

# STR-DE725

## SERVICE MANUAL

US Model



Manufactured under license from Dolby Laboratories Licensing Corporation.

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### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS

##### POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, both channels driven, from 20 - 20,000 Hz; rated 100 watts per channel minimum RMS power, with no more than 0.09% total harmonic distortion from 250 milliwatts to rated output.

#### Amplifier section

##### POWER OUTPUT

*Stereo mode* (8 ohms 20 Hz - 20 kHz, THD 0.09%)

100 W + 100 W

*Surround mode* (8 ohms at 1 kHz, THD 0.8%)

Front: 100 W/ch

Center<sup>a)</sup>: 100 W

Rear<sup>a)</sup>: 100 W/ch

a) Depending on the sound field settings and the source, there may be no sound output.

##### Dynamic power output

155 W + 155 W, 8 ohms

220 W + 220 W, 4 ohms

##### Harmonic distortion at rated output

Less than 0.09% (with sound field, tone, and bass booster bypassed)

##### Frequency response

PHONO: RIAA

equalization curve

±0.5 dB

CD, TAPE, MD/DAT, TAPE/MD, DVD/LD, TV/DBS,

VIDEO 1 and VIDEO 2 :

10 Hz - 50 kHz +0.5/-2 dB (with sound field, tone, and bass booster bypassed)

##### Inputs (Analog) PHONO:

Sensitivity: 2.5 mV

Impedance: 50 kilohms

S/N<sup>b)</sup>: 75 dB (A, 2.5 mV<sup>c)</sup>)

CD, DVD/LD, TAPE, MD/DAT, TAPE/MD, TV/DBS,

##### VIDEO 1 and VIDEO 2 :

Sensitivity: 150 mV

Impedance: 50 kilohms

S/N<sup>b)</sup>: 82 dB (A, 150 mV<sup>c)</sup>)

##### b) 78' IHF

##### c) Weighted network, input level

##### Inputs (Digital) DVD/LD:

Sensitivity: -

Impedance: -

S/N: 100 dB (A, 20 kHz LPF)

##### Outputs

TAPE/MD, (REC OUT); VIDEO 1, 2

(AUDIO OUT):

Voltage: 150 mV

Impedance: 10 kilohms

WOOFER:

Voltage: 2 V

Impedance: 1 kilohms

PHONES:

Accepts low - and high-impedance headphones

**BASS BOOST** +6 dB at 70 Hz

— Continued on next page —

## FM STEREO FM-AM RECORDER



# SONY®

### Sampling Frequency

<i>EQ</i>	48 kHz
	BASS: 100 Hz ~ 1.0 kHz (21 steps)
	MID: 500 Hz ~ 5.0 kHz (21 steps)
	TREBLE: 1.0 kHz ~ 10 kHz (21 steps)
	Gain levels: ±10 dB, 1 dB step

### FM tuner section

<i>Tuning range</i>	87.5 - 108.0 MHz
<i>Antenna terminals</i>	75 ohms, unbalanced
<i>Sensitivity</i>	Mono: 18.3 dBf, 4.5 µV Stereo: 38.3 dBf, 45 µV
<i>Usable sensitivity</i>	11.2 dBf, 2 µV (IHF)
<i>S/N</i>	Mono: 76 dB Stereo: 70 dB
<i>Harmonic distortion at 1 kHz</i>	Mono: 0.3 % Stereo: 0.5 %
<i>Separation</i>	45 dB at 1 kHz
<i>Frequency response</i>	30 Hz - 15 kHz +0.5/-2 dB
<i>Selectivity</i>	60 dB at 400 kHz

### AM tuner section

<i>Tuning range</i>	With 10-kHz tuning scale: 530 - 1710 kHz <sup>d)</sup> With 9-kHz tuning scale: 531 - 1710 kHz <sup>d)</sup>
<i>Antenna</i>	Loop antenna
<i>Usable sensitivity</i>	50 dB/m (at 1,000 kHz or 999 kHz)
<i>S/N</i>	54 dB (at 50 mV/m)

### Harmonic distortion

	0.5% (50 mV/m, 400 kHz)
<i>Selectivity</i>	At 9 kHz: 35 dB At 10 kHz: 40 dB

d) You can change the AM tuning scale to 9 kHz. After tuning in any AM station, turn off the receiver. Hold down the TUNING + button and press the I/⏪ button. All preset stations will be erased when you change the tuning scale. To reset the scale to 10 kHz, repeat the procedure.

### Video section

<i>Input</i>	1 V <sub>p-p</sub> 75 ohms
<i>Outputs</i>	1 V <sub>p-p</sub> 75 ohms

### General

<i>System</i>	Tuner section: PLL quartz-locked digital synthesizer system Preamplifier section: Low- noise NF type equalizer Power amplifier section: Pure-complementary SEPP
---------------	--

### Power requirements

120 V AC, 60 Hz

### Power consumption

290 W

*AC outlets* 2 switched, total 100 W

*Dimensions* 430 × 355 × 157.5 mm  
(17 × 14 × 6<sup>1</sup>/<sub>4</sub> in.)  
including projecting parts and controls

*Mass (Approx.)* 10.5 kg (23 lb 3 oz)

### Supplied accessories

- FM wire antenna (1)
- AM loop antenna (1)
- Remote commander RM-PP401 (remote) (1)
- Carbon-ZINC dry batteries (2)

Design and specifications are subject to change without notice.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

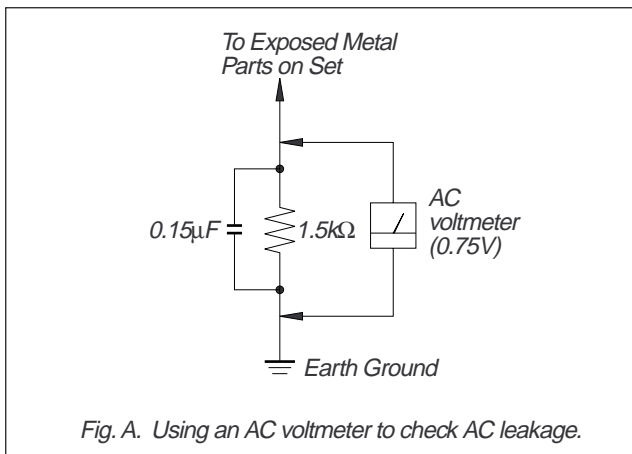


Fig. A. Using an AC voltmeter to check AC leakage.

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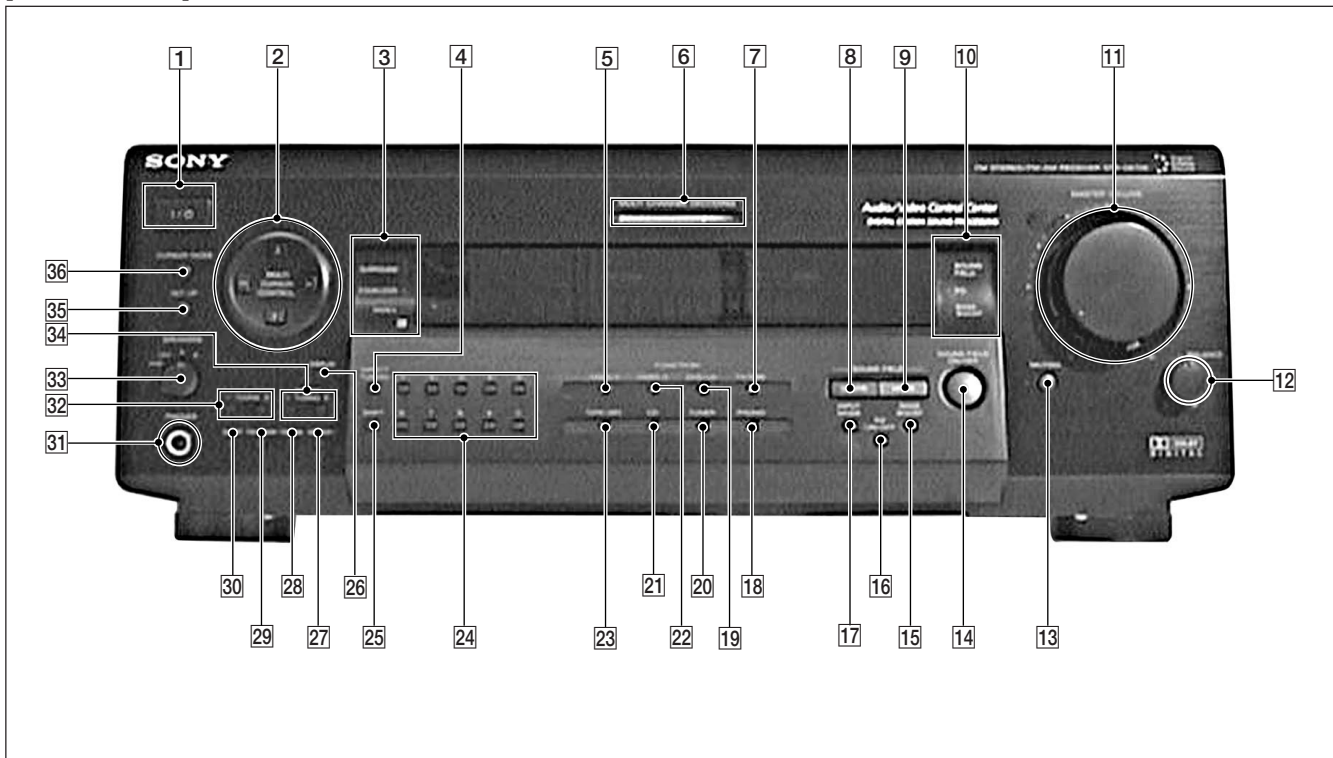
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### SAFETY-RELATED COMPONENT WARNING!!

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 GENERAL

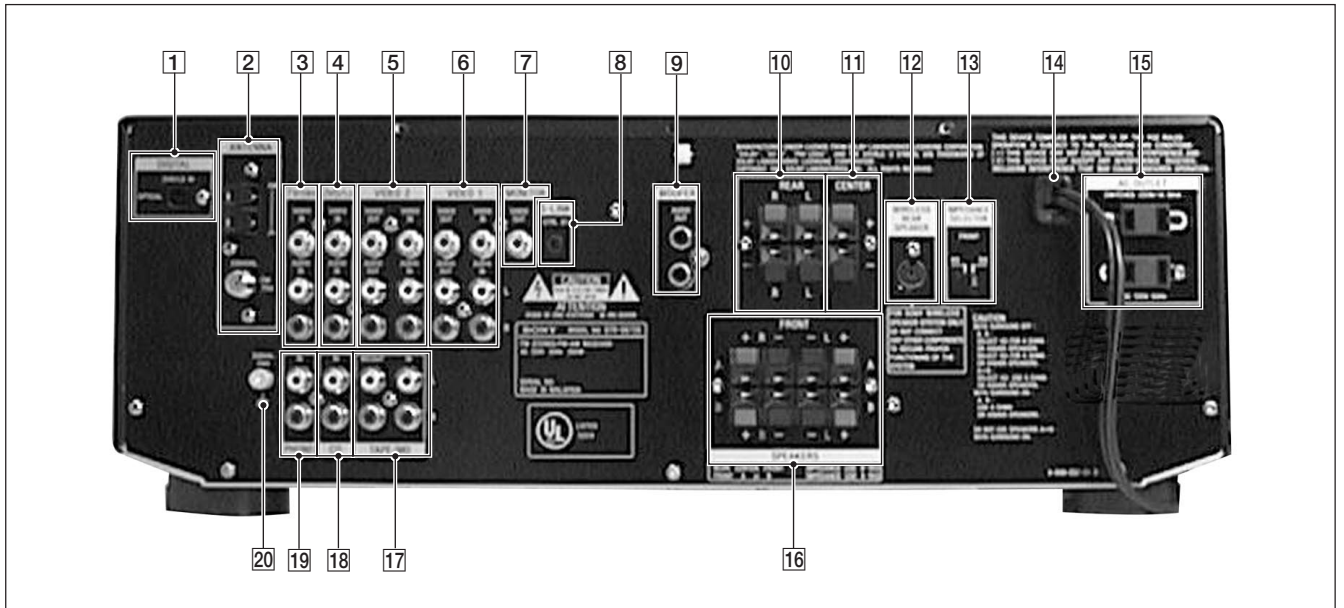
## LOCATION AND FUNCTION OF CONTROLS [FRONT PANEL]



- |           |  |           |                            |
|-----------|--|-----------|----------------------------|
| <b>1</b>  | I/⏻ (POWER) button                     | <b>20</b> | TUNER button               |
| <b>2</b>  | MULTI CURSOR CONTROL                   | <b>21</b> | CD button                  |
| <b>3</b>  | SURROUND, EQUALIZER, INDEX indicators  | <b>22</b> | VIDEO 2 button             |
| <b>4</b>  | DIRECT TUNING button                   | <b>23</b> | TAPE/MD button             |
| <b>5</b>  | VIDEO 1 button                         | <b>24</b> | Numeric buttons            |
| <b>6</b>  | MULTI CHANNEL DECODING indicator       | <b>25</b> | SHIFT button               |
| <b>7</b>  | TV/DBS button                          | <b>26</b> | DISPLAY button             |
| <b>8</b>  | SOUND FIELD GENRE button               | <b>27</b> | MEMORY button              |
| <b>9</b>  | SOUND FIELD MODE button                | <b>28</b> | FM/AM button               |
| <b>10</b> | SOUND FIELD, EQ, BASS BOOST indicators | <b>29</b> | FM MODE button             |
| <b>11</b> | MASTER VOLUME control                  | <b>30</b> | SLEEP button               |
| <b>12</b> | BALANCE control                        | <b>31</b> | PHONES jack                |
| <b>13</b> | MUTING button                          | <b>32</b> | TUNING +, – buttons        |
| <b>14</b> | SOUND FIELD ON/OFF button              | <b>33</b> | SPEAKERS A, B switche      |
| <b>15</b> | BASS BOOST button                      | <b>34</b> | PRESET TUNING +, – buttons |
| <b>16</b> | EQ ON/OFF button                       | <b>35</b> | SET UP button              |
| <b>17</b> | INPUT MODE button                      | <b>36</b> | CURSOR MODE button         |
| <b>18</b> | PHONO button                           |           |                            |
| <b>19</b> | DVD/LD                                 |           |                            |



[REAR PANEL]



- 1 DIGITAL
- 2 ANTENNA (FM/AM)
- 3 TV/LD
- 4 DVD/LD
- 5 VIDEO 2
- 6 VIDEO 1
- 7 MONITOR
- 8 S-LINK
- 9 WOOFER
- 10 SPEAKERS (REAR)
- 11 SPEAKER (CENTER)

- 12 WIRELESS REAR SPEAKER
- 13 IMPEDANCE SELECTOR
- 14 AC power cord
- 15 AC OUTLET
- 16 FRONT SPEAKERS (A/B)
- 17 SPEAKERS (FRONT)
- 18 CD
- 19 PHONO
- 20  $\hbar$  SIGNAL GND

## SECTION 2 TEST MODE

### FLUORESCENT INDICATOR TUBE TEST MODE

\* All fluorescent segments are tested. When this test is activated, all segments turn on at the same time, then each segment turns on one after another.

\* Procedure:

While depressing the **[SET UP]** and the **[SOUND FIELD MODE]** buttons simultaneously, press the power **[I/O]** button to turn on the main power. All segments turn on at the same time, then each segment turns on one after another.

### FACTORY SET MODE

\* All preset contents are reset to the default setting.

\* Procedure:

While depressing the **[SET UP]** and the **[SOUND FIELD ON/OFF]** buttons simultaneously, press the power **[I/O]** button to turn on the main power. The message FACTORY SET appears and the present contents are reset to the default values.

### ALL CLEAR MODE

\* All preset contents are cleared when this mode is activated. Use this mode before returning the product to clients upon completion of repair.

\* Procedure:

While depressing the **[DISPLAY]** and the **[SOUND FIELD ON/OFF]** buttons simultaneously, press the power **[I/O]** button to turn on the main power. The machine enters the DEMO mode. DEMO mode: Wait a while, then the demonstration starts. If the power **[I/O]** button is pressed often the demonstration has started, the power is turned off, and the demonstration resumes if the power **[I/O]** button is pressed again.

ALL CLEAR mode; If the power **[I/O]** button is pressed often the machine enters the DEMO mode, but before the demonstration starts, the display is turned off. Press **[I/O]** again. No response is returned. Then press **[I/O]** again. The preset data is cleared and the machine enters the normal power-on state.

### SOUND FIELD CLEAR MODE

\* The preset sound field is cleared when this mode is activated. Use this mode before returning the product to clients upon completion of repair.

\* Procedure:

While depressing the **[SOUND FIELD ON/OFF]** button, press the power **[I/O]** button to turn on the main power. The message SURR CLEAR! appears and initialization is performed.

### AM CHANNEL STEP 9 kHz/10 kHz SELECTION MODE

\* Either the 9 kHz step or 10 kHz step can be selected for the AM channel step.

\* Procedure:

Set the FUNCTION to AM. Turn off the main power.

While depressing the **[TUNING+]** button or the **[PRESET TUNING +]** button, press the power **[I/O]** button to turn on the main power. Either the message AM 9kHz STEP or AM 10kHz STEP appears. Select the desired step.

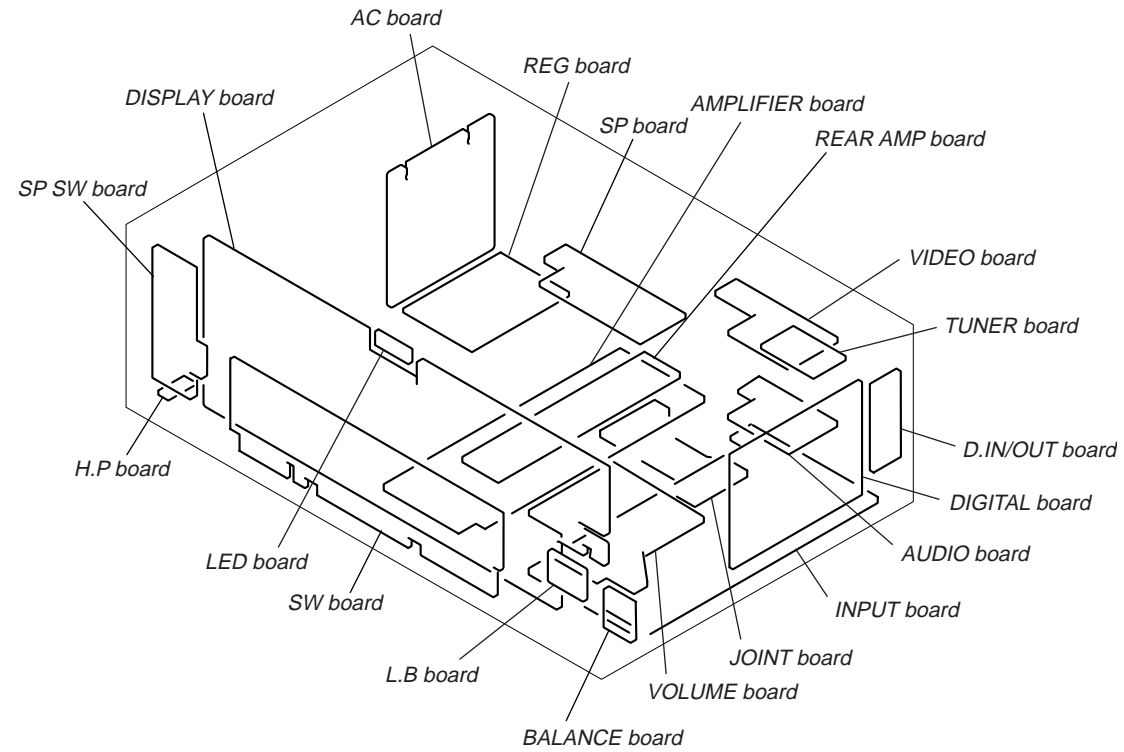
### DSP TEST MODE

\* Procedure:

While depressing the **[SET UP]** and the **[SOUND FIELD GENRE]** buttons simultaneously, press the power **[I/O]** button to turn on the main power. The message DSP NO ERROR or DSP ERROR.

## SECTION 3 DIAGRAMS




### 3-1. CIRCUIT BOARDS LOCATION










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

#### For schematic diagrams.

##### Note:




- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
- % : indicates tolerance.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.

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

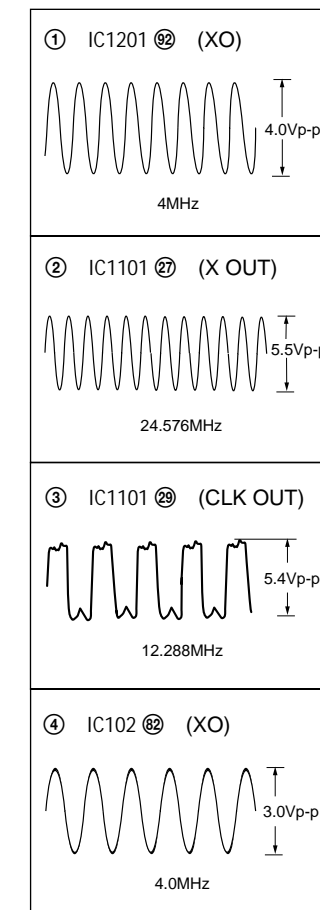
-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
No mark : FM
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ).  
Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
-  : FM
-  : CD
-  : DIGITAL
-  : PHONO

#### For printed wiring boards.

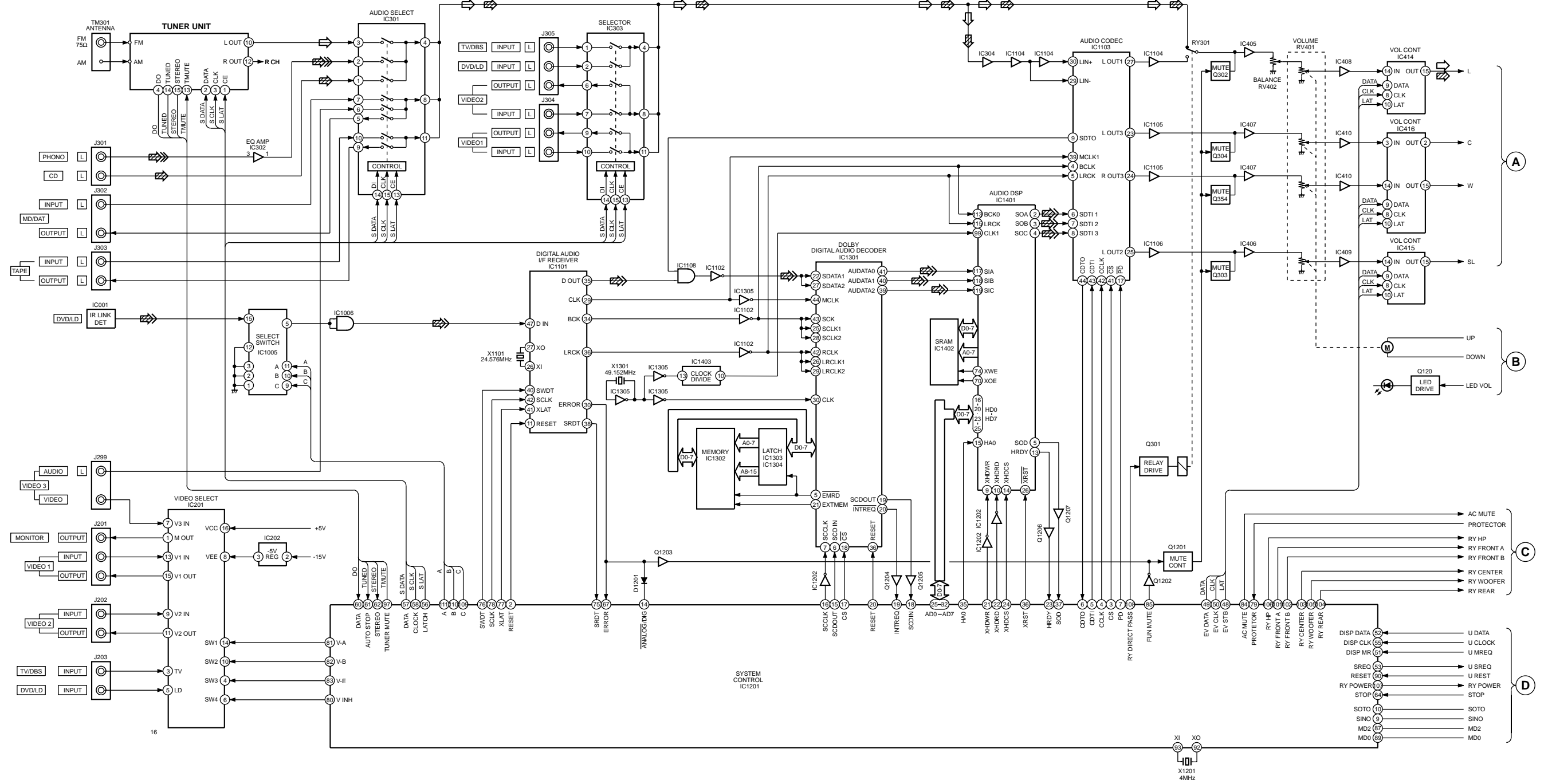
##### Note:

-  : parts extracted from the component side.
-  : Through hole.
-  : Pattern from the side which enables seeing.

#### • Waveform

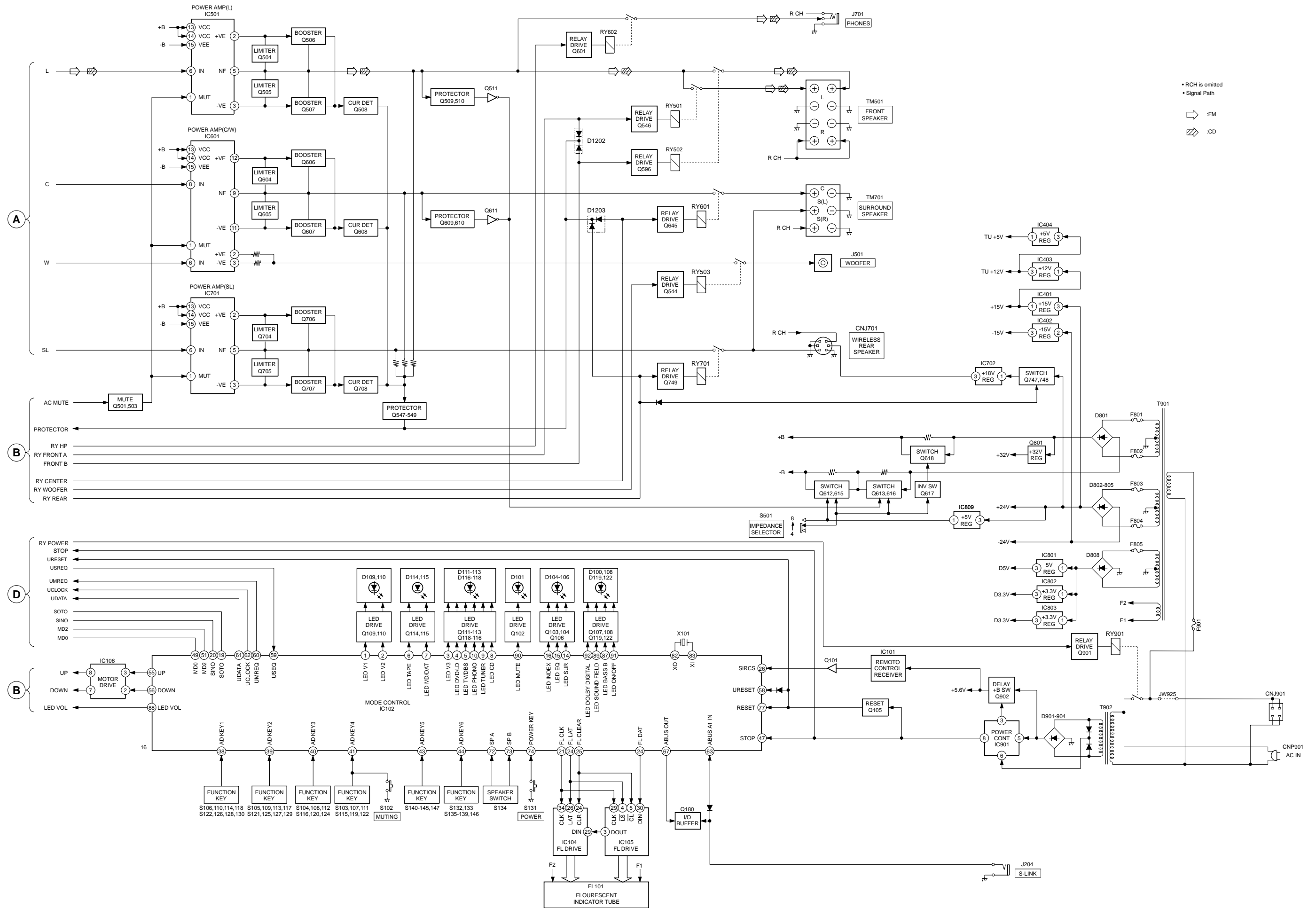


3-2. BLOCK DIAGRAM – MAIN SECTION –



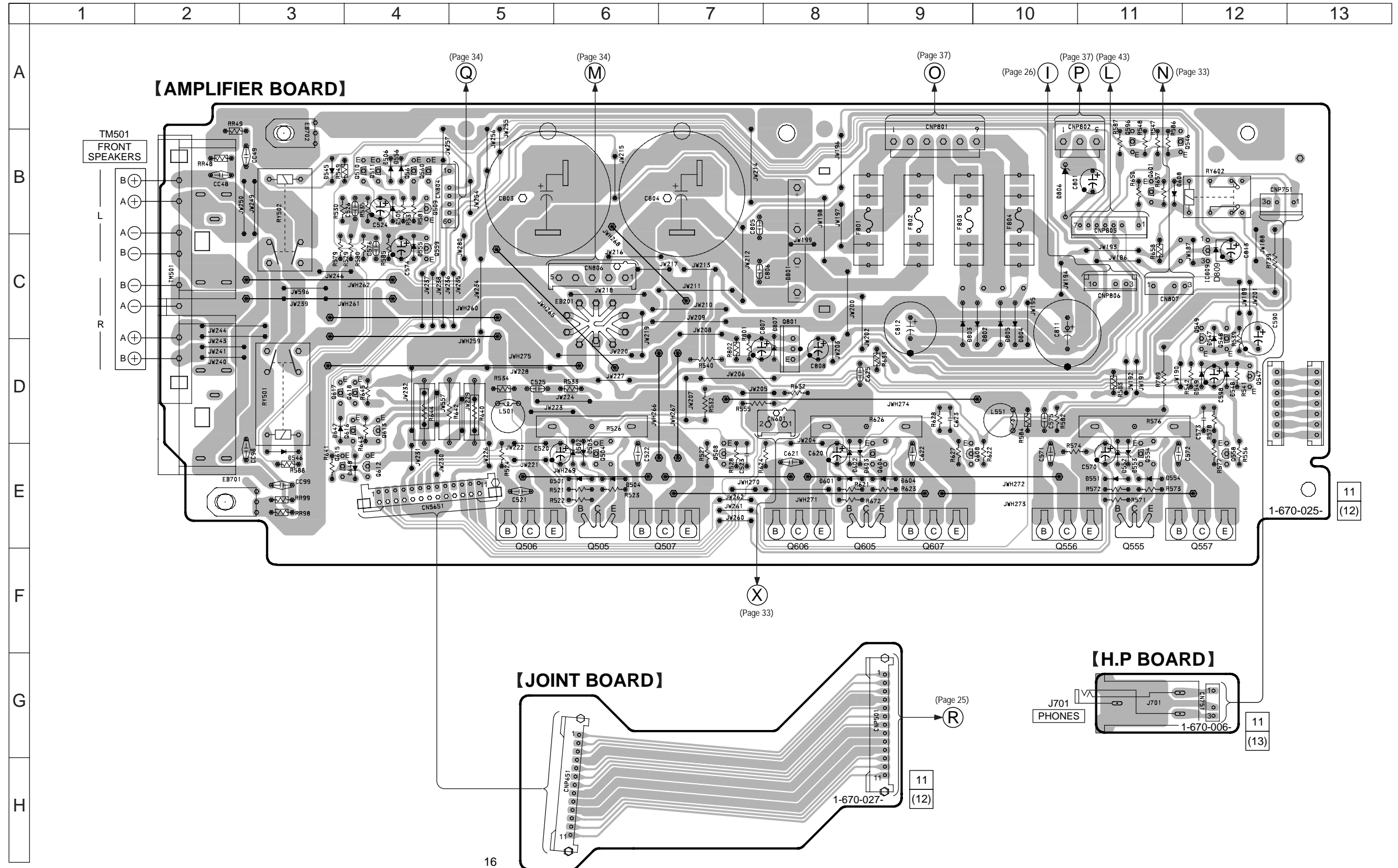
- RCH is omitted
- Signal Path
- ◻ : FM
- ◻◻◻ : PHONO
- ◻◻◻◻ : CD
- ◻◻◻◻◻ : DIGITAL

3-3. BLOCK DIAGRAM – POWER SECTION –



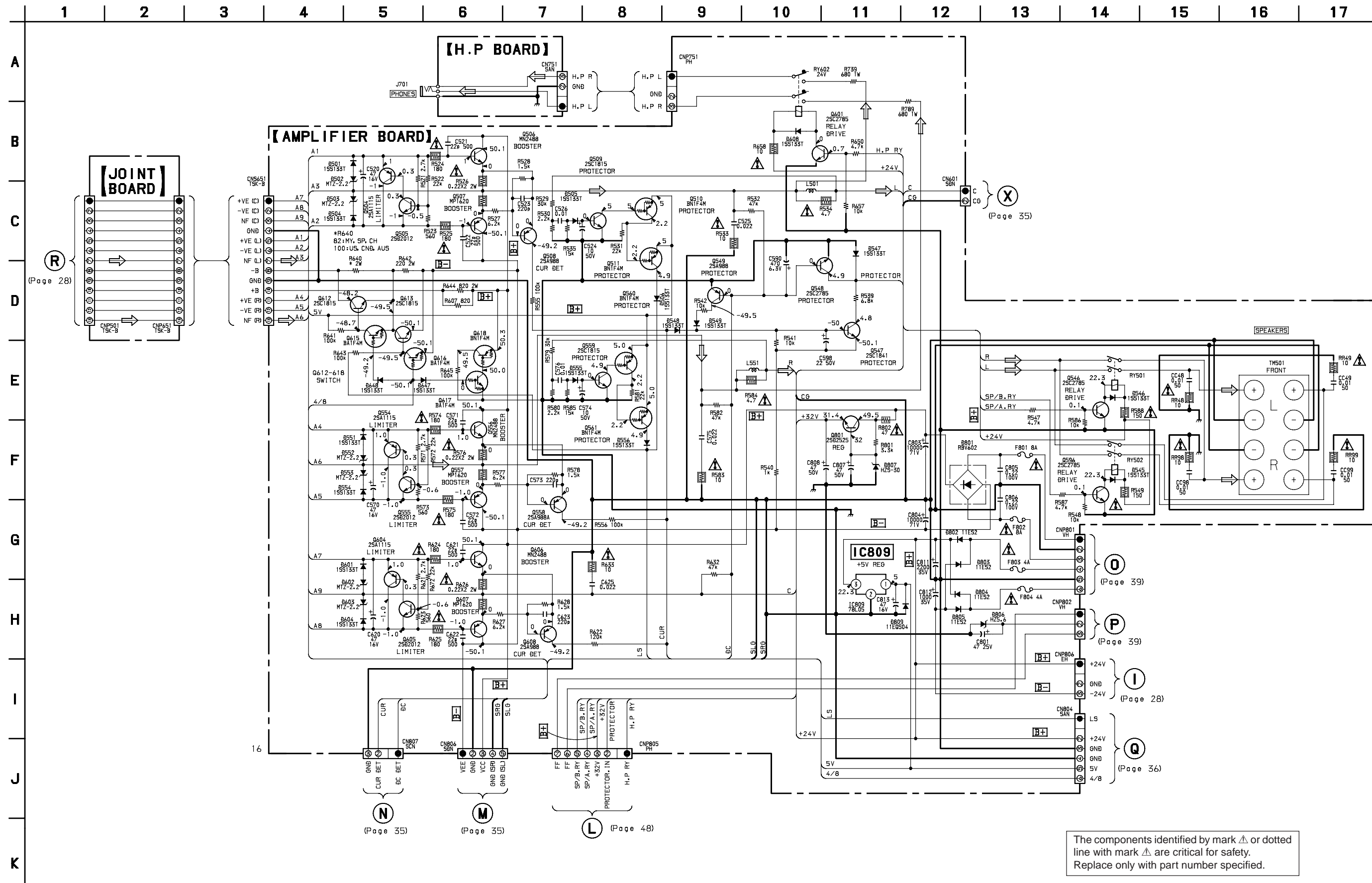
• Semiconductor Location

Ref. No.	Location
D501	E-6
D502	E-6
D503	E-6
D504	E-6
D505	B-4
D506	B-4
D545	B-3
D546	E-3
D547	D-12
D548	D-12
D549	D-12
D551	E-11
D552	E-11
D553	E-11
D554	E-11
D555	C-4
D556	B-4
D601	E-8
D602	E-8
D603	E-8
D604	E-9
D608	C-11
D647	D-3
D648	E-4
D801	C-8
D802	D-10
D803	C-9
D804	D-10
D805	D-10
D806	B-10
D807	D-8
D809	C-12
IC809	C-12
Q504	E-6
Q505	E-6
Q506	E-5
Q507	F-7
Q508	E-7
Q509	B-4
Q510	B-4
Q511	B-4
Q546	B-11
Q547	D-12
Q548	D-12
Q549	D-12
Q554	E-11
Q555	E-11
Q556	E-10
Q557	E-12
Q558	E-12
Q559	C-4
Q560	B-4
Q561	B-4
Q596	B-11
Q601	B-11
Q604	E-9
Q605	E-8
Q606	E-8
Q607	E-9
Q608	E-9
Q612	E-4
Q613	D-4
Q615	E-3
Q616	D-3
Q617	D-3
Q618	D-3
Q801	D-8



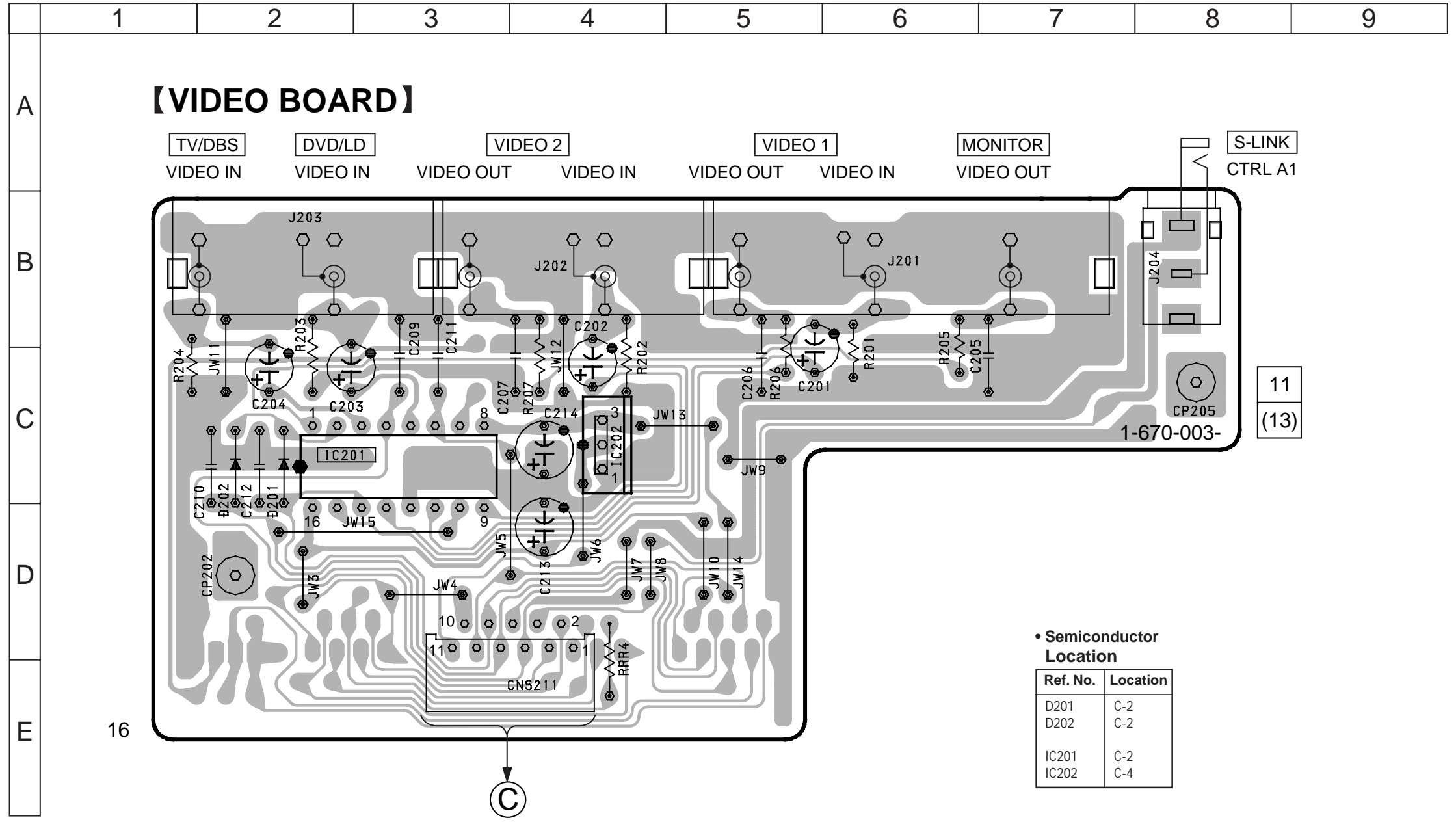


3-5. SCHEMATIC DIAGRAM — AMP SECTION —



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



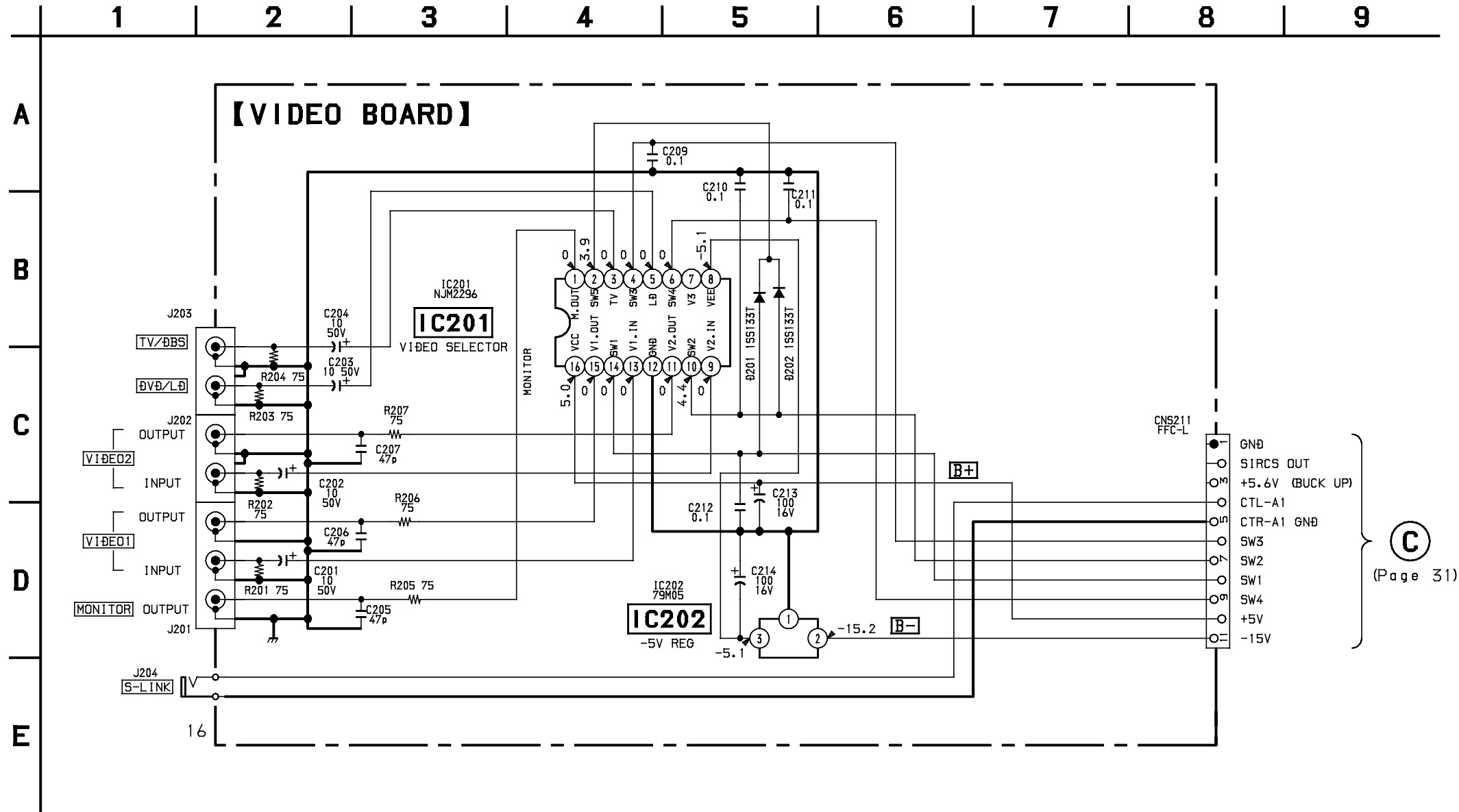


• Semiconductor Location

Ref. No.	Location
D201	C-2
D202	C-2
IC201	C-2
IC202	C-4

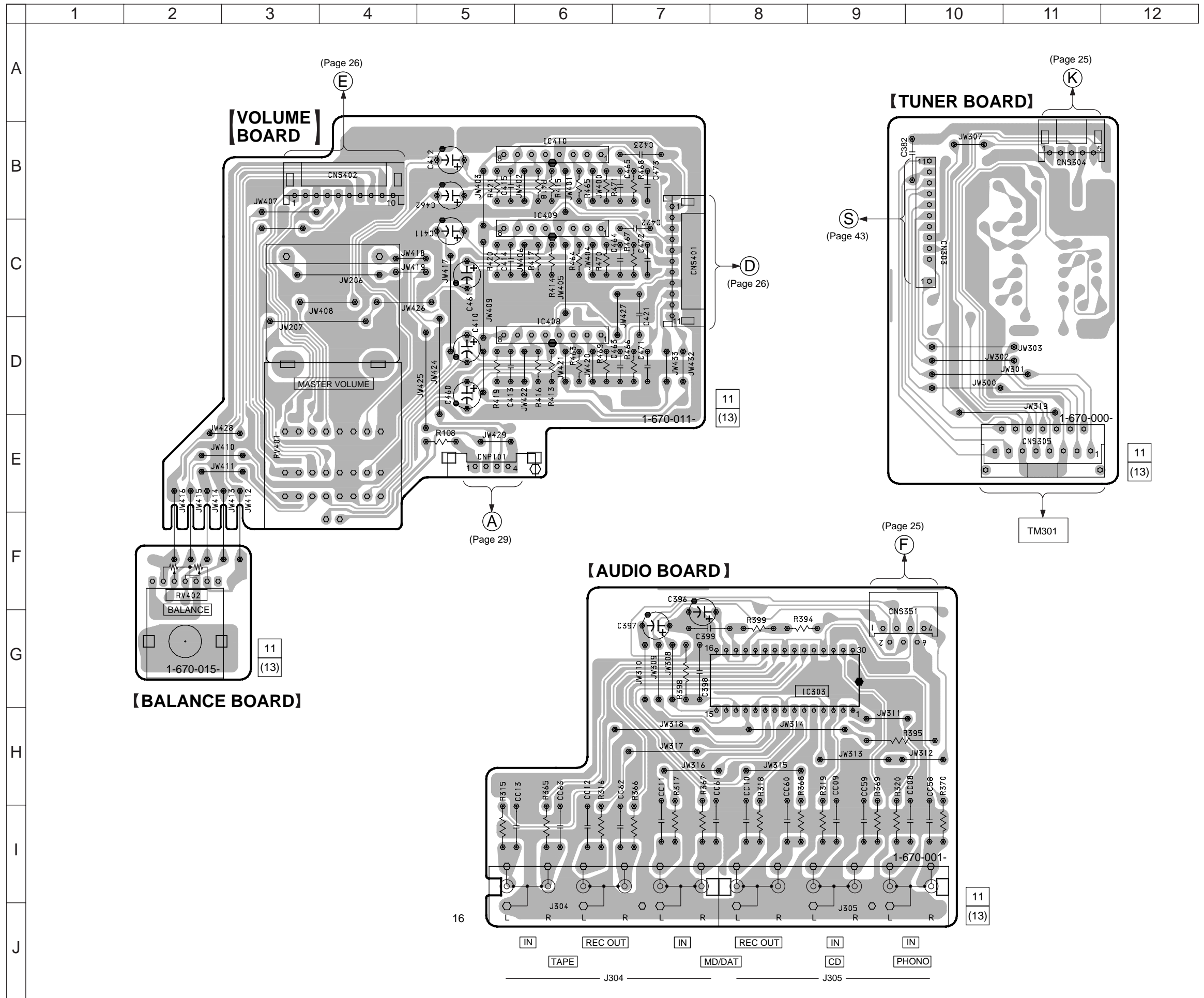
(Page 29)

3-7. SCHEMATIC DIAGRAM — VIDEO SECTION — • See pages 61 for IC Block Diagrams.

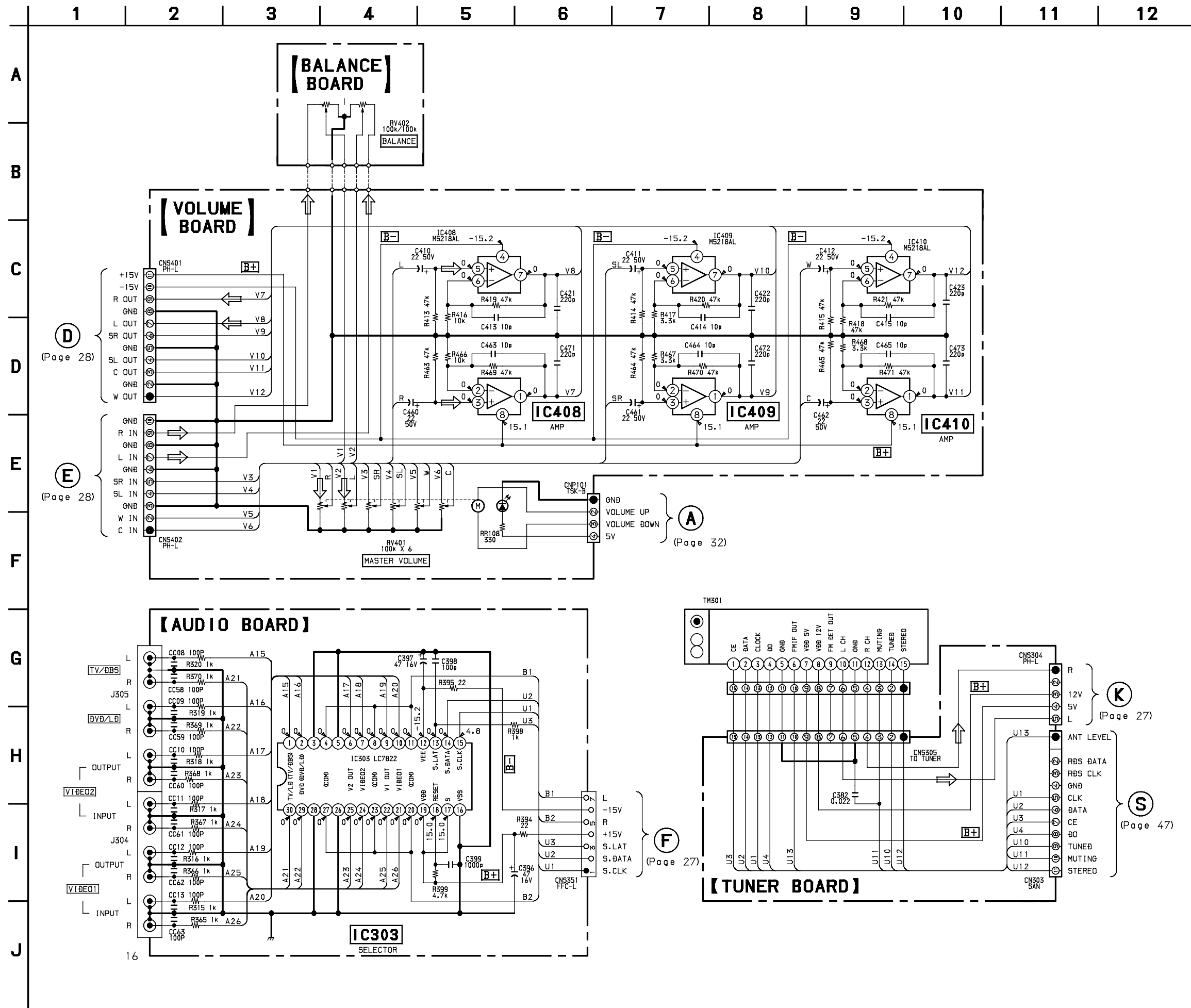


• Semiconductor Location

Ref. No.	Location
IC303	G-8
IC408	D-6
IC409	C-6
IC410	B-6



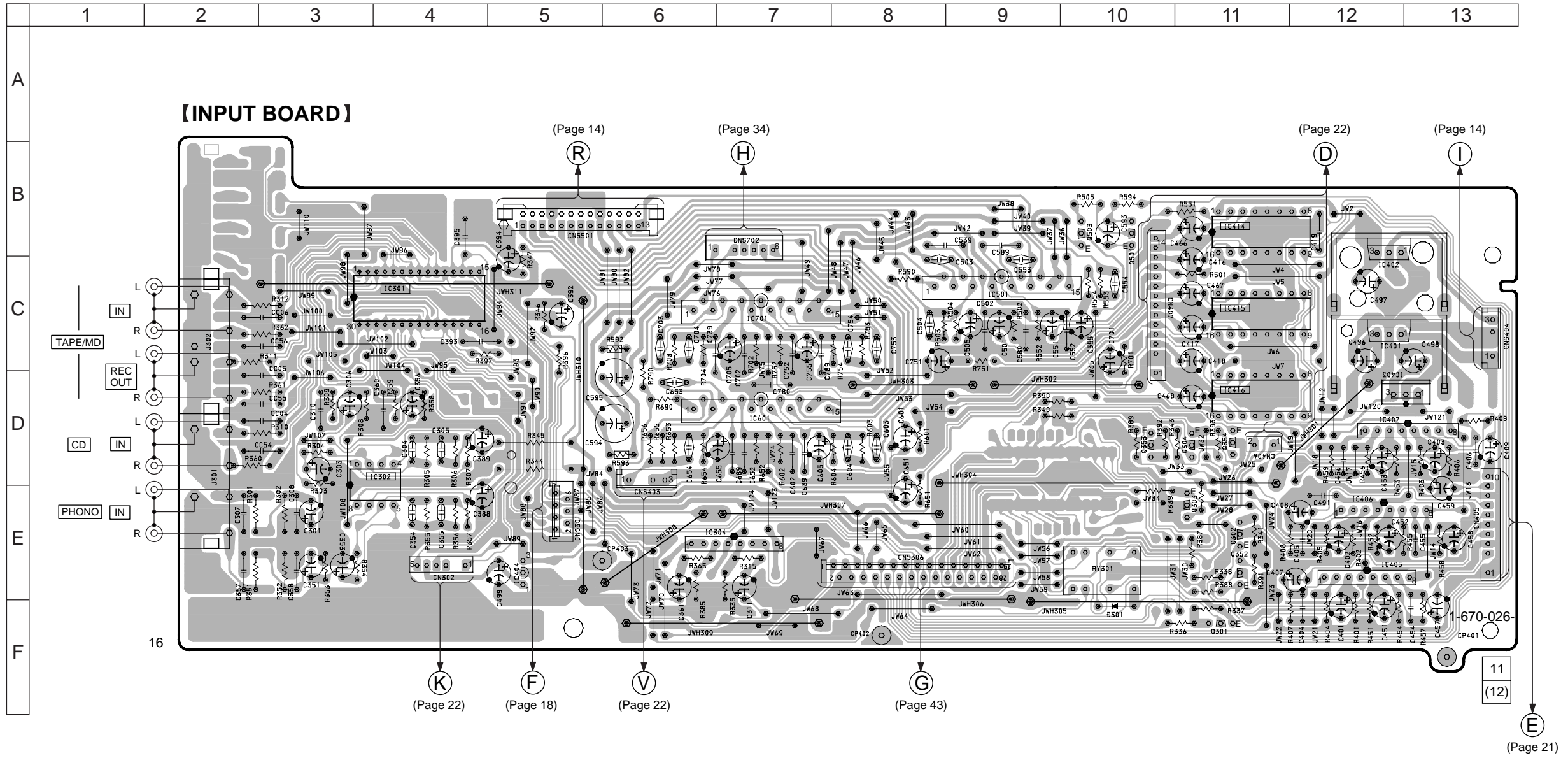
3-9. SCHEMATIC DIAGRAM — AUDIO SECTION —



3-10. PRINTED WIRING BOARD — INPUT SECTION — • See page 7 for Circuit Boards Location.

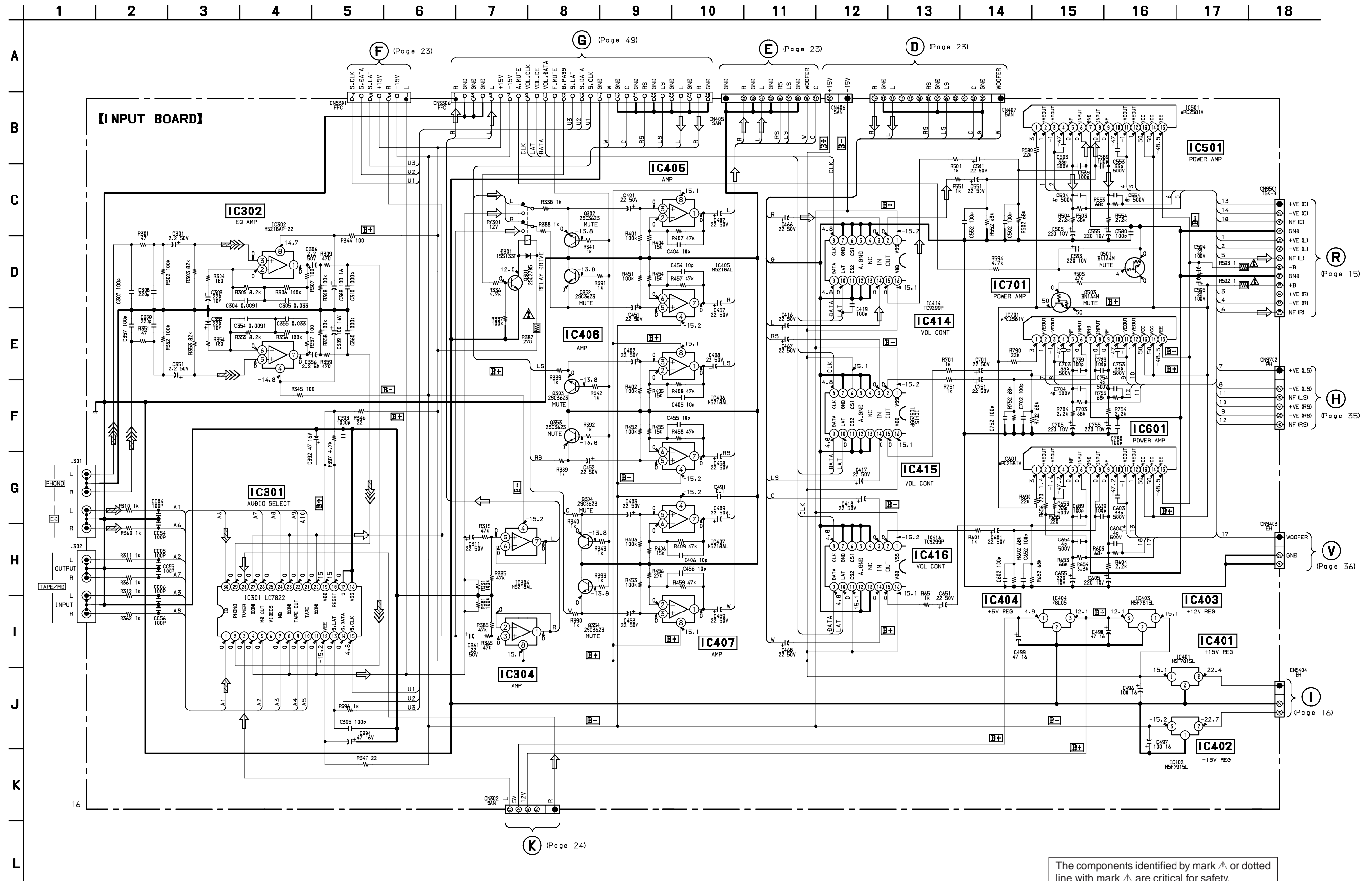
• Semiconductor Location

Ref. No.	Location
D301	F-10
IC301	C-4
IC302	D-4
IC304	E-6
IC401	C-12
IC402	B-12
IC403	D-12
IC404	E-4
IC405	E-12
IC406	D-12
IC407	D-12
IC414	B-11
IC415	C-11
IC416	D-11
IC501	C-9
IC601	D-7
IC701	C-7
Q301	F-11
Q302	E-11
Q303	E-11
Q304	D-11
Q352	E-11
Q353	D-10
Q354	D-11
Q501	C-10
Q503	C-10





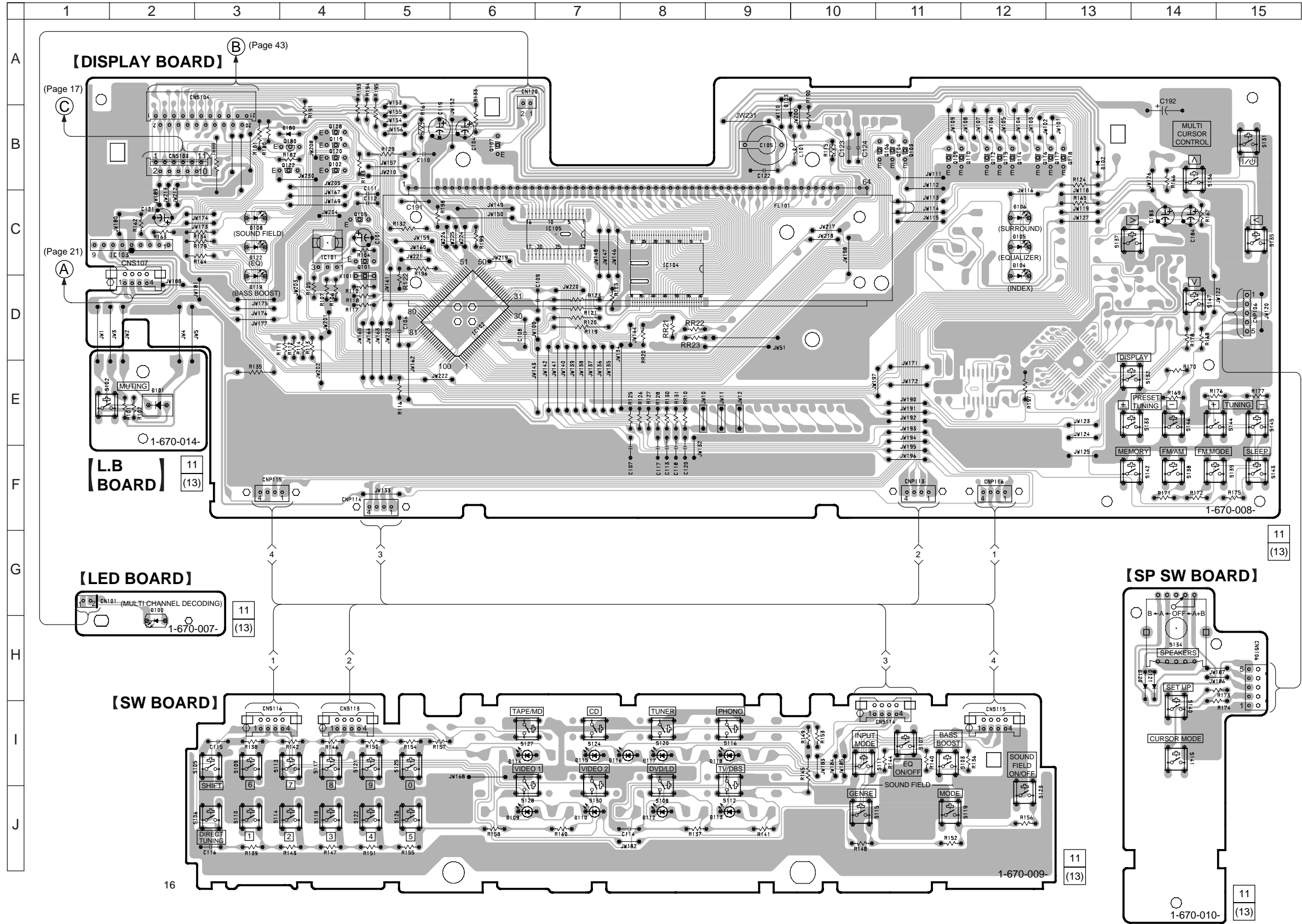
3-11. SCHEMATIC DIAGRAM — INPUT SECTION — • See page 61 for IC Block Diagrams.



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

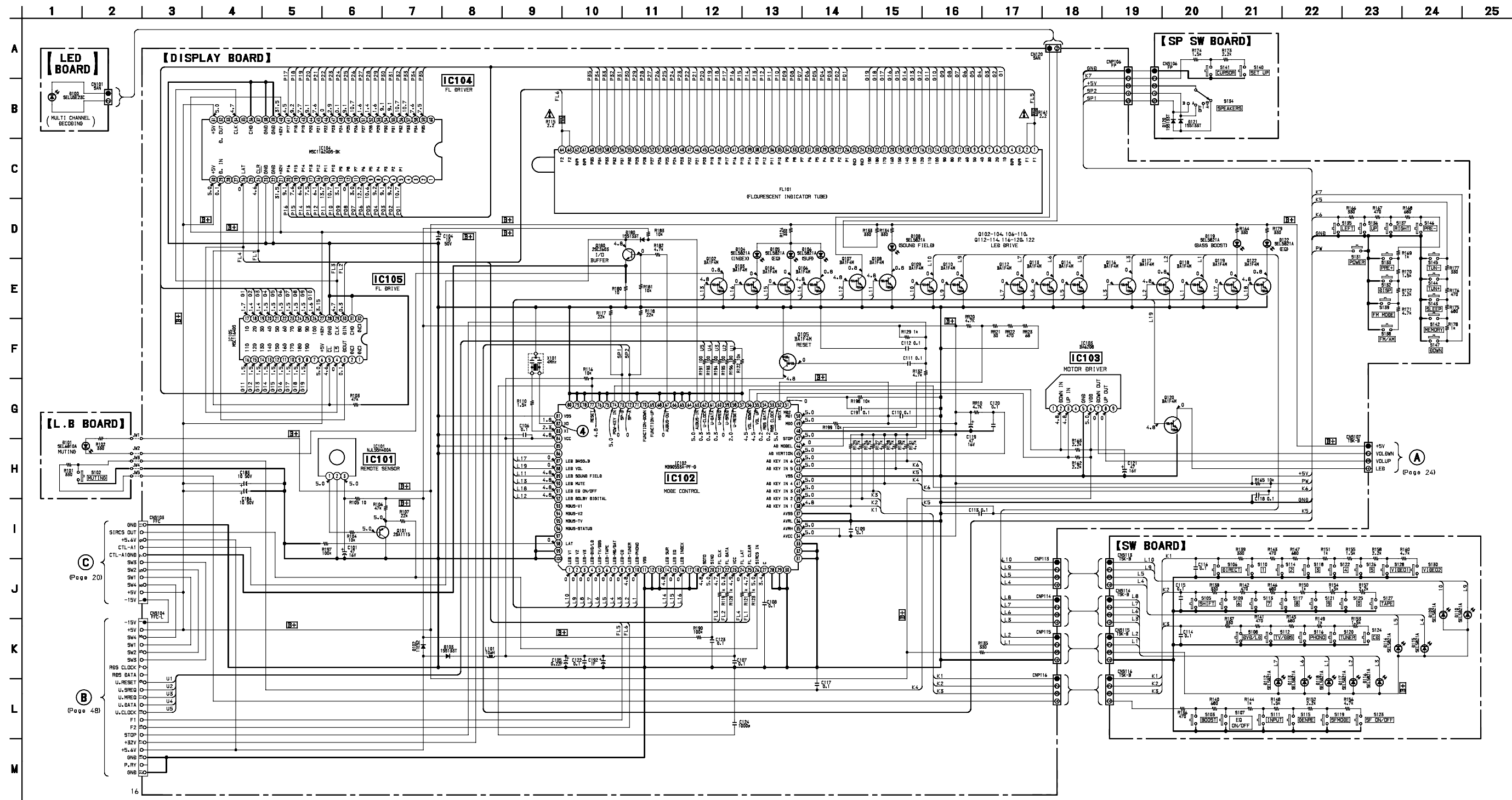
• Semiconductor Location

Ref. No.	Location
D100	H-2
D101	E-2
D102	B-13
D103	B-9
D104	C-12
D105	C-12
D106	C-12
D108	C-3
D109	J-6
D110	J-7
D111	J-7
D112	J-8
D113	J-9
D114	I-6
D115	I-7
D116	I-7
D117	I-8
D118	I-9
D119	D-3
D120	H-14
D121	H-14
D122	C-3
D180	B-3
IC101	C-4
IC102	D-6
IC103	C-1
IC104	D-8
IC105	C-7
Q101	C-4
Q102	B-4
Q103	B-11
Q104	B-11
Q105	C-4
Q106	B-11
Q107	B-6
Q108	B-4
Q109	B-11
Q110	B-11
Q111	B-12
Q112	B-12
Q113	B-12
Q114	B-12
Q115	B-12
Q116	B-12
Q117	B-13
Q118	B-13
Q119	B-4
Q120	B-4
Q122	B-3
Q180	B-3



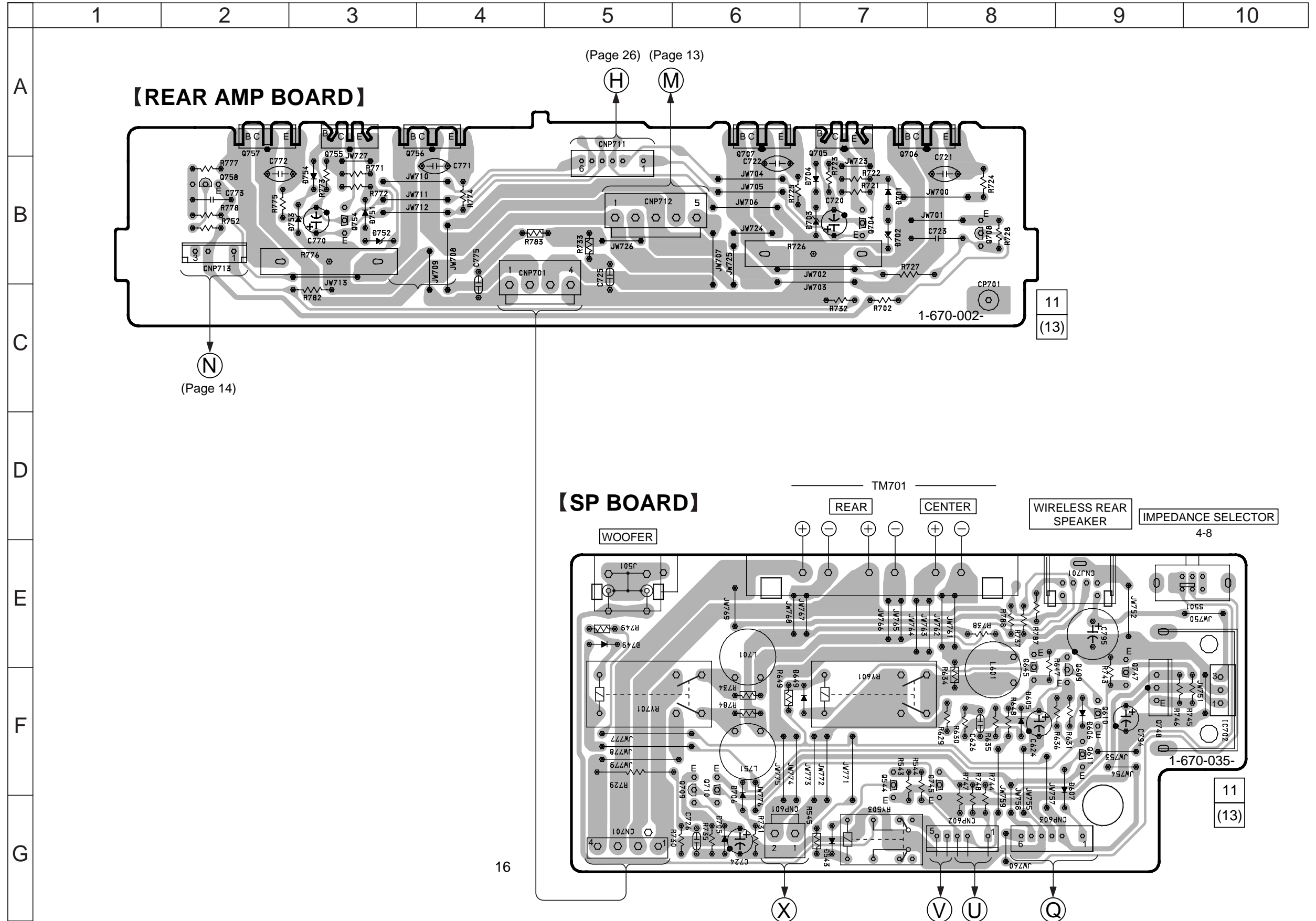


3-13. SCHEMATIC DIAGRAM — DISPLAY SECTION — • See page 8 for Waveform. • See page 51 for IC Pin Function Description. • See page 61 for IC Block Diagrams.

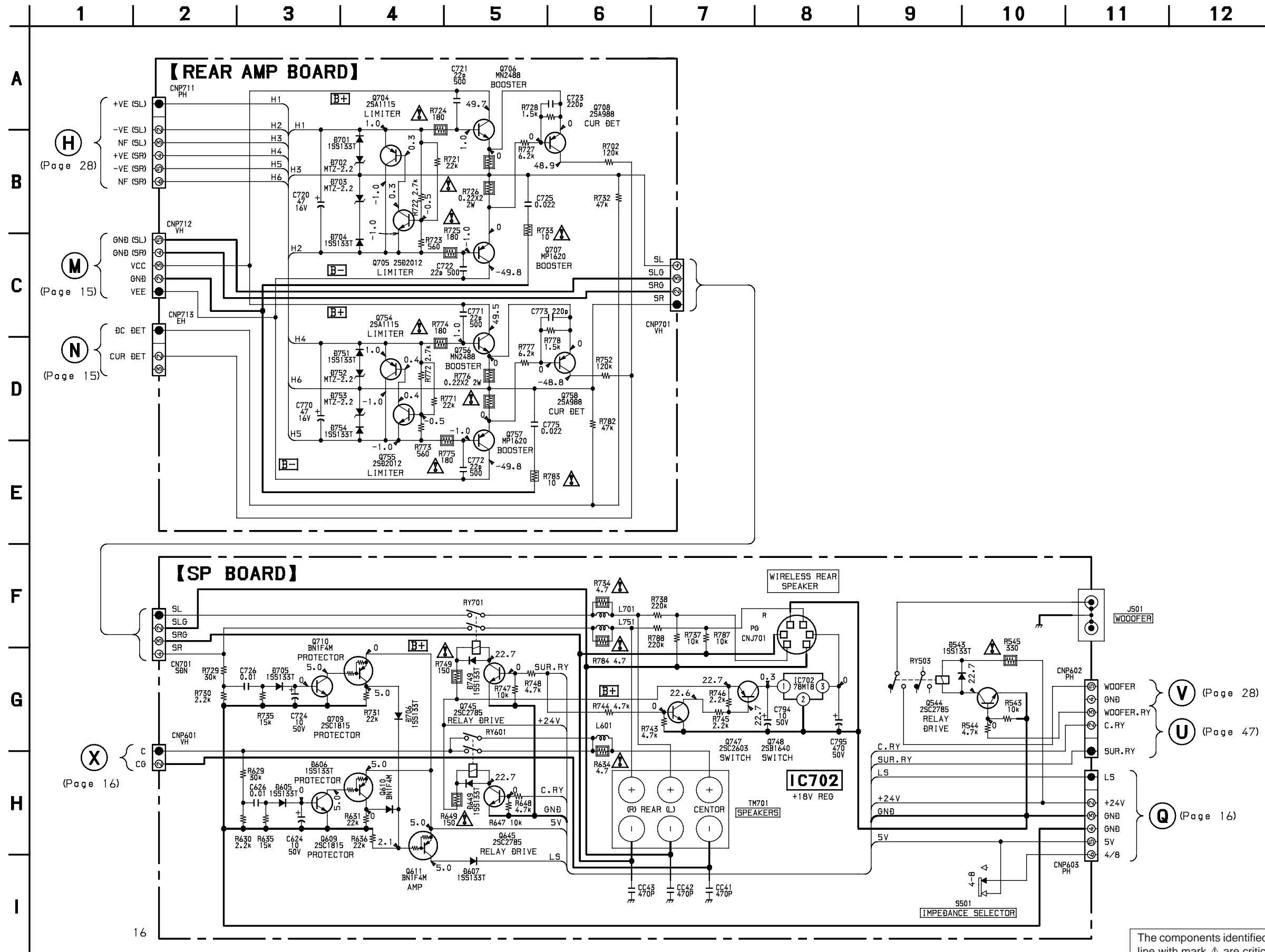


• Semiconductor Location

Ref. No.	Location
D543	G-7
D605	F-8
D606	F-9
D607	F-12
D649	F-6
D701	B-7
D702	B-7
D703	B-7
D704	B-7
D705	G-6
D706	F-6
D749	E-5
D751	B-3
D752	B-3
D753	B-3
D754	B-3
IC702	F-10
Q544	F-7
Q609	E-9
Q610	F-9
Q611	F-9
Q645	E-8
Q704	B-7
Q705	B-7
Q706	B-7
Q707	B-6
Q708	B-8
Q710	F-6
Q745	F-6
Q747	E-9
Q748	E-9
Q754	B-3
Q755	A-3
Q756	A-4
Q757	A-2
Q758	B-2



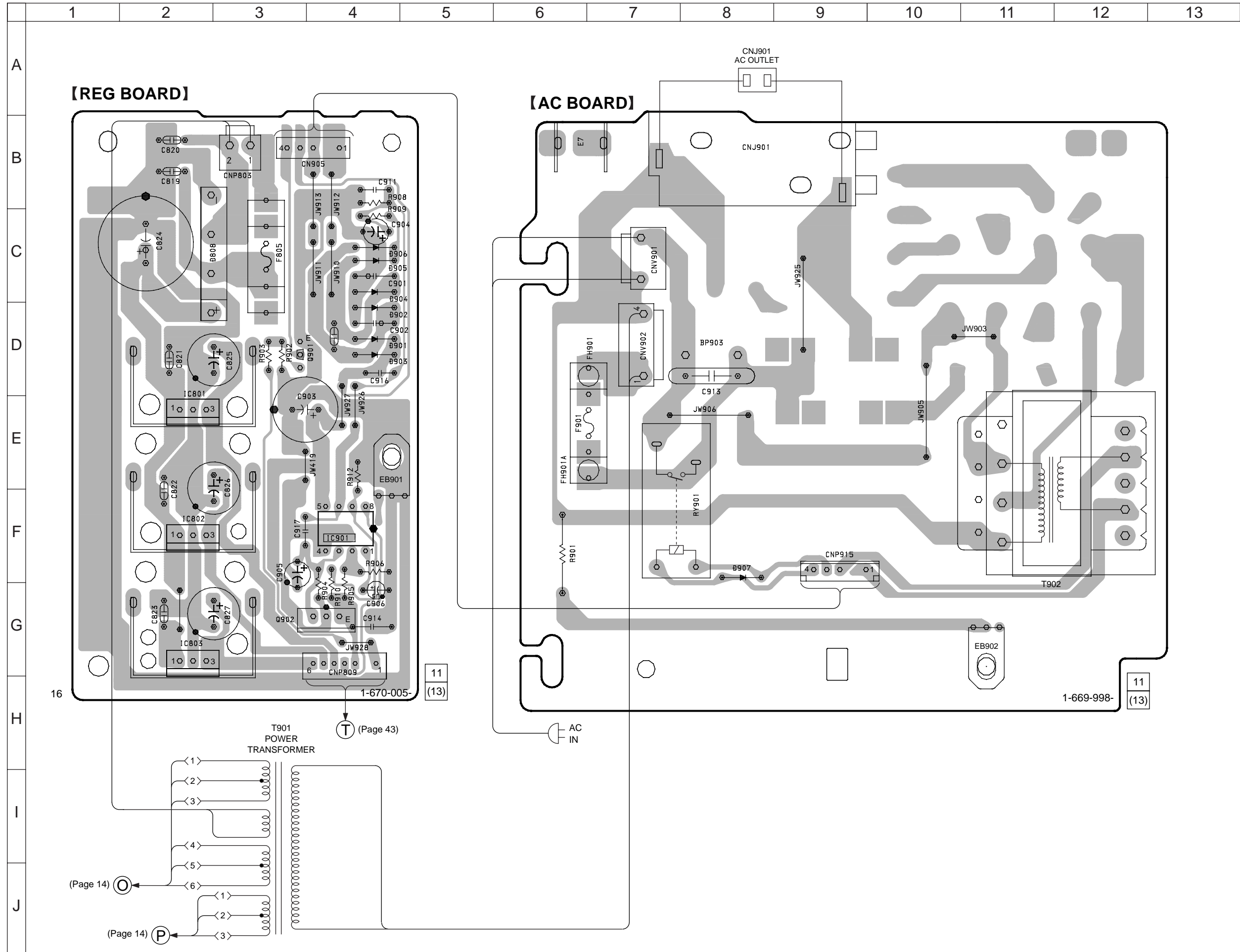
3-15. SCHEMATIC DIAGRAM — SPEAKER SECTION —



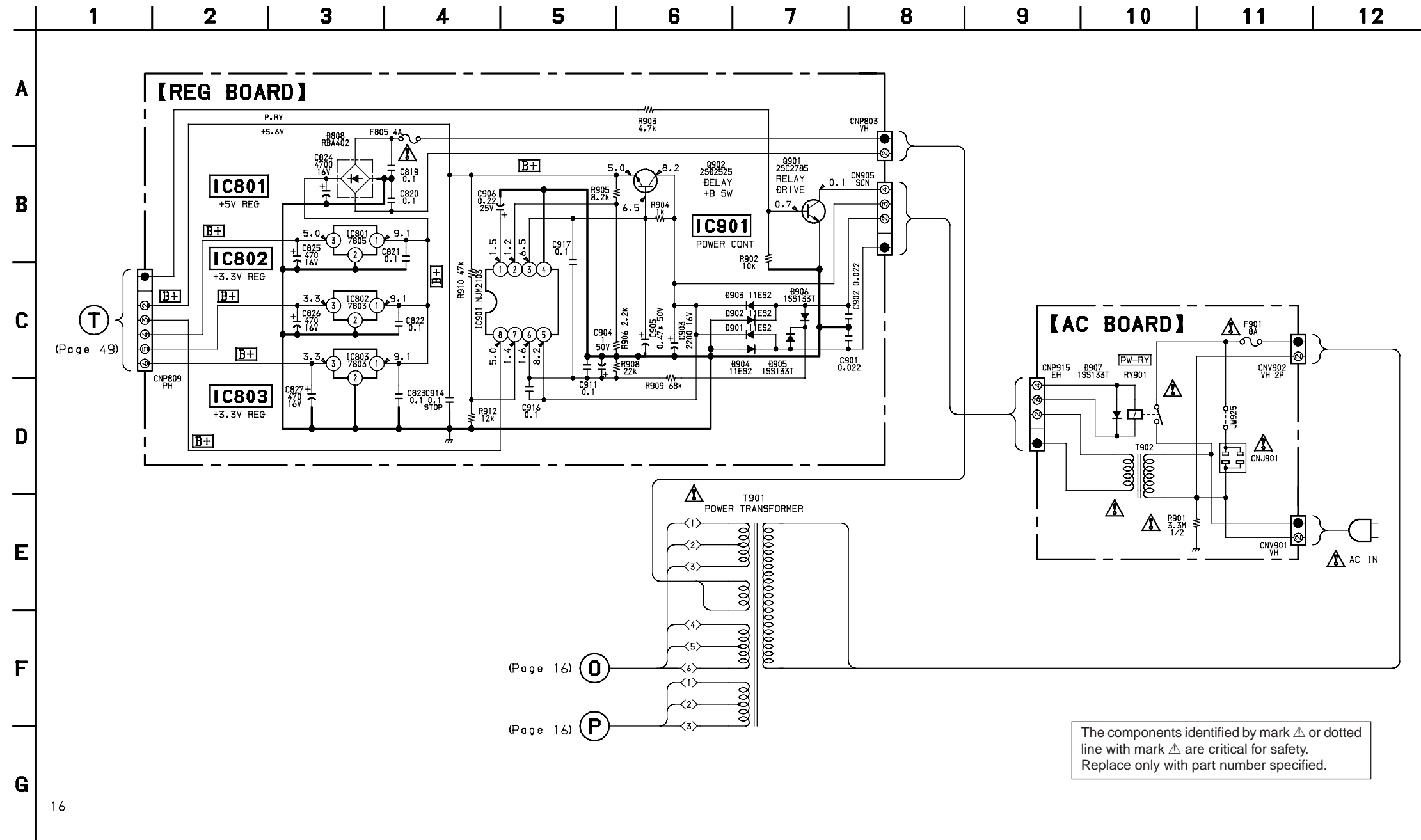
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

• Semiconductor Location

Ref. No.	Location
D808	C-3
D901	D-4
D902	D-4
D903	D-4
D904	C-4
D905	C-4
D906	C-4
D907	G-8
IC801	E-2
IC802	F-3
IC803	G-3
IC901	F-4
Q901	D-4
Q902	G-4



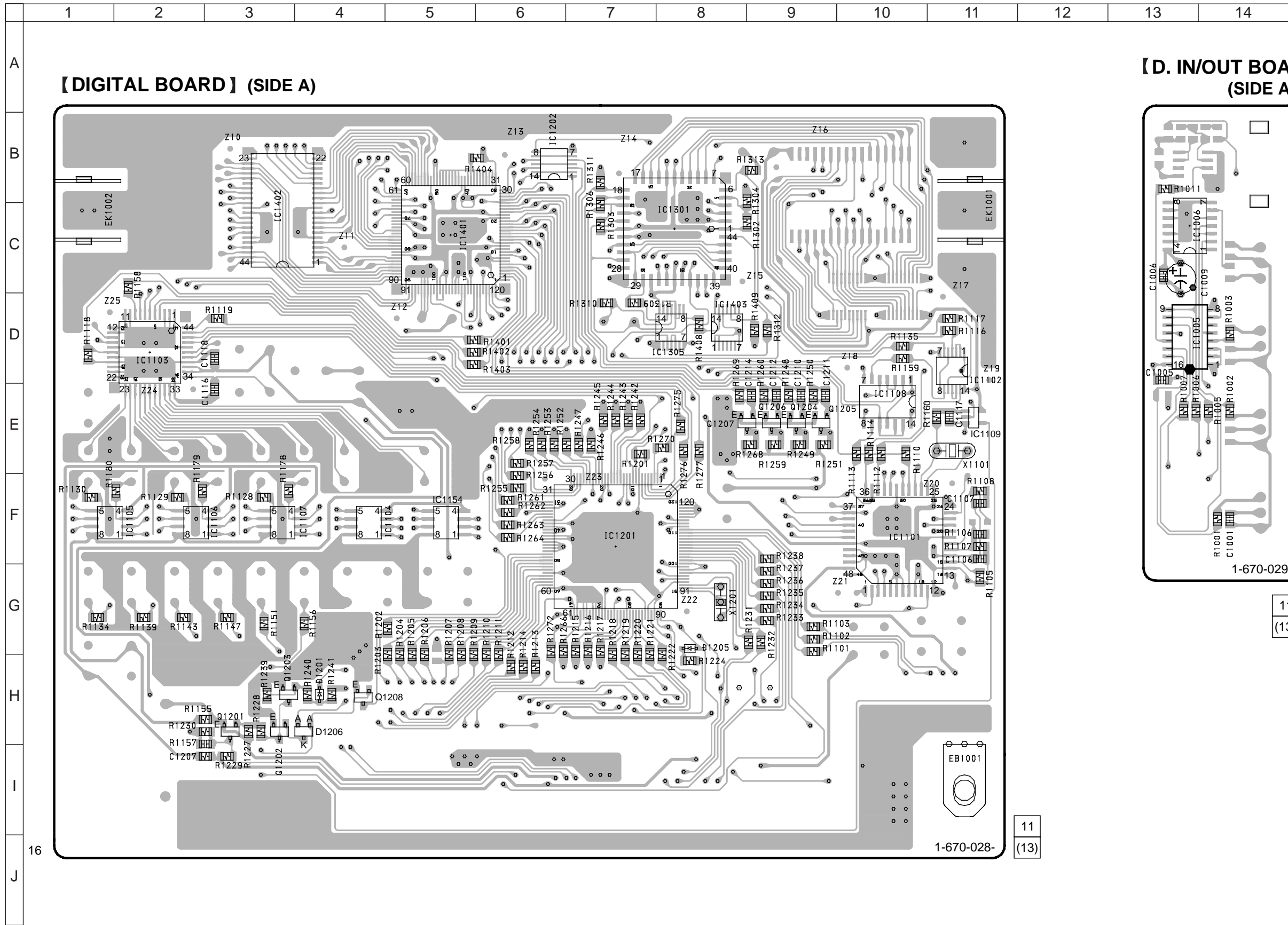
3-17. SCHEMATIC DIAGRAM — POWER SECTION — • See page 61 for IC Block Diagrams.



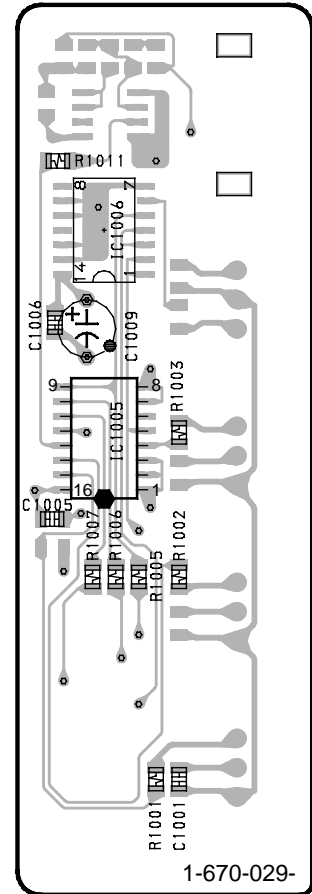


• Semiconductor Location

Ref. No.	Location
D1201	H-4
D1205	G-8
D1206	H-4
IC1005	D-13
IC1006	C-13
IC1007	B-13
IC1101	F-10
IC1102	E-11
IC1103	D-2
IC1104	F-4
IC1105	F-2
IC1106	F-3
IC1108	E-10
IC1109	E-11
IC1154	F-5
IC1201	F-7
IC1202	B-6
IC1301	C-8
IC1302	C-10
IC1303	D-9
IC1304	D-10
IC1305	D-7
IC1401	C-5
IC1402	C-3
IC1403	D-8
Q1201	H-3
Q1202	H-3
Q1203	H-3
Q1204	E-9
Q1205	E-9
Q1206	E-9
Q1207	E-8
Q1208	H-4



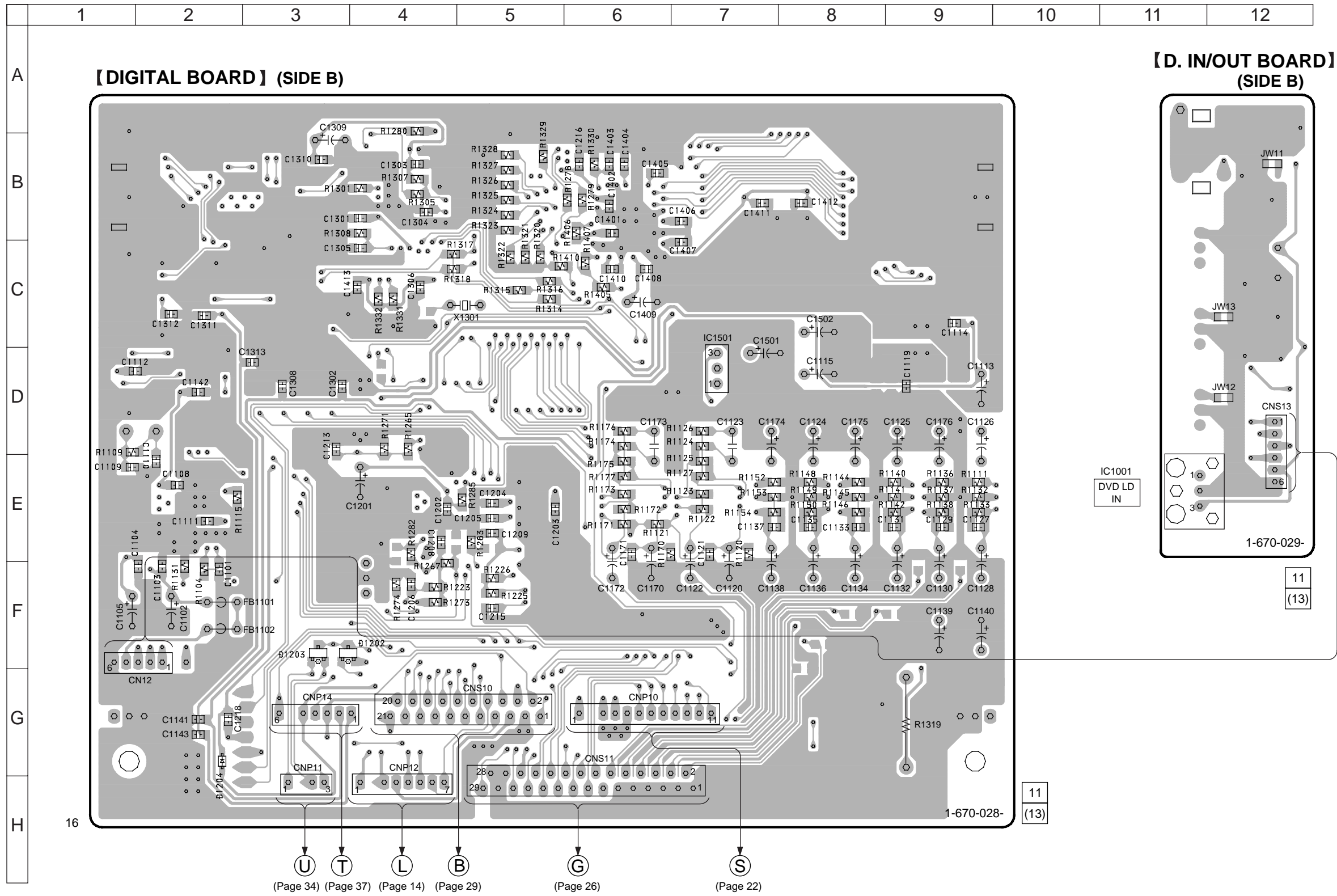
**[D. IN/OUT BOARD] (SIDE A)**



11  
(13)

11  
(13)

3-19. PRINTED WIRING BOARD — DIGITAL (SIDE B) SECTION — • See page 7 for Circuit Boards Location.

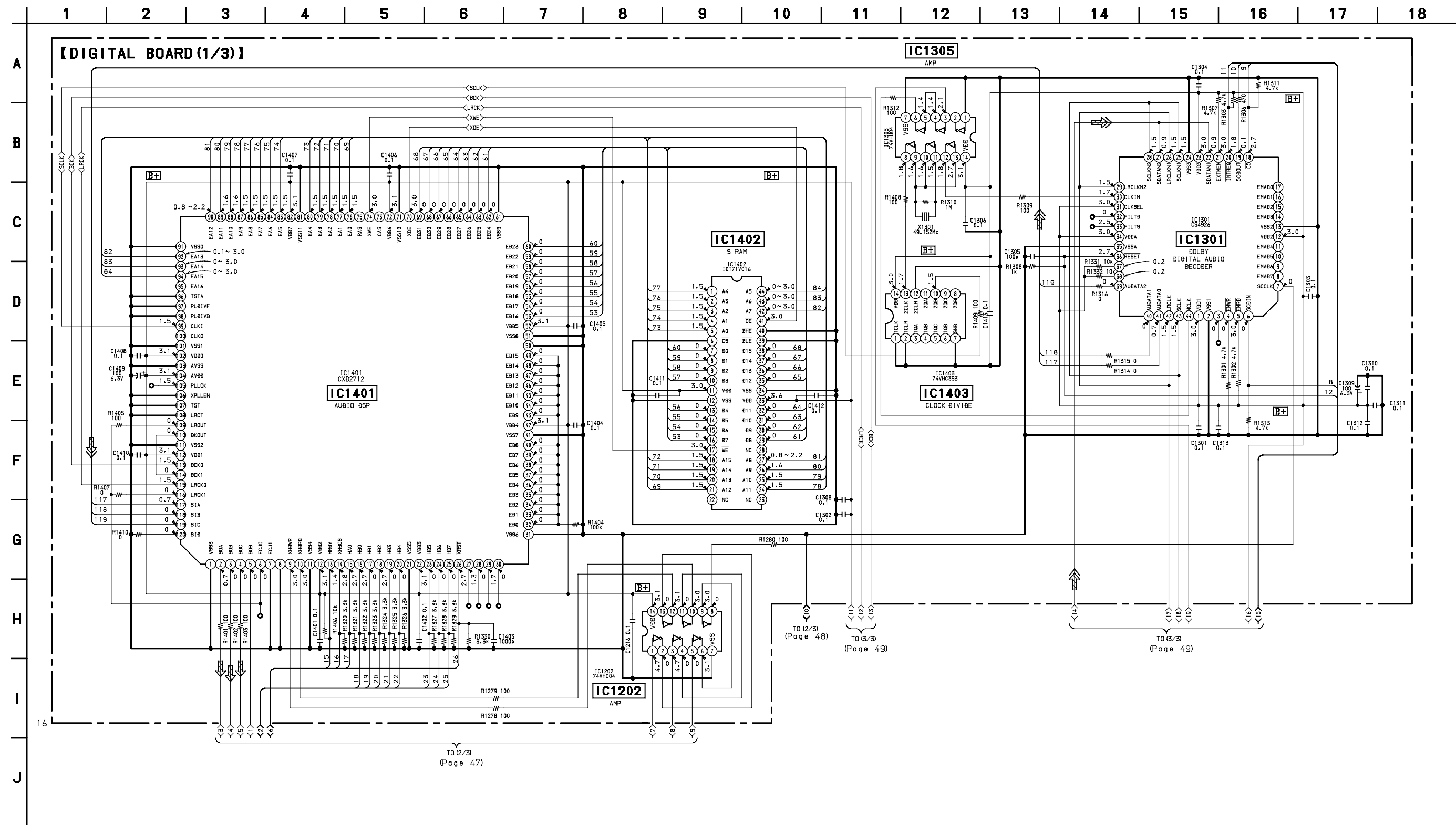


• Semiconductor Location

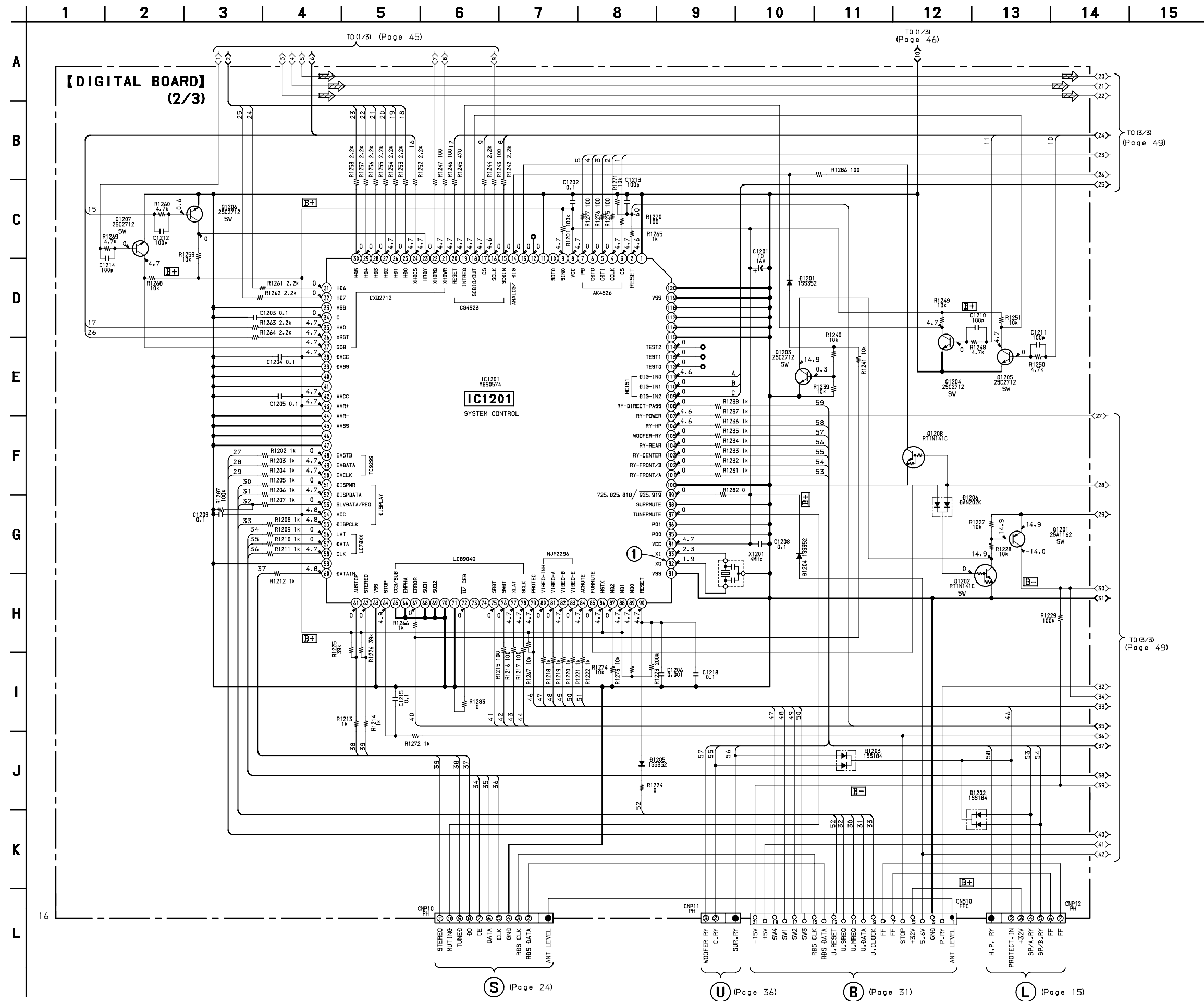
Ref. No.	Location
D1202	F-4
D1203	F-3
D1204	G-2
IC1001	E-11
IC1501	D-7

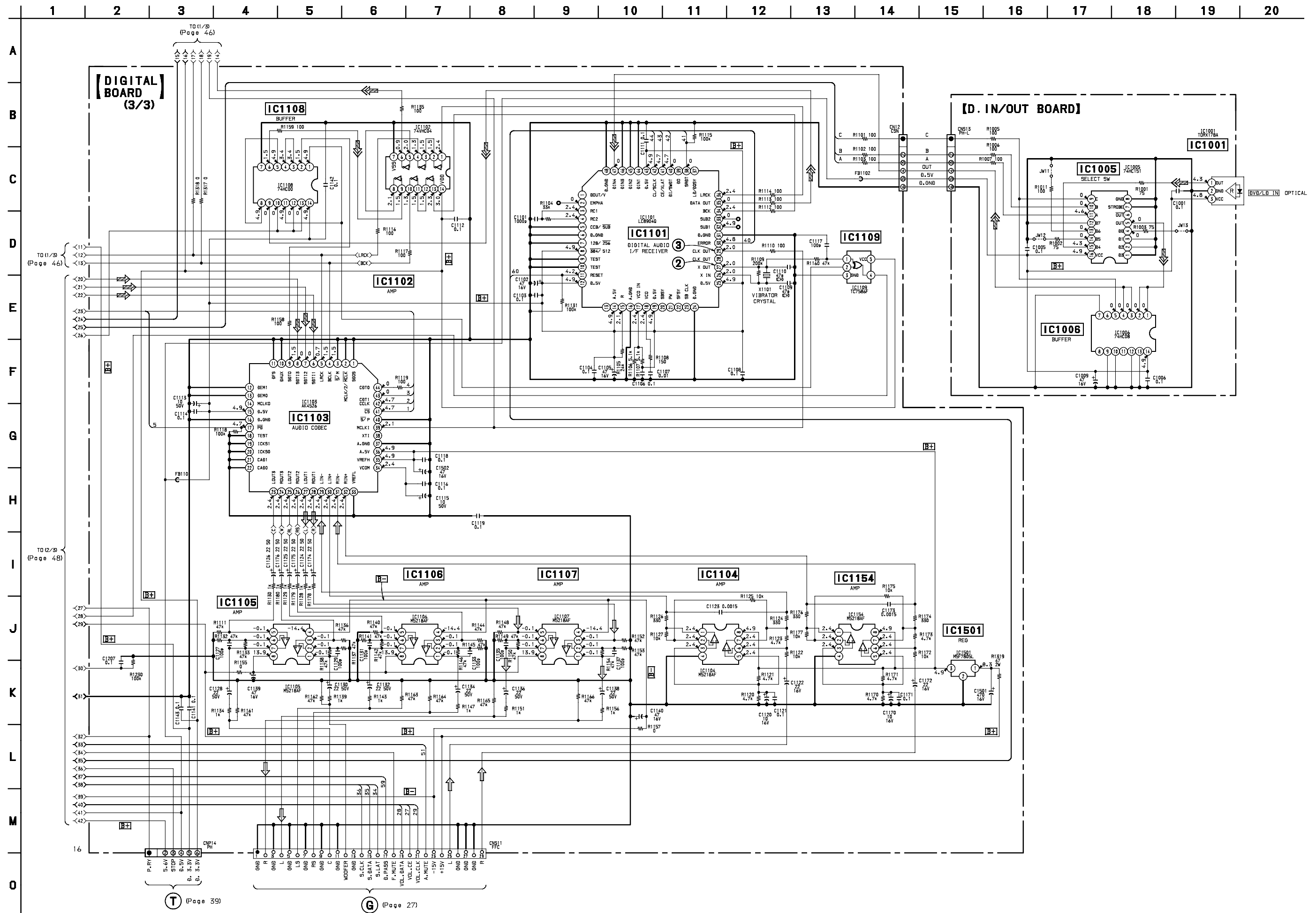
U (Page 34)  
 T (Page 37)  
 L (Page 14)  
 B (Page 29)  
 G (Page 26)  
 S (Page 22)





3-21. SCHEMATIC DIAGRAM — DIGITAL SECTION (2/3) — • See page 41,43 for Printed Wiring Board. • See page 51 for IC Pin Functions. • See page 8 for Waveforms.





**3-23. IC PIN FUNCTION DESCRIPTION**  
**IC1103 AK4526 (DIGITAL BOARD)**

Pin No.	Pin Name	I/O	Description
1	SDOS	I	SDTO source select pin “L”: internal ADC output, “H”: DAUX input ORed with serial control register if $P/\bar{S} = \text{“L”}$ (Connected to Ground)
2	$\overline{\text{MCLK}}$	I	MCKO clock frequency select pin “L”: MCLK, “H”: MCLK/2. ORed with serial control register if $P/\bar{S} = \text{“L”}$ (Connected to Ground)
3	$\bar{S}/M$	I	Audio data master/slave mode select pin “L”: slave mode, “H”: master mode (Connected to Ground)
4	BCLK	I/O	Audio serial data clock pin
5	LRCK	I/O	Input/output channel clock pin
6	SDT11	I	DAC1 audio serial data input pin
7	SDT12	I	DAC2 audio serial data input pin
8	SDT13	I	DAC3 audio serial data input pin
9	SDTO	O	Audio serial data output pin
10	DAUX	I	AUX audio serial data input pin (Connected to Ground)
11	DFS	I	Double speed sampling mode pin “L”: normal speed, “H”: double speed ORed with serial control register if $P/\bar{S} = \text{“L”}$ (Connected to Ground)
12 – 13	DEM1 – DEM0	I	De-emphasis pin ORed with serial control register if $P/\bar{S} = \text{“L”}$ (Connected to Ground)
14	MCKO	O	Master clock output pin (Not used)
15	D. 5V	—	Digital power supply pin
16	D. GND	—	Digital ground pin
17	$\overline{\text{PD}}$	I	Power-down & reset pin When “L”, the AK4526 is powered-down and the control registers are reset to default state. If the state of $P/\bar{S}$ , $M/\bar{S}$ , CAD0-1 changes, then the AK4526 must be reset by $\overline{\text{PD}}$ .
18	TEST	I	X’tal oscillator select/test mode pin “H”: X’tal oscillator selected “L”: External clock source selected “NC”: If pin is floating then test mode is enabled. (Connected to Ground)
19	ICKS1	I	Input clock select 1 pin (Connected to Ground)
20	ICKS0	I	Input clock select 0 pin (Connected to Ground)
21	CAD1	I	Chip address pin Used during the serial control mode. (Connected to Ground)
22	CAD0	I	Chip address pin Used during the serial control mode. (Connected to Ground)
23	LOUT3	O	Lch #3 analog output pin
24	ROUT3	O	Rch #3 analog output pin
25	LOUT2	O	Lch #2 analog output pin
26	ROUT2	O	Rch #2 analog output pin
27	LOUT1	O	Lch #1 analog output pin
28	ROUT1	O	Rch #1 analog output pin
29	LIN-	I	Lch analog negative input pin
30	LIN+	I	Lch analog positive input pin

Pin No.	Pin Name	I/O	Description
31	RIN-	I	Rch analog negative input pin
32	RIN+	I	Rch analog positive input pin
33	VREFL	I	Negative voltage reference input pin, AVSS (Connected to Ground)
34	VCOM	O	Common voltage output pin, AVDD/2 Large external capacitor is used to reduce power-supply noise
35	VREFH	I	Positive voltage reference input pin, AVDD
36	A. 5V	—	Analog power supply pin
37	A. GND	—	Analog ground pin
38	XTI	I	X'tal input pin (Not used)
39	MCLKI	I	External master clock input pin if XTS = "L"
40	$\bar{S}/P$	I	Parallel/serial select pin "L": serial control mode, "H": parallel control mode (Connected to Ground)
41	CS	I	Chip select pin in serial mode
42	CCLK	I	Control data clock pin in serial mode
43	CDTI	I	Control data input in serial mode
44	CDTO	O	Control data output pin in serial mode

If pins TEST, ICKS0, ICKS1,  $\bar{P}\bar{D}$ ,  $\bar{S}/P$ , DFS, DEM0, DEM1, CAD0, CAD1,  $\bar{S}/M$ ,  $\bar{M}\bar{C}\bar{L}\bar{K}$ , SDOS are not driven, then TEST, ICKS0, ICKS1, CAD0, CAD1, must be tied to either AVSS or AVDD.  $\bar{P}\bar{D}$ ,  $\bar{S}/P$ , DFS, DEM0, DEM1,  $\bar{S}/M$ ,  $\bar{M}\bar{C}\bar{L}\bar{K}$ , SDOS must be tied to either DVSS or DVDD.

**IC1401 CXD2712R (DIGITAL BOARD)**

Pin No.	Pin Name	I/O	Description
1	VSS3	—	Ground
2 – 5	SOA – SOD	O	Serial data output
6, 7	ECJ0, ECJ1	I	Conditional jump input terminal (7pin Connected to Ground)
8	—	NC	No connection
9	XHDWR	I	HCIF data write
10	XHDRD	I	HCIF data read
11	Vss4	—	Ground
12	VDD2	—	+3.3V
13	HRDY	O	HCIF ready signal Open drain
14	XHDCS	I	HCIF chip select
15	HA0	I	HCIF address input
16 – 20	HD0 – HD4	I/O	HCIF data input/output
21	Vss5	—	Ground
22	VDD3	—	+3.3V
23 – 25	HD5 – HD7	I/O	HCIF data input/output
26	XRST	I	Reset input “L”: active
27 – 30	FGP0 – FGP3	O	Test data output
31	Vss6	—	Ground
32 – 40	ED0 – ED8	I/O	External RAM data input/output
41	Vss7	—	Ground
42	VDD4	—	+3.3V
43 – 49	ED9 – ED15	I/O	External RAM data input/output
50	TSTD	I	Test data input “L” = normal “H” = test (Connected to Ground)
51	Vss8	—	Ground
52	VDD5	—	+3.3V
53 – 60	ED16 – ED23	I/O	External RAM data input/output
61	Vss9	—	Ground
62 – 69	ED24 – ED31	I/O	External RAM data input/output
70	XOE	O	External RAM output enable
71	Vss10	—	Ground
72	VDD6	—	+3.3V
73	CAS	O	External RAM column address strobe (Not used)
74	XWE	O	External RAM write enable (Not used)
75	RAS	O	External RAM row address strobe
76 – 80	EA0 – EA4	I/O	External RAM address output/test data input
81	Vss11	—	Ground
82	VDD7	—	+3.3V
83 – 89	EA5 – EA11	I/O	External RAM address output/test data input
90	EA12	O	External RAM address output

Pin No.	Pin Name	I/O	Description
91	Vss0	—	Ground
92 – 94	EA13 – EA15	O	External RAM address output
95	EA16	O	Not used
96	TSTA	I	Test data input “L” = normal “H” = test (Connecting to Ground)
97	PLDIVF	I	PLL input frequency select “L” = 256Fs “H” = 128Fs (Connecting to Ground)
98	PLDIVB	O	PLL output frequency select “L” = 768Fs “H” = 1024Fs (Connecting to Ground)
99	CLKI	I	Master clock input
100	CLKO	O	Master clock output (Not used)
101	Vss1	—	Ground
102	VDD0	—	+3.3V
103	AVss	—	Ground for PLL cell
104	AVDD	—	VDD for PLL cell
105	PLLCK	I/O	PLL output/test clock input
106	XPLEN	I	PLL cell oscillation enable “L” oscillation enable “H” oscillation stop (Connecting to Ground)
107	TST	I	Test data input “L” = normal “H” = test (Connecting to Ground)
108	LRCT	I	Frequency counter input (Connecting to Ground)
109	LROUT	O	LRCK0 divider output
110	BKOUT	O	BCK0 divider output
111	Vss2	—	Ground
112	VDD1	—	+3.3V
113	BCK0	I	BCK input
114	BCK1	I	BCK input
115	LRCK0	I	LRCK input
116	LRCK1	I	LRCK input
117 – 120	SIA – SID	I	Serial data input



**IC1101 CAD8495AQ (DIGITAL BOARD)**

Pin No.	Pin Name	I/O	Description
1	DOUV	O	EIAJ data and parity flag output terminal (Not used)
2	EMPHA	O	Emphasis monitor output terminal (“H” = ON)
3	RC1	I	Input terminal for RC generator/oscillator
4	RC2	O	Output terminal for RC generator/oscillator
5	CCB/SUB	I	Microprocessor I/F select input terminal (CCB: H, @SUB@: L) (Connecting to Ground)
6	D. GND	—	Digital Ground
7	CLKMD	O	Clock output select terminal ( “L” = 256fs, “H” = 128fs) (Connecting to Ground)
8	CLK	I	Clock input select terminal ( “H” = 512fs, “L” = 384fs)
9	TEST1	I	Test terminal (normally ground)
10	TEST2	I	Test terminal (normally ground)
11	RESET	I	Reset input terminal
12	D. VDD	—	Digital power supply
13	NC	—	No connect
14	A. VDD	—	Analog power supply
15	R	I	Input terminal for VCO generator band adjustment
16	A. GND	—	Analog Ground
17	VCO IN	I	Input terminal for VCO self running frequency set
18	VCO	O	External LPF for PLL is connected to this terminal
19	D. VDD	—	Digital power supply
20	SBSY	O	CD subcode I/F and block sync output terminal (Not used)
21	PW	O	CD subcode I/F and data output terminal (Not used)
22	SFSY	O	CD subcode I/F and frame sync output terminal (Not used)
23	SBCK	I	CD subcode I/F and shift clock input terminal for data reading (Not used)
24	D. GND	—	Digital Ground
25	D. VDD	—	Digital power supply
26	XIN	I	Crystal oscillator input terminal
27	XOUT	O	Crystal oscillator output terminal
28	CLK OUT1	O	VCO and crystal oscillator clock output terminal (Not used)
29	CLK OUT2	O	256fs or 128fs clock output terminal (Select CLKMD terminal)
30	ERROR	O	Error mute output terminal
31	D. GND	—	Digital Ground
32	SUB1	O	Sampling frequency monitor output terminal
33	SUB2	O	Sampling frequency monitor output terminal
34	BCLK	O	Bit clock output terminal
35	DATA OUT	O	Audio data output terminal
36	LRCK	O	L, R clock output terminal (L-ch: “H”, R-ch: “L”)
37	LD/DQSY	O	Microprocessor I/F and subcode Q data sync output terminal (Not used)
38	SRDT	O	Microprocessor I/F. When CCB/SUB is “L”, data output terminal (3-state output)
39	DO	O	Microprocessor I/F. When CCB/SUB is “H”, data output terminal (high level open drain output) (Not used)
40	DI/SWDT	I	Microprocessor I/F. Data input terminal
41	CE/XLAT	I	Microprocessor I/F. Chip enable/latch input terminal
42	CL/SCLK	I	Microprocessor I/F. Clock input terminal
43	D. VDD	—	Digital power supply
44	DIN1	I	Amplifier integrate data input terminal (Connecting to Ground)
45	DIN2	I	Amplifier integrate data input terminal (Connecting to Ground)
46	DIN3	I	Amplifier integrate data input terminal (Connecting to Ground)
47	DIN4	I	Amplifier integrate data input terminal
48	D. GND	—	Digital Ground

**IC1201 MB90574PFV-G-161-BND (DIGITAL BOARD)**

Pin No.	Pin Name	I/O	Description
1	—	—	Not used (Connected to Ground)
2	RESET	O	RF demodulator/DIR reset
3	CS	O	To AK4526 chip select
4	CCLK	O	To AK4526 clock
5	CDT1	I	To AK4526 data input
6	CDTO	O	To AK4526 data output
7	PD	O	To AK4526 reset
8	VCC	—	Power supply +5 V
9	SIN0	I	UART input. Used for rewriting flash memory
10	SOT0	O	UART output. Used for rewriting flash memory
11	—	—	Not used (Connected to Ground)
12	—	—	Not used (Not connected, open)
13	—	—	Not used (Not connected, open)
14	ANA/DIG	O	Analog/digital selection (74HC157)
15	SCDIN	I	To CS4926 data input
16	SDLK	O	To CS4926 clock
17	CS	O	To CS4926 chip select
18	SCDIO/OUT	O	To CS4926 SPI data out
19	INTREQ	I	To CS4926 interrupt request
20	RESET	O	To CS4926 reset
21	XHDWR	O	To CXD2712 data write
22	XHDRD	O	To CXD2712 data read
23	HRDY	I	To CXD2712 ready
24	XHDCS	O	To CXD2712 chip select
25	HD 0	O	To CXD2712 data I/O
26	HD 1	O	To CXD2712 data I/O
27	HD 2	O	To CXD2712 data I/O
28	HD 3	O	To CXD2712 data I/O
29	HD 4	O	To CXD2712 data I/O
30	HD 5	O	To CXD2712 data I/O
31	HD 6	O	To CXD2712 data I/O
32	HD 7	O	To CXD2712 HD7
33	VSS	—	Ground (Connected to Ground)
34	C	—	External power regulator capacitor 0.1 $\mu$ is connected to this terminal.
35	HA0	O	To CXD2712 address
36	XRST	O	To CXD2712 reset
37	SOD	I	To CXD2712 LFE detection
38	DVCC	—	Digital power supply +5 V
39	DVSS	—	Digital Ground (Connected to Ground)
40	—	—	Not used (Connected to Ground)
41	—	—	Not used (Connected to Ground)
42	AVCC	—	Analog power supply +5 V
43	AVR+	—	Power supply +5 V
44	AVR-	—	Ground (Connected to Ground)
45	AVSS	—	Ground (Connected to Ground)
46	—	—	Not used (Connected to Ground)
47	—	—	Not used (Connected to Ground)
48	EVSTB	O	To TC9299 strobe
49	EVDATA	O	To TC9299 data
50	EVCLK	O	To TC9299 clock

Pin No.	Pin Name	I/O	Description
51	DISPMR	I	Display master request (Connected to MB90553 U.MREQ)
52	DISPDATA	I	Display data (Connected to MB90553 U.DATA)
53	SLV DTA/REQ	O	Slave data/request (Connected to MB90553 U.SREQ)
54	VCC	—	Power supply +5 V
55	DISP CLK	I	Display clock (Connected to MB90553 U.CLOCK)
56	LAT	O	To tuner TM301 latch
57	DATA	O	To tuner TM301 data
58	CLK	O	To tuner TM301 clock
59	—	—	Not used (Connected to Ground)
60	DATA IN	I	PLL data input
61	AUSTOP	I	Auto stop input
62	STEREO	I	Stereo input
63	VSS	—	Ground (Connected to Ground)
64	STOP	I	AC power check
65	CCB/SUB	I	Not used (Connected to Ground)
66	EMPHA	I	Not used (Connected to Ground)
67	ERROR	O	Error output to CXD8495AQ
68	SUB 1	I	Not used (Connected to Ground)
69	SUB 2	I	Not used (Connected to Ground)
70	—	—	Not used (Connected to Ground)
71	—	—	Not used (Connected to Ground)
72	$\bar{U}$ /CED	I	U or CED (STR only)
73	—	—	Not used (Not connected, open)
74	—	—	Not used (Not connected, open)
75	SRDT	I	To CXD8495AQ C-bit
76	SWDT	O	To CXD8495AQ data
77	XLAT	O	To CXD8495AQ latch
78	SCLK	O	To CXD8495AQ clock
79	PROTEC	I	Protector input
80	VIDEO-INH	O	Video output inhibit
81	VIDEO-A	O	To NJM2296 video select A
82	VIDEO-B	O	To NJM2296 video select B
83	VIDEO-E	O	To NJM2296 video select E
84	ACMUTE	O	IC muting
85	FUNMUTE	O	Function muting
86	HSTX	—	Hardware standby (Connected to power supply +5 V)
87	MD 2	—	MD2 (To MB90553 MD2)
88	MD 1	—	MD1 (Connect to power supply)
89	MD 0	—	MD0 (To MB90553 MD0)
90	RESET	I	Reset (Connected to MB90553 U.RESET)
91	VSS	—	Ground (Connected to Ground)
92	X 0	—	External ceramic filter 4 MHz is connected to this terminal
93	X 1	—	External ceramic filter 4 MHz is connected to this terminal
94	VCC	—	Power supply +5 V
95	P 00	I	Flash memory rewrite (Connected to Ground)
96	P 01	I	Flash memory rewrite (Connected to Ground)
97	TUNER MUT	O	Tuner muting
98	SURR MUT	O	Surround muting (Connected to Ground)
99	7E/8E	I	Not used (Connected to Ground)
100	—	—	Not used (Connected to Ground)

Pin No.	Pin Name	I/O	Description
101	RY-FRONT/A	O	Front speaker A relay
102	RY-FRONT/B	O	Front speaker B relay
103	RY-CENTER	O	Center speaker relay
104	RY-REAR	O	Rear speaker relay
105	WOOFER-RY	O	Sub Woofer relay
106	RY-HP	O	Head phone relay
107	RY-POWER	O	Power relay
108	RY-DIR-PASS	O	Direct pass relay
109	DIG-IN 2	I	Digital input select 2 (74HC151)
110	DIG-IN 1	I	Digital input select 1 (74HC151)
111	DIG-IN 0	I	Digital input select 0 (74HC151)
112	TEST 0	—	Test port 0 (Not connected, open)
113	TEST 1	—	Test port 1 (Not connected, open)
114	TEST 2	—	Test port 2 (Not connected, open)
115	—	—	Not used (Connected to Ground)
116	—	—	Not used (Connected to Ground)
117	—	—	Not used (Connected to Ground)
118	—	—	Not used (Connected to Ground)
119	VSS	—	Ground (Connected to Ground)
120	—	—	Not used (Connected to Ground)

**IC102 MB90553PF-G-131-BND (DISPLAY BOARD)**

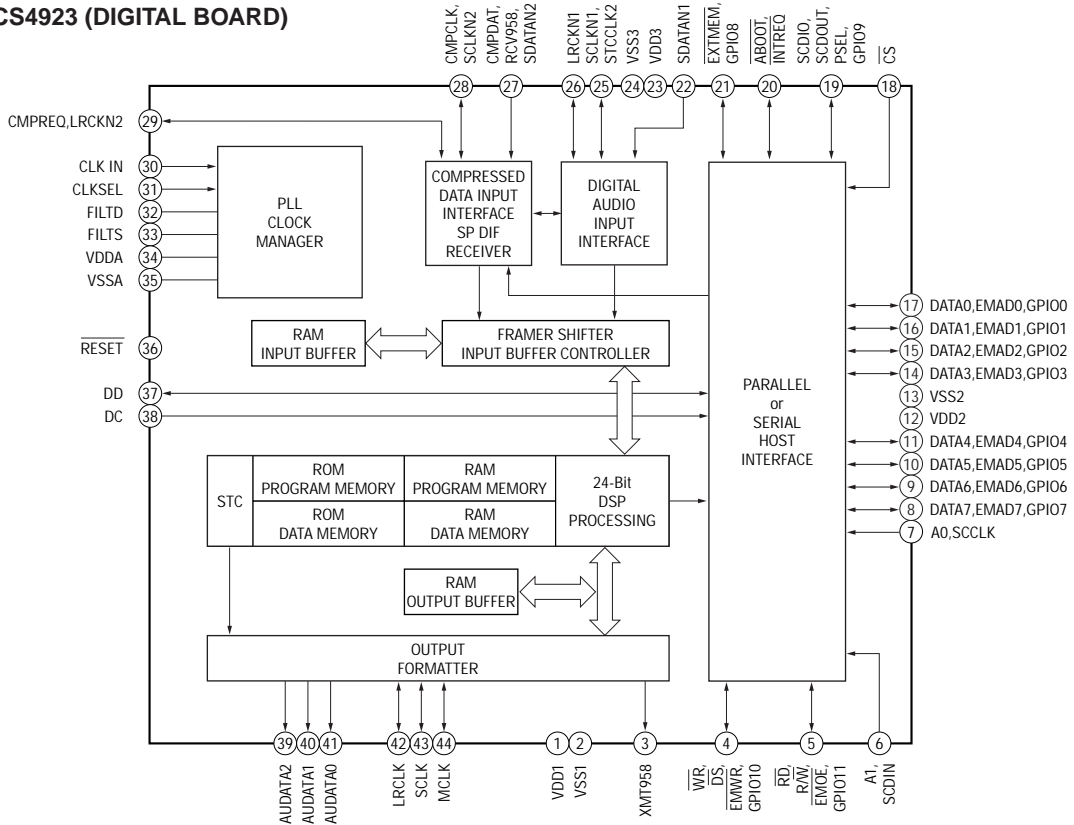
Pin No.	Pin Name	I/O	Description
1	LED V1	O	VIDEO 1 VISUAL display data output to LED
2	LED V2	O	VIDEO 2 AUDIO display data output to LED
3	LED V3	O	VIDEO 3 VISUAL display data output to LED
4	LED-DVD/LD	O	DVD/LD AUDIO display data output to LED
5	LED-TV/DBS	O	DVD/LD VISUAL display data output to LED
6	LED-TAPE	O	TV/DBS AUDIO display data output to LED
7	LED-MD/DAT	O	TV/DBS VISUAL display data output to LED
8	LED-CD	O	TAPE display data output to LED
9	LED-TUNER	O	MD/DAT display data output to LED
10	LED-PHONO	O	CD display data output to LED
11	VSS	—	Ground (Connected to Ground)
12	—	—	Not used. (Connected to Ground)
13	—	—	Not used. (Connected to Ground)
14	LED SUR	O	CURSOR MODE SURROUND display data output to LED
15	LED EQ	O	CURSOR MODE EQUIPMENT display data output to LED
16	LED INDEX	O	CURSOR MODE INDEX display data output to LED
17	—	—	Not used. (Connected to Ground)
18	—	—	Not used. (Connected to Ground)
19	SOT0	O	UART data output to rewrite flash memory
20	SIN0	I	UART data input to rewrite flash memory
21	FL CLK	O	Clock output to flourescent display tube
22	FL DATA	O	Data output to flourescent display tube
23	VCC	—	Power supply +5 V
24	FL LAT	O	Fluorescent latch
25	FL CLEAR	O	Fluorescent clear
26	SIRCS IN	I	SIRCS input
27	C	—	External power regulator capacitor 0.1 $\mu$ is connected to this terminal.
28	—	—	Not used (Connected to Ground)
29	—	—	Not used (Connected to Ground)
30	—	—	Not used (Connected to Ground)
31	—	—	Not used (Connected to Ground)
32	—	—	Not used (Connected to Ground)
33	—	—	Not used (Connected to Ground)
34	AVCC	—	Analog power supply +5 V
35	AVRH	—	AVRH (Connected to power supply +5 V)
36	AVRL	—	SVRL (Connected to Ground)
37	AVSS	—	Ground (Connected to Ground)
38	AD KEY IN 1	I	Key input 1
39	AD KEY IN 2	I	Key input 2
40	AD KEY IN 3	I	Key input 3
41	AD KEY IN 4	I	Key input 4
42	VSS	—	Ground (Connected to Ground)
43	AD KEY IN 5	I	Key input 5
44	AD KEY IN 6	I	Key input 6
45	AD VERSION	I	Version input
46	AD MODEL	I	Model input
47	STOP	I	Stop input
48	—	—	Not used (Connected to Ground)
49	MD 0	I	MD 0 (To MD0 of MB90574)
50	MD 1	I	MD 1 (Connected to power supply +5 V)

Pin No.	Pin Name	I/O	Description
51	MD 2	I	MD 2 (To MD2 of MB90574)
52	HSTX	I	Hardware STANDBY input
53	RDS CLOCK	I	RDS clock input
54	RDS DATA	I	RDS data input
55	VOL UP	O	Volume up data output
56	VOL DOWN	O	Volume down data output
57	—	—	Not used (Connected to Ground)
58	U-RESET	O	Reset output (Connected to MB90574 RESET)
59	U-SREQ	I	Slave request and data input (Connected to MB90574 SLV DATA/REQ)
60	U-MREQ	O	Master request output (Connected to MB90574 DISPMR)
61	U-DATA	O	Master data output (Connected to MB90574 DISP DATA)
62	U-CLOCK	O	Master clock output (Connected to MB90574 DISPCLK)
63	AUBUS-IN	I	Audio bus input
64	—	—	Not used (Connected to Ground)
65	—	—	Not used (Connected to Ground)
66	—	—	Not used (Connected to Ground)
67	AUBUS-OUT	O	Audio bus output
68	—	—	Not used (Connected to Ground)
69	FUNCTION-UP	I	Function encoder up input
70	FUNCTION-DW	I	Function encoder down input
71	—	—	Not used (Connected to Ground)
72	SP-A	I	Speaker A selector switch input
73	SP-B	I	Speaker B selector switch input
74	POW-KEY IN	I	Power key input
75	—	—	Not used (Connected to Ground)
76	—	—	Not used (Connected to Ground)
77	RESET	I	Reset (Display MCU)
78	—	—	Not used (Connected to Ground)
79	—	—	Not used (Connected to Ground)
80	—	—	Not used (Connected to Ground)
81	VSS	—	Ground (Connected to Ground)
82	X0	—	External ceramic filter 4 MHz is connected to this terminal
83	X1	—	External ceramic filter 4 MHz is connected to this terminal
84	VCC	—	Power supply +5 V
85	—	—	Not used. (Connected to Ground)
86	—	—	Not used. (Connected to Ground)
87	LED BASS. B	O	BASS. B display data output to LED
88	LED VOL	O	VOLUME display data output to LED
89	LED SOUND FIELD	O	SOUND FIELD display data output to LED
90	LED MUTE	O	MUTE display data output to LED
91	LED EQ ON/ OFF	O	EQ ON/OFF display data output to LED
92	LED DOLBY DIGITAL	O	DOLBY/DIGITAL display data output to LED
93	MBUS-V1	I	V1 input from MBUS
94	MBUS-V 2	I	V2 input from MBUS
95	MBUS-TV	I	TV input from MBUS
96	MBUS-STATUS	I	STATUS input from MBUS
97	—	—	Not used. (Connected to Ground)
98	LAT	O	Learning microprocessor latch output
99	—	—	Not used. (Connected to Ground)
100	—	—	Not used. (Connected to Ground)

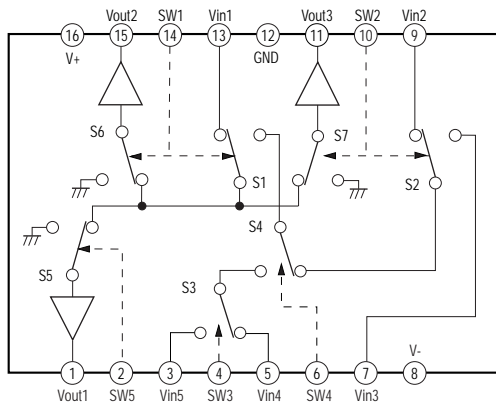


### 3-24. IC BLOCK DIAGRAMS

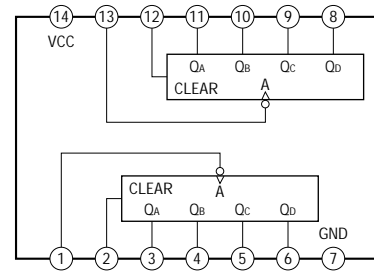
#### IC1301 CS4923 (DIGITAL BOARD)



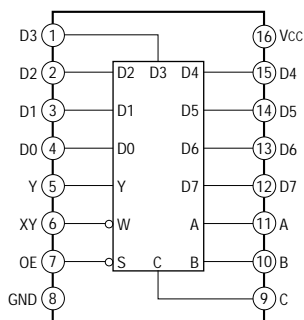
#### IC201 NJM2296D (VIDEO BOARD)



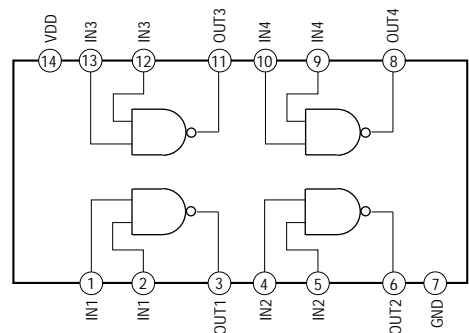
#### IC1403 TC74VHC393FT(EL) (DIGITAL BOARD)



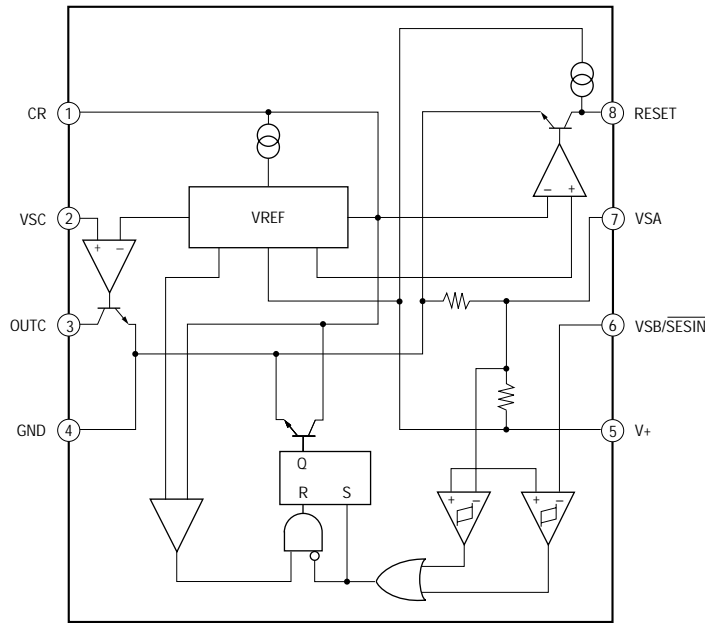
#### IC1005 TC74HC151AF (EL) (D. IN/OUT BOARD)



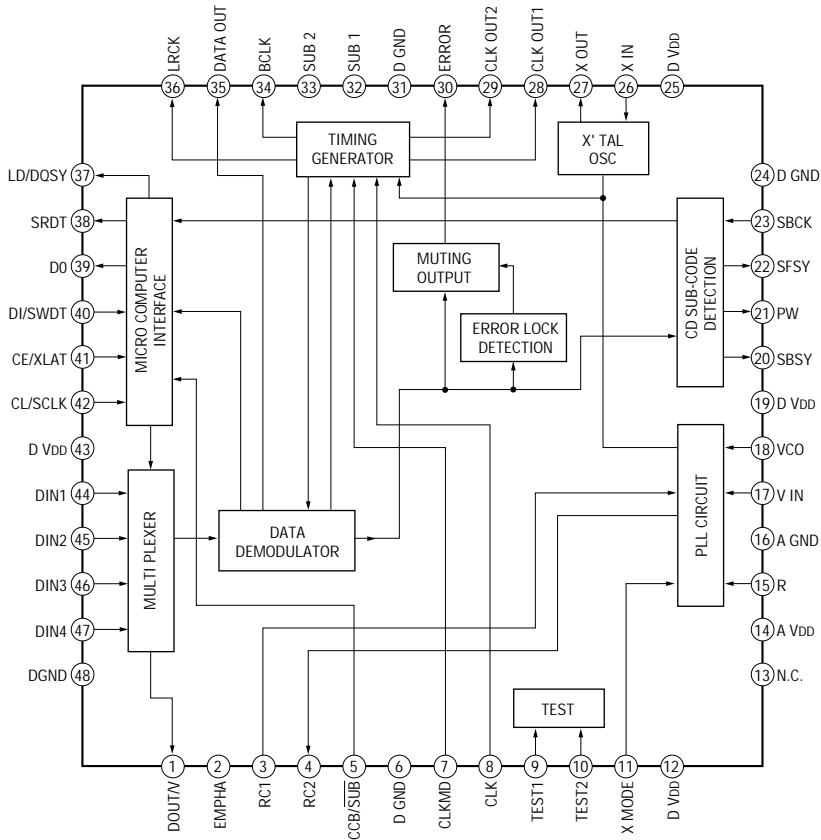
#### IC1108 MC74HC00AF (DIGITAL BOARD)



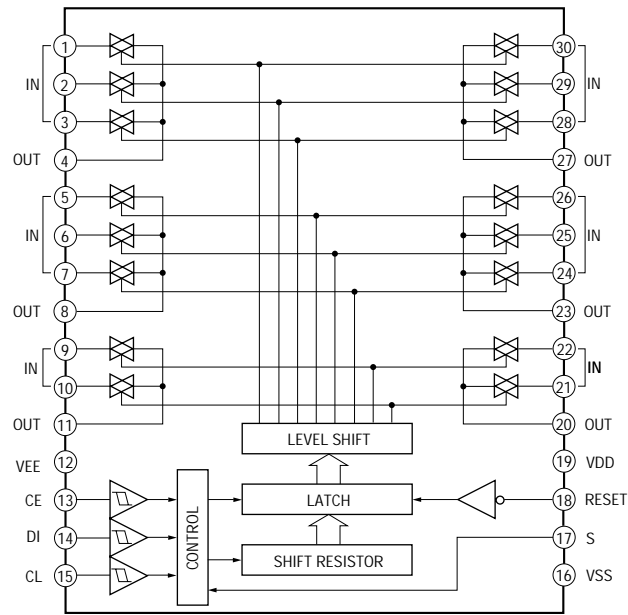
IC901 NJM2103D (REG BOARD)



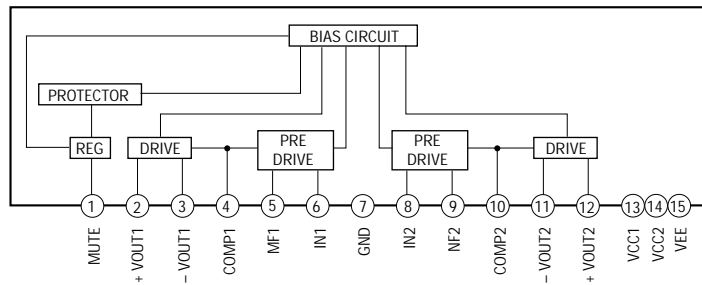
IC1101 CXD8495AQ (DIGITAL BOARD)



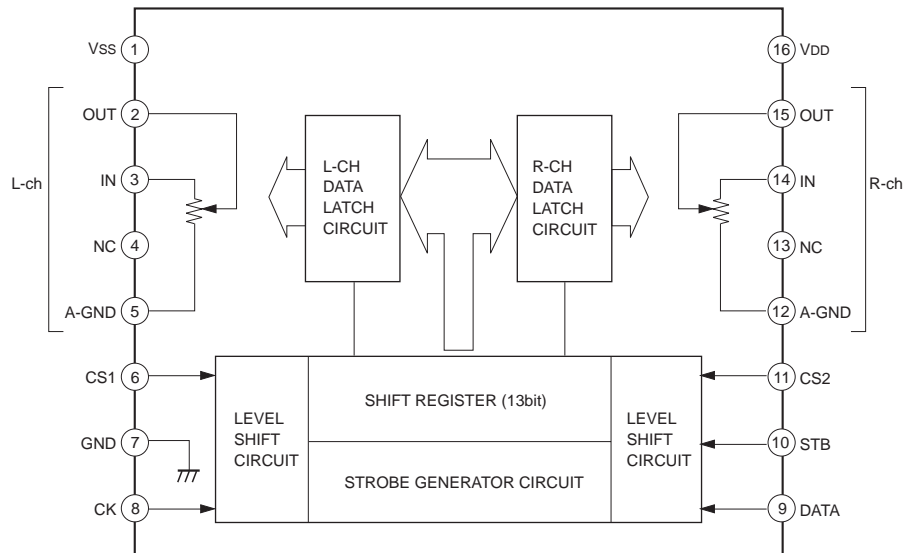
IC301 LC7822 (INPUT BOARD)



IC501, IC601, IC701 uPC2581V (INPUT BOARD)



IC414, IC415, IC416 TC9299P (INPUT BOARD)



## SECTION 4 EXPLODED VIEWS

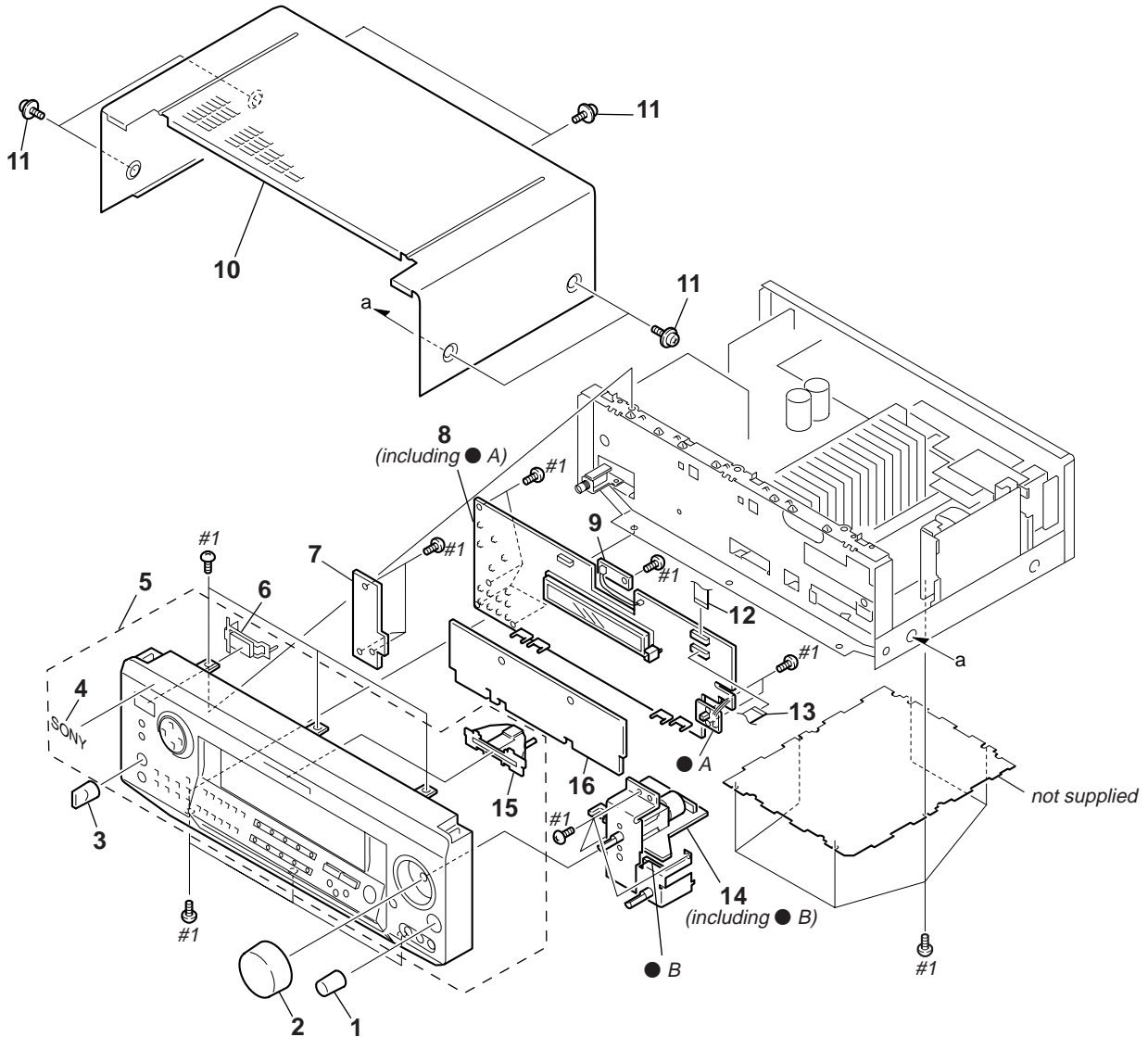
**NOTE:**

- -XX, -X mean standardized parts, so they may have some differences 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.
- 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.

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

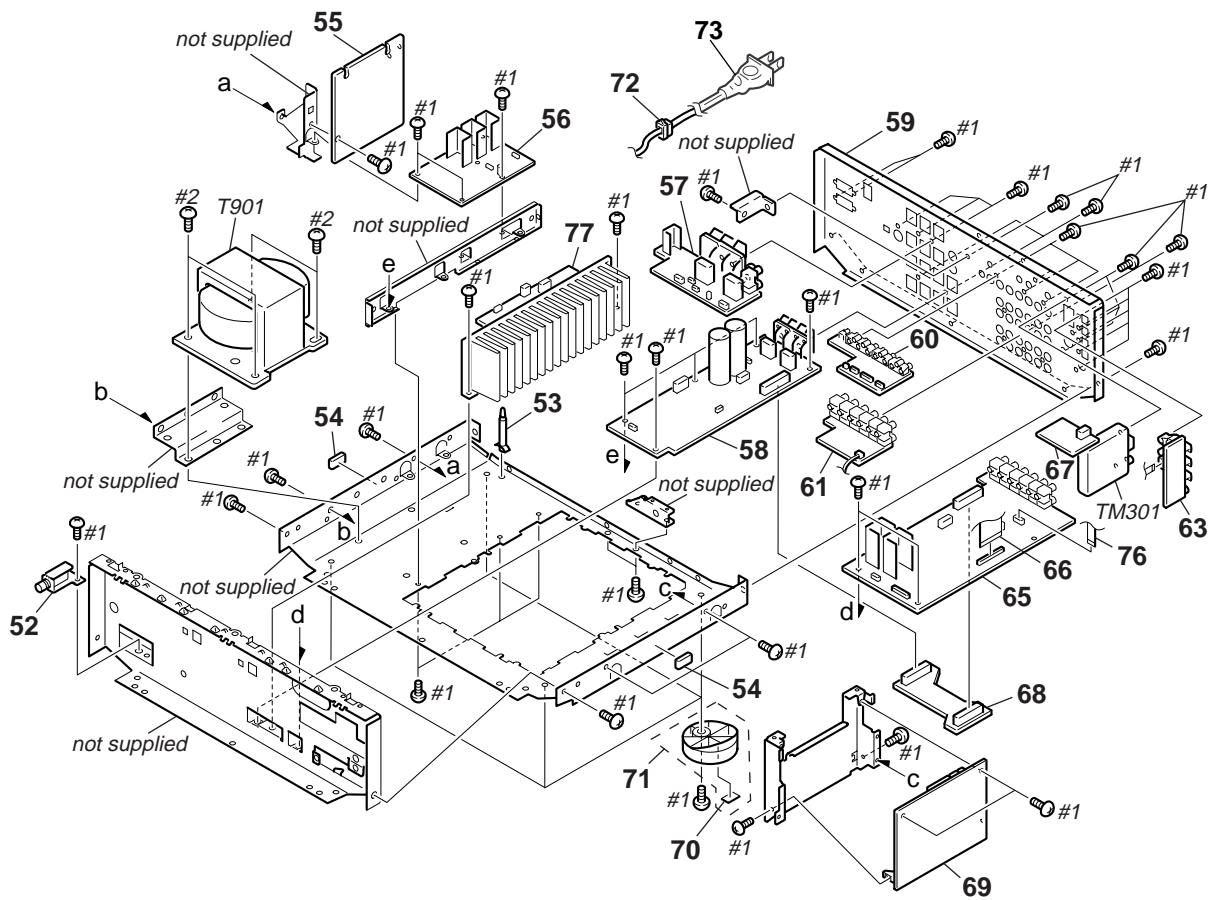
**4-1. FRONT PANEL SECTION**

- A : L.B board
- B : BALANCE board



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-957-383-01	KNOB (F14)		* 9	1-670-007-11	LED BOARD	
2	X-4949-627-1	KNOB (VOL) ASSY		* 10	4-982-682-01	CASE (414532)	
3	4-998-717-01	KNOB (BAL)		11	4-210-291-01	SCREW (CASE 3 TP2)	
4	4-996-698-01	EMBLEM, SONY		12	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)	
5	X-4949-745-1	PANEL ASSY, FRONT		13	1-769-959-11	WIRE (FLAT TYPE) (11 CORE)	
6	4-989-850-01	BUTTON (BB)		* 14	A-4414-304-A	VOLUME BOARD, COMPLETE	
* 7	1-670-010-11	SP SW BOARD		15	X-3375-588-1	ESCUTCHEON (WIN) ASSY	
* 8	A-4414-102-A	DISPLAY BOARD, COMPLETE		* 16	A-4414-123-A	SW BOARD, COMPLETE	

## 4-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
* 52	1-670-006-11	H.P BOARD		66	1-773-285-11	WIRE (FLAT TYPE) (29 CORE)	
* 53	4-924-098-31	HOLDER, PC BOARD		* 67	1-670-000-11	TUNER BOARD	
54	4-985-642-01	CUSHION		* 68	1-670-027-11	JOINT BOARD	
* 55	1-669-998-11	AC BOARD		* 69	A-4414-126-A	DIGITAL BOARD, COMPLETE	
* 56	A-4414-109-A	REG BOARD, COMPLETE		70	4-977-358-11	CUSHION	
* 57	A-4414-124-A	SP BOARD, COMPLETE		71	X-4947-208-1	FOOT ASSY (F50150S)	
* 58	A-4414-092-A	AMPLIFIER BOARD, COMPLETE		* 72	3-703-244-00	BUSHING (2104), CORD	
* 59	4-999-237-01	PANEL, BACK		Δ 73	1-769-743-11	CORD, POWER	
* 60	1-670-003-11	VIDEO BOARD		76	1-769-876-11	WIRE (FLAT TYPE) (7 CORE)	
* 61	1-670-001-11	AUDIO BOARD		* 77	A-4414-112-A	AMP REAR BOARD, COMPLETE	
* 63	1-670-029-11	D.IN/OUT BOARD		Δ T901	1-431-887-11	TRANSFORMER, POWER	
* 65	A-4414-093-A	INPUT BOARD, COMPLETE		Δ TM301	1-693-407-11	TUNER	

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

## SECTION 5

# ELECTRICAL PARTS LIST

**AC**

**AMPLIFIER**

**NOTE:**

- 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.

- CAPACITORS:  
uF: μF
- RESISTORS  
All resistors are in ohms.  
METAL: metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable
- COILS  
uH: μH

- SEMICONDUCTORS  
In each case, u: μ, for example:  
uA...: μA... , uPA... , μPA... ,  
uPB... , μPB... , uPC... , μPC... ,  
uPD... , μPD...

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

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	1-669-998-11	AC BOARD *****		C573	1-162-286-31	CERAMIC 220PF 10% 50V	
	1-533-217-31	HOLDER, FUSE < JACK >		C574	1-126-964-11	ELECT 10uF 20% 50V	
Δ CNJ901	1-540-060-11	OUTLET, AC (POLAR) < CONNECTOR >		C575	1-136-157-00	FILM 0.022uF 5% 50V	
CNP915	1-691-766-11	PLUG (MICRO CONNECTOR) 4P		C576	1-136-153-00	FILM 0.01uF 5% 50V	
CNV901	1-564-321-00	PIN, CONNECTOR 2P		C590	1-126-935-11	ELECT 470uF 20% 6.3V	
* CNV902	1-565-792-11	PIN, CONNECTOR 2P < DIODE >		C598	1-126-965-11	ELECT 22uF 20% 50V	
D907	8-719-911-19	DIODE 1SS119 < TERMINAL >		C620	1-104-664-11	ELECT 47uF 20% 16V	
* EB902	1-537-738-21	TERMINAL, EARTH < FUSE >		C621	1-107-597-11	CERAMIC 22PF 10% 500V	
Δ F901	1-533-311-11	FUSE, GLASS CYNDRICAL (DIA.5)8A < RESISTOR >		C622	1-107-597-11	CERAMIC 22PF 10% 500V	
Δ R901	1-202-725-00	SOLID 3.3M 10% 1/2W < RELAY >		C623	1-162-286-31	CERAMIC 220PF 10% 50V	
Δ RY901	1-515-999-11	RELAY, POWER < TRANSFORMER >		C625	1-136-157-00	FILM 0.022uF 5% 50V	
Δ T902	1-450-361-11	TRANSFORMER, POWER *****		C801	1-104-664-11	ELECT 47uF 20% 25V	
*	A-4414-092-A	AMPLIFIER BOARD, COMPLETE *****		C803	1-109-932-11	ELECT (BLOCK) 10000uF 20% 71V	
	1-533-293-11	FUSE HOLDER < CAPACITOR >		C804	1-109-932-11	ELECT (BLOCK) 10000uF 20% 71V	
C520	1-104-664-11	ELECT 47uF 20% 16V		C805	1-130-781-00	FILM 0.22uF 10% 100V	
C521	1-107-597-11	CERAMIC 22PF 10% 500V		C806	1-130-781-00	FILM 0.22uF 10% 100V	
C522	1-107-597-11	CERAMIC 22PF 10% 500V		C807	1-126-967-11	ELECT 47uF 20% 50V	
C523	1-162-286-31	CERAMIC 220PF 10% 50V		C808	1-126-967-11	ELECT 47uF 20% 50V	
C524	1-126-964-11	ELECT 10uF 20% 50V		C811	1-126-953-11	ELECT 2200uF 20% 35V	
C525	1-136-157-00	FILM 0.022uF 5% 50V		C812	1-126-952-11	ELECT 1000uF 20% 35V	
C526	1-136-153-00	FILM 0.01uF 5% 50V		C813	1-104-664-11	ELECT 47uF 20% 16V	
C570	1-104-664-11	ELECT 47uF 20% 16V		CC48	1-136-153-00	FILM 0.01uF 5% 50V	
C571	1-107-597-11	CERAMIC 22PF 10% 500V		CC49	1-136-153-00	FILM 0.01uF 5% 50V	
C572	1-107-597-11	CERAMIC 22PF 10% 500V		CC98	1-136-153-00	FILM 0.01uF 5% 50V	
				CC99	1-136-153-00	FILM 0.01uF 5% 50V	
				< CONNECTOR >			
				CNP751	1-779-978-11	PIN, CONNECTOR 3P	
				* CNP801	1-564-243-11	PIN, CONNECTOR 6P	
				* CNP802	1-564-104-00	PIN, CONNECTOR (B3P-VH) 3P	
				CNP805	1-784-923-11	PIN, CONNECTOR 7P	
				CNP806	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
				CNS651	1-784-806-11	HOUSING, CONNECTOR(PC BOARD)13P	
				< DIODE >			
				D501	8-719-911-19	DIODE 1SS119	
				D502	8-719-109-51	DIODE RD2.0ES-B2	
				D503	8-719-109-51	DIODE RD2.0ES-B2	
				D504	8-719-911-19	DIODE 1SS119	
				D505	8-719-911-19	DIODE 1SS119	
				D506	8-719-911-19	DIODE 1SS119	
				D545	8-719-911-19	DIODE 1SS119	
				D546	8-719-911-19	DIODE 1SS119	
				D547	8-719-911-19	DIODE 1SS119	
				D548	8-719-911-19	DIODE 1SS119	

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



# AMPLIFIER

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
D549	8-719-911-19	DIODE 1SS119		Q557	8-749-010-26	TRANSISTOR MP1620-OPY-M	
D551	8-719-911-19	DIODE 1SS119		Q558	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
D552	8-719-109-51	DIODE RD2.0ES-B2		Q559	8-729-281-53	TRANSISTOR 2SC1815-GR	
D553	8-719-109-51	DIODE RD2.0ES-B2		Q560	8-729-900-63	TRANSISTOR DTA124ES	
D554	8-719-911-19	DIODE 1SS119		Q561	8-729-900-63	TRANSISTOR DTA124ES	
D555	8-719-911-19	DIODE 1SS119		Q596	8-729-119-79	TRANSISTOR 2SC2785-FEK	
D556	8-719-911-19	DIODE 1SS119		Q601	8-729-119-79	TRANSISTOR 2SC2785-FEK	
D601	8-719-911-19	DIODE 1SS119		Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D602	8-719-109-51	DIODE RD2.0ES-B2		Q605	8-729-209-15	TRANSISTOR 2SD2012	
D603	8-719-109-51	DIODE RD2.0ES-B2		Q606	8-749-010-25	TRANSISTOR MN2488-OPY-M	
D604	8-719-911-19	DIODE 1SS119		Q607	8-749-010-26	TRANSISTOR MP1620-OPY-M	
D608	8-719-911-19	DIODE 1SS119		Q608	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
D647	8-719-911-19	DIODE 1SS119		Q612	8-729-281-53	TRANSISTOR 2SC1815-GR	
D648	8-719-911-19	DIODE 1SS119		Q613	8-729-281-53	TRANSISTOR 2SC1815-GR	
D801	8-719-302-38	DIODE RBV-602-01		Q614	8-729-201-53	TRANSISTOR 2SA1015-GR	
D802	8-719-024-99	DIODE 11ES2-NTA2B		Q615	8-729-900-36	TRANSISTOR DTC124ES	
D803	8-719-024-99	DIODE 11ES2-NTA2B		Q616	8-729-900-36	TRANSISTOR DTC124ES	
D804	8-719-024-99	DIODE 11ES2-NTA2B		Q617	8-729-900-36	TRANSISTOR DTC124ES	
D805	8-719-024-99	DIODE 11ES2-NTA2B		Q618	8-729-900-63	TRANSISTOR DTA124ES	
D806	8-719-160-26	DIODE RD5.6F-B2		Q801	8-729-026-68	TRANSISTOR 2SD2525 (TP)	
D807	8-719-934-22	DIODE HZS30-2L		< RESISTOR >			
D809	8-719-210-21	DIODE 11EQS04		R521	1-249-422-11	CARBON 2.7K 5%	1/4W F
		< TERMINAL >		R522	1-249-433-11	CARBON 22K 5%	1/4W
* EB701	1-537-738-21	TERMINAL, EARTH		R523	1-249-414-11	CARBON 560 5%	1/4W F
* EB702	1-537-738-21	TERMINAL, EARTH		△R524	1-249-408-11	CARBON 180 5%	1/4W F
		< FUSE >		△R525	1-249-408-11	CARBON 180 5%	1/4W F
△F801	1-532-311-11	FUSE, GLASS CYNDRICAL (DIA.5)8A		R526	1-234-182-11	ENCAPSULATED COMPONENT	
△F802	1-532-311-11	FUSE, GLASS CYNDRICAL (DIA.5)8A		R527	1-247-850-11	CARBON 6.2K 5%	1/4W
△F803	1-533-419-11	FUSE, GLASS CYNDRICAL (DIA.5)4A		R528	1-249-419-11	CARBON 1.5K 5%	1/4W F
△F804	1-533-419-11	FUSE, GLASS CYNDRICAL (DIA.5)4A		R529	1-247-866-11	CARBON 30K 5%	1/4W
		< IC >		R530	1-249-421-11	CARBON 2.2K 5%	1/4W F
IC809	8-759-708-05	IC NJM78L05A		R531	1-249-433-11	CARBON 22K 5%	1/4W
		< COIL >		R532	1-249-437-11	CARBON 47K 5%	1/4W
L501	1-420-872-00	COIL, AIR-CORE		△R533	1-249-393-11	CARBON 10 5%	1/4W F
L551	1-420-872-00	COIL, AIR-CORE		△R534	1-249-389-11	CARBON 4.7 5%	1/4W F
		< TRANSISTOR >		R535	1-249-431-11	CARBON 15K 5%	1/4W
Q504	8-729-119-76	TRANSISTOR 2SA1175-HFE		R539	1-249-427-11	CARBON 6.8K 5%	1/4W F
Q505	8-729-209-15	TRANSISTOR 2SD2012		R540	1-249-417-11	CARBON 1K 5%	1/4W F
Q506	8-749-010-25	TRANSISTOR MN2488-OPY-M		R541	1-249-429-11	CARBON 10K 5%	1/4W
Q507	8-749-010-26	TRANSISTOR MP1620-OPY-M		R542	1-249-429-11	CARBON 10K 5%	1/4W
Q508	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R547	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q509	8-729-281-53	TRANSISTOR 2SC1815-GR		R548	1-249-429-11	CARBON 10K 5%	1/4W
Q510	8-729-900-63	TRANSISTOR DTA124ES		△R549	1-249-407-11	CARBON 150 5%	1/4W F
Q511	8-729-900-63	TRANSISTOR DTA124ES		R555	1-247-881-00	CARBON 120K 5%	1/4W
Q546	8-729-119-79	TRANSISTOR 2SC2785-FEK		R556	1-247-881-00	CARBON 120K 5%	1/4W
Q547	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R571	1-249-422-11	CARBON 2.7K 5%	1/4W F
Q548	8-729-119-79	TRANSISTOR 2SC2785-FEK		R572	1-249-433-11	CARBON 22K 5%	1/4W
Q549	8-729-140-82	TRANSISTOR 2SA988-PAFAEA		R573	1-249-414-11	CARBON 560 5%	1/4W F
Q554	8-729-119-76	TRANSISTOR 2SA1175-HFE		△R574	1-249-408-11	CARBON 180 5%	1/4W F
Q555	8-729-209-15	TRANSISTOR 2SD2012		△R575	1-249-408-11	CARBON 180 5%	1/4W F
Q556	8-749-010-25	TRANSISTOR MN2488-OPY-M		△R576	1-234-182-11	ENCAPSULATED COMPONENT	
				R577	1-247-850-11	CARBON 6.2K 5%	1/4W
				R578	1-249-419-11	CARBON 1.5K 5%	1/4W F
				R579	1-247-866-11	CARBON 30K 5%	1/4W
				R580	1-249-421-11	CARBON 2.2K 5%	1/4W F
				R581	1-249-433-11	CARBON 22K 5%	1/4W

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

<b>AMPLIFIER</b>	<b>AUDIO</b>	<b>D.IN/OUT</b>
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Ref. No.	Part No.	Description	Remarks
R582	1-249-437-11	CARBON 47K 5%	1/4W
△R583	1-249-393-11	CARBON 10 5%	1/4W F
△R584	1-249-389-11	CARBON 4.7 5%	1/4W F
R585	1-249-431-11	CARBON 15K 5%	1/4W
R586	1-249-429-11	CARBON 10K 5%	1/4W
R587	1-249-425-11	CARBON 4.7K 5%	1/4W F
△R588	1-249-407-11	CARBON 150 5%	1/4W F
△R607	1-216-456-00	METAL OXIDE 820 5%	2W F
R621	1-249-422-11	CARBON 2.7K 5%	1/4W F
R622	1-247-881-00	CARBON 120K 5%	1/4W
R623	1-249-414-11	CARBON 560 5%	1/4W F
△R624	1-249-408-11	CARBON 180 5%	1/4W F
△R625	1-249-408-11	CARBON 180 5%	1/4W F
△R626	1-234-182-11	ENCAPSULATED COMPONENT	
R627	1-247-850-11	CARBON 6.2K 5%	1/4W
R628	1-249-419-11	CARBON 1.5K 5%	1/4W F
R632	1-249-437-11	CARBON 47K 5%	1/4W
△R633	1-249-393-11	CARBON 10 5%	1/4W F
△R640	1-215-886-11	METAL OXIDE 100 5%	2W F
R641	1-249-441-11	CARBON 100K 5%	1/4W
△R642	1-215-888-00	METAL OXIDE 220 5%	2W F
R643	1-249-441-11	CARBON 100K 5%	1/4W
△R644	1-216-456-00	METAL OXIDE 820 5%	2W F
R645	1-249-441-11	CARBON 100K 5%	1/4W
R650	1-249-425-11	CARBON 4.7K 5%	1/4W F
R657	1-249-429-11	CARBON 10K 5%	1/4W
△R658	1-249-393-11	CARBON 10 5%	1/4W F
R672	1-249-433-11	CARBON 22K 5%	1/4W
R739	1-215-868-00	METAL OXIDE 680 5%	1W F
R789	1-215-868-00	METAL OXIDE 680 5%	1W F
R801	1-247-843-11	CARBON 3.3K 5%	1/4W
△R802	1-249-401-11	CARBON 47 5%	1/4W F
△RR48	1-249-393-11	CARBON 10 5%	1/4W F
△RR49	1-249-393-11	CARBON 10 5%	1/4W F
△RR98	1-249-393-11	CARBON 10 5%	1/4W F
△RR99	1-249-393-11	CARBON 10 5%	1/4W F
< RELAY >			
RY501	1-515-920-11	RELAY (24V)	
RY502	1-515-920-11	RELAY (24V)	
RY602	1-515-793-11	RELAY	
< TERMINAL >			
TM501	1-537-922-11	TERMINAL BOARD (SPEAKERS)	
*****			
* 1-670-001-11	AUDIO BOARD	*****	
< CAPACITOR >			
C396	1-126-022-11	ELECT 47uF 20%	16V
C397	1-126-022-11	ELECT 47uF 20%	16V
C398	1-162-282-31	CERAMIC 100PF 10%	50V
C399	1-162-294-31	CERAMIC 0.001uF 10%	50V
CC08	1-162-282-31	CERAMIC 100PF 10%	50V
CC09	1-162-282-31	CERAMIC 100PF 10%	50V
CC10	1-162-282-31	CERAMIC 100PF 10%	50V
CC11	1-162-282-31	CERAMIC 100PF 10%	50V
CC12	1-162-282-31	CERAMIC 100PF 10%	50V
CC13	1-162-282-31	CERAMIC 100PF 10%	50V

Ref. No.	Part No.	Description	Remarks
CC58	1-162-282-31	CERAMIC 100PF 10%	50V
CC59	1-162-282-31	CERAMIC 100PF 10%	50V
CC60	1-162-282-31	CERAMIC 100PF 10%	50V
CC61	1-162-282-31	CERAMIC 100PF 10%	50V
CC62	1-162-282-31	CERAMIC 100PF 10%	50V
CC63	1-162-282-31	CERAMIC 100PF 10%	50V
< CONNECTOR >			
CNS351	1-784-729-11	CONNECTOR, FFC 7P	
< IC >			
IC303	8-759-805-14	IC LC7822	
< JACK >			
J304	1-784-920-11	JACK, PIN 6P (VIDEO1IN/OUT,VIDEO2IN/OUT)	
J305	1-784-920-11	JACK, PIN 6P (VIDEO2T,DVD,DVD/LD,TV/DBS)	
< RESISTOR >			
R315	1-249-417-11	CARBON 1K 5%	1/4W F
R316	1-249-417-11	CARBON 1K 5%	1/4W F
R317	1-249-417-11	CARBON 1K 5%	1/4W F
R318	1-249-417-11	CARBON 1K 5%	1/4W F
R319	1-249-417-11	CARBON 1K 5%	1/4W F
R320	1-249-417-11	CARBON 1K 5%	1/4W F
R365	1-249-417-11	CARBON 1K 5%	1/4W F
R366	1-249-417-11	CARBON 1K 5%	1/4W F
R367	1-249-417-11	CARBON 1K 5%	1/4W F
R368	1-249-417-11	CARBON 1K 5%	1/4W F
R369	1-249-417-11	CARBON 1K 5%	1/4W F
R370	1-249-417-11	CARBON 1K 5%	1/4W F
R394	1-249-397-11	CARBON 22 5%	1/4W F
R395	1-249-397-11	CARBON 22 5%	1/4W F
R398	1-249-417-11	CARBON 1K 5%	1/4W F
R399	1-249-425-11	CARBON 4.7K 5%	1/4W F
*****			
* 1-670-029-11	D.IN/OUT BOARD	*****	
< CAPACITOR >			
C1001	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1005	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1006	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1009	1-104-664-11	ELECT 47uF 20%	16V
< CONNECTOR >			
CNS13	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P	
< IC >			
IC1001	8-749-923-05	IC TORX178	
IC1005	8-759-236-19	IC TC74HC151AF(EL)	
IC1006	8-759-235-19	IC TC74HC08AF(EL)	

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

**D.IN/OUT**

**DIGITAL**

Ref. No.	Part No.	Description	Remarks
< RESISTOR >			
R1001	1-216-022-00	METAL CHIP 75 5%	1/10W
R1002	1-216-022-00	METAL CHIP 75 5%	1/10W
R1003	1-216-022-00	METAL CHIP 75 5%	1/10W
R1005	1-216-025-91	RES,CHIP 100 5%	1/10W
R1006	1-216-025-91	RES,CHIP 100 5%	1/10W
R1007	1-216-025-91	RES,CHIP 100 5%	1/10W
R1011	1-216-025-91	RES,CHIP 100 5%	1/10W
*****			
*	A-4414-126-A	DIGITAL BOARD, COMPLETE	*****
< CAPACITOR >			
C1101	1-163-275-11	CERAMIC CHIP 0.001uF 5%	50V
C1102	1-126-022-11	ELECT 47uF 20%	16V
C1103	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1104	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1105	1-126-022-11	ELECT 47uF 20%	16V
C1106	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1107	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C1108	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1109	1-163-243-11	CERAMIC CHIP 47PF 5%	50V
C1110	1-163-243-11	CERAMIC CHIP 47PF 5%	50V
C1111	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1112	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1113	1-126-059-11	ELECT 10uF 20%	50V
C1114	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1115	1-126-059-11	ELECT 10uF 20%	50V
C1116	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1117	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1118	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1119	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1120	1-126-059-11	ELECT 10uF 20%	50V
C1121	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1122	1-126-233-11	ELECT 22uF 20%	50V
C1123	1-106-347-00	MYLAR 1500PF 5%	200V
C1124	1-126-233-11	ELECT 22uF 20%	50V
C1125	1-126-233-11	ELECT 22uF 20%	50V
C1126	1-126-233-11	ELECT 22uF 20%	50V
C1127	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1128	1-126-233-11	ELECT 22uF 20%	50V
C1129	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1130	1-126-233-11	ELECT 22uF 20%	50V
C1131	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1132	1-126-233-11	ELECT 22uF 20%	50V
C1133	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1134	1-126-233-11	ELECT 22uF 20%	50V
C1135	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1136	1-126-233-11	ELECT 22uF 20%	50V
C1137	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1138	1-126-233-11	ELECT 22uF 20%	50V
C1139	1-126-022-11	ELECT 47uF 20%	16V
C1140	1-126-022-11	ELECT 47uF 20%	16V
C1141	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1142	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1143	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1170	1-126-059-11	ELECT 10uF 20%	50V
C1171	1-165-319-11	CERAMIC CHIP 0.1uF	50V

Ref. No.	Part No.	Description	Remarks
C1172	1-126-233-11	ELECT 22uF 20%	50V
C1173	1-106-347-00	MYLAR 1500PF 5%	200V
C1174	1-126-233-11	ELECT 22uF 20%	50V
C1175	1-126-233-11	ELECT 22uF 20%	50V
C1176	1-126-233-11	ELECT 22uF 20%	50V
C1201	1-126-059-11	ELECT 10uF 20%	50V
C1202	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1203	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1204	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1205	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1206	1-163-275-11	CERAMIC CHIP 0.001uF 5%	50V
C1207	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1208	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1209	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1210	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1211	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1212	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1213	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1214	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1215	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1216	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1217	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1218	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1301	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1302	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1303	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1304	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1305	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C1306	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1308	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1309	1-126-916-11	ELECT 1000uF 20%	6.3V
C1310	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1311	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1312	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1313	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1401	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1402	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1403	1-163-275-11	CERAMIC CHIP 0.001uF 5%	50V
C1404	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1405	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1406	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1407	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1408	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1409	1-124-443-00	ELECT 100uF 20%	10V
C1410	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1411	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1412	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1413	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1501	1-126-012-11	ELECT 470uF 20%	16V
C1502	1-126-022-11	ELECT 47uF 20%	16V
< CONNECTOR >			
CNP10	1-784-926-11	PIN, CONNECTOR 11P	
CNP11	1-779-977-11	PIN, CONNECTOR 6P	
CNP12	1-784-923-11	PIN, CONNECTOR 7P	
CNP14	1-779-978-11	PIN, CONNECTOR 3P	
CNS10	1-784-782-11	CONNECTOR, FFC 21P	
CNS11	1-784-790-11	CONNECTOR, FFC 29P	

# DIGITAL

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< DIODE >				< RESISTOR >	
D1101	8-719-016-74	DIODE 1SS352		R1101	1-216-025-91	RES, CHIP 100 5%	1/10W
D1201	8-719-016-74	DIODE 1SS352		R1102	1-216-025-91	RES, CHIP 100 5%	1/10W
D1202	8-719-801-78	DIODE 1SS184		R1103	1-216-025-91	RES, CHIP 100 5%	1/10W
D1203	8-719-801-78	DIODE 1SS184		R1104	1-216-085-00	METAL CHIP 33K 5%	1/10W
D1204	8-719-016-74	DIODE 1SS352		R1105	1-216-082-00	RES, CHIP 24K 5%	1/10W
D1205	8-719-016-74	DIODE 1SS352		R1106	1-216-066-00	METAL CHIP 5.1K 5%	1/10W
D1206	8-719-801-78	DIODE 1SS184		R1107	1-216-066-00	METAL CHIP 5.1K 5%	1/10W
		< TERMINAL >		R1108	1-216-029-00	METAL CHIP 150 5%	1/10W
* EB1001	1-537-738-21	TERMINAL, EARTH		R1109	1-216-104-00	METAL CHIP 200K 5%	1/10W
		< FERRITE BEAD >		R1110	1-216-025-91	RES, CHIP 100 5%	1/10W
FB1101	1-410-397-21	FERRITE BEAD INDUCTOR		R1111	1-216-089-91	RES, CHIP 47K 5%	1/10W
FB1102	1-410-397-21	FERRITE BEAD INDUCTOR		R1112	1-216-025-91	RES, CHIP 100 5%	1/10W
		< IC >		R1113	1-216-025-91	RES, CHIP 100 5%	1/10W
IC1101	8-759-294-79	IC CXD8495AQ		R1114	1-216-025-91	RES, CHIP 100 5%	1/10W
IC1102	8-759-491-46	IC TC74VHC04FT(EL)		R1115	1-216-097-91	RES, CHIP 100K 5%	1/10W
IC1103	8-759-534-62	IC AK4526		R1116	1-216-025-91	RES, CHIP 100 5%	1/10W
IC1104	8-759-636-55	IC M5218AFP		R1117	1-216-025-91	RES, CHIP 100 5%	1/10W
IC1105	8-759-636-55	IC M5218AFP		R1118	1-216-097-91	RES, CHIP 100K 5%	1/10W
IC1106	8-759-636-55	IC M5218AFP		R1119	1-216-025-91	RES, CHIP 100 5%	1/10W
IC1107	8-759-636-55	IC M5218AFP		R1120	1-216-065-91	RES, CHIP 4.7K 5%	1/10W
IC1108	8-759-032-01	IC MC74HC00AF		R1121	1-216-065-91	RES, CHIP 4.7K 5%	1/10W
IC1109	8-759-195-02	IC TC7S86F-TE85L		R1122	1-216-073-00	METAL CHIP 10K 5%	1/10W
IC1154	8-759-636-55	IC M5218AFP		R1123	1-216-065-91	RES, CHIP 4.7K 5%	1/10W
IC1201	8-759-569-05	IC MB90574PFV-G-161-BND		R1124	1-216-037-00	METAL CHIP 330 5%	1/10W
IC1202	8-759-491-46	IC TC74VHC04FT(EL)		R1125	1-216-073-00	METAL CHIP 10K 5%	1/10W
IC1301	8-759-534-61	IC CS4923		R1126	1-216-037-00	METAL CHIP 330 5%	1/10W
IC1305	8-759-530-30	IC TC74VHC04FT(EL)		R1127	1-216-073-00	METAL CHIP 10K 5%	1/10W
IC1401	8-752-391-87	IC CXD2712R		R1128	1-216-049-91	RES, CHIP 1K 5%	1/10W
IC1402	8-759-538-16	IC IDT71V016S15PH-TL		R1129	1-216-049-91	RES, CHIP 1K 5%	1/10W
IC1403	8-759-524-48	IC TC74VHC393FT(EL)		R1130	1-216-049-91	RES, CHIP 1K 5%	1/10W
IC1501	8-759-231-53	IC TA7805S		R1131	1-216-097-91	RES, CHIP 100K 5%	1/10W
		< JUMPER RESISTOR >		R1132	1-216-089-91	RES, CHIP 47K 5%	1/10W
JW1	1-216-295-91	SHORT 0		R1133	1-216-089-91	RES, CHIP 47K 5%	1/10W
JW2	1-216-295-91	SHORT 0		R1134	1-216-049-91	RES, CHIP 1K 5%	1/10W
JW3	1-216-295-91	SHORT 0		R1135	1-216-025-91	RES, CHIP 100 5%	1/10W
JW11	1-216-295-91	SHORT 0		R1136	1-216-089-91	RES, CHIP 47K 5%	1/10W
JW12	1-216-295-91	SHORT 0		R1137	1-216-089-91	RES, CHIP 47K 5%	1/10W
JW13	1-216-295-91	SHORT 0		R1138	1-216-089-91	RES, CHIP 47K 5%	1/10W
		< TRANSISTOR >		R1139	1-216-049-91	RES, CHIP 1K 5%	1/10W
Q1201	8-729-216-22	TRANSISTOR 2SA1162-G		R1140	1-216-089-91	RES, CHIP 47K 5%	1/10W
Q1202	8-729-027-43	TRANSISTOR DTC114EKA-T146		R1141	1-216-089-91	RES, CHIP 47K 5%	1/10W
Q1203	8-729-230-49	TRANSISTOR 2SC2712-YG		R1142	1-216-089-91	RES, CHIP 47K 5%	1/10W
Q1204	8-729-230-49	TRANSISTOR 2SC2712-YG		R1143	1-216-049-91	RES, CHIP 1K 5%	1/10W
Q1205	8-729-230-49	TRANSISTOR 2SC2712-YG		R1144	1-216-089-91	RES, CHIP 47K 5%	1/10W
Q1206	8-729-230-49	TRANSISTOR 2SC2712-YG		R1145	1-216-089-91	RES, CHIP 47K 5%	1/10W
Q1207	8-729-230-49	TRANSISTOR 2SC2712-YG		R1146	1-216-089-91	RES, CHIP 47K 5%	1/10W
Q1208	8-729-027-43	TRANSISTOR DTC114EKA-T146		R1147	1-216-049-91	RES, CHIP 1K 5%	1/10W
				R1148	1-216-089-91	RES, CHIP 47K 5%	1/10W
				R1149	1-216-089-91	RES, CHIP 47K 5%	1/10W
				R1150	1-216-089-91	RES, CHIP 47K 5%	1/10W
				R1151	1-216-049-91	RES, CHIP 1K 5%	1/10W
				R1152	1-216-089-91	RES, CHIP 47K 5%	1/10W
				R1153	1-216-089-91	RES, CHIP 47K 5%	1/10W
				R1154	1-216-089-91	RES, CHIP 47K 5%	1/10W
				R1155	1-216-295-91	SHORT 0	

Ref. No.	Part No.	Description	Quantity	Unit	Percentage	Remarks	Ref. No.	Part No.	Description	Quantity	Unit	Percentage	Remarks
R1156	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1239	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1157	1-216-295-91	SHORT	0				R1240	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1158	1-216-025-91	RES, CHIP	100		5%	1/10W	R1241	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1159	1-216-025-91	RES, CHIP	100		5%	1/10W	R1242	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1160	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1243	1-216-025-91	RES, CHIP	100		5%	1/10W
R1161	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1244	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1162	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1245	1-216-041-00	METAL CHIP	470		5%	1/10W
R1163	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1246	1-216-025-91	RES, CHIP	100		5%	1/10W
R1164	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1247	1-216-025-91	RES, CHIP	100		5%	1/10W
R1165	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1248	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1166	1-216-089-91	RES, CHIP	47K		5%	1/10W	R1249	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1170	1-216-065-91	RES, CHIP	4.7K		5%	1/10W	R1250	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1171	1-216-065-91	RES, CHIP	4.7K		5%	1/10W	R1251	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1172	1-216-073-00	METAL CHIP	10K		5%	1/10W	R1252	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1173	1-216-065-91	RES, CHIP	4.7K		5%	1/10W	R1253	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1174	1-216-037-00	METAL CHIP	330		5%	1/10W	R1254	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1175	1-216-073-00	METAL CHIP	10K		5%	1/10W	R1255	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1176	1-216-037-00	METAL CHIP	330		5%	1/10W	R1256	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1177	1-216-073-00	METAL CHIP	10K		5%	1/10W	R1257	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1178	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1258	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1179	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1259	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1180	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1260	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1201	1-216-097-91	RES, CHIP	100K		5%	1/10W	R1261	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1202	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1262	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1203	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1263	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1204	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1264	1-216-057-00	METAL CHIP	2.2K		5%	1/10W
R1205	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1265	1-216-049-91	RES, CHIP	1K		5%	1/10W
R1206	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1266	1-216-049-91	RES, CHIP	1K		5%	1/10W
R1207	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1267	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1208	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1268	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1209	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1269	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1210	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1270	1-216-025-91	RES, CHIP	100		5%	1/10W
R1211	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1271	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1212	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1272	1-216-049-91	RES, CHIP	1K		5%	1/10W
R1213	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1273	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1214	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1274	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1215	1-216-025-91	RES, CHIP	100		5%	1/10W	R1275	1-216-025-91	RES, CHIP	100		5%	1/10W
R1216	1-216-025-91	RES, CHIP	100		5%	1/10W	R1276	1-216-025-91	RES, CHIP	100		5%	1/10W
R1217	1-216-025-91	RES, CHIP	100		5%	1/10W	R1277	1-216-025-91	RES, CHIP	100		5%	1/10W
R1218	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1278	1-216-025-91	RES, CHIP	100		5%	1/10W
R1219	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1279	1-216-025-91	RES, CHIP	100		5%	1/10W
R1220	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1280	1-216-025-91	RES, CHIP	100		5%	1/10W
R1221	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1282	1-216-295-91	SHORT	0			
R1222	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1283	1-216-295-91	SHORT	0			
R1223	1-216-104-00	METAL CHIP	200K		5%	1/10W	R1285	1-216-073-00	METAL CHIP	10K		5%	1/10W
R1224	1-216-295-91	SHORT	0				R1286	1-216-025-91	RES, CHIP	100		5%	1/10W
R1225	1-216-689-11	METAL CHIP	39K		0.5%	1/10W	R1287	1-216-097-91	RES, CHIP	100K		5%	1/10W
R1226	1-216-689-11	METAL CHIP	39K		0.5%	1/10W	R1301	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1227	1-216-073-00	METAL CHIP	10K		5%	1/10W	R1302	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1228	1-216-073-00	METAL CHIP	10K		5%	1/10W	R1303	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1229	1-216-097-91	RES, CHIP	100K		5%	1/10W	R1304	1-216-025-91	RES, CHIP	100		5%	1/10W
R1230	1-216-097-91	RES, CHIP	100K		5%	1/10W	R1305	1-216-025-91	RES, CHIP	100		5%	1/10W
R1231	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1306	1-216-041-00	METAL CHIP	470		5%	1/10W
R1232	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1307	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1233	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1308	1-216-049-91	RES, CHIP	1K		5%	1/10W
R1234	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1309	1-216-025-91	RES, CHIP	100		5%	1/10W
R1235	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1310	1-216-081-00	METAL CHIP	22K		5%	1/10W
R1236	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1311	1-216-065-91	RES, CHIP	4.7K		5%	1/10W
R1237	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1312	1-216-025-91	RES, CHIP	100		5%	1/10W
R1238	1-216-049-91	RES, CHIP	1K		5%	1/10W	R1313	1-216-065-91	RES, CHIP	4.7K		5%	1/10W



**DIGITAL**

**DISPLAY**

Ref. No.	Part No.	Description	Remarks
R1314	1-216-295-91	SHORT 0	
R1315	1-216-295-91	SHORT 0	
R1316	1-216-295-91	SHORT 0	
R1317	1-216-295-91	SHORT 0	
R1318	1-216-295-91	SHORT 0	
△R1319	1-215-884-11	METAL OXIDE 47 5% 2W F	
R1320	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1321	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1322	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1323	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1324	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1325	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1326	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1327	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1328	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1329	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1330	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R1331	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1332	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1401	1-216-025-91	RES,CHIP 100 5% 1/10W	
R1402	1-216-025-91	RES,CHIP 100 5% 1/10W	
R1403	1-216-025-91	RES,CHIP 100 5% 1/10W	
R1404	1-216-097-91	RES,CHIP 100K 5% 1/10W	
R1405	1-216-025-91	RES,CHIP 100 5% 1/10W	
R1406	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R1407	1-216-295-91	SHORT 0	
R1408	1-216-025-91	RES, CHIP 100 5% 1/10W	
R1409	1-216-025-91	RES, CHIP 100 5% 1/10W	
R1410	1-216-295-91	SHORT 0	
< VIBRATOR >			
X1101	1-567-970-11	VIBRATOR, CRYSTAL 24.567MHz	
X1201	1-577-082-11	VIBRATOR, CERAMIC 4MHz	
X1301	1-767-949-21	VIBRATOR, CERAMIC 49.152MHz	
*****			
*	A-4414-102-A	DISPLAY BOARD, COMPLETE ***** (Including L.B BOARD)	
*	4-921-941-01	CUSHION (FL)	
*	4-990-797-01	HOLDER (FL)	
< CAPACITOR >			
C101	1-104-664-11	ELECT 47uF 20% 16V	
C104	1-126-964-11	ELECT 10uF 20% 50V	
C105	1-104-905-11	CAPACITOR 0.22F 5.5V	
C106	1-164-159-11	CERAMIC 0.1uF 50V	
C107	1-164-159-11	CERAMIC 0.1uF 50V	
C108	1-164-159-11	CERAMIC 0.1uF 50V	
C109	1-164-159-11	CERAMIC 0.1uF 50V	
C110	1-164-159-11	CERAMIC 0.1uF 50V	
C111	1-164-159-11	CERAMIC 0.1uF 50V	
C112	1-164-159-11	CERAMIC 0.1uF 50V	
C113	1-164-159-11	CERAMIC 0.1uF 50V	
C117	1-164-159-11	CERAMIC 0.1uF 50V	
C118	1-164-159-11	CERAMIC 0.1uF 50V	
C119	1-104-664-11	ELECT 47uF 20% 16V	
C120	1-164-159-11	CERAMIC 0.1uF 50V	

Ref. No.	Part No.	Description	Remarks
C121	1-104-664-11	ELECT 47uF 20% 16V	
C122	1-164-159-11	CERAMIC 0.1uF 50V	
C123	1-164-159-11	CERAMIC 0.1uF 50V	
C124	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C183	1-126-964-11	ELECT 10uF 20% 50V	
C184	1-126-964-11	ELECT 10uF 20% 50V	
C191	1-164-159-11	CERAMIC 0.1uF 50V	
C192	1-107-818-11	CAPACITOR 1F 5.5V	
CC20	1-164-159-11	CERAMIC 0.1uF 50V	
< CONNECTOR >			
CNP106	1-784-919-11	CONNECTOR, PC BOARD (PLUG) 5P	
CNP113	1-779-366-11	CONNECTOR, BOARD TO BOARD 4P	
CNP114	1-779-366-11	CONNECTOR, BOARD TO BOARD 4P	
CNP115	1-779-366-11	CONNECTOR, BOARD TO BOARD 4P	
CNP116	1-779-366-11	CONNECTOR, BOARD TO BOARD 4P	
CNS103	1-784-772-11	CONNECTOR, FFC 11P	
CNS104	1-784-743-11	CONNECTOR, FFC 21P	
CNS107	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P	
< DIODE >			
D101	8-719-313-45	DIODE SEL6810A-TH10	
D102	8-719-024-99	DIODE 11ES2-NTA2B	
D103	8-719-911-19	DIODE 1SS119	
D104	8-719-046-39	DIODE SEL5821A-TH15	
D105	8-719-046-39	DIODE SEL5821A-TH15	
D106	8-719-046-39	DIODE SEL5821A-TH15	
D108	8-719-046-39	DIODE SEL5821A-TH15	
D119	8-719-046-39	DIODE SEL5821A-TH15	
D122	8-719-046-39	DIODE SEL5821A-TH15	
D180	8-719-911-19	DIODE 1SS119	
< FILTER >			
FL101	1-517-781-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC101	8-759-459-83	IC NJL55H400A(REMOTE SENSOR)	
IC102	8-759-566-11	IC MB90553APF-G-131-BND	
IC103	8-759-962-08	IC BA6208	
IC104	8-759-463-11	IC MSC1162AGS-BK	
IC105	8-759-389-51	IC MSC1164GS-KR1	
< COIL >			
L101	1-410-509-11	INDUCTOR 10uH	
< TRANSISTOR >			
Q101	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q102	8-729-900-36	TRANSISTOR DTC124ES	
Q103	8-729-900-36	TRANSISTOR DTC124ES	
Q104	8-729-900-36	TRANSISTOR DTC124ES	
Q105	8-729-900-36	TRANSISTOR DTC124ES	
Q106	8-729-900-36	TRANSISTOR DTC124ES	
Q107	8-729-900-36	TRANSISTOR DTC124ES	
Q108	8-729-900-36	TRANSISTOR DTC124ES	
Q109	8-729-900-36	TRANSISTOR DTC124ES	
Q110	8-729-900-36	TRANSISTOR DTC124ES	

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



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
Q112	8-729-900-36	TRANSISTOR DTC124ES		R175	1-249-415-11	CARBON 680 5%	1/4W F
Q113	8-729-900-36	TRANSISTOR DTC124ES		R176	1-249-413-11	CARBON 470 5%	1/4W F
Q114	8-729-900-36	TRANSISTOR DTC124ES		R177	1-249-411-11	CARBON 330 5%	1/4W F
Q116	8-729-900-36	TRANSISTOR DTC124ES		R178	1-249-417-11	CARBON 1K 5%	1/4W F
Q117	8-729-900-36	TRANSISTOR DTC124ES		R179	1-249-411-11	CARBON 330 5%	1/4W F
Q118	8-729-900-36	TRANSISTOR DTC124ES		R180	1-249-393-11	CARBON 10 5%	1/4W F
Q119	8-729-900-36	TRANSISTOR DTC124ES		R181	1-249-429-11	CARBON 10K 5%	1/4W F
Q120	8-729-900-36	TRANSISTOR DTC124ES		R182	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q122	8-729-900-36	TRANSISTOR DTC124ES		R183	1-249-429-11	CARBON 10K 5%	1/4W F
Q180	8-729-620-05	TRANSISTOR 2SC2603-EF		R190	1-249-441-11	CARBON 100K 5%	1/4W F
< RESISTOR >				R191	1-247-807-31	CARBON 100 5%	1/4W F
R101	1-249-411-11	CARBON 330 5%	1/4W F	R193	1-247-807-31	CARBON 100 5%	1/4W F
R102	1-249-411-11	CARBON 330 5%	1/4W F	R194	1-247-807-31	CARBON 100 5%	1/4W F
R103	1-249-437-11	CARBON 47K 5%	1/4W F	R195	1-247-807-31	CARBON 100 5%	1/4W F
R104	1-249-429-11	CARBON 10K 5%	1/4W F	R196	1-247-807-31	CARBON 100 5%	1/4W F
R105	1-249-393-11	CARBON 10 5%	1/4W F	R197	1-249-441-11	CARBON 100K 5%	1/4W F
R106	1-249-437-11	CARBON 47K 5%	1/4W F	R198	1-249-429-11	CARBON 10K 5%	1/4W F
R107	1-249-433-11	CARBON 22K 5%	1/4W F	R199	1-249-429-11	CARBON 10K 5%	1/4W F
R110	1-249-419-11	CARBON 1.5K 5%	1/4W F	RR10	1-249-425-11	CARBON 4.7K 5%	1/4W F
R111	1-247-807-31	CARBON 100 5%	1/4W F	RR20	1-249-425-11	CARBON 4.7K 5%	1/4W F
R112	1-247-807-31	CARBON 100 5%	1/4W F	RR21	1-249-411-11	CARBON 330 5%	1/4W F
R113	1-247-807-31	CARBON 100 5%	1/4W F	RR22	1-249-413-11	CARBON 470 5%	1/4W F
R114	1-247-807-31	CARBON 100 5%	1/4W F	RR23	1-249-415-11	CARBON 680 5%	1/4W F
△ R115	1-249-385-11	CARBON 2.2 5%	1/6W F	RRR1	1-249-417-11	CARBON 1K 5%	1/4W F
R116	1-249-429-11	CARBON 10K 5%	1/4W F	< SWITCH >			
R117	1-249-433-11	CARBON 22K 5%	1/4W F	S102	1-762-750-11	SWITCH, TACTILE (MUTING)	
R118	1-249-433-11	CARBON 22K 5%	1/4W F	S131	1-762-750-11	SWITCH, TACTILE (POWER)	
R119	1-249-417-11	CARBON 1K 5%	1/4W F	S132	1-762-750-11	SWITCH, TACTILE (DISP)	
R120	1-249-417-11	CARBON 1K 5%	1/4W F	S133	1-762-750-11	SWITCH, TACTILE (PRE+)	
R121	1-249-417-11	CARBON 1K 5%	1/4W F	S135	1-762-750-11	SWITCH, TACTILE (LEFT)	
R122	1-249-429-11	CARBON 10K 5%	1/4W F	S136	1-762-750-11	SWITCH, TACTILE (UP)	
R123	1-249-417-11	CARBON 1K 5%	1/4W F	S137	1-762-750-11	SWITCH, TACTILE (RIGHT)	
R124	1-249-411-11	CARBON 330 5%	1/4W F	S138	1-762-750-11	SWITCH, TACTILE (FM/AM)	
R125	1-249-425-11	CARBON 4.7K 5%	1/4W F	S139	1-762-750-11	SWITCH, TACTILE (FM MODE)	
R126	1-249-425-11	CARBON 4.7K 5%	1/4W F	S142	1-762-750-11	SWITCH, TACTILE (MEMORY)	
R127	1-249-425-11	CARBON 4.7K 5%	1/4W F	S143	1-762-750-11	SWITCH, TACTILE (SLEEP)	
R128	1-249-425-11	CARBON 4.7K 5%	1/4W F	S144	1-762-750-11	SWITCH, TACTILE (TUN+)	
R129	1-249-417-11	CARBON 1K 5%	1/4W F	S145	1-762-750-11	SWITCH, TACTILE (TUN-)	
R130	1-249-425-11	CARBON 4.7K 5%	1/4W F	S146	1-762-750-11	SWITCH, TACTILE (PRE-)	
R131	1-249-425-11	CARBON 4.7K 5%	1/4W F	S147	1-762-750-11	SWITCH, TACTILE (DOWN)	
R132	1-249-425-11	CARBON 4.7K 5%	1/4W F	< VIBRATOR >			
R133	1-249-411-11	CARBON 330 5%	1/4W F	X101	1-577-082-11	VIBRATOR, CERAMIC 4MHz	
R134	1-249-411-11	CARBON 330 5%	1/4W F	*****			
R135	1-249-411-11	CARBON 330 5%	1/4W F	*	1-670-006-11	H.P BOARD	
△ R161	1-249-385-11	CARBON 2.2 5%	1/6W F	*****			
R162	1-249-421-11	CARBON 2.2K 5%	1/4W F	< JACK >			
R163	1-249-421-11	CARBON 2.2K 5%	1/4W F	J701	1-568-519-41	JACK, LARGE TYPE (PHONES)	
R164	1-249-411-11	CARBON 330 5%	1/4W F	*****			
R165	1-249-429-11	CARBON 10K 5%	1/4W F				
R166	1-249-411-11	CARBON 330 5%	1/4W F				
R167	1-249-413-11	CARBON 470 5%	1/4W F				
R168	1-249-415-11	CARBON 680 5%	1/4W F				
R169	1-249-417-11	CARBON 1K 5%	1/4W F				
R170	1-249-419-11	CARBON 1.5K 5%	1/4W F				
R171	1-249-425-11	CARBON 4.7K 5%	1/4W F				
R172	1-249-421-11	CARBON 2.2K 5%	1/4W F				

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# INPUT

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4414-093-A	INPUT BOARD, COMPLETE *****		C502	1-162-282-31	CERAMIC	100PF 10% 50V
	7-685-872-09	SCREW +BVTT 3 × 8 (S)		C503	1-102-233-00	CERAMIC	33PF 10% 500V
		< CAPACITOR >		C504	1-102-230-00	CERAMIC	4PF 0.25PF 500V
C301	1-126-961-11	ELECT	2.2uF 20% 50V	C505	1-126-934-11	ELECT	220uF 20% 10V
C303	1-126-934-11	ELECT	220uF 20% 10V	C539	1-162-282-31	CERAMIC	100PF 10% 50V
C304	1-125-896-91	MYLAR	0.0091uF 5% 50V	C551	1-126-965-11	ELECT	22uF 20% 50V
C305	1-136-159-00	FILM	0.033uF 5% 50V	C552	1-162-282-31	CERAMIC	100PF 10% 50V
C306	1-126-961-11	ELECT	2.2uF 20% 50V	C553	1-102-233-00	CERAMIC	33PF 10% 500V
C307	1-162-282-31	CERAMIC	100PF 10% 50V	C554	1-102-230-00	CERAMIC	4PF 0.25PF 500V
C308	1-162-286-31	CERAMIC	220PF 10% 50V	C555	1-126-934-11	ELECT	220uF 20% 10V
C310	1-162-294-31	CERAMIC	0.001uF 10% 50V	C580	1-162-282-31	CERAMIC	100PF 10% 50V
C311	1-126-965-11	ELECT	22uF 20% 50V	C589	1-162-282-31	CERAMIC	100PF 10% 50V
C351	1-126-961-11	ELECT	2.2uF 20% 50V	C593	1-126-934-11	ELECT	220uF 20% 10V
C353	1-126-934-11	ELECT	220uF 20% 10V	C594	1-128-560-11	ELECT	22uF 20% 100V
C354	1-125-896-91	MYLAR	0.0091uF 5% 50V	C595	1-128-560-11	ELECT	22uF 20% 100V
C355	1-136-159-00	FILM	0.033uF 5% 50V	C601	1-126-965-11	ELECT	22uF 20% 50V
C356	1-126-961-11	ELECT	2.2uF 20% 50V	C602	1-162-282-31	CERAMIC	100PF 10% 50V
C357	1-162-282-31	CERAMIC	100PF 10% 50V	C603	1-102-233-00	CERAMIC	33PF 10% 500V
C358	1-162-286-31	CERAMIC	220PF 10% 50V	C604	1-102-230-00	CERAMIC	4PF 0.25PF 500V
C360	1-162-294-31	CERAMIC	0.001uF 10% 50V	C605	1-126-934-11	ELECT	220uF 20% 10V
C361	1-126-965-11	ELECT	22uF 20% 50V	C639	1-162-282-31	CERAMIC	100PF 10% 50V
C388	1-126-933-11	ELECT	100uF 20% 16V	C651	1-126-965-11	ELECT	22uF 20% 50V
C389	1-126-933-11	ELECT	100uF 20% 16V	C652	1-162-282-31	CERAMIC	100PF 10% 50V
C392	1-104-664-11	ELECT	47uF 20% 16V	C653	1-102-233-00	CERAMIC	33PF 10% 500V
C393	1-162-294-31	CERAMIC	0.001uF 10% 50V	C654	1-102-230-00	CERAMIC	4PF 0.25PF 500V
C394	1-104-664-11	ELECT	47uF 20% 16V	C655	1-126-934-11	ELECT	220uF 20% 10V
C395	1-162-282-31	CERAMIC	100PF 10% 50V	C689	1-162-282-31	CERAMIC	100PF 10% 50V
C401	1-126-965-11	ELECT	22uF 20% 50V	C701	1-126-965-11	ELECT	22uF 20% 50V
C402	1-126-965-11	ELECT	22uF 20% 50V	C702	1-162-282-31	CERAMIC	100PF 10% 50V
C403	1-126-965-11	ELECT	22uF 20% 50V	C703	1-102-233-00	CERAMIC	33PF 10% 500V
C404	1-162-199-31	CERAMIC	10PF 5% 50V	C704	1-102-230-00	CERAMIC	4PF 0.25PF 500V
C405	1-162-199-31	CERAMIC	10PF 5% 50V	C705	1-126-934-11	ELECT	220uF 20% 10V
C406	1-162-199-31	CERAMIC	10PF 5% 50V	C739	1-162-282-31	CERAMIC	100PF 10% 50V
C407	1-126-965-11	ELECT	22uF 20% 50V	C751	1-126-965-11	ELECT	22uF 20% 50V
C408	1-126-965-11	ELECT	22uF 20% 50V	C752	1-162-282-31	CERAMIC	100PF 10% 50V
C409	1-126-965-11	ELECT	22uF 20% 50V	C753	1-102-233-00	CERAMIC	33PF 10% 500V
C416	1-126-965-11	ELECT	22uF 20% 50V	C754	1-102-230-00	CERAMIC	4PF 0.25PF 500V
C417	1-126-965-11	ELECT	22uF 20% 50V	C755	1-126-934-11	ELECT	220uF 20% 10V
C418	1-126-965-11	ELECT	22uF 20% 50V	C780	1-162-282-31	CERAMIC	100PF 10% 50V
C419	1-162-282-31	CERAMIC	100PF 10% 50V	C789	1-162-282-31	CERAMIC	100PF 10% 50V
C451	1-126-965-11	ELECT	22uF 20% 50V	CC04	1-162-282-31	CERAMIC	100PF 10% 50V
C452	1-126-965-11	ELECT	22uF 20% 50V	CC05	1-162-282-31	CERAMIC	100PF 10% 50V
C453	1-126-965-11	ELECT	22uF 20% 50V	CC06	1-162-282-31	CERAMIC	100PF 10% 50V
C454	1-162-199-31	CERAMIC	10PF 5% 50V	CC54	1-162-282-31	CERAMIC	100PF 10% 50V
C455	1-162-199-31	CERAMIC	10PF 5% 50V	CC55	1-162-282-31	CERAMIC	100PF 10% 50V
C456	1-162-199-31	CERAMIC	10PF 5% 50V	CC56	1-162-282-31	CERAMIC	100PF 10% 50V
C457	1-126-965-11	ELECT	22uF 20% 50V			< CONNECTOR >	
C458	1-126-965-11	ELECT	22uF 20% 50V	CNS301	1-784-768-11	CONNECTOR, FFC 7P	
C459	1-126-965-11	ELECT	22uF 20% 50V	CNS306	1-784-790-11	CONNECTOR, FFC 29P	
C466	1-126-965-11	ELECT	22uF 20% 50V	CNS403	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
C467	1-126-965-11	ELECT	22uF 20% 50V	CNS404	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
C468	1-126-965-11	ELECT	22uF 20% 50V	CNS501	1-784-806-11	HOUSING,CONNECTOR(PC BOARD)13P	
C491	1-164-159-11	CERAMIC	0.1uF 50V	CNS702	1-779-977-11	PIN, CONNECTOR 6P	
C496	1-126-933-11	ELECT	100uF 20% 16V			< DIODE >	
C497	1-126-933-11	ELECT	100uF 20% 16V	D301	8-719-911-19	DIODE 1SS119	
C498	1-104-664-11	ELECT	47uF 20% 16V				
C499	1-104-664-11	ELECT	47uF 20% 16V				
C501	1-126-965-11	ELECT	22uF 20% 50V				

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< IC >		R346	1-249-397-11	CARBON 22 5%	1/4W F
IC301	8-759-805-14	IC LC7822		R347	1-249-397-11	CARBON 22 5%	1/4W F
IC302	8-759-636-74	IC M5218AP-22		R351	1-249-401-11	CARBON 47 5%	1/4W F
IC304	8-759-634-50	IC M5218AL		R352	1-249-441-11	CARBON 100K 5%	1/4W
IC401	8-759-231-59	IC TA7815S		R353	1-249-440-11	CARBON 82K 5%	1/4W
IC402	8-759-245-87	IC TA7915S		R354	1-249-408-11	CARBON 180 5%	1/4W F
IC403	8-759-604-39	IC M5F78M12		R355	1-249-428-11	CARBON 8.2K 5%	1/4W F
IC404	8-759-708-05	IC NJM78L05A		R356	1-249-441-11	CARBON 100K 5%	1/4W
IC405	8-759-634-50	IC M5218AL		R357	1-247-807-31	CARBON 100 5%	1/4W
IC406	8-759-634-50	IC M5218AL		R358	1-249-441-11	CARBON 100K 5%	1/4W
IC407	8-759-634-50	IC M5218AL		R359	1-249-413-11	CARBON 470 5%	1/4W F
IC414	8-759-534-63	IC TC9299P		R360	1-249-417-11	CARBON 1K 5%	1/4W F
IC415	8-759-534-63	IC TC9299P		R361	1-249-417-11	CARBON 1K 5%	1/4W F
IC416	8-759-534-63	IC TC9299P		R362	1-249-417-11	CARBON 1K 5%	1/4W F
IC501	8-759-326-52	IC uPC2581V		R365	1-249-437-11	CARBON 47K 5%	1/4W
IC601	8-759-326-52	IC uPC2581V		R381	1-249-441-11	CARBON 100K 5%	1/4W
IC701	8-759-326-52	IC uPC2581V		R385	1-249-437-11	CARBON 47K 5%	1/4W
		< JACK >		△R387	1-249-410-11	CARBON 270 5%	1/4W F
J301	1-784-429-11	JACK, PIN 4P(PHONO/CD)		R388	1-249-417-11	CARBON 1K 5%	1/4W F
J302	1-784-429-11	JACK, PIN 4P(MD/DAT)		R389	1-249-417-11	CARBON 1K 5%	1/4W F
		< TRANSISTOR >		R390	1-249-417-11	CARBON 1K 5%	1/4W F
Q301	8-729-119-79	TRANSISTOR 2SC2785-FEK		R391	1-249-417-11	CARBON 1K 5%	1/4W F
Q302	8-729-141-30	TRANSISTOR 2SC3623A-LK		R392	1-249-417-11	CARBON 1K 5%	1/4W F
Q303	8-729-141-30	TRANSISTOR 2SC3623A-LK		R393	1-249-417-11	CARBON 1K 5%	1/4W F
Q304	8-729-141-30	TRANSISTOR 2SC3623A-LK		R396	1-249-417-11	CARBON 1K 5%	1/4W F
Q352	8-729-141-30	TRANSISTOR 2SC3623A-LK		R397	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q353	8-729-141-30	TRANSISTOR 2SC3623A-LK		R401	1-249-441-11	CARBON 100K 5%	1/4W
Q354	8-729-141-30	TRANSISTOR 2SC3623A-LK		R402	1-249-441-11	CARBON 100K 5%	1/4W
Q501	8-729-900-36	TRANSISTOR DTC124ES		R403	1-249-441-11	CARBON 100K 5%	1/4W
Q503	8-729-900-63	TRANSISTOR DTA124ES		R404	1-249-431-11	CARBON 15K 5%	1/4W
		< RESISTOR >		R405	1-249-431-11	CARBON 15K 5%	1/4W
R301	1-249-401-11	CARBON 47 5%	1/4W F	R406	1-249-431-11	CARBON 15K 5%	1/4W
R302	1-249-441-11	CARBON 100K 5%	1/4W	R407	1-249-437-11	CARBON 47K 5%	1/4W
R303	1-249-440-11	CARBON 82K 5%	1/4W	R408	1-249-437-11	CARBON 47K 5%	1/4W
R304	1-249-408-11	CARBON 180 5%	1/4W F	R409	1-249-437-11	CARBON 47K 5%	1/4W
R305	1-249-428-11	CARBON 8.2K 5%	1/4W F	R451	1-249-441-11	CARBON 100K 5%	1/4W
R306	1-249-441-11	CARBON 100K 5%	1/4W	R452	1-249-441-11	CARBON 100K 5%	1/4W
R307	1-247-807-31	CARBON 100 5%	1/4W	R453	1-249-441-11	CARBON 100K 5%	1/4W
R308	1-249-441-11	CARBON 100K 5%	1/4W	R454	1-249-431-11	CARBON 15K 5%	1/4W
R309	1-249-413-11	CARBON 470 5%	1/4W F	R455	1-249-431-11	CARBON 15K 5%	1/4W
R310	1-249-417-11	CARBON 1K 5%	1/4W F	R456	1-249-434-11	CARBON 27K 5%	1/4W
R311	1-249-417-11	CARBON 1K 5%	1/4W F	R457	1-249-437-11	CARBON 47K 5%	1/4W
R312	1-249-417-11	CARBON 1K 5%	1/4W F	R458	1-249-437-11	CARBON 47K 5%	1/4W
R315	1-249-437-11	CARBON 47K 5%	1/4W	R459	1-249-437-11	CARBON 47K 5%	1/4W
R331	1-249-441-11	CARBON 100K 5%	1/4W	R501	1-249-417-11	CARBON 1K 5%	1/4W F
R335	1-249-437-11	CARBON 47K 5%	1/4W	R502	1-249-439-11	CARBON 68K 5%	1/4W
R336	1-249-425-11	CARBON 4.7K 5%	1/4W F	R503	1-249-439-11	CARBON 68K 5%	1/4W
R337	1-249-441-11	CARBON 100K 5%	1/4W	R504	1-249-421-11	CARBON 2.2K 5%	1/4W F
R338	1-249-417-11	CARBON 1K 5%	1/4W F	R505	1-249-437-11	CARBON 47K 5%	1/4W
R339	1-249-417-11	CARBON 1K 5%	1/4W F	R551	1-249-417-11	CARBON 1K 5%	1/4W F
R340	1-249-417-11	CARBON 1K 5%	1/4W F	R552	1-249-439-11	CARBON 68K 5%	1/4W
R341	1-249-417-11	CARBON 1K 5%	1/4W F	R553	1-249-439-11	CARBON 68K 5%	1/4W
R342	1-249-417-11	CARBON 1K 5%	1/4W F	R554	1-249-421-11	CARBON 2.2K 5%	1/4W F
R343	1-249-417-11	CARBON 1K 5%	1/4W F	R590	1-249-433-11	CARBON 22K 5%	1/4W
R344	1-247-807-31	CARBON 100 5%	1/4W	△R592	1-249-381-11	CARBON 1 5%	1/4W F
R345	1-247-807-31	CARBON 100 5%	1/4W				

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

INPUT	JOINT	LED	REAR AMP
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Ref. No.	Part No.	Description	Remarks
△ R593	1-249-381-11	CARBON	1 5% 1/4W F
R594	1-249-425-11	CARBON	4.7K 5% 1/4W F
R601	1-249-417-11	CARBON	1K 5% 1/4W F
R602	1-249-439-11	CARBON	68K 5% 1/4W
R603	1-249-439-11	CARBON	68K 5% 1/4W
R604	1-249-421-11	CARBON	2.2K 5% 1/4W F
R651	1-249-417-11	CARBON	1K 5% 1/4W F
R652	1-249-439-11	CARBON	68K 5% 1/4W
R653	1-249-439-11	CARBON	68K 5% 1/4W
R654	1-247-843-11	CARBON	3.3K 5% 1/4W
R655	1-249-409-11	CARBON	220 5% 1/4W F
R656	1-249-409-11	CARBON	220 5% 1/4W F
R690	1-249-433-11	CARBON	22K 5% 1/4W
R701	1-249-417-11	CARBON	1K 5% 1/4W F
R702	1-249-439-11	CARBON	68K 5% 1/4W
R703	1-249-439-11	CARBON	68K 5% 1/4W
R704	1-249-421-11	CARBON	2.2K 5% 1/4W F
R751	1-249-417-11	CARBON	1K 5% 1/4W F
R752	1-249-439-11	CARBON	68K 5% 1/4W
R753	1-249-439-11	CARBON	68K 5% 1/4W
R754	1-249-421-11	CARBON	2.2K 5% 1/4W F
R790	1-249-433-11	CARBON	22K 5% 1/4W
< RELAY >			
RY301	1-515-614-11	RELAY	
*****			
*	1-670-027-11	JOINT BOARD	
*****			
< CONNECTOR >			
CNP501	1-784-807-11	CONNECTOR, BOARD TO BOARD 13P	
CNP651	1-784-807-11	CONNECTOR, BOARD TO BOARD 13P	
*****			
*	1-670-007-11	LED BOARD	
*****			
< DIODE >			
D100	8-719-070-83	DIODE SELU5E20C-TP15	
*****			
*	A-4414-112-A	REAR AMP BOARD, COMPLETE	
*****			
< CAPACITOR >			
C720	1-126-022-11	ELECT	47uF 20% 16V
C721	1-107-597-11	CERAMIC	22PF 10% 500V
C722	1-107-597-11	CERAMIC	22PF 10% 500V
C723	1-162-286-31	CERAMIC	220PF 10% 50V
C725	1-136-157-00	FILM	0.022uF 5% 50V
C770	1-126-022-11	ELECT	47uF 20% 16V
C771	1-107-597-11	CERAMIC	22PF 10% 500V
C772	1-107-597-11	CERAMIC	22PF 10% 500V
C773	1-162-286-31	CERAMIC	220PF 10% 50V
C775	1-136-157-00	FILM	0.022uF 5% 50V

Ref. No.	Part No.	Description	Remarks
< CONNECTOR >			
* CNP701	1-564-241-11	PIN, CONNECTOR (B4P-VH) 4P	
CNP711	1-779-977-11	PIN, CONNECTOR 6P	
* CNP712	1-564-242-00	PIN, CONNECTOR 5P	
CNP713	1-691-765-11	PLUG (MICRO CONNECTOR) 3P	
< DIODE >			
D701	8-719-911-19	DIODE 1SS119	
D702	8-719-109-51	DIODE RD2.0ES-B2	
D703	8-719-109-51	DIODE RD2.0ES-B2	
D704	8-719-911-19	DIODE 1SS119	
D751	8-719-911-19	DIODE 1SS119	
D752	8-719-109-51	DIODE RD2.0ES-B2	
D753	8-719-109-51	DIODE RD2.0ES-B2	
D754	8-719-911-19	DIODE 1SS119	
< TRANSISTOR >			
Q704	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q708	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q754	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q758	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
< RESISTOR >			
R702	1-247-881-00	CARBON	120K 5% 1/4W
R721	1-249-433-11	CARBON	22K 5% 1/4W
R722	1-249-422-11	CARBON	2.7K 5% 1/4W F
R723	1-249-414-11	CARBON	560 5% 1/4W F
△ R724	1-249-408-11	CARBON	180 5% 1/4W F
△ R725	1-249-408-11	CARBON	180 5% 1/4W F
△ R726	1-234-182-11	ENCAPSULATED COMPONENT	
R727	1-247-850-11	CARBON	6.2K 5% 1/4W
R728	1-249-419-11	CARBON	1.5K 5% 1/4W F
R732	1-249-437-11	CARBON	47K 5% 1/4W
△ R733	1-249-393-11	CARBON	10 5% 1/4W F
R752	1-247-881-00	CARBON	120K 5% 1/4W
R771	1-249-433-11	CARBON	22K 5% 1/4W
R772	1-249-422-11	CARBON	2.7K 5% 1/4W F
R773	1-249-414-11	CARBON	560 5% 1/4W F
△ R774	1-249-408-11	CARBON	180 5% 1/4W F
△ R775	1-249-408-11	CARBON	180 5% 1/4W F
△ R776	1-234-182-11	ENCAPSULATED COMPONENT	
R777	1-247-850-11	CARBON	6.2K 5% 1/4W
R778	1-249-419-11	CARBON	1.5K 5% 1/4W F
R782	1-249-437-11	CARBON	47K 5% 1/4W
△ R783	1-249-393-11	CARBON	10 5% 1/4W F
*****			

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Ref. No.	Part No.	Description	Remarks
*	A-4414-109-A	REG BOARD, COMPLETE *****	
	1-533-217-31	HOLDER, FUSE  < CAPACITOR >	
C819	1-136-165-00	FILM 0.1uF 5% 50V	
C820	1-136-165-00	FILM 0.1uF 5% 50V	
C821	1-136-165-00	FILM 0.1uF 5% 50V	
C822	1-136-165-00	FILM 0.1uF 5% 50V	
C823	1-136-165-00	FILM 0.1uF 5% 50V	
C824	1-126-937-11	ELECT 4700uF 20% 16V	
C825	1-126-935-11	ELECT 470uF 20% 16V	
C826	1-126-935-11	ELECT 470uF 20% 16V	
C827	1-126-935-11	ELECT 470uF 20% 16V	
C901	1-164-097-11	CERAMIC 0.022uF 50V	
C902	1-164-097-11	CERAMIC 0.022uF 50V	
C903	1-126-768-11	ELECT 2200uF 20% 16V	
C904	1-126-960-11	ELECT 1uF 20% 50V	
C905	1-126-959-11	ELECT 0.47uF 20% 50V	
C906	1-124-464-11	ELECT 0.22uF 20% 50V	
C911	1-164-159-11	CERAMIC 0.1uF 50V	
C914	1-164-159-11	CERAMIC 0.1uF 50V	
C916	1-164-159-11	CERAMIC 0.1uF 50V	
C917	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
CNP803	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
CNP809	1-779-977-11	PIN, CONNECTOR 6P	
		< DIODE >	
D808	8-719-025-03	DIODE RBA-402-SL	
D901	8-719-024-99	DIODE 11ES2-NTA2B	
D902	8-719-024-99	DIODE 11ES2-NTA2B	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-911-19	DIODE 1SS119	
D906	8-719-911-19	DIODE 1SS119	
		< TERMINAL >	
* EB900	1-537-738-21	TERMINAL, EARTH	
		< FUSE >	
△ F805	1-533-419-11	FUSE, GLASS CYNDRICAL (DIA.5) 4A	
		< IC >	
IC801	8-759-231-53	IC TA7805S	
IC802	8-759-445-59	IC BA033T	
IC803	8-759-445-59	IC BA033T	
IC901	8-759-333-83	IC NJM2103D	
		< TRANSISTOR >	
Q901	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q902	8-729-026-68	TRANSISTOR 2SD2525 (TP)	

Ref. No.	Part No.	Description	Remarks
		< RESISTOR >	
R902	1-249-429-11	CARBON 10K 5% 1/4W	
R903	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R904	1-249-417-11	CARBON 1K 5% 1/4W F	
R905	1-249-428-11	CARBON 8.2K 5% 1/4W F	
R906	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R908	1-249-433-11	CARBON 22K 5% 1/4W	
R909	1-249-439-11	CARBON 68K 5% 1/4W	
R910	1-249-437-11	CARBON 47K 5% 1/4W	
R912	1-249-430-11	CARBON 12K 5% 1/4W	
*****			
*	A-4414-124-A	SP BOARD, COMPLETE *****	
	7-685-872-09	SCREW +BVTT 3 x 8 (S)	
		< CAPACITOR >	
C624	1-126-059-11	ELECT 10uF 20% 50V	
C626	1-136-153-00	FILM 0.01uF 5% 50V	
C724	1-126-059-11	ELECT 10uF 20% 50V	
C726	1-136-153-00	FILM 0.01uF 5% 50V	
C794	1-126-059-11	ELECT 10uF 20% 50V	
C795	1-126-941-11	ELECT 470uF 20% 25V	
		< JACK >	
CNJ701	1-774-136-11	CONNECTOR, ROUND TYPE 6P (WIRELESS REAR SPEAKER)	
		< CONNECTOR >	
CNP601	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P	
CNP602	1-784-922-11	PIN, CONNECTOR 5P	
CNP603	1-779-977-11	PIN, CONNECTOR 6P	
		< DIODE >	
D543	8-719-911-19	DIODE 1SS119	
D605	8-719-911-19	DIODE 1SS119	
D606	8-719-911-19	DIODE 1SS119	
D607	8-719-911-19	DIODE 1SS119	
D649	8-719-911-19	DIODE 1SS119	
D705	8-719-911-19	DIODE 1SS119	
D706	8-719-911-19	DIODE 1SS119	
D749	8-719-911-19	DIODE 1SS119	
		< IC >	
IC702	8-759-605-01	IC M5F78M18L	
		< JACK >	
J501	1-770-157-21	JACK, PIN 2P(WOOFER)	
		< COIL >	
L601	1-420-872-00	COIL, AIR-CORE	
L701	1-420-872-00	COIL, AIR-CORE	
L751	1-420-872-00	COIL, AIR-CORE	

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



Ref. No.	Part No.	Description	Remarks
		< TRANSISTOR >	
Q544	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q609	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q610	8-729-900-63	TRANSISTOR DTA124ES	
Q611	8-729-900-63	TRANSISTOR DTA124ES	
Q645	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q709	8-729-281-53	TRANSISTOR 2SC1815-GR	
Q710	8-729-900-63	TRANSISTOR DTA124ES	
Q745	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q747	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q748	8-729-030-19	TRANSISTOR 2SB1640	
		< RESISTOR >	
R543	1-249-429-11	CARBON 10K 5%	1/4W
R544	1-249-425-11	CARBON 4.7K 5%	1/4W F
△R545	1-249-411-11	CARBON 330 5%	1/4W
R629	1-247-866-11	CARBON 30K 5%	1/4W
R630	1-249-421-11	CARBON 2.2K 5%	1/4W F
R631	1-249-433-11	CARBON 22K 5%	1/4W
△R634	1-249-389-11	CARBON 4.7 5%	1/4W F
R635	1-249-431-11	CARBON 15K 5%	1/4W
R636	1-249-433-11	CARBON 22K 5%	1/4W
R647	1-249-429-11	CARBON 10K 5%	1/4W
R648	1-249-425-11	CARBON 4.7K 5%	1/4W F
△R649	1-249-407-11	CARBON 150 5%	1/4W F
R729	1-247-866-11	CARBON 30K 5%	1/4W
R730	1-249-421-11	CARBON 2.2K 5%	1/4W F
R731	1-249-433-11	CARBON 22K 5%	1/4W
△R734	1-249-389-11	CARBON 4.7 5%	1/4W F
R735	1-249-431-11	CARBON 15K 5%	1/4W
R737	1-249-429-11	CARBON 10K 5%	1/4W
R738	1-247-887-00	CARBON 220K 5%	1/4W
R743	1-249-425-11	CARBON 4.7K 5%	1/4W F
R744	1-249-425-11	CARBON 4.7K 5%	1/4W F
R745	1-249-421-11	CARBON 2.2K 5%	1/4W F
R746	1-249-421-11	CARBON 2.2K 5%	1/4W F
R747	1-249-429-11	CARBON 10K 5%	1/4W
R748	1-249-425-11	CARBON 4.7K 5%	1/4W F
△R749	1-249-407-11	CARBON 150 5%	1/4W F
△R784	1-249-389-11	CARBON 4.7 5%	1/4W F
R787	1-249-429-11	CARBON 10K 5%	1/4W
R788	1-247-887-00	CARBON 220K 5%	1/4W
		< RELAY >	
RY503	1-515-793-11	RELAY	
RY601	1-515-920-11	RELAY (24V)	
RY701	1-515-920-11	RELAY (24V)	
		< SWITCH >	
S501	1-692-196-11	SWITCH, SLIDE(SPEAKERS)	
		< TERMINAL >	
TM701	1-537-923-11	TERMINAL BOARD (SPEAKERS) (6P)	

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Ref. No.	Part No.	Description	Remarks
*	1-670-010-11	SP SW BOARD *****	
		< DIODE >	
D120	8-719-911-19	DIODE 1SS119	
D121	8-719-911-19	DIODE 1SS119	
		< RESISTOR >	
R173	1-249-421-11	CARBON 2.2K 5%	1/4W F
R174	1-249-419-11	CARBON 1.5K 5%	1/4W F
		< SWITCH >	
S134	1-762-268-11	SWITCH, ROTARY (SPEAKERS)	
S140	1-762-750-11	SWITCH, TACTILE (SET UP)	
S141	1-762-750-11	SWITCH, TACTILE (CURSOR)	
*****			
*	A-4414-123-A	SW BOARD, COMPLETE *****	
		< CAPACITOR >	
C114	1-164-159-11	CERAMIC 0.1uF	50V
C115	1-164-159-11	CERAMIC 0.1uF	50V
C116	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
CNS113	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P	
CNS114	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P	
CNS115	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P	
CNS116	1-770-397-11	HOUSING, CONNECTOR(PC BOARD)4P	
		< DIODE >	
D109	8-719-046-39	DIODE SEL5821A-TH15	
D110	8-719-046-39	DIODE SEL5821A-TH15	
D112	8-719-046-39	DIODE SEL5821A-TH15	
D113	8-719-046-39	DIODE SEL5821A-TH15	
D114	8-719-046-39	DIODE SEL5821A-TH15	
D116	8-719-046-39	DIODE SEL5821A-TH15	
D117	8-719-046-39	DIODE SEL5821A-TH15	
D118	8-719-046-39	DIODE SEL5821A-TH15	
		< RESISTOR >	
R136	1-249-413-11	CARBON 470 5%	1/4W F
R137	1-249-411-11	CARBON 330 5%	1/4W
R138	1-249-411-11	CARBON 330 5%	1/4W
R139	1-249-411-11	CARBON 330 5%	1/4W
R140	1-249-415-11	CARBON 680 5%	1/4W F
R141	1-249-413-11	CARBON 470 5%	1/4W F
R142	1-249-413-11	CARBON 470 5%	1/4W F
R143	1-249-413-11	CARBON 470 5%	1/4W F
R144	1-249-417-11	CARBON 1K 5%	1/4W F
R145	1-249-415-11	CARBON 680 5%	1/4W F
R146	1-249-415-11	CARBON 680 5%	1/4W F
R147	1-249-415-11	CARBON 680 5%	1/4W F
R148	1-249-419-11	CARBON 1.5K 5%	1/4W F
R149	1-249-417-11	CARBON 1K 5%	1/4W F
R150	1-249-417-11	CARBON 1K 5%	1/4W F

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Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R151	1-249-417-11	CARBON	1K 5%	1/4W F	*	1-670-003-11	VIDEO BOARD
R152	1-249-421-11	CARBON	2.2K 5%	1/4W F		*****	
R153	1-249-419-11	CARBON	1.5K 5%	1/4W F		< CAPACITOR >	
R154	1-249-419-11	CARBON	1.5K 5%	1/4W F			
R155	1-249-419-11	CARBON	1.5K 5%	1/4W F			
R156	1-249-425-11	CARBON	4.7K 5%	1/4W F			
R157	1-249-421-11	CARBON	2.2K 5%	1/4W F			
R158	1-249-421-11	CARBON	2.2K 5%	1/4W F			
R160	1-249-425-11	CARBON	4.7K 5%	1/4W F			
		< SWITCH >					
S103	1-762-750-11	SWITCH, TACTILE (BOOST)					
S105	1-762-750-11	SWITCH, TACTILE (SHIFT)					
S106	1-762-750-11	SWITCH, TACTILE (DIRECT)					
S107	1-762-750-11	SWITCH, TACTILE (EQ ON/OFF)					
S108	1-762-750-11	SWITCH, TACTILE (DVD/LD)					
S109	1-762-750-11	SWITCH, TACTILE (6)					
S110	1-762-750-11	SWITCH, TACTILE (1)					
S111	1-762-750-11	SWITCH, TACTILE (INPUT)					
S112	1-762-750-11	SWITCH, TACTILE (TV/DBS)					
S113	1-762-750-11	SWITCH, TACTILE (7)					
S114	1-762-750-11	SWITCH, TACTILE (2)					
S115	1-762-750-11	SWITCH, TACTILE (GENRE)					
S116	1-762-750-11	SWITCH, TACTILE (PHONO)					
S117	1-762-750-11	SWITCH, TACTILE (8)					
S118	1-762-750-11	SWITCH, TACTILE (3)					
S119	1-762-750-11	SWITCH, TACTILE (SF MODE)					
S120	1-762-750-11	SWITCH, TACTILE (TUNER)					
S121	1-762-750-11	SWITCH, TACTILE (9)					
S122	1-762-750-11	SWITCH, TACTILE (4)					
S123	1-762-750-11	SWITCH, TACTILE (SF ON/OFF)					
S124	1-762-750-11	SWITCH, TACTILE (CD)					
S125	1-762-750-11	SWITCH, TACTILE (0)					
S126	1-762-750-11	SWITCH, TACTILE (5)					
S127	1-762-750-11	SWITCH, TACTILE (TAPE)					
S128	1-762-750-11	SWITCH, TACTILE (VIDEO1)					
S130	1-762-750-11	SWITCH, TACTILE (VIDEO2)					
*****							
*	1-670-000-11	TUNER BOARD					
		*****					
		< CAPACITOR >					
C382	1-161-494-00	CERAMIC	0.022uF	25V			
		< CONNECTOR >					
CNS304	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P					
CNS305	1-774-289-11	PIN, CONNECTOR (PC BOARD) 15P					
*****							
		< DIODE >					
D201	8-719-911-19	DIODE	1SS119				
D202	8-719-911-19	DIODE	1SS119				
		< IC >					
IC201	8-759-529-20	IC	NJM2296D				
IC202	8-759-701-65	IC	NJM79M05FA				
		< JACK >					
J201	1-766-399-11	JACK, PIN 3P (MONITOR/VIDEO1)					
J202	1-766-400-11	JACK, PIN 2P (VIDEO2)					
J203	1-766-400-11	JACK, PIN 2P (TV/DBS)					
J204	1-563-330-11	JACK (S-LINK)					
		< RESISTOR >					
R201	1-247-804-11	CARBON	75	5%	1/4W		
R202	1-247-804-11	CARBON	75	5%	1/4W		
R203	1-247-804-11	CARBON	75	5%	1/4W		
R204	1-247-804-11	CARBON	75	5%	1/4W		
R205	1-247-804-11	CARBON	75	5%	1/4W		
R206	1-247-804-11	CARBON	75	5%	1/4W		
R207	1-247-804-11	CARBON	75	5%	1/4W		
RRR4	1-249-417-11	CARBON	1K	5%	1/4W F		
*****							

## VOLUME

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4414-304-A	VOLUME BOARD, COMPLETE ***** (Including L.B BOARD)				< VARIABLE RESISTOR >	
		< CAPACITOR >		RV401	1-225-446-11	RES, VAR, CARBON 100K × 6 (MASTER VOLUME)	
				RV402	1-238-965-21	RES, VAR, CARBON 100K/100K (BALANCE)	
						*****	
C410	1-126-233-11	ELECT	22uF 20% 50V			MISCELLANEOUS	
C411	1-126-233-11	ELECT	22uF 20% 50V			*****	
C412	1-126-233-11	ELECT	22uF 20% 50V				
C413	1-162-199-31	CERAMIC	10PF 5% 50V	12	1-773-161-11	WIRE (FLAT TYPE) (21 CORE)	
C414	1-162-199-31	CERAMIC	10PF 5% 50V	13	1-769-959-11	WIRE (FLAT TYPE) (11 CORE)	
C415	1-162-199-31	CERAMIC	10PF 5% 50V	66	1-773-285-11	WIRE (FLAT TYPE) (29 CORE)	
C421	1-162-286-31	CERAMIC	220PF 10% 50V	△73	1-769-743-11	CORD, POWER	
C422	1-162-286-31	CERAMIC	220PF 10% 50V	76	1-769-876-11	WIRE (FLAT TYPE) (7 CORE)	
C423	1-162-286-31	CERAMIC	220PF 10% 50V				
C460	1-126-233-11	ELECT	22uF 20% 50V	△T901	1-431-887-11	TRANSFORMER, POWER	
C461	1-126-233-11	ELECT	22uF 20% 50V	△TM301	1-693-407-11	TUNER	
C462	1-126-233-11	ELECT	22uF 20% 50V			*****	
C463	1-162-199-31	CERAMIC	10PF 5% 50V			ACCESSORIES & PACKING MATERIALS	
C464	1-162-199-31	CERAMIC	10PF 5% 50V			*****	
C465	1-162-199-31	CERAMIC	10PF 5% 50V				
C471	1-162-286-31	CERAMIC	220PF 10% 50V			1-501-374-11	ANTENNA, LOOP
C472	1-162-286-31	CERAMIC	220PF 10% 50V			3-810-765-11	MANUAL, COMMONNESS INSTRUCTION (ENGLISH)
C473	1-162-286-31	CERAMIC	220PF 10% 50V			3-864-230-11	MANUAL, INSTRUCTION (RM-PP401) (ENGLISH)
		< CONNECTOR >				3-864-484-11	MANUAL, INSTRUCTION (ENGLISH)
CNP101	1-770-388-11	PIN, CONNECTOR (PC BOARD) 4P				8-917-634-90	REMOTE COMMADER RM-PP401
* CNS402	1-564-726-11	PIN, CONNECTOR (SMALL TYPE)10P				4-987-977-01	LID, BATTERY CASE (For RM-PP401)
		< IC >				*****	
IC408	8-759-634-50	IC M5218AL				*****	
IC409	8-759-634-50	IC M5218AL				HARDWARE LIST	
IC410	8-759-634-50	IC M5218AL				*****	
		< RESISTOR >					
R108	1-249-411-11	CARBON	330 5% 1/4W	#1	7-685-646-79	SCREW +BVTP 3 × 8 TYPE2 TT (B)	
R413	1-249-437-11	CARBON	47K 5% 1/4W	#2	7-685-881-09	SCREW +BVTT 4 × 8 (S)	
R414	1-249-437-11	CARBON	47K 5% 1/4W	#3	7-685-872-09	SCREW +BVTT 3 × 8 (S)	
R415	1-249-437-11	CARBON	47K 5% 1/4W				
R416	1-249-429-11	CARBON	10K 5% 1/4W				
R417	1-247-843-11	CARBON	3.3K 5% 1/4W				
R418	1-249-437-11	CARBON	47K 5% 1/4W				
R419	1-249-437-11	CARBON	47K 5% 1/4W				
R420	1-249-437-11	CARBON	47K 5% 1/4W				
R421	1-249-437-11	CARBON	47K 5% 1/4W				
R463	1-249-437-11	CARBON	47K 5% 1/4W				
R464	1-249-437-11	CARBON	47K 5% 1/4W				
R465	1-249-437-11	CARBON	47K 5% 1/4W				
R466	1-249-429-11	CARBON	10K 5% 1/4W				
R467	1-247-843-11	CARBON	3.3K 5% 1/4W				
R468	1-247-843-11	CARBON	3.3K 5% 1/4W				
R469	1-249-437-11	CARBON	47K 5% 1/4W				
R470	1-249-437-11	CARBON	47K 5% 1/4W				
R471	1-249-437-11	CARBON	47K 5% 1/4W				

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Replace only with part number specified.