STR-KSL60

SERVICE MANUAL

AEP Model
UK Model

Ver 1.0 2003. 08

- STR-KSL60 is the receiver section in HT-SL60/SL65.

SPECIFICATIONS

Amplifier section

POWER OUTPUT

Rated Power Output at Stereo Mode
(8 ohms 1 kHz, THD 0.7 %)
25 W + 25 W

Reference Power Output
(8 ohms 1 kHz, THD 10 %)
FRONT[1]: 35 W/ch
CENTER[1]: 35 W
SURR[1]: 35 W/ch

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

Frequency response
TV/SAT, DVD, VIDEO: 10 Hz – 50 kHz
+0.5/–3 dB (with sound field and tone by passed)

Inputs (Analog)
TV/SAT, DVD, VIDEO: Sensitivity: 250 mV
Impedance: 50 kilohms
S/N[3]: 96 dB
(A, 250 mV[4])

3) INPUT SHORT (with sound field and tone by passed).
4) Weighted network, input level.

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

DVD, TV/SAT (Optical) Sensitivity: –
Impedance: –
S/N: 100 dB
(A, 20 kHz LPF)

Outputs
SUB WOOFER Voltage: 2 V
Impedance: 1 kilohms

Tone
Gain levels: ±6 dB, 1 dB step

Video section

Inputs
Video: 1 Vp-p, 75 ohms

Outputs
Video: 1 Vp-p, 75 ohms

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 9-kHz tuning scale: 531 – 1602 kHz

Antenna Loop antenna

Intermediate frequency
450 kHz

Usable sensitivity 50 dB/m (at 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

General

Power requirements 230 V AC, 50/60 Hz

Power consumption 130 W

Power consumption (during standby mode) 0.3 W

Dimensions (w/h/d) 430 × 56 × 290 mm including projecting parts and controls

Mass (Approx.) 4.5 kg

— Continued on next page —

HOME THEATER SYSTEM

9-961-218-01
2003H1678-1

Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

Supplied accessories
FM wire antenna (1)
AM loop antenna (1)
Remote commander RM-U40 (1)
R6 (size-AA) batteries (2)
Speakers
• Front speakers (2)
• Center speaker (1)
• Surround speakers (2)
• Sub woofer (1)
Speaker cords (long) (2)
Speaker cords (short) (3)
Speaker foot pads (20)
(HT-SL60, HT-SL55, HT-SL50 and HT-SL40 only)
Speaker foot pads for center speaker (4)
(HT-SL70 and HT-SL65 only)
Sub woofer foot pads (4)
Coaxial digital cord (1)
Monaural audio cord (1)
Colour label for speakers (5)

Design and specifications are subject to change without notice.

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.

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.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ 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

SECTION 1
GENERAL

This section is extracted from instruction manual.

List of Button Locations and Reference Pages

How to use this page

Use this page to find the location of buttons that are mentioned in the text.

Illustration number
↓
MUTING 11 (14, 19, 37)
↑ Name of button/part ↑ Reference page

Main unit

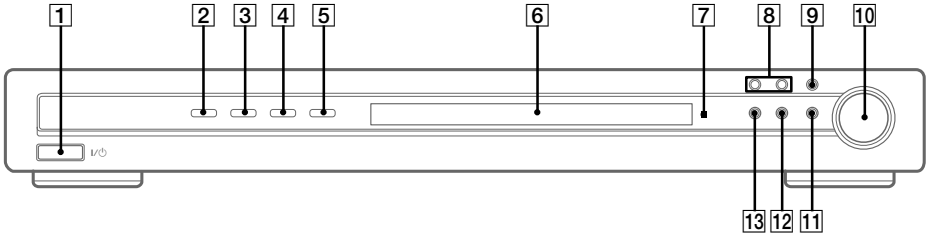
HT-SL65 and HT-SL60 only

ALPHABETICAL ORDER

Display 6 (28)
DVD (indicator) 3 (19)
INPUT SELECTOR 9 (19, 26)
IR (receptor) 7 (32)
MASTER VOLUME 10 (18, 36)
MUTING 11 (14, 19, 37)
PRESET TUNING +/– 8 (28)
SOUND FIELD 12 (21, 25, 38)
TUNER (indicator) 5 (19)
TV/SAT (indicator) 4 (19)
VIDEO (indicator) 2 (19)

NUMBERS AND SYMBOLS

I/⏻ (power) 1 (13, 18, 19, 25, 26)
DD PLII 13 (20)



HT-SL70, HT-SL55, HT-SL50 and HT-SL40 only

ALPHABETICAL ORDER

Display 6 (28)
DVD (indicator) 3 (19)
INPUT SELECTOR 8 (19, 26)
IR (receptor) 7 (32)
MASTER VOLUME 9 (18, 36)
MUTING 12 (14, 19, 37)
PRESET TUNING +/– 13 (28)
SOUND FIELD 11 (21, 25, 38)
TUNER (indicator) 5 (19)
TV/SAT (indicator) 4 (19)
VIDEO (indicator) 2 (19)

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I/⏻ (power) 1 (13, 18, 19, 25, 26)
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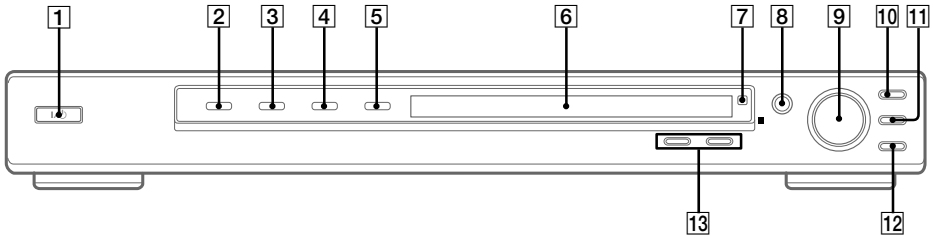


SECTION 2
TEST MODE

FACTORY PRESET MODE

* All preset contents are reset to the default setting.
* Procedure:
  While depressing the PLII and the PRESET TUNING + buttons simultaneously, press the power I/⏻ button to turn on the main power. The message "FACTORY" appears and the present contents are reset to the default values.

RDS AUTOBETICAL MODE

* This mode is installed in the Europe models only. When this mode is used, the receiver scans the broadcasts that can be received by the tuner, and sets up the broadcasts. Be sure to start scanning after connecting the antenna.
* Procedure :

1. Check that the antenna is connected.
2. While depressing the INPUT SELECTOR button, press the I/⏻ button to turn on the main power.
3. The message "AUTO-BETICAL SELECT" appears and the receiver starts scanning.

MICRO/NORMAL SPEAKER SELECTION MODE

* Either the micro speaker mode or normal speaker mode can be selected.
* Procedure
  While depressing the MUTING button, press the power I/⏻ button to turn on the main power. Either the message "MICRO SP." or "NORM. SP." appears. Select the desired mode.

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 button, press the power I/⏻ button to turn on the main power. The message "SF. CLR" appears and initialization is performed.

ALL CLEAR MODE

* The all preset value is cleared when this mode is activated.
* Procedure :
  While depressing the PLII and the PRESET TUNING - buttons simultaneously, press the power I/⏻ button to turn on the main power. The message "CLEARED" appears and clear all preset value.

SOFTWARE VERSION DISPLAY MODE

* The software version is displayed.
* Procedure:
  While depressing the SOUND FIELD and the PRESET TUNING - buttons simultaneously, press the power 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 MUTING and the INPUT SELECTOR buttons simultaneously, press the power I/⏻ button to turn on the main power.
  "REST 06" 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.

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 MUTING and the PRESET TUNING - buttons simultaneously, press the power I/⏻ button to turn on the main power.

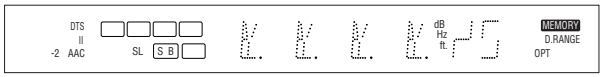
1. All segments turn on.

   VIDEO, DVD, TV/SAT and TUNER LED turn on.

2. Press the INPUT SELECTOR button, confirm display

   VIDEO, and TUNER LED turn on.

3. Press the INPUT SELECTOR button, confirm display



   DVD and TV/SAT LED turn on.

4. Press the INPUT SELECTOR button, all segments and LEDs turn off.

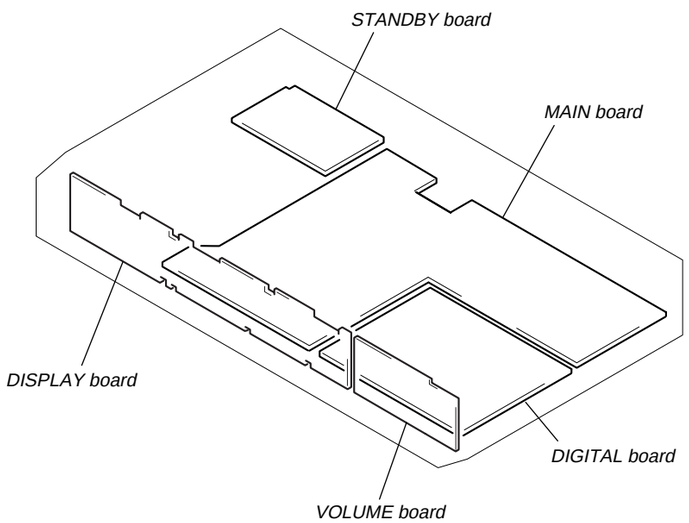
5. Every pressing of the INPUT SELECTOR button turns on each segment and LED one after another in the same order.

TUNER CHECK MODE

* Tuner check
* Procedure :
  While depressing the SOUND FIELD and the INPUT SELECTOR buttons simultaneously, press the power I/⏻ button to turn on the main power. "TUN CHK" appears and the tuner checking is performed.

SECTION 3
DIAGRAMS

• 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:

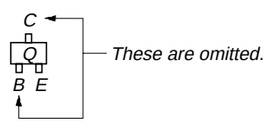
- All capacitors are in µF unless otherwise noted. p : pF. 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

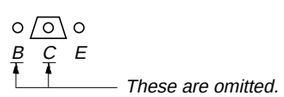
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- : 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 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  : ANALOG
  : DIGITAL
  : DVD

For printed wiring boards.
Note:

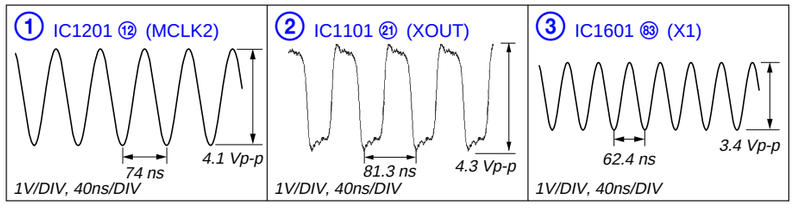
- : parts extracted from the component side.
- : Through hole.
- : Pattern from the side which enables seeing.





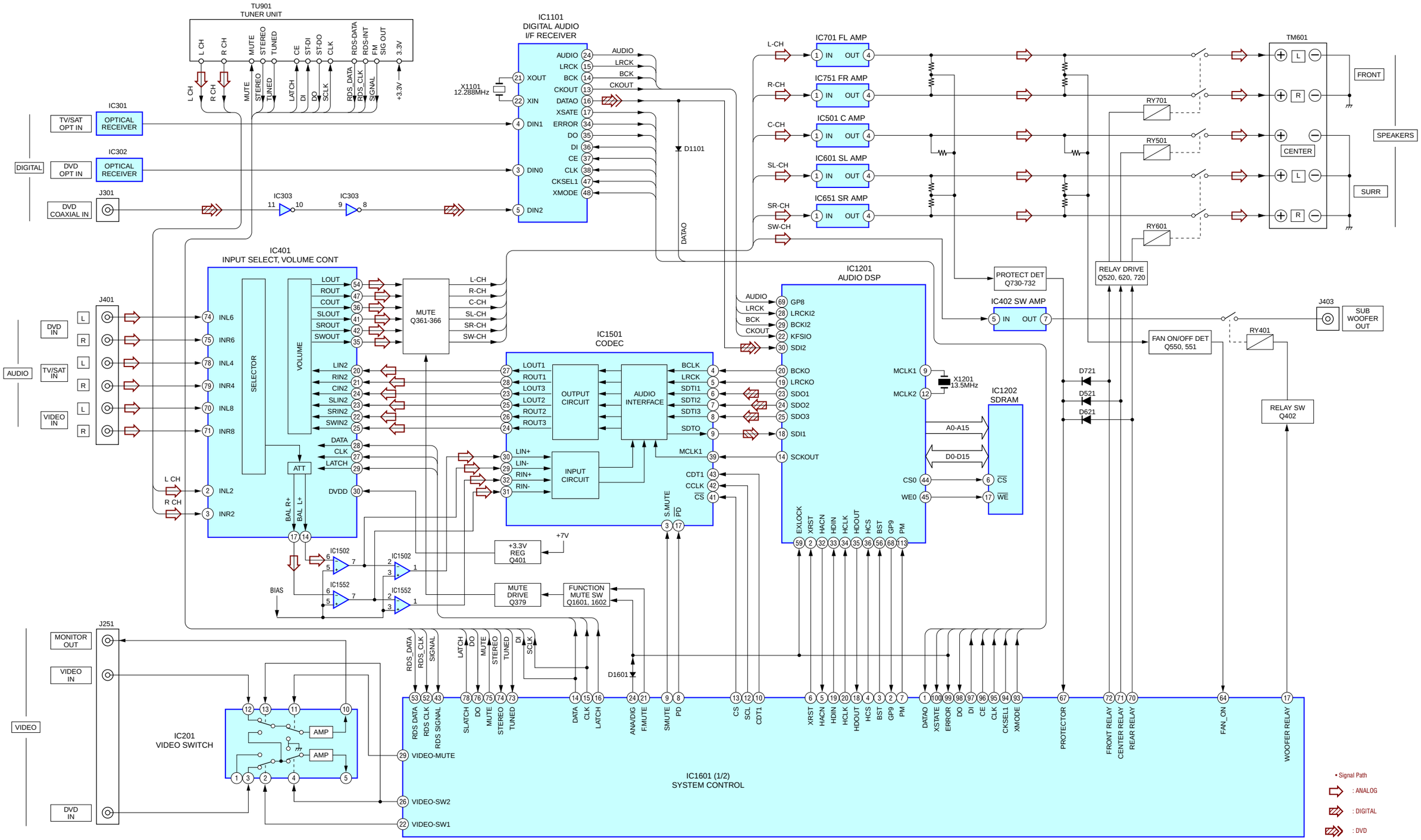
Caution:	
Pattern face side: (Side A)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side B)	Parts on the parts face side seen from the parts face are indicated.

• Waveforms
– DIGITAL Board –

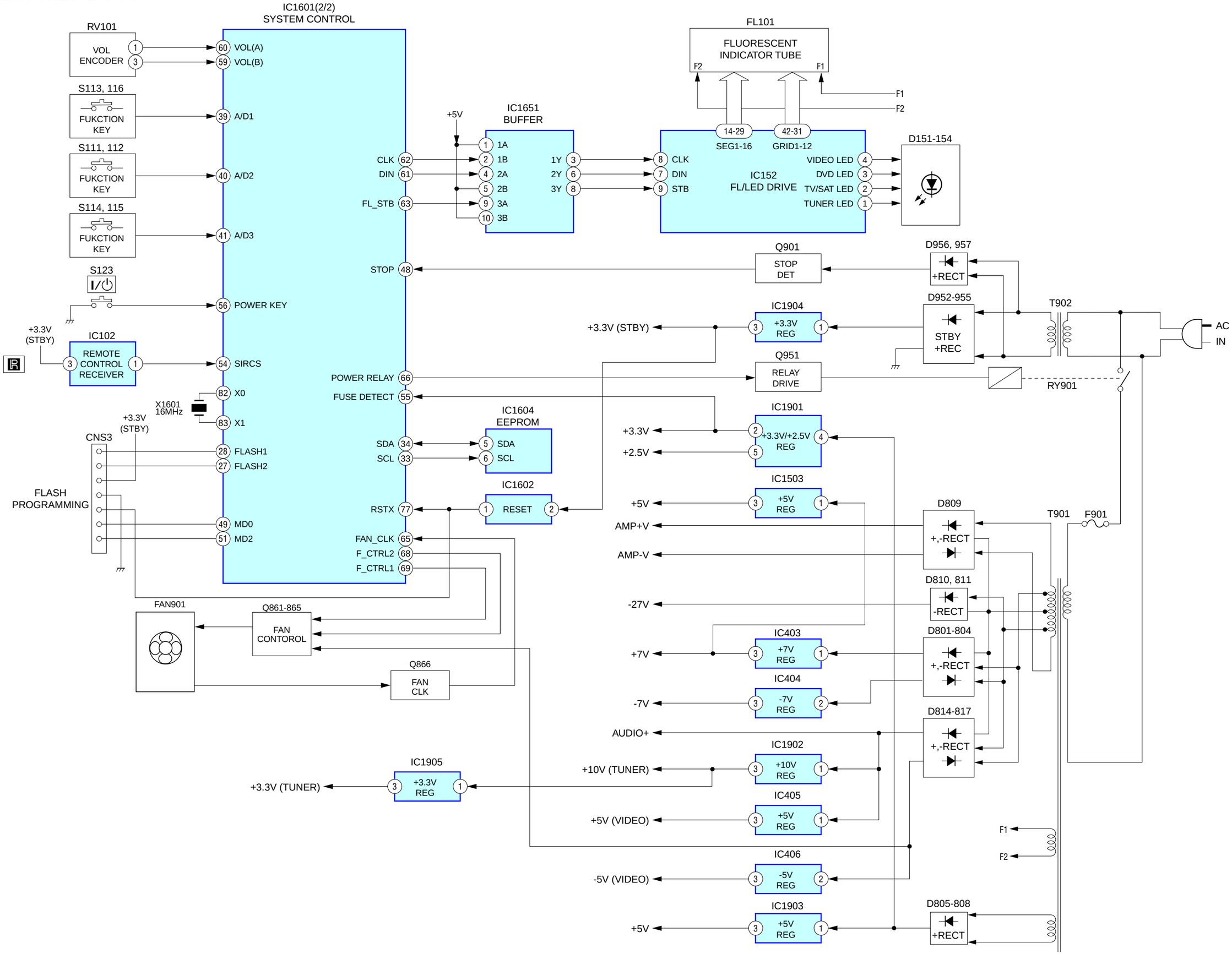


STR-KSL60

3-1. BLOCK DIAGRAMS – MAIN SECTION –

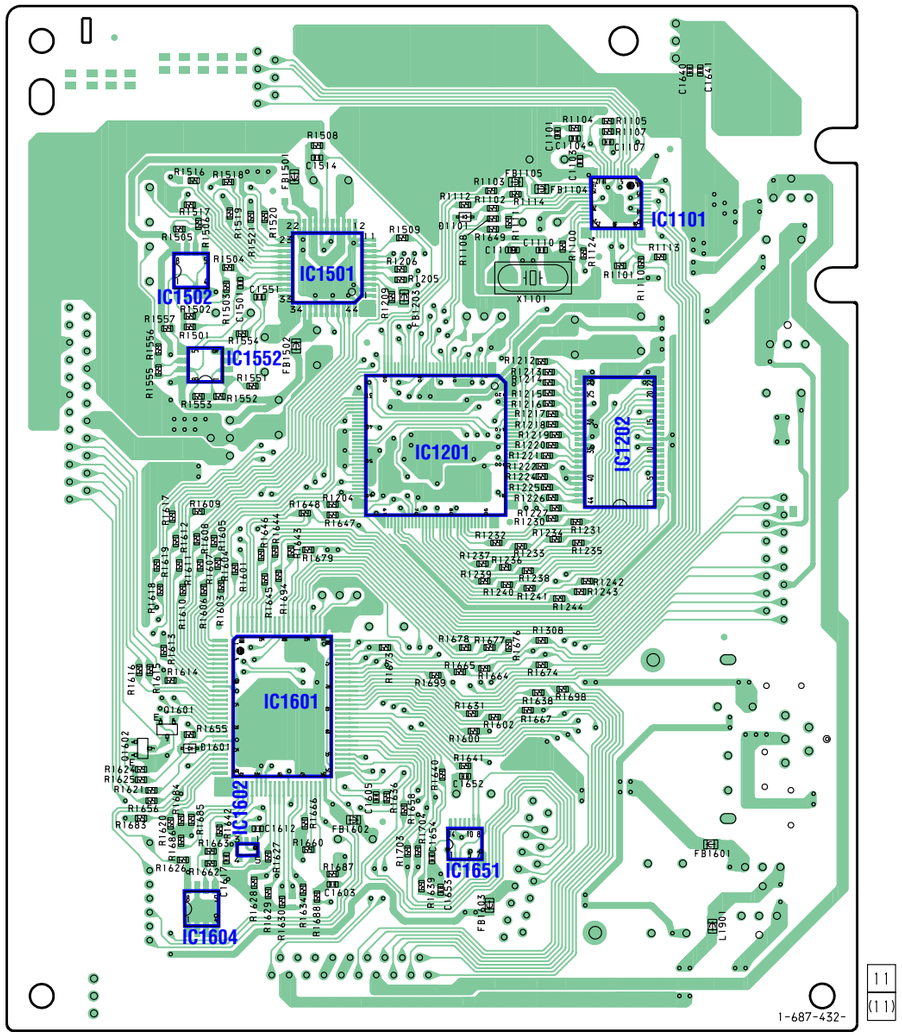


– DISPLAY/POWER SECTION –

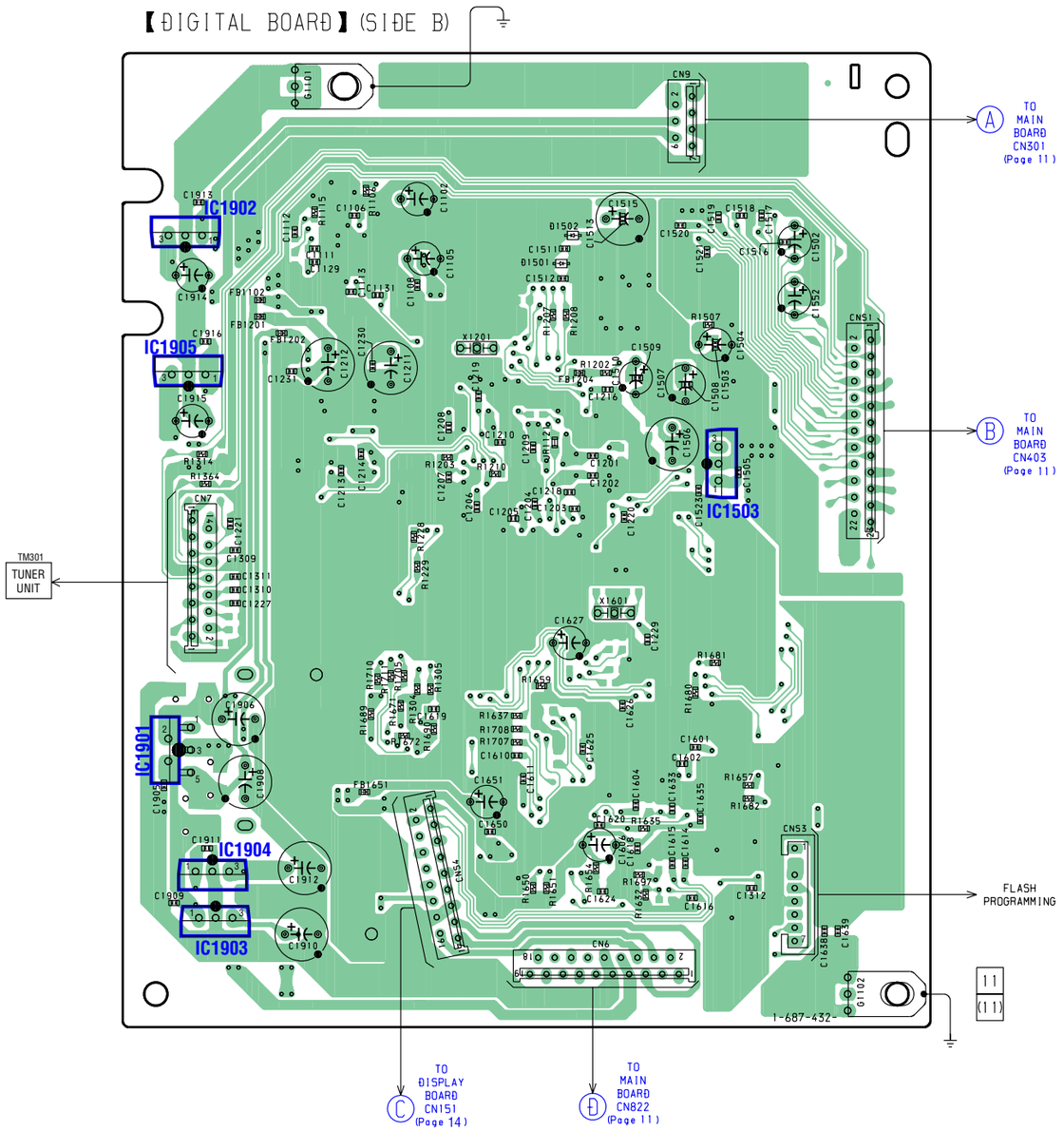


3-2. PRINTED WIRING BOARD – DIGITAL SECTION – • See page 5 for Circuit Boards Location. • **:** Uses unleaded solder.

【DIGITAL BOARD】(SIDE A)



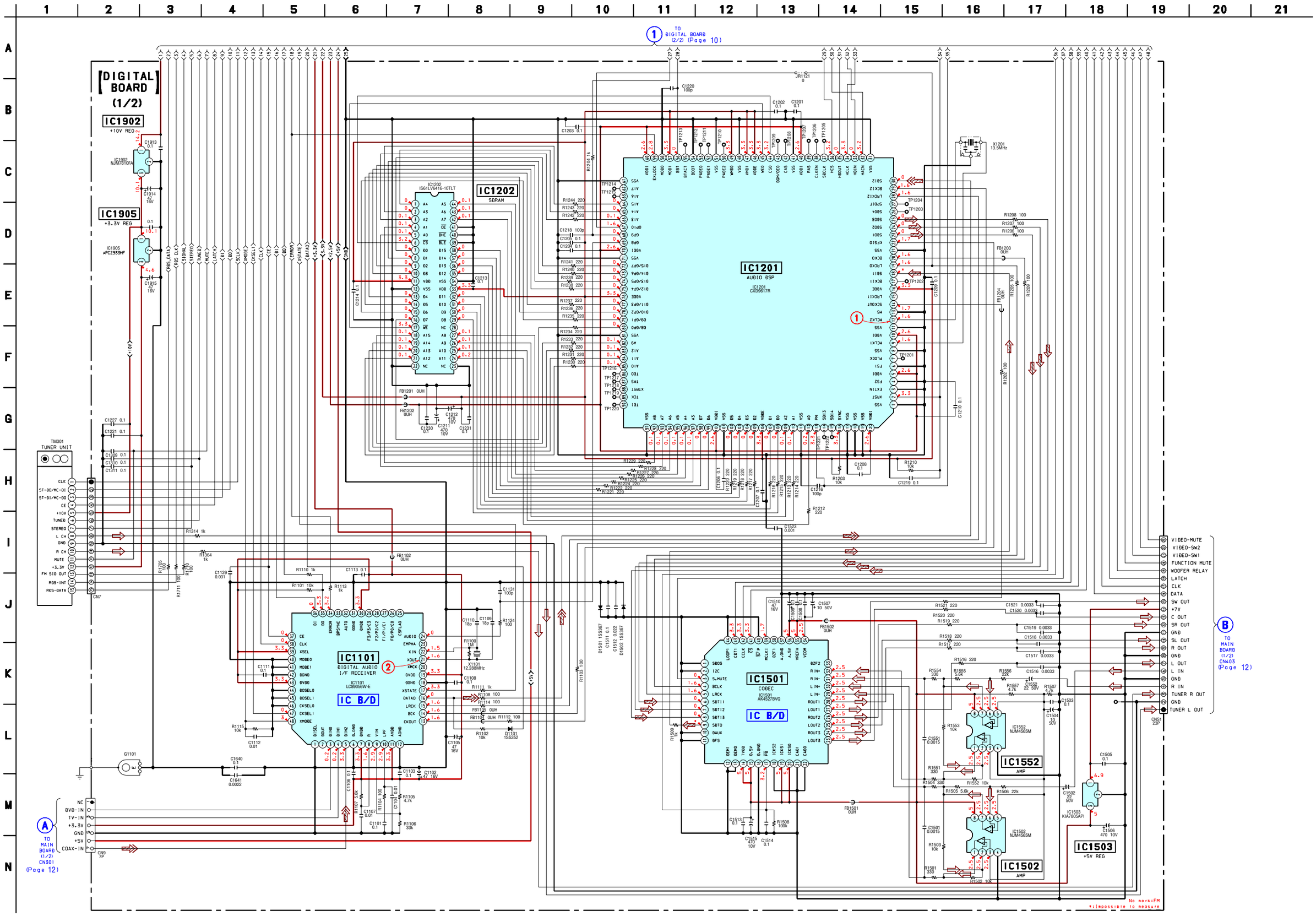
【DIGITAL BOARD】(SIDE B)



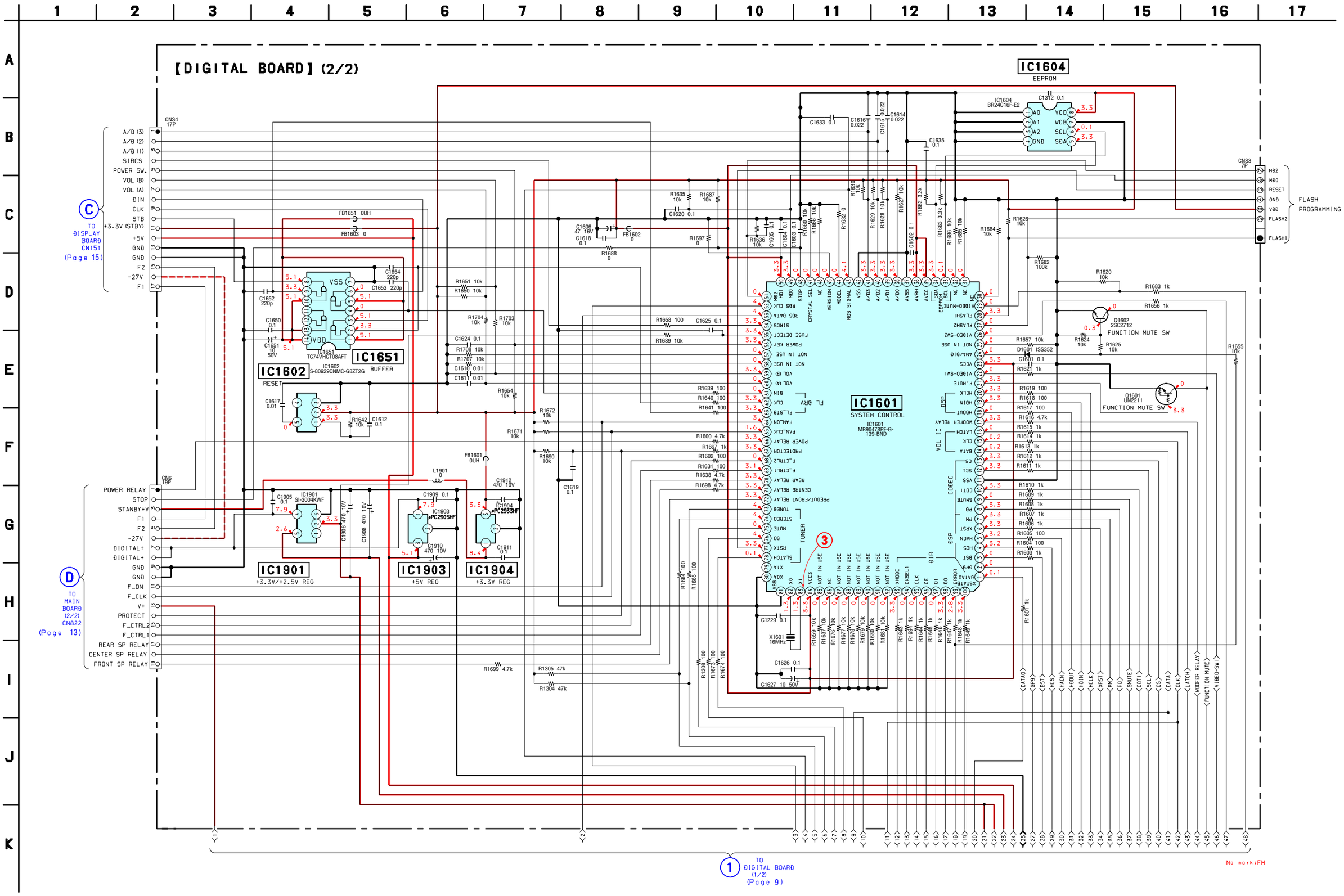
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D1101	B-3	IC1501	B-3	IC1901	E-6
D1501	B-8	IC1502	B-2	IC1902	B-6
D1502	B-8	IC1503	C-9	IC1903	E-6
D1601	E-2	IC1552	C-2	IC1904	E-7
		IC1601	D-2	IC1905	C-6
IC1101	B-4	IC1602	E-2		
IC1201	C-3	IC1604	E-2	Q1601	D-2
IC1202	C-4	IC1651	E-3	Q1602	E-2

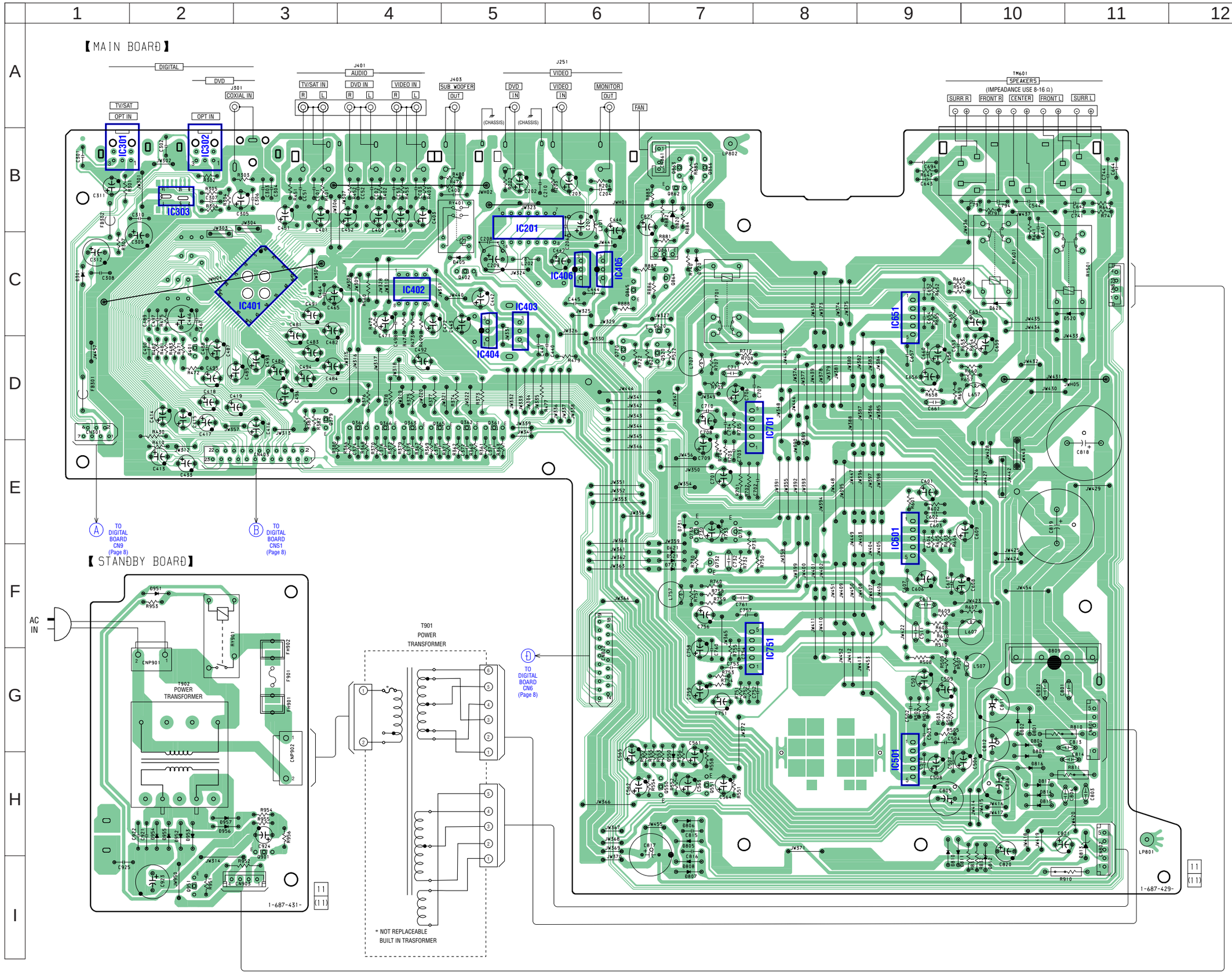
3-3. SCHEMATIC DIAGRAM – DIGITAL (1/2) SECTION – • See page 5 for Waveforms. • See page 16 for IC Block Diagrams. • See page 17 for IC Pin Function Description.



3-4. SCHEMATIC DIAGRAM – DIGITAL (2/2) SECTION – • See page 5 for Wavefoms. • See page 19 for IC Pin Function Description.



3-5. PRINTED WIRING BOARD – MAIN/STANDBY SECTION – • See page 5 for Circuit Boards Location. • **:** Uses unleaded solder.

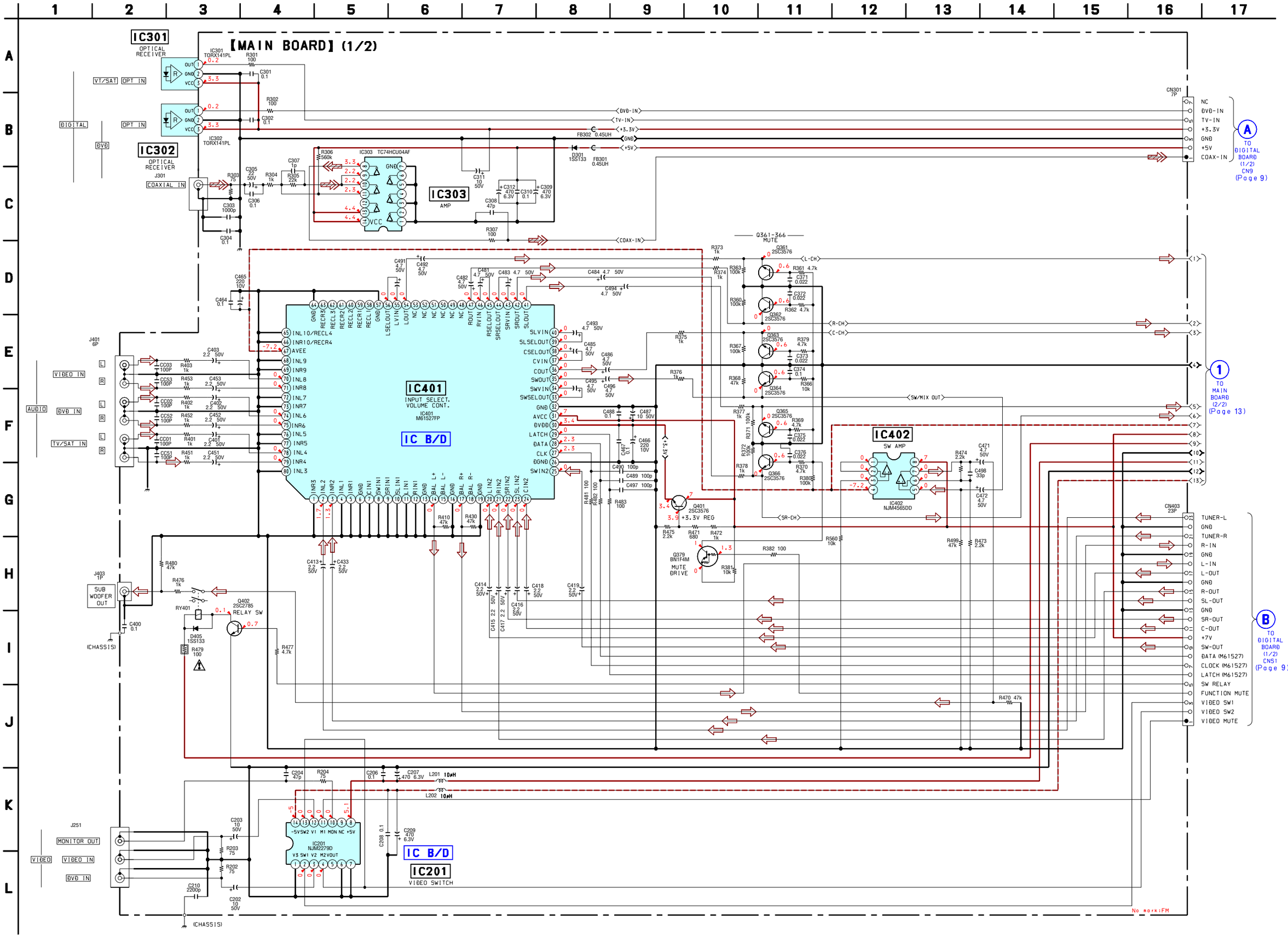


• **Semiconductor Location**

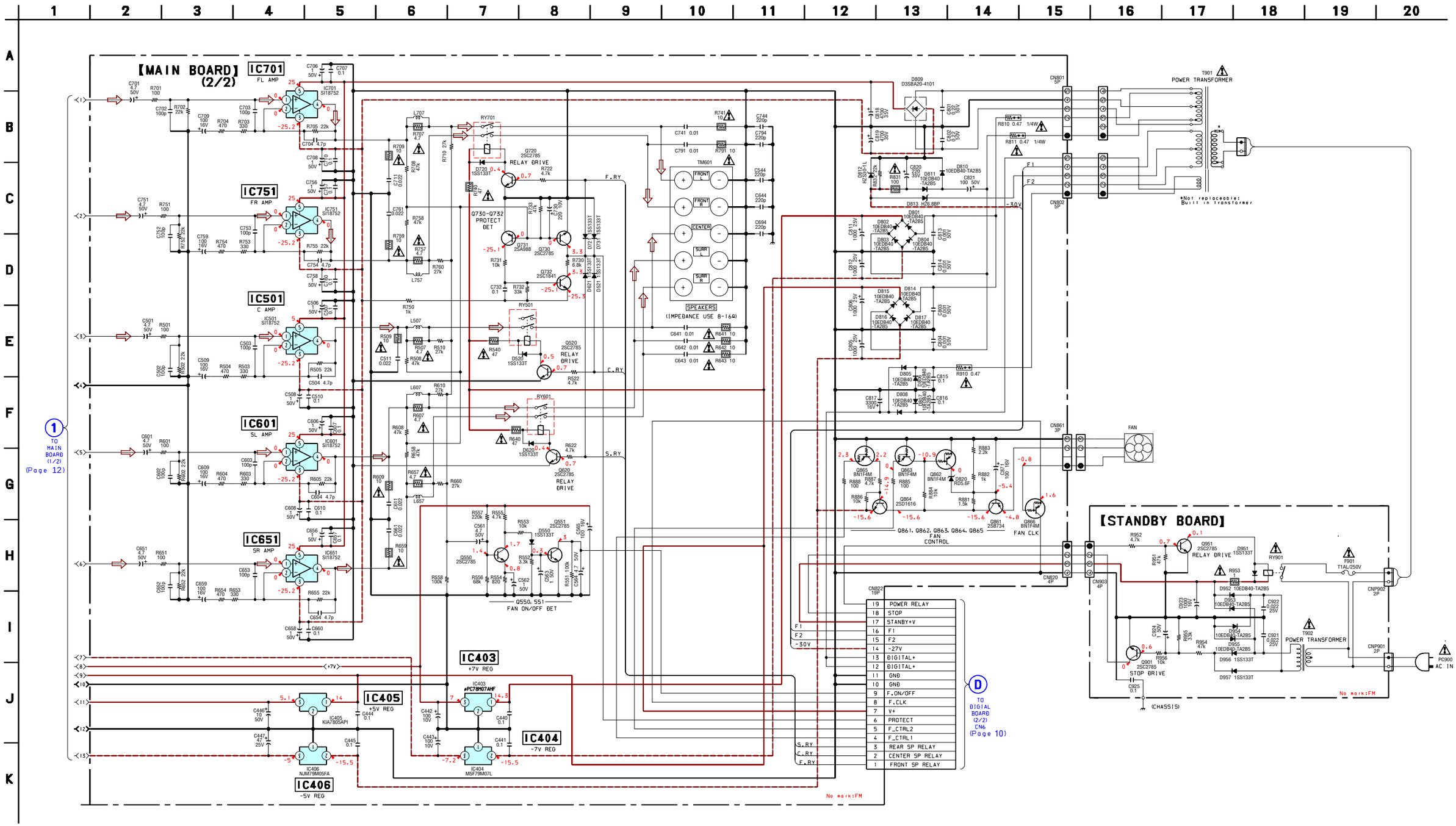
Ref. No.	Location
D301	C-1
D405	C-5
D520	C-11
D521	F-7
D550	H-7
D620	C-10
D621	F-7
D720	C-7
D721	F-7
D731	E-7
D801	G-10
D802	G-10
D803	H-10
D804	G-10
D805	H-7
D806	H-7
D807	I-7
D808	I-7
D809	F-10
D810	I-9
D811	I-9
D812	I-10
D813	H-11
D814	H-10
D815	H-10
D816	H-10
D817	H-10
D820	B-7
IC201	B-5
IC301	B-1
IC302	B-2
IC303	B-2
IC401	C-3
IC402	C-4
IC403	C-5
IC404	D-5
IC405	C-6
IC406	C-6
IC501	H-9
IC601	E-9
IC651	C-9
IC701	D-8
IC751	F-8
Q361	D-5
Q362	D-5
Q363	D-4
Q364	D-4
Q365	D-5
Q366	D-4
Q379	D-3
Q401	D-2
Q402	C-5
Q520	D-7
Q550	H-7
Q551	H-7
Q620	C-7
Q720	D-6
Q730	E-7
Q731	E-7
Q732	F-7
Q861	C-7
Q862	B-7
Q863	B-7
Q864	C-7
Q865	C-6
Q866	B-7

3-6. SCHEMATIC DIAGRAM – MAIN (1/2) SECTION –

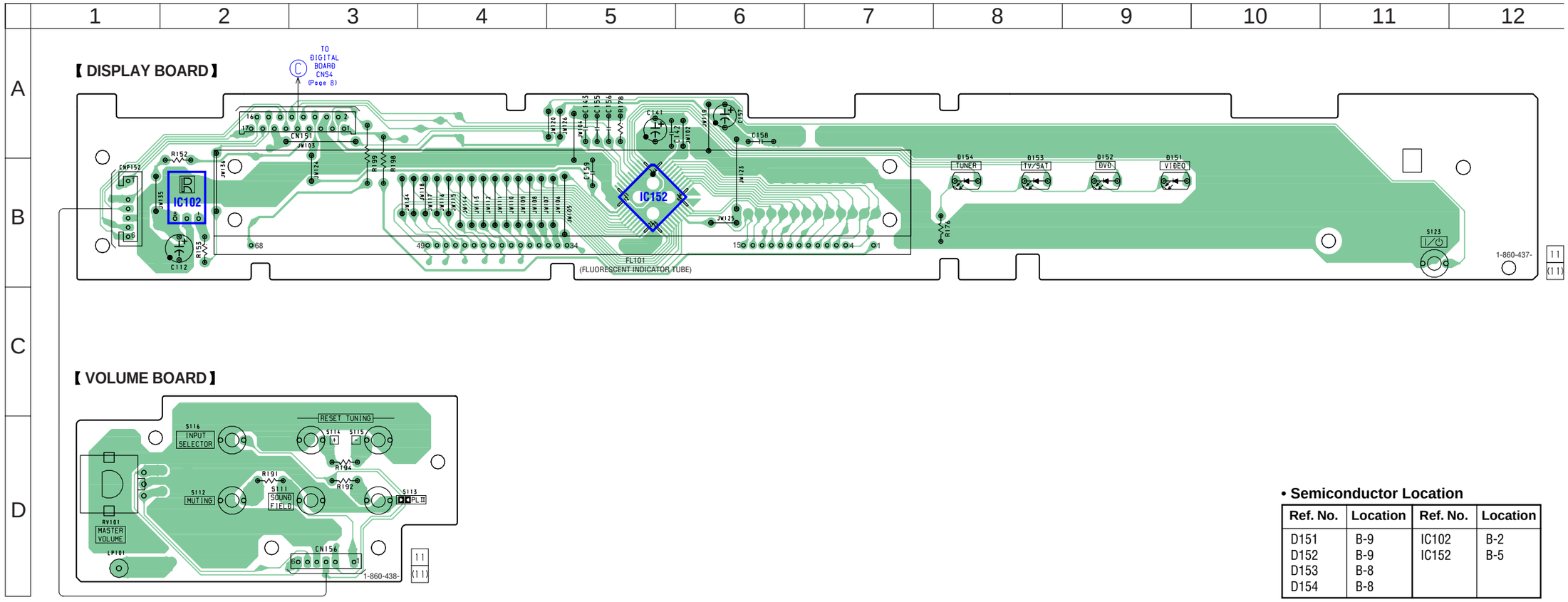
• See page 16 for IC Block Diagrams.



3-7. SCHEMATIC DIAGRAM – MAIN (2/2)/STANDBY SECTION –



3-8. PRINTED WIRING BOARD – DISPLAY SECTION – • See page 5 for Circuit Boards Location. • : Uses unleaded solder.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D151	B-9	IC102	B-2
D152	B-9	IC152	B-5
D153	B-8		
D154	B-8		

3-9. SCHEMATIC DIAGRAM – DISPLAY SECTION – • See page 16 f or IC Bloc k Diag rams .

【DISPLAY BOARD】

FL101
(FLUORESCENT INÐICATOR TUBE)

IC152
FL/LEÐ ÐRIVE
IC152
μPÐ16315GB-3B5
IC B/D

IC102
NJL74H400A
IC102
REMOTE CONTROL
RECEIVER

【VOLUME BOARD】

S111 SOUNÐ FIELÐ
S112 MUTING
S116 INPUT SELECTOR
S113 PLII
S114
S115
PRESET TUNING
RV101 MASTER VOLUME
CN156
CNP152 6P
CN151 17P

Ð151 VIÐEO
Ð152 ÐVÐ
Ð153 TV/SAT
Ð154 TUNER

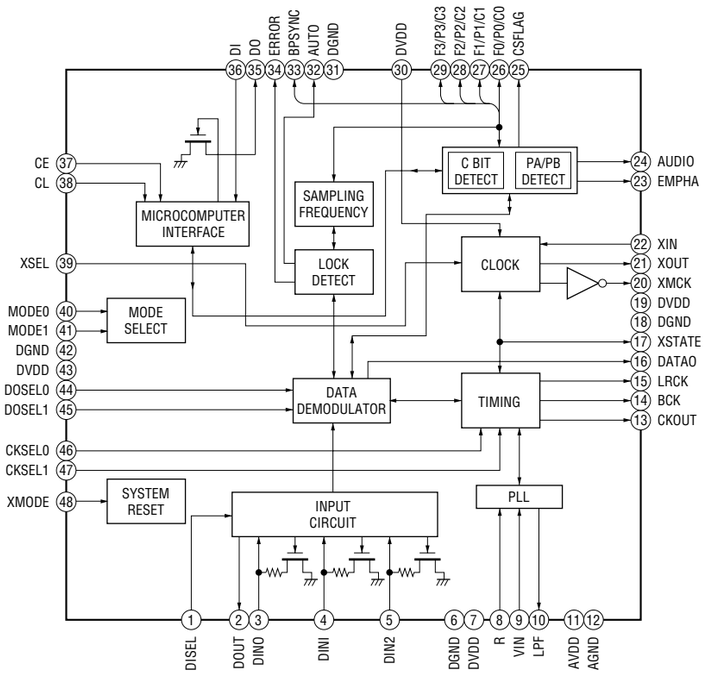
F1
-27V
F2
GNÐ
GNÐ
+5V
+3.3V (STBY)
FL LAT
FL CLK
FL ÐATA
VOL UP
VOL ÐOWN
POWER SW
SIRCS
AÐ (1)
AÐ (2)
AÐ (3)

TO ÐIGITAL BOARÐ (2/2) CNS4 (Page 10)

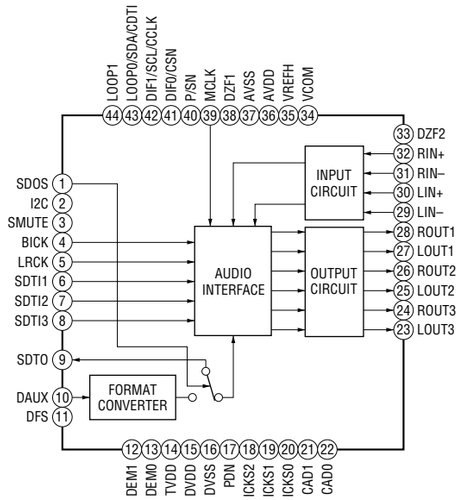
No mark:FM

3-10. IC BLOCK DIAGRAM

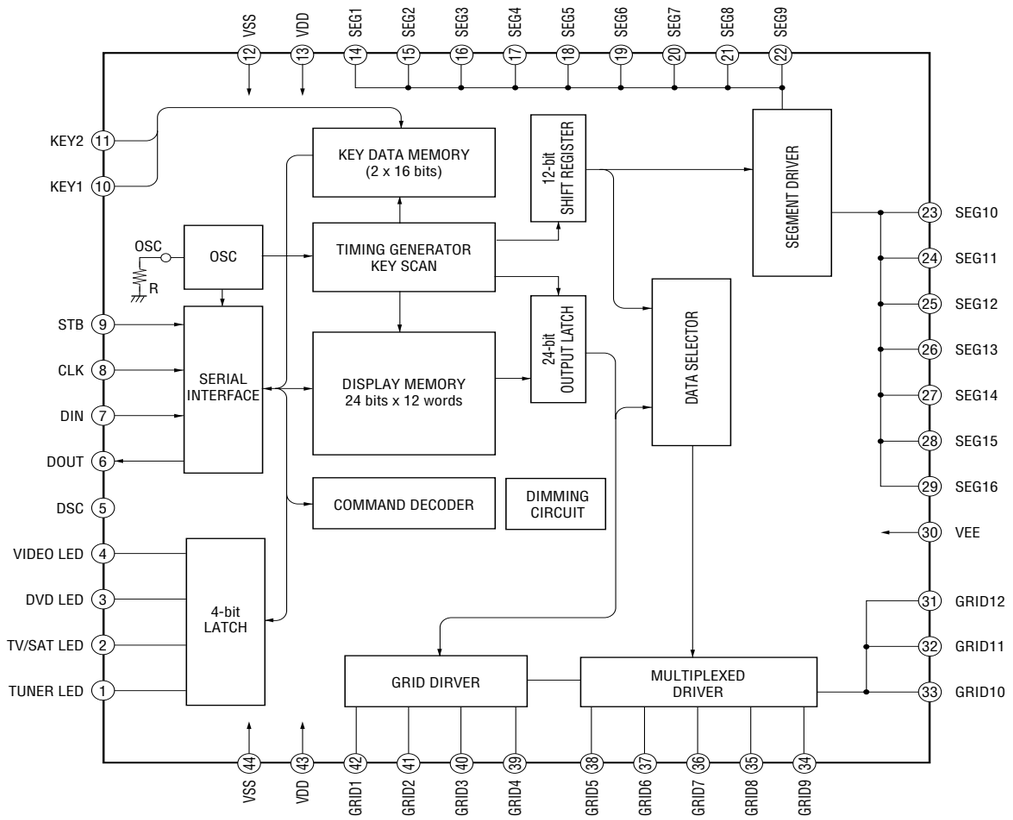
IC1101 LC89056W-E (DIGITAL Board)



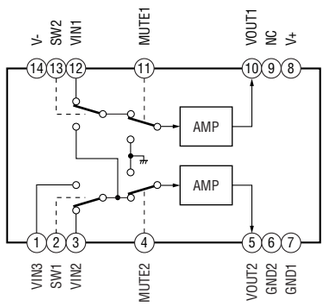
IC1501 AK4527BVQ (DIGITAL Board)



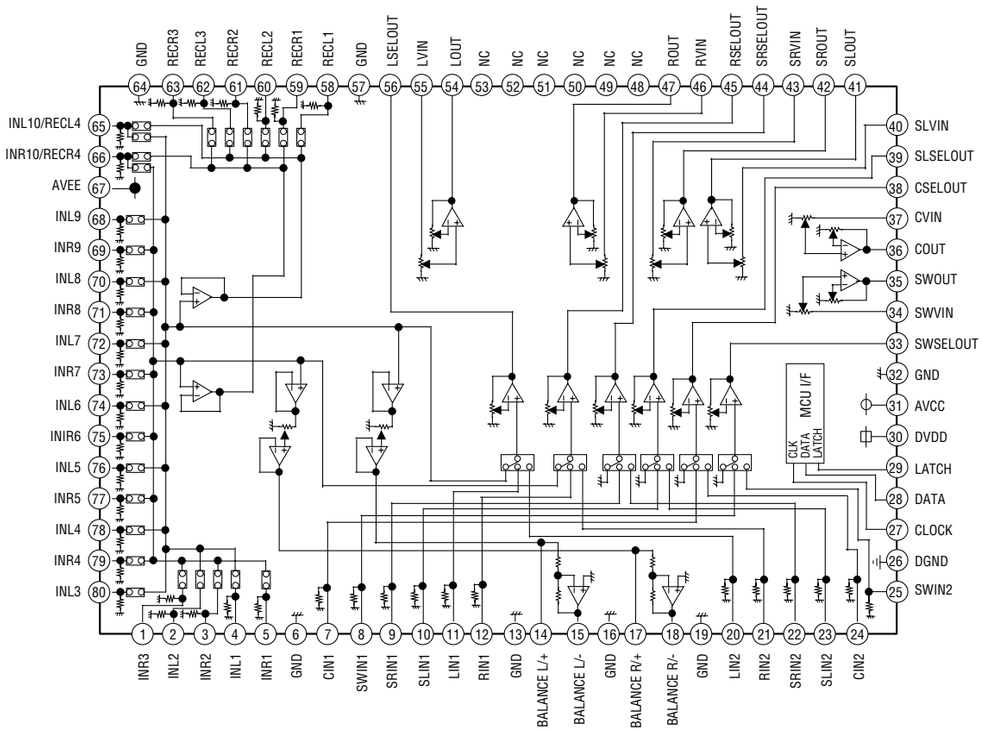
IC152 μPD16315GB-3BS (DISPLAY Board)



IC201 NJM2279D (MAIN Board)



IC401 M61527FP (MAIN Board)



3-11. IC PIN FUNCTION DESCRIPTIONS

• IC1201 CXD9617R (AUDIO DSP) (DIGITAL BOARD)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	XRST	I	Rest input from the system control
3	EXTIN	I	Not used (connected to the ground)
4	FS2	I	Not used (connected to the ground)
5	VDD1	—	Power supply terminal (+2.5V)
6	FS1	I	Not used (connected to the ground)
7	PLOCK	O	Internal PLL lock signal output Not used (open)
8	VSS	—	Ground terminal
9	MCLK1	—	Resonator terminal (13.5MHz)
10	VDDI	—	Power supply terminal (+2.5V)
11	VSS	—	Ground terminal
12	MCLK2	—	Resonator terminal (13.5MHz)
13	MS	I	Master/slave operation selection terminal (L : internal clock) (fixed at “L”)
14	SCKOUT	O	Internal system clock output to the CODEC (IC1501)
15	LRCKI1	I/O	Not used (open)
16	VDDE	—	Power supply terminal (+3.3V)
17	BCKI1	I/O	Bit clock input-output terminal for audio interface serial data Not used (open)
18	SDI1	I	Data input from the CODEC (IC1501)
19	LRCKO	O	Sampling clock output to the CODEC (IC1501)
20	BCKO	O	Bit clock output to the CODEC (IC1501)
21	VSS	—	Ground terminal
22	KFSIO	I/O	Audio clock (384fs/256fs) input from the DIR (IC1101)
23 to 25	SDO1 to SDO3	O	Serial data output to the CODEC (IC1501)
26	SDO4	O	Serial data output terminal Not used (open)
27	SPDIF	O	SPDIF power output terminal Not used (open)
28	LRCKI2	I	Sampling clock input to the DIR (IC1101)
29	BCKI2	I	Bit clock input from the DIR (IC1101)
30	SDI2	I	Data input from the DIR (IC1101)
31	VSS	—	Ground terminal
32	HACN	O	Acknowledge signal output to the system control (IC1601)
33	HDIN	I	Serial data input from the system control (IC1601)
34	HCLK	I	Clock input from the system control (IC1601)
35	HDOUT	O	Serial data output to the system control (IC1601)
36	HCS	I	Chip select signal input from the system control (IC1601)
37	SDCLK	O	SDRAM clock Not used (open)
38	CLKEN	O	SDRAM clock enable Not used (open)
39	RAS	O	Row address strobing Not used (open)
40	VDDI	—	Power supply terminal (+2.5V)
41	VSS	—	Ground terminal
42	CAS	O	Column address strobing Not used (open)
43	DQM/OE0	O	Data I/O mask Not used (open)
44	CS0	O	Chip select signal output to the SRAM (IC1202)
45	WE0	O	Write enable signal output to the SRAM (IC1202)
46	VDDE	—	Power supply terminal (+3.3V)
47	WMD1	I	Setting WAIT mode for external memory (pull up)
48	VSS	—	Ground terminal
49	WMD0	I	Setting WAIT mode for external memory (pull up)
50	PAGE2	O	External memory page switch signal output Not used (open)
51	VSS	—	Ground terminal
52	PAGE1	O	External memory page switch signal output Not used (open)

Pin No.	Pin Name	I/O	Description
53	PAGE0	O	External memory page switch signal output Not used (open)
54	BOOT	I	Not used (connected to the ground)
55	BTACT	O	Boot mode status display signal Not used (open)
56	BST	I	Boot strap signal input from the system control (IC1601)
57	MOD1	I	Setting for 256fs (pllx9) (pull up)
58	MOD0	I	Setting for single chip mode (pull down)
59	EXLOCK	I	Lock signal input terminal
60	VDDI	—	Power supply terminal (+2.5V)
61	VSS	—	Ground terminal
62	A17	O	External memory address Not used (open)
63	A16	O	External memory address Not used (open)
64 to 66	A15 to A13	O	Address signal output to the SRAM (IC1202)
67	GP10	O	LRCK0 signal output
68	GP9	O	GP9 (DECODE) signal output to the system control (IC1601)
69	GP8	I	GP8 (AUDIO) signal input from the DIR (IC1101)
70	VDDI	—	Power supply terminal (+2.5V)
71	VSS	—	Ground terminal
72 to 75	D15/GP7 to D12/GP4	I/O	Data input/output from/to the SRAM (IC1202)
76	VDDE	—	Power supply terminal (+3.3V)
77 to 80	D11/GP3 to D8/GP0	I/O	Data input/output from/to the SRAM (IC1202)
81	VSS	—	Ground terminal
82 to 85	A9 to A10	O	Address signal output to the SRAM (IC1202)
86	TDO	O	Simple emulation data output Not used (open)
87	TMS	I	Simple emulation data entry beginning and the end terminal Not used (open)
88	XTRST	I	Asynchronous simple BREAK input terminal of emulation Not used (open)
89	TCK	I	Simple emulation clock input Not used (open)
90	TDI	I	Simple emulation data entry Not used (open)
91	VSS	—	Ground terminal
92 to 97	A8 to A3	O	Address signal output to the SRAM (IC1202)
98,99	D7,D6	I/O	Data input/output from/to the SRAM (IC1202)
100	VDDI	—	Power supply terminal (+2.5V)
101	VSS	—	Ground terminal
102 to 105	D5 to D2	I/O	Data input/output from/to the SRAM (IC1202)
106	VDDE	—	Power supply terminal (+3.3V)
107,108	D1,D0	I/O	Data input/output from/to the SRAM (IC1202)
109,110	A2,A1	O	Address signal output to the SRAM (IC1202)
111	VSS	—	Ground terminal
112	A0	O	Address signal output to the SRAM (IC1202)
113	PM	I	PLL initialization signal input from the system control (IC1601)
114	SD13	I	Data entry terminal Not used (open)
115	SD14	I	Data entry terminal Not used (open)
116	SYNC	I	Synchronization / asynchronous selection terminal (L:Sync. H:Async.) (fixed at “H”)
117 to 119	VSS	—	Ground terminal
120	VDDI	—	Power supply terminal (+2.5V)

• IC1601 MB90478PF-G-139-BND (SYSTEM CONTROL)(DIGITAL BOARD)

Pin No.	Pin Name	I/O	Description
1	DATA O	I	Data input from the DIR (IC1101)
2	GP9	I	External memory data input from the DSP (IC1201)
3	BST	O	Boot strap signal output to the DSP (IC1201)
4	HCS	O	Chip select signal output to the DSP (IC1201)
5	HACN	I	Acknowledge signal input from the DSP (IC1201)
6	XRST	O	Reset signal output to the DSP (IC1201)
7	PM	O	PLL initialization signal output to the DSP (IC1201)
8	PD	O	Power down signal output to the CODEC (IC1501)
9	SMUTE	O	Soft mute signal output to the CODEC (IC1501)
10	CDT1	O	Control data output to the CODEC (IC1501)
11	VSS	—	Ground terminal
12	SCL	O	Serial clock output to the CODEC (IC1501)
13	CS	O	Chip select signal output to the CODEC (IC1501)
14	DATA	O	Serial control data output to the tuner and the IC401
15	CLK	O	Serial control clock output to the tuner and the IC401
16	LATCH	O	Latch signal output to the IC401
17	WOOFER RELAY	O	Sub woofer relay control signal output
18	HDOUT	I	Serial data input from the DSP (IC1201)
19	HDIN	O	Serial data output to the DSP (IC1201)
20	HCLK	O	Clock signal output to the DSP (IC1201)
21	F.MUTE	O	Function mute signal output
22	VIDEO-SW1	O	Video switch signal output to the video switch (IC201)
23	VCC5	—	Power supply terminal (+3.3V) (STBY)
24	ANA/DIG	O	Function mute and error port signal output
25	NOT IN USE	I	Not used (fiexed at “L”)
26	VIDEO-SW2	O	Video switch signal output to the video switch (IC201)
27	FLASH2	I	Flash programming input
28	FLASH1	I	Flash programming input
29	VIDEO-MUTE	O	Video mute signal output to tthe video switch (IC201)
30 to 32	NC	I	Not used (fixed at “L”)
33	SCL	O	Clock output to the EEPROM (IC1604)
34	SDA	I/O	Serial data input/output from/to the EEPROM (IC1604)
35	AVCC	—	Power supply terminal (A/D converter) (+3.3V)
36	AVRH	—	External reference power supply (A/D converter)
37	AVSS	—	Ground terminal (A/D converter)
38	A/D0	I	Not used (fixed at “L”)
39	A/D1	I	Key data signal input from S113, 116
40	A/D2	I	Key data signal input from S111, 112
41	A/D3	I	Key data signal input from S114, 115
42	VSS	—	Ground terminal
43	RDS SIGNAL	I	RDS signal level input
44	MODEL	I	Model setting terminal
45	VERSION	I	Destination setting terminal
46	NC	I	Not used (fixed at “L”)
47	CRYSTAL SEL	I	Not used (fixed at “L”)
48	STOP	I	Power stop detection signal input
49	MD0	I	Flash programming MD0 input
50	MD1	I	Operation mode setting terminal
51	MD2	I	Flash programming MD2 input
52	RDS CLK	I	RDS clock input from the tuner

Pin No.	Pin Name	I/O	Description
53	RDS DATA	I	RDS data input from the tuner
54	SIRCS	I	Data input from the remote control receiver
55	FUSE DETECT	I	Fuse open detection signal input
56	POWER KEY	I	Power switch detection signal input
57, 58	NOT IN USE	I	Not used (fixed at “L”)
59	VOL(B)	I	Volume signal input from the rotary encoder
60	VOL(A)	I	Volume signal input from the rotary encoder
61	DIN	O	Serial control data output to the FL/LED driver (IC152)
62	CLK	O	Clock signal output to the FL/LED driver (IC152)
63	FL_STB	O	Latch signal output to the FL/LED driver (IC152)
64	FAN_ON	I	Fan on level detection signal input
65	FAN_CLK	I	Feedback signal input from the fan (FAN901)
66	POWER RELAY	O	Power relay drive signal output
67	PROTECTOR	I	Protect detection signal input
68	F_CTRL2	O	Fan speed control signal output
69	F_CTRL1	O	Fan ON/OFF control signal output
70	REAR RELAY	O	Surround speasker relay control signal output
71	CENTER RELAY	O	Center speasker relay control signal output
72	FRONT RELAY	O	Front speasker relay control signal output
73	TUNED	I	Tuning a frequency detection signal input from the tuner
74	STEREO	I	Stereo detection signal from the tuner
75	MUTE	O	Muting control signal output to the tuner
76	DO	I	Data input from the tuner
77	RSTX	I	System reset input
78	SLATCH	O	Serial control latch signal output to the tuner
79	X1A	—	Not used (open)
80	X0A	—	Not used (connected to the ground)
81	VSS	—	Ground terminal
82	X0	I	Terminal for a oscillator
83	X1	O	Terminal for a oscillator
84	VCC3	—	Power supply terminal (+3.3V) (STBY)
85	NOT IN USE	I	Not used (fixed at “L”)
86	NC	I	Not used (fixed at “L”)
87 to 92	NOT IN USE	I	Not used (fixed at “L”)
93	XMODE	O	Reset signal output to the DIR (IC1101)
94	CKSEL1	O	Clock selection signal output to the DIR (IC1101)
95	CLK	O	Clock output to the DIR (IC1101)
96	CE	O	Chip enable signal output to the DIR (IC1101)
97	DI	O	Data output to the DIR (IC1101)
98	DO	I	Data input from the DIR (IC1101)
99	ERROR	I	PLL lock error, data error flag input from the DIR (IC1101)
100	XSTATE	I	XSTATE signal input from the DIR (IC1101)

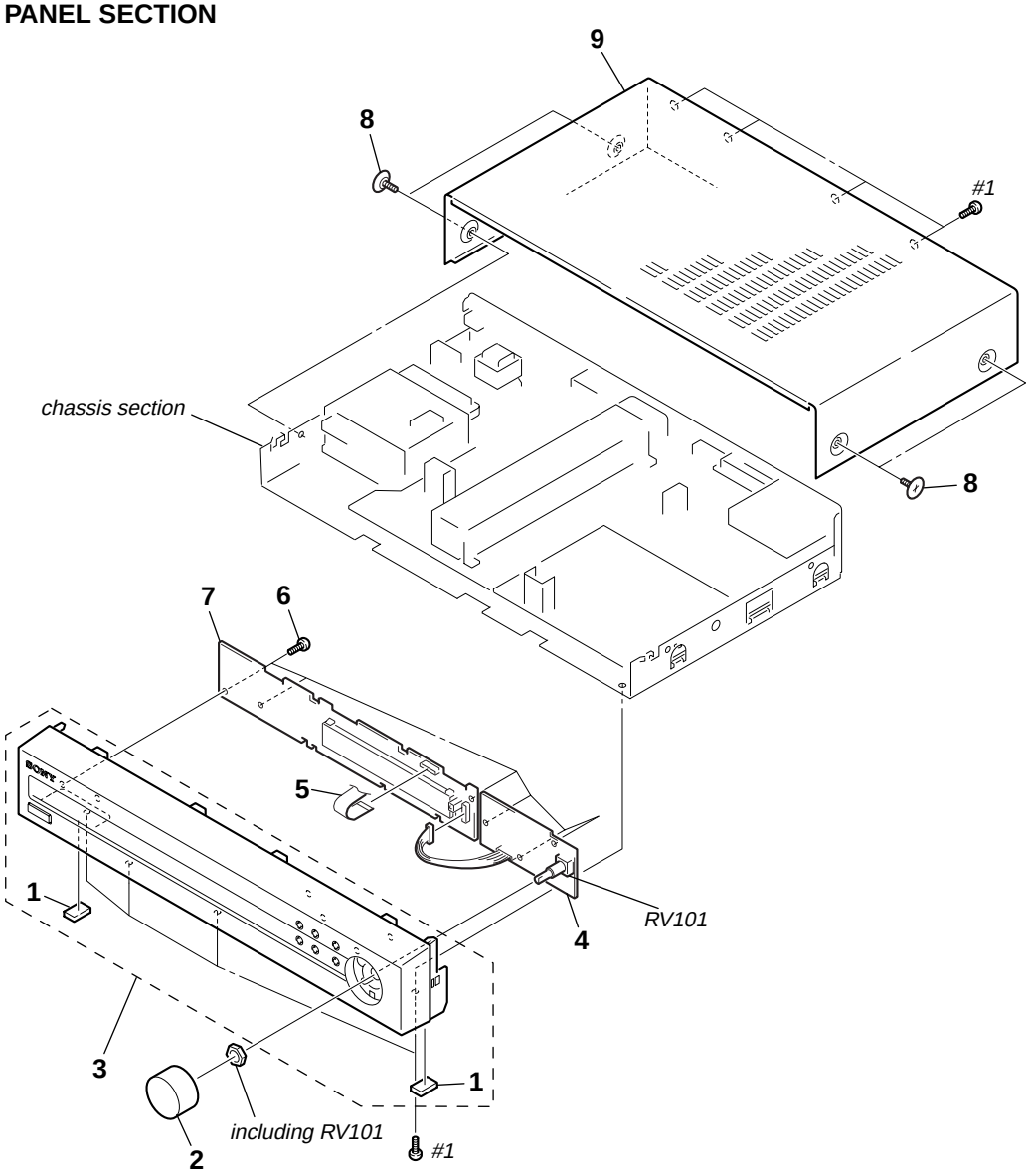
SECTION 4
EXPLODED VIEWS

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.

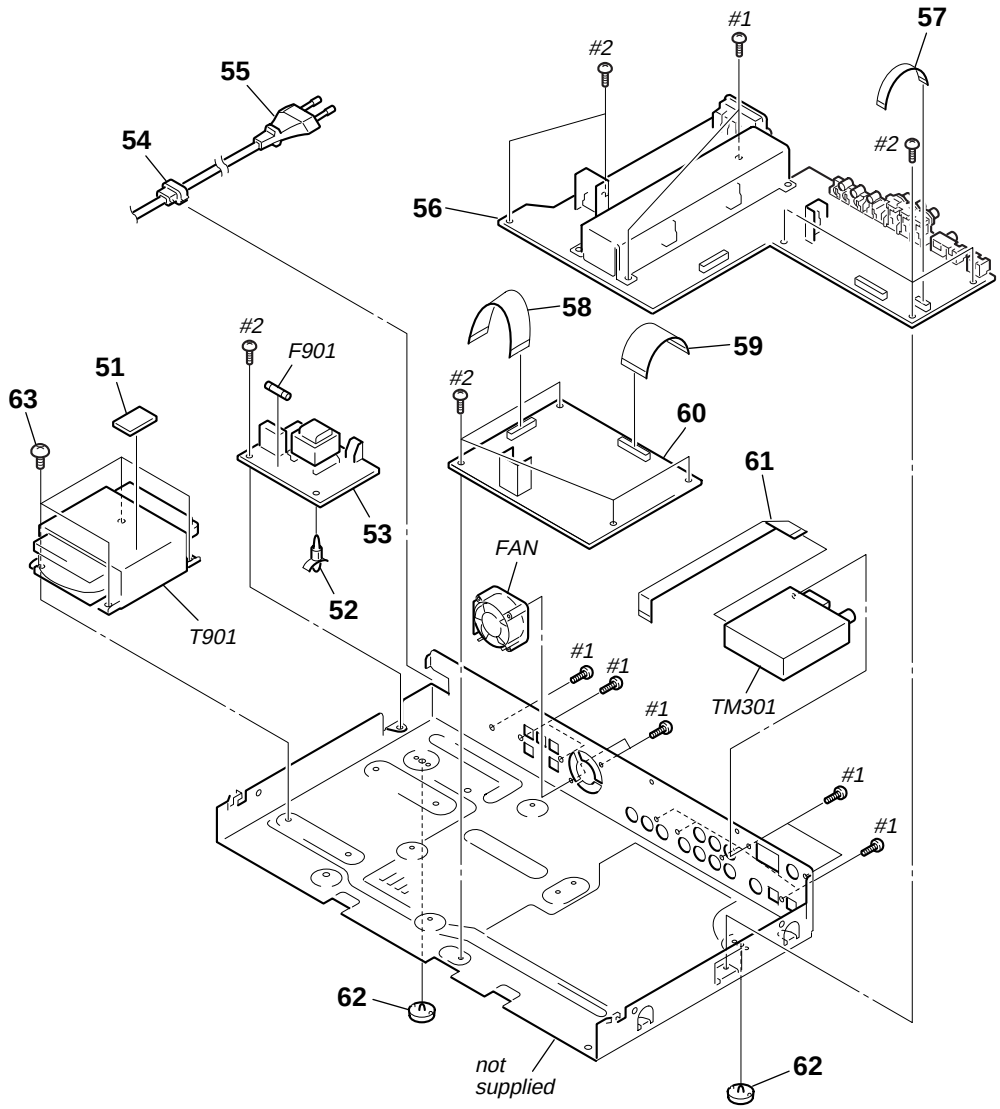
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

4-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
1	4-977-358-01	CUSHION	
2	4-246-464-01	KNOB VOL (SL50)	
3	X-4955-913-1	FRONT PANEL ASSY	
4	1-860-438-11	VOLUME BOARD	
5	1-773-041-11	WIRE (FLAT TYPE) (17 CORE)	
6	4-951-620-01	SCREW (2.6X8), +BVTP	
7	A-4748-511-A	DISPLAY BOARD, COMPLETE	
8	3-070-883-11	SCREW, TAPPING	
9	4-246-548-41	CASE	
#1	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	

4-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remarks
51	4-214-557-11	CUSHION	
52	4-954-051-21	HOLDER, PC BOARD	
53	1-687-431-11	STANDBY BOARD	
* 54	3-703-244-00	BUSHING (2104), CORD	
⚠55	1-777-071-23	CORD, POWER	
56	A-4733-034-A	MAIN BOARD, COMPLETE	
57	1-769-876-11	WIRE (FLAT TYPE)(7 CORE)	
58	1-773-105-11	WIRE (FLAT TYPE)(19 CORE)	
59	1-773-175-11	WIRE (FLAT TYPE)(23 CORE)	
60	A-4733-037-A	DIGITAL BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remarks
61	1-773-017-11	WIRE (FLAT TYPE)(15 CORE)	
62	4-965-822-01	FOOT	
63	4-249-675-01	+BV SUMITITE S 4x6 ROUND	
⚠F901	1-532-463-51	FUSE (T1AL 250V)	
FAN	1-763-561-22	FAN, D.C.	
⚠T901	1-439-630-11	POWER TRANSFORMER	
TM301	1-693-578-13	TUNER	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	

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

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
- COILS
  uH: µH
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: 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 ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
	A-4733-037-A	DIGITAL BOARD, COMPLETE			
		**********			
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 IT-3	
		< CAPACITOR >			
C1101	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1102	1-126-947-11	ELECT	47uF	20.00%	16V
C1103	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1104	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1105	1-126-947-11	ELECT	47uF	20.00%	16V
C1106	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1107	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1108	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1109	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C1110	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C1111	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1112	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1113	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1129	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C1131	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1201	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1202	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1203	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1204	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1205	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1206	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1207	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1208	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1209	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1210	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1211	1-126-935-11	ELECT	470uF	20.00%	10V
C1212	1-126-935-11	ELECT	470uF	20.00%	10V
C1213	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1214	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1216	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1218	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1219	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1220	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1221	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1227	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1229	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1230	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1231	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1309	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1310	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1311	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1312	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1501	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C1502	1-126-965-91	ELECT	22uF	20.00%	50V
C1503	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1504	1-126-964-11	ELECT	10uF	20.00%	50V
C1505	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1506	1-126-935-11	ELECT	470uF	20.00%	10V
C1507	1-126-964-11	ELECT	10uF	20.00%	50V
C1508	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1509	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1510	1-126-947-11	ELECT	47uF	20.00%	16V
C1511	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1512	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C1513	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1514	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1515	1-126-935-11	ELECT	470uF	20.00%	10V
C1516	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1517	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1518	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1519	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1520	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1521	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C1523	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V
C1551	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C1552	1-126-965-91	ELECT	22uF	20.00%	50V
C1601	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1602	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1603	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1604	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1605	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1606	1-126-947-11	ELECT	47uF	20.00%	16V
C1610	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1611	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1612	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1614	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C1615	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C1616	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C1617	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1618	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1619	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1620	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1624	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1625	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1626	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1627	1-126-964-11	ELECT	10uF	20.00%	50V
C1633	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1635	1-164-156-11	CERAMIC CHIP	0.1uF		25V

DIGITAL

Ref. No.	Part No.	Description			Remarks
C1640	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1641	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C1650	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1651	1-126-964-11	ELECT	10uF	20.00%	50V
C1652	1-164-816-11	CERAMIC CHIP	220PF	2.00%	50V
C1653	1-164-816-11	CERAMIC CHIP	220PF	2.00%	50V
C1654	1-164-816-11	CERAMIC CHIP	220PF	2.00%	50V
C1905	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1906	1-126-935-11	ELECT	470uF	20.00%	10V
C1908	1-126-935-11	ELECT	470uF	20.00%	10V
C1909	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1910	1-126-935-11	ELECT	470uF	20.00%	10V
C1911	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1912	1-126-935-11	ELECT	470uF	20.00%	10V
C1913	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1914	1-126-947-11	ELECT	47uF	20.00%	16V
C1915	1-126-947-11	ELECT	47uF	20.00%	16V
C1916	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN6	1-784-780-11	CONNECTOR, FFC 19P			
CN7	1-569-321-11	SOCKET, CONNECTOR 15P			
CN9	1-568-826-11	CONNECTOR, FFC 7P			
		< CONNECTOR >			
CNS1	1-784-784-11	CONNECTOR, FFC 23P			
CNS3	1-784-923-11	PIN, CONNECTOR 7P			
CNS4	1-784-778-11	CONNECTOR, FFC 17P			
		< DIODE >			
D1101	8-719-016-74	DIODE 1SS352-TPH3			
D1501	8-719-049-09	DIODE 1SS367-T3SONY			
D1502	8-719-049-09	DIODE 1SS367-T3SONY			
D1601	8-719-016-74	DIODE 1SS352-TPH3			
		< FERRITE BEAD >			
FB1102	1-414-813-11	FERRITE	0uH		
FB1104	1-469-152-11	FERRITE	0uH		
FB1105	1-469-152-11	FERRITE	0uH		
FB1201	1-414-813-11	FERRITE	0uH		
FB1202	1-414-813-11	FERRITE	0uH		
FB1203	1-469-152-11	FERRITE	0uH		
FB1204	1-469-152-11	FERRITE	0uH		
FB1501	1-414-813-11	FERRITE	0uH		
FB1502	1-414-813-11	FERRITE	0uH		
FB1601	1-414-813-11	FERRITE	0uH		
FB1602	1-216-864-11	METAL CHIP	0	5%	1/16W
FB1603	1-216-864-11	METAL CHIP	0	5%	1/16W
FB1651	1-414-813-11	FERRITE	0uH		
		< GROUND TERMINAL >			
* G1101	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC1101	8-759-825-15	IC LC89056W-E			
IC1201	8-759-698-76	IC CXD9617R			
IC1202	6-704-037-01	IC IS61LV6416-10TLT			

Ref. No.	Part No.	Description			Remarks
IC1501	6-703-705-01	IC AK4527BVQ			
IC1502	8-759-710-97	IC NJM4565M (TE2)			
IC1503	8-759-646-52	IC KIA7805API			
IC1552	8-759-710-97	IC NJM4565M (TE2)			
IC1601	6-802-652-01	IC MB90478PF-G-139-BND			
IC1602	6-702-913-01	IC S-80929CNMC-G8ZT2G			
IC1604	8-759-641-86	IC BR24C16F-E2			
IC1651	8-759-491-47	IC TC74VHCT08AFT (EL)			
IC1901	6-701-887-02	IC SI-3004KWF			
IC1902	8-759-656-35	IC NJM7810FA			
IC1903	8-759-647-11	IC uPC2905HF			
IC1904	8-759-647-10	IC uPC2933HF			
IC1905	8-759-647-10	IC uPC2933HF			
		< JUMPER RESISTOR >			
JR1121	1-216-864-11	METAL CHIP	0	5%	1/16W
		< COIL >			
L1901	1-216-864-11	METAL CHIP	0	5%	1/16W
		< TRANSISTOR >			
Q1601	8-729-421-22	TRANSISTOR	UN2211-TX		
Q1602	8-729-230-49	TRANSISTOR	2SC2712-YG-TE85L		
		< RESISTOR >			
R1100	1-216-857-11	METAL CHIP	1M	5%	1/16W
R1101	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1102	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1103	1-216-809-11	METAL CHIP	100	5%	1/16W
R1104	1-216-809-11	METAL CHIP	100	5%	1/16W
R1105	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1106	1-216-839-11	METAL CHIP	33K	5%	1/16W
R1107	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R1108	1-216-809-11	METAL CHIP	100	5%	1/16W
R1110	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1111	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1112	1-216-809-11	METAL CHIP	100	5%	1/16W
R1113	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1114	1-216-809-11	METAL CHIP	100	5%	1/16W
R1115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1124	1-216-809-11	METAL CHIP	100	5%	1/16W
R1202	1-216-809-11	METAL CHIP	100	5%	1/16W
R1203	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1204	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1205	1-216-809-11	METAL CHIP	100	5%	1/16W
R1206	1-216-809-11	METAL CHIP	100	5%	1/16W
R1207	1-216-809-11	METAL CHIP	100	5%	1/16W
R1208	1-216-809-11	METAL CHIP	100	5%	1/16W
R1209	1-216-809-11	METAL CHIP	100	5%	1/16W
R1210	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1212	1-216-813-11	METAL CHIP	220	5%	1/16W
R1213	1-216-813-11	METAL CHIP	220	5%	1/16W
R1214	1-216-813-11	METAL CHIP	220	5%	1/16W
R1215	1-216-813-11	METAL CHIP	220	5%	1/16W
R1216	1-216-813-11	METAL CHIP	220	5%	1/16W
R1217	1-216-813-11	METAL CHIP	220	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R1218	1-216-813-11	METAL CHIP	220	5%	1/16W
R1219	1-216-813-11	METAL CHIP	220	5%	1/16W
R1220	1-216-813-11	METAL CHIP	220	5%	1/16W
R1221	1-216-813-11	METAL CHIP	220	5%	1/16W
R1222	1-216-813-11	METAL CHIP	220	5%	1/16W
R1224	1-216-813-11	METAL CHIP	220	5%	1/16W
R1225	1-216-813-11	METAL CHIP	220	5%	1/16W
R1226	1-216-813-11	METAL CHIP	220	5%	1/16W
R1227	1-216-813-11	METAL CHIP	220	5%	1/16W
R1228	1-216-813-11	METAL CHIP	220	5%	1/16W
R1229	1-216-813-11	METAL CHIP	220	5%	1/16W
R1230	1-216-813-11	METAL CHIP	220	5%	1/16W
R1231	1-216-813-11	METAL CHIP	220	5%	1/16W
R1232	1-216-813-11	METAL CHIP	220	5%	1/16W
R1233	1-216-813-11	METAL CHIP	220	5%	1/16W
R1234	1-216-813-11	METAL CHIP	220	5%	1/16W
R1235	1-216-813-11	METAL CHIP	220	5%	1/16W
R1236	1-216-813-11	METAL CHIP	220	5%	1/16W
R1237	1-216-813-11	METAL CHIP	220	5%	1/16W
R1238	1-216-813-11	METAL CHIP	220	5%	1/16W
R1239	1-216-813-11	METAL CHIP	220	5%	1/16W
R1240	1-216-813-11	METAL CHIP	220	5%	1/16W
R1241	1-216-813-11	METAL CHIP	220	5%	1/16W
R1242	1-216-813-11	METAL CHIP	220	5%	1/16W
R1243	1-216-813-11	METAL CHIP	220	5%	1/16W
R1244	1-216-813-11	METAL CHIP	220	5%	1/16W
R1304	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1305	1-216-841-11	METAL CHIP	47K	5%	1/16W
R1308	1-216-809-11	METAL CHIP	100	5%	1/16W
R1314	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1364	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1501	1-216-815-11	METAL CHIP	330	5%	1/16W
R1502	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1503	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1504	1-216-815-11	METAL CHIP	330	5%	1/16W
R1505	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R1506	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1507	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1508	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1509	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1516	1-216-813-11	METAL CHIP	220	5%	1/16W
R1517	1-216-813-11	METAL CHIP	220	5%	1/16W
R1518	1-216-813-11	METAL CHIP	220	5%	1/16W
R1519	1-216-813-11	METAL CHIP	220	5%	1/16W
R1520	1-216-813-11	METAL CHIP	220	5%	1/16W
R1521	1-216-813-11	METAL CHIP	220	5%	1/16W
R1551	1-216-815-11	METAL CHIP	330	5%	1/16W
R1552	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1553	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1554	1-216-815-11	METAL CHIP	330	5%	1/16W
R1555	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R1556	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1557	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1600	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1601	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1602	1-216-809-11	METAL CHIP	100	5%	1/16W
R1603	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1604	1-216-809-11	METAL CHIP	100	5%	1/16W
R1605	1-216-809-11	METAL CHIP	100	5%	1/16W
R1606	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1607	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1608	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1609	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1610	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1611	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1612	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1613	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1614	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1615	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1616	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1617	1-216-809-11	METAL CHIP	100	5%	1/16W
R1618	1-216-809-11	METAL CHIP	100	5%	1/16W
R1619	1-216-809-11	METAL CHIP	100	5%	1/16W
R1620	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1621	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1624	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1625	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1626	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1627	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1628	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1630	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1631	1-216-809-11	METAL CHIP	100	5%	1/16W
R1632	1-216-864-11	METAL CHIP	0	5%	1/16W
R1635	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1636	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1637	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1638	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1639	1-216-809-11	METAL CHIP	100	5%	1/16W
R1640	1-216-809-11	METAL CHIP	100	5%	1/16W
R1641	1-216-809-11	METAL CHIP	100	5%	1/16W
R1642	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1643	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1644	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1645	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1646	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1647	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1648	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1649	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1650	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1651	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1655	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1656	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1657	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1658	1-216-809-11	METAL CHIP	100	5%	1/16W
R1659	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1660	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1662	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R1663	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R1664	1-216-809-11	METAL CHIP	100	5%	1/16W
R1665	1-216-809-11	METAL CHIP	100	5%	1/16W
R1666	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1667	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1671	1-216-833-11	METAL CHIP	10K	5%	1/16W

DIGITAL DISPLAY MAIN

Ref. No.	Part No.	Description			Remarks
R1672	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1673	1-216-809-11	METAL CHIP	100	5%	1/16W
R1674	1-216-809-11	METAL CHIP	100	5%	1/16W
R1676	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1677	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1678	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1679	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1680	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1681	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1682	1-216-845-11	METAL CHIP	100K	5%	1/16W
R1683	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1684	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1685	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1686	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1687	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1688	1-216-864-11	METAL CHIP	0	5%	1/16W
R1689	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1690	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1694	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1697	1-216-864-11	METAL CHIP	0	5%	1/16W
R1698	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1699	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1703	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1705	1-216-809-11	METAL CHIP	100	5%	1/16W
R1707	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1708	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1710	1-216-809-11	METAL CHIP	100	5%	1/16W
R1711	1-216-809-11	METAL CHIP	100	5%	1/16W
		< VIBRATOR >			
X1101	1-795-126-21	VIBRATOR, CRYSTAL (12.288MHz)			
X1201	1-795-297-21	VIBRATOR, CERAMIC (13.5MHz)			
X1601	1-781-356-21	VIBRATOR, CERAMIC (16MHz)			
**********					
	A-4748-511-A	DISPLAY BOARD, COMPLETE			
		**********			
	4-246-476-01	HOLDER (FL)			
*	4-921-941-01	CUSHION (FL)			
		< CAPACITOR >			
C112	1-124-589-11	ELECT	47uF	20%	16V
C141	1-126-795-11	ELECT	10uF	20.00%	50V
C142	1-127-888-11	CERAMIC	0.1uF	10%	50V
C143	1-128-821-11	CERAMIC	1000PF	5%	50V
C155	1-128-813-11	CERAMIC	220PF	5%	50V
C156	1-128-813-11	CERAMIC	220PF	5%	50V
C157	1-126-795-11	ELECT	10uF	20.00%	50V
C158	1-127-888-11	CERAMIC	0.1uF	10%	50V
C159	1-127-888-11	CERAMIC	0.1uF	10%	50V
		< CONNECTOR >			
CN151	1-784-778-11	CONNECTOR, FFC 17P			
		< CONNECTOR >			
CNP152	1-779-977-11	PIN, CONNECTOR 6P			

Ref. No.	Part No.	Description			Remarks
		< DIODE >			
D151	8-719-075-59	DIODE SELS5B23C-TP15 (VIDEO)			
D152	8-719-075-59	DIODE SELS5B23C-TP15 (DVD)			
D153	8-719-075-59	DIODE SELS5B23C-TP15 (TV/SAT)			
D154	8-719-075-59	DIODE SELS5B23C-TP15 (TUNER)			
		< INDICATOR TUBE >			
FL101	1-518-874-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC102	8-759-826-34	IC NJL74H400A (🅱)			
IC152	8-759-643-83	IC uPD16315GB-3BS			
		< RESISTOR >			
R152	1-249-393-11	CARBON	10	5%	1/4W F
R153	1-247-807-31	CARBON	100	5%	1/4W
R176	1-249-413-11	CARBON	470	5%	1/4W F
R178	1-249-440-11	CARBON	82K	5%	1/4W
R198	1-249-381-11	CARBON	1	5%	1/4W F
R199	1-249-381-11	CARBON	1	5%	1/4W F
		< SWITCH >			
S123	1-771-349-21	SWITCH, KEYBOARD (I/⏻)			
**********					
	A-4733-034-A	MAIN BOARD, COMPLETE			
		**********			
	3-531-576-11	RIVET			
	7-685-647-79	SCREW +BVTP	3X10 TYPE2 IT-3		
	7-685-872-09	SCREW +BVTT	3X8	(S)	
		< CAPACITOR >			
C202	1-126-964-11	ELECT	10uF	20.00%	50V
C203	1-126-964-11	ELECT	10uF	20.00%	50V
C204	1-128-805-11	CERAMIC	47PF	5%	50V
C206	1-164-159-11	CERAMIC	0.1uF		50V
C207	1-126-935-11	ELECT	470uF	20.00%	6.3V
C208	1-164-159-11	CERAMIC	0.1uF		50V
C209	1-126-935-11	ELECT	470uF	20.00%	6.3V
C210	1-128-825-11	CERAMIC	2200PF	5%	50V
C301	1-164-159-11	CERAMIC	0.1uF		50V
C302	1-164-159-11	CERAMIC	0.1uF		50V
C303	1-128-821-11	CERAMIC	1000PF	5%	50V
C304	1-164-159-11	CERAMIC	0.1uF		50V
C305	1-126-796-11	ELECT	22uF	20.00%	50V
C306	1-164-159-11	CERAMIC	0.1uF		50V
C307	1-162-187-31	CERAMIC	1PF	20.00%	50V
C308	1-162-215-31	CERAMIC	47PF	5%	50V
C309	1-119-941-91	ELECT	470uF	20.00%	6.3V
C310	1-164-159-11	CERAMIC	0.1uF		50V
C311	1-126-795-11	ELECT	10uF	20.00%	50V
C312	1-119-941-91	ELECT	470uF	20.00%	6.3V
C371	1-161-494-00	CERAMIC	0.022uF		25V
C372	1-161-494-00	CERAMIC	0.022uF		25V
C373	1-161-494-00	CERAMIC	0.022uF		25V
C374	1-164-159-11	CERAMIC	0.1uF		50V
C375	1-161-494-00	CERAMIC	0.022uF		25V

Ref. No.	Part No.	Description			Remarks
C376	1-161-494-00	CERAMIC	0.022uF	25V	
C400	1-164-159-11	CERAMIC	0.1uF		50V
C401	1-126-961-11	ELECT	2.2uF	20.00%	50V
C402	1-126-961-11	ELECT	2.2uF	20.00%	50V
C403	1-126-961-11	ELECT	2.2uF	20.00%	50V
C413	1-126-961-11	ELECT	2.2uF	20.00%	50V
C414	1-126-961-11	ELECT	2.2uF	20.00%	50V
C415	1-126-961-11	ELECT	2.2uF	20.00%	50V
C416	1-126-961-11	ELECT	2.2uF	20.00%	50V
C417	1-126-961-11	ELECT	2.2uF	20.00%	50V
C418	1-126-961-11	ELECT	2.2uF	20.00%	50V
C419	1-126-961-11	ELECT	2.2uF	20.00%	50V
C433	1-126-961-11	ELECT	2.2uF	20.00%	50V
C440	1-164-159-11	CERAMIC	0.1uF		50V
C441	1-164-159-11	CERAMIC	0.1uF		50V
C442	1-104-665-11	ELECT	100uF	20.00%	10V
C443	1-104-665-11	ELECT	100uF	20.00%	10V
C444	1-164-159-11	CERAMIC	0.1uF		50V
C445	1-164-159-11	CERAMIC	0.1uF		50V
C446	1-126-964-11	ELECT	10uF	20.00%	50V
C447	1-126-947-11	ELECT	47uF	20.00%	25V
C451	1-115-872-11	ELECT	2.2uF	20.00%	50V
C452	1-126-961-11	ELECT	2.2uF	20.00%	50V
C453	1-126-961-11	ELECT	2.2uF	20.00%	50V
C464	1-164-159-11	CERAMIC	0.1uF		50V
C465	1-126-934-11	ELECT	220uF	20.00%	10V
C466	1-126-176-11	ELECT	220uF	20%	10V
C467	1-164-159-11	CERAMIC	0.1uF		50V
C471	1-126-963-11	ELECT	4.7uF	20.00%	50V
C472	1-126-963-11	ELECT	4.7uF	20.00%	50V
C481	1-126-794-11	ELECT	4.7uF	20.00%	50V
C482	1-126-963-11	ELECT	4.7uF	20.00%	50V
C483	1-126-963-11	ELECT	4.7uF	20.00%	50V
C484	1-126-963-11	ELECT	4.7uF	20.00%	50V
C485	1-126-794-11	ELECT	4.7uF	20.00%	50V
C486	1-126-794-11	ELECT	4.7uF	20.00%	50V
C487	1-126-795-11	ELECT	10uF	20.00%	50V
C488	1-164-159-11	CERAMIC	0.1uF		50V
C489	1-128-809-11	CERAMIC	100PF	5%	50V
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
C493	1-126-794-11	ELECT	4.7uF	20.00%	50V
C494	1-126-963-11	ELECT	4.7uF	20.00%	50V
C495	1-126-794-11	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	1-162-211-31	CERAMIC	33PF	5%	50V
C501	1-126-963-11	ELECT	4.7uF	20.00%	50V
C502	1-128-809-11	CERAMIC	100PF	5%	50V
C503	1-128-809-11	CERAMIC	100PF	5%	50V
C504	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C506	1-126-960-11	ELECT	1uF	20.00%	50V
C507	1-164-159-11	CERAMIC	0.1uF		50V
C508	1-126-960-11	ELECT	1uF	20.00%	50V
C509	1-126-933-11	ELECT	100uF	20.00%	16V
C510	1-164-159-11	CERAMIC	0.1uF		50V
C511	1-136-157-00	FILM	0.022uF	5.00%	50V
C544	1-128-813-11	CERAMIC	220PF	5%	50V
C561	1-126-963-11	ELECT	4.7uF	20.00%	50V
C562	1-126-960-11	ELECT	1uF	20.00%	50V
C563	1-126-960-11	ELECT	1uF	20.00%	50V
C564	1-126-963-11	ELECT	4.7uF	20.00%	50V
C565	1-126-933-11	ELECT	100uF	20.00%	16V
C601	1-126-963-11	ELECT	4.7uF	20.00%	50V
C602	1-128-809-11	CERAMIC	100PF	5%	50V
C603	1-128-809-11	CERAMIC	100PF	5%	50V
C604	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C606	1-126-960-11	ELECT	1uF	20.00%	50V
C607	1-164-159-11	CERAMIC	0.1uF		50V
C608	1-126-960-11	ELECT	1uF	20.00%	50V
C609	1-126-933-11	ELECT	100uF	20.00%	16V
C610	1-164-159-11	CERAMIC	0.1uF		50V
C611	1-136-157-00	FILM	0.022uF	5.00%	50V
C641	1-127-876-11	CERAMIC	0.01uF	10%	50V
C642	1-127-876-11	CERAMIC	0.01uF	10%	50V
C643	1-127-876-11	CERAMIC	0.01uF	10%	50V
C644	1-128-813-11	CERAMIC	220PF	5%	50V
C651	1-126-963-11	ELECT	4.7uF	20.00%	50V
C652	1-128-809-11	CERAMIC	100PF	5%	50V
C653	1-128-809-11	CERAMIC	100PF	5%	50V
C654	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C656	1-126-960-11	ELECT	1uF	20.00%	50V
C657	1-164-159-11	CERAMIC	0.1uF		50V
C658	1-126-960-11	ELECT	1uF	20.00%	50V
C659	1-126-933-11	ELECT	100uF	20.00%	16V
C660	1-164-159-11	CERAMIC	0.1uF		50V
C661	1-136-157-00	FILM	0.022uF	5.00%	50V
C694	1-128-813-11	CERAMIC	220PF	5%	50V
C701	1-126-963-11	ELECT	4.7uF	20.00%	50V
C702	1-128-809-11	CERAMIC	100PF	5%	50V
C703	1-128-809-11	CERAMIC	100PF	5%	50V
C704	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C706	1-126-960-11	ELECT	1uF	20.00%	50V
C707	1-164-159-11	CERAMIC	0.1uF		50V
C708	1-126-960-11	ELECT	1uF	20.00%	50V
C709	1-126-933-11	ELECT	100uF	20.00%	16V
C710	1-164-159-11	CERAMIC	0.1uF		50V
C711	1-136-157-00	FILM	0.022uF	5.00%	50V
C730	1-126-934-11	ELECT	220uF	20.00%	10V
C732	1-136-165-00	FILM	0.1uF	5.00%	50V
C741	1-127-876-11	CERAMIC	0.01uF	10%	50V
C744	1-128-813-11	CERAMIC	220PF	5%	50V
C751	1-126-963-11	ELECT	4.7uF	20.00%	50V
C752	1-128-809-11	CERAMIC	100PF	5%	50V
C753	1-128-809-11	CERAMIC	100PF	5%	50V
C754	1-162-195-31	CERAMIC	4.7PF	10.00%	50V
C756	1-126-960-11	ELECT	1uF	20.00%	50V
C757	1-164-159-11	CERAMIC	0.1uF		50V
C758	1-126-960-11	ELECT	1uF	20.00%	50V
C759	1-126-933-11	ELECT	100uF	20.00%	16V
C760	1-164-159-11	CERAMIC	0.1uF		50V
C761	1-136-157-00	FILM	0.022uF	5.00%	50V
C791	1-127-876-11	CERAMIC	0.01uF	10%	50V
C794	1-128-813-11	CERAMIC	220PF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remarks
C801	1-136-169-00	MYLAR	0.22uF	5.00%	50V
C802	1-136-169-00	MYLAR	0.22uF	5.00%	50V
C803	1-101-001-00	CERAMIC	0.001uF		50V
C804	1-101-001-00	CERAMIC	0.001uF		50V
C805	1-126-942-61	ELECT	1000uF	20.00%	25V
C806	1-126-942-61	ELECT	1000uF	20.00%	25V
C811	1-126-942-61	ELECT	1000uF	20.00%	25V
C812	1-126-942-61	ELECT	1000uF	20.00%	25V
C813	1-101-001-00	CERAMIC	0.001uF		50V
C814	1-101-001-00	CERAMIC	0.001uF		50V
C815	1-164-159-11	CERAMIC	0.1uF		50V
C816	1-164-159-11	CERAMIC	0.1uF		50V
C817	1-126-936-11	ELECT	3300uF	20.00%	16V
C818	1-126-256-11	ELECT	4700uF	20.00%	35V
C819	1-126-256-11	ELECT	4700uF	20.00%	35V
C820	1-126-949-11	ELECT	220uF	20.00%	35V
C821	1-126-968-11	ELECT	100uF	20.00%	50V
C871	1-126-933-11	ELECT	100uF	20.00%	16V
		< CAPACITOR >			
CC01	1-128-809-11	CERAMIC	100PF	5%	50V
CC02	1-128-809-11	CERAMIC	100PF	5%	50V
CC03	1-128-809-11	CERAMIC	100PF	5%	50V
CC51	1-128-809-11	CERAMIC	100PF	5%	50V
CC52	1-128-809-11	CERAMIC	100PF	5%	50V
CC53	1-128-809-11	CERAMIC	100PF	5%	50V
		< CONNECTOR >			
CN301	1-568-826-11	CONNECTOR, FFC 7P			
CN403	1-784-784-11	CONNECTOR, FFC 23P			
CN801	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
* CN802	1-564-508-11	PLUG, CONNECTOR 5P			
CN820	1-770-479-11	PLUG,CONNECTOR PIN (PC BOARD) 4P			
CN822	1-784-780-11	CONNECTOR, FFC 19P			
CN861	1-779-978-11	PIN, CONNECTOR 3P			
		< DIODE >			
D301	8-719-991-33	DIODE	1SS133T-72		
D405	8-719-991-33	DIODE	1SS133T-72		
D520	8-719-991-33	DIODE	1SS133T-72		
D521	8-719-991-33	DIODE	1SS133T-72		
D550	8-719-991-33	DIODE	1SS133T-72		
D620	8-719-991-33	DIODE	1SS133T-72		
D621	8-719-991-33	DIODE	1SS133T-72		
D720	8-719-991-33	DIODE	1SS133T-72		
D721	8-719-991-33	DIODE	1SS133T-72		
D731	8-719-991-33	DIODE	1SS133T-72		
D801	6-500-522-11	DIODE	10EDB40-TA2B5		
D802	6-500-522-11	DIODE	10EDB40-TA2B5		
D803	6-500-522-11	DIODE	10EDB40-TA2B5		
D804	6-500-522-11	DIODE	10EDB40-TA2B5		
D805	6-500-522-11	DIODE	10EDB40-TA2B5		
D806	6-500-522-11	DIODE	10EDB40-TA2B5		
D807	6-500-522-11	DIODE	10EDB40-TA2B5		
D808	6-500-522-11	DIODE	10EDB40-TA2B5		
D809	8-719-028-23	DIODE	D3SBA20-4101		
D810	6-500-522-11	DIODE	10EDB40-TA2B5		
D811	6-500-522-11	DIODE	10EDB40-TA2B5		
D812	8-719-934-21	DIODE	HZS30-1LTA		
D813	8-719-068-28	DIODE	HZ6.8BP-TK		
D814	6-500-522-11	DIODE	10EDB40-TA2B5		
D815	6-500-522-11	DIODE	10EDB40-TA2B5		
D816	6-500-522-11	DIODE	10EDB40-TA2B5		
D817	6-500-522-11	DIODE	10EDB40-TA2B5		
D820	8-719-118-63	DIODE	RD5.6F-T7B2		
		< FERRITE BEAD >			
FB301	1-410-396-41	FERRITE	0.45uH		
FB302	1-410-396-41	FERRITE	0.45uH		
		< IC >			
IC201	8-759-333-84	IC	NJM2279D		
IC301	6-600-057-01	IC	TORX141PL		
IC302	6-600-057-01	IC	TORX141PL		
IC303	8-759-233-64	IC	TC74HCU04AF (EL)		
IC401	6-703-501-01	IC	M61527FP		
IC402	8-759-636-74	IC	NJM4565DD		
IC403	8-759-649-68	IC	uPC78M07AHF		
IC404	8-759-604-95	IC	M5F79M07L		
IC405	8-759-646-52	IC	KIA7805API		
IC406	8-759-701-65	IC	NJM79M05FA		
IC501	8-759-502-33	IC	SI-18752		
IC601	8-759-502-33	IC	SI-18752		
IC651	8-759-502-33	IC	SI-18752		
IC701	8-759-502-33	IC	SI-18752		
IC751	8-759-502-33	IC	SI-18752		
		< JACK >			
J251	1-770-337-11	JACK, PIN 3P (VIDEO)			
J301	1-817-376-11	JACK, PIN 1P (COAXIAL IN)			
J401	1-774-411-11	JACK, PIN 6P (AUDIO)			
J403	1-770-377-31	JACK, PIN 1P (SUB WOOFER OUT)			
		< COIL >			
L201	1-410-509-11	INDUCTOR 10uH			
L202	1-410-509-11	INDUCTOR 10uH			
L507	1-420-872-52	COIL, AIR-CORE			
L607	1-420-872-52	COIL, AIR-CORE			
L657	1-420-872-52	COIL, AIR-CORE			
L707	1-420-872-52	COIL, AIR-CORE			
L757	1-420-872-52	COIL, AIR-CORE			
		< TRANSISTOR >			
Q361	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q362	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q363	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q364	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q365	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q366	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q379	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q401	8-729-823-22	TRANSISTOR	2SC3576-AC		
Q402	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q520	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q550	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q551	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		

Ref. No.	Part No.	Description				Remarks
Q620	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q720	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q730	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q731	8-729-140-82	TRANSISTOR	2SA988TP-PAFAEA			
Q732	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA			
Q861	8-729-140-97	TRANSISTOR	2SB734-T-34			
Q862	8-729-900-63	TRANSISTOR	BN1F4M-TP			
Q863	8-729-900-63	TRANSISTOR	BN1F4M-TP			
Q864	8-729-142-48	TRANSISTOR	2SD1616-TP-LK			
Q865	8-729-900-63	TRANSISTOR	BN1F4M-TP			
Q866	8-729-900-63	TRANSISTOR	BN1F4M-TP			
		< RESISTOR >				
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	
R301	1-247-807-31	CARBON	100	5%	1/4W	
R302	1-247-807-31	CARBON	100	5%	1/4W	
R303	1-247-804-11	CARBON	75	5%	1/4W	
R304	1-249-417-11	CARBON	1K	5%	1/4W	F
R305	1-249-433-11	CARBON	22K	5%	1/4W	
R306	1-247-897-11	CARBON	560K	5%	1/4W	
R307	1-247-807-31	CARBON	100	5%	1/4W	
R360	1-249-441-11	CARBON	100K	5%	1/4W	
R361	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R362	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R363	1-249-441-11	CARBON	100K	5%	1/4W	
R366	1-249-429-11	CARBON	10K	5%	1/4W	
R367	1-249-441-11	CARBON	100K	5%	1/4W	
R368	1-249-437-11	CARBON	47K	5%	1/4W	
R369	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R370	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R371	1-249-441-11	CARBON	100K	5%	1/4W	
R372	1-249-441-11	CARBON	100K	5%	1/4W	
R373	1-249-417-11	CARBON	1K	5%	1/4W	F
R374	1-249-417-11	CARBON	1K	5%	1/4W	F
R375	1-249-417-11	CARBON	1K	5%	1/4W	F
R376	1-249-417-11	CARBON	1K	5%	1/4W	F
R377	1-249-417-11	CARBON	1K	5%	1/4W	F
R378	1-249-417-11	CARBON	1K	5%	1/4W	F
R379	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R380	1-249-441-11	CARBON	100K	5%	1/4W	
R381	1-249-429-11	CARBON	10K	5%	1/4W	
R382	1-247-807-31	CARBON	100	5%	1/4W	
R401	1-249-417-11	CARBON	1K	5%	1/4W	F
R402	1-249-417-11	CARBON	1K	5%	1/4W	F
R403	1-249-417-11	CARBON	1K	5%	1/4W	F
R410	1-249-437-11	CARBON	47K	5%	1/4W	
R430	1-249-437-11	CARBON	47K	5%	1/4W	
R451	1-249-417-11	CARBON	1K	5%	1/4W	F
R452	1-249-417-11	CARBON	1K	5%	1/4W	F
R453	1-249-417-11	CARBON	1K	5%	1/4W	F
R470	1-249-437-11	CARBON	47K	5%	1/4W	
R471	1-249-415-11	CARBON	680	5%	1/4W	F
R472	1-249-417-11	CARBON	1K	5%	1/4W	F
R473	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R474	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R475	1-249-421-11	CARBON	2.2K	5%	1/4W	F

Ref. No.	Part No.	Description				Remarks
R476	1-249-417-11	CARBON	1K	5%	1/4W	F
R477	1-249-425-11	CARBON	4.7K	5%	1/4W	F
⚠R479	1-249-405-11	CARBON	100	5%	1/4W	F
R480	1-249-437-11	CARBON	47K	5%	1/4W	
R481	1-247-807-31	CARBON	100	5%	1/4W	
R482	1-247-807-31	CARBON	100	5%	1/4W	
R483	1-247-807-31	CARBON	100	5%	1/4W	
R499	1-249-437-11	CARBON	47K	5%	1/4W	
R501	1-247-807-31	CARBON	100	5%	1/4W	
R502	1-249-433-11	CARBON	22K	5%	1/4W	
R503	1-249-411-11	CARBON	330	5%	1/4W	
R504	1-249-413-11	CARBON	470	5%	1/4W	F
R505	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R507	1-249-389-11	CARBON	4.7	5%	1/4W	F
R508	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R509	1-249-393-11	CARBON	10	5%	1/4W	F
R510	1-249-434-11	CARBON	27K	5%	1/4W	
R522	1-249-425-11	CARBON	4.7K	5%	1/4W	F
⚠R540	1-249-401-11	CARBON	47	5%	1/4W	F
R551	1-249-441-11	CARBON	100K	5%	1/4W	
R552	1-247-843-11	CARBON	3.3K	5%	1/4W	
R553	1-249-429-11	CARBON	10K	5%	1/4W	
R554	1-249-416-11	CARBON	820	5%	1/4W	F
R555	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R556	1-249-439-11	CARBON	68K	5%	1/4W	
R557	1-247-887-00	CARBON	220K	5%	1/4W	
R558	1-249-441-11	CARBON	100K	5%	1/4W	
R560	1-249-429-11	CARBON	10K	5%	1/4W	
R601	1-247-807-31	CARBON	100	5%	1/4W	
R602	1-249-433-11	CARBON	22K	5%	1/4W	
R603	1-249-411-11	CARBON	330	5%	1/4W	
R604	1-249-413-11	CARBON	470	5%	1/4W	F
R605	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R607	1-249-389-11	CARBON	4.7	5%	1/4W	F
R608	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R609	1-249-393-11	CARBON	10	5%	1/4W	F
R610	1-249-434-11	CARBON	27K	5%	1/4W	
R622	1-249-425-11	CARBON	4.7K	5%	1/4W	F
⚠R640	1-249-401-11	CARBON	47	5%	1/4W	F
⚠R641	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R642	1-249-393-11	CARBON	10	5%	1/4W	F
⚠R643	1-249-393-11	CARBON	10	5%	1/4W	F
R651	1-247-807-31	CARBON	100	5%	1/4W	
R652	1-249-433-11	CARBON	22K	5%	1/4W	
R653	1-249-411-11	CARBON	330	5%	1/4W	
R654	1-249-413-11	CARBON	470	5%	1/4W	F
R655	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R657	1-249-389-11	CARBON	4.7	5%	1/4W	F
R658	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R659	1-249-393-11	CARBON	10	5%	1/4W	F
R660	1-249-434-11	CARBON	27K	5%	1/4W	
R701	1-247-807-31	CARBON	100	5%	1/4W	
R702	1-249-433-11	CARBON	22K	5%	1/4W	
R703	1-249-411-11	CARBON	330	5%	1/4W	
R704	1-249-413-11	CARBON	470	5%	1/4W	F
R705	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R707	1-249-389-11	CARBON	4.7	5%	1/4W	F

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

MAIN **STANDBY** **VOLUME**

Ref. No.	Part No.	Description			Remarks
R708	1-249-437-11	CARBON	47K	5%	1/4W
⚠R709	1-249-393-11	CARBON	10	5%	1/4W F
R710	1-249-434-11	CARBON	27K	5%	1/4W
R722	1-249-425-11	CARBON	4.7K	5%	1/4W F
R730	1-249-427-11	CARBON	6.8K	5%	1/4W F
R731	1-249-429-11	CARBON	10K	5%	1/4W
R732	1-249-435-11	CARBON	33K	5%	1/4W
R733	1-249-437-11	CARBON	47K	5%	1/4W
⚠R740	1-249-401-11	CARBON	47	5%	1/4W F
⚠R741	1-249-393-11	CARBON	10	5%	1/4W F
R750	1-249-417-11	CARBON	1K	5%	1/4W F
R751	1-247-807-31	CARBON	100	5%	1/4W
R752	1-249-433-11	CARBON	22K	5%	1/4W
R753	1-249-411-11	CARBON	330	5%	1/4W
R754	1-249-413-11	CARBON	470	5%	1/4W F
R755	1-249-433-11	CARBON	22K	5%	1/4W
⚠R757	1-249-389-11	CARBON	4.7	5%	1/4W F
R758	1-249-437-11	CARBON	47K	5%	1/4W
⚠R759	1-249-393-11	CARBON	10	5%	1/4W F
⚠R760	1-249-434-11	CARBON	27K	5%	1/4W
⚠R791	1-249-393-11	CARBON	10	5%	1/4W F
⚠R810	1-249-443-11	CARBON	0.47	5%	1/4W
⚠R811	1-249-443-11	CARBON	0.47	5%	1/4W
⚠R831	1-249-405-11	CARBON	100	5%	1/4W F
R832	1-249-433-11	CARBON	22K	5%	1/4W
R881	1-249-419-11	CARBON	1.5K	5%	1/4W F
R882	1-249-417-11	CARBON	1K	5%	1/4W F
R883	1-249-421-11	CARBON	2.2K	5%	1/4W F
R884	1-249-429-11	CARBON	10K	5%	1/4W
R885	1-247-807-31	CARBON	100	5%	1/4W
R886	1-249-429-11	CARBON	10K	5%	1/4W
R887	1-249-425-11	CARBON	4.7K	5%	1/4W F
R888	1-247-807-31	CARBON	100	5%	1/4W
⚠R910	1-249-443-11	CARBON	0.47	5%	1/4W
		< RELAY >			
RY401	1-755-267-11	RELAY			
RY501	1-755-170-11	RELAY (12V)			
RY601	1-755-170-11	RELAY (12V)			
RY701	1-755-170-11	RELAY (12V)			
		< TERMINAL >			
TM601	1-780-000-11	TERMINAL BOARD (SPEAKER)(SPEAKERS)			
**********					
	1-687-431-11	STANDBY BOARD			
		**********			
	1-533-293-11	FUSE HOLDER			
		< CAPACITOR >			
C921	1-161-494-00	CERAMIC	0.022uF		25V
C922	1-161-494-00	CERAMIC	0.022uF		25V
C923	1-126-767-11	ELECT	1000uF	20.00%	16V
C924	1-126-960-11	ELECT	1uF	20.00%	50V
C925	1-127-888-11	CERAMIC	0.1uF	10%	50V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN903	1-770-480-11	SOCKET, CONNECTOR PIN 4P			
		< CONNECTOR >			
CNP901	1-564-321-00	PIN, CONNECTOR (3.96MM PITCH) 2P			
* CNP902	1-565-792-11	PIN, CONNECTOR (3.96MM PITCH) 2P			
		< DIODE >			
D951	8-719-991-33	DIODE 1SS133T-72			
D952	6-500-522-11	DIODE 10EDB40-TA2B5			
D953	6-500-522-11	DIODE 10EDB40-TA2B5			
D954	6-500-522-11	DIODE 10EDB40-TA2B5			
D955	6-500-522-11	DIODE 10EDB40-TA2B5			
D956	8-719-991-33	DIODE 1SS133T-72			
D957	8-719-991-33	DIODE 1SS133T-72			
		< TRANSISTOR >			
Q901	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q951	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
		< RESISTOR >			
R951	1-249-437-11	CARBON	47K	5%	1/4W
R952	1-249-425-11	CARBON	4.7K	5%	1/4W F
⚠R953	1-249-381-11	CARBON	1	5%	1/4W F
R954	1-249-437-11	CARBON	47K	5%	1/4W
R955	1-249-435-11	CARBON	33K	5%	1/4W
R956	1-249-429-11	CARBON	10K	5%	1/4W
		< RELAY >			
⚠RY901	1-755-298-11	RELAY			
		< TRANSFORMER >			
⚠T902	1-435-435-11	TRANSFORMER, POWER			
**********					
	1-860-438-11	VOLUME BOARD			
		**********			
R191	1-249-417-11	CARBON	1K	5%	1/4W F
R192	1-249-417-11	CARBON	1K	5%	1/4W F
R194	1-249-417-11	CARBON	1K	5%	1/4W F
		< VARIABLE RESISTOR >			
RV101	1-418-725-51	ENCODER, ROTARY (12 TYPE) (MASTER VOLUME)			
		< SWITCH >			
S111	1-771-349-21	SWITCH, KEYBOARD (SOUND FIELD)			
S112	1-771-349-21	SWITCH, KEYBOARD (MUTING)			
S113	1-771-349-21	SWITCH, KEYBOARD (□□ PL II)			
S114	1-771-349-21	SWITCH, KEYBOARD (PRESET TUNING +)			
S115	1-771-349-21	SWITCH, KEYBOARD (PRESET TUNING -)			
S116	1-771-349-21	SWITCH, KEYBOARD (INPUT SELECTOR)			
**********					

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Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS	
		**********	
5	1-773-041-11	WIRE (FLAT TYPE)(17 CORE)	
57	1-769-876-11	WIRE (FLAT TYPE)(7 CORE)	
⚠55	1-777-071-23	CORD, POWER	
58	1-773-105-11	WIRE (FLAT TYPE)(19 CORE)	
59	1-773-175-11	WIRE (FLAT TYPE)(23 CORE)	
61	1-773-017-11	WIRE (FLAT TYPE)(15 CORE)	
FAN	1-763-561-22	FAN, D.C.	
⚠F901	1-532-463-51	FUSE T1AL/250V	
⚠T901	1-439-630-11	TRANSFORMER, POWER	
TM301	1-693-578-13	TUNER	

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REVISION HISTORY

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

Ver.	Date	Description of Revision
1.0	2003.08	New