

STR-K650P

SERVICE MANUAL

US Model

Ver 1.0 2003.04



- STR-K650P is the tuner and the amplifier section in HT-DDW650.

Dolby Laboratories Licensing Corporation.
“DOLBY” the double-D symbol  “AC-3” and “PRO LOGIC”
are trademarks of Dolby Laboratories Licensing Corporation.

SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, both channels driven, from 40 – 20,000 Hz; rated 70 watts per channel minimum RMS power, with no more than 0.7 % total harmonic distortion from 250 milliwatts to rated output (Models of area code U only).

Amplifier section

POWER OUTPUT

Rated Power Output at Stereo Mode

(8 ohms 40 Hz – 20 kHz, THD 0.7 %)
70 W + 70 W

Reference Power Output

(8 ohms 1 kHz, THD 0.7 %)

FRONT¹⁾: 80 W/ch

CENTER¹⁾: 80 W

SURR¹⁾: 80 W/ch

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

Frequency response

CD, MD/TAPE, DVD,	10 Hz – 50 kHz
VIDEO 1, 2	+0.5/-2 dB (with sound field and tone bypassed)

Inputs (Analog)

CD, MD/TAPE, DVD, VIDEO 1, 2	Sensitivity: 500 mV Impedance: 50 kilohms S/N ²⁾ : 96 dB (A, 500 mV ³⁾)
------------------------------	---

2) INPUT SHORT (with sound field and tone bypassed).

3) Weighted network, input level.

Inputs (Digital)

DVD (Coaxial)	Sensitivity: – Impedance: 75 ohms S/N: 100 dB (A, 20 kHz LPF)
---------------	--

VIDEO 2 (Optical)	Sensitivity: – Impedance: – S/N: 100 dB (A, 20 kHz LPF)
-------------------	--

Outputs

MD/TAPE (OUT), VIDEO 1 (AUDIO OUT)	Voltage: 500 mV Impedance: 10 kilohms
------------------------------------	--

SUB WOOFER	Voltage: 2 V Impedance: 1 kilohms
------------	--------------------------------------

Tone

Gain levels: ±6 dB, 1 dB step

— Continued on next page —

FM STEREO FM-AM RECEIVER

9-877-334-01
2003D167800-1
© 2003.04

Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

FM tuner section	
Tuning range	87.5 - 108.0 MHz
Antenna terminals	75 ohms, unbalanced
Intermediate Frequency	10.7 MHz
Sensitivity	
Mono:	18.3 dBf, 2.2 µV/75 ohms
Stereo:	38.3 dBf, 22.5 µV/75 ohms
Usable sensitivity	11.2 dBf, 1 µV/75 ohms
S/N	
Mono:	76 dB
Stereo:	70 dB
Harmonic distortion at 1 kHz	
Mono:	0.3%
Stereo:	0.5%
Separation	45 dB at 1 kHz
Frequency response	30 Hz – 15 kHz, +0.5/-2 dB
Selectivity	60 dB at 400 kHz
AM tuner section	
Tuning range	
With 10-kHz tuning scale: 530 – 1710 kHz ⁴⁾	
With 9-kHz tuning scale: 531 – 1710 kHz ⁴⁾	
Antenna	Loop antenna
Intermediate Frequency	450 kHz
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)

S/N	54 dB (at 50 mV/m)
Harmonic distortion	0.5 % (50 mV/m, 400 Hz)
Selectivity	
At 9 kHz:	35 dB
At 10 kHz:	40 dB

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

Video section	
Inputs	
Video:	1 Vp-p, 75 ohms
Outputs	
Video:	1 Vp-p, 75 ohms

General	
Power requirements	120 V AC, 60 Hz
Power consumption	175 W
Power consumption (during standby mode)	0.3 W
Dimensions	
430 × 145 × 298 mm (16 7/8 × 5 6/8 × 11 6/8 inches) including projecting parts and controls	
Mass (Approx.)	7.2 kg (15 lb 14 oz)

Design and specifications are subject to change without notice.

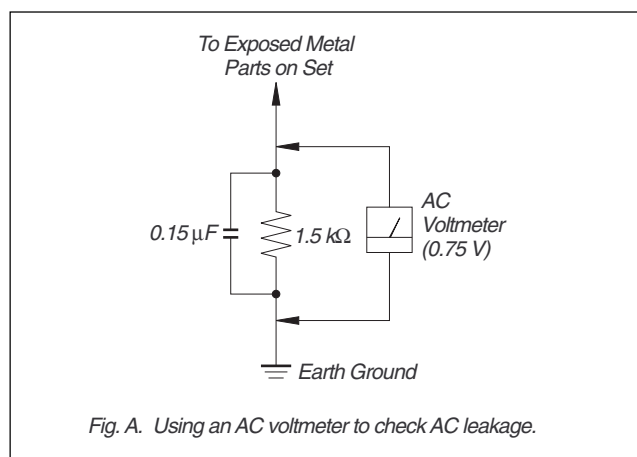
SAFETY CHECK-OUT

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 microamperes). 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)



Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)



: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350°C.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

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.

TABLE OF CONTENTS

1. GENERAL	5
2. TEST MODE	6
3. DIAGRAMS	7
3-1. Circuit Board Location	7
3-2. Block Diagrams – MAIN Section –	8
– DISPLAY/POWER Section –	9
3-3. Printed Wiring Board – DIGITAL Board (SIDE A) –	10
3-4. Printed Wiring Board – DIGITAL Board (SIDE B) –	11
3-5. Schematic Diagram – DIGITAL Section (1/2) –	12
3-6. Schematic Diagram – DIGITAL Section (2/2) –	13
3-7. Printed Wiring Board – MAIN Board –	14
3-8. Schematic Diagram – MAIN Section (1/3) –	15
3-9. Schematic Diagram – MAIN Section (2/3) –	16
3-10. Schematic Diagram – MAIN Section (3/3) –	17
3-11. Printed Wiring Board – POWER Section –	18
3-12. Printed Wiring Board – DISPLAY Board –	19
3-13. Schematic Diagram – DISPLAY Section –	20
3-14. Printed Wiring Board – VIDEO Section –	21
3-15. Schematic Diagram – VIDEO Board –	22
3-16. IC Block Diagrams	23
3-17. IC Pin Function Descriptions	25
4. EXPLODED VIEWS	27
4-1. Front Panel Section	27
4-2. Chassis Section	28
5. ELECTRICAL PARTS LIST	29

SECTION 1 GENERAL

This section is extracted
from instruction manual.

ALPHABETICAL ORDER

A – L

A. F. D. (button/indicator) **20**
(22–24)
CD **9** (20)
DIMMER **3** (21)
DISPLAY **2** (21, 31, 46)
Display **11** (21)
DVD **7** (20)
ENTER **15** (33, 35)
FM MODE **24** (29)
INPUT MODE **13** (20)
IR (receptor) **4** (36, 46)

M – O

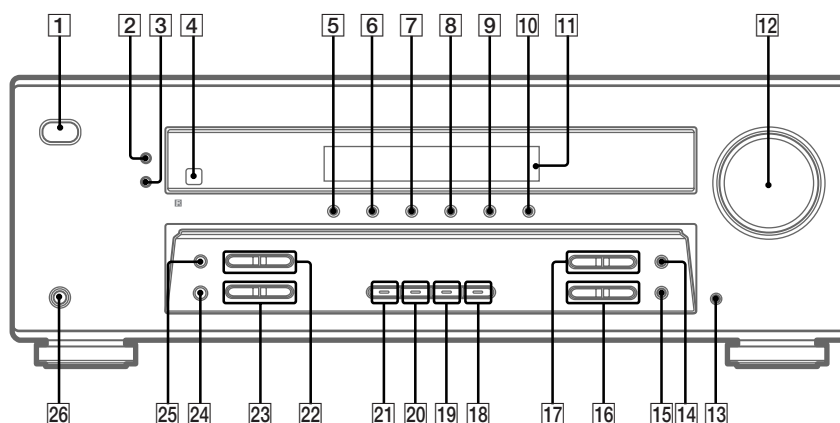
MAIN MENU **14** (15, 26, 27, 33,
34, 51)
MASTER VOLUME **12** (18, 20,
44)
MD/TAPE **8** (20)
MEMORY **25** (28, 30)
MENU +/- **16** (15, 26, 27, 33, 34,
51)
MENU </> **17** (15, 26, 27, 33, 34,
51)
MOVIE (button/indicator) **19** (23,
45)
MUSIC (button/indicator) **18** (23,
24, 45)

P – Z

PHONES (jack) **26** (20, 25, 45)
PRESET TUNING +/- **22** (30, 48)
TUNER FM/AM **10** (20, 29, 30,
33)
TUNING +/- **23** (29)
VIDEO 1 **5** (20)
VIDEO 2 **6** (20)

NUMBERS AND SYMBOLS

2CH (button/indicator) **21** (22, 24,
27)
I/⏻ (power) **1** (14, 19, 27, 28,
35, 48)



SECTION 2

TEST MODE

FACTORY PRESET MODE

* All preset contents are reset to the default setting.

* Procedure:

While depressing the **FM MODE** and the **PRESET TUNING-** buttons simultaneously, press the **I/⏻** button again. The message “FACTORY” appears and the present contents are reset to the default values.

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 **I/⏻** button to turn on the main power. Either the message “9 k STEP” or “10 k STEP” appears. Select the desired step.

SPEAKER SIZE SELECTION MODE

* Either Normal Speaker or Micro Satellite Speaker can be selected.

* Procedure:

While depressing the **MAIN MENU** button, press the **I/⏻** button to turn the main power.

Either the message “NORM. SP.” or “MICRO SP.” is displayed. Select the desired speaker size.

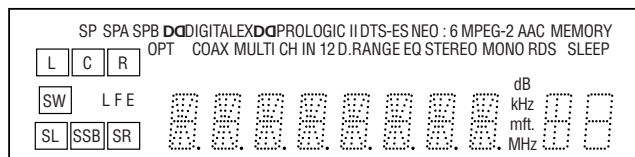
FLUORESCENT INDICATOR TUBE TEST MODE

* 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:

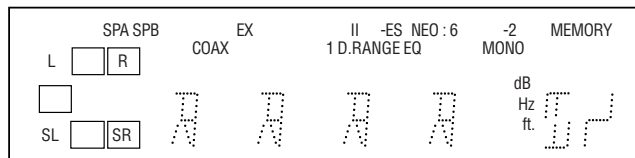
While depressing the **FM MODE** and the **MD/TAPE** buttons simultaneously, press the **I/⏻** button to turn on the main power.

1. All segments turn on.



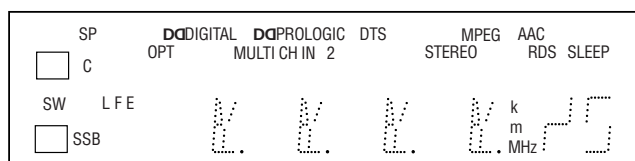
2CH, **A. F. D**, **MOVIE** and **MUSIC** LED turn on.

2. Press the **VIDEO** button, confirm display.



2CH and **MOVIE** LED turn on.

3. Press the **VIDEO** button, confirm display



A. F. D and **MUSIC** LED turn on.

4. Press the **VIDEO1** button, All segments and all LEDS turn off.

5. Every pressing of the **VIDEO1** button turns on each segment and LED one after another in the same order.

(Not only the **VIDEO1** button, but also the other buttons such as **VIDEO2**, **DVD**, **MD/TAPE**, **CD** and **TUNER FM/AM** can be used.)

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 **2CH** button, press the **I/⏻** button to turn on the main power.

The message “SF. CLR.” appears and initialization is performed.

SOFTWARE VERSION DISPLAY MODE

* The software version is displayed.

* Procedure:

While depressing the **FM MODE** and the **DVD** buttons simultaneously, press the **I/⏻** button to turn on the main power. The model name, destination and the software version are displayed.

KEY CHECK MODE

* Button check

* Procedure:

While depressing the **MUSIC** and the **TUNING-** buttons simultaneously, press the power **I/⏻** button to turn on the main power.

“REST 25” appears.

Every pressing of any button other than **I/⏻** counts down the buttons. The buttons which are already counted once are not counted again. When all buttons are pressed “REST 00” appears.

COMMAND MODE SELECTION MODE

* The command mode (AV1 or AV2) of the remote commander can be selected.

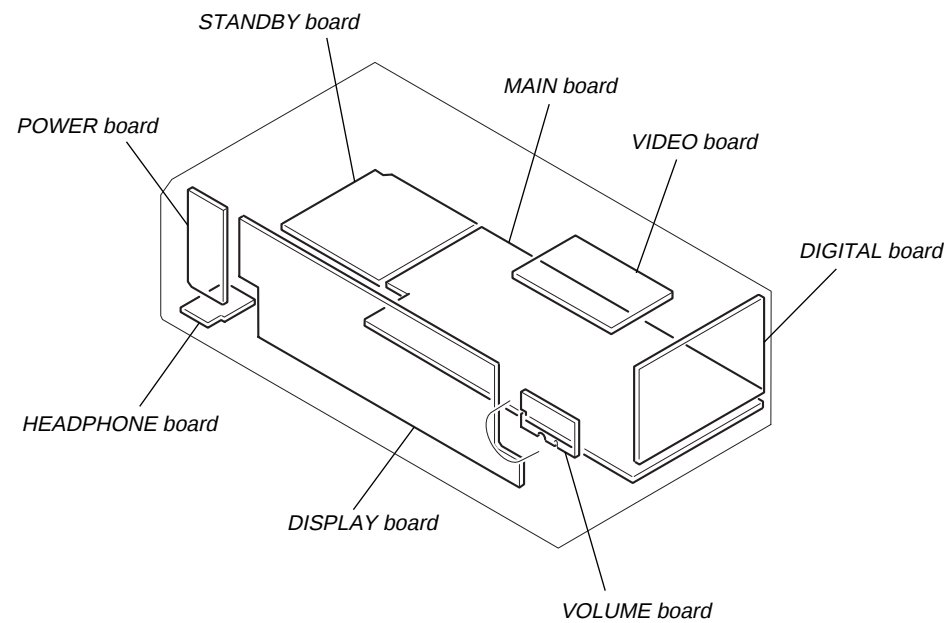
* Procedure:

1. While depressing the **ENTER** button, press the **I/⏻** button to turn on the main power.

2. The message “C.MODE.AV 1” or “C.MODE.AV 2” appears for a moment. Select the desired mode.

SECTION 3
DIAGRAMS

3-1. Circuit Board 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 μF unless otherwise noted. p : pF. 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.

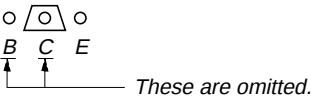
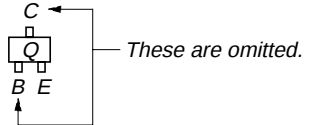
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

-  : B+ Line.
-  : B- Line.
- 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 Ω).
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 (ANALOG)
 -  : DVD (DIGITAL)

For printed wiring boards.

Note:

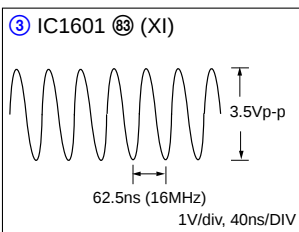
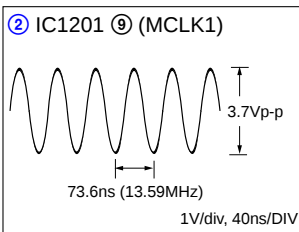
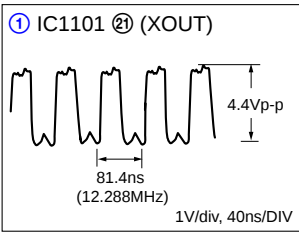
-  : parts extracted from the component side.
-  : Through hole.
-  : internal component.
-  : Pattern from the side which enables seeing.



Caution:
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: Parts on the parts face side seen from the parts face are indicated.

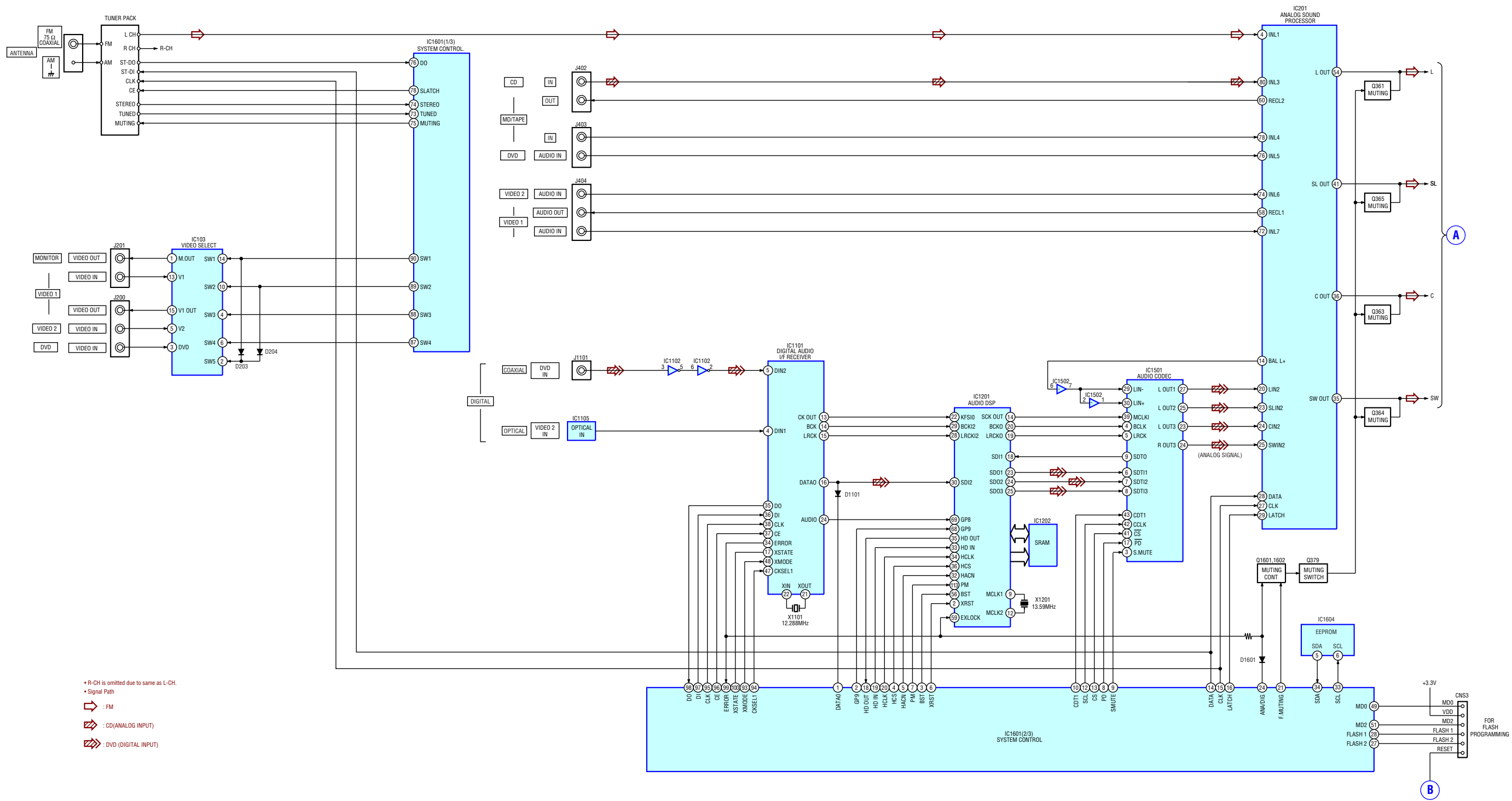
• Waveform

DIGITAL Board

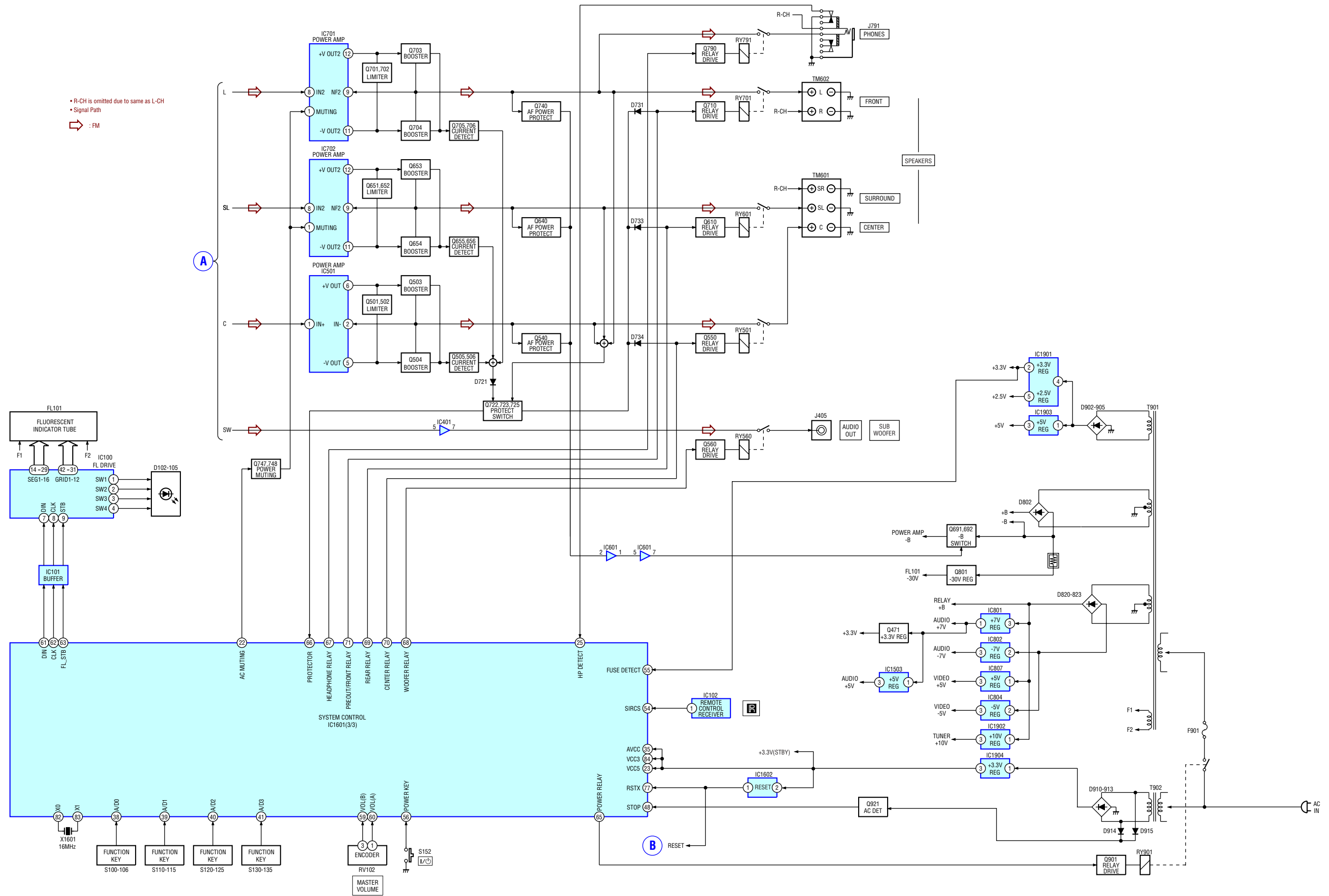


STR-K650P

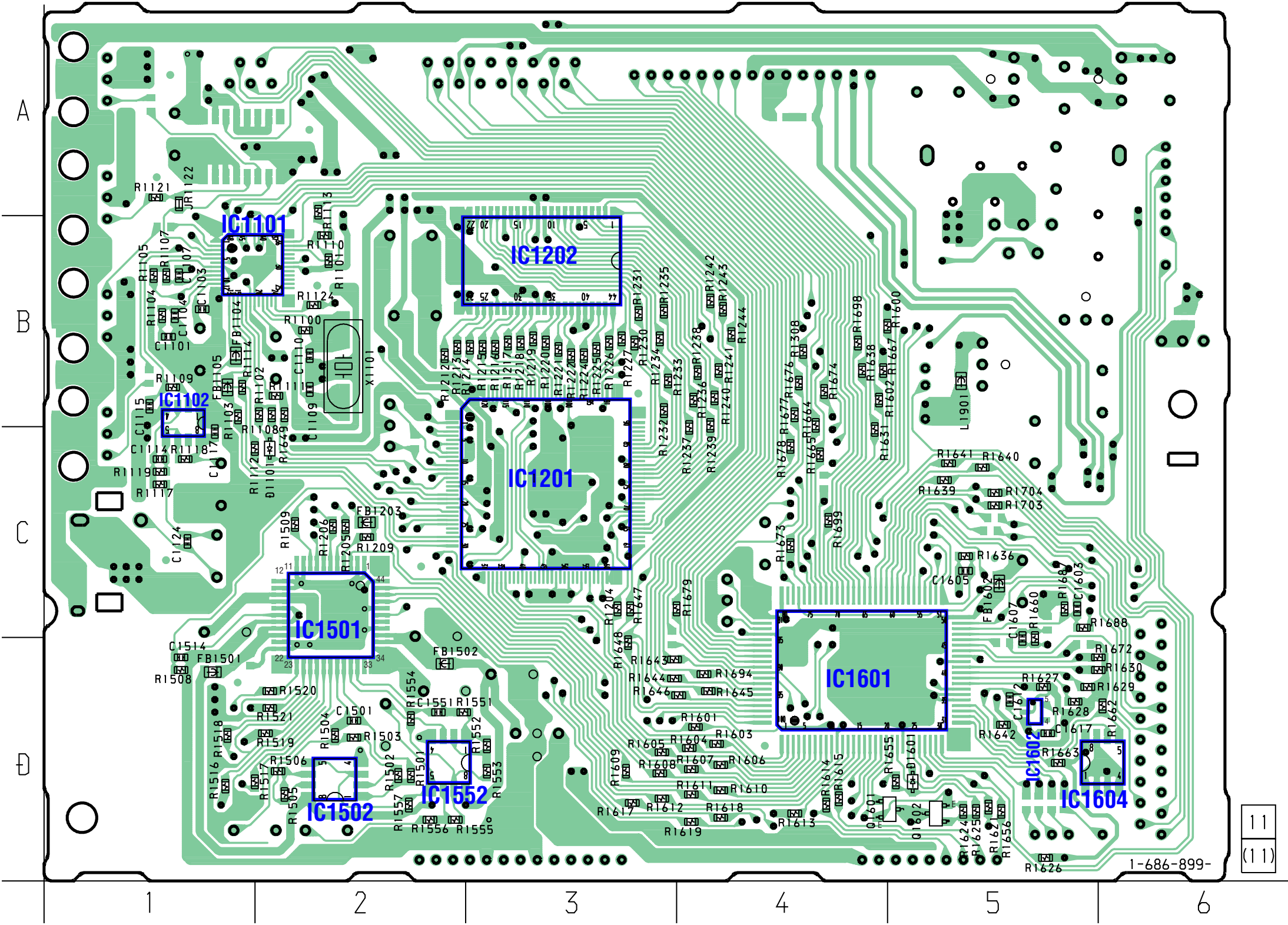
3-2. Block Diagrams – MAIN Section –



- DISPLAY/POWER Section -



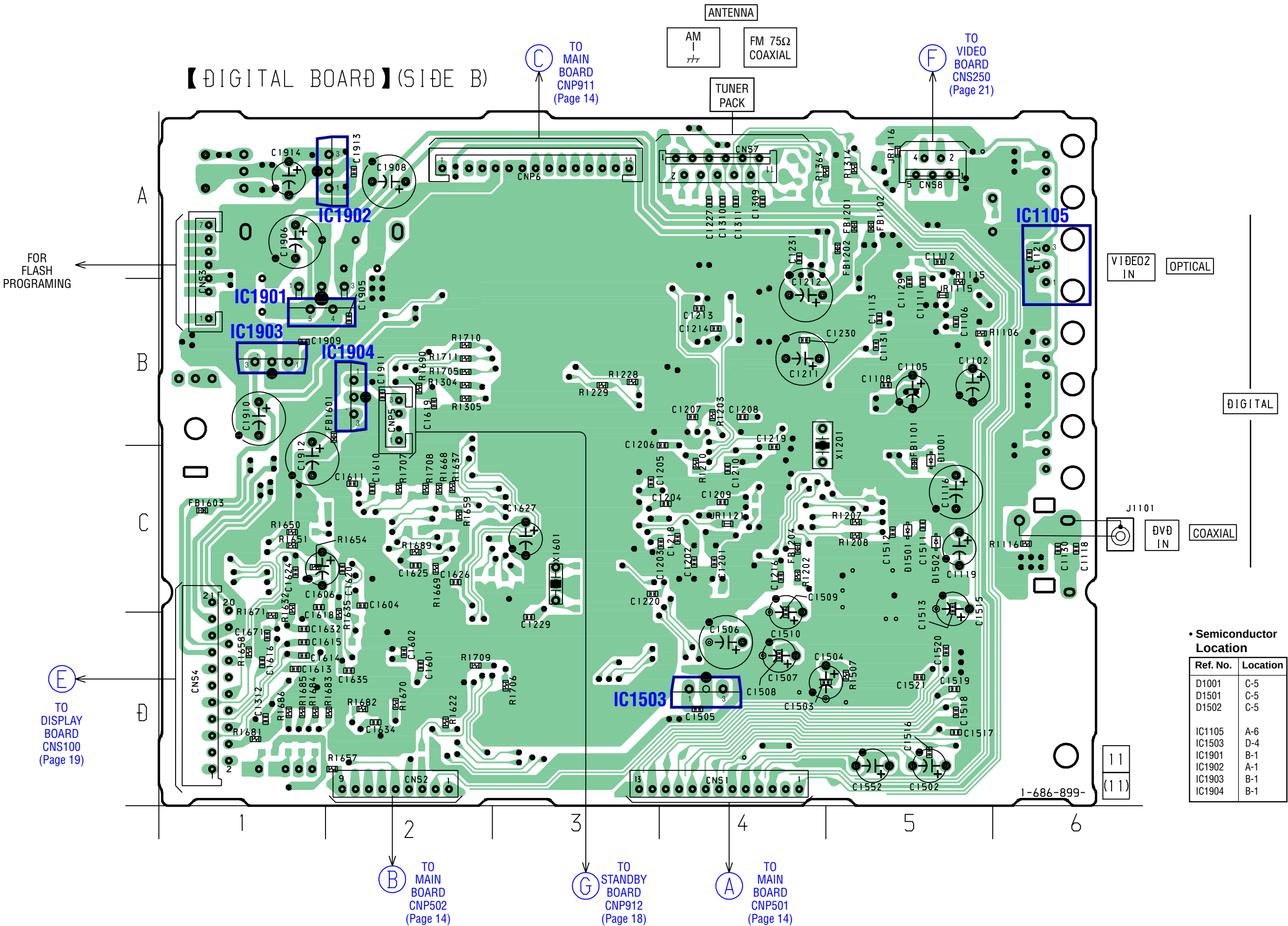
【DIGITAL BOARD】(SIDE A)



• Semiconductor Location

Ref. No.	Location
D1101	C-2
D1601	D-5
IC1101	B-2
IC1102	B-1
IC1201	C-3
IC1202	B-3
IC1501	D-2
IC1502	D-2
IC1552	D-2
IC1601	D-4
IC1602	D-5
IC1604	D-5
Q1601	D-4
Q1602	D-5

3-4. Printed Wiring Board – DIGITAL Board (SIDE B) – • See page 7 for Circuit Boards Location. • : Uses unleaded solder.



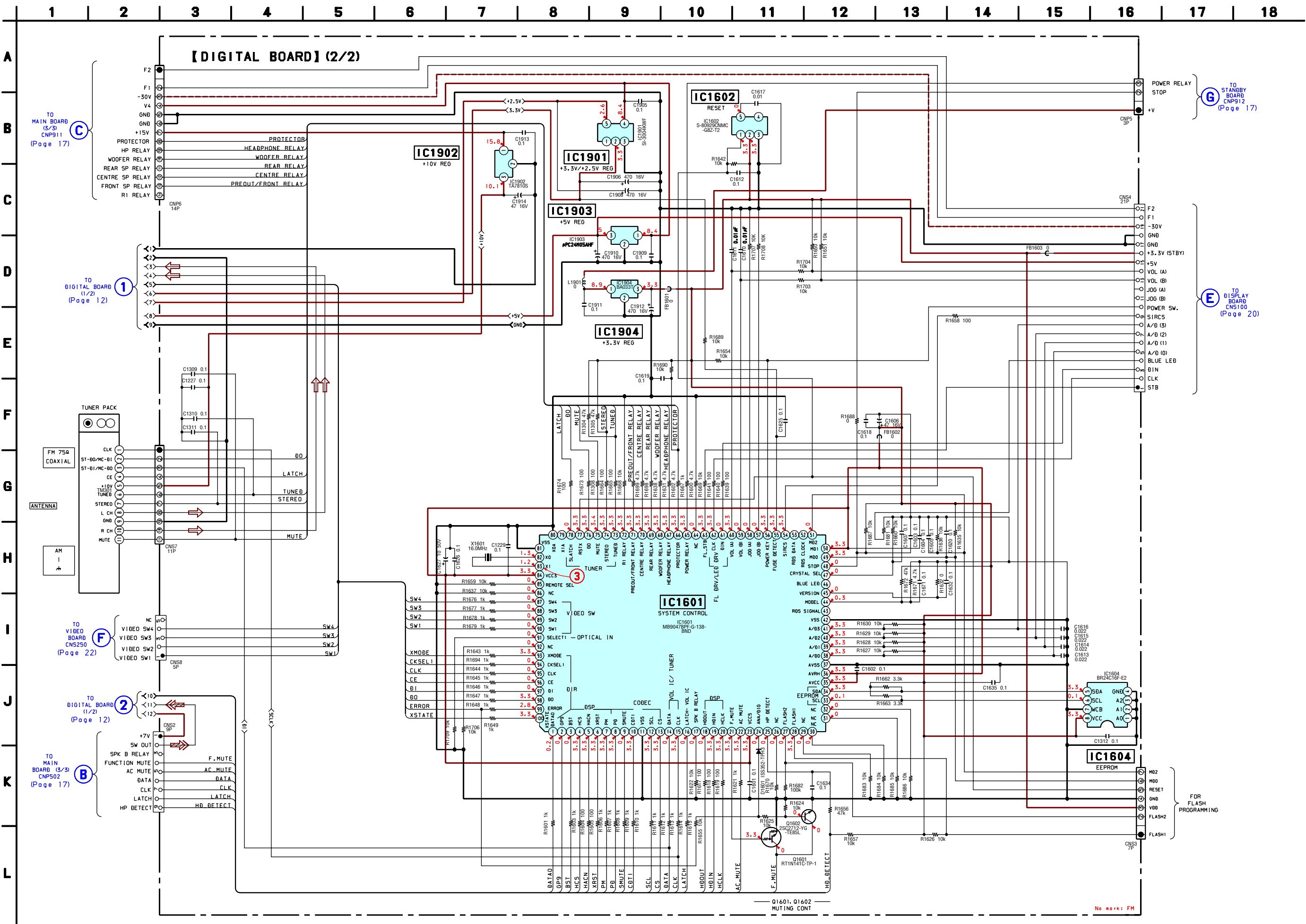
• Semiconductor Location

Ref. No.	Location
D1001	C-5
D1501	C-5
D1502	C-5
IC1105	A-6
IC1503	D-4
IC1901	B-1
IC1902	A-1
IC1903	B-1
IC1904	B-1

3-5. Schematic Diagram – DIGITAL Section (1/2) – • See page 7 for Waveforms. • See page 23 for IC Block Diagrams.



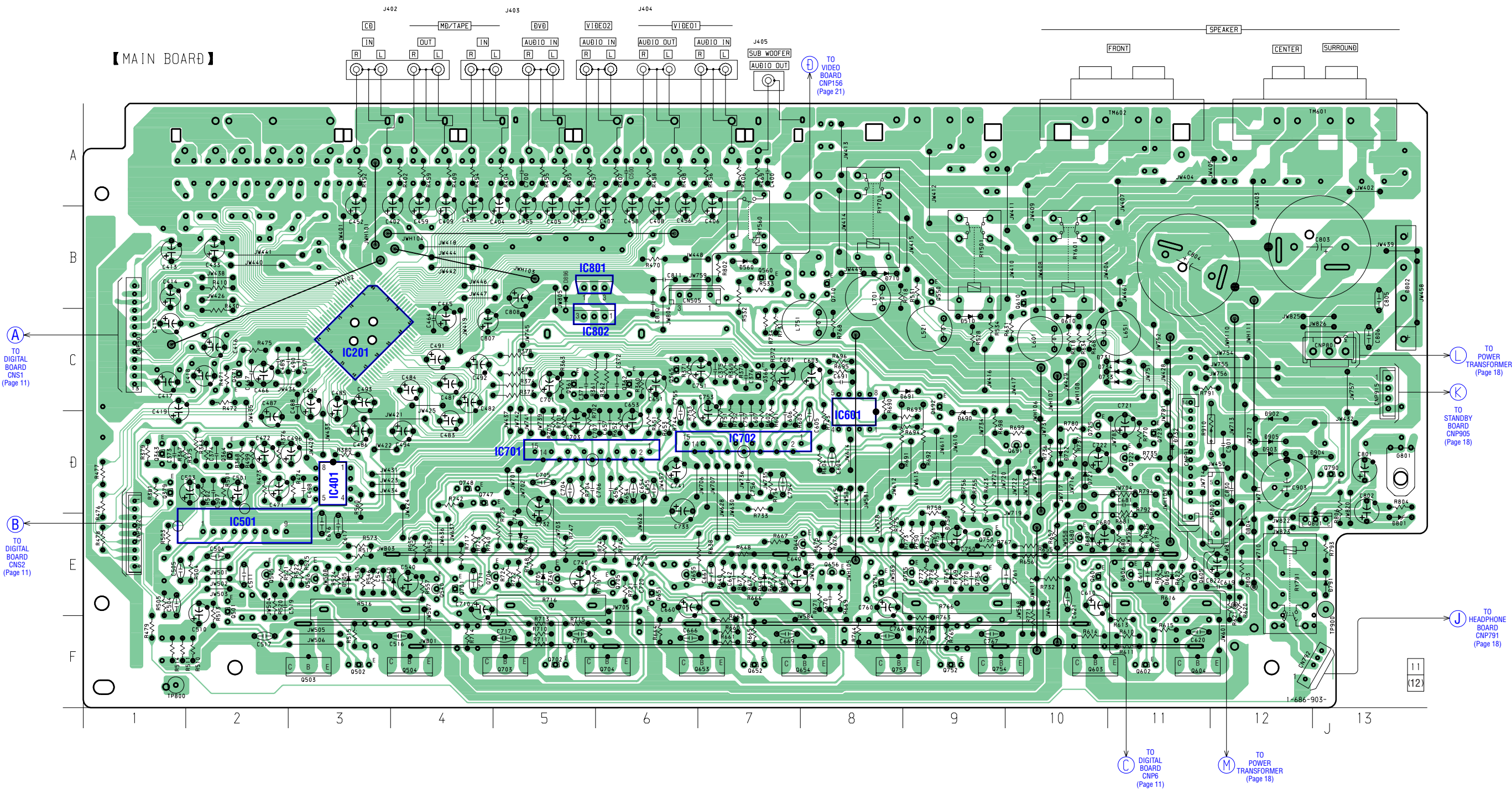
3-6. Schematic Diagram – DIGITAL Section (2/2) – • See page 7 for Waveforms.



STR-K650P

3-7. Printed Wiring Board – MAIN Board –

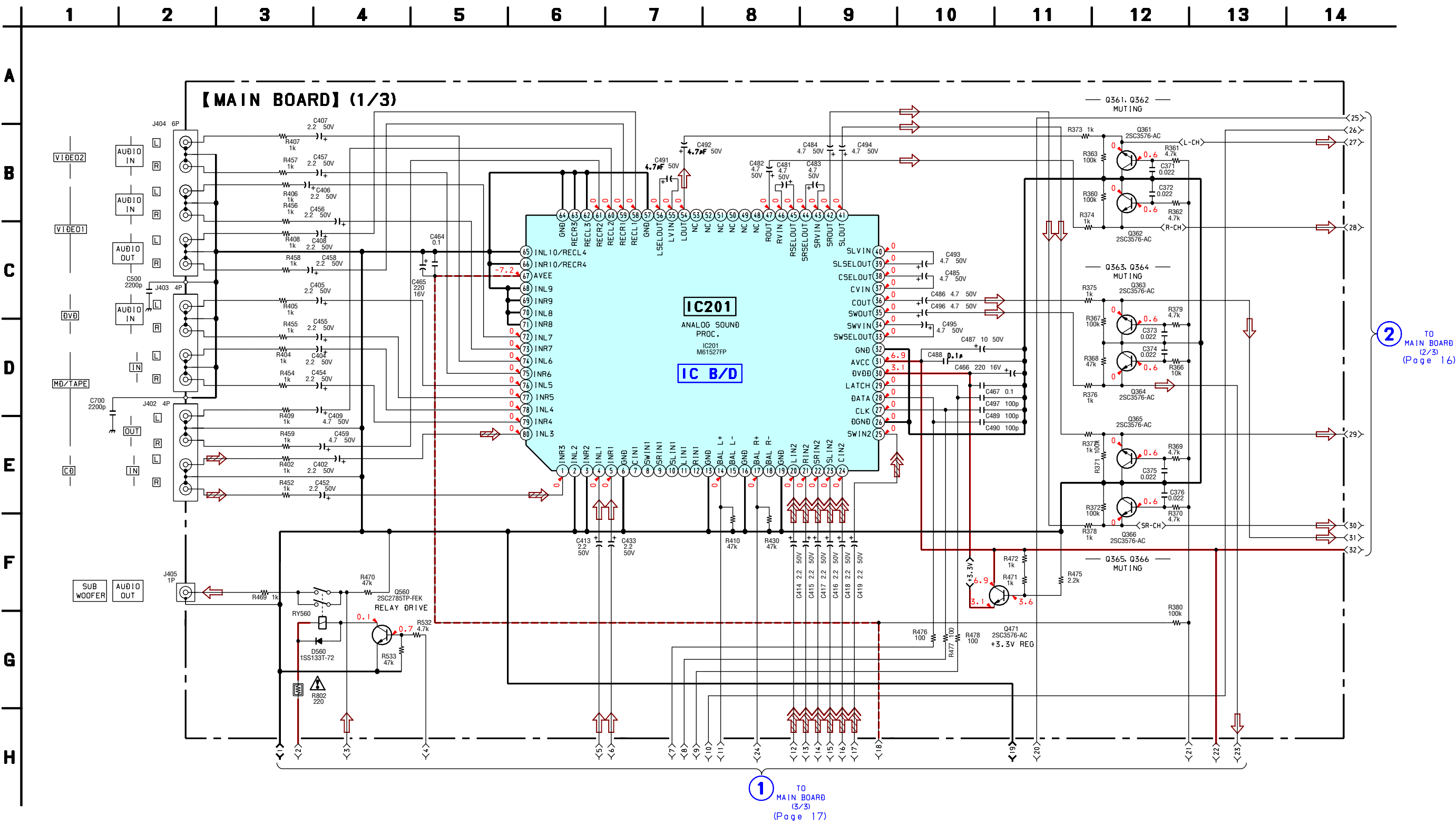
• See page 7 for Circuit Boards Location. •  : Uses unleaded solder.

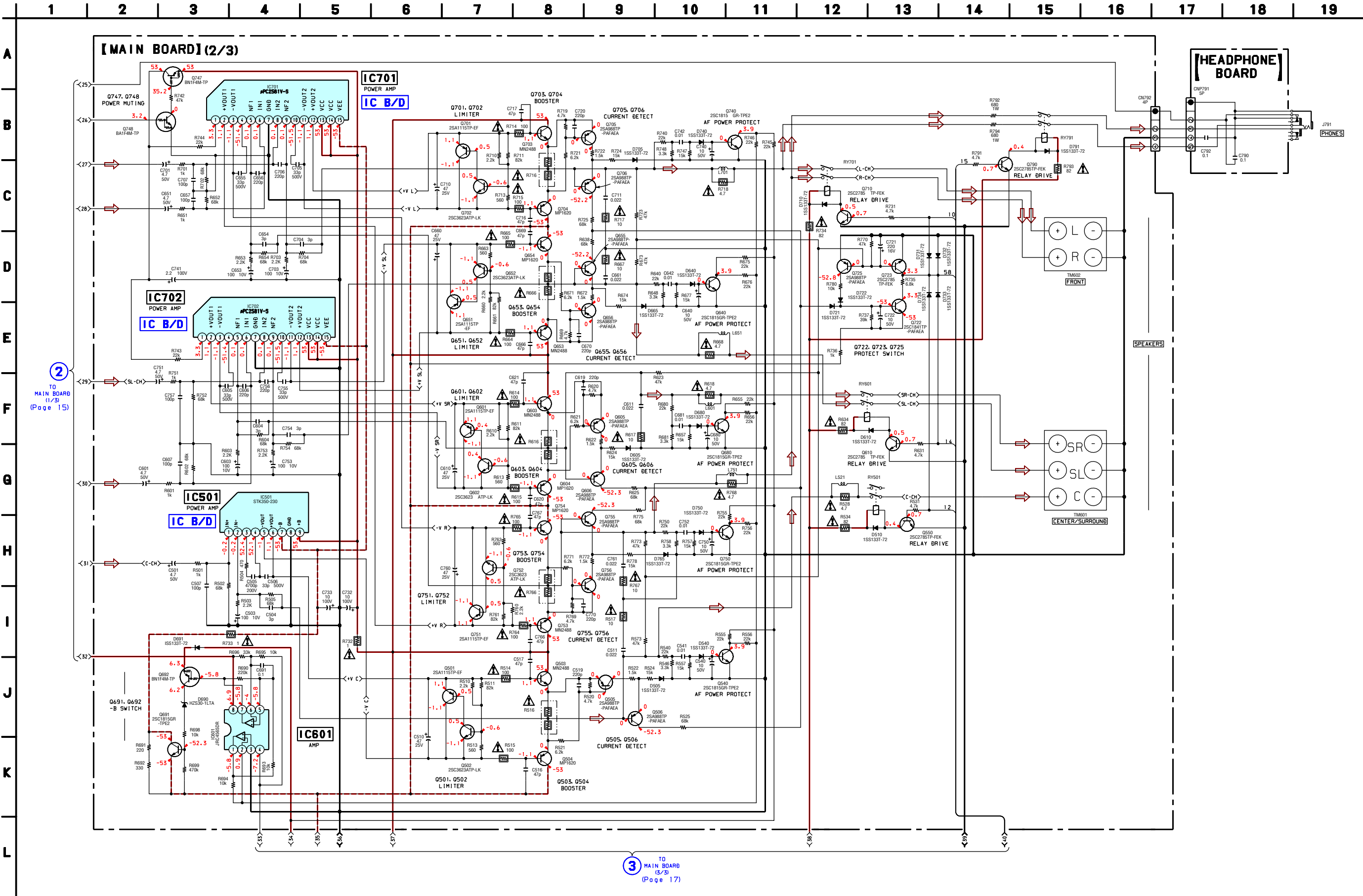


• Semiconductor Location

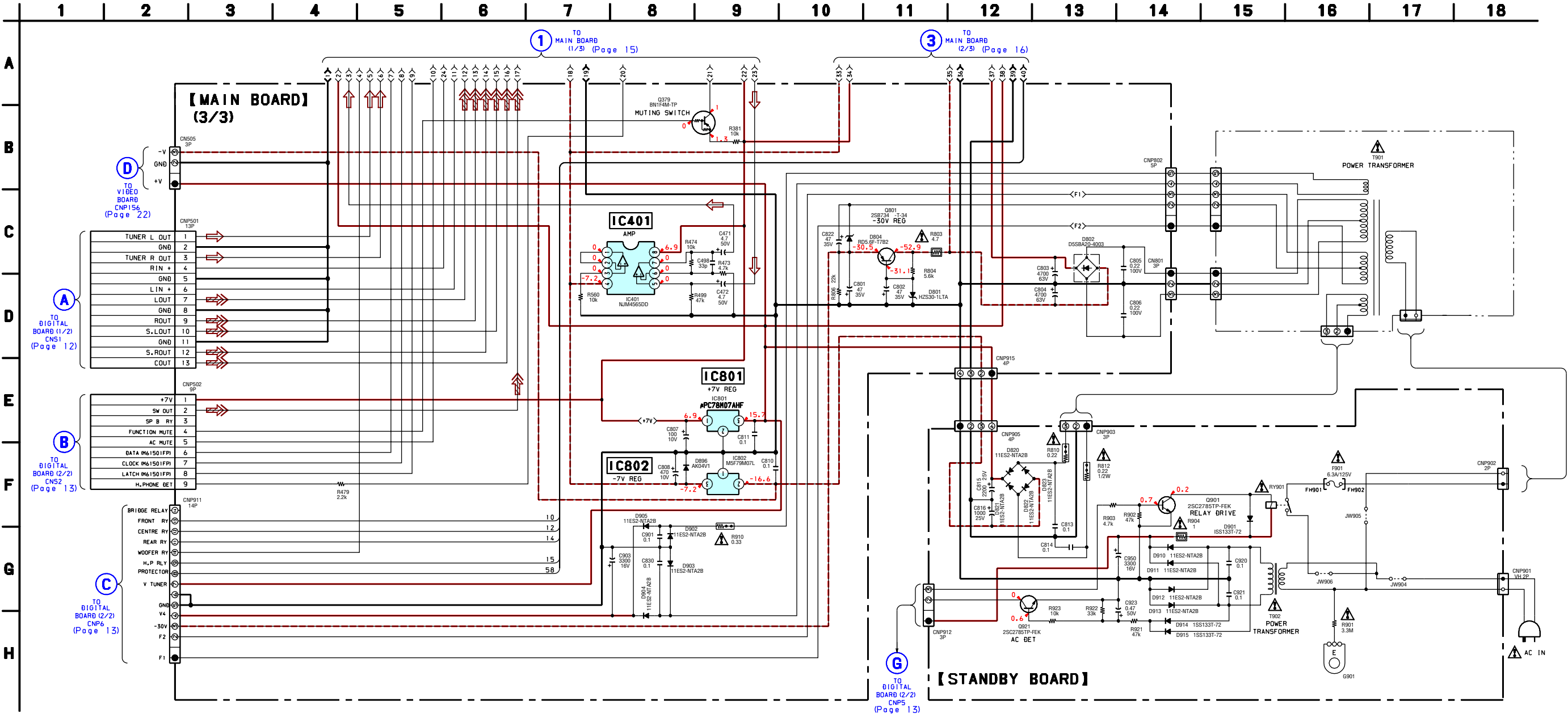
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D505	E-3	D722	D-10	D903	D-12	Q362	C-6	Q550	B-9	Q655	E-6	Q725	D-10
D510	C-9	D731	C-10	D904	D-12	Q363	D-1	Q560	B-7	Q656	E-8	Q740	E-5
D540	E-3	D732	D-11	D905	D-12	Q364	D-2	Q601	E-10	Q680	E-10	Q747	D-4
D560	B-7	D733	C-10			Q365	C-6	Q602	F-11	Q691	D-9	Q748	D-4
D605	E-11	D734	C-10	IC201	C-3	Q366	C-7	Q603	F-10	Q692	C-9	Q750	E-9
D610	C-10	D740	E-5	IC401	D-3	Q379	D-1	Q604	F-11	Q701	E-4	Q751	E-8
D640	E-7	D750	E-9	IC501	E-2	Q471	C-2	Q605	E-11	Q702	F-5	Q752	F-9
D665	E-7	D765	E-9	IC601	D-8	Q501	E-2	Q606	E-11	Q703	F-5	Q753	F-8
D680	E-10	D791	E-13	IC701	D-5	Q502	F-3	Q610	C-10	Q704	F-6	Q754	F-9
D690	D-9	D801	E-13	IC702	D-7	Q503	E-7	Q640	E-7	Q705	E-6	Q755	E-8
D691	C-8	D802	E-13	IC801	B-5	Q504	F-4	Q651	E-6	Q706	E-4	Q756	E-9
D705	E-5	D804	E-12	IC802	C-5	Q505	E-2	Q652	F-7	Q710	C-8	Q790	D-13
D710	B-8	D896	B-5			Q506	E-3	Q653	F-7	Q722	D-11	Q801	E-12
D721	D-10	D902	D-12	Q361	C-5	Q540	E-4	Q654	F-8	Q723	D-11		

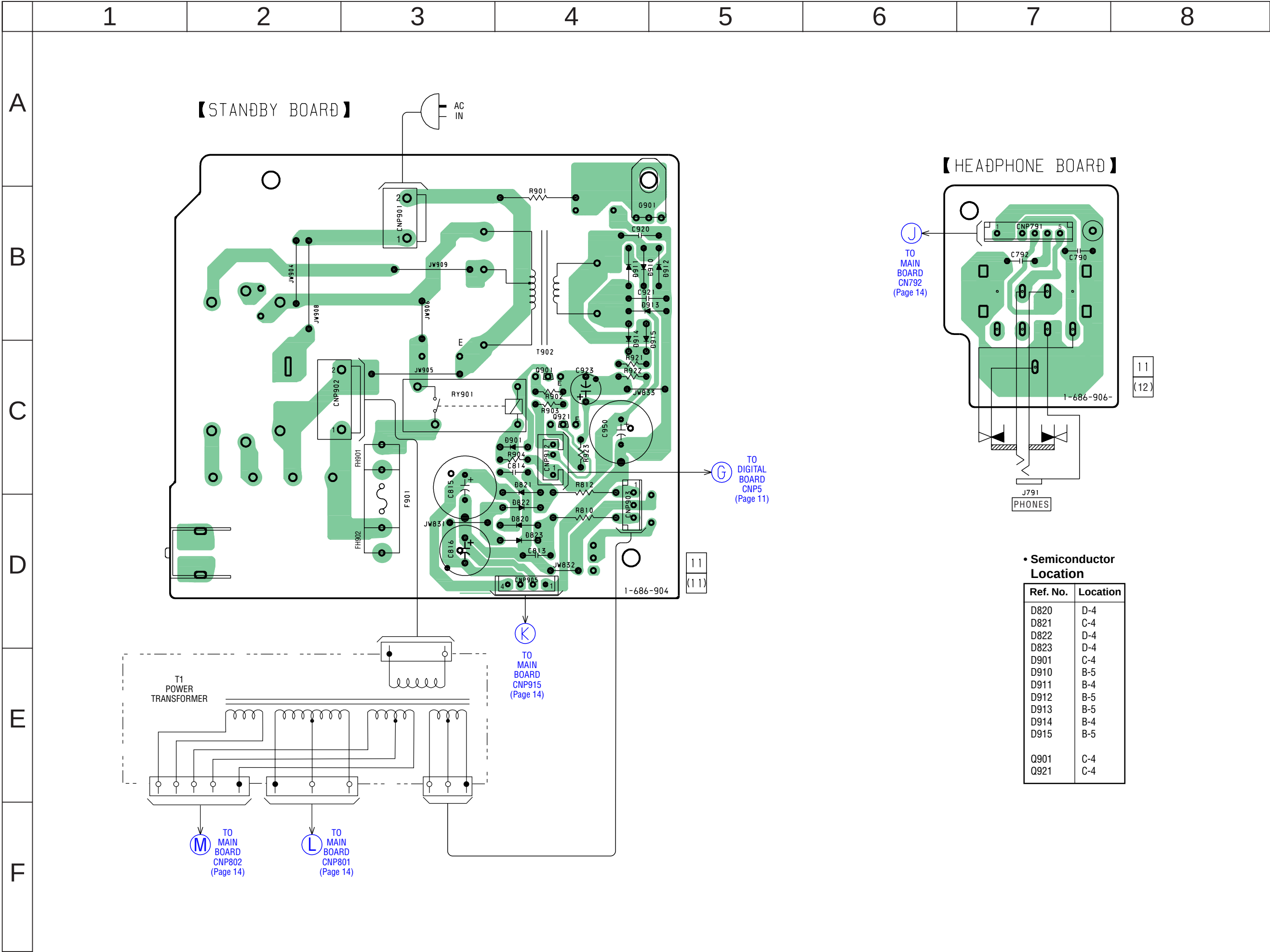
3-8. Schematic Diagram – MAIN Section (1/3) – • See page 24 for IC Block Diagrams.





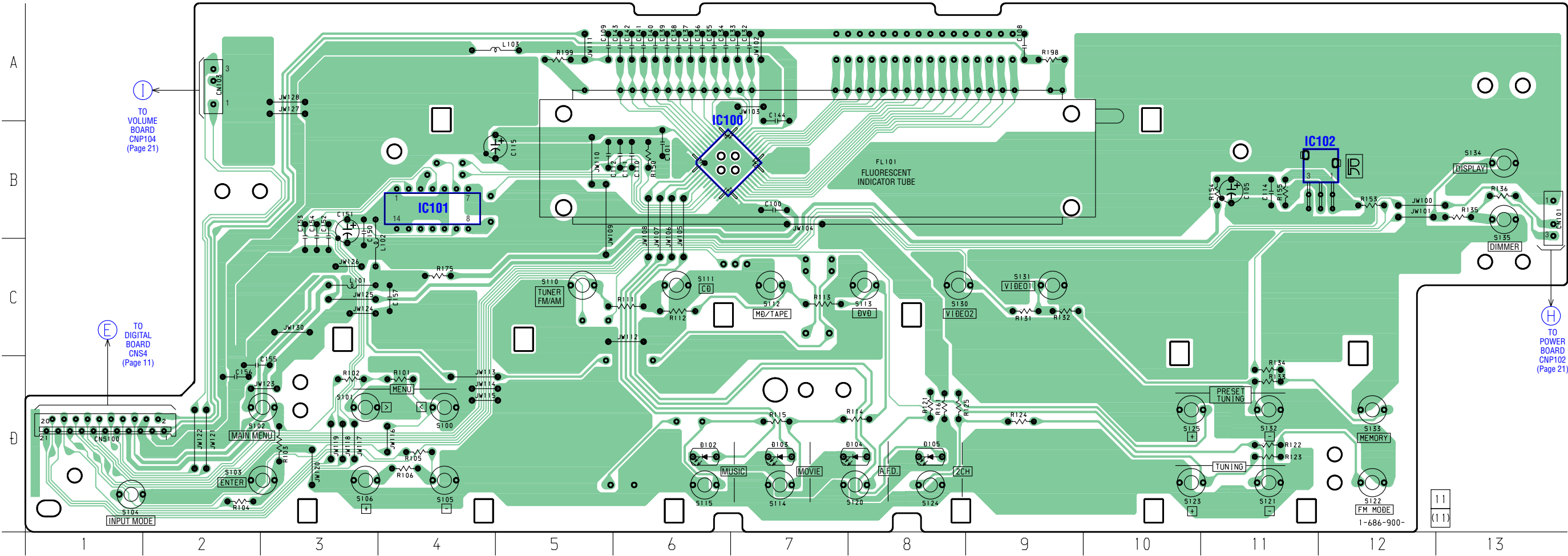
3-10. Schematic Diagram – MAIN Section (3/3) –





3-12. Printed Wiring Board – DISPLAY Board – • See page 7 for Circuit Boards Location. • : Uses unleaded solder.

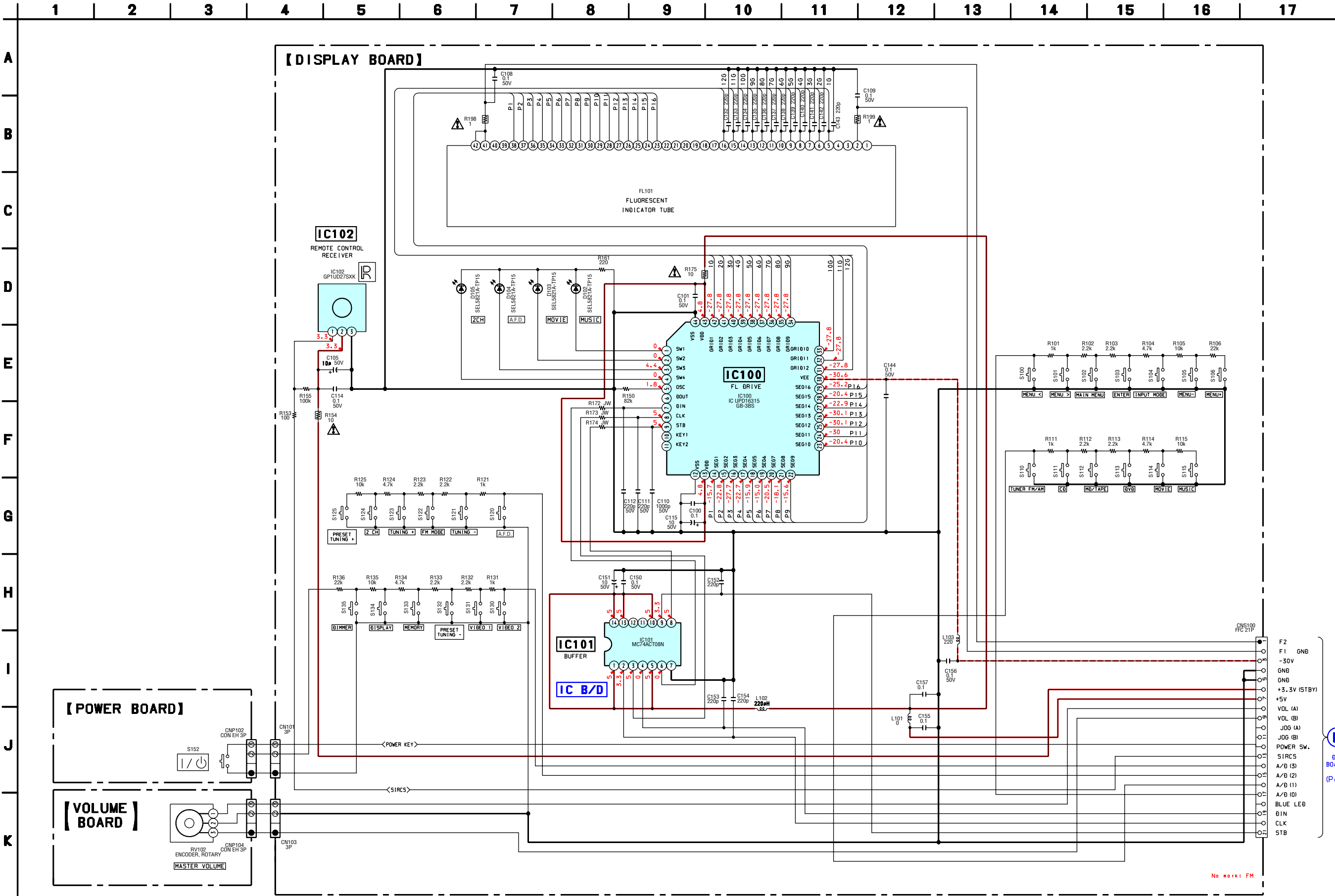
【DISPLAY BOARD】



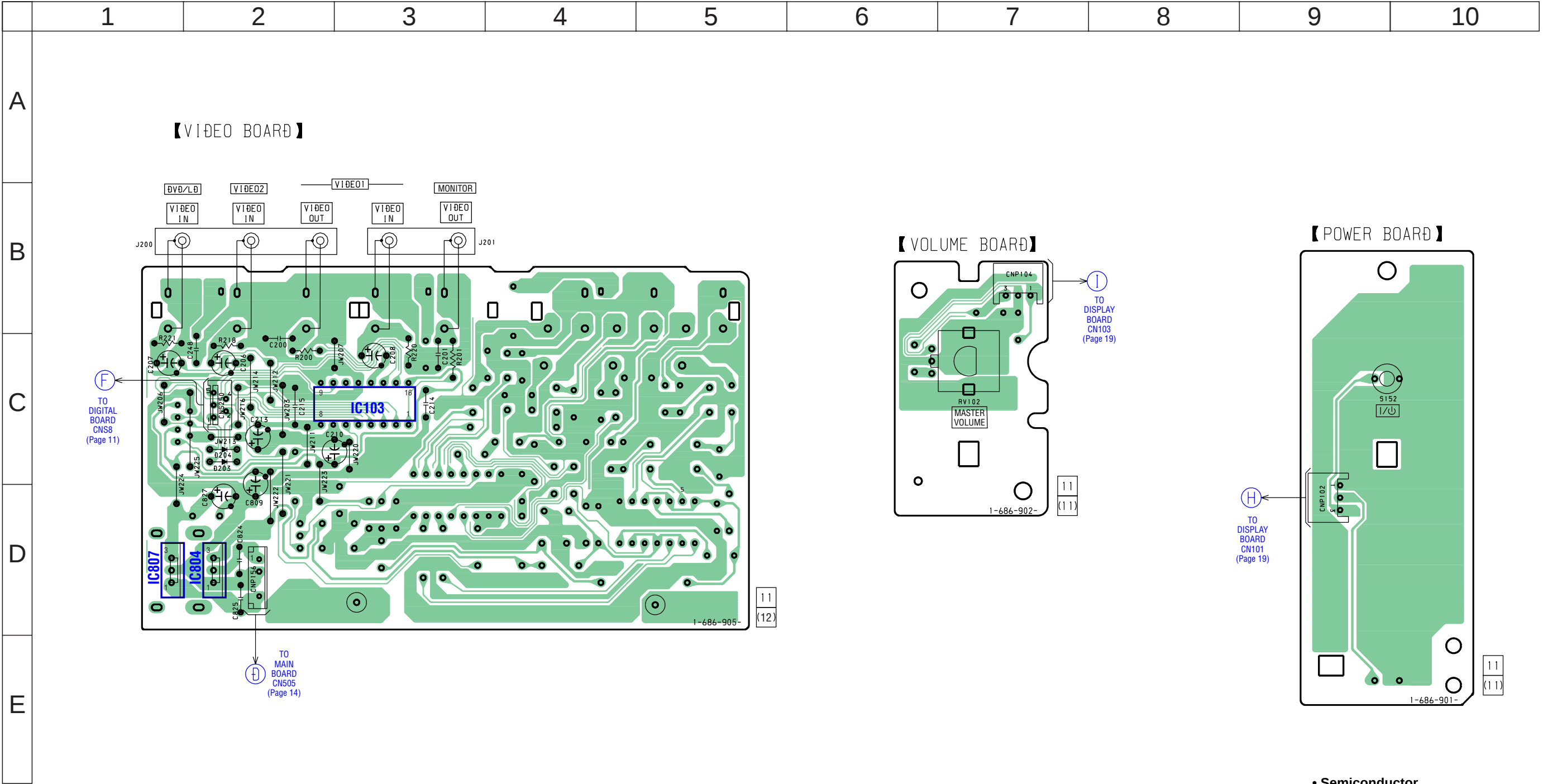
• Semiconductor Location

Ref. No.	Location
D102	D-6
D103	D-7
D104	D-8
D105	D-8
IC100	B-6
IC101	B-4
IC102	B-11

3-13. Schematic Diagram – DISPLAY Section – • See page 23 for IC Block Diagrams.

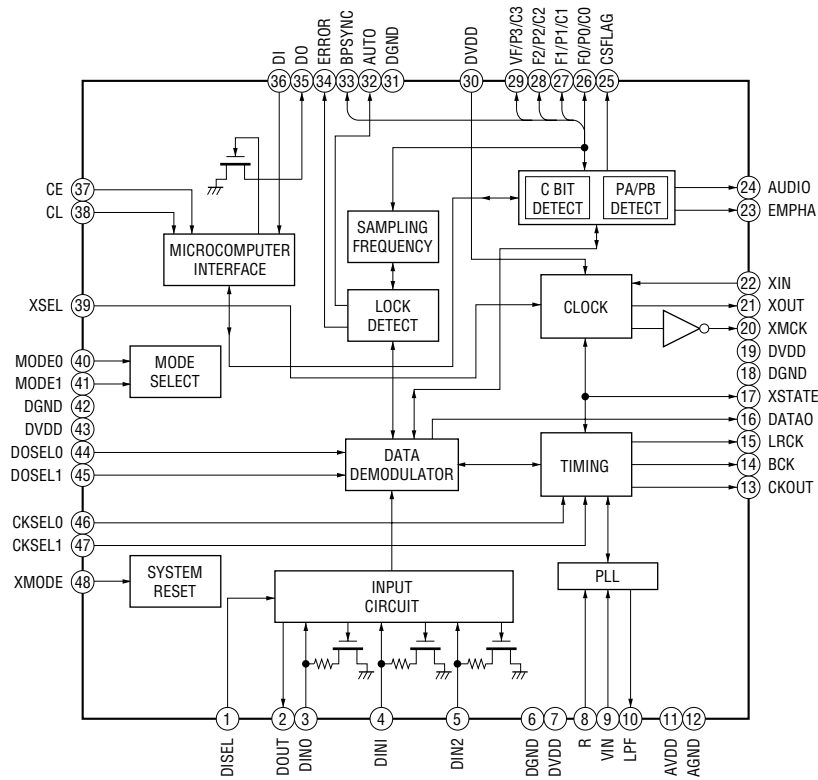


3-14. Printed Wiring Board – VIDEO Section – • See page 7 for Circuit Boards Location. • : Uses unleaded solder.

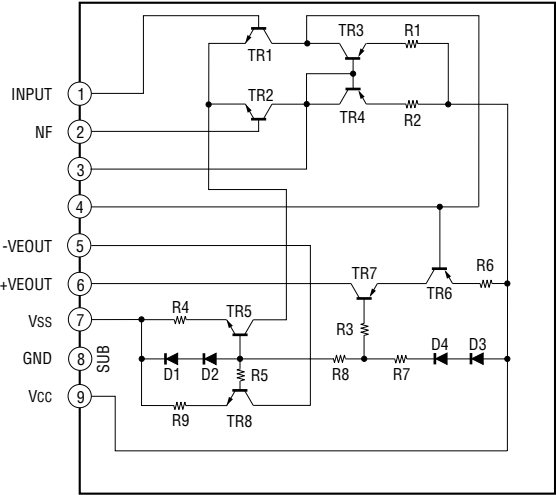




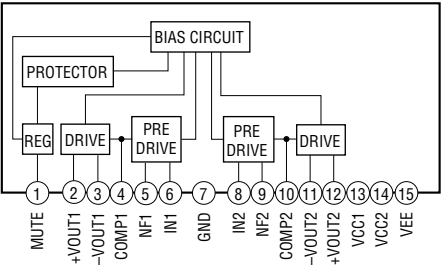
3-16. IC Block Diagrams
IC1101 LC89056W-E (DIGITAL BOARD)



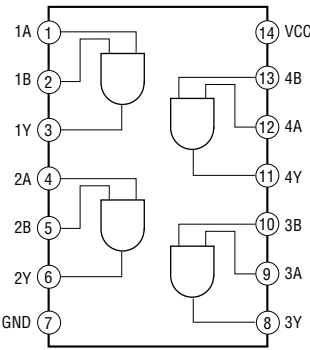
IC501 STK350-230 (MAIN BOARD)



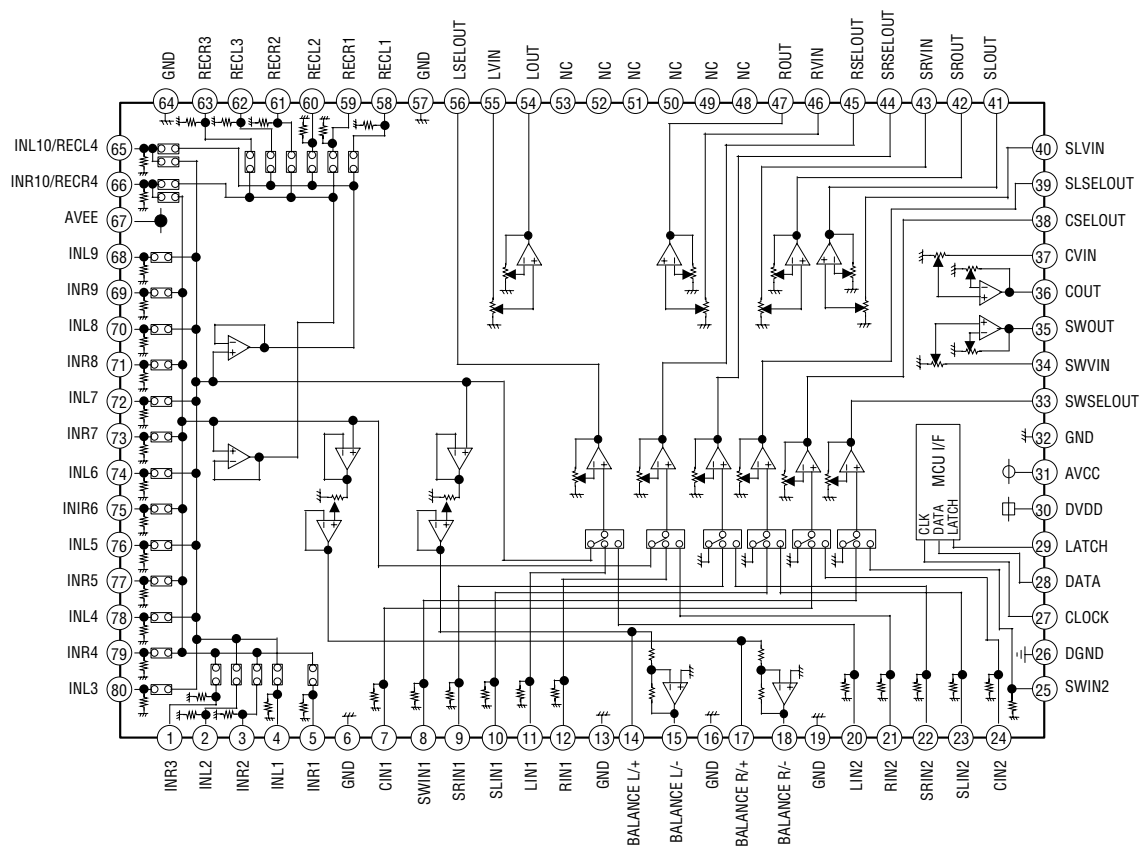
IC701, IC702 μ PC2581V-S (MAIN BOARD)



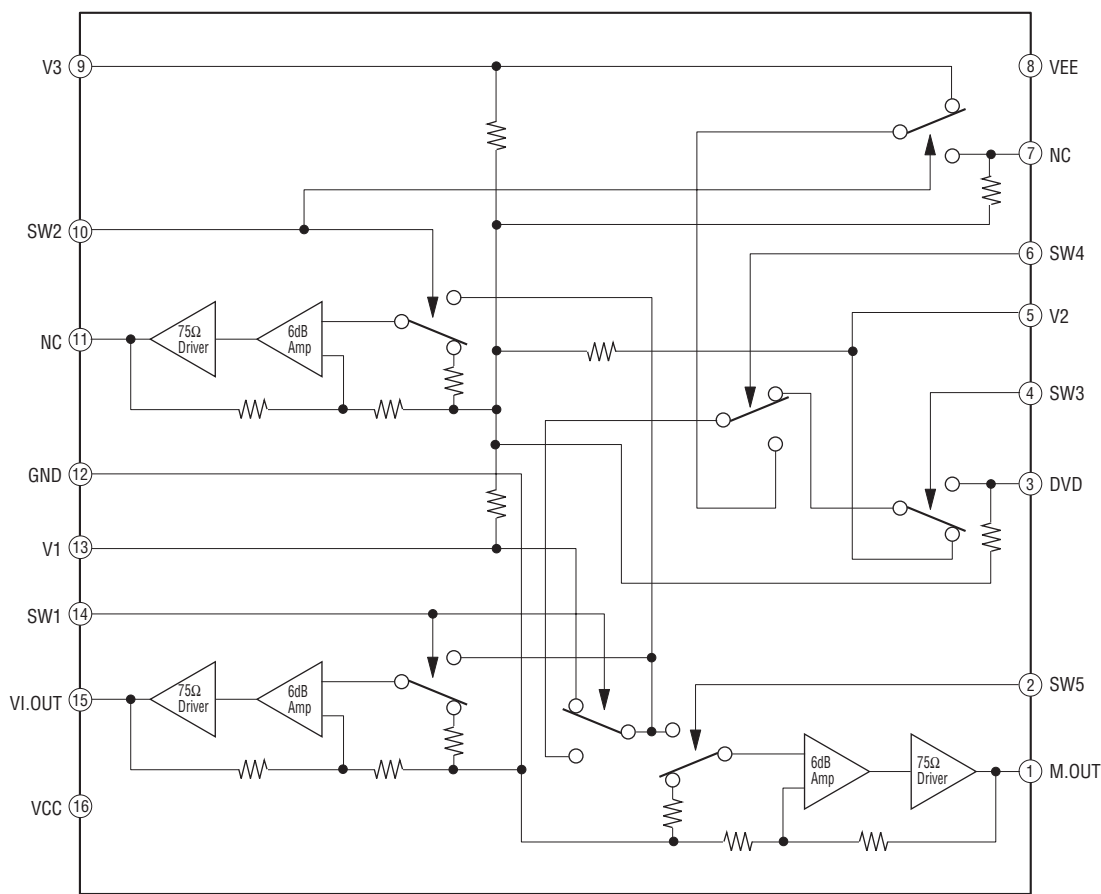
IC101 MC74ACT08N (DISPLAY BOARD)



IC201 M61527FP (MAIN BOARD)



IC103 NJM2595D (VIDEO BOARD)



3-17. IC Pin Function Descriptions**• IC1601 MB9047BPF-G-138-BND (SYSTEM CONTROL)**

Pin No.	Pin Name	I/O	Description
1	DATAO	I	Audio data signal input from DIR
2	GP9	I	GP9 signal input from DSP
3	BST	O	BST signal output to DSP
4	HCS	O	HCS signal output to DSP
5	HACN	I	HACN signal input from DSP
6	XRST	O	Reset signal output to DSP
7	PM	O	PM signal output to DSP
8	PD	O	Power down signal output to AUDIO CODEC
9	SMUTE	O	Muting signal output to AUDIO CODEC
10	CDT1	O	Control data signal output to AUDIO CODEC
11	VSS	—	Ground terminal
12	SCL	O	Clock signal output to AUDIO CODEC
13	CS	O	Chip select signal output to AUDIO CODEC
14	DATA	O	Control data signal output to the sound processor
15	CLK	O	Clock signal output to the sound processor
16	LATCH	O	Latch signal output to the sound processor
17	SPK B RELAY	O	Not used
18	HDOUT	I	HDOUT signal input from DSP
19	HDIN	O	HDIN signal output to DSP
20	HCLK	O	Clock signal output to DSP
21	F.MUTE	O	Muting signal output
22	AC MUTE	O	Muting signal output to the power amplifier
23	VCC5	—	Power supply
24	ANA/DIG	O	Muting and error signal output
25	HP DETECT	I	Headphone switch detect signal input
26	NC	—	Not used
27	FLASH2	O	Terminal for FLASH programming
28	FLASH1	I/O	Terminal for FLASH programming
29	NC	—	Not used
30	NC	—	Not used
31	NC	—	Not used
32	NC	—	Not used
33	SCL	O	Serial clock output
34	SDA	I/O	Serial data input or output
35	AVCC	—	Analog power supply
36	AVRH	I	Analog reference voltage input
37	AVSS	—	Analog ground terminal
38	A/D0	I	Function key push signal input
39	A/D1	I	Function key push signal input
40	A/D2	I	Function key push signal input
41	A/D3	I	Function key push signal input
42	VSS	—	Ground terminal
43	RDS SIGNAL	I	RDS signal detect input
44	MODEL	I	Version setting input (MODEL)
45	VERSION	I	Version setting input (DESTINATION)
46	BLUE LED	O	Not used
47	CRYSTAL SEL	—	Short to ground terminal
48	STOP	I	AC off detect signal input
49	MD0	I	Operation mode setting input
50	MD1	I	Operation mode setting input

Pin No.	Pin Name	I/O	Description
51	MD2	I	Operation mode setting input
52	RDS CLOCK	I	RDS clock signal input (Not used)
53	RDS DATA	I	RDS data signal input (Not used)
54	SIRCS	I	Data signal input from the remote control sensor
55	FUSE DETECT	I	Fuse detect signal input
56	POWER KEY	I	Power switch key detect signal input
57	JOG (B)	I	Jog dial signal input from the rotary encoder
58	JOG (A)	I	Jog dial signal input from the rotary encoder
59	VOL (B)	I	Jog dial signal input from the rotary encoder
60	VOL (A)	I	Jog dial signal input from the rotary encoder
61	DIN	O	Data signal output to the FL tube driver
62	CLK	O	Clock signal output to the FL tube driver
63	FL STB	O	Strobe signal output to the FL tube driver
64	NC	—	Not used
65	POWER RELAY	O	Power relay control signal output
66	PROTECTOR	I	Protector status detect signal input
67	HEADPHONE RELAY	O	Headphone relay control signal output
68	WOOFER RELAY	O	Woofer relay control signal output
69	REAR RELAY	O	Rear speaker relay control signal output
70	CENTRE RELAY	O	Centre speaker relay control signal output
71	PREOUT/FRONT RELAY	O	Front speaker relay control signal output
72	R1 RELAY	O	Bridgeable relay control
73	TUNED	I	Tuning a frequency signal input from the tuner
74	STEREO	I	Stereo tuning signal input from the tuner
75	MUTE	O	Muting signal output to the tuner
76	DO	I	Frequency data signal input from the tuner
77	RSTX	I	System reset
78	SLATCH	O	Latch signal output to the tuner
79	X1A	—	Not used
80	X0A	—	Not used
81	VSS	—	Ground terminal
82	X0	—	Connection for a crystal resonator
83	X1	—	Connection for a crystal resonator
84	VCC3	—	Power supply
85	REMOTE SEL	—	Short to ground terminal
86	NC	O	Not used
87	SW4	O	Video select control signal output
88	SW3	O	Video select control signal output
89	SW2	O	Video select control signal output
90	SW1	O	Video muting control signal output
91	SELECT1	O	Optical in selector control signal output
92	NC	—	Not used
93	XMODE	O	Reset signal output to DIR
94	CKSEL 1	O	CKSEL control signal to DIR
95	CLK	O	Clock signal output to DIR
96	CE	O	Chip enable signal output to DIR
97	DI	O	Data signal output to DIR
98	DO	I	Data signal input from DIR
99	ERROR	I	PLL error muting signal input from DIR
100	XSTATE	I	XSTATE data signal input from DIR

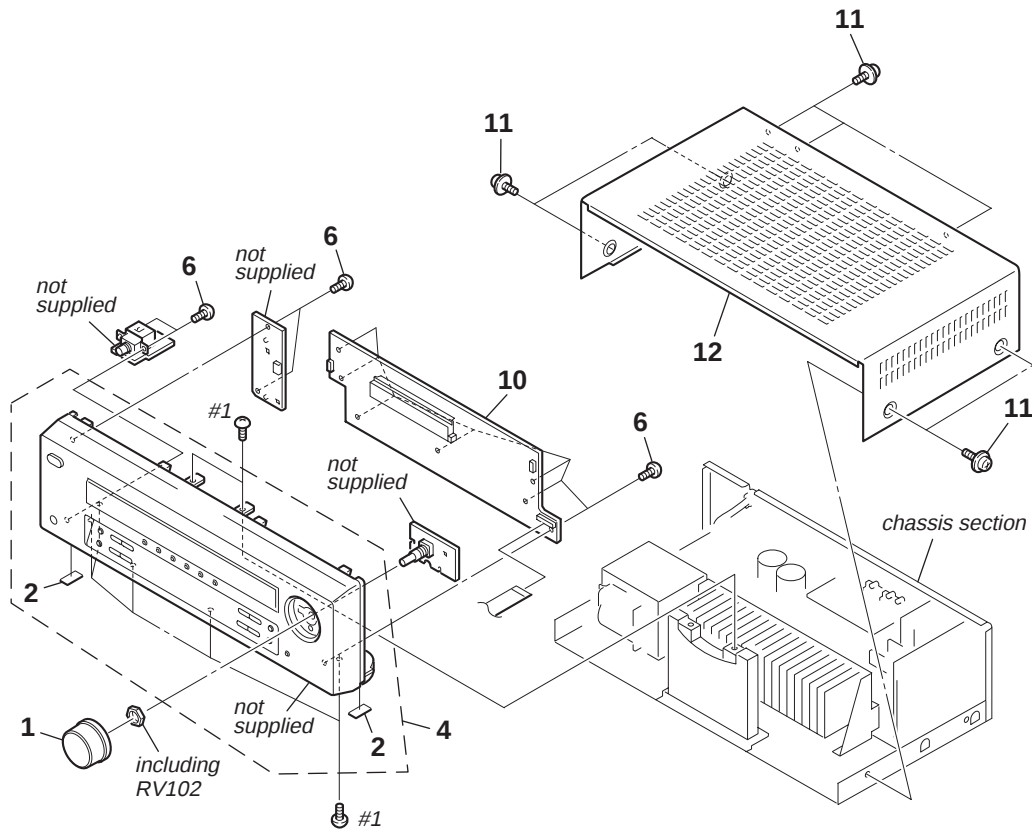
SECTION 4
EXPLODED VIEWS

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.

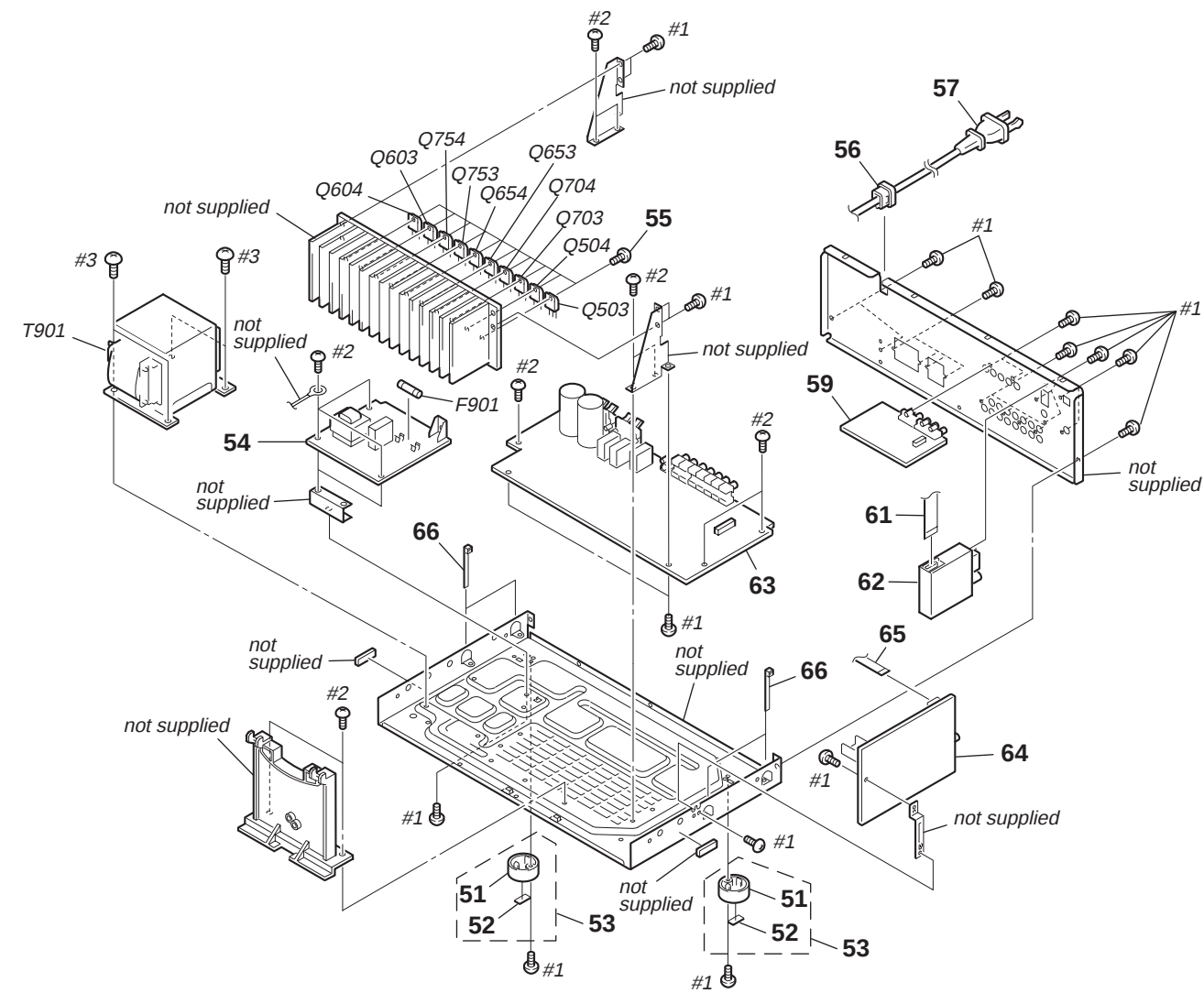
The components identified by mark $\triangle$ or dotted line with mark $\triangle$ are critical for safety. Replace only with part number specified.

4-1. Front Panel Section



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-232-113-12	KNOB (VOL)		11	4-210-291-11	SCREW (CASE 3 TP2)	
2	4-977-358-11	CUSHION		12	4-245-939-21	CASE	
4	X-4955-543-1	FRONT PANEL ASSY		13	1-920-818-91	WIRE (FLAT TYPE)(21 CORE)	
6	4-951-620-01	SCREW (2.6X8), +BVTP		#1	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
10	A-4731-177-A	DISPLAY BOARD, COMPLETE		#2	7-685-645-71	SCREW +BVTP 3X6 TYPE2 N-S	

4-2. Chassis Section



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-232-237-01	FOOT (DIA. 30)		Q503	8-749-010-25	IC MN2488-OPY-M	
52	4-977-358-11	CUSHION		Q504	8-749-010-26	IC MP1620-OPY-M	
53	X-4953-448-1	FOOT ASSY		Q603	8-749-010-25	IC MN2488-OPY-M	
54	1-686-904-11	STANDBY BOARD		Q604	8-749-010-26	IC MP1620-OPY-M	
55	3-905-609-01	SCREW (TRANSISTOR)		Q653	8-749-010-25	IC MN2488-OPY-M	
* 56	3-703-244-21	BUSHING (2104), CORD		Q654	8-749-010-26	IC MP1620-OPY-M	
△ 57	1-783-532-11	CORD, POWER		Q703	8-749-010-25	IC MN2488-OPY-M	
59	A-4731-175-A	VIDEO BOARD, COMPLETE		Q704	8-749-010-26	IC MP1620-OPY-M	
61	1-769-937-11	WIRE (FLAT TYPE) (11 CORE)		Q753	8-749-010-25	IC MN2488-OPY-M	
62	1-693-577-22	TUNER		Q754	8-749-010-26	IC MP1620-OPY-M	
63	A-4732-919-A	MAIN BOARD, COMPLETE		△ T901	1-437-995-11	POWER TRANSFORMER	
64	A-4732-916-A	DIGITAL BOARD, COMPLETE		#1	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
65	1-575-662-31	WIRE (FLAT TYPE) (5 CORE)		#2	7-685-645-71	SCREW +BVTP 3X6 TYPE2 N-S	
66	3-701-748-02	CLAMP		#3	7-685-880-01	SCREW +BVTT 4X6 (S)	
△ F901	1-576-109-11	FUSE 6.3A/125V					

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

SECTION 5 ELECTRICAL PARTS LIST

DIGITAL

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.
- COILS
uH: μ H

- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- CAPACITORS:
uF: μ F
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

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
	A-4732-916-A	DIGITAL BOARD, COMPLETE *****		C1219	1-164-156-11	CERAMIC CHIP 0.1uF	25V
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		C1220	1-162-927-11	CERAMIC CHIP 100PF	5% 50V
		< CAPACITOR >		C1227	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1101	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1229	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1102	1-126-947-11	ELECT 47uF	20.00% 16V	C1230	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1103	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1231	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1104	1-162-974-11	CERAMIC CHIP 0.01uF	50V	C1309	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1105	1-126-947-11	ELECT 47uF	20.00% 16V	C1310	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1106	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1311	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1107	1-162-974-11	CERAMIC CHIP 0.01uF	50V	C1312	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1108	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1501	1-162-965-11	CERAMIC CHIP 0.0015uF	10% 50V
C1109	1-162-918-11	CERAMIC CHIP 18PF	5.00% 50V	C1502	1-128-131-11	ELECT 22uF	20.00% 50V
C1110	1-162-918-11	CERAMIC CHIP 18PF	5.00% 50V	C1503	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1111	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1504	1-126-964-11	ELECT 10uF	20.00% 50V
C1112	1-162-974-11	CERAMIC CHIP 0.01uF	50V	C1505	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1113	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1506	1-126-935-11	ELECT 470uF	20.00% 16V
C1114	1-162-905-11	CERAMIC CHIP 1PF	0.25PF 50V	C1507	1-126-964-11	ELECT 10uF	20.00% 50V
C1115	1-162-923-11	CERAMIC CHIP 47PF	5% 50V	C1508	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1116	1-126-916-11	ELECT 1000uF	20.00% 6.3V	C1509	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1117	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1510	1-126-947-11	ELECT 47uF	20.00% 16V
C1118	1-115-416-11	CERAMIC CHIP 0.001uF	5.00% 25V	C1511	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1119	1-126-965-91	ELECT 22uF	20.00% 50V	C1512	1-162-995-11	CERAMIC CHIP 0.022uF	50V
C1121	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1513	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1124	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1514	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1129	1-115-416-11	CERAMIC CHIP 0.001uF	5.00% 25V	C1515	1-126-935-11	ELECT 470uF	20.00% 10V
C1130	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1516	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C1131	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C1517	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C1201	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1518	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C1202	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1519	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C1203	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1520	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C1204	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1521	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V
C1205	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1551	1-162-965-11	CERAMIC CHIP 0.0015uF	10% 50V
C1206	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1552	1-128-131-11	ELECT 22uF	20.00% 50V
C1207	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1601	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1208	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1602	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1209	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1603	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1210	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1604	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1211	1-126-935-11	ELECT 470uF	20.00% 10V	C1605	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1212	1-126-935-11	ELECT 470uF	20.00% 10V	C1606	1-126-947-11	ELECT 47uF	20.00% 16V
C1213	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1607	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C1214	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C1610	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C1216	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C1611	1-162-974-11	CERAMIC CHIP 0.01uF	50V
C1218	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	C1612	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C1613	1-162-995-11	CERAMIC CHIP 0.022uF	50V
				C1614	1-162-995-11	CERAMIC CHIP 0.022uF	50V

DIGITAL

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
C1615	1-162-995-11	CERAMIC CHIP	0.022uF		50V			< IC >			
C1616	1-162-995-11	CERAMIC CHIP	0.022uF		50V						
C1617	1-162-974-11	CERAMIC CHIP	0.01uF		50V	IC1101	8-759-825-15	IC LC89056W-E			
C1618	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1102	8-759-242-70	IC TC7WU04F(TE12R)			
C1619	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1105	6-600-014-01	IC TORX141L(VIDEO2 IN)			
						IC1201	8-759-698-76	IC CXD9617R			
C1620	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1202	8-759-538-16	IC IS61LV6416-10TT(ISSI)			
C1624	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C1625	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1501	6-703-705-01	IC AK4527B			
C1626	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1502	8-759-710-97	IC NJM4565M(TE2)			
C1627	1-126-964-11	ELECT	10uF	20.00%	50V	IC1503	8-759-231-53	IC M5F7805L			
						IC1552	8-759-710-97	IC NJM4565M(TE2)			
C1632	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1601	6-802-541-01	IC MB9047BPF-G-138-BND			
C1634	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C1635	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1602	6-702-913-01	IC S-80929CNMC-G8Z-T2			
C1671	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1604	8-759-641-86	IC BR24C16F-E2			
C1905	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1901	6-701-887-02	IC SI-3004KWF			
						IC1902	8-759-231-57	IC TA7810S			
C1906	1-126-935-11	ELECT	470uF	20.00%	16V	IC1903	8-759-390-42	IC uPC24M05AHF			
C1908	1-126-935-11	ELECT	470uF	20.00%	16V						
C1909	1-164-156-11	CERAMIC CHIP	0.1uF		25V	IC1904	8-759-445-59	IC BA033T			
C1910	1-126-935-11	ELECT	470uF	20.00%	16V						
C1911	1-164-156-11	CERAMIC CHIP	0.1uF		25V			< JACK >			
C1912	1-126-935-11	ELECT	470uF	20.00%	16V	J1101	1-778-228-11	JACK, PIN 1P (DVD IN)			
C1913	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C1914	1-126-947-11	ELECT	47uF	20.00%	16V			< JUMPER RESISTOR >			
		< CONNECTOR >				JR1115	1-216-864-11	METAL CHIP	0	5%	1/10W
CNP5	1-779-978-11	PIN, CONNECTOR 3P				JR1116	1-216-864-11	METAL CHIP	0	5%	1/10W
CNP6	1-784-929-11	PIN, CONNECTOR 14P				JR1121	1-216-864-11	METAL CHIP	0	5%	1/10W
						JR1122	1-216-864-11	METAL CHIP	0	5%	1/10W
		< CONNECTOR >						< COIL >			
CNS1	1-764-865-41	CONNECTOR, BOARD TO BOARD 13P				L1901	1-216-864-11	METAL CHIP	0	5%	1/10W
CNS2	1-784-041-41	CONNECTOR, BOARD TO BOARD 9P									
CNS3	1-784-923-11	PIN, CONNECTOR 7P						< TRANSISTOR >			
CNS4	1-569-309-11	SOCKET, CONNECTOR (L TYRE) 21P									
CNS7	1-569-060-11	SOCKET, CONNECTOR 11P				Q1601	8-729-027-43	TRANSISTOR	RT1N141C-TP-1		
						Q1602	8-729-230-49	TRANSISTOR	2SC2712-YG-TE85L		
CNS8	1-569-315-11	SOCKET, CONNECTOR 5P						< RESISTOR >			
		< DIODE >				R1100	1-216-857-11	METAL CHIP	1M	5%	1/10W
D1001	8-719-016-74	DIODE 1SS352-TPH3				R1101	1-216-833-11	METAL CHIP	10K	5%	1/10W
D1101	8-719-016-74	DIODE 1SS352-TPH3				R1102	1-216-833-11	METAL CHIP	10K	5%	1/10W
D1501	8-719-049-09	DIODE 1SS367-T3SONY				R1103	1-216-809-11	METAL CHIP	100	5%	1/10W
D1502	8-719-049-09	DIODE 1SS367-T3SONY				R1104	1-216-809-11	METAL CHIP	100	5%	1/10W
D1601	8-719-016-74	DIODE 1SS352-TPH3									
						R1105	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
						R1106	1-216-839-11	METAL CHIP	33K	5%	1/10W
		< FERRITE BEAD >				R1107	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
FB1101	1-414-813-11	FERRITE	0uH			R1108	1-216-809-11	METAL CHIP	100	5%	1/10W
FB1102	1-414-813-11	FERRITE	0uH			R1109	1-216-809-11	METAL CHIP	100	5%	1/10W
FB1104	1-469-152-11	FERRITE	0uH								
FB1105	1-469-152-11	FERRITE	0uH			R1110	1-216-821-11	METAL CHIP	1K	5%	1/10W
FB1201	1-414-813-11	FERRITE	0uH			R1111	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R1112	1-216-809-11	METAL CHIP	100	5%	1/10W
FB1202	1-414-813-11	FERRITE	0uH			R1113	1-216-821-11	METAL CHIP	1K	5%	1/10W
FB1203	1-469-152-11	FERRITE	0uH			R1114	1-216-809-11	METAL CHIP	100	5%	1/10W
FB1204	1-469-152-11	FERRITE	0uH								
FB1501	1-414-813-11	FERRITE	0uH			R1115	1-216-833-11	METAL CHIP	10K	5%	1/10W
FB1502	1-414-813-11	FERRITE	0uH			R1116	1-218-285-11	METAL CHIP	75	5%	1/10W
						R1117	1-216-821-11	METAL CHIP	1K	5%	1/10W
FB1601	1-414-813-11	FERRITE	0uH			R1118	1-216-854-11	METAL CHIP	560K	5%	1/10W
FB1602	1-216-864-11	METAL CHIP	0	5%	1/10W	R1119	1-216-837-11	METAL CHIP	22K	5%	1/10W
FB1603	1-216-864-11	METAL CHIP	0	5%	1/10W						

31

STR-K650P

DIGITAL

DISPLAY

Ref. No.	Part No.	Description	Remarks		
R1657	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1658	1-216-809-11	METAL CHIP	100	5%	1/10W
R1659	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1660	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1662	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1663	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1664	1-216-809-11	METAL CHIP	100	5%	1/10W
R1665	1-216-809-11	METAL CHIP	100	5%	1/10W
R1667	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1668	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1669	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1670	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1671	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1672	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1673	1-216-809-11	METAL CHIP	100	5%	1/10W
R1674	1-216-809-11	METAL CHIP	100	5%	1/10W
R1676	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1677	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1678	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1679	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1681	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1682	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1683	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1684	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1685	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1686	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1687	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1688	1-216-864-11	METAL CHIP	0	5%	1/10W
R1689	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1690	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1694	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1698	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1699	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1703	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1704	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1706	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1707	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1708	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1709	1-216-833-11	METAL CHIP	10K	5%	1/10W
< VIBRATOR >					
X1101	1-781-465-21	VIBRATOR, CRYSTAL 12.288MHz			
X1201	1-795-297-21	VIBRATOR, CERAMIC 13.59MHz			
X1601	1-781-356-21	VIBRATOR, CERAMIC 16MHz			

A-4731-177-A		DISPLAY BOARD, COMPLETE			

*	3-386-245-13	HOLDER (FL)			
*	4-921-941-01	CUSHION (FL)			
< CAPACITOR >					
C100	1-164-159-11	CERAMIC	0.1uF		50V
C101	1-164-159-11	CERAMIC	0.1uF		50V
C105	1-126-795-11	ELECT	10uF	20.00%	50V
C108	1-164-159-11	CERAMIC	0.1uF		50V
C109	1-164-159-11	CERAMIC	0.1uF		50V
C110	1-128-821-11	CERAMIC	1000PF	5%	50V
C111	1-128-813-11	CERAMIC	220PF	5%	50V

Ref. No.	Part No.	Description	Remarks		
C112	1-128-813-11	CERAMIC	220PF	5%	50V
C114	1-164-159-11	CERAMIC	0.1uF		50V
C115	1-126-795-11	ELECT	10uF	20.00%	50V
C132	1-128-813-11	CERAMIC	220PF	5%	50V
C133	1-128-813-11	CERAMIC	220PF	5%	50V
C134	1-128-813-11	CERAMIC	220PF	5%	50V
C135	1-128-813-11	CERAMIC	220PF	5%	50V
C136	1-128-813-11	CERAMIC	220PF	5%	50V
C137	1-128-813-11	CERAMIC	220PF	5%	50V
C138	1-128-813-11	CERAMIC	220PF	5%	50V
C139	1-128-813-11	CERAMIC	220PF	5%	50V
C140	1-128-813-11	CERAMIC	220PF	5%	50V
C141	1-128-813-11	CERAMIC	220PF	5%	50V
C142	1-128-813-11	CERAMIC	220PF	5%	50V
C143	1-128-813-11	CERAMIC	220PF	5%	50V
C144	1-164-159-11	CERAMIC	0.1uF		50V
C150	1-164-159-11	CERAMIC	0.1uF		50V
C151	1-126-795-11	ELECT	10uF	20.00%	50V
C152	1-128-813-11	CERAMIC	220PF	5%	50V
C153	1-128-813-11	CERAMIC	220PF	5%	50V
C154	1-128-813-11	CERAMIC	220PF	5%	50V
C155	1-164-159-11	CERAMIC	0.1uF		50V
C156	1-164-159-11	CERAMIC	0.1uF		50V
C157	1-164-159-11	CERAMIC	0.1uF		50V
< CONNECTOR SOCKET >					
CNS100	1-569-324-11	SOCKET, CONNECTOR 21P			
< DIODE >					
D102	8-719-046-39	DIODE SEL5821A-TP15 (MUSIC)			
D103	8-719-046-39	DIODE SEL5821A-TP15 (MOVIE)			
D104	8-719-046-39	DIODE SEL5821A-TP15 (A. F. D.)			
D105	8-719-046-39	DIODE SEL5821A-TP15 (2CH)			
< FILTER >					
FL101	1-518-831-11	INDICATOR TUBE, FLUORESCENT			
< IC >					
IC100	8-759-643-83	IC uPD16315GB-3BS			
IC101	8-759-036-90	IC MC74ACT08N			
IC102	6-600-055-01	IC GP1UD27SXX (H)			
< COIL >					
L101	1-412-473-21	INDUCTOR	0uH		
L102	1-410-525-11	INDUCTOR	220uH		
L103	1-410-525-11	INDUCTOR	220uH		
< RESISTOR >					
R101	1-249-417-11	CARBON	1K	5%	1/4W F
R102	1-249-421-11	CARBON	2.2K	5%	1/4W F
R103	1-249-421-11	CARBON	2.2K	5%	1/4W F
R104	1-249-425-11	CARBON	4.7K	5%	1/4W F
R105	1-249-429-11	CARBON	10K	5%	1/4W
R106	1-249-433-11	CARBON	22K	5%	1/4W
R111	1-249-417-11	CARBON	1K	5%	1/4W F
R112	1-249-421-11	CARBON	2.2K	5%	1/4W F
R113	1-249-421-11	CARBON	2.2K	5%	1/4W F
R114	1-249-425-11	CARBON	4.7K	5%	1/4W

DISPLAY

HEADPHONE

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R115	1-249-429-11	CARBON 10K 5%	1/4W			< JACK >	
R118	1-249-433-11	CARBON 22K 5%	1/4W				
R121	1-249-417-11	CARBON 1K 5%	1/4W F	J791	1-815-314-21	JACK (PHONES)	
R122	1-249-421-11	CARBON 2.2K 5%	1/4W F	*****			
R123	1-249-421-11	CARBON 2.2K 5%	1/4W F				
R124	1-249-425-11	CARBON 4.7K 5%	1/4W F		A-4732-919-A	MAIN BOARD, COMPLETE	
R125	1-249-429-11	CARBON 10K 5%	1/4W			*****	
R131	1-249-417-11	CARBON 1K 5%	1/4W F		7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
R132	1-249-421-11	CARBON 2.2K 5%	1/4W F				
R133	1-249-421-11	CARBON 2.2K 5%	1/4W F			< CAPACITOR >	
R134	1-249-425-11	CARBON 4.7K 5%	1/4W F	C371	1-127-880-11	CERAMIC 0.022uF 10% 50V	
R135	1-249-429-11	CARBON 10K 5%	1/4W	C372	1-127-880-11	CERAMIC 0.022uF 10% 50V	
R136	1-249-433-11	CARBON 22K 5%	1/4W	C373	1-127-880-11	CERAMIC 0.022uF 10% 50V	
R150	1-249-440-11	CARBON 82K 5%	1/4W	C374	1-164-159-11	CERAMIC 0.1uF 50V	
R153	1-247-807-31	CARBON 100 5%	1/4W	C375	1-127-880-11	CERAMIC 0.022uF 10% 50V	
△ R154	1-249-393-11	CARBON 10 5%	1/4W F	C376	1-127-880-11	CERAMIC 0.022uF 10% 50V	
R155	1-249-441-11	CARBON 100K 5%	1/4W	C400	1-164-159-21	CERAMIC 0.1uF 50V	
R161	1-249-409-11	CARBON 220 5%	1/4W F	C402	1-126-961-11	ELECT 2.2uF 20.00% 50V	
△ R175	1-249-393-11	CARBON 10 5%	1/4W F	C404	1-126-961-11	ELECT 2.2uF 20.00% 50V	
△ R198	1-249-381-11	CARBON 1 5%	1/4W F	C405	1-126-961-11	ELECT 2.2uF 20.00% 50V	
△ R199	1-249-381-11	CARBON 1 5%	1/4W F	C406	1-126-961-11	ELECT 2.2uF 20.00% 50V	
		< SWITCH >		C407	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S100	1-771-410-21	SWITCH, TACTILE (MENU <)		C408	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S101	1-771-410-21	SWITCH, TACTILE (MENU >)		C409	1-126-963-11	ELECT 4.7uF 20.00% 50V	
S102	1-771-410-21	SWITCH, TACTILE (MAIN MENU)		C413	1-124-257-00	ELECT 2.2uF 20% 50V	
S103	1-771-410-21	SWITCH, TACTILE (ENTER)		C414	1-124-257-00	ELECT 2.2uF 20% 50V	
S104	1-771-410-21	SWITCH, TACTILE (INPUT MODE)		C415	1-124-257-00	ELECT 2.2uF 20% 50V	
S105	1-771-410-21	SWITCH, TACTILE (MENU -)		C416	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S106	1-771-410-21	SWITCH, TACTILE (MENU +)		C417	1-124-257-00	ELECT 2.2uF 20% 50V	
S110	1-771-410-21	SWITCH, TACTILE (TUNER FM/AM)		C418	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S111	1-771-410-21	SWITCH, TACTILE (CD)		C419	1-124-257-00	ELECT 2.2uF 20% 50V	
S112	1-771-410-21	SWITCH, TACTILE (MD/TAPE)		C433	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S113	1-771-410-21	SWITCH, TACTILE (DVD)		C452	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S114	1-771-410-21	SWITCH, TACTILE (MOVIE)		C454	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S115	1-771-410-21	SWITCH, TACTILE (MUSIC)		C455	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S120	1-771-410-21	SWITCH, TACTILE (A. F. D.)		C456	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S121	1-771-410-21	SWITCH, TACTILE (TUNING -)		C457	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S122	1-771-410-21	SWITCH, TACTILE (FM MODE)		C458	1-126-961-11	ELECT 2.2uF 20.00% 50V	
S123	1-771-410-21	SWITCH, TACTILE (TUNING +)		C459	1-126-963-11	ELECT 4.7uF 20.00% 50V	
S124	1-771-410-21	SWITCH, TACTILE (2CH)		C464	1-164-159-11	CERAMIC 0.1uF 50V	
S125	1-771-410-21	SWITCH, TACTILE (PRESET TUNING +)		C465	1-126-934-11	ELECT 220uF 20.00% 16V	
S130	1-771-410-21	SWITCH, TACTILE (VIDEO 2)		C466	1-126-934-11	ELECT 220uF 20.00% 16V	
S131	1-771-410-21	SWITCH, TACTILE (VIDEO 1)		C467	1-164-159-11	CERAMIC 0.1uF 50V	
S132	1-771-410-21	SWITCH, TACTILE (PRESET TUNING -)		C471	1-126-963-11	ELECT 4.7uF 20.00% 50V	
S133	1-771-410-21	SWITCH, TACTILE (MEMORY)		C472	1-126-963-11	ELECT 4.7uF 20.00% 50V	
S134	1-771-410-21	SWITCH, TACTILE (DISPLAY)		C481	1-126-963-11	ELECT 4.7uF 20.00% 50V	
S135	1-771-410-21	SWITCH, TACTILE (DIMMER)		C482	1-126-963-11	ELECT 4.7uF 20.00% 50V	
*****				C483	1-126-963-11	ELECT 4.7uF 20.00% 50V	
		HEADPHONE BOARD		C484	1-126-963-11	ELECT 4.7uF 20.00% 50V	
		*****		C485	1-126-963-11	ELECT 4.7uF 20.00% 50V	
		< CAPACITOR >		C486	1-126-963-11	ELECT 4.7uF 20.00% 50V	
C790	1-164-159-11	CERAMIC 0.1uF 50V		C487	1-126-964-11	ELECT 10uF 20.00% 50V	
C792	1-164-159-11	CERAMIC 0.1uF 50V		C488	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >		C489	1-128-809-11	CERAMIC 100PF 5% 50V	
CNP791	1-691-767-11	PLUG (MICRO CONNECTOR) 5P		C490	1-128-809-11	CERAMIC 100PF 5% 50V	
				C491	1-126-963-11	ELECT 4.7uF 20.00% 50V	
				C492	1-126-963-11	ELECT 4.7uF 20.00% 50V	

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

MAIN

Ref. No.	Part No.	Description	Remarks		
C493	1-126-963-11	ELECT	4.7uF	20.00%	50V
C494	1-126-963-11	ELECT	4.7uF	20.00%	50V
C495	1-126-963-11	ELECT	4.7uF	20.00%	50V
C496	1-126-963-11	ELECT	4.7uF	20.00%	50V
C497	1-128-809-11	CERAMIC	100PF	5%	50V
C498	1-128-803-11	CERAMIC	33PF	5%	50V
C500	1-128-825-11	CERAMIC	2200PF	5%	50V
C501	1-126-963-11	ELECT	4.7uF	20.00%	50V
C503	1-104-665-11	ELECT	100uF	20.00%	10V
C504	1-107-583-11	CERAMIC	3PF	0.25PF	500V
C505	1-106-359-00	MYLAR	4700PF	5%	200V
C506	1-102-233-00	CERAMIC	33PF	10.00%	500V
C507	1-128-809-11	CERAMIC	100PF	5%	50V
C510	1-126-947-11	ELECT	47uF	20.00%	25V
C511	1-136-157-00	FILM	0.022uF	5.00%	50V
C516	1-162-815-11	CERAMIC	47PF	5.00%	500V
C517	1-162-815-11	CERAMIC	47PF	5.00%	500V
C519	1-128-813-11	CERAMIC	220PF	5%	50V
C540	1-126-964-11	ELECT	10uF	20.00%	50V
C541	1-127-876-11	CERAMIC	0.01uF	10%	50V
C601	1-126-963-11	ELECT	4.7uF	20.00%	50V
C603	1-104-665-11	ELECT	100uF	20.00%	10V
C604	1-107-583-11	CERAMIC	3PF	0.25PF	500V
C605	1-102-233-00	CERAMIC	33PF	10.00%	500V
C606	1-128-813-11	CERAMIC	220PF	5%	50V
C607	1-128-809-11	CERAMIC	100PF	5%	50V
C610	1-126-947-11	ELECT	47uF	20.00%	25V
C611	1-136-157-00	FILM	0.022uF	5.00%	50V
C619	1-128-813-11	CERAMIC	220PF	5%	50V
C620	1-162-815-11	CERAMIC	47PF	5.00%	500V
C621	1-162-815-11	CERAMIC	47PF	5.00%	500V
C640	1-126-964-11	ELECT	10uF	20.00%	50V
C642	1-127-876-11	CERAMIC	0.01uF	10%	50V
C651	1-126-963-11	ELECT	4.7uF	20.00%	50V
C653	1-104-665-11	ELECT	100uF	20.00%	10V
C654	1-107-583-11	CERAMIC	3PF	0.25PF	500V
C655	1-102-233-00	CERAMIC	33PF	10.00%	500V
C656	1-128-813-11	CERAMIC	220PF	5%	50V
C657	1-128-809-11	CERAMIC	100PF	5%	50V
C660	1-126-947-11	ELECT	47uF	20.00%	25V
C661	1-136-157-00	FILM	0.022uF	5.00%	50V
C666	1-162-815-11	CERAMIC	47PF	5.00%	500V
C669	1-162-815-11	CERAMIC	47PF	5.00%	500V
C670	1-128-813-11	CERAMIC	220PF	5%	50V
C680	1-126-964-11	ELECT	10uF	20.00%	50V
C681	1-127-876-11	CERAMIC	0.01uF	10%	50V
C691	1-164-159-11	CERAMIC	0.1uF		50V
C700	1-128-825-11	CERAMIC	2200PF	5%	50V
C701	1-126-963-11	ELECT	4.7uF	20.00%	50V
C703	1-104-665-11	ELECT	100uF	20.00%	10V
C704	1-107-583-11	CERAMIC	3PF	0.25PF	500V
C705	1-102-233-00	CERAMIC	33PF	10.00%	500V
C706	1-128-813-11	CERAMIC	220PF	5%	50V
C707	1-128-809-11	CERAMIC	100PF	5%	50V
C710	1-126-947-11	ELECT	47uF	20.00%	25V
C711	1-136-157-00	FILM	0.022uF	5.00%	50V
C716	1-162-815-11	CERAMIC	47PF	5.00%	500V
C717	1-162-815-11	CERAMIC	47PF	5.00%	500V
C720	1-128-813-11	CERAMIC	220PF	5%	50V
C721	1-126-934-11	ELECT	220uF	20.00%	16V

Ref. No.	Part No.	Description	Remarks		
C722	1-126-964-11	ELECT	10uF	20.00%	50V
C732	1-128-582-11	ELECT	10uF	20.00%	100V
C733	1-128-582-11	ELECT	10uF	20.00%	100V
C740	1-126-964-11	ELECT	10uF	20.00%	50V
C741	1-128-579-11	ELECT	2.2uF	20.00%	100V
C742	1-127-876-11	CERAMIC	0.01uF	10%	50V
C750	1-126-964-11	ELECT	10uF	20.00%	50V
C751	1-126-963-11	ELECT	4.7uF	20.00%	50V
C752	1-127-876-11	CERAMIC	0.01uF	10%	50V
C753	1-104-665-11	ELECT	100uF	20.00%	10V
C754	1-107-583-11	CERAMIC	3PF	0.25PF	500V
C755	1-102-233-00	CERAMIC	33PF	10.00%	500V
C756	1-128-813-11	CERAMIC	220PF	5%	50V
C757	1-128-809-11	CERAMIC	100PF	5%	50V
C760	1-126-947-11	ELECT	47uF	20.00%	25V
C761	1-136-157-00	FILM	0.022uF	5.00%	50V
C766	1-162-815-11	CERAMIC	47PF	5.00%	500V
C767	1-162-815-11	CERAMIC	47PF	5.00%	500V
C770	1-128-813-11	CERAMIC	220PF	5%	50V
C801	1-126-947-11	ELECT	47uF	20.00%	35V
C802	1-126-947-11	ELECT	47uF	20.00%	35V
C803	1-165-498-11	ELECT	4700uF	20%	63V
C804	1-165-498-11	ELECT	4700uF	20%	63V
C805	1-135-851-21	MYLAR	0.22uF		100V
C806	1-135-851-21	MYLAR	0.22uF		100V
C807	1-104-665-11	ELECT	100uF	20.00%	10V
C808	1-126-935-11	ELECT	470uF	20.00%	10V
C810	1-164-159-11	CERAMIC	0.1uF		50V
C811	1-164-159-11	CERAMIC	0.1uF		50V
C822	1-126-947-11	ELECT	47uF	20.00%	35V
C830	1-164-159-11	CERAMIC	0.1uF		50V
C901	1-164-159-11	CERAMIC	0.1uF		50V
C903	1-126-936-11	ELECT	3300uF	20.00%	16V
< CONNECTOR >					
CNP501	1-573-845-11	CONNECTOR, BOARD TO BOARD 13P			
CNP502	1-784-038-21	CONNECTOR, BOARD TO BOARD 9P			
CNP802	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
CNP911	1-784-929-11	PIN, CONNECTOR 14P			
CNP915	1-770-480-11	SOCKET, CONNECTOR PIN 4P			
* CNP916	1-564-104-00	PIN, CONNECTOR(3.96mm PITCH)3P			
< DIODE >					
D505	8-719-911-19	DIODE	1SS133T-72		
D510	8-719-911-19	DIODE	1SS133T-72		
D540	8-719-911-19	DIODE	1SS133T-72		
D560	8-719-911-19	DIODE	1SS133T-72		
D605	8-719-911-19	DIODE	1SS133T-72		
D610	8-719-911-19	DIODE	1SS133T-72		
D640	8-719-911-19	DIODE	1SS133T-72		
D665	8-719-911-19	DIODE	1SS133T-72		
D680	8-719-911-19	DIODE	1SS133T-72		
D690	8-719-934-21	DIODE	HZS30-1LTA		
D691	8-719-911-19	DIODE	1SS133T-72		
D705	8-719-911-19	DIODE	1SS133T-72		
D710	8-719-911-19	DIODE	1SS133T-72		
D721	8-719-911-19	DIODE	1SS133T-72		
D722	8-719-911-19	DIODE	1SS133T-72		
D731	8-719-911-19	DIODE	1SS133T-72		
D732	8-719-911-19	DIODE	1SS133T-72		

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
D733	8-719-911-19	DIODE 1SS133T-72		Q605	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
D734	8-719-911-19	DIODE 1SS133T-72		Q606	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
D740	8-719-911-19	DIODE 1SS133T-72		Q610	8-729-119-79	TRANSISTOR 2SC2785TP-FEK	
D750	8-719-911-19	DIODE 1SS133T-72		Q640	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
D765	8-719-911-19	DIODE 1SS133T-72		Q651	8-729-119-76	TRANSISTOR 2SA1115TP-EF	
D791	8-719-911-19	DIODE 1SS133T-72		Q652	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
D801	8-719-934-21	DIODE HZS30-1LTA		Q655	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
D802	8-719-072-05	DIODE D5SBA20-4003		Q656	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
D804	8-719-118-63	DIODE RD5.6F-T7B2		Q680	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
D896	8-719-043-76	DIODE AK04V1		Q691	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
D902	8-719-024-99	DIODE 11ES2-NTA2B		Q692	8-729-900-63	TRANSISTOR BN1F4M-TP	
D903	8-719-024-99	DIODE 11ES2-NTA2B		Q701	8-729-119-76	TRANSISTOR 2SA1115TP-EF	
D904	8-719-024-99	DIODE 11ES2-NTA2B		Q702	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
D905	8-719-024-99	DIODE 11ES2-NTA2B		Q705	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
		< IC >		Q706	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
IC201	6-703-501-01	IC M61527FP		Q710	8-729-119-79	TRANSISTOR 2SC2785TP-FEK	
IC401	8-759-636-74	IC NJM4565DD		Q722	8-729-140-84	TRANSISTOR 2SC1841TP-PAFAEA	
IC501	8-749-011-16	IC STK350-230		Q723	8-729-119-79	TRANSISTOR 2SC2785TP-FEK	
IC601	8-759-636-74	IC NJM4565DD		Q725	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
IC701	6-700-943-01	IC uPC2581V-S		Q740	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
IC702	6-700-943-01	IC uPC2581V-S		Q747	8-729-900-63	TRANSISTOR BN1F4M-TP	
IC801	8-759-649-68	IC uPC78M07AHF		Q748	8-729-900-36	TRANSISTOR BA1F4M-TP	
IC802	8-759-604-95	IC M5F79M07L		Q750	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
		< JACK >		Q751	8-729-119-76	TRANSISTOR 2SA1115TP-EF	
J402	1-794-981-11	JACK, PIN 4P (MD/TAPE,CD)		Q752	8-729-141-30	TRANSISTOR 2SC3623ATP-LK	
J403	1-794-981-11	JACK, PIN 4P (DVD,MD/TAPE)		Q755	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
J404	1-774-411-11	JACK, PIN 6P (VIDEO1,VIDEO2)		Q756	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA	
J405	1-770-377-21	JACK, PIN 1P (SUB WOOFER)		Q790	8-729-119-79	TRANSISTOR 2SC2785TP-FEK	
		< COIL >		Q801	8-729-140-97	TRANSISTOR 2SB734-T-34	
L521	1-422-009-13	COIL, AIR-CORE				< RESISTOR >	
L601	1-422-009-13	COIL, AIR-CORE		R360	1-249-441-11	CARBON 100K 5% 1/4W	
L651	1-422-009-13	COIL, AIR-CORE		R361	1-249-425-11	CARBON 4.7K 5% 1/4W F	
L701	1-422-009-13	COIL, AIR-CORE		R362	1-249-425-11	CARBON 4.7K 5% 1/4W F	
L751	1-422-009-13	COIL, AIR-CORE		R363	1-249-441-11	CARBON 100K 5% 1/4W	
		< TRANSISTOR >		R366	1-249-429-11	CARBON 10K 5% 1/4W	
Q361	8-729-823-22	TRANSISTOR 2SC3576-AC		R367	1-249-441-11	CARBON 100K 5% 1/4W	
Q362	8-729-823-22	TRANSISTOR 2SC3576-AC		R368	1-249-437-11	CARBON 47K 5% 1/4W	
Q363	8-729-823-22	TRANSISTOR 2SC3576-AC		R369	1-249-425-11	CARBON 4.7K 5% 1/4W F	
Q364	8-729-823-22	TRANSISTOR 2SC3576-AC		R370	1-249-425-11	CARBON 4.7K 5% 1/4W F	
Q365	8-729-823-22	TRANSISTOR 2SC3576-AC		R371	1-249-441-11	CARBON 100K 5% 1/4W	
Q366	8-729-823-22	TRANSISTOR 2SC3576-AC		R372	1-249-441-11	CARBON 100K 5% 1/4W	
Q379	8-729-900-63	TRANSISTOR BN1F4M-TP		R373	1-249-417-11	CARBON 1K 5% 1/4W F	
Q471	8-729-823-22	TRANSISTOR 2SC3576-AC		R374	1-249-417-11	CARBON 1K 5% 1/4W F	
Q501	8-729-119-76	TRANSISTOR 2SA1115TP-EF		R375	1-249-417-11	CARBON 1K 5% 1/4W F	
Q502	8-729-141-30	TRANSISTOR 2SC3623ATP-LK		R376	1-249-417-11	CARBON 1K 5% 1/4W F	
Q505	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA		R377	1-249-417-11	CARBON 1K 5% 1/4W F	
Q506	8-729-140-82	TRANSISTOR 2SA988TP-PAFAEA		R378	1-249-417-11	CARBON 1K 5% 1/4W F	
Q540	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2		R379	1-249-425-11	CARBON 4.7K 5% 1/4W F	
Q550	8-729-119-79	TRANSISTOR 2SC2785TP-FEK		R380	1-249-441-11	CARBON 100K 5% 1/4W	
Q560	8-729-119-79	TRANSISTOR 2SC2785TP-FEK		R381	1-249-429-11	CARBON 10K 5% 1/4W	
Q601	8-729-119-76	TRANSISTOR 2SA1115TP-EF		R402	1-249-417-11	CARBON 1K 5% 1/4W F	
Q602	8-729-141-30	TRANSISTOR 2SC3623ATP-LK		R404	1-249-417-11	CARBON 1K 5% 1/4W F	
				R405	1-249-417-11	CARBON 1K 5% 1/4W F	
				R406	1-249-417-11	CARBON 1K 5% 1/4W F	
				R407	1-249-417-11	CARBON 1K 5% 1/4W F	

STR-K650P

MAIN

Ref. No.	Part No.	Description				Remarks	Ref. No.	Part No.	Description				Remarks
R408	1-249-417-11	CARBON	1K	5%	1/4W	F	△ R615	1-249-405-11	CARBON	100	5%	1/4W	F
R409	1-249-417-11	CARBON	1K	5%	1/4W	F	△ R616	1-234-182-11	ENCAPSULATED COMPONENT				
R410	1-249-437-11	CARBON	47K	5%	1/4W		△ R617	1-249-393-11	CARBON	10	5%	1/4W	F
R430	1-249-437-11	CARBON	47K	5%	1/4W		△ R618	1-249-389-11	CARBON	4.7	5%	1/4W	F
R452	1-249-417-11	CARBON	1K	5%	1/4W	F	R620	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R454	1-249-417-11	CARBON	1K	5%	1/4W	F	R621	1-247-850-11	CARBON	6.2K	5%	1/4W	
R455	1-249-417-11	CARBON	1K	5%	1/4W	F	R622	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R456	1-249-417-11	CARBON	1K	5%	1/4W	F	R623	1-249-437-11	CARBON	47K	5%	1/4W	
R457	1-249-417-11	CARBON	1K	5%	1/4W	F	R624	1-249-431-11	CARBON	15K	5%	1/4W	
R458	1-249-417-11	CARBON	1K	5%	1/4W	F	R625	1-249-439-11	CARBON	68K	5%	1/4W	
R459	1-249-417-11	CARBON	1K	5%	1/4W	F	R631	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R469	1-249-417-11	CARBON	1K	5%	1/4W	F	△ R634	1-249-404-00	CARBON	82	5%	1/4W	F
R470	1-249-437-11	CARBON	47K	5%	1/4W		R638	1-249-439-11	CARBON	68K	5%	1/4W	
R471	1-249-417-11	CARBON	1K	5%	1/4W	F	R640	1-249-433-11	CARBON	22K	5%	1/4W	
R472	1-249-417-11	CARBON	1K	5%	1/4W	F	R648	1-247-843-11	CARBON	3.3K	5%	1/4W	
R473	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R651	1-249-417-11	CARBON	1K	5%	1/4W	F
R474	1-249-429-11	CARBON	10K	5%	1/4W		R652	1-249-439-11	CARBON	68K	5%	1/4W	
R475	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R653	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R476	1-249-807-11	RES-CHIP	100	5%	1/4W		R654	1-249-439-11	CARBON	68K	5%	1/4W	
R477	1-247-807-11	RES-CHIP	100	5%	1/4W		R655	1-249-433-11	CARBON	22K	5%	1/4W	
R478	1-247-807-11	RES-CHIP	100	5%	1/4W		R656	1-249-433-11	CARBON	22K	5%	1/4W	
R479	1-249-421-11	RES-CHIP	2.2K	5%	1/4W		R657	1-249-431-11	CARBON	15K	5%	1/4W	
R499	1-249-437-11	CARBON	47K	5%	1/4W		R660	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R501	1-249-417-11	CARBON	1K	5%	1/4W	F	R661	1-249-440-11	CARBON	82K	5%	1/4W	
R502	1-249-439-11	CARBON	68K	5%	1/4W		R663	1-249-414-11	CARBON	560	5%	1/4W	F
R503	1-249-421-11	CARBON	2.2K	5%	1/4W	F	△ R664	1-249-405-11	CARBON	100	5%	1/4W	F
R504	1-249-413-11	CARBON	470	5%	1/4W	F	△ R665	1-249-405-11	CARBON	100	5%	1/4W	F
R505	1-249-439-11	CARBON	68K	5%	1/4W		△ R666	1-234-182-11	ENCAPSULATED COMPONENT				
R510	1-249-421-11	CARBON	2.2K	5%	1/4W	F	△ R667	1-249-393-11	CARBON	10	5%	1/4W	F
R511	1-249-440-11	CARBON	82K	5%	1/4W		△ R668	1-249-389-11	CARBON	4.7	5%	1/4W	F
R513	1-249-414-11	CARBON	560	5%	1/4W	F	R669	1-249-425-11	CARBON	4.7K	5%	1/4W	F
△ R514	1-249-405-11	CARBON	100	5%	1/4W	F	R671	1-247-850-11	CARBON	6.2K	5%	1/4W	
△ R515	1-249-405-11	CARBON	100	5%	1/4W	F	R672	1-249-419-11	CARBON	1.5K	5%	1/4W	F
△ R516	1-234-182-11	ENCAPSULATED COMPONENT					R673	1-249-437-11	CARBON	47K	5%	1/4W	
△ R517	1-249-393-11	CARBON	10	5%	1/4W	F	R674	1-249-431-11	CARBON	15K	5%	1/4W	
R520	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R675	1-249-433-11	CARBON	22K	5%	1/4W	
R521	1-247-850-11	CARBON	6.2K	5%	1/4W		R676	1-249-433-11	CARBON	22K	5%	1/4W	
R522	1-249-419-11	CARBON	1.5K	5%	1/4W	F	R677	1-249-431-11	CARBON	15K	5%	1/4W	
R524	1-249-431-11	CARBON	15K	5%	1/4W		R680	1-249-433-11	CARBON	22K	5%	1/4W	
R525	1-249-439-11	CARBON	68K	5%	1/4W		R681	1-247-843-11	CARBON	3.3K	5%	1/4W	
△ R528	1-249-389-11	CARBON	4.7	5%	1/4W	F	R690	1-247-887-00	CARBON	220K	5%	1/4W	
R531	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R691	1-215-888-00	METAL OXIDE	220	5%	2W	
R532	1-249-425-11	CARBON	4.7K	5%	1/4W	F	R692	1-215-889-00	METAL OXIDE	330	5%	2W	
R533	1-249-437-11	CARBON	47K	5%	1/4W		R693	1-249-429-11	CARBON	10K	5%	1/4W	
△ R534	1-249-404-00	CARBON	82	5%	1/4W	F	R694	1-249-429-11	CARBON	10K	5%	1/4W	
R540	1-249-433-11	CARBON	22K	5%	1/4W		R695	1-249-429-11	CARBON	10K	5%	1/4W	
R546	1-247-843-11	CARBON	3.3K	5%	1/4W		R696	1-249-435-11	CARBON	33K	5%	1/4W	
R555	1-249-433-11	CARBON	22K	5%	1/4W		R698	1-249-429-11	CARBON	10K	5%	1/4W	
R556	1-249-433-11	CARBON	22K	5%	1/4W		R699	1-247-895-00	CARBON	470K	5%	1/4W	
R557	1-249-431-11	CARBON	15K	5%	1/4W		R701	1-249-417-11	CARBON	1K	5%	1/4W	F
R560	1-249-429-11	CARBON	10K	5%	1/4W		R702	1-249-439-11	CARBON	68K	5%	1/4W	
R573	1-249-437-11	CARBON	47K	5%	1/4W		R703	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R601	1-249-417-11	CARBON	1K	5%	1/4W	F	R704	1-249-439-11	CARBON	68K	5%	1/4W	
R602	1-249-439-11	CARBON	68K	5%	1/4W		R710	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R603	1-249-421-11	CARBON	2.2K	5%	1/4W	F	R711	1-249-440-11	CARBON	82K	5%	1/4W	
R604	1-249-439-11	CARBON	68K	5%	1/4W		R713	1-249-414-11	CARBON	560	5%	1/4W	F
R610	1-249-421-11	CARBON	2.2K	5%	1/4W	F	△ R714	1-249-405-11	CARBON	100	5%	1/4W	F
R611	1-249-440-11	CARBON	82K	5%	1/4W		The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.						
R613	1-249-414-11	CARBON	560	5%	1/4W	F							
△ R614	1-249-405-11	CARBON	100	5%	1/4W	F							

Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks
△ R715	1-249-405-11	CARBON	100	5%	1/4W F			< RELAY >			
△ R716	1-234-182-11	ENCAPSULATED COMPONENT									
△ R717	1-249-393-11	CARBON	10	5%	1/4W F	RY501	1-515-921-11	RELAY			
						RY560	1-755-267-11	RELAY			
△ R718	1-249-389-11	CARBON	4.7	5%	1/4W F	RY601	1-515-921-11	RELAY			
R719	1-249-425-11	CARBON	4.7K	5%	1/4W F	RY701	1-515-921-11	RELAY			
R721	1-247-850-11	CARBON	6.2K	5%	1/4W	RY791	1-515-921-11	RELAY			
R722	1-249-419-11	CARBON	1.5K	5%	1/4W F						
R723	1-249-437-11	CARBON	47K	5%	1/4W			< TERMINAL >			
R724	1-249-431-11	CARBON	15K	5%	1/4W	TM601	1-694-805-11	TERMINAL BOARD (CENTER/SURROUND)			
R725	1-249-439-11	CARBON	68K	5%	1/4W	TM602	1-694-785-11	TERMINAL BOARD (FRONT)			
R731	1-249-425-11	CARBON	4.7K	5%	1/4W F	*****					
△ R732	1-249-381-11	CARBON	1	5%	1/4W F						
△ R733	1-249-381-11	CARBON	1	5%	1/4W F			POWER BOARD			

△ R734	1-249-404-00	CARBON	82	5%	1/4W F						
R735	1-249-427-11	CARBON	6.8K	5%	1/4W F			< CONNECTOR >			
R736	1-249-417-11	CARBON	1K	5%	1/4W F						
R737	1-249-436-11	CARBON	39K	5%	1/4W	* CNP102	1-564-518-11	PLUG, CONNECTOR 3P			
R740	1-249-433-11	CARBON	22K	5%	1/4W						
								< SWITCH >			
R742	1-249-437-11	CARBON	47K	5%	1/4W						
R743	1-249-433-11	CARBON	22K	5%	1/4W	S152	1-771-410-21	SWITCH, TACTILE (I/⏻)			
R744	1-249-433-11	CARBON	22K	5%	1/4W	*****					
R745	1-249-433-11	CARBON	22K	5%	1/4W						
R746	1-249-433-11	CARBON	22K	5%	1/4W		1-686-904-11	STANDBY BOARD			

R747	1-249-431-11	CARBON	15K	5%	1/4W						
R748	1-247-843-11	CARBON	3.3K	5%	1/4W			< CAPACITOR >			
R750	1-249-433-11	CARBON	22K	5%	1/4W						
R751	1-249-417-11	CARBON	1K	5%	1/4W F	C813	1-164-159-11	CERAMIC	0.1uF	50V	
R752	1-249-439-11	CARBON	68K	5%	1/4W	C814	1-164-159-11	CERAMIC	0.1uF	50V	
						C815	1-126-943-11	ELECT	2200uF	20.00%	25V
R753	1-249-421-11	CARBON	2.2K	5%	1/4W F	C816	1-126-942-61	ELECT	1000uF	20.00%	25V
R754	1-249-439-11	CARBON	68K	5%	1/4W	C920	1-164-159-11	CERAMIC	0.1uF	50V	
R755	1-249-433-11	CARBON	22K	5%	1/4W						
R756	1-249-433-11	CARBON	22K	5%	1/4W	C921	1-164-159-11	CERAMIC	0.1uF	50V	
R757	1-249-431-11	CARBON	15K	5%	1/4W	C923	1-126-959-11	ELECT	0.47uF	20.00%	50V
						C950	1-126-936-11	ELECT	3300uF	20.00%	16V
R758	1-247-843-11	CARBON	3.3K	5%	1/4W						
R760	1-249-421-11	CARBON	2.2K	5%	1/4W F			< CONNECTOR >			
R761	1-249-440-11	CARBON	82K	5%	1/4W						
R763	1-249-414-11	CARBON	560	5%	1/4W F	CNP901	1-564-321-00	PIN, CONNECTOR(3.96mm PITCH)2P			
△ R764	1-249-405-11	CARBON	100	5%	1/4W F	* CNP902	1-565-792-11	PIN, CONNECTOR(3.96mm PITCH)2P			
						CNP903	1-564-506-11	PLUG, CONNECTOR 3P			
△ R765	1-249-405-11	CARBON	100	5%	1/4W F	CNP905	1-779-495-11	PLUG, CONNECTOR PIN 4P			
△ R766	1-234-182-11	ENCAPSULATED COMPONENT				CNP912	1-779-978-11	PIN, CONNECTOR 3P			
△ R767	1-249-393-11	CARBON	10	5%	1/4W F						
△ R768	1-249-389-11	CARBON	4.7	5%	1/4W F			< DIODE >			
R769	1-249-425-11	CARBON	4.7K	5%	1/4W F						
						D820	8-719-024-99	DIODE	11ES2-NTA2B		
R770	1-249-437-11	CARBON	47K	5%	1/4W	D821	8-719-024-99	DIODE	11ES2-NTA2B		
R771	1-247-850-11	CARBON	6.2K	5%	1/4W	D822	8-719-024-99	DIODE	11ES2-NTA2B		
R772	1-249-419-11	CARBON	1.5K	5%	1/4W F	D823	8-719-024-99	DIODE	11ES2-NTA2B		
R773	1-249-437-11	CARBON	47K	5%	1/4W	D901	8-719-911-19	DIODE	1SS133T-72		
R775	1-249-439-11	CARBON	68K	5%	1/4W						
						D910	8-719-024-99	DIODE	11ES2-NTA2B		
R778	1-249-431-11	CARBON	15K	5%	1/4W	D911	8-719-024-99	DIODE	11ES2-NTA2B		
R780	1-249-429-11	CARBON	10K	5%	1/4W	D912	8-719-024-99	DIODE	11ES2-NTA2B		
R791	1-249-425-11	CARBON	4.7K	5%	1/4W F	D913	8-719-024-99	DIODE	11ES2-NTA2B		
R792	1-215-868-00	METAL OXIDE	680	5%	1W	D914	8-719-911-19	DIODE	1SS133T-72		
△ R793	1-249-404-00	CARBON	82	5%	1/4W F						
						D915	8-719-911-19	DIODE	1SS133T-72		
R794	1-215-868-00	METAL OXIDE	680	5%	1W						
△ R802	1-249-409-11	CARBON	220	5%	1/4W F			< EARTH TERMINAL >			
△ R803	1-249-389-11	CARBON	4.7	5%	1/4W F						
R804	1-249-426-11	CARBON	5.6K	5%	1/4W	* G901	1-537-738-21	TERMINAL, EARTH			
R806	1-249-433-11	CARBON	22K	5%	1/4W						
△ R910	1-243-635-11	FUSIBLE	0.33	5%	1/2W	The components identified by mark △ or dotted line with mark △ are critical for safety.					

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

STR-K650P

STANDBY

VIDEO

VOLUME

Ref. No.	Part No.	Description	Remarks		
< FUSE HOLDER >					
FH901	1-533-293-11	FUSE HOLDER			
FH902	1-533-293-11	FUSE HOLDER			
< TRANSISTOR >					
Q901	8-729-119-79	TRANSISTOR	2SC2785TP-FEK		
Q921	8-729-119-79	TRANSISTOR	2SC2785TP-FEK		
< RESISTOR >					
△ R810	1-243-634-91	FUSIBLE	0.22	5%	1/2W
△ R812	1-243-634-91	FUSIBLE	0.22	5%	1/2W
△ R901	1-219-237-91	SOLID	3.3M	20%	1/2W
R902	1-249-437-11	CARBON	47K	5%	1/4W
R903	1-249-425-11	CARBON	4.7K	5%	1/4W F
△ R904	1-249-381-11	CARBON	1	5%	1/4W F
R921	1-249-437-11	CARBON	47K	5%	1/4W
R922	1-249-435-11	CARBON	33K	5%	1/4W
R923	1-249-429-11	CARBON	10K	5%	1/4W
< RELAY >					
△ RY901	1-755-276-11	RELAY, POWER			
< TRANSFORMER >					
T902	1-435-281-11	TRANSFORMER, POWER			

A-4731-175-A		VIDEO BOARD, COMPLETE			

< CAPACITOR >					
C200	1-128-805-11	CERAMIC	47PF	5%	50V
C201	1-128-805-11	CERAMIC	47PF	5%	50V
C206	1-126-964-11	ELECT	10uF	20.00%	50V
C207	1-126-964-11	ELECT	10uF	20.00%	50V
C208	1-126-964-11	ELECT	10uF	20.00%	50V
C210	1-126-964-11	ELECT	10uF	20.00%	50V
C213	1-126-934-11	ELECT	220uF	20.00%	16V
C214	1-164-159-11	CERAMIC	0.1uF		50V
C215	1-164-159-11	CERAMIC	0.1uF		50V
C248	1-128-825-11	CERAMIC	2200PF	5%	50V
C809	1-126-934-11	ELECT	220uF	20.00%	16V
C824	1-164-159-11	CERAMIC	0.1uF		50V
C825	1-164-159-11	CERAMIC	0.1uF		50V
C827	1-126-947-11	ELECT	47uF	20.00%	25V
< CONNECTOR >					
CNP156	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
< CONNECTOR SOCKET >					
CNS250	1-569-315-11	SOCKET, CONNECTOR 5P			
< DIODE >					
D203	8-719-911-19	DIODE 1SS133T-72			
D204	8-719-911-19	DIODE 1SS133T-72			

Ref. No.	Part No.	Description	Remarks		
< IC >					
IC103	6-701-890-01	IC NJM2595D			
IC804	8-759-701-65	IC NJM79M05FA			
IC807	8-759-039-69	IC uPC7805AHF			
< JACK >					
J200	1-794-978-11	JACK, PIN 3P (VIDEO1,VIDEO2,DVD)			
J201	1-815-043-11	JACK, PIN 2P (VIDEO1,MONITOR)			
< RESISTOR >					
R200	1-247-804-11	CARBON	75	5%	1/4W
R201	1-247-804-11	CARBON	75	5%	1/4W
R218	1-247-804-11	CARBON	75	5%	1/4W
R220	1-247-804-11	CARBON	75	5%	1/4W
R221	1-247-804-11	CARBON	75	5%	1/4W

VOLUME BOARD					

< CONNECTOR >					
* CNP104	1-564-518-11	PLUG, CONNECTOR 3P			
< VARIABLE RESISTOR >					
RV102	1-418-725-41	ENCODER, ROTARY (12 TYPE)	(MASTER VOLUME)		

MISCELLANEOUS					

△ 57	1-783-532-11	CORD, POWER			
61	1-769-937-11	WIRE (FLAT TYPE) (11 CORE)			
62	1-693-577-22	TUNER			
65	1-575-662-31	WIRE (FLAT TYPE) (5 CORE)			
△ F901	1-576-109-11	FUSE 6.3A/125V			
Q503	8-749-010-25	IC MN2488-OPY-M			
Q504	8-749-010-26	IC MP1620-OPY-M			
Q603	8-749-010-25	IC MN2488-OPY-M			
Q604	8-749-010-26	IC MP1620-OPY-M			
Q653	8-749-010-25	IC MN2488-OPY-M			
Q654	8-749-010-26	IC MP1620-OPY-M			
Q703	8-749-010-25	IC MN2488-OPY-M			
Q704	8-749-010-26	IC MP1620-OPY-M			
Q753	8-749-010-25	IC MN2488-OPY-M			
Q754	8-749-010-26	IC MP1620-OPY-M			
△ T901	1-437-995-11	POWER TRANSFORMER			

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

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.

Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

[illegible]