

ST-SP55

SERVICE MANUAL

*AEP Model
UK Model
E Model*



ST-SP55 is the tuner section
in CMT-SP55MD or CMT-SP55TC.

SPECIFICATIONS

FM stereo, FM/AM superheterodyne tuner

Input

AUX IN (phono jacks): voltage 250 mV, impedance
47 kilohms

Output

AUX OUT (phono jacks): voltage 250 mV, impedance
1 kilohm

FM tuner section

Tuning range 87.5 – 108.0 MHz
(50 kHz step)

Aerial

Aerial terminals 300 ohms unbalanced

Intermediate frequency 10.7 MHz

AM tuner section

Tuning range

European model: 531 – 1,602 kHz
(with the interval set at 9 kHz)

Other models: 531 – 1,602 kHz
(with the interval set at 9 kHz)
530 – 1,710 kHz
(with the interval set at 10 kHz)

Aerial

AM loop aerial
External aerial terminals

Intermediate frequency 450 kHz

General

Dimensions (w/h/d) incl. projecting parts and controls
Approx. 202 × 75 × 291 mm

Mass Approx. 1.3 kg

Design and specifications are subject to change
without notice.

MICRO Hi-Fi COMPONENT SYSTEM

SONY®

SECTION 3 DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
- $\triangle$: internal component.
- $\square$: panel designation.

Note:

The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety.
Replace only with part number specified.

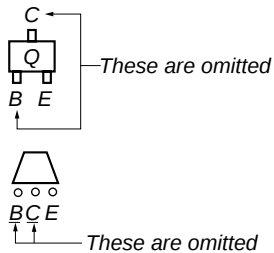
- $\boxed{B+}$: B+ Line.
- $\boxed{B-}$: B- Line.
- $\boxed{}$: adjustment for repair.
- no mark : FM
- * : Can not be measured.
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - $\Rightarrow$: FM
 - $\Rightarrow$: CD
 - $\Rightarrow$: TAPE
 - $\Rightarrow$: REC (TAPE/MD)
 - $\Rightarrow$: MD
- Abbreviation
 - MY : Malaysia model.
 - SP : Singapore model.
 - HK : Hong Kong model.
 - KR : Korea model.
 - AED : North European model.

For printed wiring boards.

Note:

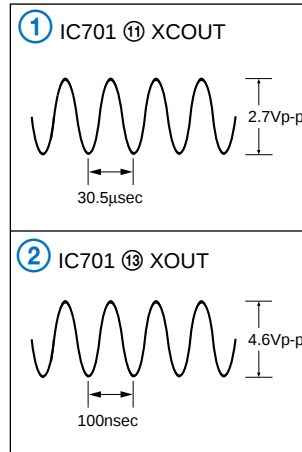
- $\circ$: parts extracted from the component side.
- --- : parts extracted from the conductor side.
- $\circ$: Through hole.
- --- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

• Indication of transistor

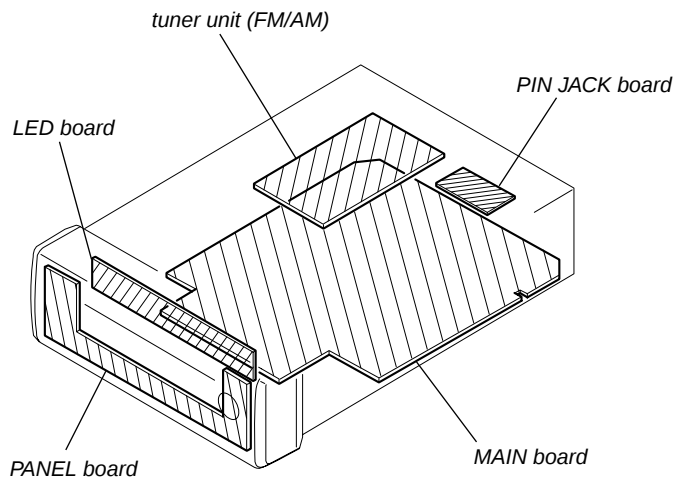


• WAVEFORMS

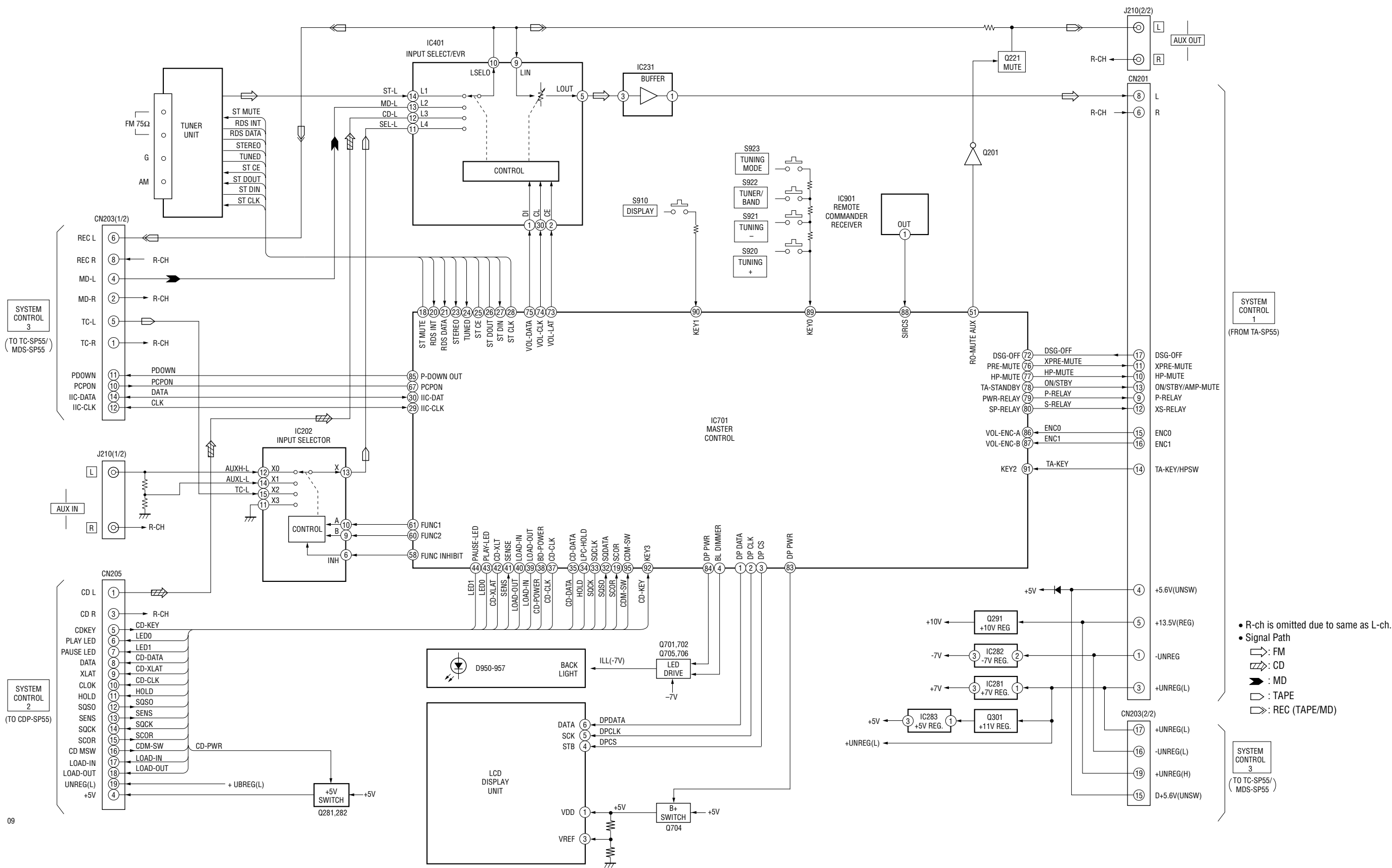
– MAIN BOARD –



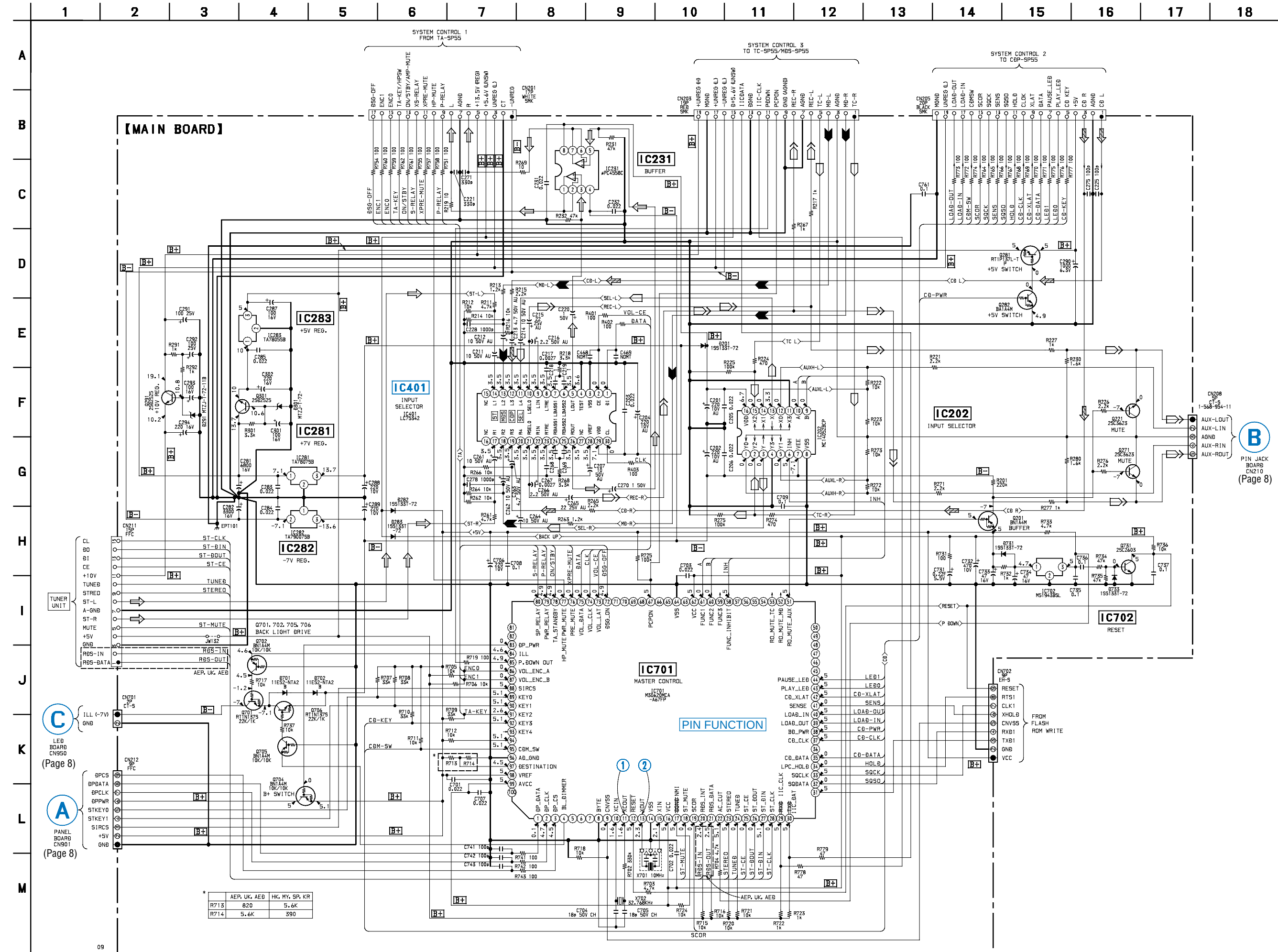
3-1. CIRCUIT BOARDS LOCATION



3-2. BLOCK DIAGRAM



3-3. SCHEMATIC DIAGRAM – MAIN SECTION –



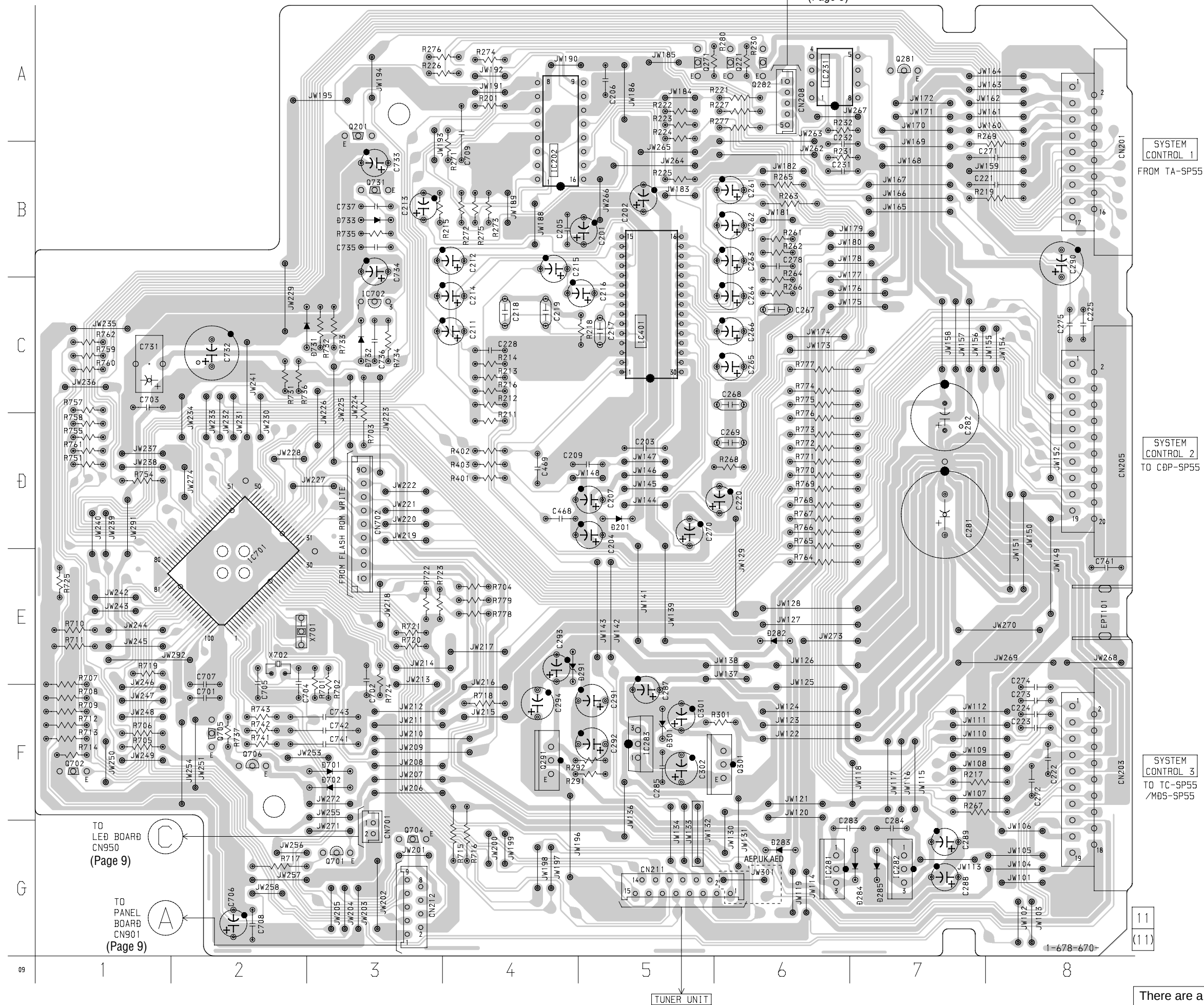
B
PIN JACK BOARD
CN210
(Page 8)

C
LED BOARD
CN950
(Page 8)

A
PANEL BOARD
CN901
(Page 8)

3-4. PRINTED WIRING BOARD – MAIN SECTION –

【MAIN BOARD】

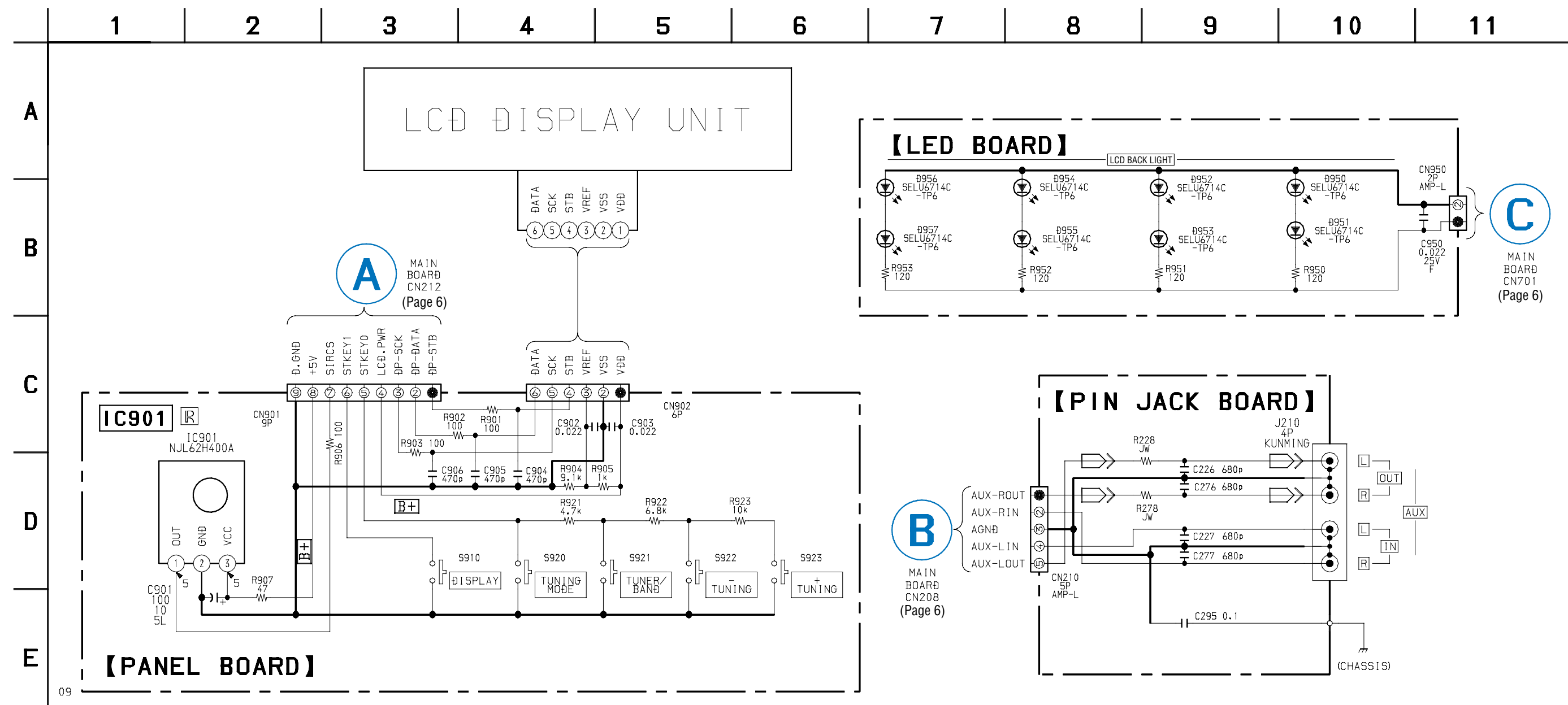


• Semiconductor Location

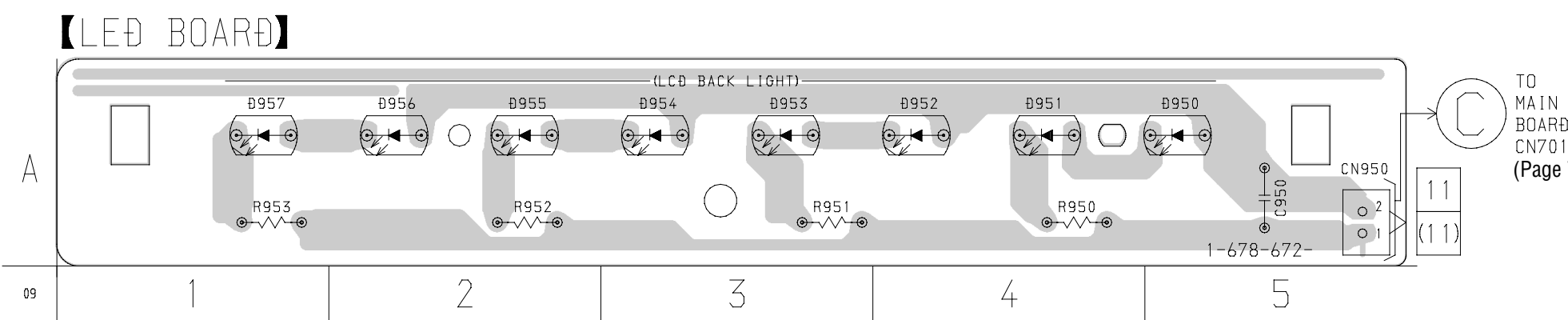
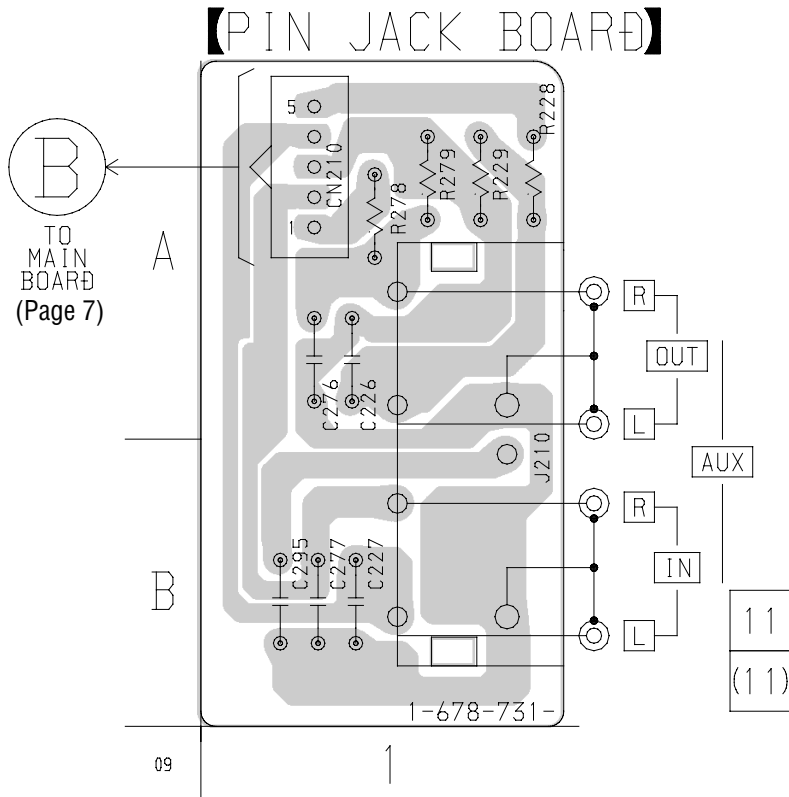
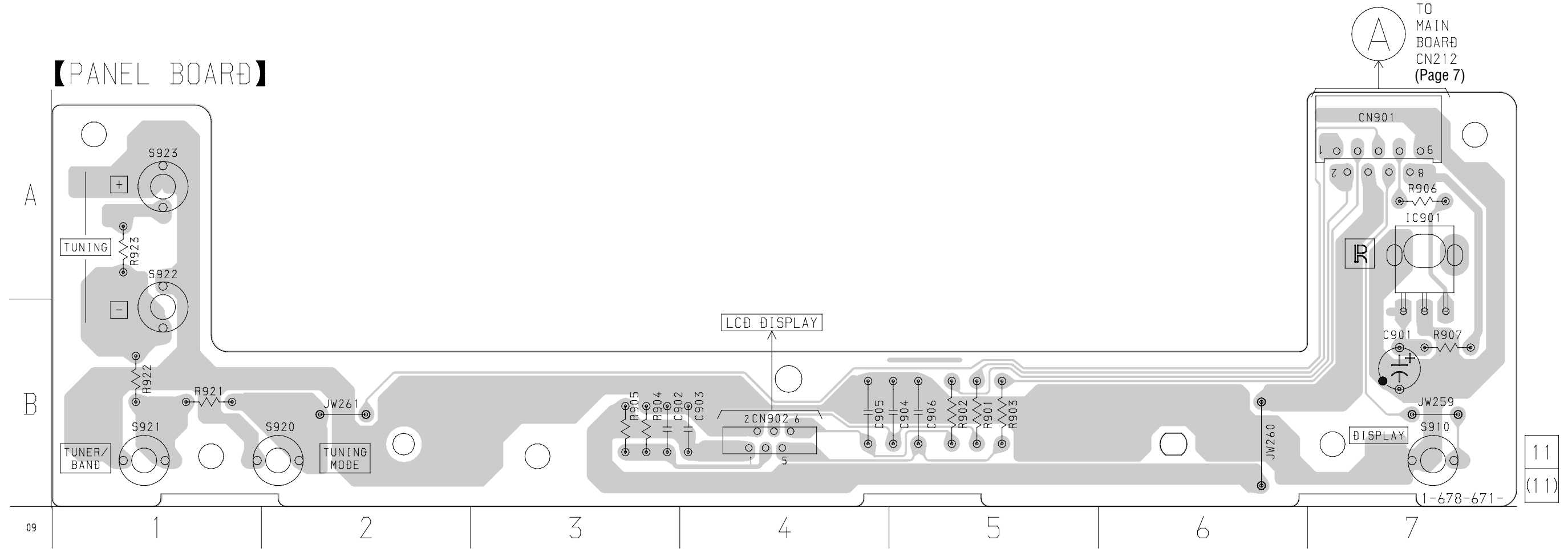
Ref. No.	Location
D201	D-5
D282	E-6
D283	G-6
D291	E-4
D301	F-5
D701	F-3
D702	F-3
D731	C-2
D733	C-3
IC202	B-4
IC231	A-6
IC281	G-6
IC282	G-7
IC283	F-5
IC401	C-5
IC701	E-2
IC702	C-3
Q201	B-3
Q221	A-6
Q271	A-5
Q281	A-7
Q282	A-6
Q291	F-4
Q301	F-5
Q701	G-3
Q702	F-1
Q704	G-3
Q705	F-2
Q706	F-2
Q731	B-3

There are a few cases that the part isn't mounted in model is printed on diagram.

3-5. SCHEMATIC DIAGRAM – PANEL SECTION –



3-6. PRINTED WIRING BOARD – PANEL SECTION –



There are a few cases that the part isn't mounted in model is printed on diagram.

3-7. IC PIN FUNCTIONS

• IC701 M30620MCA-A67FP MASTER CONTROL (MAIN BOARD)

Pin No.	Pin Name		Function
1	DP_DATA	O	LCD data output.
2	DP_CLK	O	LCD clock output.
3	DP_CS	O	LCD chip STB signal output.
4	BL_DIMMER	O	LCD back light bright signal output. (H: BRIGHT, L: DARK)
5	N.C	—	Not used.
6	N.C	—	Not used.
7	N.C	—	Not used.
8	BYTE	—	Connected to ground.
9	GND	—	Connected to ground.
10	XC IN	I	SUB CLOCK input. (32.768kHz)
11	XC OUT	O	SUB CLOCK output. (32.768kHz)
12	RESET	I	System master reset input.
13	X-OUT	O	MAIN SYSTEM CLOCK output. (10MHz)
14	VSS	—	Ground
15	X-IN	I	MAIN SYSTEM CLOCK input. (10MHz)
16	VCC	—	Power supply. (EVER +5V)
17	NMI	I	PULL UP (EVER +5V)
18	ST_MUTE	O	ST MUTE singal output.
19	SCOR	I	CD Q-data request signal input.
20	RDS-INT	I	RDS clock signal input.
21	RDS-DATA	I	RDS data signal input.
22	AC OUT	I	TA AC interrupt signal input. (H: AC ON, L: AC OFF)
23	STEREO	I	ST STEREO signal input. (L: STEREO)
24	TUNED	I	ST TUNED signal input. (L: TUNED)
25	ST_CE	O	ST PLL chip enable signal output.
26	ST_DOUT	O	ST PLL data signal output.
27	ST_DIN	I	ST PLL data signal input.
28	ST_CLK	O	ST PLL clock output.
29	IIC_CLK	I/O	IIC SCL output.
30	IIC_DAT	I/O	IIC SDA output.
31	TXD1	—	Not used.
32	SQ DATA	I	CD SUBQ data input.
33	SQ CLK	O	CD SUBQ clock output.
34	LPC_HOLD	O	CD LPC hold output.
35	CD_DATA	O	CD data signal output.
36	N.C	I	Not used.
37	CD_CLK	O	CD clock output.
38	BD_PWR	O	CD_BD power control signal output. (H: ON, L: OFF)
39	LOAD_OUT	O	CD loading motor control signal output.
40	LOAD_IN	O	CD loading motor control signal output.
41	SENSE	I	CD SENSE signal input.
42	CD_XLAT	O	CD XLAT signal output.
43	PLAY_LED	O	CD PLAY LED signal output. (H: OFF, L: ON)
44	PAUSE_LED	O	CD PAUSE LED signal output. (H: OFF, L: ON)
45 to 50	N.C	—	Not used.
51	RO_MUTE_AUX	O	AUX out mute signal output. (H: MUTE OFF, L: MUTE)
52 to 57	N.C	—	Not used.
58	FUNC_INHIBIT	O	TA input select inhibit signal. (H: INHIBIT, L: NOT INHIBIT)
59	N.C	O	Not used.
60	FUNC2	O	TA input select signal output.
61	FUNC1	O	TA input select signal output.
62	VCC	—	Power Supply (EVER +5V)
63	N.C	—	Not used.

Pin No.	Pin Name		Function
64	VSS	—	Ground.
65	N.C	—	Not used.
66	N.C	—	Not used.
67	PCPON	I	Power ON signal from PC.
68 to 71	N.C	—	Not used.
72	DSG_ON	O	TA DSG off control signal output. (H: DSG OFF, L: DSG ON)
73	VOL_LAT	O	ST, “(IC401)” Volume latch.
74	VOL_CLK	O	ST, “(IC401)” Volume clock.
75	VOL_DATA	O	ST, “(IC401)” Volume data signal output.
76	PRE_MUTE	O	TA PRE MUTE signal output. (H: MUTE OFF, L: MUTE ON)
77	XHP_MUTE	O	TA headphone MUTE signal output. (H: MUTE OFF, L: MUTE ON)
78	ON/STANDBY	O	TA Power amp MUTE/Standby LED signal output. (H: ON, L: STANDBY)
79	PWR_RELAY	O	TA Standby relay signal output. (H: RELAY OFF, L: RELAY)
80	SP_RELAY	O	TA Speaker relay signal output.
81	N.C	—	Not used.
82	N.C	—	Not used.
83	DP_PWR	O	LCD power ON/OFF signal output. (H: OFF, L: ON)
84	ILL	O	LCD backlight ON/OFF signal output. (H: ON, L: OFF)
85	P_DOWN OUT	O	MD/TC power control signal output. (H: POW ON, L: STANDBY)
86	VOL_ENC_A	I	TA Volume encoder (A) signal input.
87	VOL_ENC_B	I	TA Volume encoder (B) signal input.
88	SIRCS	I	RM SIRCS signal input.
89	KEY0	I	KEY A/D input. (For ST)
90	KEY1	I	KEY A/D input. (For ST)
91	KEY2	I	KEY A/D input. (For TA)
92	KEY3	I	KEY A/D input. (For CDP)
93	NC	—	Not used.
94	NC	I	Not used (pull up).
95	CDM_SW	I	CD Loading switch input.
96	AD_GND	—	Analog ground.
97	DISTINATION	I	Distination signal input.
98	VREF	—	Analog Reference Voltage.
99	AVCC	—	Analog Power Supply.
100	NC	—	Not used.

INH	A	B	SEL	FUNC
L	L	L	0	AUX (H)
L	H	L	1	AUX (L)
L	L	H	2	TAPE
L	H	H	3	GND
H	X	X	NONE	NONE

3-8. IC BLOCK DIAGRAM
IC401 LC75342

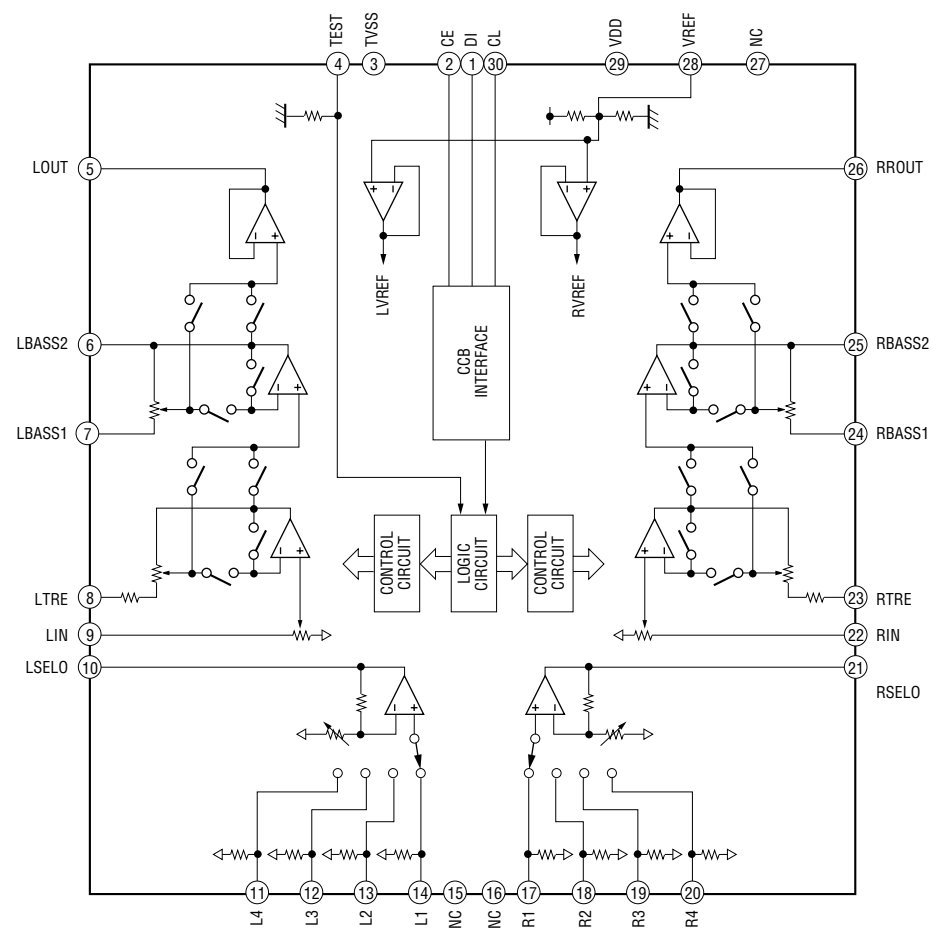


TABLE OF CONTENTS

1. SERVICE NOTE	3
2. GENERAL	3
3. DIAGRAMS	
3-1. Circuit Boards Location	4
3-2. Block Diagram	5
3-3. Schematic Diagram – Main Section –	6
3-4. Printed Wiring Board – Main Section –	7
3-5. Schematic Diagram – Panel Section –	8
3-6. Printed Wiring Board – Panel Section –	9
3-7. IC Pin Functions	10
3-8. IC Block Diagram	11
4. EXPLODED VIEW	
4-1. Case and Front Panel	12
5. ELECTRICAL PARTS LIST	13

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 SERVICE NOTE

This unit cannot be repaired by itself.

When repairing, connect the whole system except for the speaker.

CD Text Display

- This unit displays CD text.

Text is displayed for the first 50 track only and will not be displayed from the 51st track onwards. Do not suspect a fault in this case.

In some cases, some special characters will not be displayed and may be replaced by other characters. Do not suspect a fault in this case.

Cold Reset

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure :

- When the power ON, press the  button (TA) while pressing the **TUNING MODE** button (ST) and  buttons (CDP) together.
- “COLD RESET” is displayed on the fluorescent indicator tube and reset is executed.

Hot Reset

- This mode reset the preset data kept in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure :

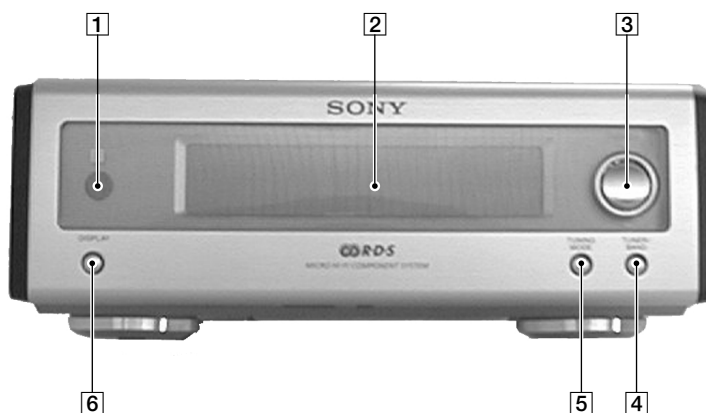
- When the power ON, press the  button (TA) while pressing the **TUNING MODE** button (ST) and  buttons (CDP) together.
- Turn off the unit and reset is executed.

GC Test Mode

Procedure :

- When the power ON, press the  button (TA) while pressing the **TUNING MODE** button (ST) and **PLAY MODE** buttons (CDP) together.
- LCD are all turned on.
- Press **TUNING MODE** button (ST) to enter the model destination indication mode. “SP55 CE2” or “SP55 ASIA2” appears.
- Every pressing of **TUNING MODE** button (ST) changes the display in the following order.
MC Version → CD Version → ST Version → TC Version → TA Version → TM Version → model destination display.
- Press **DISPLAY** button (ST) and the date appears as “00615a”
Every pressing of **DISPLAY** button (ST) changes the display in the Version display and model destination display.
- Press **TUNER/BAND** button (ST) to enter the key check mode.
- In the key check mode, the fluorescent indicator tube displays “Key 0 Vol 0”. Each time a button is pressed, “Key” value increases.
However, once a button is pressed, it is no longer taken into account.
“Vol” Value increases like “1, 2, 3 ...” if rotating **VOLUME** knob (TA) in the clockwise direction, or decreases like “0, 9, 8 ...” if rotating in the counterclockwise direction.
- To exit from this mode, disconnect the power cord.

SECTION 2 GENERAL



-  (Remote sensor)
- Display window
- TUNING +/- button
- TUNER/BAND button
- TUNING MODE button
- DISPLAY button

SECTION 4 EXPLODED VIEW

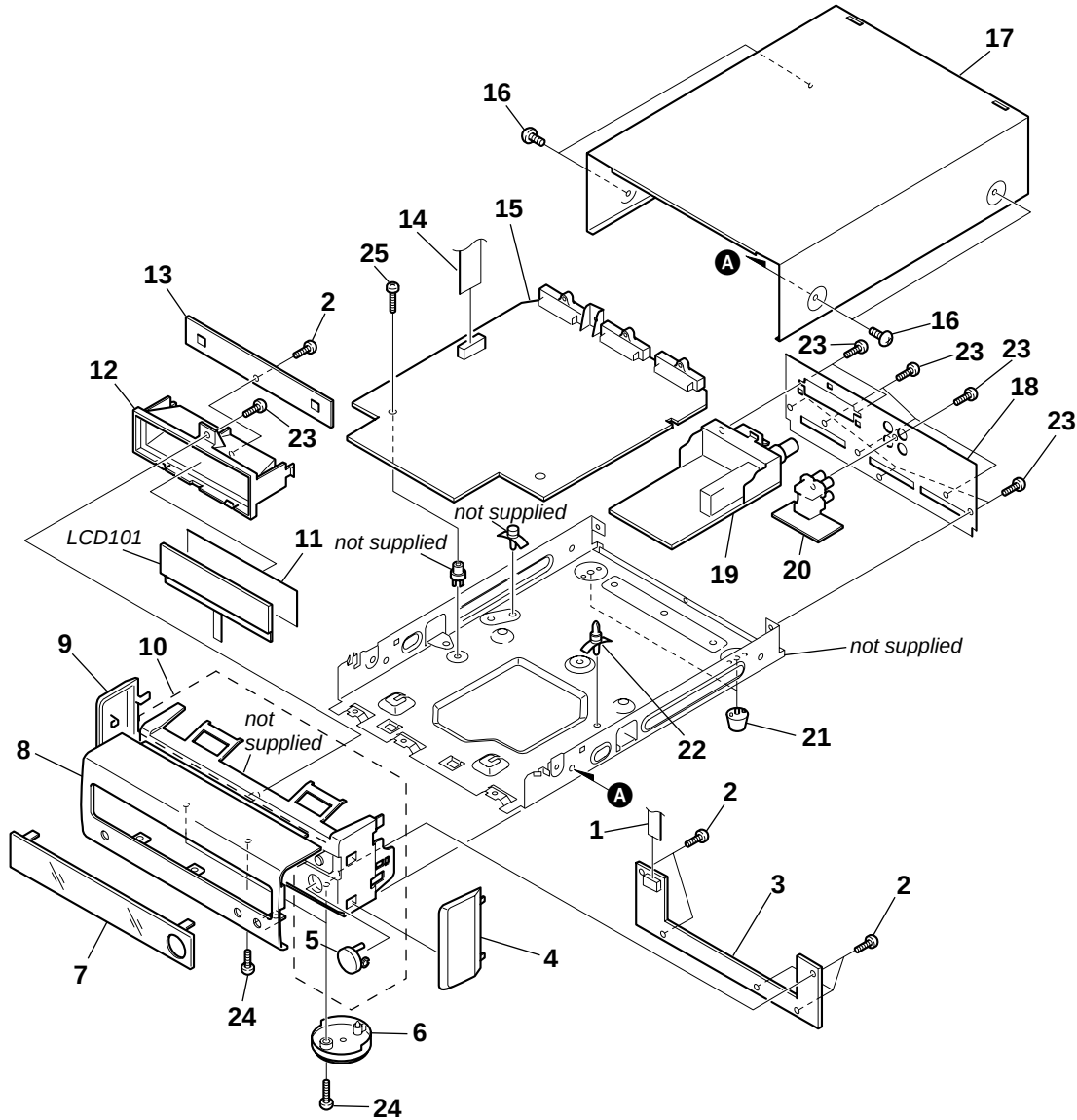
NOTE:

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation
AED : North European model
MY : Malaysia model
SP : Singapore model
HK : Hong Kong model
KR : Korea model

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

4-1. CASE AND FRONT PANEL



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	1-769-916-11	WIRE (FLAT TYPE) (9 CORE)		15	A-4424-804-A	MAIN BOARD, COMPLETE (AEP,UK,AED)	
2	4-951-620-01	SCREW (2.6X8), +BVTP		15	A-4473-725-A	MAIN BOARD, COMPLETE (HK,MY,SP,KR)	
3	1-678-671-11	PANEL BOARD		16	3-363-099-51	SCREW (CASE 3 TP2)	
4	4-229-683-01	PLATE (R), SIDE		17	4-229-687-11	CASE	
5	4-229-678-01	BUTTON (U/D)					
6	X-4953-027-1	FOOT ASSY		18	4-229-686-01	PANEL, BACK (AEP,UK,AED)	
7	4-229-677-01	WINDOW (LCD)		18	4-229-686-21	PANEL, BACK (HK,MY,SP)	
8	4-229-676-01	PANEL (ST), FRONT (AEP,UK,AED)		18	4-229-686-31	PANEL, BACK (KR)	
8	4-229-676-11	PANEL (ST), FRONT (HK,MY,SP,KR)		19	1-693-482-11	TUNER (FM/AM) (HK,MY,SP,KR)	
9	4-229-684-01	PLATE (L), SIDE		19	1-693-499-11	TUNER (FM/AM) (AEP,UK,AED)	
10	X-4953-022-1	PANEL ASSY (ST), SUB		20	1-678-673-11	PIN JACK BOARD	
11	4-229-680-01	ILLUMINATOR		21	4-965-822-01	FOOT	
12	4-229-679-01	HOLDER, LCD		22	4-924-098-11	HOLDER, PC BOARD	
13	1-678-672-11	LED BOARD		23	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
14	1-769-970-11	WIRE (FLAT TYPE) (13 CORE) (HK,MY,SP,KR)		24	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
14	1-773-002-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK,AED)		25	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S	
				LCD101	1-804-056-11	DISPLAY PANEL, LIQUID CRYSTAL	

SECTION 5 ELECTRICAL PARTS LIST

LED

MAIN

Note:

The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “**” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H
- Abbreviation
AED : North European model
MY : Malasia model
SP : Songapore model
HK : Hong Kong model
KR : Korea model

Ref. No.	Part No.	Description	Remarks				Ref. No.	Part No.	Description	Remarks			
	1-678-672-11	LED BOARD *****					C219	1-136-177-00	MYLAR	1uF	5%	50V	
		< CAPACITOR >					C220	1-119-820-11	ELECT	1uF	20%	50V	
							C221	1-162-288-31	CERAMIC	330uF	10%	50V	
							C225	1-162-282-31	CERAMIC	100PF	10%	50V	
							C227	1-162-288-31	CERAMIC	330uF	10%	50V	
C950	1-161-494-00	CERAMIC	0.022uF		25V		C228	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< DIODE >					C231	1-161-494-00	CERAMIC	0.022uF		25V	
							C232	1-161-494-00	CERAMIC	0.022uF		25V	
D950	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)					C261	1-119-824-11	ELECT MELF	10uF	20%	50V	
D951	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)					C262	1-119-824-11	ELECT MELF	10uF	20%	50V	
D952	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)											
D953	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)					C263	1-119-823-11	ELECT	4.7uF	20%	50V	
D954	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)					C264	1-119-824-11	ELECT MELF	10uF	20%	50V	
							C265	1-128-858-91	ELECT	22uF	20%	25V	
D955	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)					C266	1-119-821-11	ELECT MELF	2.2uF	20%	50V	
D956	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)					C267	1-130-476-00	MYLAR	0.0027uF	5%	50V	
D957	8-719-080-67	DIODE SELU6714C-TP6 (LED BACK LIGHT)											
		< RESISTOR >					C268	1-136-177-00	MYLAR	1uF	5%	50V	
							C269	1-136-177-00	MYLAR	1uF	5%	50V	
R950	1-249-406-11	CARBON	120	5%	1/4W	F	C270	1-119-820-11	ELECT	1uF	20%	50V	
R951	1-249-406-11	CARBON	120	5%	1/4W	F	C275	1-162-282-31	CERAMIC	100PF	10%	50V	
R952	1-249-406-11	CARBON	120	5%	1/4W	F	C278	1-162-294-31	CERAMIC	0.001uF	10%	50V	
R953	1-249-406-11	CARBON	120	5%	1/4W	F							
*****							C281	1-128-547-11	ELECT	6800uF	20%	16V	
							C282	1-126-936-11	ELECT	3300uF	20%	16V	
A-4424-804-A	MAIN BOARD, COMPLETE (AEP,UK,AED) *****						C283	1-161-494-00	CERAMIC	0.022uF		25V	
							C284	1-161-494-00	CERAMIC	0.022uF		25V	
							C285	1-161-494-00	CERAMIC	0.022uF		25V	
A-4473-725-A	MAIN BOARD, COMPLETE (HK,MY,SP,KR) *****						C287	1-126-933-11	ELECT	100uF	20%	16V	
							C288	1-126-934-11	ELECT	220uF	20%	10V	
							C289	1-126-934-11	ELECT	220uF	20%	10V	
		< CAPACITOR >					C290	1-126-916-11	ELECT	1000uF	20%	6.3V	
							C291	1-104-665-11	ELECT	100uF	20%	25V	
C201	1-128-832-11	ELECT	220uF	20%	10V								
C202	1-128-832-11	ELECT	220uF	20%	10V		C292	1-104-665-11	ELECT	100uF	20%	25V	
C203	1-161-494-00	CERAMIC	0.022uF		25V		C293	1-126-933-11	ELECT	100uF	20%	16V	
C204	1-128-832-11	ELECT	220uF	20%	10V		C294	1-126-934-11	ELECT	220uF	20%	16V	
C205	1-161-494-00	CERAMIC	0.022uF		25V		C301	1-126-933-11	ELECT	100uF	20%	16V	
							C302	1-126-934-11	ELECT	220uF	20%	16V	
C206	1-161-494-00	CERAMIC	0.022uF		25V								
C207	1-119-824-11	ELECT MELF	10uF	20%	50V		C701	1-161-494-00	CERAMIC	0.022uF		25V	
C211	1-119-824-11	ELECT MELF	10uF	20%	50V		C702	1-161-494-00	CERAMIC	0.022uF		25V	
C212	1-119-824-11	ELECT MELF	10uF	20%	50V		C703	1-161-494-00	CERAMIC	0.022uF		25V	
C213	1-119-823-11	ELECT	4.7uF	20%	50V		C704	1-162-205-31	CERAMIC	18PF	5%	50V	
							C705	1-162-205-31	CERAMIC	18PF	5%	50V	
C214	1-119-824-11	ELECT MELF	10uF	20%	50V								
C215	1-128-858-91	ELECT	22uF	20%	25V		C706	1-126-934-11	ELECT	220uF	20%	10V	
C216	1-119-821-11	ELECT MELF	2.2uF	20%	50V		C707	1-161-494-00	CERAMIC	0.022uF		25V	
C217	1-130-476-00	MYLAR	0.0027uF	5%	50V		C708	1-164-159-11	CERAMIC	0.1uF		50V	
C218	1-136-177-00	MYLAR	1uF	5%	50V		C709	1-164-159-11	CERAMIC	0.1uF		50V	
							C731	1-125-507-11	CAPACITOR	0.22F		5.5V	

MAIN

Ref. No.	Part No.	Description	Remarks
C732	1-126-925-11	ELECT 470uF 20% 10V	
C733	1-104-664-11	ELECT 47uF 20% 16V	
C734	1-104-664-11	ELECT 47uF 20% 16V	
C735	1-164-159-11	CERAMIC 0.1uF 50V	
C736	1-164-159-11	CERAMIC 0.1uF 50V	
C737	1-164-159-11	CERAMIC 0.1uF 50V	
C741	1-162-282-31	CERAMIC 100PF 10% 50V	
C742	1-162-282-31	CERAMIC 100PF 10% 50V	
C743	1-162-282-31	CERAMIC 100PF 10% 50V	
C761	1-164-159-11	CERAMIC 0.1uF 50V	
< CONNECTOR >			
CN201	1-569-624-11	SOCKET, CONNECTOR 17P	
CN203	1-793-351-21	SOCKET, CONNECTOR 19P	
CN205	1-794-498-11	SOCKET, CONNECTOR 20P	
* CN208	1-568-954-11	PIN, CONNECTOR 5P	
CN211	1-784-776-11	CONNECTOR, FFC 15P (AEP,UK,AED)	
CN211	1-784-774-11	CONNECTOR, FFC 13P (HK,MY,SP,KR)	
CN212	1-568-828-11	CONNECTOR, FFC 9P	
CN701	1-568-951-11	PIN, CONNECTOR 2P	
* CN702	1-564-512-11	PLUG, CONNECTOR 9P	
< DIODE >			
D201	8-719-911-19	DIODE 1SS133T-72	
D282	8-719-911-19	DIODE 1SS133T-72	
D283	8-719-911-19	DIODE 1SS133T-72	
D291	8-719-921-80	DIODE MTZJ-T-72-11B	
D301	8-719-947-48	DIODE MTZJ-T-72-11A	
D701	8-719-024-99	DIODE 11ES2-NTA2B	
D702	8-719-024-99	DIODE 11ES2-NTA2B	
D731	8-719-911-19	DIODE 1SS133T-72	
D733	8-719-911-19	DIODE 1SS133T-72	
< IC >			
IC202	8-759-000-48	IC MC14052BCP	
IC231	8-759-705-58	IC NJM4558D-D	
IC281	8-759-373-82	IC TA7807SB	
IC282	8-759-373-94	IC TA79007SB	
IC283	8-759-373-79	IC TA7805SB	
IC401	8-759-669-03	IC LC75342	
IC701	8-759-681-71	IC M30620MCA-A67FP	
IC702	8-759-635-63	IC M51943BSL-TP	
< TRANSISTOR >			
Q201	8-729-422-57	TRANSISTOR BN1A4M-TP	
Q221	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q271	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
Q281	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q282	8-729-900-80	TRANSISTOR BA1A4M-TP	
Q291	8-729-026-68	TRANSISTOR 2SD2525(TP)	
Q301	8-729-026-68	TRANSISTOR 2SD2525(TP)	
Q701	8-729-049-80	TRANSISTOR RTIN137S-TP	
Q702	8-729-422-57	TRANSISTOR BN1A4M-TP	
Q704	8-729-422-57	TRANSISTOR BN1A4M-TP	
Q705	8-729-422-57	TRANSISTOR BN1A4M-TP	
Q706	8-729-049-80	TRANSISTOR RTIN137S-TP	
Q731	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
< RESISTOR >			
R201	1-247-887-00	CARBON 220K 5% 1/4W	
R211	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R212	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remarks
R213	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R214	1-249-429-11	CARBON 10K 5% 1/4W	
R215	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R216	1-249-429-11	CARBON 10K 5% 1/4W	
R217	1-249-417-11	CARBON 1K 5% 1/4W	F
R218	1-247-843-11	CARBON 3.3K 5% 1/4W	
R219	1-249-393-11	CARBON 10 5% 1/4W	F
R221	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R222	1-249-429-11	CARBON 10K 5% 1/4W	
R223	1-249-429-11	CARBON 10K 5% 1/4W	
R224	1-249-413-11	CARBON 470 5% 1/4W	F
R225	1-249-441-11	CARBON 100K 5% 1/4W	
R226	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R227	1-249-417-11	CARBON 1K 5% 1/4W	F
R230	1-247-836-11	CARBON 1.6K 5% 1/4W	
R231	1-249-437-11	CARBON 47K 5% 1/4W	
R232	1-249-437-11	CARBON 47K 5% 1/4W	
R261	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R262	1-249-429-11	CARBON 10K 5% 1/4W	
R263	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R264	1-249-429-11	CARBON 10K 5% 1/4W	
R265	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R266	1-249-429-11	CARBON 10K 5% 1/4W	
R267	1-249-417-11	CARBON 1K 5% 1/4W	F
R268	1-247-843-11	CARBON 3.3K 5% 1/4W	
R269	1-249-393-11	CARBON 10 5% 1/4W	F
R271	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R272	1-249-429-11	CARBON 10K 5% 1/4W	
R273	1-249-429-11	CARBON 10K 5% 1/4W	
R274	1-249-413-11	CARBON 470 5% 1/4W	F
R275	1-249-441-11	CARBON 100K 5% 1/4W	
R276	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R277	1-249-417-11	CARBON 1K 5% 1/4W	F
R280	1-247-836-11	CARBON 1.6K 5% 1/4W	
R291	1-249-417-11	CARBON 1K 5% 1/4W	F
R292	1-249-417-11	CARBON 1K 5% 1/4W	F
R301	1-247-843-11	CARBON 3.3K 5% 1/4W	F
R401	1-247-807-31	CARBON 100 5% 1/4W	
R402	1-247-807-31	CARBON 100 5% 1/4W	
R403	1-247-807-31	CARBON 100 5% 1/4W	
R702	1-247-891-00	CARBON 330K 5% 1/4W	
R703	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R704	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R705	1-249-429-11	CARBON 10K 5% 1/4W	
R706	1-249-429-11	CARBON 10K 5% 1/4W	
R707	1-249-435-11	CARBON 33K 5% 1/4W	
R708	1-249-435-11	CARBON 33K 5% 1/4W	
R709	1-249-435-11	CARBON 33K 5% 1/4W	
R710	1-249-435-11	CARBON 33K 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R712	1-249-429-11	CARBON 10K 5% 1/4W	
R713	1-249-416-11	CARBON 820 5% 1/4W	F (AEP,UK,AED)
R713	1-249-426-11	CARBON 5.6K 5% 1/4W	(HK,MY,SP,KR)
R714	1-249-412-11	CARBON 390 5% 1/4W	F (HK,MY,SP,KR)
R714	1-249-426-11	CARBON 5.6K 5% 1/4W	(AEP,UK,AED)
R715	1-249-429-11	CARBON 10K 5% 1/4W	
R716	1-249-429-11	CARBON 10K 5% 1/4W	

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
R717	1-249-429-11	CARBON	10K	5%	1/4W			< CONNECTOR >			
R718	1-249-429-11	CARBON	10K	5%	1/4W						
R719	1-247-807-31	CARBON	100	5%	1/4W	CN901	1-784-731-11	CONNECTOR, FFC 9P			
R720	1-249-429-11	CARBON	10K	5%	1/4W	CN902	1-580-471-11	SOCKET, CONNECTOR 6P			
R721	1-249-429-11	CARBON	10K	5%	1/4W			< IC >			
R722	1-249-417-11	CARBON	1K	5%	1/4W	F					
R723	1-249-417-11	CARBON	1K	5%	1/4W	F	IC901	8-749-016-97	IC NJL62H400A (REMOTE SENSOR)		
R724	1-249-429-11	CARBON	10K	5%	1/4W			< RESISTOR >			
R725	1-249-441-11	CARBON	100K	5%	1/4W						
R731	1-247-807-31	CARBON	100	5%	1/4W						
R732	1-249-417-11	CARBON	1K	5%	1/4W	F	R901	1-247-807-31	CARBON	100 5% 1/4W	
R733	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R902	1-247-807-31	CARBON	100 5% 1/4W	
R734	1-249-437-11	CARBON	47K	5%	1/4W		R903	1-247-807-31	CARBON	100 5% 1/4W	
R735	1-249-437-11	CARBON	47K	5%	1/4W		R904	1-247-854-11	CARBON	9.1K 5% 1/4W	
R736	1-249-429-11	CARBON	10K	5%	1/4W		R905	1-249-417-11	CARBON	1K 5% 1/4W F	
R737	1-249-429-11	CARBON	10K	5%	1/4W		R906	1-247-807-31	CARBON	100 5% 1/4W	
R741	1-247-807-31	CARBON	100	5%	1/4W		R907	1-249-401-11	CARBON	47 5% 1/4W F	
R742	1-247-807-31	CARBON	100	5%	1/4W		R921	1-249-425-11	CARBON	4.7K 5% 1/4W F	
R743	1-247-807-31	CARBON	100	5%	1/4W		R922	1-249-427-11	CARBON	6.8K 5% 1/4W F	
R751	1-247-807-31	CARBON	100	5%	1/4W		R923	1-249-429-11	CARBON	10K 5% 1/4W	
R754	1-247-807-31	CARBON	100	5%	1/4W			< SWITCH >			
R755	1-247-807-31	CARBON	100	5%	1/4W		S910	1-771-410-21	SWITCH, TACTILE (DISPLAY)		
R757	1-247-807-31	CARBON	100	5%	1/4W		S920	1-771-410-21	SWITCH, TACTILE (TUNING MODE)		
R758	1-247-807-31	CARBON	100	5%	1/4W		S921	1-771-410-21	SWITCH, TACTILE (TUNER/BAND)		
R759	1-247-807-31	CARBON	100	5%	1/4W		S922	1-771-410-21	SWITCH, TACTILE (-TUNING)		
R760	1-247-807-31	CARBON	100	5%	1/4W		S923	1-771-410-21	SWITCH, TACTILE (+TUNING)		
R761	1-247-807-31	CARBON	100	5%	1/4W		*****				
R762	1-247-807-31	CARBON	100	5%	1/4W		1-678-673-11	PIN JACK BOARD			
R764	1-247-807-31	CARBON	100	5%	1/4W			*****			
R765	1-247-807-31	CARBON	100	5%	1/4W			< CAPACITOR >			
R766	1-247-807-31	CARBON	100	5%	1/4W		C226	1-162-292-31	CERAMIC	680PF 10% 50V	
R767	1-247-807-31	CARBON	100	5%	1/4W		C227	1-162-292-31	CERAMIC	680PF 10% 50V	
R768	1-247-807-31	CARBON	100	5%	1/4W		C276	1-162-292-31	CERAMIC	680PF 10% 50V	
R769	1-247-807-31	CARBON	100	5%	1/4W		C277	1-162-292-31	CERAMIC	680PF 10% 50V	
R770	1-247-807-31	CARBON	100	5%	1/4W		C295	1-164-159-11	CERAMIC	0.1uF 50V	
R771	1-247-807-31	CARBON	100	5%	1/4W			< JACK >			
R772	1-247-807-31	CARBON	100	5%	1/4W						
R773	1-247-807-31	CARBON	100	5%	1/4W						
R774	1-247-807-31	CARBON	100	5%	1/4W		J210	1-695-188-31	JACK, PIN 4P (AUX IN/OUT)		
R775	1-247-807-31	CARBON	100	5%	1/4W		*****				
R776	1-247-807-31	CARBON	100	5%	1/4W			MISCELLANEOUS			
R777	1-247-807-31	CARBON	100	5%	1/4W			*****			
R778	1-249-401-11	CARBON	47	5%	1/4W	F	1	1-769-916-11	WIRE (FLAT TYPE) (9 CORE)		
R779	1-249-401-11	CARBON	47	5%	1/4W	F	14	1-769-970-11	WIRE (FLAT TYPE) (13 CORE) (HK,MY,SP,KR)		
		< VIBRATOR >					14	1-773-002-11	WIRE (FLAT TYPE) (15 CORE) (AEP,UK,AED)		
X701	1-579-175-11	VIBRATOR, CERAMIC (10MHz)					19	1-693-482-11	TUNER (FM/AM) (HK,MY,SP,KR)		
X702	1-567-098-41	VIBRATOR, CRYSTAL (32.768KHz)					19	1-693-499-11	TUNER (FM/AM) (AEP,UK,AED)		
*****						LCD101	1-804-056-11	DISPLAY PANEL, LIQUID CRYSTAL			
	1-678-671-11	PANEL BOARD									

		< CAPACITOR >									
C901	1-124-584-00	ELECT	100uF	20%	10V						
C902	1-161-494-00	CERAMIC	0.022uF		25V						
C903	1-161-494-00	CERAMIC	0.022uF		25V						
C904	1-162-290-31	CERAMIC	470PF	10%	50V						
C905	1-162-290-31	CERAMIC	470PF	10%	50V						
C906	1-162-290-31	CERAMIC	470PF	10%	50V						

