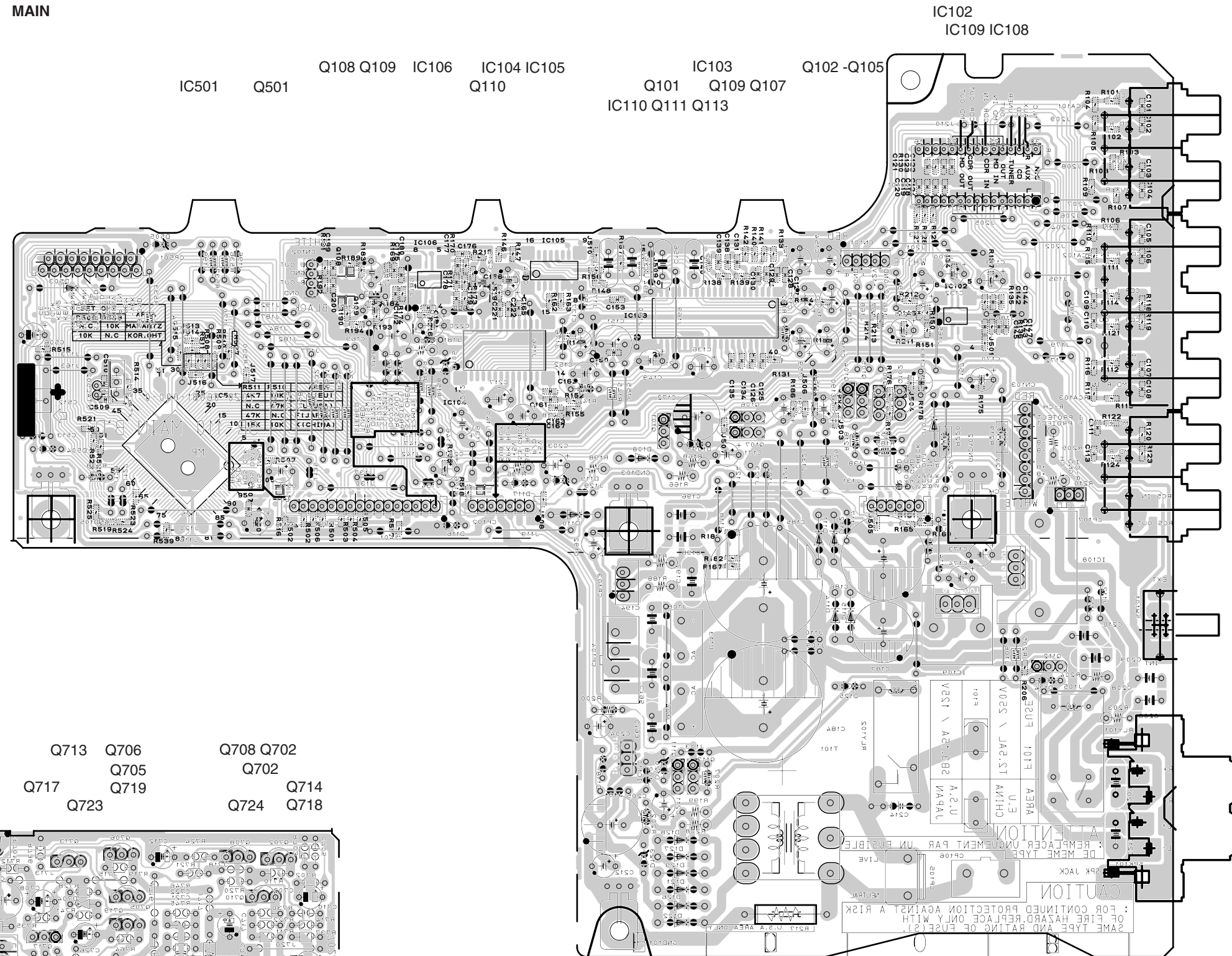




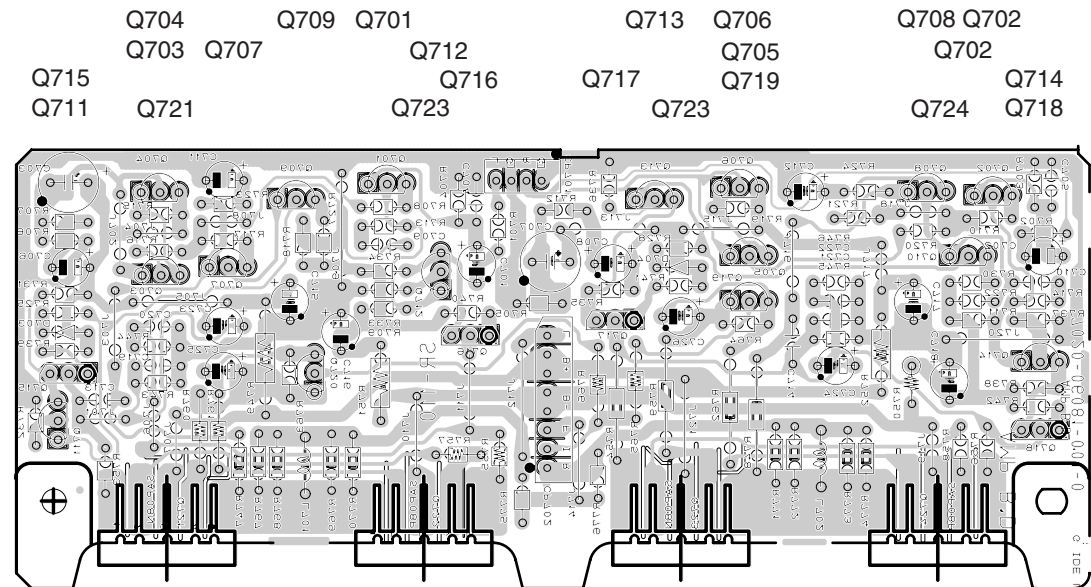
CON 01

6. PARTS LOCATION (Pattern Side)

MAIN



AMP



FRONT

Q301

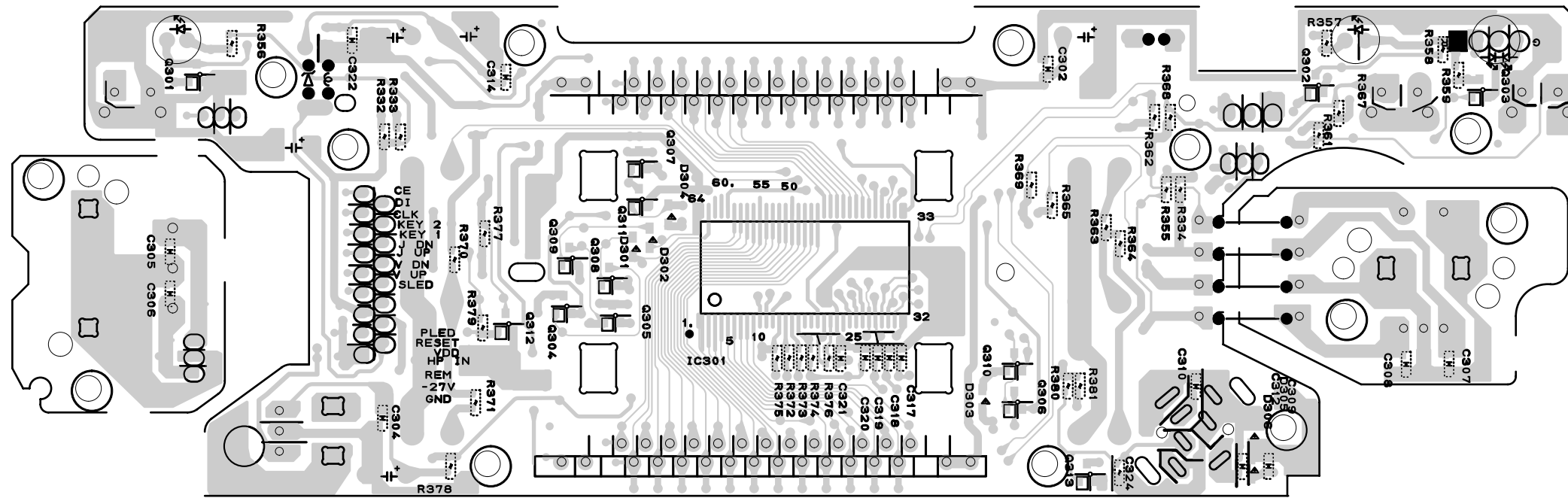
Q307 Q311
Q312 Q304 Q309 Q308 Q305

IC301

Q310 Q306 Q313

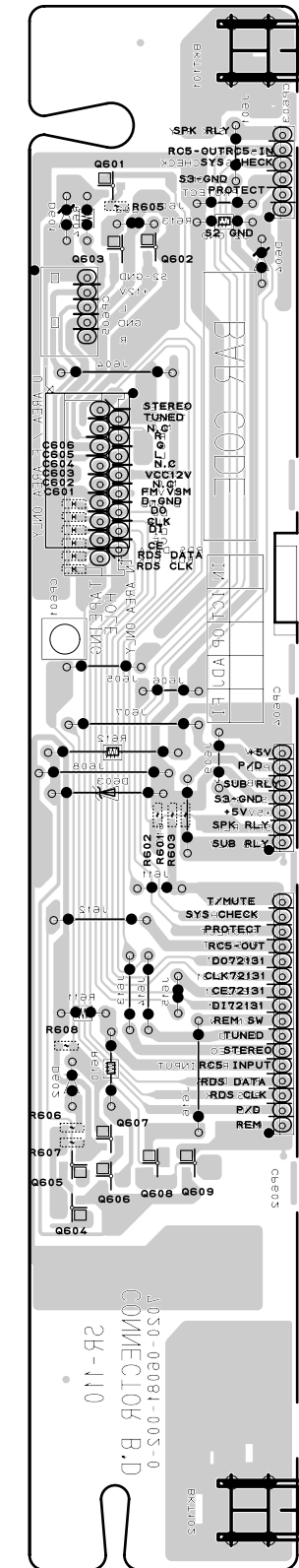
Q302

Q303



CONNECTOR

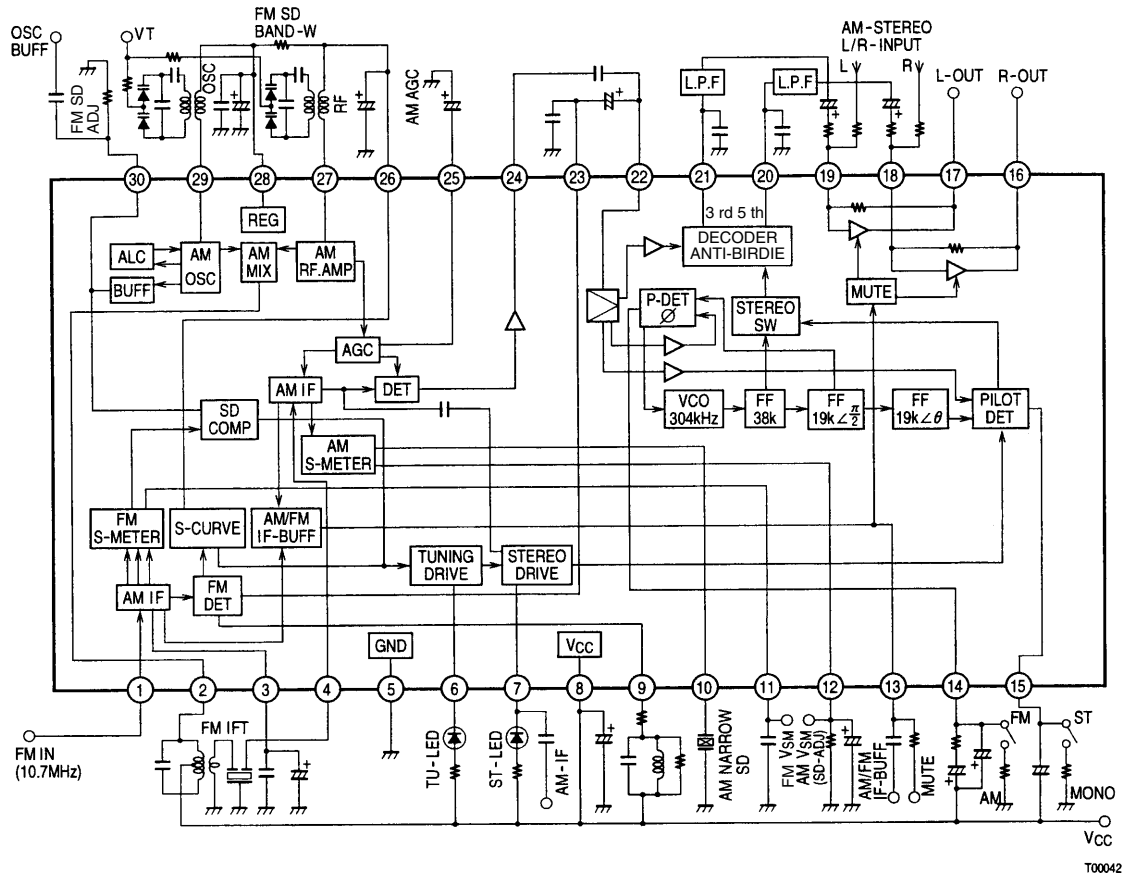
Q601 - Q603
Q604 - Q609



7. IC DATA

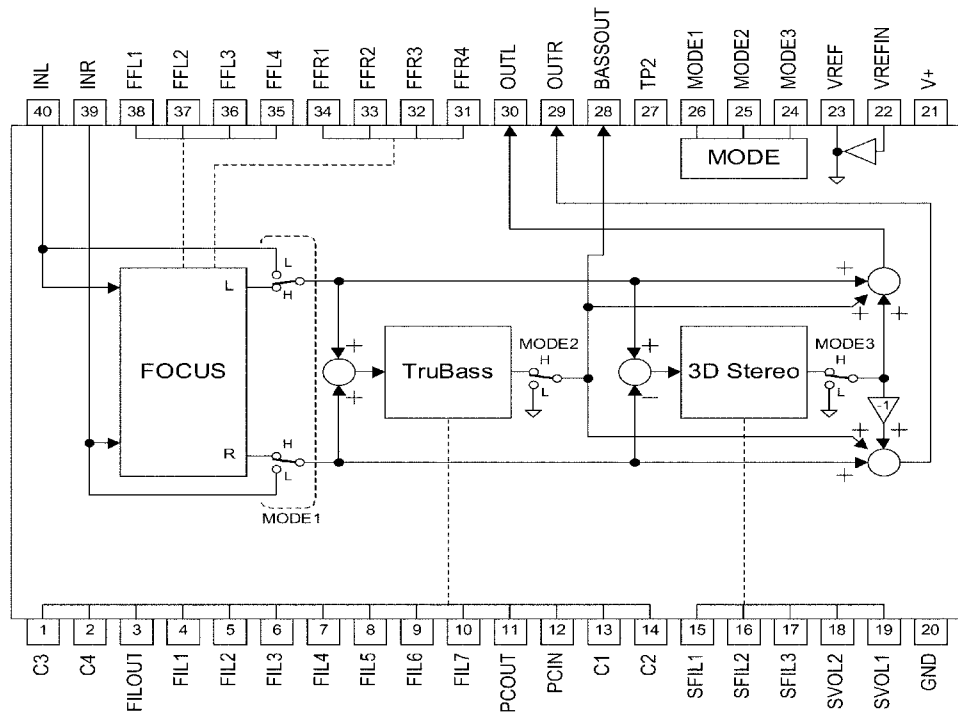
IC01:LA1837

Block Diagram



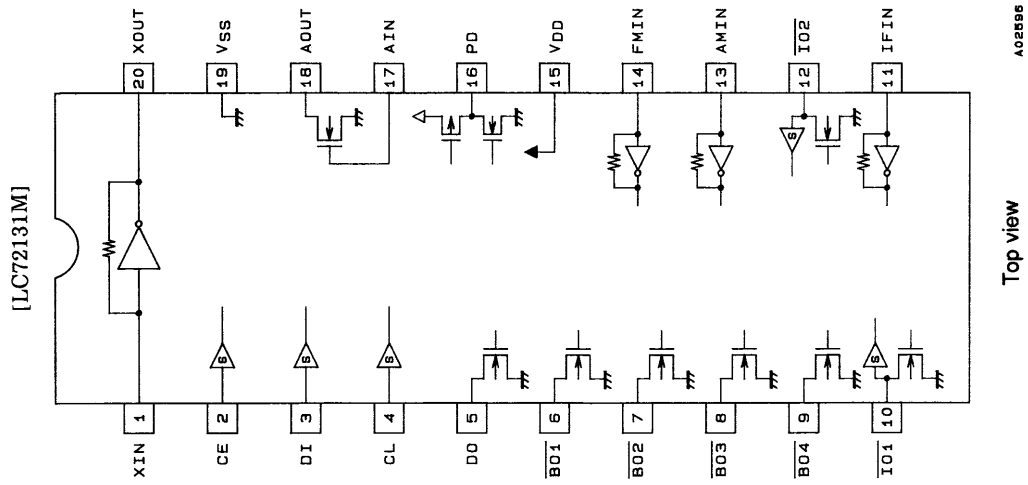
IC103:NJM2700

BLOCK DIAGRAM

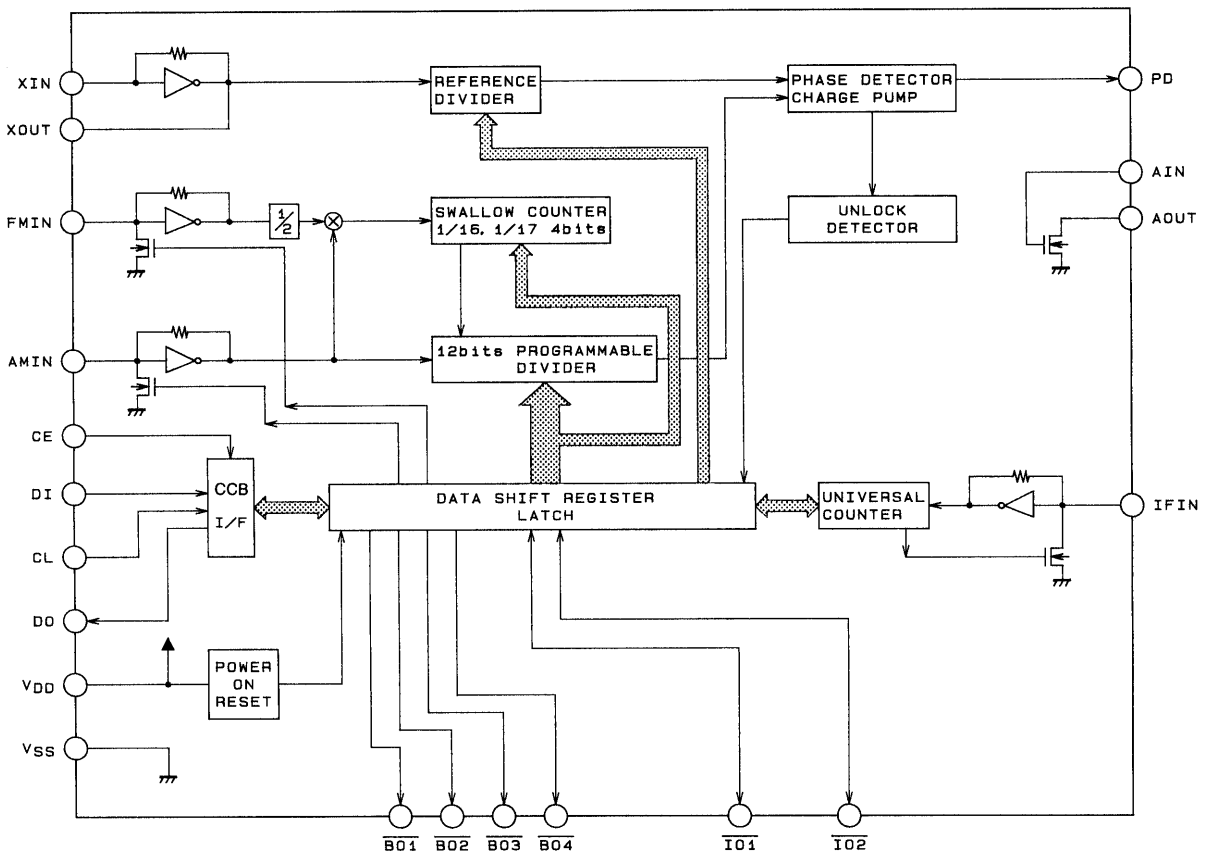


IC02:LC72131

Pin Assignment

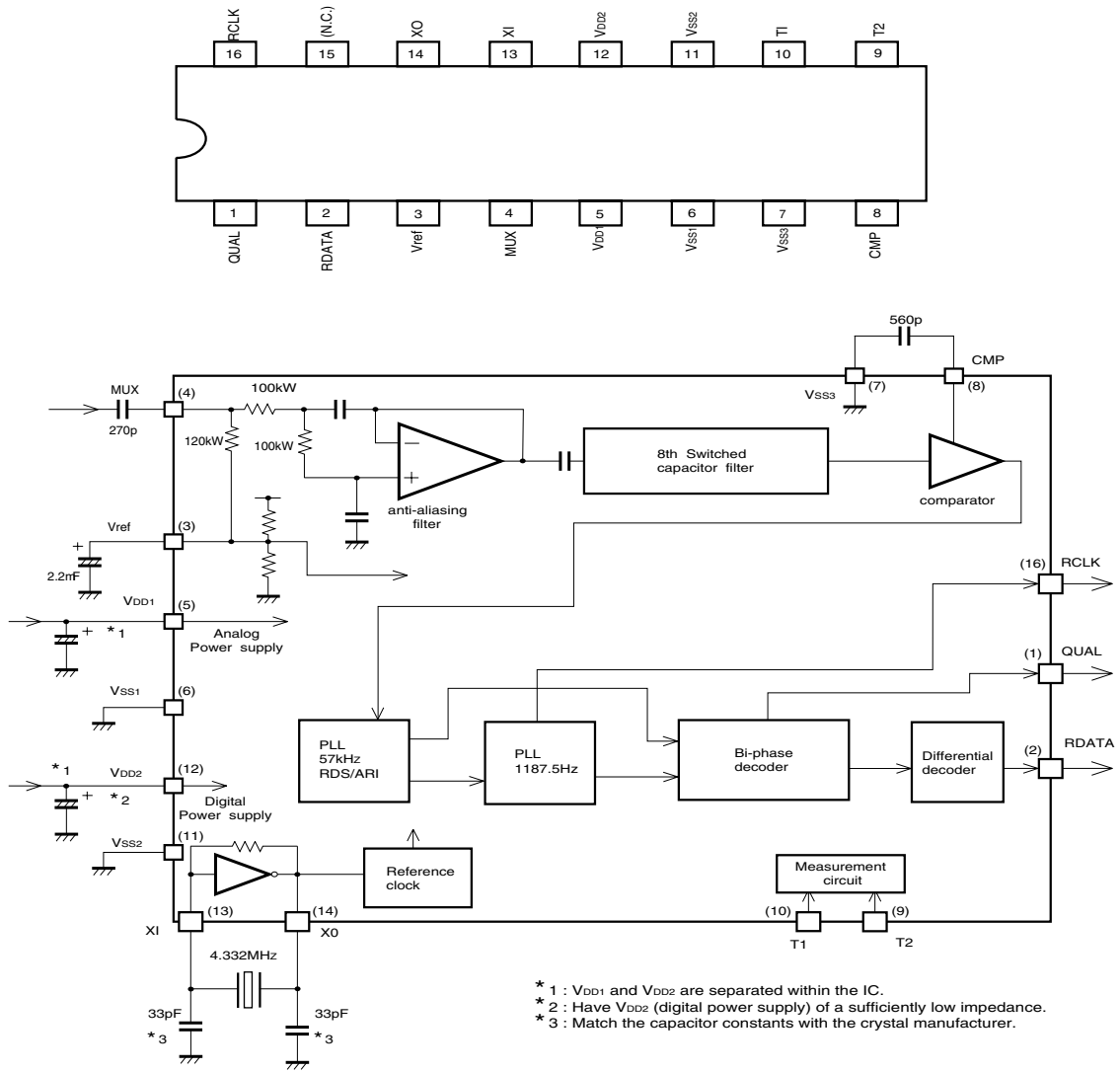


Block Diagram



A02597

Block Diagram

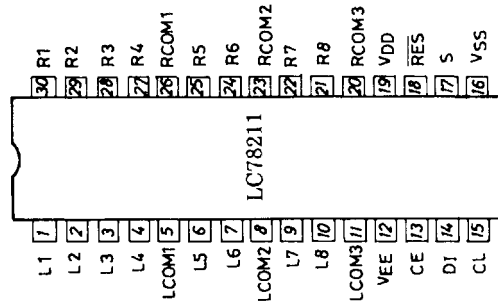


Pin Descriptions

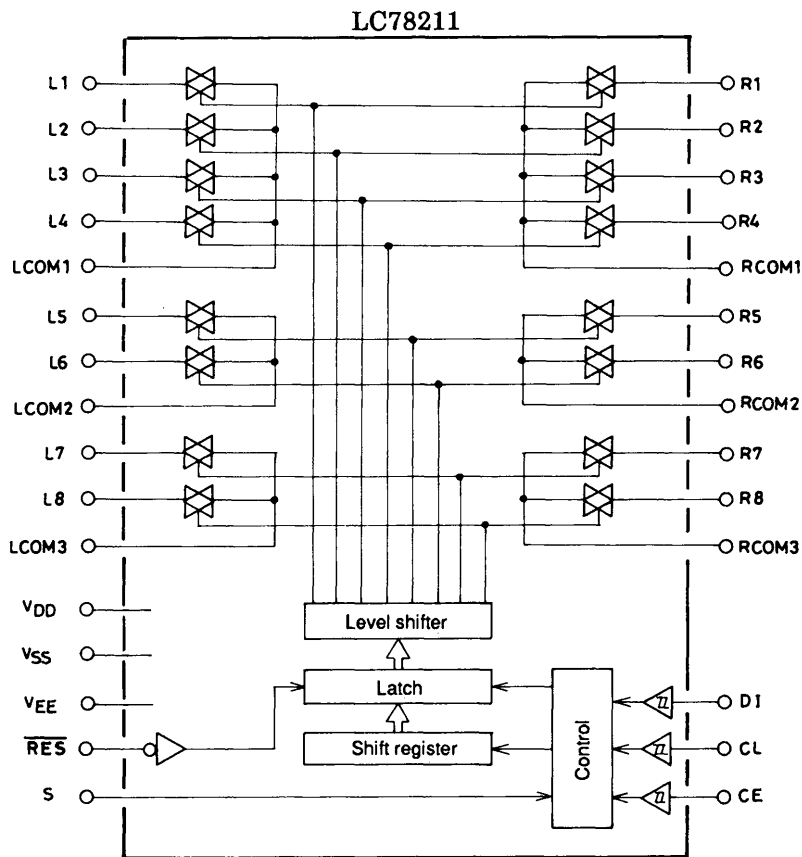
Pin No.	Symbol	Pin name	Function	Input/output type
1	QUAL	Demodulator quality	Good data : High, bad data : Low	Type C
2	RDATA	Demodulator data	Refer to output data timing	-
3	Vref	Reference voltage	1/2 V _{DD1} (refer to input/output circuits)	Type E
4	MUX	Input	Composite signal input (refer to input/output circuits)	Type D
5	V _{DD1}	Analog power supply	4.5V to 5.5V	-
6	V _{SS1}			
7	CMP	Comparator input	C-junction (refer to input/output circuits)	Type D
8	V _{SS3}	GND	-	-
9	T2	Test input	Open or connected to ground	Type B
10	T1			
11	V _{DD2}	Digital power supply	4.5V to 5.5V	-
12	V _{SS2}			
13	XI	Crystal oscillator	Connects to 4.332MHz oscillator (refer to input/output circuits)	Type A
14	XO			
15	(N.C.)	-	-	-
16	RCLK	Demodulator clock	1187.5Hz clock (refer to the timing diagram)	Type C

IC101:LC78211

Pin Assignments

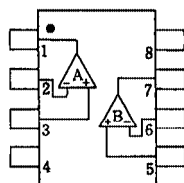


Equivalent Circuit Block Diagrams



IC102/IC106:NJM2068

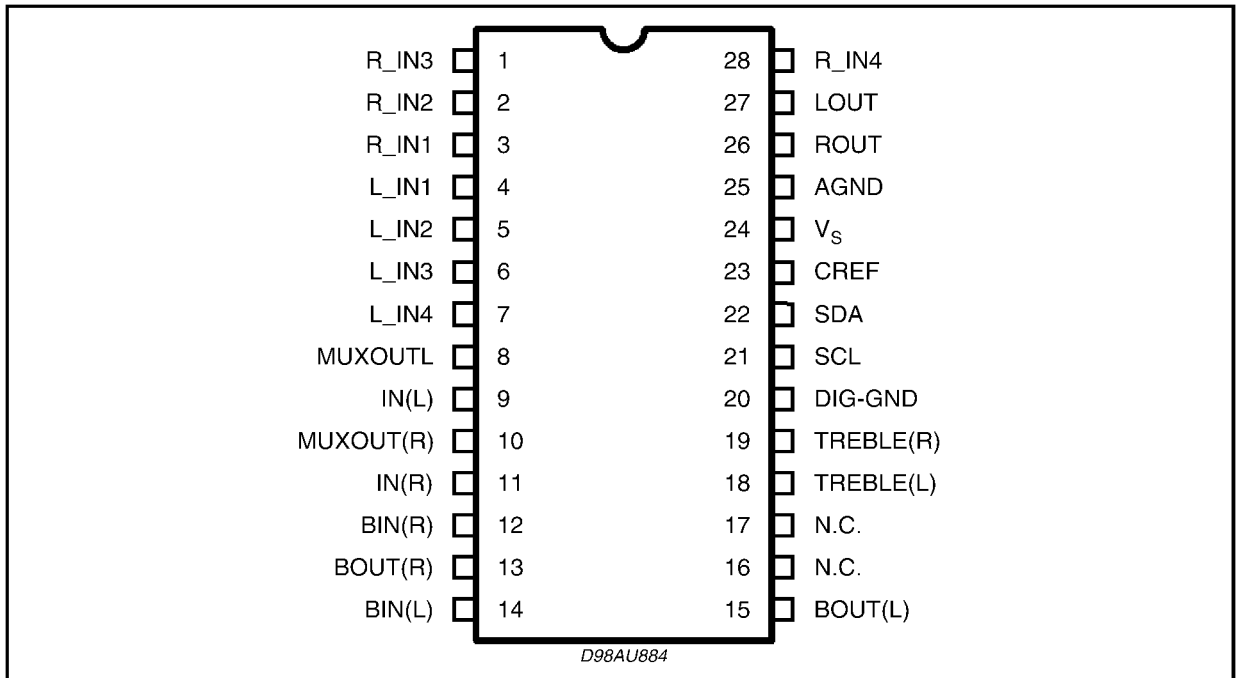
Pin Configuration



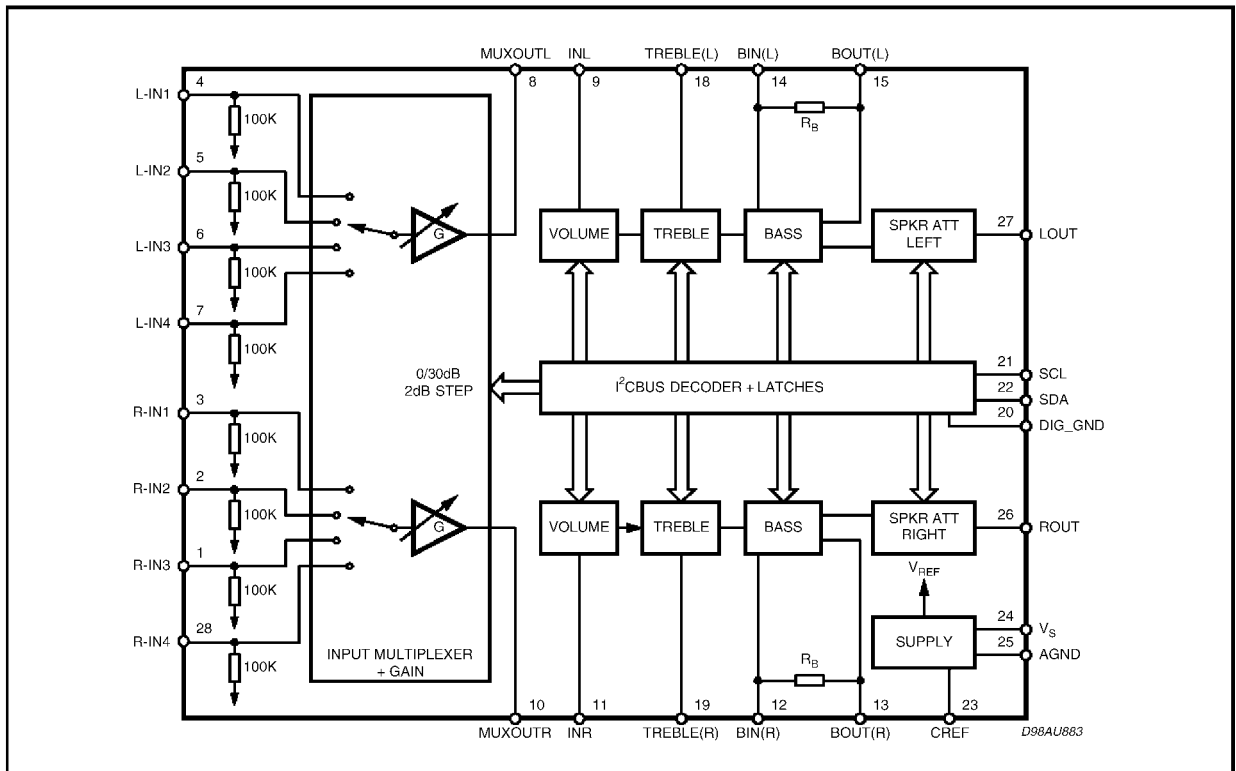
PIN FUNCTION

1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

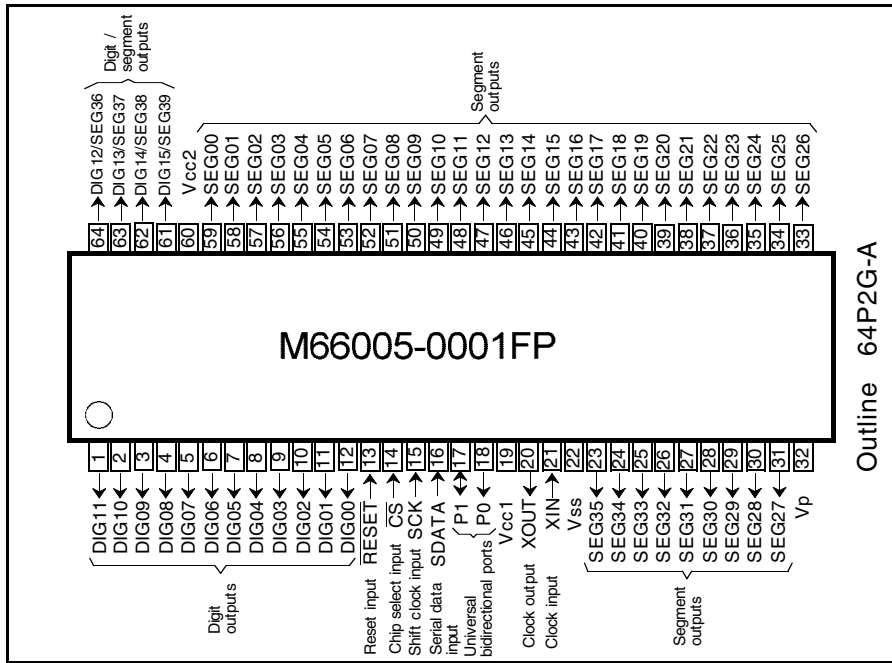
PIN CONNECTION



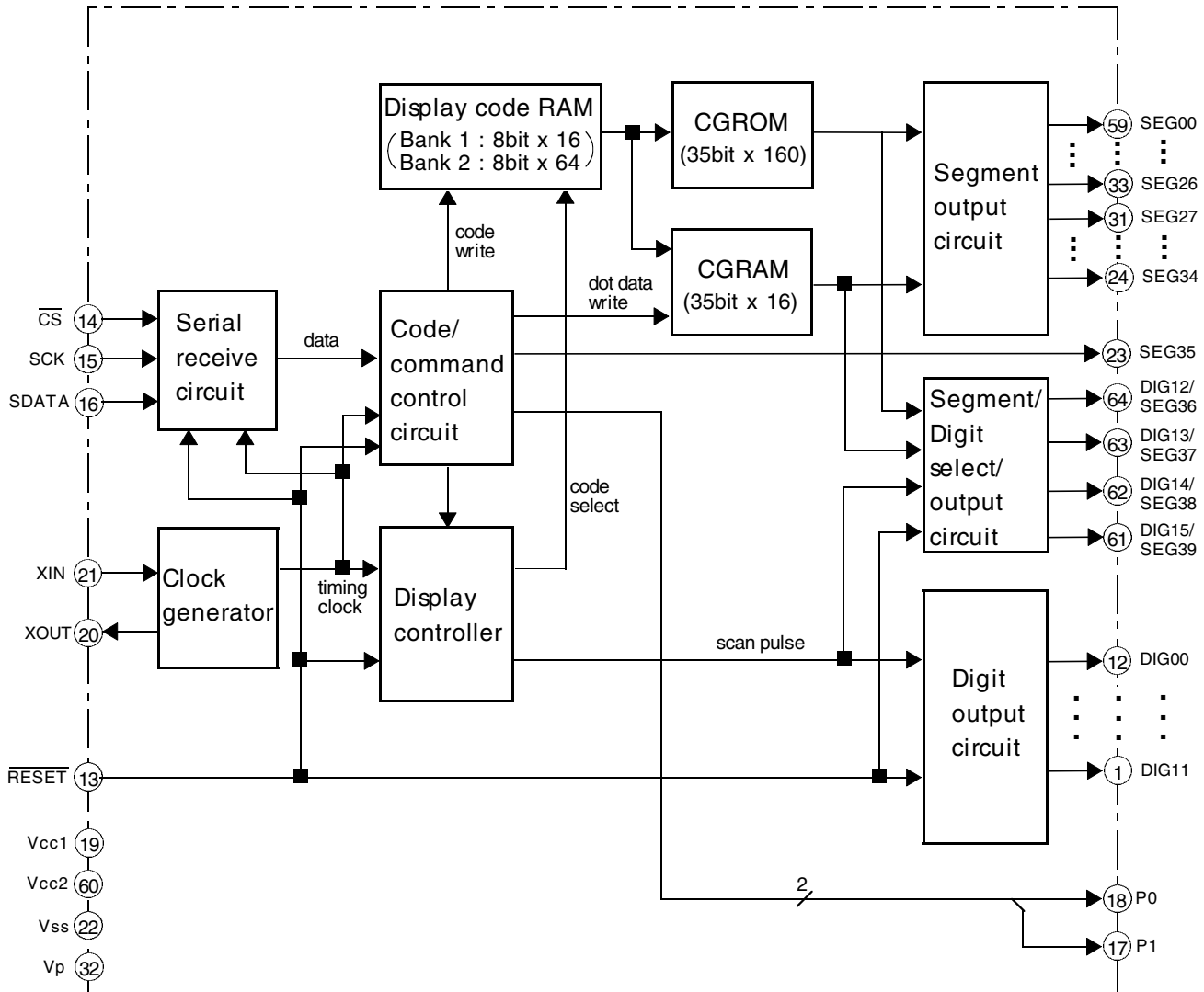
BLOCK DIAGRAM



PIN CONFIGURATION



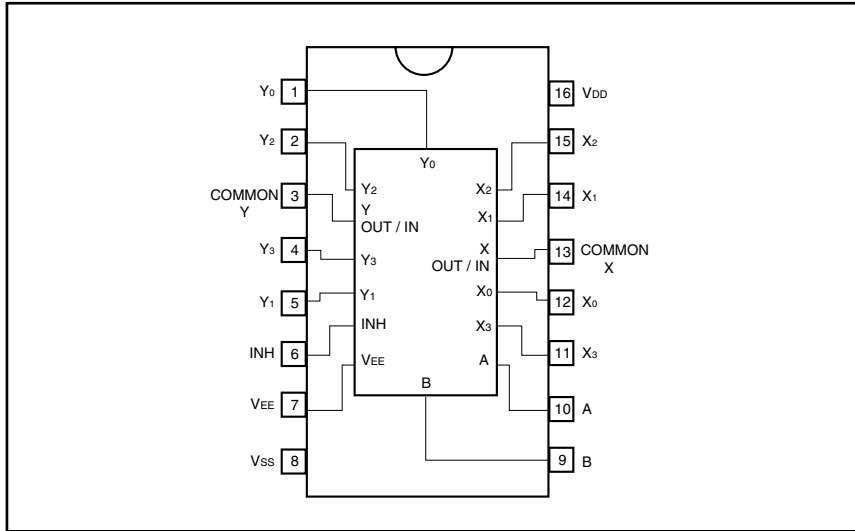
BLOCK DIAGRAM



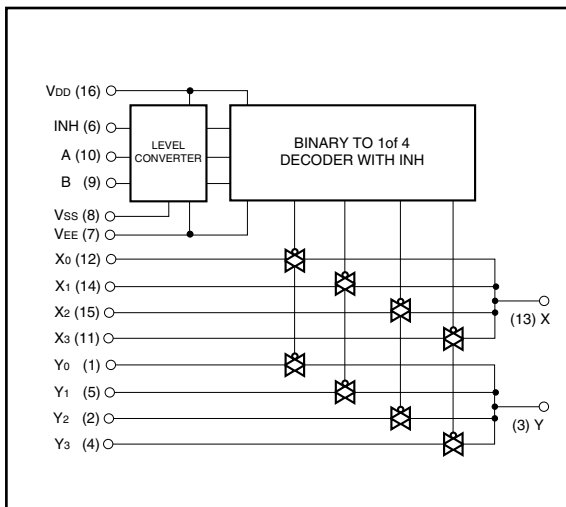
PIN DESCRIPTIONS

Symbol	Pin name	Comment
$\overline{\text{RESET}}$	Reset input	When "L", M66005 is initialized.
$\overline{\text{CS}}$	Chip select input	When "L", communication with the MCU is possible. When "H", any instruction from the MCU is neglected.
SCK	Shift clock input	Serial input data is taken and shifted by the positive edge of SCK.
SDATA	Serial data input	
XIN , XOUT	Clock input Clock output	When use as a CR oscillator, connect external resistor and capacitor. When use an external clock, input external clock to XIN, and XOUT must be opened.
DIG00~ DIG15	Digit output	Connect to digit (grid) pins of VFD.
SEG00~ SEG39	Segment output	Connect to segment (anode) pins of VFD. Pins from SEG00 to SEG39 correspond to segment pins of VFD as shown in the table below. SEG36~SEG39 pins are common to DIG12~DIG15 pins. So, when use SEG36~SEG39, the number of digit to be used is decreased.
P1, P0	Universal port P1 : bidirectional P0 : output	Generally, use this port as the static output port. This port also operates as the timing IN/OUT port to control another M66005.
Vcc1		Positive power supply for internal logic.
Vcc2		Positive power supply for DIG and SEG outputs.
Vss		GND (0V)
Vp		Negative power supply to pull down.

Block diagram



Logic circuit diagram

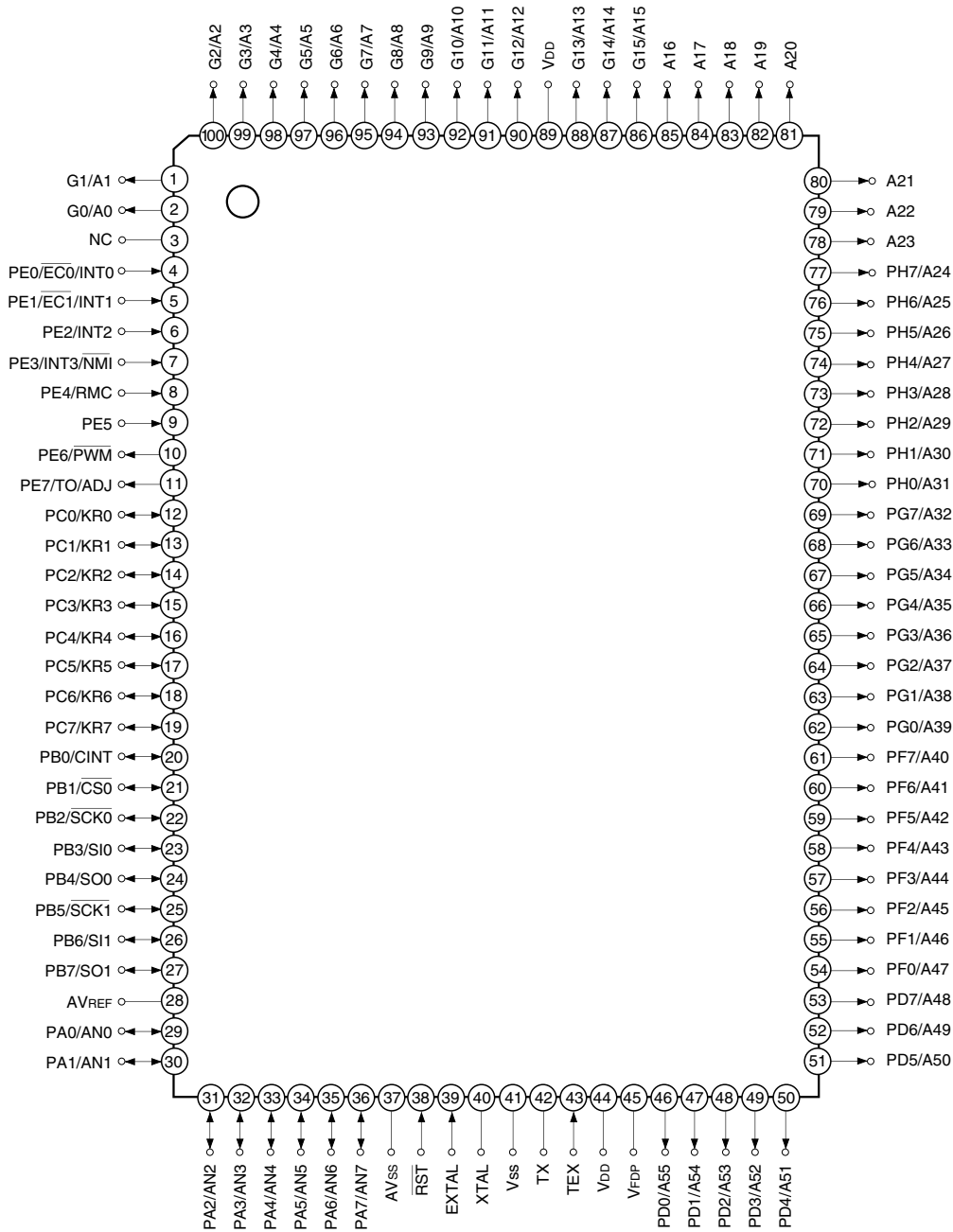


Truth table

INH	A	B	ON SWITCH
L	L	L	X ₀ Y ₀
L	H	L	X ₁ Y ₁
L	L	H	X ₂ Y ₂
L	H	H	X ₃ Y ₃
H	X	X	NONE

X: Irrelevant

Pin Assignment

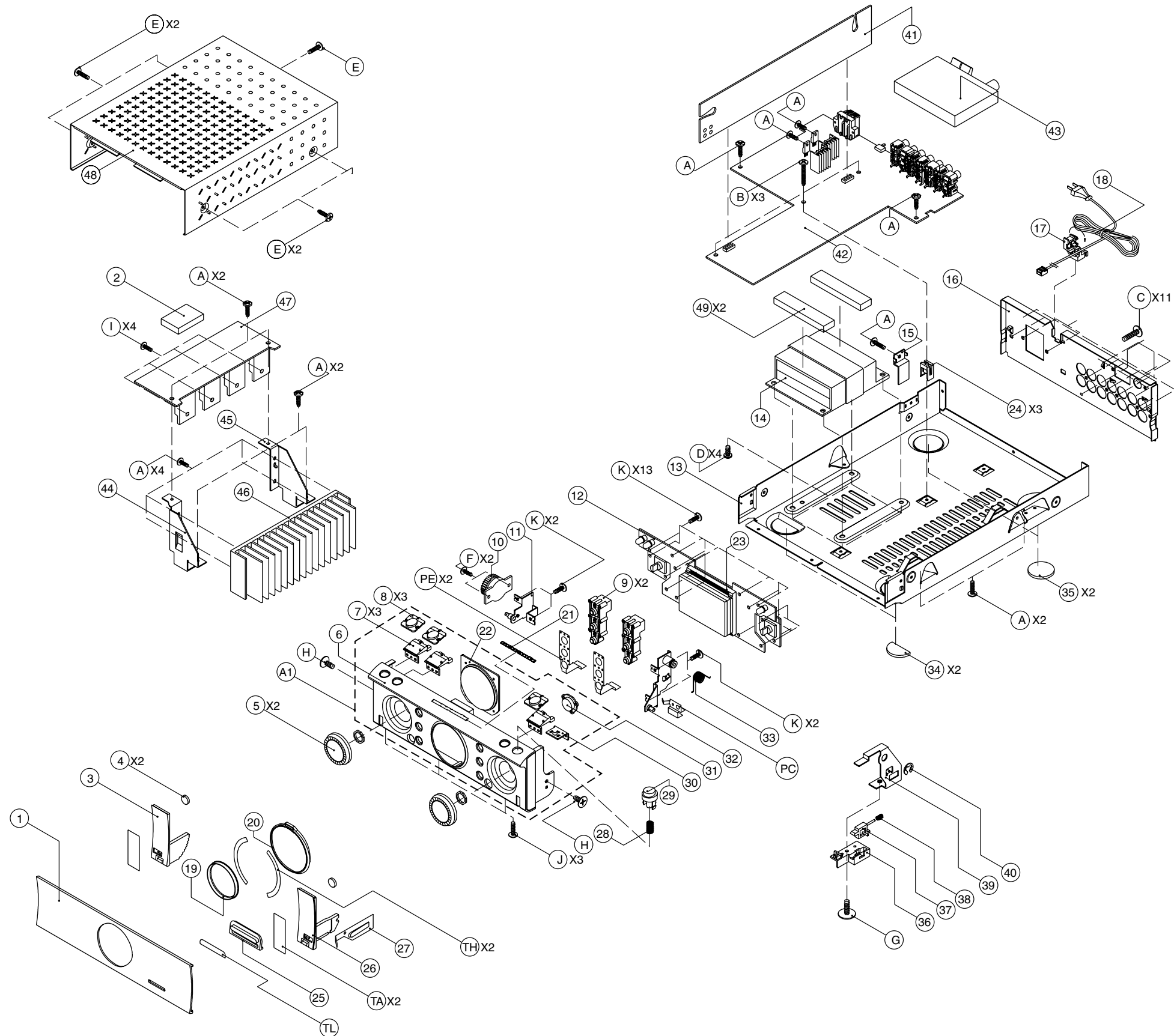


Note) 1. NC (Pin 3) must be connected to V_{DD}.
 2. V_{DD} (Pins 44 and 89) must be connected to V_{DD}.

PIN FUNCTION

PIN NO	PIN NAME	description	IN/OUT	ASSIGN	ACTIVE LEVEL	PULL-UP/DOWN	FORM	FORM
1	N.C		O	O			G1	MOS OUT/buff input
2	N.C		O	O			G2	high input resist
3	PULL UP(N.C)	+5V POWER SUPPLY for pull-up	+5V	I	High			
4	POWER DOWN	INPUT for power down checking.	I	I	High	PD	PE0	P-ch MOS input
5	VOLUME UP	Input for main volume up	I	I		PD	PE1	schmitt trig input
6	RDS CLK	Clock signal output for BU1924	I	I		PD	PE2	high input resist
7	VOLUME DOWN	Input for main volume down	I	I		PD	PE3	
8	REMOCON	INPUT for remocon data	I	I		PD	PE4	
9	RDS DATA IN	INPUT for RDS DATA of BU1924	I	I		PD	PE5	buff out/high resist
10	NC		O	O		PD	PE6	CMOS OUT/high level
11	NC		O	O		PD	PE7	CMOS OUT/high level
12	CLK M66005	Output for CLK of M66005 FLT DRIVE IC	I/O	O		PC0	PC0	CMOS OUT/buff input
13	DI M66005	Output for DATA IN of M66005 FLT DRIVE IC	I/O	O		PC1	PC1	high current drive
14	JOG VOL UP	Input for JOG volume up	I/O	I		PC2	PC2	output(12mA)
15	JOG VOL DOWN	Input for JOG volume DOWN	I/O	I		PC3	PC3	
16	RC-5 INPUT	input for controlling RC-5	I/O	I		PC4	PC4	
17	STEREO	Input for detecting "STEREO" condtion	I/O	I	Low	PU	PC5	
18	TUNED	input for detecting "TUNED" condtion	I/O	I	Low	PU	PC6	
19	SDA TDA7440	output for DATA of TDA 7440	I/O	I		PU	PC7	
20	DI LC72131	input for detecting "SCAN STOP" condition	I/O	I		PB0	PB0	CMOS OUT/schmitt
21	CE LC72131	Output for CHIP ENABLE OF LC72131 PLL IC	I/O	O		PB1	PB1	trig input
22	CLK LC72131	Clock signal output for LC72131 PLL IC	I/O	O		PB2	PB2	high input resist
23	DO LC72131	Output for data of LC72131 PLL IC	I/O	I/O		PB3	PB3	
24	SCK TDA7440	output for CLOCK of TDA7440	I/O	I/O		PB4	PB4	
25	N.C		I/O	I/O		PB5	PB5	
26	RC-5 OUT	Grid signal output for FIP	I/O	O		PB6	PB6	
27	CE M66005	output CE for M66005	I/O	I/O		PB7	PB7	
28	AVREF	Referenc voltage(connected to +5 V)	AVREF		+5V			
29	CE 7821	output for chip enable of LC7821	I/O	O		PA0	PA0	CMOS OUT/multiplex
30	KEY IN1	Data input key scan	I/O	I		PA1	PA1	input(A/D convert)
31	KEY IN2	Data input key scan	I/O	I		PA2	PA2	OR GATE input
32	PROTECT	Input for detecting "PROTECTION" condition	I/O	I	High		PA3	high input resist
33	H/P IN	INPUT for H/P IN	I/O	I	High		PA4	
34	SYSTEM CHECK	INPUT for checking system connetion	I/O	I	High		PA5	
35	SET OPT	Input for selecting set (pull-up : other area pull-down : Marantz	I/O	I			PA7	
36	STEP OPT	According to region, input for selecting the frequency and FM and AM.	I/O	I			PA6	
37	AVSS	Ground	AVSS		0V			
38	RESET	Input for resetting the CPU ("L" condition is active.)	RST	I	Low			
39	EXTAL	input for 10MHz crystal oscillator.						
40	XTAL	Output for 10MHz crystal oscillator.						
41	VSS	VSS (GROUND)	GND					
42	TX	Input for 38.768KHz sub cryatal oscillator						
43	TEX	Output for 38.768KHz sub cryatal oscillator						
44	+5V BACK UP	VDD +5V	VDD		+5V			
45	VFDP -30V	-30V POWER SUPPLY for FIP(Not used)	VFDP		0V			
46	TUNER MUTE	output for TUNER MUTE ("L" condition is active)	O	O	Low	PD6.8K	PD0	P-ch MOS output
47	MAIN MUTE	Output for F CHANNEL MUTE ("L" condition is active	O	O	Low	PD6.8K	PD1	pull-up resist
48	SPK RLY	Output for "SPEAKER SWITCH IS ON/OFF"	O	O	High	PD	PD2	
49	REM SW	OUTPUT FOR REMOCON & RC-5	O	O	Low	PD	PD3	
50	SUB RLY	Output for "SUB TRANS RLY IS ON/OFF"	O	O	High	PD	PD4	
51	MODE1-2700	output for MODE1 OF NJM2700	O	O		PD	PD5	
52	MODE2-2700	output for MODE2 OF NJM2700	O	O		PD	PD6	
53	MODE3-2700	output for MODE3 OF NJM2700	O	O		PD	PD7	
54	POWER LED(GREEN)	Output to drive POWER ON LED(GREEN)	O	O	High	PD100K	PF0	P-ch MOS output
55	STBY LED	Output to drive SYBY LED(RED)	O	O	High	PD100K	PF1	pull-up resist
56	RESET M66005	RESET port for M66005	O	O		PD100K	PF2	
57	N.C		O	O			PF3	
58	CLK LC7821	Clock signal output for LC7821	O	O		PD6.8K	PF4	
59	DATA LC7821	output for data of LC7821	O	O		PD6.8K	PF5	
60	N.C		O	O			PF6	
61	N.C		O	O			PF7	
62~69	N.C	Data input for key scan(Not used)	O	O		PD	PG0	
70~85	S1~S15	SEGMENT signal output for FIP(Not used)	O	O			PH	
86~88	N.C	Not used	O	O			A	
89	VDD	VDD +5V	VDD		+5V			
90	N.C	Not used	O	O			G	
91~100	1G~11G	Grid signal output for FIP(Not used)	O	O			G	

8. EXPLODED VIEW AND PARTS LIST



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
1		9965 000 10696	PANEL DOOR	323W162010	PE		nsp	PLATE EATRTH "E"	nsp
2		nsp	CUSHION	nsp	PC		nsp	PLATE EATRTH "C"	nsp
3		9965 000 10697	ARM DOOR L	323W002010	TA		nsp	TAPE ARM	nsp
4		9965 000 10698	CUSHION DOOR	323W259010	TL		nsp	TAPE LENS	nsp
5		9965 000 10699	KNOB VOLUME/MULTI JOG	323W154010	TP		nsp	TAPE PROTECTOR	nsp
A1		9965 000 10947	FRONT PANEL SUB ASSY	323W248500	TH		nsp	TAPE HOLDER RING	nsp
6		nsp	PANEL FRONT	323W248010	A		nsp	SCREW TAPPING	nsp
7		nsp	BUTTON POWER B	323W270030	B		nsp	SCREW TAP TITE	nsp
8		nsp	BUTTON POWER A	323W270010	C		nsp	SCREW TAP TITE	nsp
9		9965 000 10700	BUTTON FUNCTION	323W270020	E		nsp	SCREW TAP TITE	nsp
10		9965 000 10701	DAMPER GEAR	323W130010	F		nsp	SCREW TAPPING	nsp
11		9965 000 10702	BRACKET DOOR C	323W160060	G		nsp	SCREW	nsp
12	F	nsp	P.C.B ASSY FRONT	nsp	H		nsp	SCREW TAP TITE	nsp
12	N	nsp	P.C.B ASSY FRONT	nsp	i		nsp	SCREW TAPPING ASSY	nsp
12	U	nsp	P.C.B ASSY FRONT	nsp	J		nsp	SCREW TAP TITE	nsp
13		nsp	CHASSIS MAIN	nsp	K		nsp	SCREW TAP TITE	nsp
▲	F	nsp	MAINS TRANSFORMER	*TS001270R					
▲	N	9965 000 10704	MAINS TRANSFORMER	*TS001250R				PACKING	
▲	U	nsp	MAINS TRANSFORMER	*TS001260R	N		9965 000 10727	USER GUIDE	323W851310
15		nsp	BRACKET SIDE	nsp	U		nsp	USER GUIDE	323W851250
16	F	nsp	REAR PANEL	nsp	F		nsp	USER GUIDE	323W851110
16	N	nsp	REAR PANEL	nsp					
16	U	nsp	REAR PANEL	nsp			9965 000 10726	REMOTE CONTROLLER	ZK323W0010
17	F	nsp	STOPPER CORD	323W259020				RC110SR	
17	N U	nsp	STOPPER CORD	323W259030					
▲	F	nsp	MAINS CORD ASSY	*YC000560R					
▲	N	9965 000 10705	MAINS CORD ASSY	*YC000570R					
▲	U	nsp	MAINS CORD ASSY	*YC000580R					
19		9965 000 10706	RING DOOR	323W353020					
20		9965 000 10707	HOLDER RING	323W353010					
21		9965 000 10708	BADGE MARANTZ	323W251010					
22		nsp	WINDOW DISPLAY	323W158010					
23		nsp	SUPPORTER FLT	nsp					
24		nsp	SUPPORTER PCB	nsp					
25		9965 000 10709	WINDOW REMOCON B	323W158030					
26		9965 000 10713	ARM DOOR R	323W002020					
27		nsp	PLATE EARTH A	323W123010					
28		9965 000 10714	SPRING DOOR C	323W115010					
29		9965 000 10715	KNOB EJECT	323W154020					
30		nsp	SUPPORTER EJECT	323W101010					
31		nsp	WINDOW REMOCON A	323W158020					
32		9965 000 10716	BRACKET DOOR A	323W160010					
33		9965 000 10717	SPRING DOOR A	323W115020					
34		9965 000 10718	CUSHION FOOT F	323W057010					
35		9965 000 10719	CUSHION FOOT B	323W057020					
36		9965 000 10720	HOLDER HINGE B	323W271020					
37		9965 000 10721	HOLDER HINGE A	323W271010					
38		9965 000 10703	SPRING DOOR B	323W115030					
39		9965 000 10722	BRACKET DOOR B	323W160020					
40		9965 000 10723	E-RING	323W353100					
41	F	nsp	P.C.B ASSY CONNECTOR	nsp					
41	N	nsp	P.C.B ASSY CONNECTOR	nsp					
41	U	nsp	P.C.B ASSY CONNECTOR	nsp					
42	F	nsp	P.C.B ASSY MAIN	nsp					
42	N	nsp	P.C.B ASSY MAIN	nsp					
42	U	nsp	P.C.B ASSY MAIN	nsp					
43	F	nsp	TUNER PACK FM	*AV000150R					
43	N	9965 000 10724	TUNER PACK FM	*AV000160R				NOT STANDARD SPARE	
43	U	nsp	TUNER PACK FM	*AV000140R				PARTS	
44		nsp	BRACKET HEATSINK R	nsp	U		nsp	CARD	nsp
45		nsp	BRACKET HEATSINK L	nsp	F		nsp	CARD	nsp
46		nsp	HEAT SINK MAIN	nsp	U		nsp	CARD	nsp
47	F	nsp	P.C.B ASSY AMP	nsp	F		nsp	CARD	nsp
47	N	nsp	P.C.B ASSY AMP	nsp	U		nsp	BOX GIFT	323W801010
47	U	nsp	P.C.B ASSY AMP	nsp			nsp	CUSHION SNOW	323W809010
48		9965 000 10725	CABINET TOP	323W257010			nsp	ANTENNA LOOP	nsp
							nsp	ANTENNA WIRE	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

9. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R***: 1) GD05 × × × 140, Carbon film fixed resistor, ±5% 1/4W
 R***: 2) GD05 × × × 160, Carbon film fixed resistor, ±5% 1/6W

① — Resistance value

Examples ;

① Resistance value
 0.1 Ω 001 10 Ω 100 1 kΩ 102 100 kΩ 104
 0.5 Ω 005 18 Ω 180 2.7 kΩ 272 680 kΩ 684
 1 Ω 010 100 Ω 101 10 kΩ 103 1 MΩ 105
 6.8 Ω 068 390 Ω 391 22 kΩ 223 4.7 MΩ 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C***: CERAMIC CAP.

3) DD1 × × × × 370, Ceramic capacitor
 Disc type
 Temp.coeff.P350 ~ N1000, 50V
 ② — Capacity value
 ③ — Tolerance

Examples ;

② Tolerance (Capacity deviation)
 ±0.25 pF 0
 ±0.5 pF 1
 ±5% 5

* Tolerance of COMMON PARTS handled here are as follows :

0.5 pF ~ 5 pF ±0.25 pF
 6 pF ~ 10 pF ±0.5 pF
 12 pF ~ 560 pF ±5%

③ Capacity value

0.5 pF 005 3 pF 030 100 pF 101
 1 pF 010 10 pF 100 220 pF 221
 1.5 pF 015 47 pF 470 560 pF 561

C*** : CERAMIC CAP.

4) DK16 × × × × 300, High dielectric constant ceramic capacitor
 Disc type
 Temp.chara. 2B4, 50V
 ④ — Capacity value

Examples ;

④ Capacity value
 100 pF 101 1000 pF 102 10000 pF 103
 470 pF 471 2200 pF 222

C*** : 5) ELECTROLY CAP. (⏏), 6) FILM CAP. (⏏)

5) EA × × × × × 10, Electrolytic capacitor
 One-way lead type, Tolerance ±20%
 ⑤ — Working voltage
 ⑥ — Capacity value

Examples ;

⑤ Capacity value
 0.1 μF 104 4.7 μF 475 100 μF 107
 0.33 μF 334 10 μF 106 330 μF 337
 1 μF 105 22 μF 226 1100 μF 118
 2200 μF 228

⑥ Working voltage

6.3V 006 25V 025
 10V 010 35V 035
 16V 016 50V 050

6) DF15 × × × 350 — Plastic film capacitor
 DF15 × × × 310 — One-way type, Mylar ±5% 50V
 DF16 × × × 310 — Plastic film capacitor
 One-way type, Mylar ±10% 50V
 ⑦ — Capacity value

Examples ;

⑦ Capacity value
 0.001 μF (1000 pF) 102 0.1 μF 104
 0.0018 μF 182 0.56 μF 564
 0.01 μF 103 1 μF 105
 0.015 μF 153

NOTE : 1) The above CODES (R***, R***, C***, C*** and C***) are omitted on the schematic diagram in some case.

2) On the occasion, be confirmed the common parts on the parts list.

3) Refer to "Common Parts List" for the other common parts (R105, DD4, DK4).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
NH05 × × × 140	RF25S × × × × ΩJ	(±5% 1/4W)
NH05 × × × 120	RF50S × × × × ΩJ	(±5% 1/2W)
NH85 × × × 110	RF73B2A × × × × ΩJ	(±5% 1/10W)
NH95 × × × 140	RF73B2E × × × × ΩJ	(±5% 1/4W)

* Resistance value * Resistance value
 (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
NF05 × × × 140	ERD-2FCJ × × ×	(±5% 1/4W)
RF05 × × × 140		
NF02 × × × 140	ERD-2FCG × × ×	(±2% 1/4W)
RF02 × × × 140		

* Resistance value * Resistance value

Examples ;

* Resistance value
 0.1 Ω 001 10 Ω 100 1 kΩ 102 100 kΩ 104
 0.5 Ω 005 18 Ω 180 2.7 kΩ 272 680 kΩ 684
 1 Ω 010 100 Ω 101 10 kΩ 103 1 MΩ 105
 6.8 Ω 068 390 Ω 391 22 kΩ 223 4.7 MΩ 475

ABBREVIATION AND MARKS

ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ-PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF. : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X'TAL : CRYSTAL

NOTE ON FUSE :

Regarding to all parts of parts code **FS20xxx2xx**, replace only with Wickmann-Werke GmbH, Type 372 non glass type fuse.

NOTE ON SAFETY :

Symbol \blacktriangle Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol \blacktriangle . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

\blacktriangle がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
			MAIN CIRCUIT BOARD						
			MAIN-CAPACITORS						
C101		nsp	CER. CHIP COG100PF-J/50V	nsp	C180		nsp	CER. CHIP X7R0.01UF-K/50V	nsp
C113		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C181		nsp	CER. CHIP COG100PF-J/50V	nsp
C116		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C182		nsp	CER. CHIP COG470PF-J/50V	nsp
C117		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C183		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp
C118		nsp	CER. CHIP COG100PF-J/50V	nsp	▲ C186		nsp	ELECT. 2200UF-M/25V 16x25	EA22802510
C119		nsp	CER. CHIP COG100PF-J/50V	nsp	▲ C187		nsp	ELECT.	EA10802510
C120		nsp	CER. CHIP COG100PF-J/50V	nsp	C188		nsp	1000UF-M/25V 12.5x20S.BLK	
C121		nsp	CER. CHIP X7R0.01UF-K/50V	nsp	C189		nsp	ELECT. 4.7UF-M/50V 5x5-5RE	nsp
C122		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C190		nsp	ELECT. 4.7UF-M/50V 5x5-5RE	nsp
C123		nsp	CER. CHIP X7R0.022UF-K/25V	nsp				ELECT.	
C124		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C191		nsp	100UF-M/10V 5x11-5RE	nsp
C127		nsp	CER. CHIP X7R0.1UF-K/50V	nsp				ELECT.	
C128		nsp	CER. CHIP X7R0.01UF-K/50V	nsp	C192		nsp	100UF-M/10V 5x11-5RE	nsp
C129		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	▲ C193		nsp	ELECT. 1UF-M/50V 5x11-5RE	nsp
C130		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	▲ C194		nsp	FILM RED-0.1UF-K/250V-5RE	nsp
C131		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	▲ C195		nsp	FILM RED-0.1UF-K/250V-5RE	nsp
C132		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C196		nsp	FILM ST-0.047UF-J/100V-5RE	nsp
C133		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C197		nsp	FILM ST-0.047UF-J/100V-5RE	nsp
C134		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C198		nsp	FILM ST-0.047UF-J/100V-5RE	nsp
C135		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C199		nsp	CER. CHIP COG100PF-J/50V	nsp
C136		nsp	ELECT. 4.7UF-M/50V 5x11	nsp					
C137		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C200		nsp	CER. CHIP COG100PF-J/50V	nsp
C138		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C201		nsp	ELECT. 0.1UF-M/50V 4x7	nsp
C139		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C202		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp
C140		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C203		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp
C141		nsp	ELECT. 1UF-M/50V 5x11-5RE	nsp	C204		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp
C142		nsp	CER. CHIP COG470PF-J/50V	nsp	▲ C205		nsp	ELECT.	EA10802510
C143		nsp	CER. CHIP COG470PF-J/50V	nsp				1000UF-M/25V 12.5x20S.BLK	
C144		nsp	CER. CHIP COG100PF-J/50V	nsp	C206		nsp	FILM RED-0.1UF-K/63V-5RE	nsp
C145		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C207		nsp	FILM ST-0.0047UF-J/100V-5RE	nsp
C146		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C208		nsp	FILM RED-0.1UF-K/63V-5RE	nsp
C147		nsp	CER. CHIP COG100PF-J/50V	nsp	C209		nsp	FILM RED-0.1UF-K/63V-5RE	nsp
C149		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp	C210		nsp	FILM RED-0.1UF-K/63V-5RE	nsp
					C211		nsp	ELECT. 0.1UF-M/50V 4x7	nsp
C150		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C212		nsp	ELECT. 1UF-M/50V 5x11-5RE	nsp
C151		nsp	ELECT.	nsp	C213		nsp	FILM ST-0.0047UF-J/100V-5RE	nsp
			100UF-M/25V 6.3x11-5RE.SY		▲ C214		nsp	CER. DE7150-487F 472MVAI	DK17472840
C152		nsp	ELECT.	nsp	C215		nsp	ELECT. 4.7UF-M/50V 5x11	nsp
			100UF-M/16V 6.3x11-5RE SMS		§				
C153		nsp	CER. CHIP COG220PF-J/50V	nsp	C218		nsp	ELECT.	nsp
C154		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp	C219		nsp	0.47UF-M/50V 5x11-5RE	nsp
C155		nsp	FILM ST-0.033UF-J/100V-5RE	nsp				ELECT.	nsp
C156		nsp	FILM ST-0.01UF-J/100V-5RE	nsp	C220		nsp	ELECT.	nsp
C157		nsp	FILM RED-0.47UF-K/63V-5RE	nsp				0.47UF-M/50V 5x11-5RE	nsp
C158		nsp	FILM RED-0.33UF-K/63V-5RE	nsp	C221		nsp	CER. CHIP COG220PF-J/50V	nsp
C159		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C222		nsp	CER. CHIP COG220PF-J/50V	nsp
C160		nsp	ELECT. 4.7UF-M/50V 5x11	nsp					
C161		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C506		nsp	ELECT.	nsp
C162		nsp	CER. CHIP X7R0.1UF-K/50V	nsp				47UF-M/25V 5x11-5RE.SY	
C163		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C507		nsp	CER. CHIP X7R0.01UF-K/50V	nsp
C164		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp	C508		nsp	ELECT. 0.1UF-M/50V 4x7	nsp
C165		nsp	CER. CHIP X7R5600PF-K/50V	nsp	C509		nsp	CER. CHIP COG22PF-J/50V	nsp
C166		nsp	CER. CHIP X7R5600PF-K/50V	nsp	C510		nsp	CER. CHIP COG22PF-J/50V	nsp
C167		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	C511		nsp	ELECT. 4.7UF-M/50V 5x11	nsp
C169		nsp	ELECT.	nsp	C512	9965 000 10730		DOUBLE LAYER(70)	*EX000070R
			100UF-M/25V 6.3x11-5RE.SY					IF/5.5V 5x20	
C170		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	C513		nsp	CER.F0.1UF-Z/50V-52RE	nsp
C171		nsp	ELECT. 1UF-M/50V 5x11-5RE	nsp					
▲ C172		nsp	ELECT. 330UF-M/63V 12.5x20	EA33706310					
C173		nsp	ELECT. 1UF-M/50V 5x11-5RE	nsp					
C174		nsp	ELECT. 1UF-M/50V 5x11-5RE	nsp					
C175		nsp	CER. CHIP COG470PF-J/50V	nsp					
C176		nsp	CER. CHIP COG100PF-J/50V	nsp	R101		nsp	CHIP 470-J 1/16W	nsp
C177		nsp	CER. CHIP X7R1000PF-K/50V	nsp	R102		nsp	CHIP 470-J 1/16W	nsp
C178		nsp	CER. CHIP X7R1000PF-K/50V	nsp	R103		nsp	CHIP 470-J 1/16W	nsp
C179		nsp	CER. CHIP X7R0.01UF-K/50V	nsp	R104		nsp	CHIP 100K-J 1/16W	nsp
					R105		nsp	CHIP 100K-J 1/16W	nsp
					R106		nsp	CHIP 470-J 1/16W	nsp
					R107		nsp	CHIP 470-J 1/16W	nsp
					R108		nsp	CHIP 100K-J 1/16W	nsp
					R109		nsp	CHIP 100K-J 1/16W	nsp
					R110		nsp	CHIP 100K-J 1/16W	nsp

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R111					R188		nsp	METAL 100PPM 0.22-J 1W	*GA000200R
{		nsp	CHIP 470-J 1/16W	nsp	R189		nsp	CHIP 1K-J 1/16W	nsp
R114					R190		nsp	CHIP 1K-J 1/16W	nsp
R115					R191		nsp	CHIP 100K-J 1/16W	nsp
{		nsp	CHIP 100K-J 1/16W	nsp	R192		nsp	CHIP 100K-J 1/16W	nsp
R120					R193		nsp	CHIP 2.2K-J 1/16W	nsp
R121		nsp	CHIP 470-J 1/16W	nsp	R194		nsp	CHIP 2.2K-J 1/16W	nsp
R122		nsp	CHIP 470-J 1/16W	nsp	R195		nsp	CHIP 470K-J 1/16W	nsp
R123		nsp	CHIP 100K-J 1/16W	nsp	R196		nsp	METAL 100PPM 1K-J 1/4W	GG05102140
R124		nsp	CHIP 470-J 1/16W	nsp	R198		nsp	METAL 100PPM 4.7K-J 1/4W	GG05472140
R127		nsp	CHIP 1K-J 1/16W	nsp	R199		nsp	METAL 100PPM 68-J 1/4W	GG05680140
R128		nsp	CHIP 1K-J 1/16W	nsp					
R129		nsp	CHIP 1K-J 1/16W	nsp	R200		nsp	1.8K-J 1/5W-52RE-AX	nsp
R130		nsp	CHIP 680K-J 1/16W	nsp	R202		nsp	47K-J 1/5W-52RE-AX	nsp
R131		nsp	CHIP 470-J 1/16W	nsp	R203		nsp	METAL 100PPM 10-J 1W	GA05100010
R132		nsp	470-J 1/5W-52RE-AX	nsp	R204		nsp	METAL 100PPM 10-J 1W	GA05100010
R133		nsp	CHIP 22K-J 1/16W	nsp	R205		nsp	4.7K-J 1/5W-52RE-AX	nsp
R134		nsp	CHIP 470-J 1/16W	nsp	R206		nsp	CHIP 47K-J 1/16W	nsp
R135		nsp	CHIP 100K-J 1/16W	nsp	R207		nsp	47K-J 1/5W-52RE-AX	nsp
R136		nsp	CHIP 100K-J 1/16W	nsp	R208		nsp	METAL 100PPM 0.22-J 1W	*GA000200R
R137		nsp	CHIP 470-J 1/16W	nsp	R209		nsp	METAL 100PPM 470-J 1W	GA05471010
R138		nsp	CHIP 100K-J 1/16W	nsp	R210		nsp	METAL 100PPM 470-J 1W	GA05471010
R139		nsp	CHIP 43K-J 1/16W	nsp	R211		nsp	CHIP 2.2K-J 1/16W	nsp
R140		nsp	CHIP 3K-J 1/16W	nsp	R212		nsp	CHIP 2.2K-J 1/16W	nsp
R141		nsp	CHIP 39K-J 1/16W	nsp	R213		nsp	CHIP 560-J 1/16W	nsp
R142		nsp	CHIP 9.1K-J 1/16W	nsp	R214		nsp	CHIP 560-J 1/16W	nsp
R143		nsp	CHIP 470-J 1/16W	nsp	R215		nsp	CHIP 470-J 1/16W	nsp
R144		nsp	470-J 1/5W-52RE-AX	nsp	R216		nsp	CHIP 470-J 1/16W	nsp
R145		nsp	1K-J 1/5W-52RE-AX	nsp	R217	U	nsp	METAL 100PPM ERC-12UGK335	RC05471010
R146		nsp	CHIP 1K-J 1/16W	nsp					
R147		nsp	CHIP 1K-J 1/16W	nsp	R218		nsp	10K-J 1/5W-52RE-AX	nsp
R148		nsp	CHIP 1K-J 1/16W	nsp	R219		nsp	4.7-J 1/4W-52RE-AX	nsp
R150		nsp	CHIP 100K-J 1/16W	nsp	R220		nsp	4.7-J 1/4W-52RE-AX	nsp
R151		nsp	CHIP 100K-J 1/16W	nsp					
R152		nsp	CHIP 5.6K-J 1/16W	nsp	R501				
R153		nsp	CHIP 470-J 1/16W	nsp	{		nsp	CHIP 100K-J 1/16W	nsp
R154		nsp	CHIP 470-J 1/16W	nsp	R504				
R155		nsp	CHIP 5.6K-J 1/16W	nsp	R505		nsp	CHIP 10K-J 1/16W	nsp
R156		nsp	CHIP 4.7K-J 1/16W	nsp	R506		nsp	CHIP 100K-J 1/16W	nsp
R157		nsp	CHIP 1K-J 1/16W	nsp	R507		nsp	CHIP 10K-J 1/16W	nsp
R158		nsp	150-J 1/5W-52RE-AX	nsp	R510	N	nsp	CHIP 10K-J 1/16W	nsp
R159		nsp	150-J 1/5W-52RE-AX	nsp	R510	U	nsp	CHIP 47K-J 1/16W	nsp
R160		nsp	CHIP 27K-J 1/16W	nsp	R511	N	nsp	CHIP 4.7K-J 1/16W	nsp
R161		nsp	CHIP 27K-J 1/16W	nsp	R511	F	nsp	CHIP 47K-J 1/16W	nsp
R162		nsp	CHIP 1K-J 1/16W	nsp	R514		nsp	CHIP 1M-J 1/16W	nsp
R163		nsp	CHIP 1K-J 1/16W	nsp	R515		nsp	CHIP 100K-J 1/16W	nsp
R164		nsp	METAL 100PPM 220-J 1W	GA05221010	R516		nsp	CHIP 1M-J 1/16W	nsp
R165		nsp	CHIP 27K-J 1/16W	nsp	R517		nsp	CHIP 10K-J 1/16W	nsp
R166		nsp	METAL 100PPM 10-J 1W	GA05100010	R518		nsp	CHIP 6.8K-J 1/16W	nsp
R167		nsp	CHIP 51K-J 1/16W	nsp	R519				
R168		nsp	METAL 100PPM 4.7K-J 1/4W	GG05472140	{		nsp	CHIP 100K-J 1/16W	nsp
R169		nsp	CHIP 5.1K-J 1/16W	nsp	R522				
R170		nsp	CHIP 100K-J 1/16W	nsp	R523		nsp	CHIP 6.8K-J 1/16W	nsp
R171		nsp	CHIP 100K-J 1/16W	nsp	R524		nsp	CHIP 6.8K-J 1/16W	nsp
R172		nsp	CHIP 3.3K-J 1/16W	nsp	R525		nsp	CHIP 100K-J 1/16W	nsp
R173		nsp	CHIP 3.3K-J 1/16W	nsp	R527		nsp	CHIP 100K-J 1/16W	nsp
R174		nsp	CHIP 5.1K-J 1/16W	nsp	R530		nsp	1K-J 1/5W-52RE-AX	nsp
R175		nsp	CHIP 47K-J 1/16W	nsp	R531		nsp	1K-J 1/5W-52RE-AX	nsp
R176		nsp	CHIP 47K-J 1/16W	nsp	R532		nsp	1K-J 1/5W-52RE-AX	nsp
R177		nsp	CHIP 4.7K-J 1/16W	nsp	R533		nsp	47K-J 1/5W-52RE-AX	nsp
R178		nsp	CHIP 47K-J 1/16W	nsp	R534		nsp	1K-J 1/5W-52RE-AX	nsp
R179		nsp	2.2K-J 1/5W-52RE-AX	nsp	R535		nsp	1K-J 1/5W-52RE-AX	nsp
R180		nsp	CHIP 33K-J 1/16W	nsp	R536		nsp	1K-J 1/5W-52RE-AX	nsp
R181		nsp	CHIP 51K-J 1/16W	nsp	R537		nsp	1K-J 1/5W-52RE-AX	nsp
R182		nsp	CHIP 51K-J 1/16W	nsp	R538		nsp	4.7K-J 1/5W-52RE-AX	nsp
R183		nsp	CHIP 100K-J 1/16W	nsp	R539		nsp	CHIP 100K-J 1/16W	nsp
R184		nsp	CHIP 100K-J 1/16W	nsp					
R185		nsp	2.2K-J 1/5W-52RE-AX	nsp	J501				
R186		nsp	CHIP 8.2K-J 1/16W	nsp	{		nsp	CHIP 0-J 1/16W	nsp
R187		nsp	METAL 100PPM 0.22-J 1W	*GA000200R	J511				

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
J513 }		nsp	CHIP 0-J 1/16W	nsp	Q103 }		4822 130 41947	TRS. NPN 2SC	HT30001000
J517					Q107			2SC3199Y (KTC3199 Y)	
J519		nsp	CHIP 0-J 1/16W	nsp	Q108		9965 000 10744	CHIP TRS. 2SC KTC2875B	*HT300870R
			MAIN-SEMICONDUCTORS					0.15W/LOW-ON-RES	
D105		4822 130 30862	D ZENER	*HD301970R	Q109		9965 000 10744	CHIP TRS. 2SC KTC2875B	*HT300870R
			MTZJ9.1B-0.5W/5MA-52MM		Q110		9965 000 10745	0.15W/LOW-ON-RES	
D107		4822 130 32778	D SWITCHING	HD20015210	Q111		9965 000 10444	CHIP TRS. KRA102S SOT23	*BA001130R
			1SS133T-72-52MM					TRS. NPN RC	*BA001070R
D108		9965 000 10728	D SWITCHING	*HD201570R	Q112		4822 130 41947	KRC107M 0.4W/TO92M	
			IN4007 52 1000V 1A					TRS. NPN 2SC	HT30001000
D109		4822 130 11676	D ZENER	*HD301670R	Q113		4822 130 41947	2SC3199Y (KTC3199 Y)	HT30001000
			MTZJ30B-0.5W/5MA-52MM					TRS. NPN 2SC	HT30001000
D110 }					Q501		9965 000 10746	2SC3199Y (KTC3199 Y)	
D112		9965 000 10728	D SWITCHING	*HD201570R				CHIP TRS. 2SA	*BA001170R
▲ D113		4822 130 83067	D RECTIFIER BRIDGE	HE20020290				KRA107S-SOT23	
			D3SB20/DBF40C 5A-4PIN					MAIN-MISCELLANEOUS	
D114		9965 000 10728	D SWITCHING	*HD201570R	CP101		nsp	1P JUMPER (0.6/52MM)	nsp
			IN4007 52 1000V 1A				nsp	CN.WAFER	nsp
D115		9965 000 10728	D SWITCHING	*HD201570R	CP102		nsp	2.0MM 35336-0610 6P	nsp
			IN4007 52 1000V 1A					CN.WAFER	nsp
D116 }					CP103		nsp	2.0MM 35336-0710 7P	nsp
D118		4822 130 32778	D SWITCHING	HD20015210				CN.WAFER	nsp
D119		4822 130 33948	D ZENER	HD30561000	▲ CP104		nsp	2.5MM 5267-03A 3P	nsp
			MTZJ5.6B-0.5W/5MA-52MM					CN.WAFER	nsp
D120		9965 000 10586	D ZENER	*HD301950R	▲ CP105		nsp	3.96MM 35313-0410	nsp
			MTZJ20B-0.5W/5MA-52MM					CN.WAFER	nsp
D121		9965 000 10728	D SWITCHING	*HD201570R	▲ CP106		nsp	7.92MM YW396-32V 2P	nsp
			IN4007 52 1000V 1A					CN.WAFER	nsp
D122		9965 000 10728	D SWITCHING	*HD201570R	CP107		nsp	3.96MM 35328-0210	nsp
			IN4007 52 1000V 1A					CN.WAFER	nsp
D123		4822 130 80317	D ZENER	HD30511000	CP501		nsp	2.0MM 53014-0310 3P	nsp
			MTZJ5.1B-0.5W/5MA-52MM					CN.FPC	nsp
D124		4822 130 32778	D SWITCHING	HD20015210	CP502		nsp	1.25MM 52045-1745 17P ST	nsp
			1SS133T-72-52MM					CN.WAFER	nsp
D125		4822 130 32778	D SWITCHING	HD20015210	F101 N		4822 070 32502	2.0MM 35336-1610 16P	
			1SS133T-72-52MM					FUSE (5.2x20)	*FS000360R
D126 }					F101 F U		nsp	250V-T2.5A-S/V/B/R(TEAR1)	
D129		9965 000 10728	D SWITCHING	*HD201570R				FUSE (5.2x20)	*FS000780R
			IN4007 52 1000V 1A					125V-S3.15A(TEAR2)	
D501		9965 000 10747	D SWITCHING CHIP KDS160	*HD201560R	RCA101		9965 000 10734	TERCA 4PIN	*YT002460R
D502		9965 000 10747	D SWITCHING CHIP KDS160	*HD201560R				DAERYUNG/JK040131PN	
D503		4822 130 32778	D SWITCHING	HD20015210	RCA102		9965 000 10736	TERCA 6PIN	*YT002480R
			1SS133T-72-52MM					DAERYUNG/JK060132PN	
D504		4822 130 32778	D SWITCHING	HD20015210	RCA103		9965 000 10735	TERCA 4PIN	*YT002470R
			1SS133T-72-52MM					DAERYUNG/JK040131HN	
D505		4822 130 80317	D ZENER	HD30511000	RLY101		9965 000 10738	RELAY G5PA-28 12V SPK	*LY000270R
			MTZJ5.1B-0.5W/5MA-52MM		▲ RLY102		9965 000 10737	RELAY G5PA-1-8 12V 5A	*LY000260R
IC101		4822 209 72748	IC LOGIC LC7821 LOW NOISE	HC10228030	SPK101		9965 000 10733	TE BOARD PUSH 4P	*YT002490R
IC102		4822 209 17155	IC OP NJM2068M	HC10102090				P80420771P	
IC103		9965 000 10741	IC VOICE NJM2700G WOW	*HC107200R	SW101		9965 000 10732	SW SLIDE SSAFE112NA011	*SS000700R
IC104		9965 000 10742	IC LINEAR EQ TDA7440D	*HC107190R	▲ T101 N		9965 000 10729	POWER TRANSFORMER	*TS001350R
IC105		9965 000 01740	IC LOGIC BU4052BCF	HC40522110				STAND-BY 230V/50HZ 28x15	
IC106		4822 209 17155	IC LINEAR OP NJM2068M	HC10102090	▲ T101 U		nsp	POWER TRANSFORMER	*TS001360R
▲ IC108		4822 209 60826	IC REG. KIA7812PI 20W	HC3891209F				STAND-BY 120V/60HZ 28x15	
▲ IC109		4822 209 73954	IC REG. KIA7912PI 20W	HC3991209F	▲ T101 F		nsp	POWER TRANSFORMER	*TS001370R
▲ IC110		4822 209 31631	IC REG. KIA7805PI 20W	HC3890509F				STAND-BY 100V 50HZ 28x15	
IC501		9965 000 10743	MICRO PROCESSOR	*HC106790R	XTAL501		9965 000 10739	RESONATO CERAMIC	*FQ000350R
			CXP828P60Q-1					STAND-BY 100V 50HZ 28x15	
Q101		4822 130 11683	TRS. PNP 2SA KSA916Y 0.9W	*HT100460R	XTAL502		9965 000 10731	CST10.0MTW-TF01/	
Q102		9965 000 10740	TRS. PNP 2SA	*HT100340R				CRYSTAL 32.768KHZ	*JX000750R
			KTA1268BL 0.3W					CFS308-CL:12.5P	

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			AMP CIRCUIT BOARD		R724		nsp	1.2K-J 1/5W-52RE-AX	nsp
			AMP-CAPACITORS		R725		nsp	560-J 1/5W-52RE-AX	nsp
C601					R727		nsp	560-J 1/5W-52RE-AX	nsp
}		nsp	CER. CHIP COG100PF-J/50V	nsp	R728		nsp	560-J 1/5W-52RE-AX	nsp
C606					R730				
C701		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	}		nsp	560-J 1/5W-52RE-AX	nsp
C702		nsp	ELECT. 4.7UF-M/50V 5x11	nsp	R738				
C703		nsp	ELECT. 100UF-M/50V	nsp	R739				
			8x11.5-5RE.SY		}		nsp	82-J 1/5W-52RE-AX	nsp
C704		nsp	CER.B330PF-K/50V-52RE	nsp	R742				
C705		nsp	CER.B330PF-K/50V-52RE	nsp	R743				
C706		nsp	ELECT. 22UF-M/50V 6x11	nsp	}		nsp	22K-J 1/5W-52RE-AX	nsp
C707		nsp	ELECT. 100UF-M/50V	nsp	R746				
			8x11.5-5RE.SY		R747		nsp	33K-J 1/5W-52RE-AX	nsp
C708		nsp	ELECT. 22UF-M/50V 6x11	nsp	R748		nsp	33K-J 1/5W-52RE-AX	nsp
C709		nsp	CER.B0.001UF-K/50V-52RE	nsp	R749		nsp	METAL 100PPM	*GA000190R
C710		nsp	CER.B0.001UF-K/50V-52RE	nsp				RES MF 220 1W	
C711		nsp	ELECT. 220UF-M/10V	nsp	R750		nsp	METAL 100PPM 220-J 1W	GA05221010
			6.3x11-5RE.SMS-SY		R751		nsp	METAL 100PPM	*GA000190R
C712		nsp	ELECT. 220UF-M/10V	nsp				RES MF 220 1W	
			6.3x11-5RE.SMS-SY		R752		nsp	METAL 100PPM	*GA000190R
C713		nsp	CER.SL1PF-K/50V-52RE	nsp				RES MF 220 1W	
C714		nsp	CER.SL1PF-K/50V-52RE	nsp	R753				
C715					}		nsp	4.7-J 1/5W-52RE-AX	nsp
}		nsp	ELECT. 47UF-M/50V	nsp	R758				
C718			6.3x11-5RE.SY		R759		nsp	1.8K-J 1/5W-52RE-AX	nsp
C719					R760		nsp	1.8K-J 1/5W-52RE-AX	nsp
}		nsp	CER.B100PF-K/50V-52RE	nsp	R761		nsp	2K-J 1/5W-52RE-AX	nsp
C722					R762		nsp	2K-J 1/5W-52RE-AX	nsp
C723					R763		nsp	1K-J 1/5W-52RE-AX	nsp
}		nsp	ELECT. 10UF-M/50V 5x11-5RE	nsp	R764		nsp	1K-J 1/5W-52RE-AX	nsp
C726					R765		nsp	6.8K-J 1/5W-52RE-AX	nsp
					R766		nsp	6.8K-J 1/5W-52RE-AX	nsp
			AMP-RESISTORS		R767				
R601		nsp	CHIP 6.8K-J 1/16W	nsp	}		nsp	39-J 1/5W-52RE-AX	nsp
R602		nsp	CHIP 100K-J 1/16W	nsp	R774				
R603		nsp	CHIP 100K-J 1/16W	nsp	R775		nsp	22K-J 1/5W-52RE-AX	nsp
R604		nsp	1K-J 1/5W-52RE-AX	nsp	R776		nsp	22K-J 1/5W-52RE-AX	nsp
R605		nsp	CHIP 4.7K-J 1/16W	nsp					
R606		nsp	CHIP 47-J 1/16W	nsp	D601		4822 130 10667	AMP-SEMICONDUCTORS D ZENER	HD30471000
R607		nsp	CHIP 2.2K-J 1/16W	nsp				MTZJ4.7B-0.5W/5MA-52MM	
R608		nsp	CHIP 47K-J 1/16W	nsp	D602		4822 130 32778	D SWITCHING	HD20015210
R610		nsp	2.2K-J 1/5W-52RE-AX	nsp				1SS133T-72-52MM	
R611		nsp	100K-J 1/5W-52RE-AX	nsp	D603		4822 130 10667	D ZENER	HD30471000
R612		nsp	100-J 1/5W-52RE	nsp				MTZJ4.7B-0.5W/5MA-52MM	
R613		nsp	100K-J 1/5W-52RE-AX	nsp	D604		4822 130 80317	D ZENER	HD30511000
								MTZJ5.1B-0.5W/5MA-52MM	
R701		nsp	1K-J 1/5W-52RE-AX	nsp	D703		4822 130 32778	D SWITCHING	HD20015210
R702		nsp	1K-J 1/5W-52RE-AX	nsp				1SS133T-72-52MM	
R703		nsp	33K-J 1/5W-52RE-AX	nsp	D704		4822 130 32778	D SWITCHING	HD20015210
R704		nsp	33K-J 1/5W-52RE-AX	nsp				1SS133T-72-52MM	
R705		nsp	43K-J 1/5W-52RE-AX	nsp					
R706		nsp	43K-J 1/5W-52RE-AX	nsp	Q601		9965 000 10745	CHIP TRS. KRA102S SOT23	*BA001130R
R707		nsp	10K-J 1/5W-52RE-AX	nsp	Q602		9965 000 10744	CHIP TRS. 2SC KTC2875B	*HT300870R
R708		nsp	15-J 1/5W-52RE-AX	nsp				0.15W/LOW-ON-RES	
R709		nsp	750-J 1/5W-52RE-AX	nsp	Q603		9965 000 10744	CHIP TRS. 2SC KTC2875B	*HT300870R
R710		nsp	15-J 1/5W-52RE-AX	nsp				0.15W/LOW-ON-RES	
R711		nsp	750-J 1/5W-52RE-AX	nsp	Q604		9965 000 10745	CHIP TRS. KRA102S SOT23	*BA001130R
R712		nsp	10K-J 1/5W-52RE-AX	nsp	Q605		9965 000 10753	TRS. NPN 2SC	*BA001150R
R713		nsp	470-J 1/5W-52RE-AX	nsp				KRC102S SOT23	
R714		nsp	470-J 1/5W-52RE-AX	nsp	Q606		9965 000 10745	CHIP TRS. KRA102S SOT23	*BA001130R
R715		nsp	150-J 1/5W-52RE-AX	nsp	Q607		9965 000 10753	TRS. NPN 2SC	*BA001150R
R716		nsp	68-J 1/5W-52RE-AX	nsp				KRC102S SOT23	
R717		nsp	15-J 1/5W-52RE-AX	nsp	Q608		9965 000 10745	CHIP TRS. KRA102S SOT23	*BA001130R
R718		nsp	750-J 1/5W-52RE-AX	nsp	Q609		4822 130 90323	CHIP TRS. 2SC	*BA001140R
R719		nsp	150-J 1/5W-52RE-AX	nsp				DTC114TK 0.2W/SMT	
R720		nsp	68-J 1/5W-52RE-AX	nsp	Q701				
R721		nsp	15-J 1/5W-52RE-AX	nsp	}		9965 000 10749	TRS. PNP 2SA KSA992F 0.5W	*HT100590R
R722		nsp	750-J 1/5W-52RE-AX	nsp	Q708				
R723		nsp	1.2K-J 1/5W-52RE-AX	nsp					

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POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
Q709		9965 000 10750	TRS. NPN 2SC KSC1845F 0.5W	*HT300860R				FRONT-RESISTORS	
Q710		9965 000 10750	TRS. NPN 2SC KSC1845F 0.5W	*HT300860R	R332				
Q711		9965 000 10749	TRS. PNP 2SA KSA992F 0.5W	*HT100590R	∫	nsp	CHIP 10K-J 1/16W	nsp	
Q712		9965 000 10750	TRS. NPN 2SC KSC1845F 0.5W	*HT300860R	R355				
Q713		9965 000 10749	TRS. PNP 2SA KSA992F 0.5W	*HT100590R	R356				
Q714		9965 000 10750	TRS. NPN 2SC KSC1845F 0.5W	*HT300860R	∫	nsp	CHIP 220-J 1/16W	nsp	
Q715		4822 130 43012	TRS. PNP 2SA KTA1024Y 1W	HT112082A0	R359				
Q716		4822 130 43225	TRS. NPN 2SC KTC3206Y 1W	HT322292A0	R361	nsp	CHIP 10K-J 1/16W	nsp	
Q717		4822 130 43012	TRS. PNP 2SA KTA1024Y 1W	HT112082A0	R362	nsp	CHIP 2.4K-J 1/16W	nsp	
Q718		4822 130 43225	TRS. NPN 2SC KTC3206Y 1W	HT322292A0	R363	nsp	CHIP 4.3K-J 1/16W	nsp	
Q719		9965 000 10750	TRS. NPN 2SC KSC1845F 0.5W	*HT300860R	R364	nsp	CHIP 8.2K-J 1/16W	nsp	
Q720		9965 000 10750	TRS. NPN 2SC KSC1845F 0.5W	*HT300860R	R365	nsp	CHIP 24K-J 1/16W	nsp	
Q721		9965 000 10751	TRS. NPN 2SC	*HC107160R	R367	nsp	CHIP 10K-J 1/16W	nsp	
			SAP09N 80W/LF550(5P)		R368	nsp	CHIP 2.4K-J 1/16W	nsp	
Q722		9965 000 10752	TRS. PNP 2SA	*HC107170R	R369	nsp	CHIP 4.3K-J 1/16W	nsp	
			SAP09P 80W /LF550(5P)		R370	nsp	CHIP 8.2K-J 1/16W	nsp	
Q723		9965 000 10751	TRS. NPN 2SC	*HC107160R	R371	nsp	CHIP 24K-J 1/16W	nsp	
			SAP09N 80W/LF550(5P)		R372	nsp	CHIP 1K-J 1/16W	nsp	
Q724		9965 000 10752	TRS. PNP 2SA	*HC107170R	R373	nsp	CHIP 1K-J 1/16W	nsp	
			SAP09P 80W /LF550(5P)		R374	nsp	CHIP 1K-J 1/16W	nsp	
			AMP-MISCELLANEOUS		R375	nsp	CHIP 100-J 1/16W	nsp	
CP601	N	nsp	CN.FPC 1.25MM	nsp	R376	nsp	CHIP 27K-J 1/16W	nsp	
			52044-1745 17P ANGLE		R377	nsp	CHIP 4.7K-J 1/16W	nsp	
CP601	U	nsp	CN.FPC 1.25MM	nsp	R378	nsp	CHIP 47-J 1/16W	nsp	
			52044-1545 15P ANGLE		R379	nsp	CHIP 1.2K-J 1/16W	nsp	
CP601	F	nsp	CN.FPC 1.25MM	nsp	R380	nsp	CHIP 470K-J 1/16W	nsp	
			52044-1545 15P ANGLE		R381	nsp	CHIP 100K-J 1/16W	nsp	
CP602		nsp	CN.WAFER	nsp			FRONT-SEMICONDUCTORS		
			2.0MM 35237-1610 16P		D301				
CP603		nsp	CN.WAFER	nsp	∫	9965 000 10747	D SWITCHING CHIP KDS160	*HD201560R	
			2.0MM 35237-0610 6P		D306				
CP604		nsp	CN.WAFER	nsp	D307	4822 130 11629	D ZENER	*HD301620R	
			2.0MM 35237-0710 7P				MTZJ6.8B-0.5W/5MA-52MM		
CP605		nsp	CN.WAFER	nsp					
			2.0MM 53014-0510 5P		IC301	9965 000 10762	IC FL-DRIVER M66005FP	*HC107180R	
CP701		nsp	CN.WAFER	nsp	IR301	9965 000 10754	MODULE REMOCON	*HW100520R	
			2.0MM 53014-0410 4P				NJL64H380A		
CP702		nsp	CN.WAFER	nsp					
			2.5MM 5267-08A 8P		Q301	9965 000 10753	CHIP TRS. NPN 2SC KRC102S	*BA001150R	
L701		9965 000 10748	COIL FILTER-INDUCTOR	*LC106490R	Q302	9965 000 10753	CHIP TRS. NPN 2SC KRC102S	*BA001150R	
			J9000031		Q303	9965 000 10753	CHIP TRS. NPN 2SC KRC102S	*BA001150R	
L702		9965 000 10748	COIL FILTER-INDUCTOR	*LC106490R	Q304				
			J9000031		∫	9965 000 10745	CHIP TRS. KRA102S SOT23	*BA001130R	
			FRONT CIRCUIT BOARD		Q307				
			FRONT-CAPACITORS		Q308				
C301		nsp	ELECT. 1UF-M/50V 3x5-5RE	nsp	∫	9965 000 10763	CHIP TRS. NPN 2SC KRC107S	*BA001160R	
C302		nsp	CER. CHIP Y5V0.047UF-Z/50V	nsp	Q311				
C303		nsp	ELECT. 47UF-M/16V	nsp	Q312	9965 000 10753	CHIP TRS. NPN 2SC KRC102S	*BA001150R	
			6.3x5-5RE.SY		Q313	9965 000 10753	CHIP TRS. NPN 2SC KRC102S	*BA001150R	
C304		nsp	CER. CHIP X7R0.1UF-K/50V	nsp			FRONT-MISCELLANEOUS		
C305		nsp	CER. CHIP X7R820PF-K/50V	nsp	FLT301	9965 000 10759	DISPLAY FLT	*HQ300460R	
							14-ST-36GN/SR-110		
C308		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	CP301	nsp	CN.FPC 1.25MM	nsp	
C309		nsp	CER. CHIP COG100PF-J/50V	nsp			52044-1745 17P ANGLE		
C310		nsp	CER. CHIP COG100PF-J/50V	nsp	CP302	nsp	CN.WAFER 2.5MM	nsp	
C312		nsp	CER. CHIP COG100PF-J/50V	nsp			5268-03A 3P ANGLE		
C313		nsp	ELECT. 1UF-M/50V 3x5-5RE	nsp	J301				
C314		nsp	CER. CHIP Y5V0.047UF-Z/50V	nsp	∫	nsp	1P JUMPER (0.6/52MM)	nsp	
C316		nsp	ELECT. 47UF-M/25V 6.3x7-5RE	nsp	J304				
C317		nsp	CER. CHIP X7R0.1UF-K/50V	nsp					
C318		nsp	CER. CHIP COG220PF-J/50V	nsp	JACK501	9965 000 10756	JACK D3.5 HTJ035-18AB(G)	*YT002500R	
C319		nsp	CER. CHIP COG220PF-J/50V	nsp	L301	nsp	COIL FILTER-INDUCTOR	nsp	
C320		nsp	CER. CHIP COG220PF-J/50V	nsp			10UH-Q40/24M-R2.5-52RE		
C321		nsp	CER. CHIP COG100PF-J/50V	nsp					
C322		nsp	CER. CHIP Y5V0.047UF-Z/50V	nsp	LED301	9965 000 10757	LED ROUND HL-50CDG	*HI100970R	
C323		nsp	ELECT. 1UF-M/50V 3x5-5RE	nsp			GREEN MILKY RESIN		
C324		nsp	CER. CHIP X7R0.1UF-K/50V	nsp	LED302	9965 000 10757	LED ROUND HL-50CDG	*HI100970R	
							GREEN MILKY RESIN		

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
LED303		9965 000 10758	LED ROUND PI5-RD GR/HLD50RG DUAL	*HI100980R
SW301		9965 000 10760	SW TACT THVH472GAA	*SP001150R
SW302		9965 000 10761	SW TACT	*SP001140R
SW305		9965 000 10760	SKHV10920A 5MM/260G	*SP001150R
SW306		9965 000 10761	SW TACT THVH472GAA	*SP001140R
SW307		9965 000 10761	SW TACT SKHV10920A 5MM/260G	*SP001150R
SW308		9965 000 10760	SW TACT THVH472GAA	*SP001140R
SW309		9965 000 10761	SW TACT SKHV10920A 5MM/260G	*SR000160R
VOL302		9965 000 10755	SW ROTARY EC11B20D2-ZZZ	

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