

STR-K670P

SERVICE MANUAL

Ver. 1.3 2006.05

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model



- STR-K670P is the tuner and the amplifier section in HT-DDW670 and HTP-32DW/82DWK.

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SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(Models of area code US only)

With 6 ohm loads, both channels driven, from 120 – 20,000 Hz; rated 60 watts per channel minimum RMS power, with no more than 0.7% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

Power Output¹⁾

Models of area code US

(6 ohms 1 kHz, THD 10%)
FRONT²⁾: 1 00 W/ch
CENTER²⁾: 100 W
SURR²⁾: 100 W/ch
(6 ohms 100 Hz, THD 10%)
SUB WOOFER²⁾: 100 W

Models of area code CND

(6 ohms 1 kHz, THD 0.7%)
FRONT²⁾: 60 W/ch
CENTER²⁾: 60 W
SURR²⁾: 60 W/ch
(6 ohms 100 Hz, THD 0.7%)
SUB WOOFER²⁾: 60 W
(6 ohms 1 kHz, THD 10%)
FRONT²⁾: 100 W/ch
CENTER²⁾: 100 W
SURR²⁾: 100 W/ch
(6 ohms 100 Hz, THD 10%)
SUB WOOFER²⁾: 100 W

Models of area code AEP, UK, RU, MX, SP, SP6, E51, AR
(6 ohms 1 kHz, THD 0.7%)

FRONT²⁾: 5 0 W/ch
CENTER²⁾: 50 W
SURR²⁾: 50 W/ch
(6 ohms 100 Hz, THD 0.7%)
SUB WOOFER²⁾: 50 W
(6 ohms 1 kHz, THD 10%)
FRONT²⁾: 85 W/ch
CENTER²⁾: 85 W
SURR²⁾: 85 W/ch
(6 ohms 100 Hz, THD 10%)
SUB WOOFER²⁾: 85 W

Models of area code AUS

(6 ohms 120 Hz – 20 kHz, THD 0.09%)
FRONT²⁾: 4 0 W/ch
CENTER²⁾: 40 W
SURR²⁾: 40 W/ch
(6 ohms 100 Hz, THD 0.09%)
SUB WOOFER²⁾: 40 W
(6 ohms 1 kHz, THD 0.7%)
FRONT²⁾: 5 0 W/ch
CENTER²⁾: 50 W
SURR²⁾: 50 W/ch
(6 ohms 100 Hz, THD 0.7%)
SUB WOOFER²⁾: 50 W/ch
(6 ohms 1 kHz, THD 10%)
FRONT²⁾: 85 W/ch
CENTER²⁾: 85 W
SURR²⁾: 85 W/ch
(6 ohms 100 Hz, THD 10%)
SUB WOOFER²⁾: 85 W

– Continued on next page –

FM STEREO FM-AM RECEIVER

1) Measured under the following conditions:

Area code	Power requirements
US, CND	120 V AC, 60 Hz
AEP, UK, RU, SP, SP6, AR	230 V AC, 50 Hz
AUS, E51	240 V AC, 50 Hz
MX	127 V AC, 60 Hz

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

Inputs (Analog)

SA-CD/CD, DVD	Sensitivity: 800 mV
VIDEO 1, 2	Impedance: 50 k ohms

Inputs (Digital)

DVD (Coaxial)	Sensitivity: – Impedance: 75 ohms
SA-CD/CD (Optical)	Sensitivity: – Impedance: –

Output (Analog)

SUB WOOFER	Voltage: 2 V Impedance: 1 k ohm
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Reproduction frequency range:

28 – 20,000 Hz

Tone

Gain levels	±6 dB, 1 dB step
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FM tuner section

Tuning range	87.5 - 108.0 MHz
Antenna	FM wire antenna
Antenna terminals	75 ohms, unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range

Models of area code US, CND

With 10-kHz tuning scale: 530 - 1,710 kHz³⁾

With 9-kHz tuning scale: 531 - 1,710 kHz³⁾

Models of area code AEP, UK, RU, AUS, SP, SP6

With 9-kHz tuning scale: 531 – 1,602 kHz

Models of area code E51

With 10-kHz tuning scale: 530 - 1,610 kHz³⁾

With 9-kHz tuning scale: 531 - 1,602 kHz³⁾

Models of area code MX, AR

With 10-kHz tuning scale: 530 - 1,610 kHz

Antenna Loop antenna

Intermediate frequency 450 kHz

- 3) You can change the AM tuning scale to 9 kHz or 10 kHz. After tuning in any AM station, turn off the receiver. While holding down PRESET TUNING + or TUNING +, press I/O. 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.

General

Power requirements

Area code	Power requirements
US, CND	120 V AC, 60 Hz
AEP, UK, RU	230 V AC, 50/60 Hz
AUS	240 V AC, 50 Hz
E15	120/220/240 V AC, 50/60 Hz
SP, SP6, AR	220 – 230 V AC, 50/60 Hz
MX	127 V AC, 60 Hz

Power consumption

Area code	Power consumption
US, AEP, UK, E51, AR, SP, SP6, MX, AUS, RU	160 W
CND	220 VA

Power consumption (during standby mode)

0.2 W

Dimensions (w/h/d) (Approx.)

430 × 145 × 301.5 mm

(17 × 5 6/8 × 11 7/8 inches)

including projecting parts
and controls

Mass (Approx.) 6.5 kg (14 lb 6 oz)

- Abbreviation

AR : Argentina model

AUS: Australian model

CND : Canadian model

E51 : Chilean and Peruvian models

MX : Mexican model

RU : Russian model

SP : Singapore model

SP6 : Singapore and Malaysia models

Design and specifications are subject to change
without notice

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check 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 TEST

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)

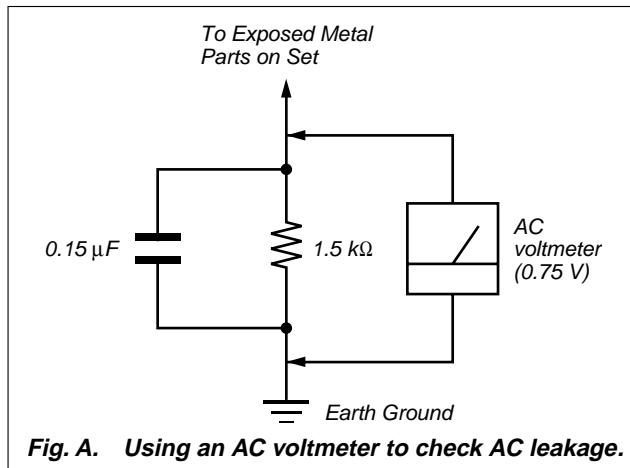


Fig. A. Using an AC voltmeter to check AC leakage.

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)

LF : 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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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MODEL IDENTIFICATION
— BACK PANEL —



Model	Part No.
US model	2-342-334-0□
CND model	2-342-334-1□
AUS model	2-342-334-2□
SP, SP6 models	2-342-334-3□
MX model	2-342-334-4□
E51 model	2-342-334-5□
AEP, UK and RU models	2-342-334-8□
AR model	2-348-134-1□

• Abbreviation

- AR : Argentina model
- AUS : Australian model
- CND : Canadian model
- E51 : Chilean and Peruvian models
- MX : Mexican model
- RU : Russian model
- SP : Singapore model
- SP6 : Singapore and Malaysia models

SERVICING NOTE

Note on replacement POWER AMPLIFIER IC

There are two kinds of sets by POWER AMPLIFIER IC (IC501, IC601, IC701: on MAIN board) used with this model.

Type1 : 6-700-943-01 IC uPC2581V-S

Type2 : 6-600-450-01 IC STK350-530-E

Ref. No.	Type1 : uPC2581V-S	Type2 : STK350-530-E	Wiring Board Location
C503	1-128-813-11 CERAMIC 220PF 5% 50V	1-128-809-11 CERAMIC 100PF 5% 50V	C-4
C553	1-128-813-11 CERAMIC 220PF 5% 50V	1-128-809-11 CERAMIC 100PF 5% 50V	C-4
C603	1-128-813-11 CERAMIC 220PF 5% 50V	1-128-809-11 CERAMIC 100PF 5% 50V	C-5
C653	1-128-813-11 CERAMIC 220PF 5% 50V	1-128-809-11 CERAMIC 100PF 5% 50V	C-5
C703	1-128-813-11 CERAMIC 220PF 5% 50V	1-128-809-11 CERAMIC 100PF 5% 50V	D-3
C753	1-128-813-11 CERAMIC 220PF 5% 50V	1-128-809-11 CERAMIC 100PF 5% 50V	D-3
IC501	6-700-943-01 IC UPC2581V-S	6-600-450-01 IC STK350-530-E	C-4
IC601	6-700-943-01 IC UPC2581V-S	6-600-450-01 IC STK350-530-E	C-5
IC701	6-700-943-01 IC UPC2581V-S	6-600-450-01 IC STK350-530-E	D-2
R500	1-247-863-91 CARBON 22K 5% 1/4W	1-247-871-91 CARBON 47K 5% 1/4W	C-5
R600	1-247-863-91 CARBON 22K 5% 1/4W	1-247-871-91 CARBON 47K 5% 1/4W	C-6
R700	1-247-863-91 CARBON 22K 5% 1/4W	1-247-871-91 CARBON 47K 5% 1/4W	D-3
R858	JUMPER (EXCEPT E51, MX)	1-216-453-00 METAL OXIDE 270 5% 2W (EXCEPT E51, MX)	D-7
	1-216-452-11 RES, METAL OXIDE FILM 180 (E51)	1-215-889-00 METAL OXIDE 330 5% 2W (E51)	
	JUMPER (MX)	1-215-888-00 METAL OXIDE 220 5% 2W (MX)	
R859	1-215-889-00 METAL OXIDE 330 5% 2W (EXCEPT E51, MX)	1-215-888-00 METAL OXIDE 220 5% 2W	D-6
	1-215-888-00 METAL OXIDE 220 5% 2W (E51)		
	1-216-453-00 METAL OXIDE 270 5% 2W (MX)		

SECTION 1 GENERAL

This section is extracted
from instruction manual.

Main unit

ALPHABETICAL ORDER

A - H

- A.F.D. **9** (25, 26, 27)
- AM **16** (18, 19, 32, 41)
- DIMMER **3** (23)
- DISPLAY **2** (21, 23, 39)
- Display **5** (21, 23)
- DVD **19** (18)
- ENTER **7** (14, 32)
- FM **17** (18, 19, 32, 41)
- FM MODE **25** (19)

I - O

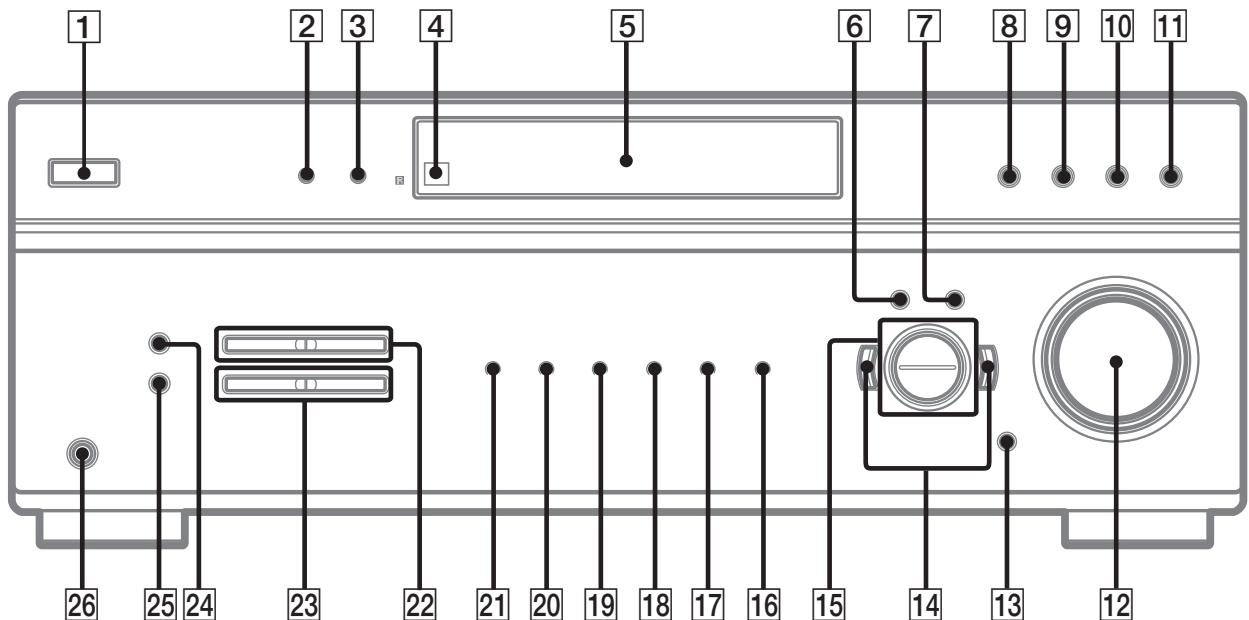
- INPUT MODE **13** (28)
- IR (receptor) **4** (33, 39)
- MAIN MENU **6** (15, 28, 30, 32)
- MASTER VOLUME -/+ **12** (14, 17, 18, 38)
- MEMORY **24** (20)
- MOVIE **10** (26, 27, 38)
- MUSIC **11** (27, 38)

P - Z

- PHONES (jack) **26** (18, 38)
- PRESET TUNING -/+ **22** (20)
- SA-CD/CD **18** (18)
- TUNING -/+ **23** (19)
- VIDEO 1 **21** (18)
- VIDEO 2 **20** (18)

NUMBERS AND SYMBOLS

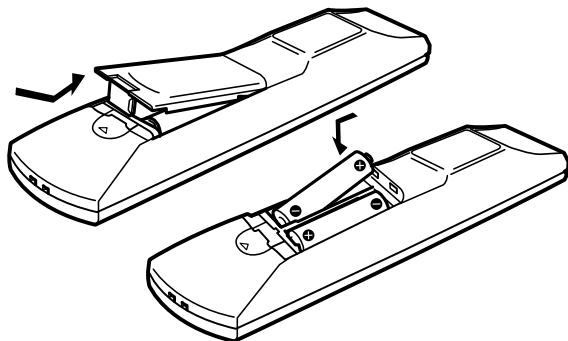
- 2CH **8** (25, 27, 29)
- I**/**U** (power) **1** (14, 20, 29)
- </> **14** (15, 28, 30, 32)
- +/- **15** (15, 28, 30, 32)



Before you use your remote

Inserting batteries into the remote

Insert R6 (size-AA) batteries with the + and – properly oriented in the battery compartment. When using the remote, point it at the remote sensor  on the receiver.



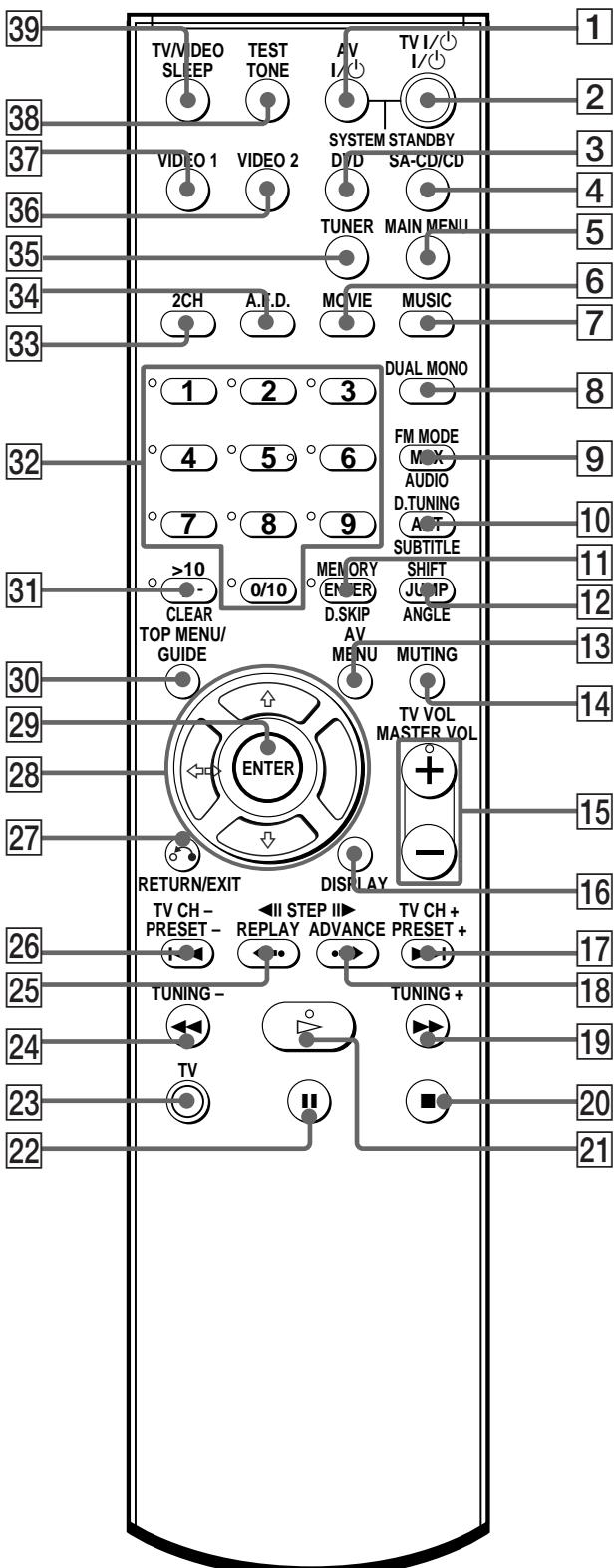
Tip

Under normal conditions, the batteries should last for about 6 months. When the remote no longer operates the receiver, replace all batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Remote button description



The tables below show the settings of each button.

Remote Button	Operations	Function
A.F.D. [34]	Receiver	Selects the decoding mode for audio sound.
ANGLE [12]	DVD player	Selects viewing angle or changes the angles.
ANT [10]	VCR/ Satellite tuner	Selects output signal from the antenna terminal: TV signal or VCR program.
AUDIO [9]	DVD player/ Satellite tuner	Changes the sound to Multiplex or Bilingual or Multi channel TV sound.
AV MENU [13]	VCR/ DVD player/ Satellite tuner	Displays menu.
AV I/O [1]	VCR/ CD player/ DVD player/ Satellite tuner/ MD deck	Turns the audio and video components on or off.
CLEAR [31]	DVD player/ Satellite tuner	Clears a mistake when you press the incorrect numeric buttons or returns to continuous playback etc.
DISPLAY [16]	Receiver/ CD player/ VCR/ DVD player/ Satellite tuner/ MD deck	Selects information displayed on the TV screen.
D.SKIP [11]	CD player/ DVD player	Skips discs (multi-disc changer only).
D.TUNING [10]	Receiver	Enters direct tuning mode.
DUAL MONO [8]	Receiver	Selects the language you want during digital broadcast.
DVD [3]	Receiver	To watch DVD.
ENTER [11]	TV/VCR/ Satellite tuner	After selecting a channel, disc or track using the numeric buttons, press to enter the value.

Remote Button	Operations	Function
ENTER [29]	Receiver/ VCR/ DVD player/ Satellite tuner/ CD player/ MD deck	Enters the selection.
FM MODE [9]	Receiver	Selects FM monaural or stereo reception.
JUMP [12]	Satellite tuner	Toggles between the previous and the current channels.
MAIN MENU [5]	Receiver	Selects the menu of the receiver.
MASTER VOL +/- [15]	Receiver/TVA	Adjusts the master volume of the receiver.
MEMORY [11]	Receiver	Stores the radio stations.
MOVIE [6]	Receiver	Selects the pre-programmed sound fields for movie.
MPX [9]	VCR	Select main or sub language.
MUSIC [7]	Receiver	Selects the pre-programmed sound fields for music.
MUTING [14]	Receiver	Mutes the sound from the receiver.
PRESET +/- [17][26]	Receiver	Selects preset stations.
	TV/VCR/ Satellite tuner	Select preset channel.
RETURN/ EXIT [27]	DVD player	Returns to the previous menu or exits the menu.
	Satellite tuner	Exits the menu.
SA-CD/CD [4]	Receiver	To listen to Super Audio CD or compact disc.
SHIFT [12]	Receiver	Selects a memory page for presetting radio stations or tuning to preset stations.

Remote Button	Operations	Function
SLEEP [39]	Receiver	Activates the sleep function and the duration which the receiver turns off automatically.
SUBTITLE [10]	DVD player	Changes the subtitles.
SYSTEM STANDBY (Press AV I/O [1] and I/O [2] at the same time)	Receiver/ TV/VCR/ CD player/ DVD player/ Satellite tuner/ MD deck/ DAT deck	Turns off the receiver and other Sony audio/video components.
TEST TONE [38]	Receiver	Outputs test tone.
TOP MENU/ GUIDE [30]	DVD player	Displays DVD title.
	Satellite tuner	Display guide menu.
TUNER [35]	Receiver	To listen to radio programs.
TUNING+/- [19] [24]	Receiver	Scans radio station.
TV [23]	TVT	o watch TV programs.
TV CH +/- [17] [26]	TVS	elects preset TV channels.
TV/VIDEO [39]	TVS	elects input signal: TV input or video input.
TV VOL +/- [15]	TVA	djusts the volume of the TV.
TV I/O [2]	TVT	urns the TV on or off.
VIDEO 1 [37]	Receiver	To watch VCR. (VTR mode 3)
VIDEO 2 [36]	Receiver	To watch VCR. (VTR mode 1)

Remote Button	Operations	Function
1-9 and 0/10 [32]	Receiver	Use with SHIFT to preset radio station or tuning to preset stations and with D.TUNING for direct tuning.
CD player/ DVD player/ MD deck	0/10 selects track 10.	Selects track numbers.
TV/ VCR/ Satellite tuner	Selects channel numbers.	Selects channel
2CH [33]	Receiver	Selects 2CH STEREO mode.
>10 [31]	VCR/ CD player/ DVD player/ Satellite tuner/ MD deck	Selects track numbers over 10.
-- [31]	TVS	elects the channel entry mode, either one or two digit.
I/O [2]	Receiver	Turns the receiver on or off.
◀◀/STEP ▶▶ REPLAY ←→ ADVANCE →→ [25] [18]	VCR/ DVD player	Replay the previous scene or fast forward the current scene.
◀◀/▶▶ [26] [17]	VCR/ CD player/ DVD player	Skips tracks.
◀◀/▶▶ [24] [19]	DVD player	Searches tracks in the forward or backward direction.
VCR/ CD player/ MD deck/ Tape deck	Fastforwards or rewinds.	
▷ [21]	VCR/ CD player/ DVD player/ MD deck/ Tape deck	Starts playback.

Remote Button	Operations	Function
II [22]	VCR/ CD player/ DVD player/ MD deck/ Tape deck	Pauses playback or recording. (Also starts recording with components in recording standby.)
■ [20]	VCR/ CD player/ DVD player/ MD deck/ Tape deck	Stops playback.
⌚ [27]	DVD player	Returns to the previous menu or exits the menu.
↑/↓ [28]	Receiver	Selects a menu item.
◀/▶ [28]	Receiver	Adjusts or changes the setting.
↑/↓/◀/▶ [28]	VCR/ Satellite tuner/ DVD player	Selects a menu item.

Notes

- Some functions explained in this section may not work depending on the model.
- The above explanation is intended to serve as an example only. Therefore, depending on the component the above operation may not be possible or may operate differently than described.
- When you press input buttons (VIDEO 1, VIDEO 2 or DVD), the input mode of the TV might not switch to the corresponding input mode that you want. In this case, press TV/VIDEO button to switch the input mode of the TV.
- To activate the buttons with orange printing, press TV and the button you want simultaneously.

Changing the factory setting of an input button

If the factory settings of the input buttons do not match your system components, you can change them. For example, if you have a CD player and you do not have a DVD player, you can assign the DVD button to your CD player.

- 1 Hold down the input button whose input you want to change (for example, DVD).
- 2 Press the corresponding button of the component you want to assign to the input button (for example, 5 – CD player).

The following buttons are assigned to select the input:

To operate	Press
VCR (command mode VTR 3*)	1
VCR (command mode VTR 2*)	2
DVD player or DVD recorder (command mode DVD 1)	3
DVD recorder (command mode DVD 3)	4
CD player	5
MD deck	6
Tape deck B	7
Tuner (this receiver)	8
DSS (Digital Satellite Receiver)	9
DCS (Digital CS Tuner)	0/10
BSD (Digital BS Tuner)	-/-

*Sony VCRs are operated with a VTR 2 or 3 setting. These correspond to 8 mm and VHS respectively.

Now you can use the DVD button to control the CD player.

To reset a button to its factory setting

Repeat the above procedure.

To reset all the input buttons to their factory setting

Press I/O, TEST TONE and MASTER VOL – at the same time.

SECTION 2

TEST MODE

FACTORY PRESET MODE

- All preset contents are reset to the default setting.
- Procedure:
While depressing the **PRESET TUNING-** and the **DIMMER** buttons simultaneously, press the power **[I/O]** button to turn on the main power. The message “FACTORY” appears and switch off the set.
While depressing the **PRESET TUNING-** and the **DIMMER** buttons simultaneously, press the power **[I/O]** 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 power **[I/O]** button to turn on the main power. Either the message “9 k STEP” or “10 k STEP” appears. Select the desired step.
This mode is only for US/Canadian, Australian and E models.

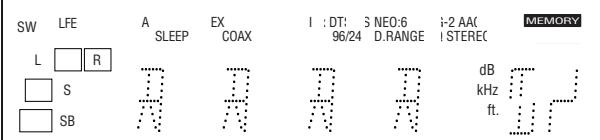
FLUORESCENT INDICATOR TUBE TEST MODE

- 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 **[PRESET TUNING-]** and the **[AM]** buttons simultaneously, press the power **[I/O]** button to turn on the main power.

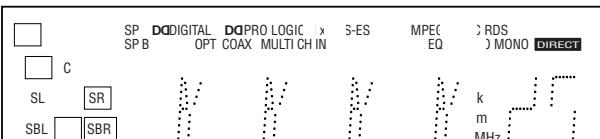
1. All segments turn on.



2. Press the **[VIDEO 1]** button, confirm display.



3. Press the **[VIDEO 1]** button, confirm display



4. Press the **[VIDEO 1]** button, All segments turn off.

5. Every pressing of the **[VIDEO 1]** button turns on each segment one after another in the same order.
(Not only the **[VIDEO 1]** button, but also the other buttons such as **[VIDEO 2]**, **[DVD]**, **[SA-CD/CD]**, **[FM]** and **[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 **[CH]** button, press the power **[I/O]** 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 **[PRESET TUNING-]** and the **[<]** buttons simultaneously, press the power **[I/O]** 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 **[A.F.D.]** and the **[<]** buttons simultaneously, press the power **[I/O]** button to turn on the main power.

“REST 25” appears.

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

When **[MASTERVOLUME]** is rotated in clockwise direction, “VOL MIN”, “VOL 1” to “VOL 48”, “VOL MAX” appear.

AUTO BROADCAST 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. Press the **[I/O]** button to turn on the power while pressing the **[MEMORY]** button.

CHANGE COMMON MODE

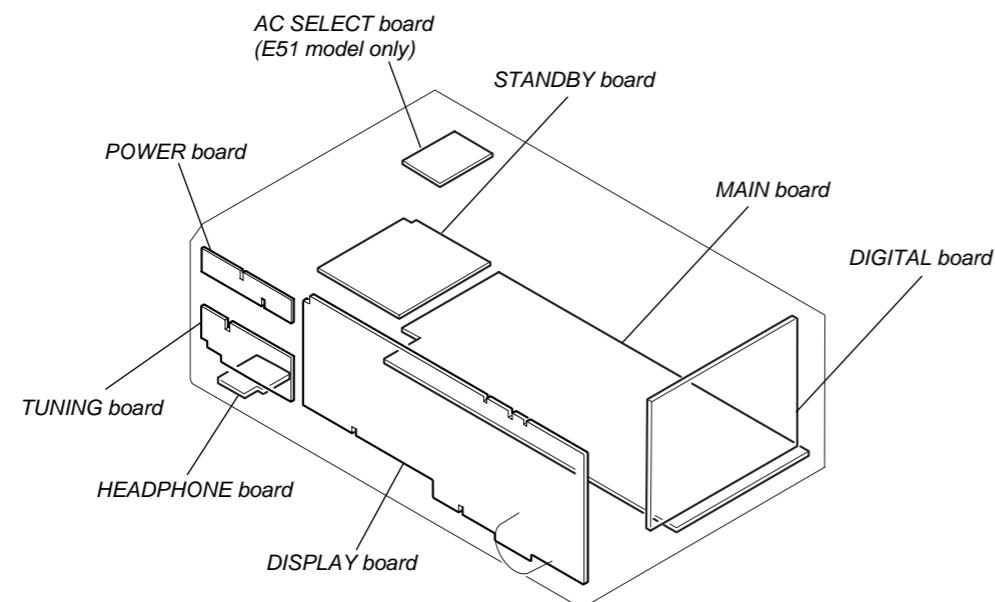
- This mode is command mode changed to AV 1 or AV2.
- Procedure:
While depressing the **[ENTER]** button, press the power **[I/O]** button to turn on the main power.
Either the message “C.MODE.AV 1” or “C.MODE.AV 2” appears.

SHIPMENT MODE

- All preset contents are reset to the default setting.
- Procedure:
While depressing the **[A.F.D.]** and the **[AM]** buttons simultaneously, press the power **[I/O]** button to turn on the main power.
“CLEARED” appears.

SECTION 3 DIAGRAMS

- Circuit Boards Location



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

For Schematic Diagrams.

Note:

- All capacitors are in μF unless otherwise noted. (p: pF)
50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4 \text{ W}$ 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.

Note:

Les composants identifiés par une marque Δ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le même numéro spécifié.

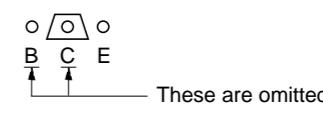
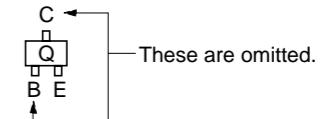
- : B+ Line.
 - : B+ Line.
 - Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
No mark : FM
 - Voltages are taken with a VOM (Input impedance $10 \text{ M}\Omega$). Voltage variations may be noted due to normal production tolerances.
 - Waveforms are taken with an oscilloscope.
 - Circled numbers refer to waveforms.
 - Signal path.
 - : FM
 - : ANALOG
 - : DIGITAL
 - Abbreviation
- | | |
|-----|---------------------------------|
| AR | : Argentina model |
| AUS | : Australian model |
| CND | : Canadian model |
| E51 | : Chilean and Peruvian models |
| MX | : Mexican model |
| RU | : Russian model |
| SP | : Singapore model |
| SP6 | : Singapore and Malaysia models |

For Printed Wiring Boards.

Note:

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

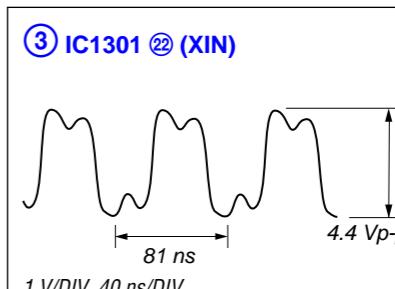
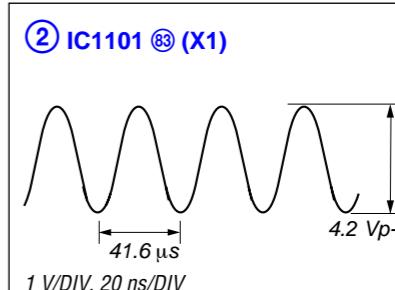
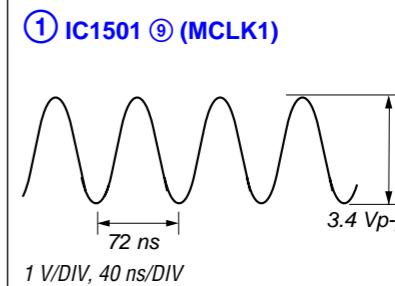
Indication of transistor.



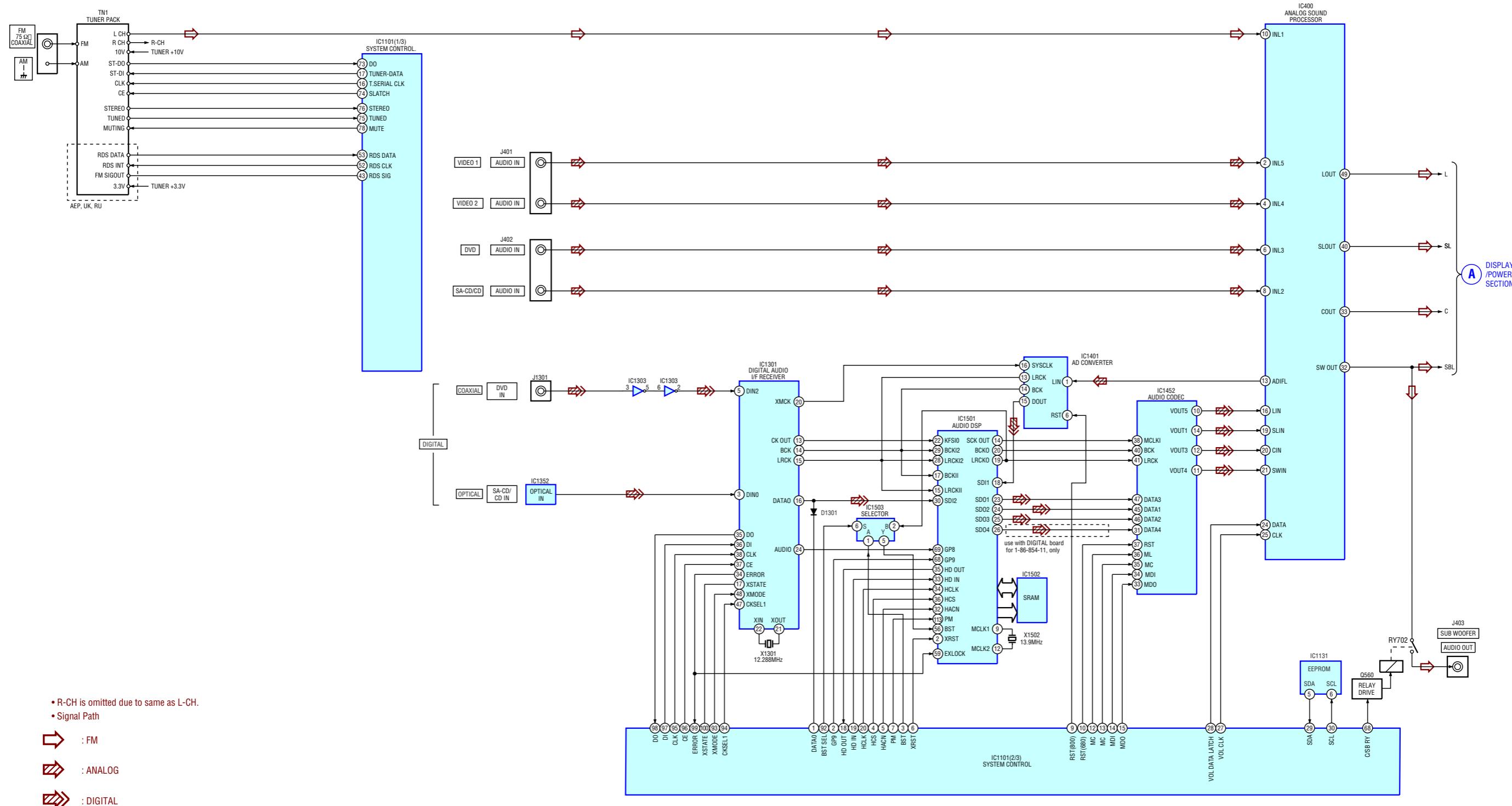
Caution:
Pattern face side: Parts on the pattern face side seen from the pattern face are indicated.
(Side A)
Parts face side: Parts on the parts face side seen from the parts face are indicated.
(Side B)

• Waveforms

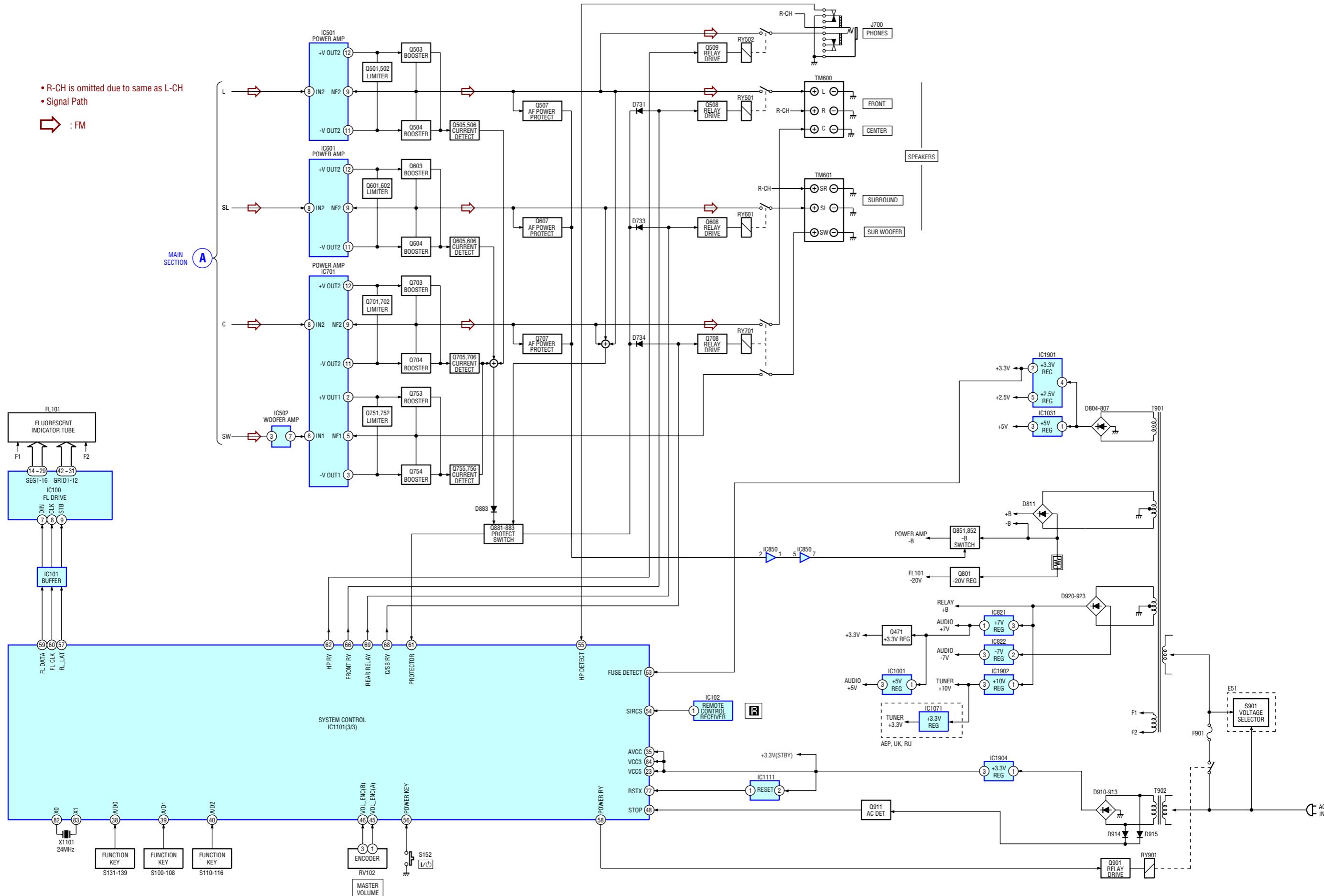
- DIGITAL Board -



3-1. BLOCK DIAGRAM — MAIN SECTION —



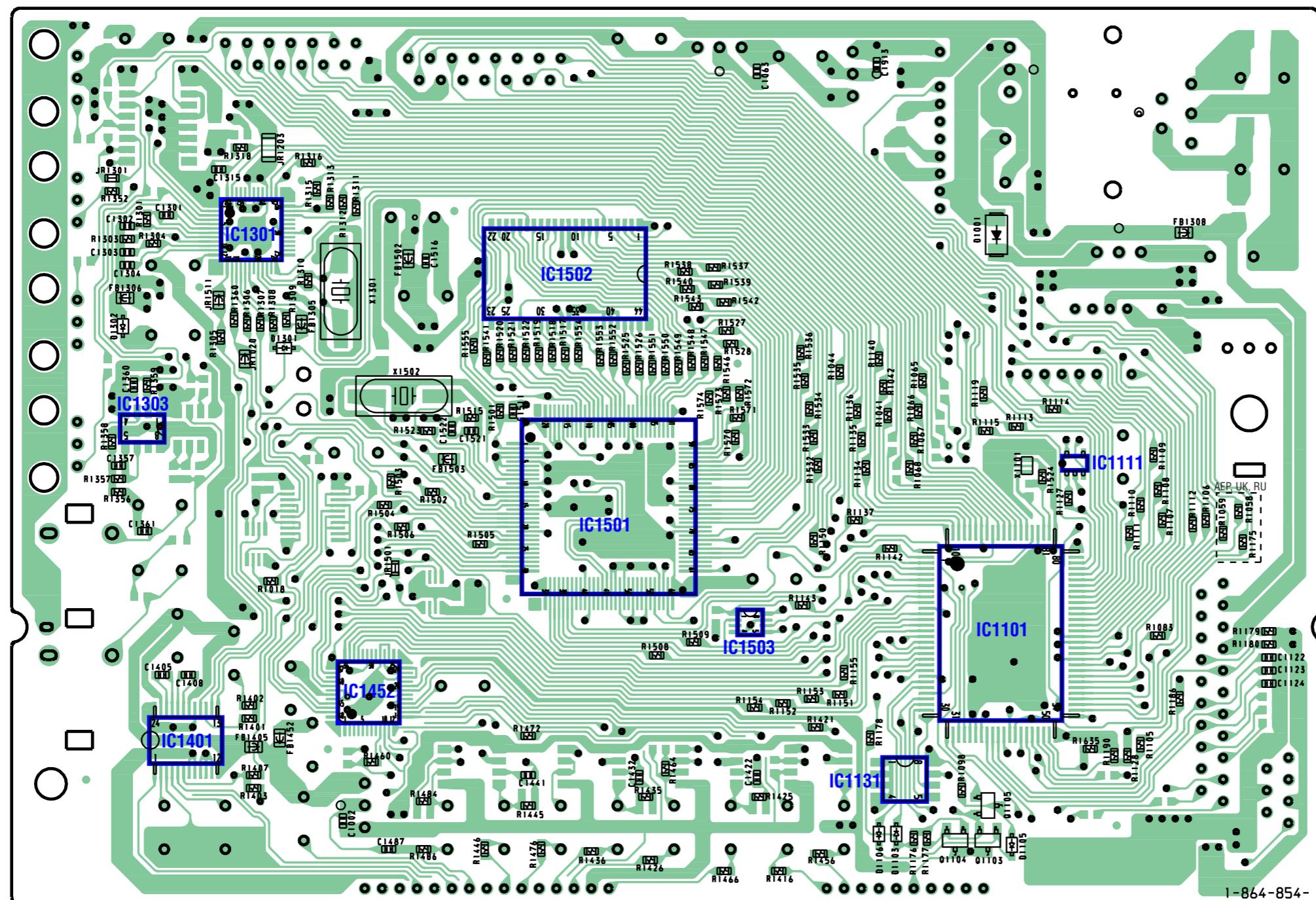
3-2. BLOCK DIAGRAM — DISPLAY/POWER SECTION —



1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

A
B
C
D
E
F
G
H

DIGITAL BOARD (SIDE A)



• Semiconductor Location

Ref. No.	Location
D1001	C-8
D1103	G-7
D1105	G-8
D1106	G-7
D1301	D-3
D1302	D-2
IC1101	F-8
IC1111	D-9
IC1131	G-7
IC1301	C-3
IC1303	D-2
IC1401	F-2
IC1452	F-4
IC1501	E-5
IC1502	C-5
IC1503	F-6
Q1103	G-8
Q1104	G-8
Q1105	G-8

11
(11)

1-864-854-

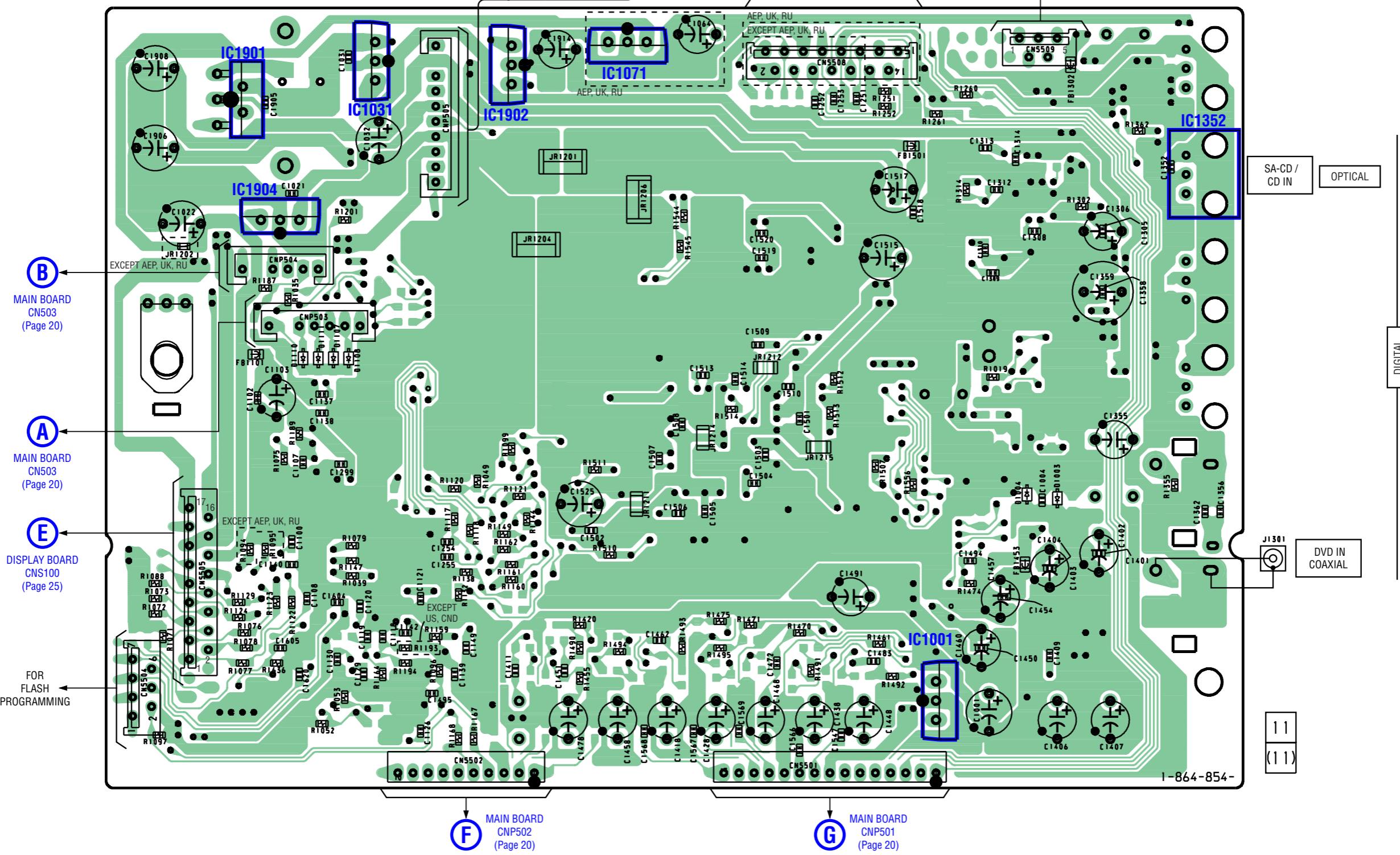
3-4. PRINTED WIRING BOARD — DIGITAL BOARD (SIDE B) —

• :Uses unleaded solder. • See page 11 for Circuit Boards Location.

1 2 3 4 5 6 7 8 9 10 11

A

【 DIGITAL BOARD 】(SIDE B)

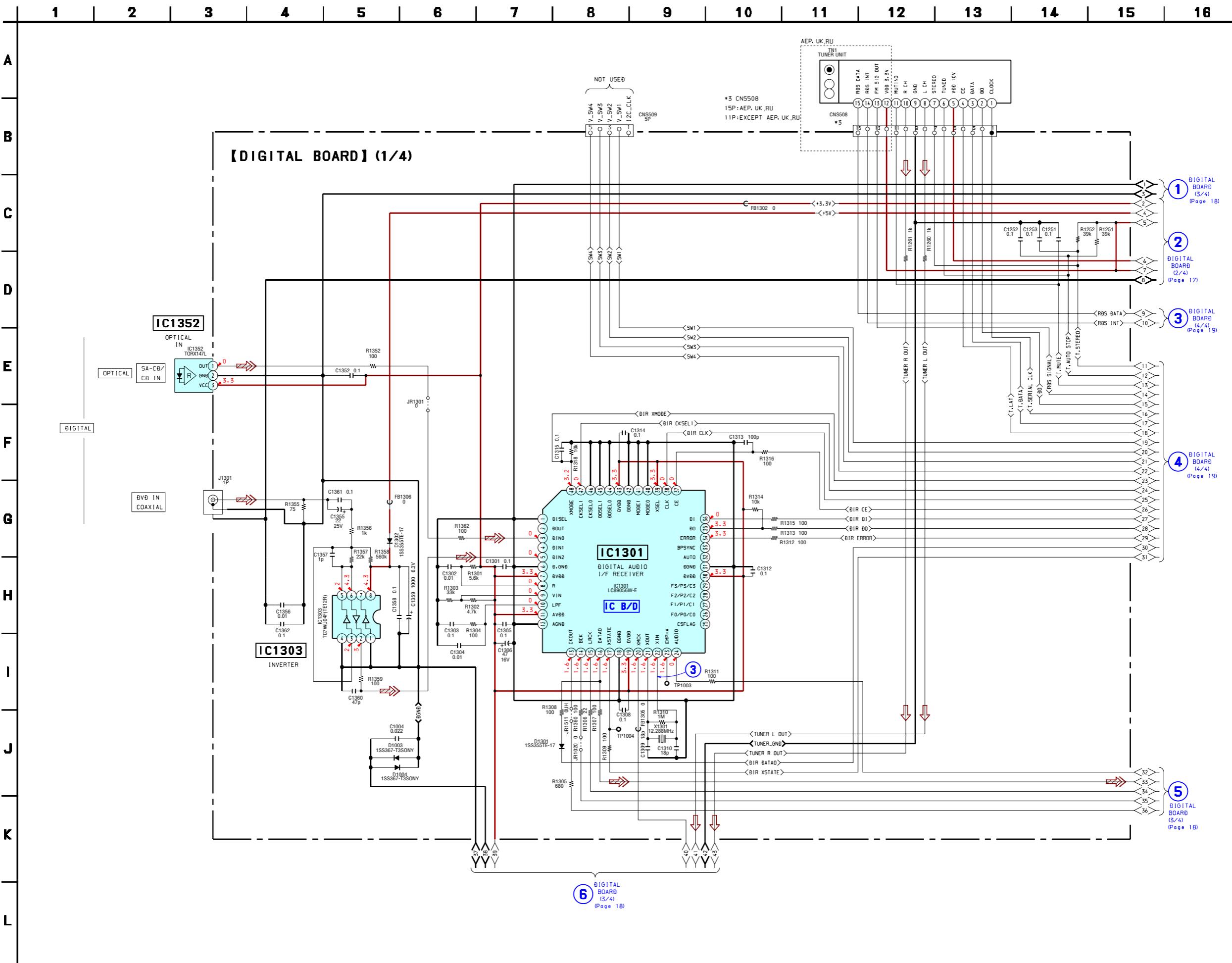


• Semiconductor Location

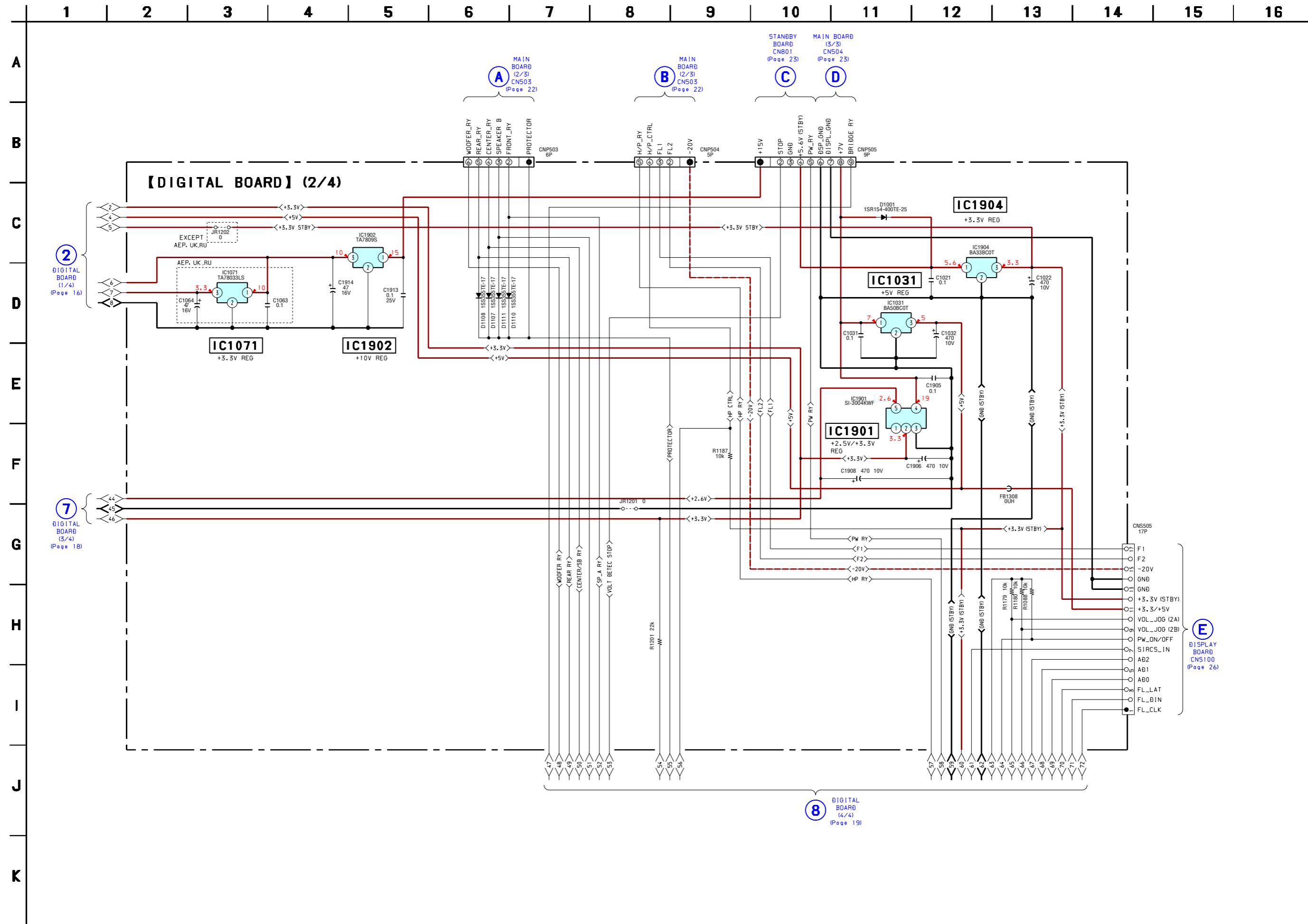
Ref. No.	Location
D1003	E-9
D1004	E-8
D1107	D-3
D1108	D-3
D1110	D-3
D1111	D-3
IC1001	F-8
IC1031	B-3
IC1071	B-5
IC1352	B-9
IC1901	B-2
IC1902	B-4
IC1904	C-2

3-5. SCHEMATIC DIAGRAM — DIGITAL BOARD (1/4) —

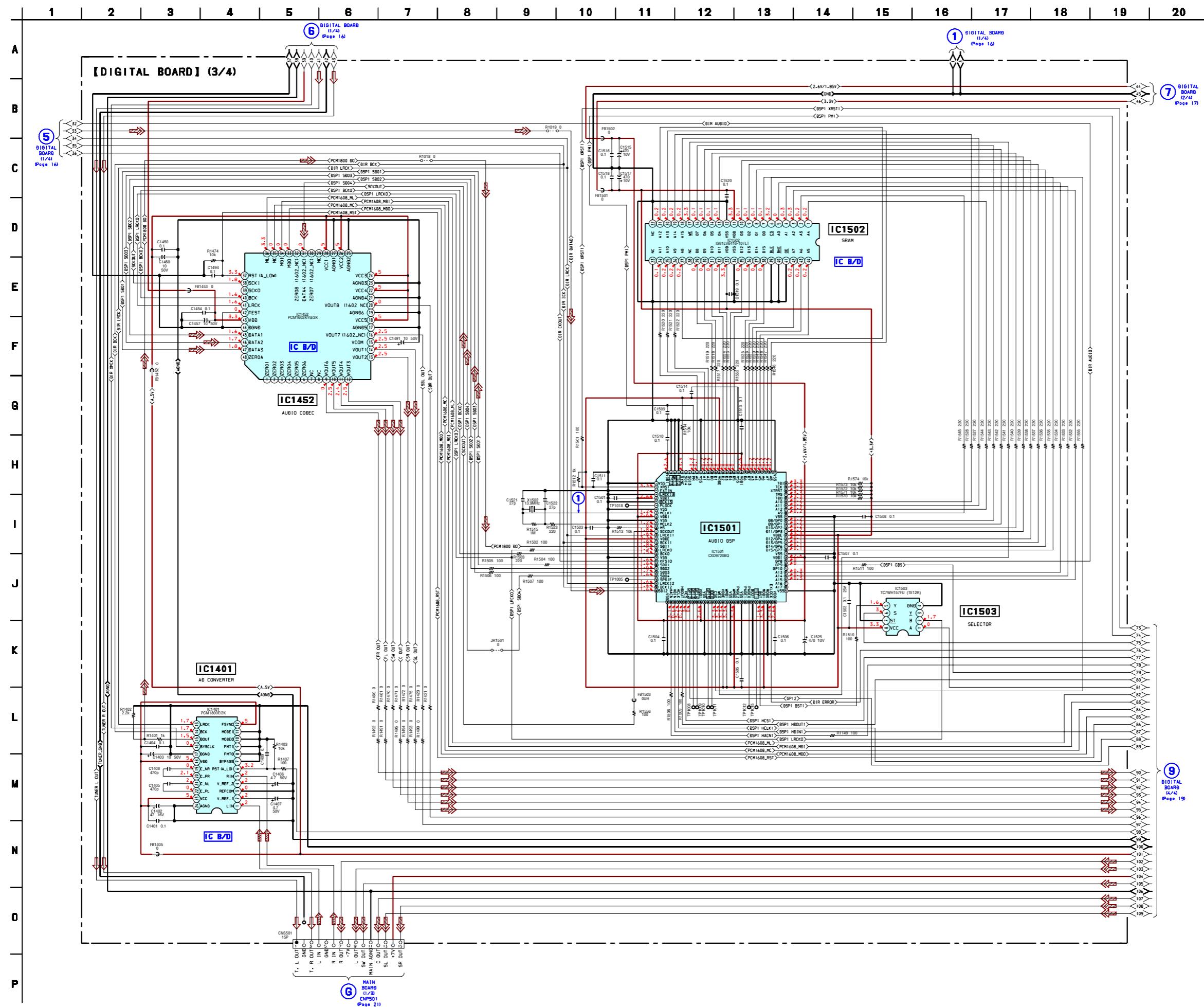
• See page 11 for Waveform. • See page 27 for IC Block Diagram.



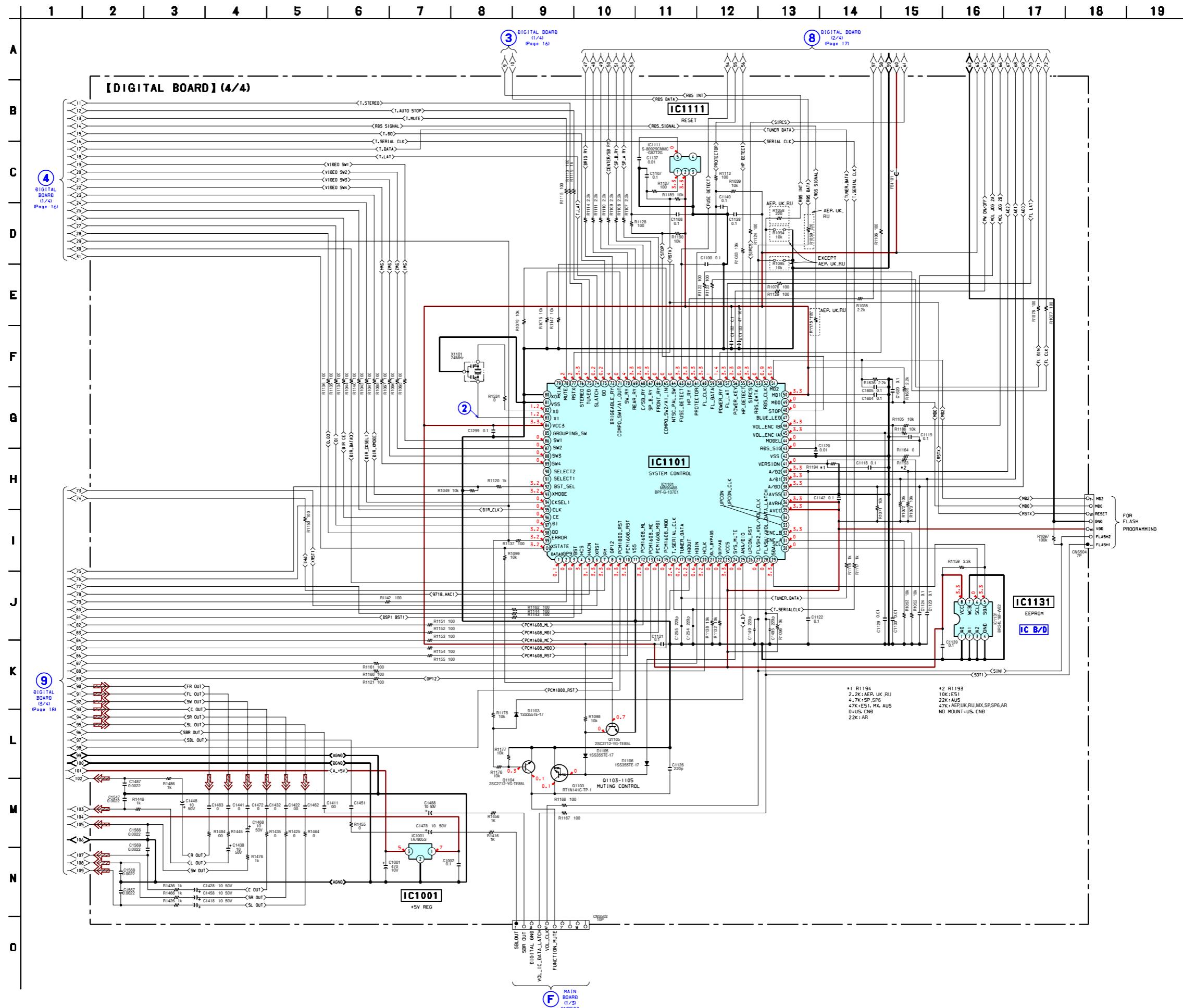
3-6. SCHEMATIC DIAGRAM — DIGITAL BOARD (2/4) —



3-7. SCHEMATIC DIAGRAM — DIGITAL BOARD (3/4) — • See page 11 for Waveform. • See page 28, 29 for IC Block Diagrams.



3-8. SCHEMATIC DIAGRAM — DIGITAL BOARD (4/4) — • See page 11 for Waveform. • See page 27 for IC Block Diagram. • See page 31 for IC Pin Function Description.



3-9. PRINTED WIRING BOARD — MAIN SECTION —

• : Uses unleaded solder. • See page 11 for Circuit Boards Location.

1 2 3 4 5 6 7 8 9 10 11

A

[MAIN BOARD]

G DIGITAL BOARD
CNP501
(PART NUMBER 1-864-854-11)
Page 15
(PART NUMBER 1-866-751-11)
SUPPLEMENT-1
Page 4

F DIGITAL BOARD
CNP502
(PART NUMBER 1-864-854-11)
Page 15
(PART NUMBER 1-866-751-11)
SUPPLEMENT-1
Page 4

J402 SA-CD/CD
AUDIO IN
DVD
AUDIO IN
VIDEO 2
AUDIO IN
VIDEO 1
AUDIO IN
SUB WOOFER
AUDIO OUT
J401
J403

SPEAKERS
IMPEDANCE USE 6-16Ω

SUB WOOFER TM601 SURROUND TM600 CENTER TM600 FRONT

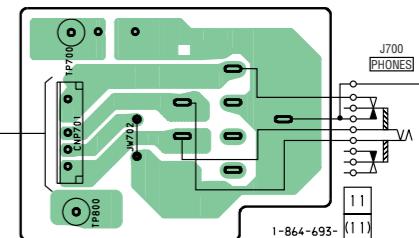
I T901
POWER TRANSFORMER
(Page 24)

D DIGITAL BOARD
CNP505
(PART NUMBER 1-864-854-11)
Page 15
(PART NUMBER 1-866-751-11)
SUPPLEMENT-1
Page 4

H STANDBY BOARD
CNP906
(Page 24)

J T901
POWER TRANSFORMER
(Page 24)

[HEADPHONE BOARD]



B DIGITAL BOARD
CNP504
(PART NUMBER 1-864-854-11)
Page 15
(PART NUMBER 1-866-751-11)
SUPPLEMENT-1
Page 4

A DIGITAL BOARD
CNP503
(PART NUMBER 1-864-854-11)
Page 15
(PART NUMBER 1-866-751-11)
SUPPLEMENT-1
Page 4

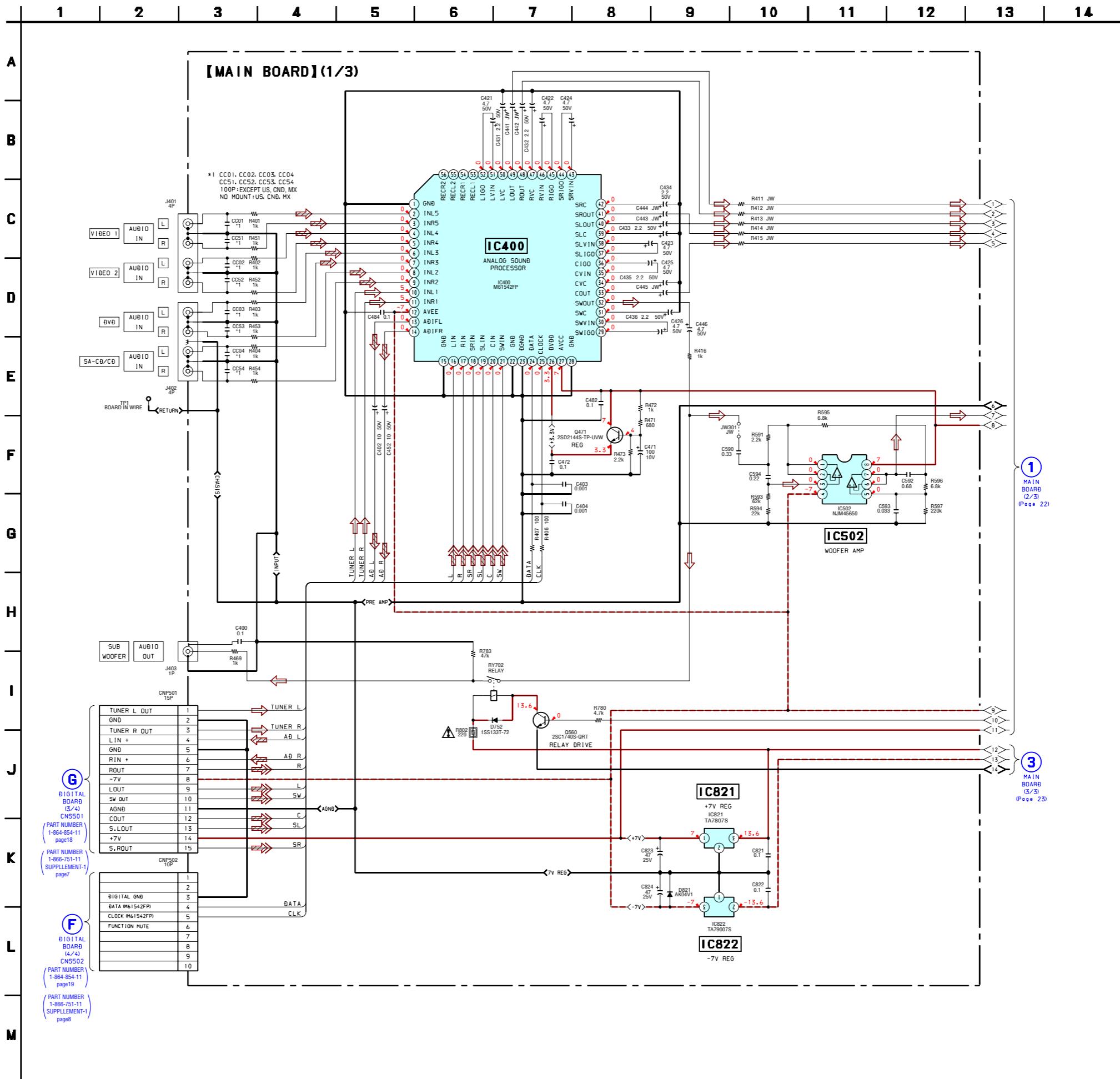
1-864-693-
(11)

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D448	C-3	D752	B-6	IC501	C-4	Q508	C-7	Q607	B-6
D449	C-3	D791	C-9	IC502	C-4	Q509	C-9	Q751	D-3
D501	D-5	D801	C-10	IC601	C-5	Q551	D-7	Q752	E-4
D502	D-4	D802	D-9	IC701	D-2	Q552	E-7	Q753	E-3
D503	C-7	D804	B-10	IC821	B-5	Q553	E-7	Q754	E-4
D551	D-8	D805	B-10	IC822	B-5	Q554	E-7	Q755	D-4
D552	D-7	D806	B-10	IC850	C-6	Q555	D-8	Q756	D-3
D601	D-7	D807	B-10	Q471	C-2	Q556	D-8	Q801	C-8
D602	D-7	D811	C-9	Q501	D-4	Q557	D-7	Q851	C-7
D603	B-6	D821	B-4	Q502	E-5	Q560	B-5	Q852	C-6
D651	D-9	D851	C-7	Q504	E-5	Q601	D-6	Q702	E-3
D652	D-8	D881	C-8	Q506	D-5	Q602	E-6	Q703	E-2
D701	D-2	D882	C-8	Q503	E-4	Q603	E-6	Q704	E-3
D702	D-1	D883	D-8	Q505	D-6	Q604	E-6	Q705	D-3
D703	B-6			Q506	D-5	Q605	D-7	Q706	D-2
D751	D-4	IC400	B-2	Q507	D-5	Q606	D-6	Q707	E-2

★ : When replacing the POWER AMPLIFIER IC (IC501, 601, 701), refer to SERVICE NOTE "NOTE on replacement POWER AMPLIFIER IC" (Page 4)

3-10. SCHEMATIC DIAGRAM — MAIN SECTION (1/3) —



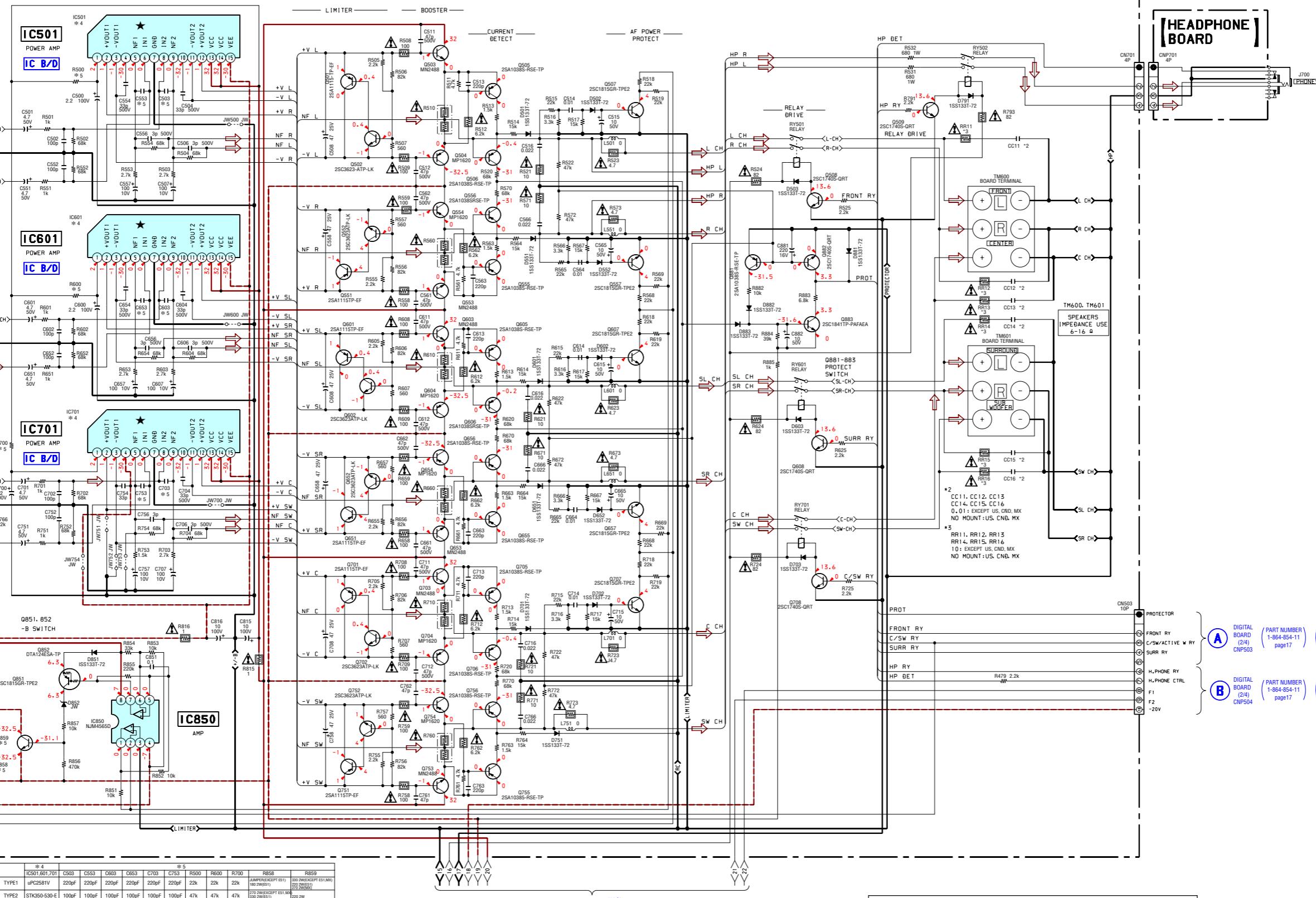
3-11. SCHEMATIC DIAGRAM — MAIN SECTION (2/3) —

• See page 29 for IC Block Diagram.

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20

A

[MAIN BOARD] (2/3)

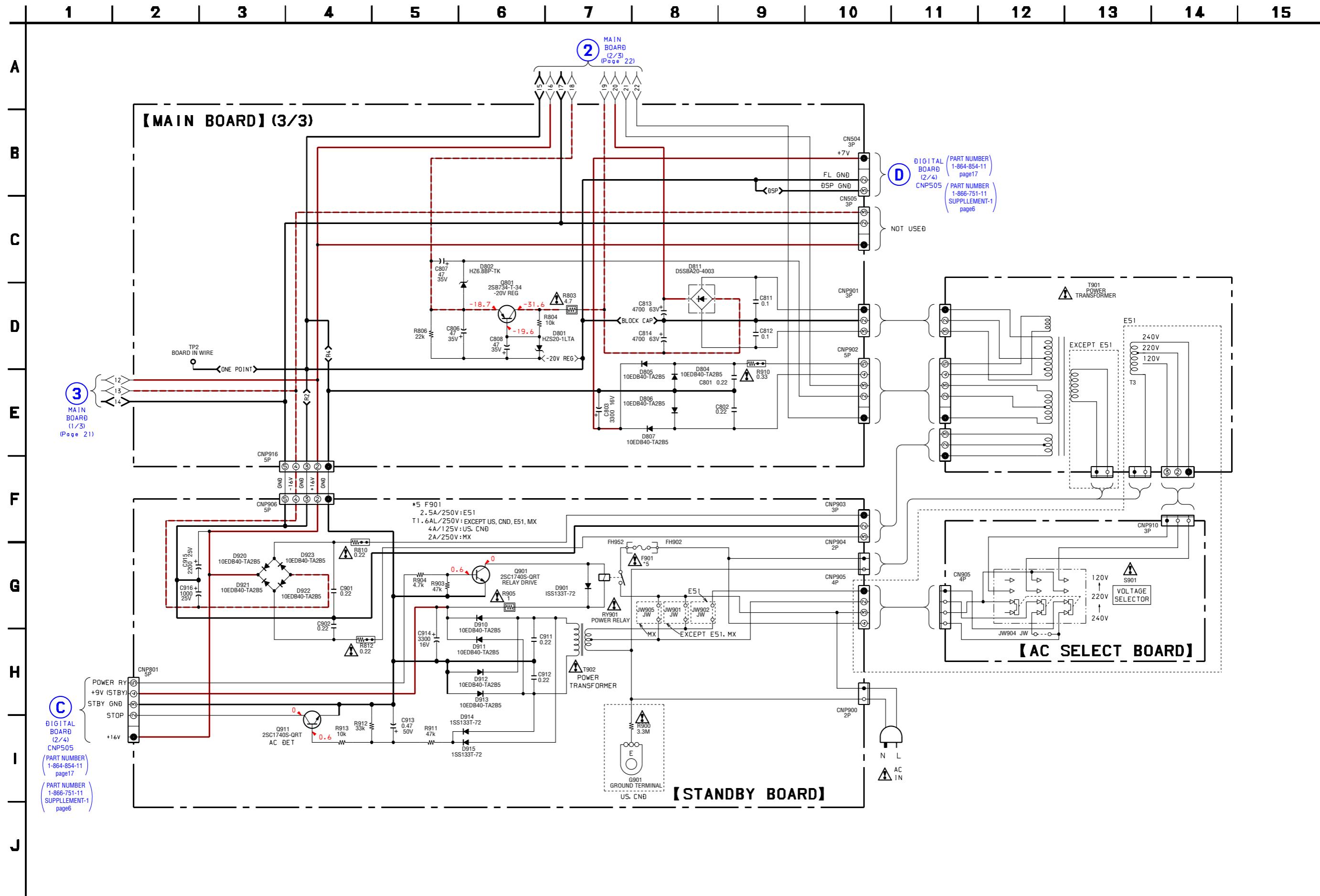


★ : When replacing the POWER AMPLIFIER IC (IC501, 601, 701), refer to SERVICE NOTE "NOTE on replacement POWER AMPLIFIER IC" (Page 4)

(2) MAIN BOARD (3/3)
(Page 23)

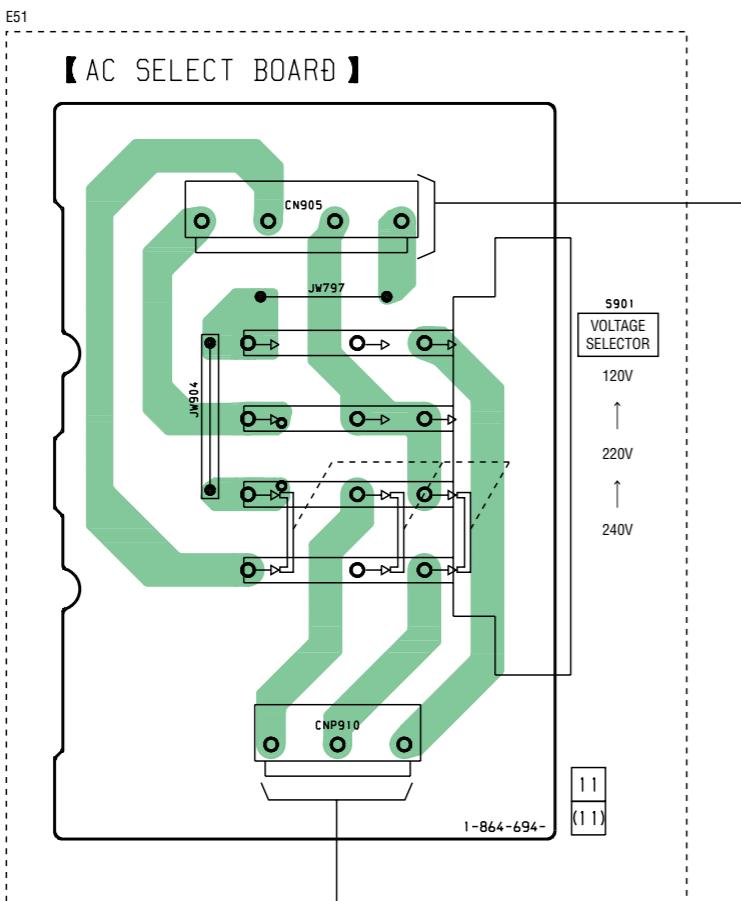
- A** DIGITAL BOARD (2/4) CNF503 (PART NUMBER 1-866-854-11) (SUPPLEMENT-1) (page 17)
- B** DIGITAL BOARD (2/4) CNP504 (PART NUMBER 1-866-854-11) (SUPPLEMENT-1) (page 17)

3-12. SCHEMATIC DIAGRAM — MAIN SECTION (3/3) —

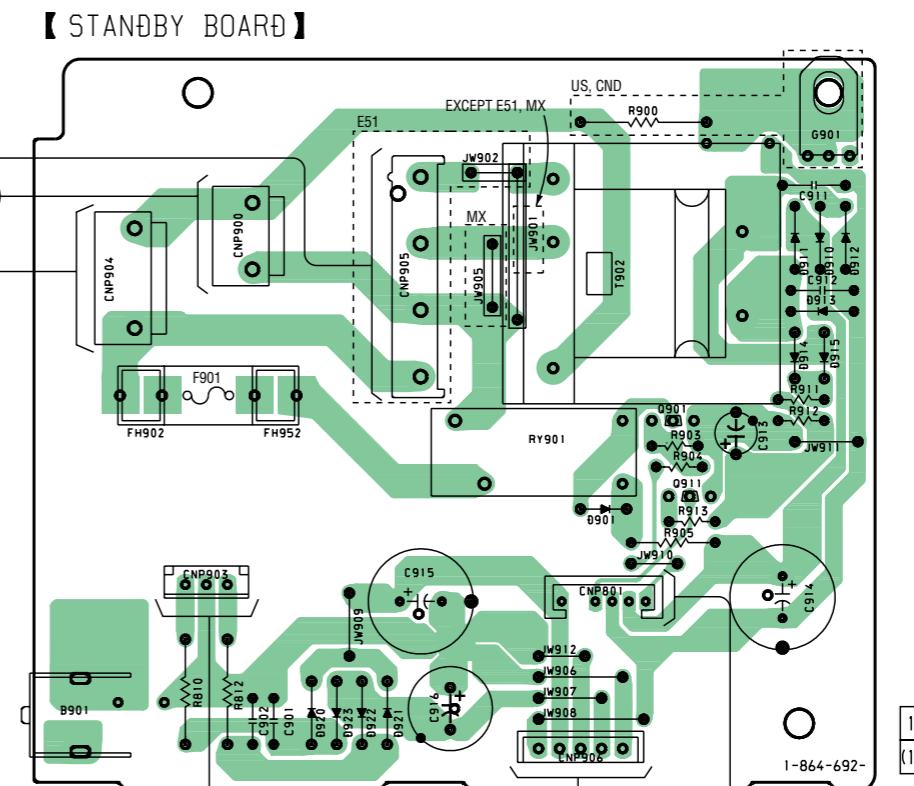


1 2 3 4 5 6 7 8

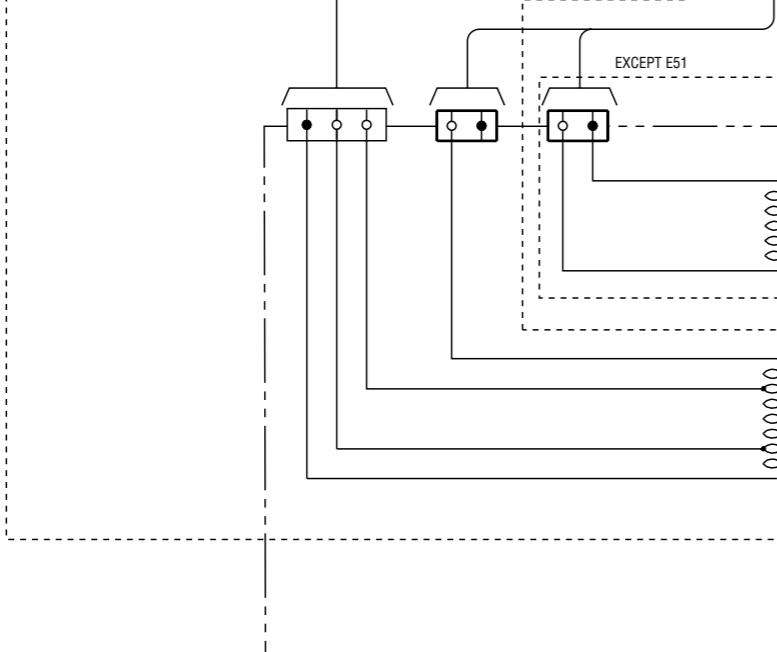
A



B



C



D

E

F

H
MAIN BOARD
CNP916
(Page 20)

C
DIGITAL BOARD
CNP505
(PART NUMBER)
1-864-854-11
page15

(PART NUMBER)
1-866-751-11
SUPPLEMENT-1
page4

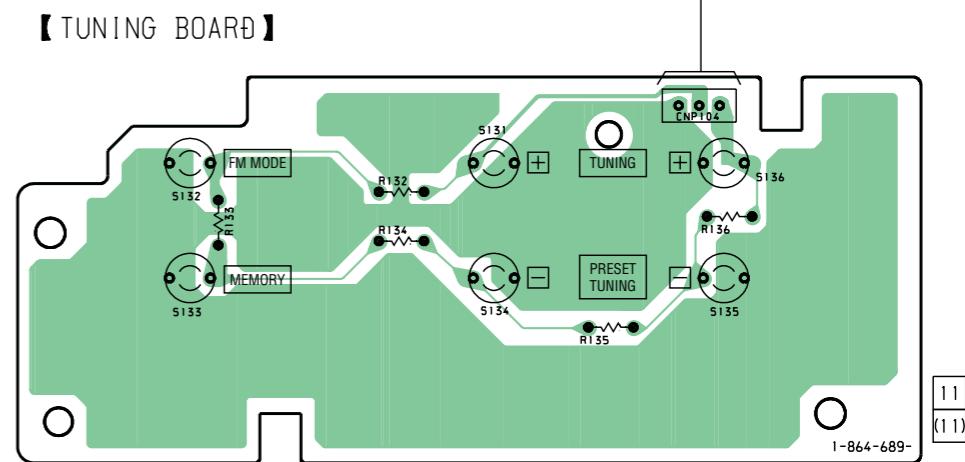
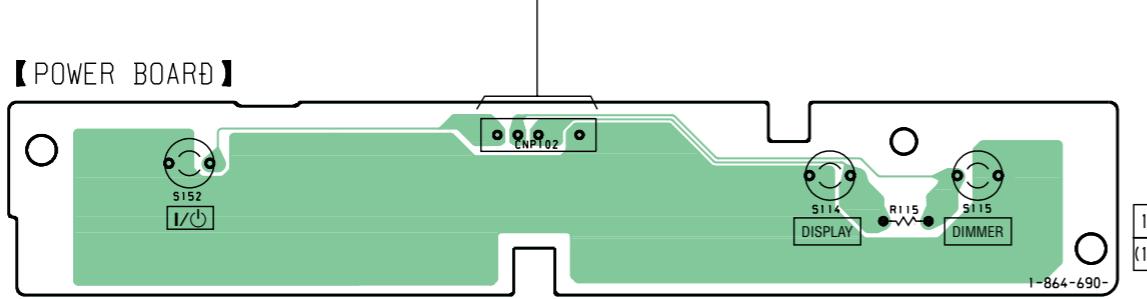
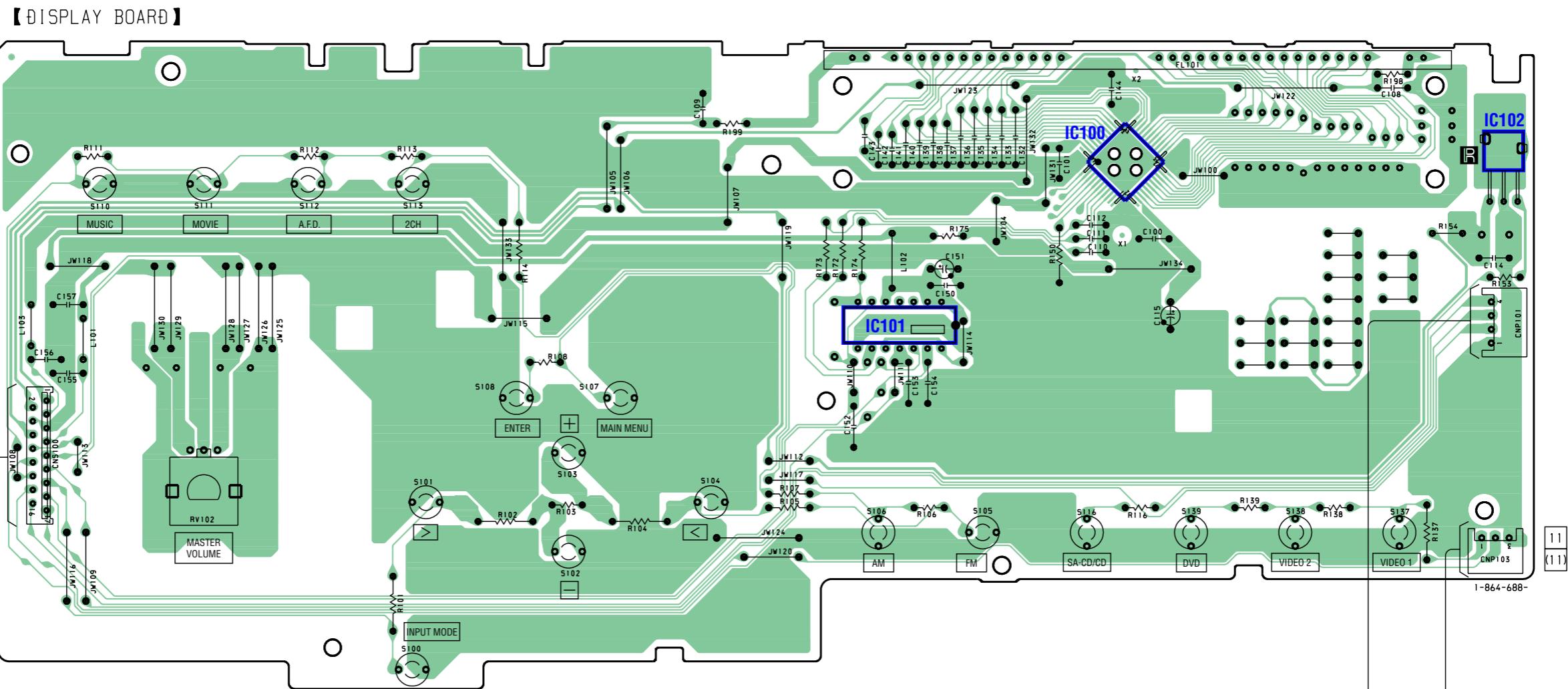
• Semiconductor
Location

Ref. No.	Location
D901	C-7
D910	B-8
D911	B-8
D912	B-8
D913	B-8
D914	B-8
D915	B-8
D920	C-6
D921	C-7
D922	C-6
D923	C-6
Q901	B-7
Q911	C-7

3-14. PRINTED WIRING BOARD — DISPLAY SECTION —

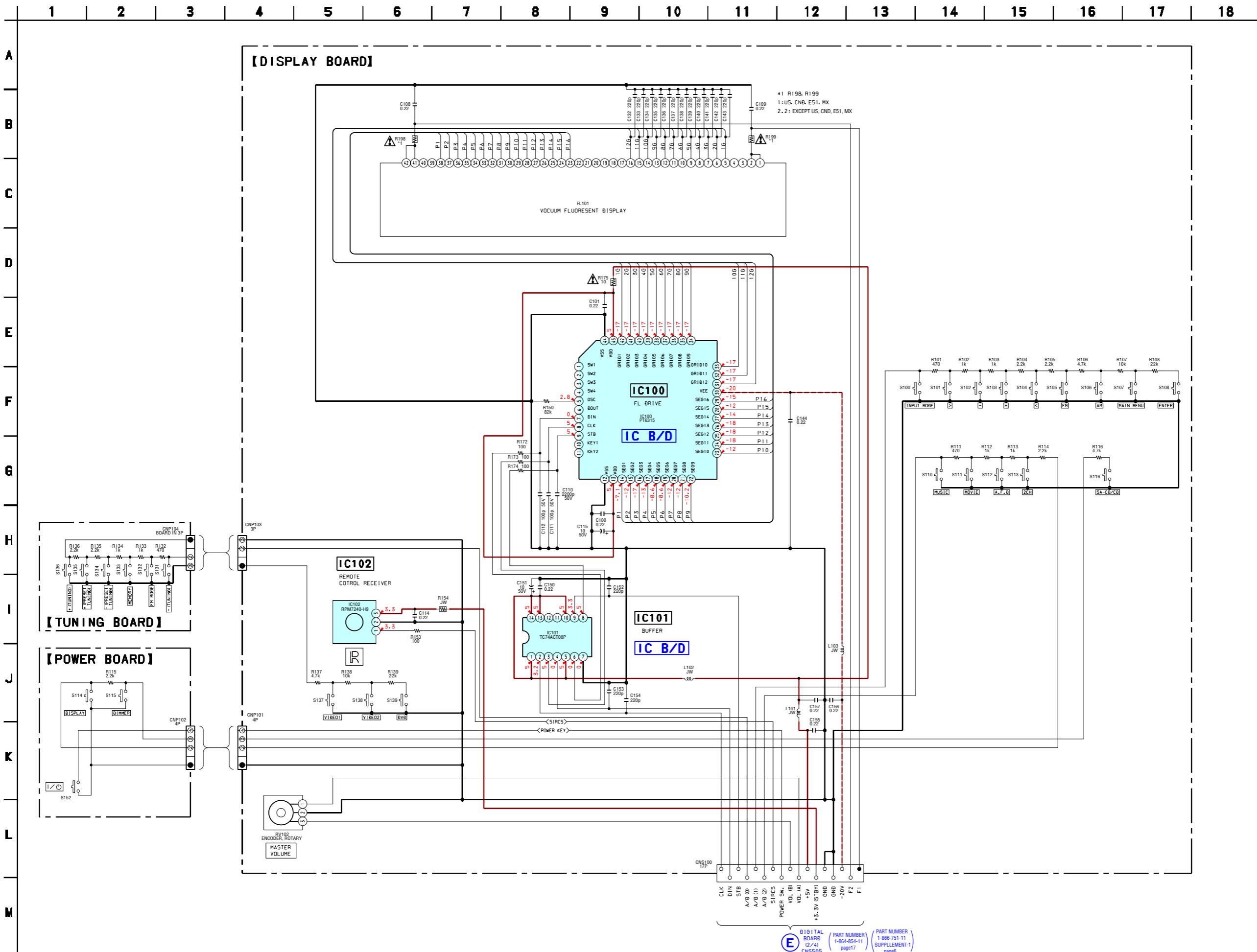
• :Uses unleaded solder. • See page 11 for Circuit Boards Location.

1 2 3 4 5 6 7 8



• Semiconductor Location

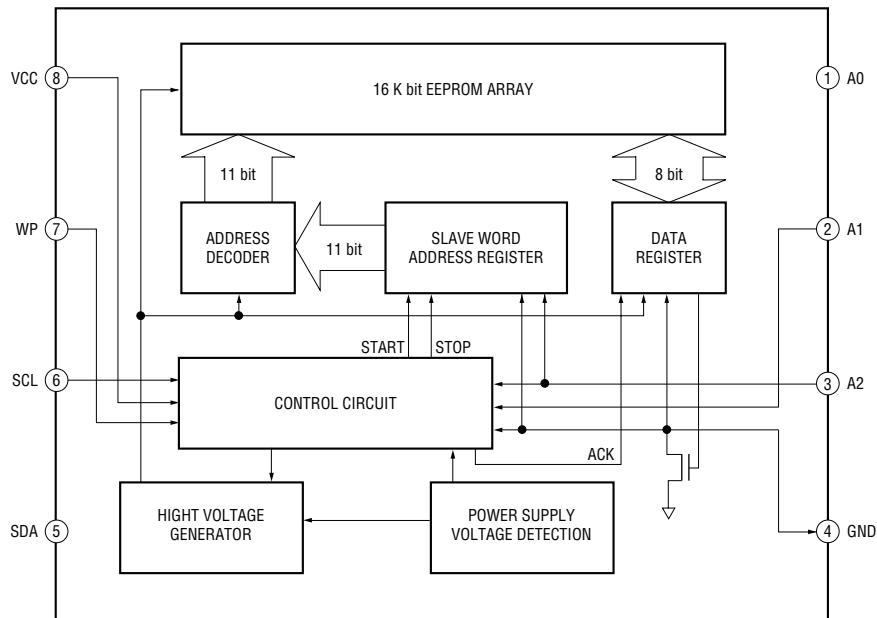
Ref. No.	Location
IC100	A-6
IC101	B-5
IC102	A-8



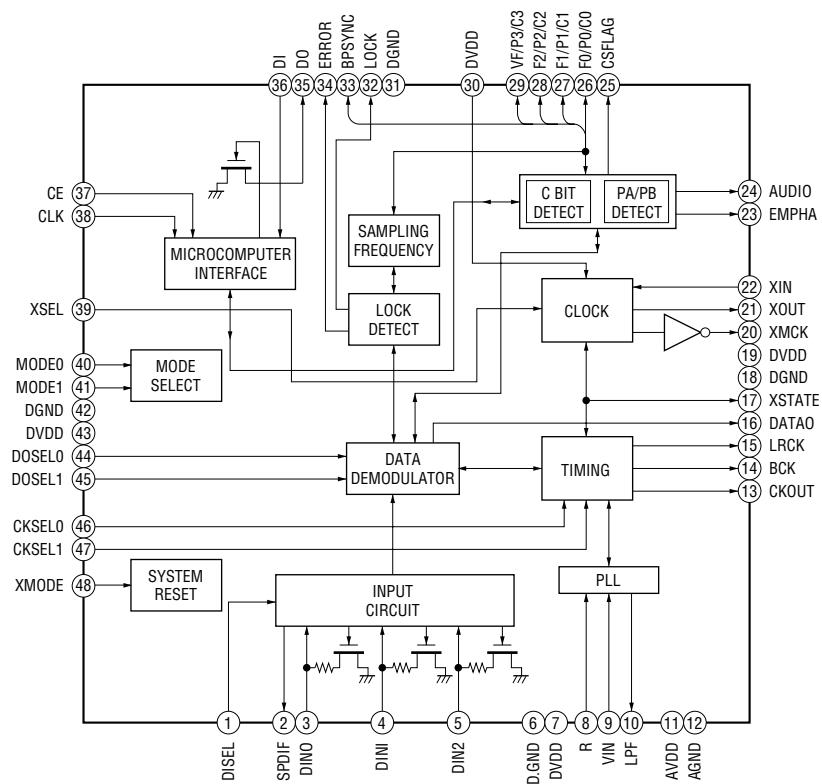
- IC Block Diagrams

– DIGITAL Board –

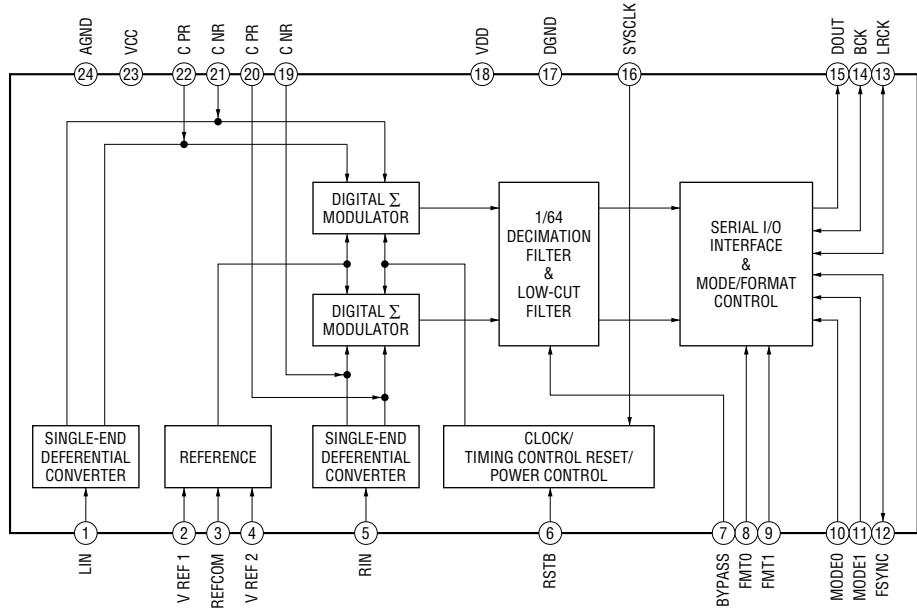
IC1131 BR24L16F-WE2



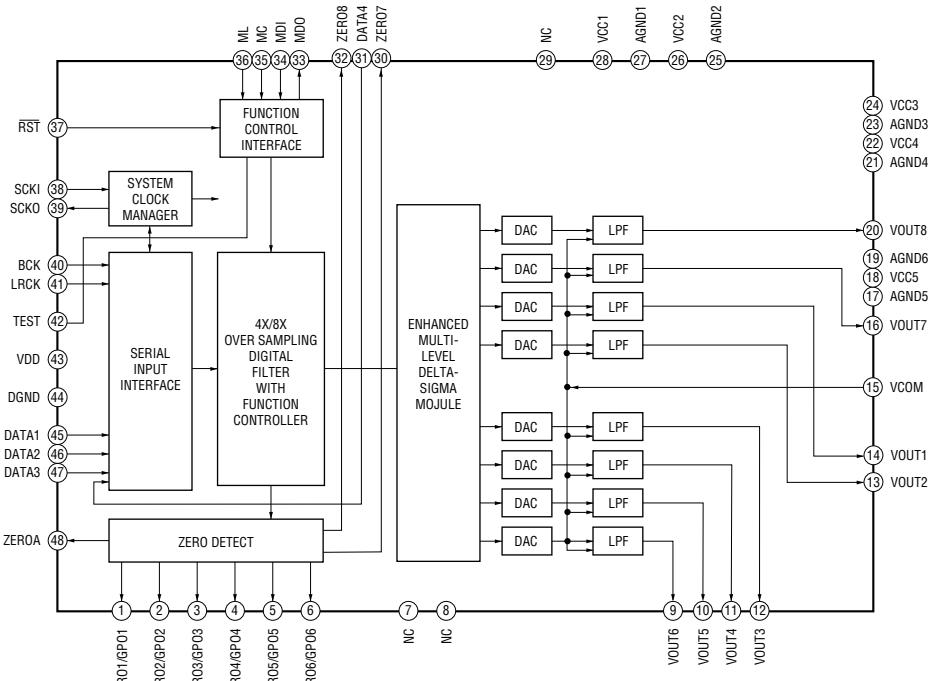
IC1301 LC89056W-E



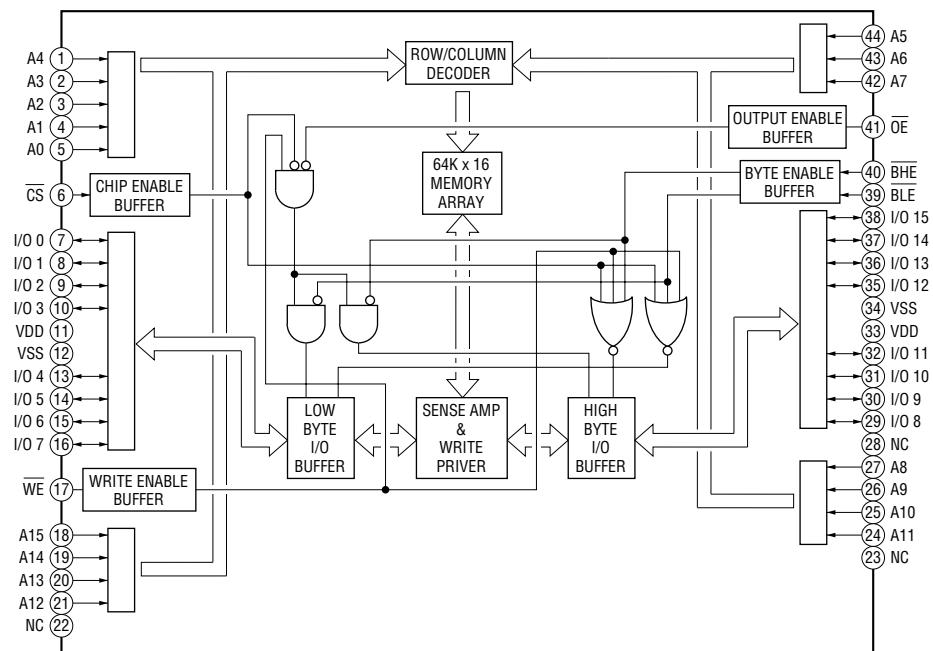
IC1401 PCM1800E/2K



IC1452 PCM1602KYG/2K

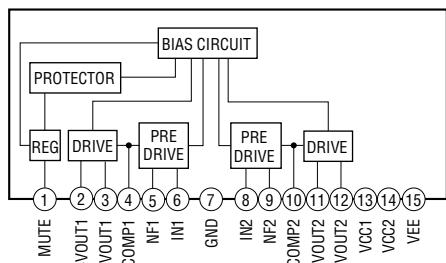


IC1502 IS61LV6416-10TLT

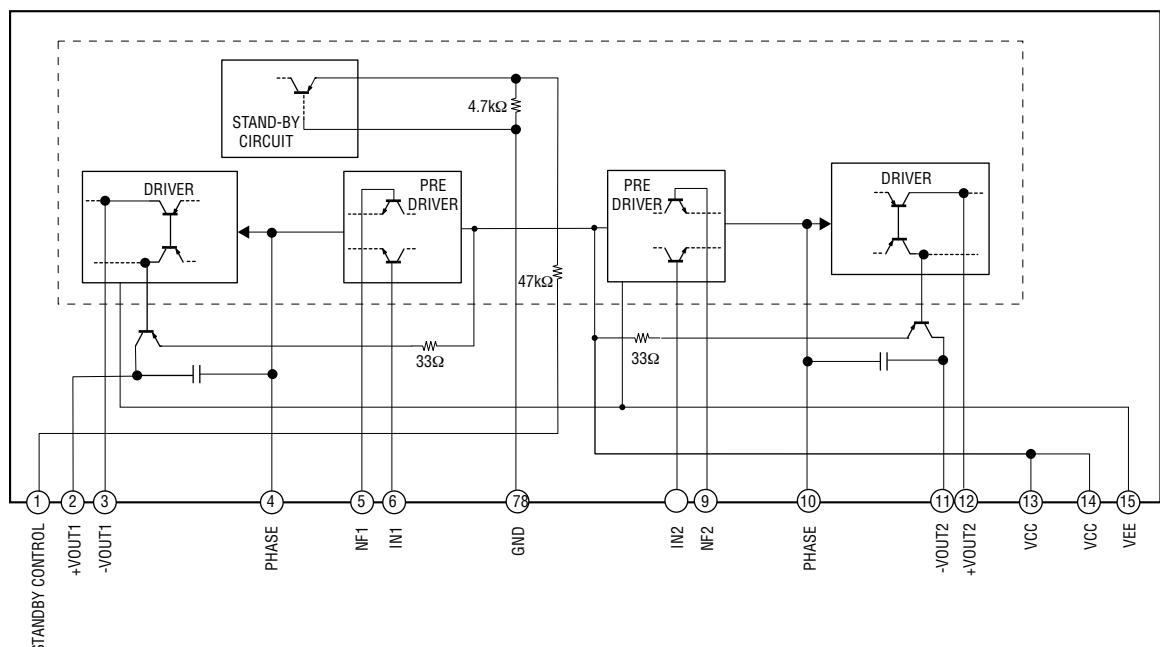


- MAIN Board -

IC501,601,701 uPC2581V-S (TYPE 1)



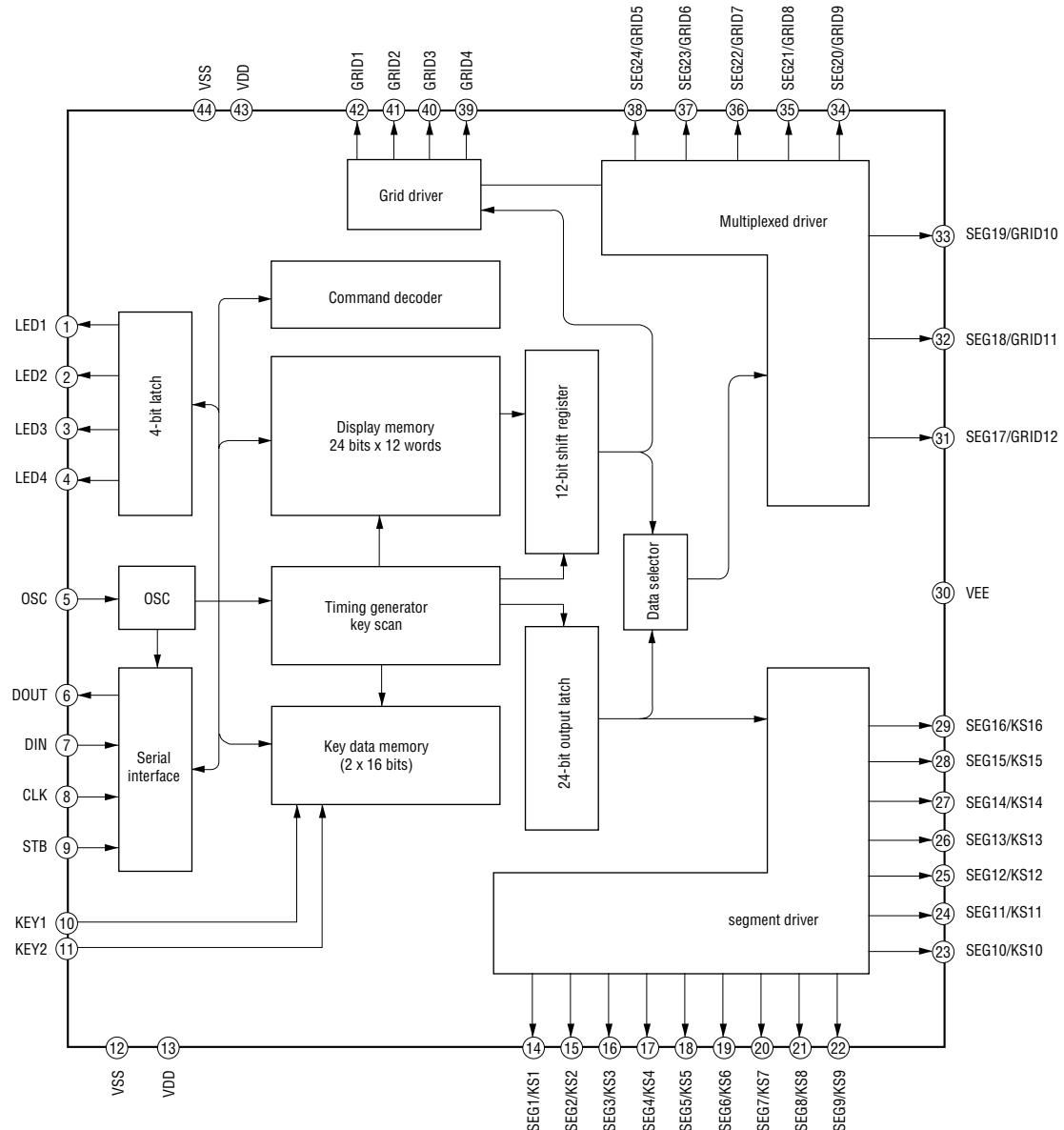
IC501,601,701 STK350-530-E (TYPE 2)



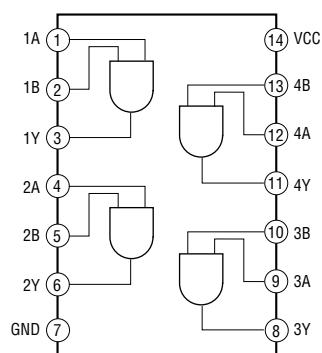
STR-K670P

- DISPLAY Board -

IC100 PT6315



IC101 TC74ACT08P



• IC Pin Function Description

DIGITAL BOARD IC1101 MB90488BPF-G-137E1 (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	GP12	O	GP12 signal output to DSP
9	PCM1800RST	O	IC reset signal output to ADC
10	PCM1608RST	O	IC reset signal output to DAC
11	VSS	—	Ground terminal
12	PCM1608ML	O	Latch signal output to DAC
13	PCM1608MC	O	Clock signal output to DAC
14	PCM1608MDI	O	IC data output to DAC
15	PCM1608MDO	I	IC data input to DAC
16	T_CLK	O	Tuner clock signal output terminal
17	T_DI	O	Tuner data signal output terminal
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	DLY_B PASS	—	Connected to ground terminal
22	DIR/AD	—	Connected to ground terminal
23	VCC5	—	Power supply
24	SYS_MUTE	O	Muting and error signal output
25	ANA/DIG	O	Analog signal or digital signal output terminal
26	UPCON_RST	—	Not used
27	FLASH2/VOL_CL	O	Volume IC clock signal output terminal
28	FLASH1/VOL_DA	O	Volume IC data and latch signal output terminal
29	SDA	I	EEPROM data signal input terminal
30	SCL	O	EEPROM clock signal output terminal
31	ENC_A	—	Short to ground terminal
32	ENC_B	—	Short to ground terminal
33	UPCON	—	Not used
34	UPCON_CLK	—	Not used
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	VERSION	I	Version setting input terminal (DESTINATION)
42	VSS	—	Ground terminal
43	RDS SIG	I	RDS signal detect input
44	MODEL	I	Version setting input (MODEL)
45	VOL ENCODER (A)	I	Volume signal input from rotary encoder
46	VOL ENCODER (B)	I	Volume signal input from rotary encoder
47	BLUE LED	—	Not used

Pin No.	Pin Name	I/O	Description
48	STOP	I	AC off detect signal input
49	MDO	I	Operation mode setting input
50	MD1	I	Operation mode setting input
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	HP DETECT	I	Headphone signal input
56	POWER KEY	I	Power switch key detect signal input
57	FL_LAT	O	FL driver latch signal output terminal
58	POWER RY	O	Power relay control signal output
59	FL_DATA	O	FL driver signal output terminal
60	FL_CLK	O	FL driver clock signal output terminal
61	PROTECTOR	I	Protector status detect signal input
62	HP_RY	O	Headphone relay control signal output
63	FUSE DETECT	I	Fuse detect signal input
64	NTSC_PAL_SW	—	Short to ground terminal
65	COMPO_SW2	—	Short to ground terminal
66	FRONT_RY	O	Front speaker relay control signal output
67	SP_B RY	O	Front speaker B relay control signal output
68	C/SW RY	O	Center speaker or Subwoofer control signal output
69	REAR RY	O	Rear speaker relay control signal output
70	SW_RY	—	Short to ground terminal
71	COMPO_SW1	—	Short to ground terminal
72	BRIDGEABLE_RY	O	Bridgeable relay control
73	DO	I	Frequency data signal input from the tuner
74	SLATCH	O	Latch signal output to the tuner
75	TUNED	I	Tuning a frequency signal input from the tuner
76	STEREO	I	Stereo tuning signal input from the tuner
77	RSTX	I	System reset
78	MUTE	O	Muting signal output to the tuner
79	X1A	—	Not used
80	X0A	—	Ground terminal
81	VSS	—	Ground terminal
82	X0	—	Connection for a crystal resonator
83	X1	—	Connection for a crystal resonator
84	VCC3	—	Power supply
85	GROUPING_SW	—	Not used
86	SW1	O	Video select control signal output
87	SW2	O	Video select control signal output
88	SW3	O	Video select control signal output
89	SW4	O	Video select control signal output
90	SELECT2	—	Not used
91	SELECT1	—	Not used
92	BST_SEL	O	BST signal output terminal
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

Pin No.	Pin Name	I/O	Description
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:

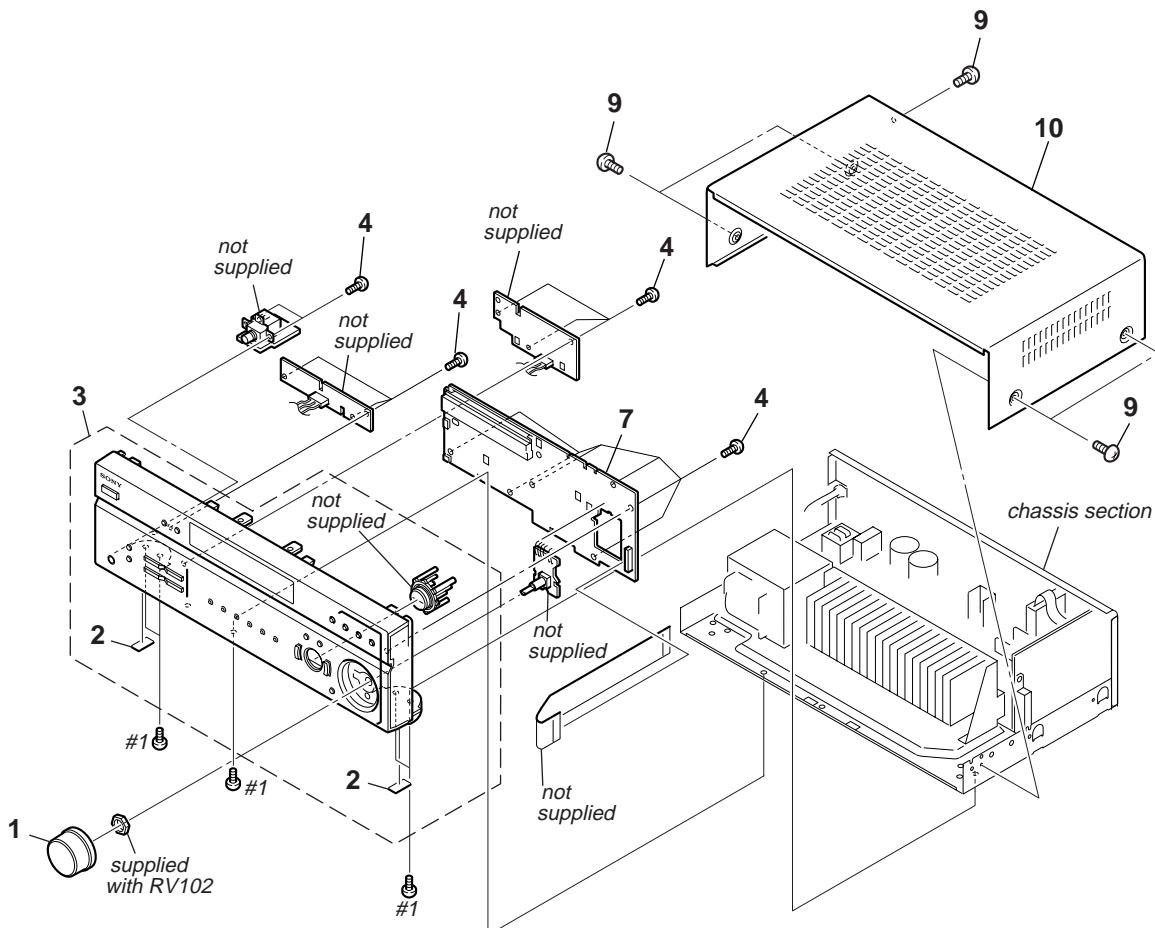
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Abbreviation

AR	: Argentina model
AUS	: Australian model
CND	: Canadian model
E51	: Chilean and Peruvian models
MX	: Mexican model
RU	: Russian model
SP	: Singapore model
SP6	: Singapore and Malaysia models

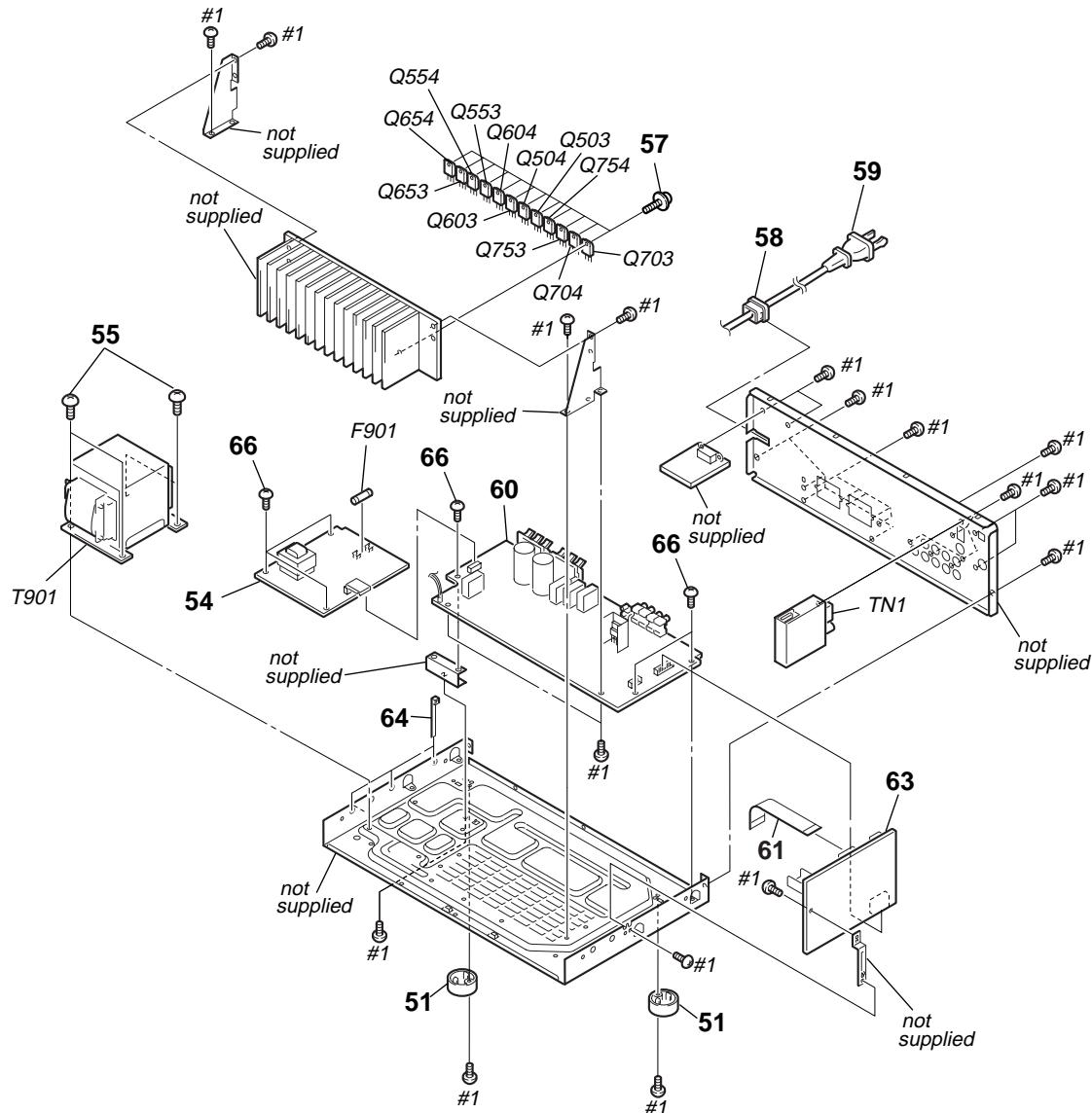
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

4-1. FRONT PANEL SECTION

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-232-113-31	KNOB (VOL)		7	A-1082-615-A	DISPLAY BOARD, COMPLETE	
2	4-977-358-01	CUSHION					(US, CND, E51, MX)
3	X-2024-397-1	FRONT PANEL ASSY (US)		7	A-1108-790-A	DISPLAY BOARD, COMPLETE	
3	X-2024-527-1	FRONT PANEL ASSY (AEP, UK, RU)					(EXCEPT US, CND, E51, MX)
3	X-2024-543-1	FRONT PANEL ASSY(EXCEPT US, AEP, UK, RU)		7	A-1148-680-A	DISPLAY BOARD, COMPLETE (AR)	
4	3-087-053-01	+BVTP2.6 (3CR)		9	3-363-099-11	SCREW (CASE 3 TP2)	
				10	4-245-939-61	CASE	
				#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

4-3. CHASSIS SECTION-2



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		Continued from page 35 -		Q703	6-702-390-01	IC MN2488-OPY-MK	
64	3-701-748-00	CLAMP		Q704	6-702-391-01	IC MP1620-OPY-MK	
66	3-077-331-21	+BV3 (3-CR)		Q753	6-702-390-01	IC MN2488-OPY-MK	
△F901	1-532-464-32	FUSE 2.5A/250V (E51)		Q754	6-702-391-01	IC MP1620-OPY-MK	
△F901	1-532-503-32	FUSE T1.6AL/250V (EXCEPT US, CND, E51, MX, AR)		△T901	1-443-185-11	POWER TRANSFORMER (US, CND)	
△F901	1-532-503-33	FUSE T1.6AL/250V (AR)		△T901	1-443-186-11	POWER TRANSFORMER (E51)	
△F901	1-533-452-12	FUSE, GLASS TUBE (DIA. 5) 4A/125V (US, CND)		△T901	1-443-521-11	POWER TRANSFORMER (MX)	
△F901	1-533-468-12	FUSE, GLASS TUBE (DIA. 5) 2A/250V (MX)		△T901	1-443-629-11	POWER TRANSFORMER (EXCEPT US, CND, E51, MX)	
Q503	6-702-390-01	IC MN2488-OPY-MK		TN1	1-693-675-11	TUNER UNIT (MX, AR)	
Q504	6-702-391-01	IC MP1620-OPY-MK		TN1	1-693-675-21	TUNER UNIT (US, CND, E51)	
Q553	6-702-390-01	IC MN2488-OPY-MK		TN1	1-693-676-21	TUNER UNIT (AEP, UK, RU)	
Q554	6-702-391-01	IC MP1620-OPY-MK		TN1	1-693-678-11	TUNER UNIT (SP, SP6, AUS)	
Q603	6-702-390-01	IC MN2488-OPY-MK		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
Q604	6-702-391-01	IC MP1620-OPY-MK					
Q653	6-702-390-01	IC MN2488-OPY-MK					
Q654	6-702-391-01	IC MP1620-OPY-MK					

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

Les composants identifiés par une marque △ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

MEMO

STR-K670P

SONY®

SERVICE MANUAL

Ver. 1.2 2006.04

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SUPPLEMENT-1

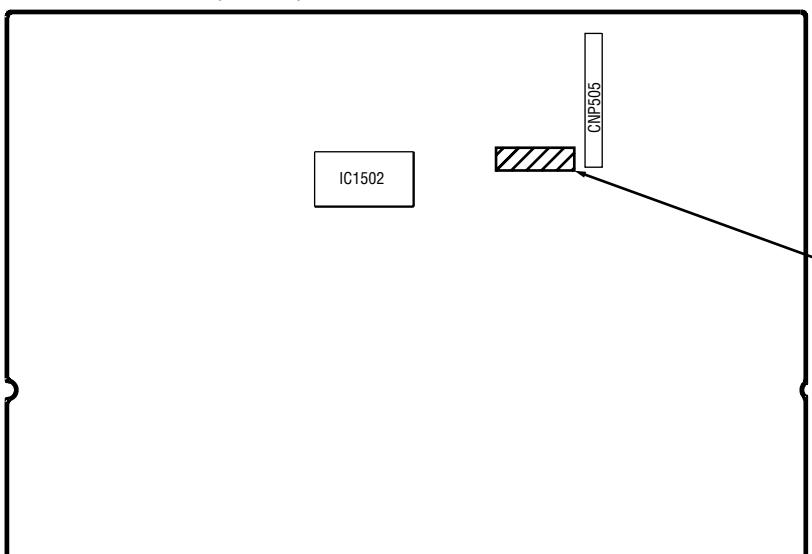
**Subject: DIGITAL board changed to 1-866-751-11 from 1-864-854-11
on part number**

Part number of printed wiring board changed to 1-866-751-11 from 1-864-854-11.
It has any difference between part number 1-864-854-11 and part number 1-866-751-11.
This supplement-1 describes the difference in the two boards.
Refer to original service manual (9-879-447-0) for other information.

•How to distinguish

Location of parts number on changed printed wiring board

DIGITAL BOARD (SIDE A)

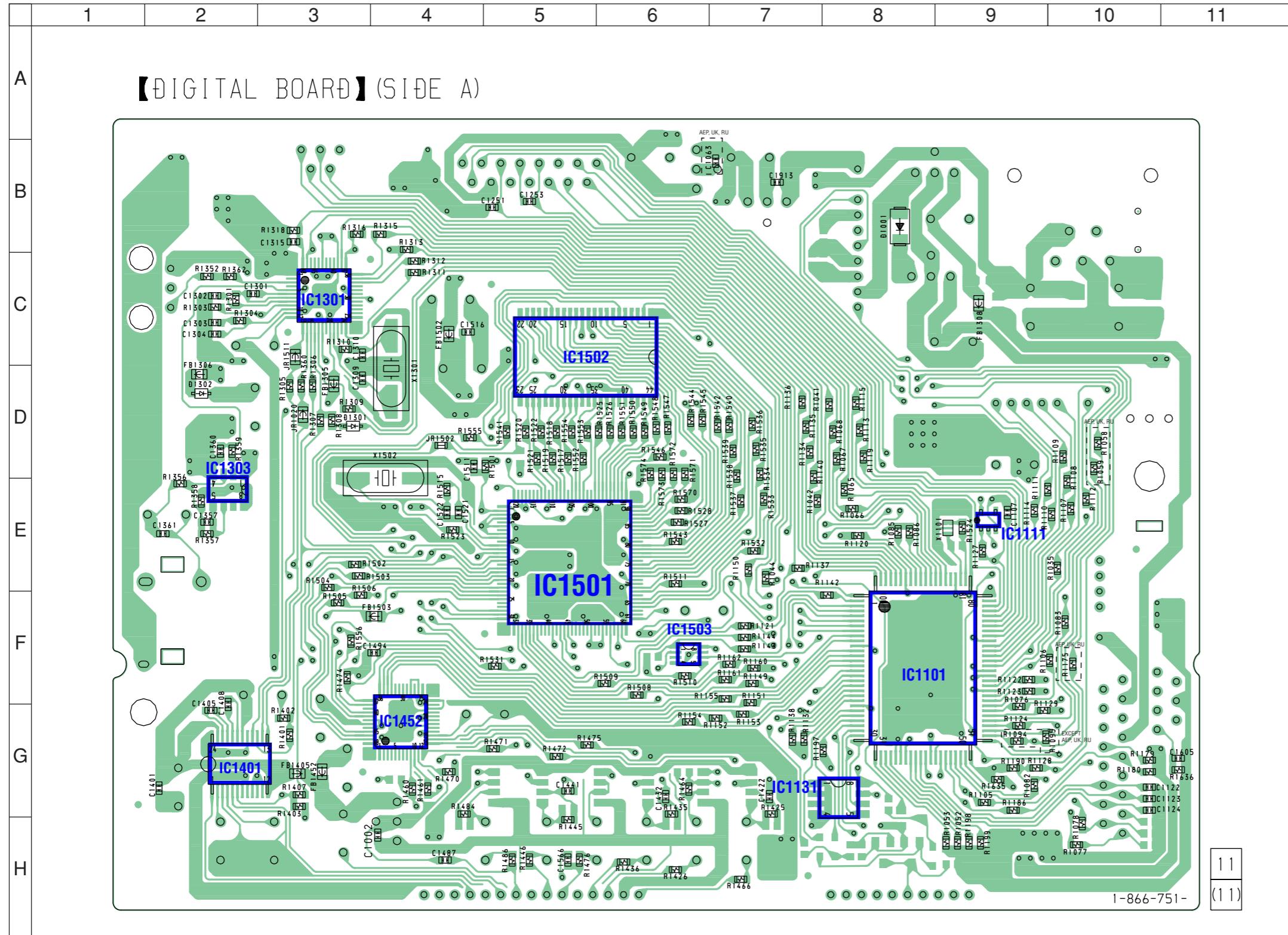


Part number
1-864-854-11 (for original service manual)
1-866-751-11 (for SUPPLEMENT-1)

PRINTED WIRING BOARD – DIGITAL BOARD (SIDE A) –



• Uses unleaded solder. • See page 11 for Circuit Boards Location.



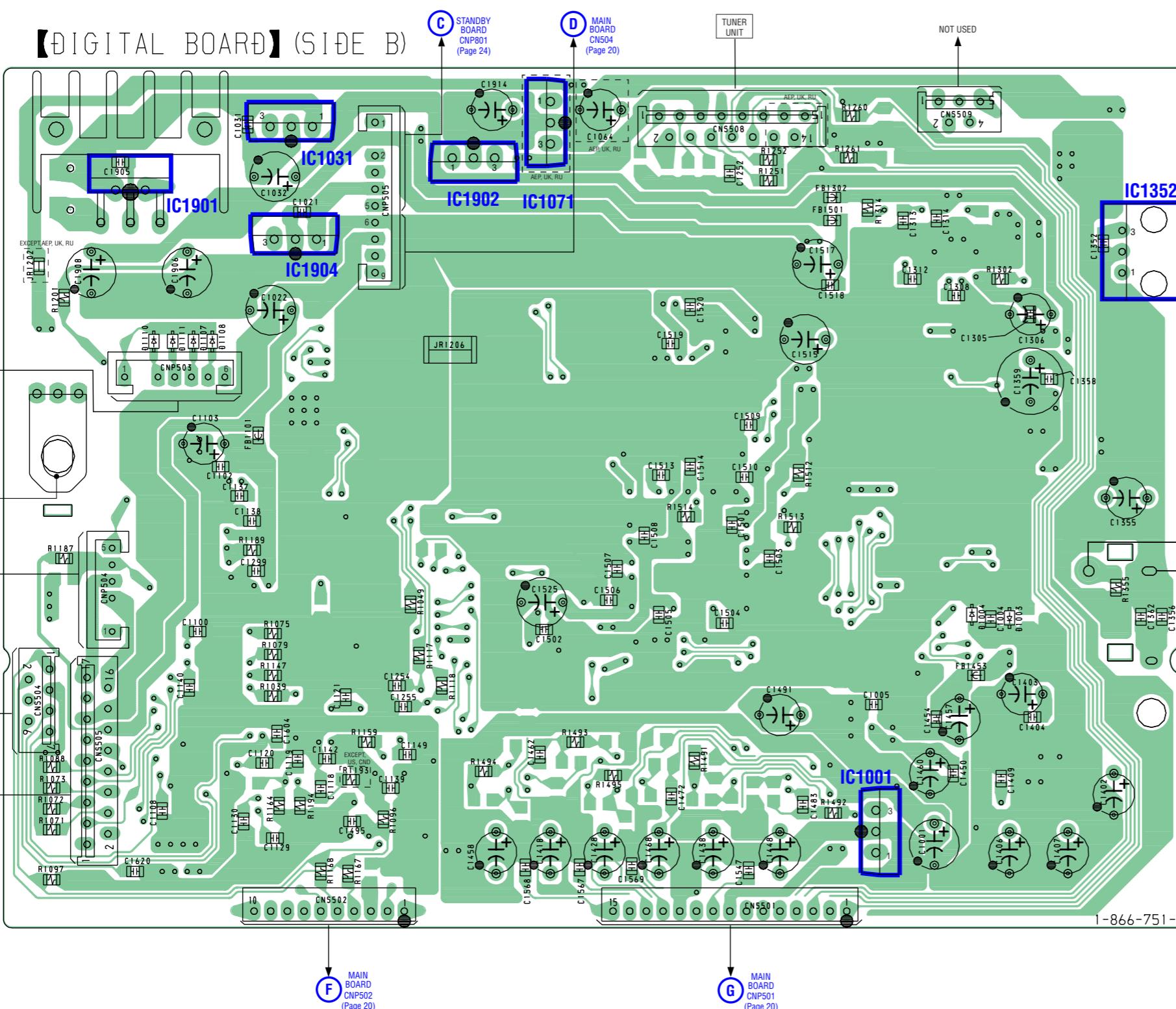
• Semiconductor

Ref. No.	Location
D1001	B-8
D1301	D-3
D1302	D-2
IC1101	F-8
IC1111	E-9
IC1131	G-7
IC1301	C-3
IC1303	D-2
IC1401	G-2
IC1452	G-4
IC1501	E-5
IC1502	C-5
IC1503	F-6



:Uses unleaded solder. • See page 11 for Circuit Boards Location.

1 2 3 4 5 6 7 8 9 10 11 12

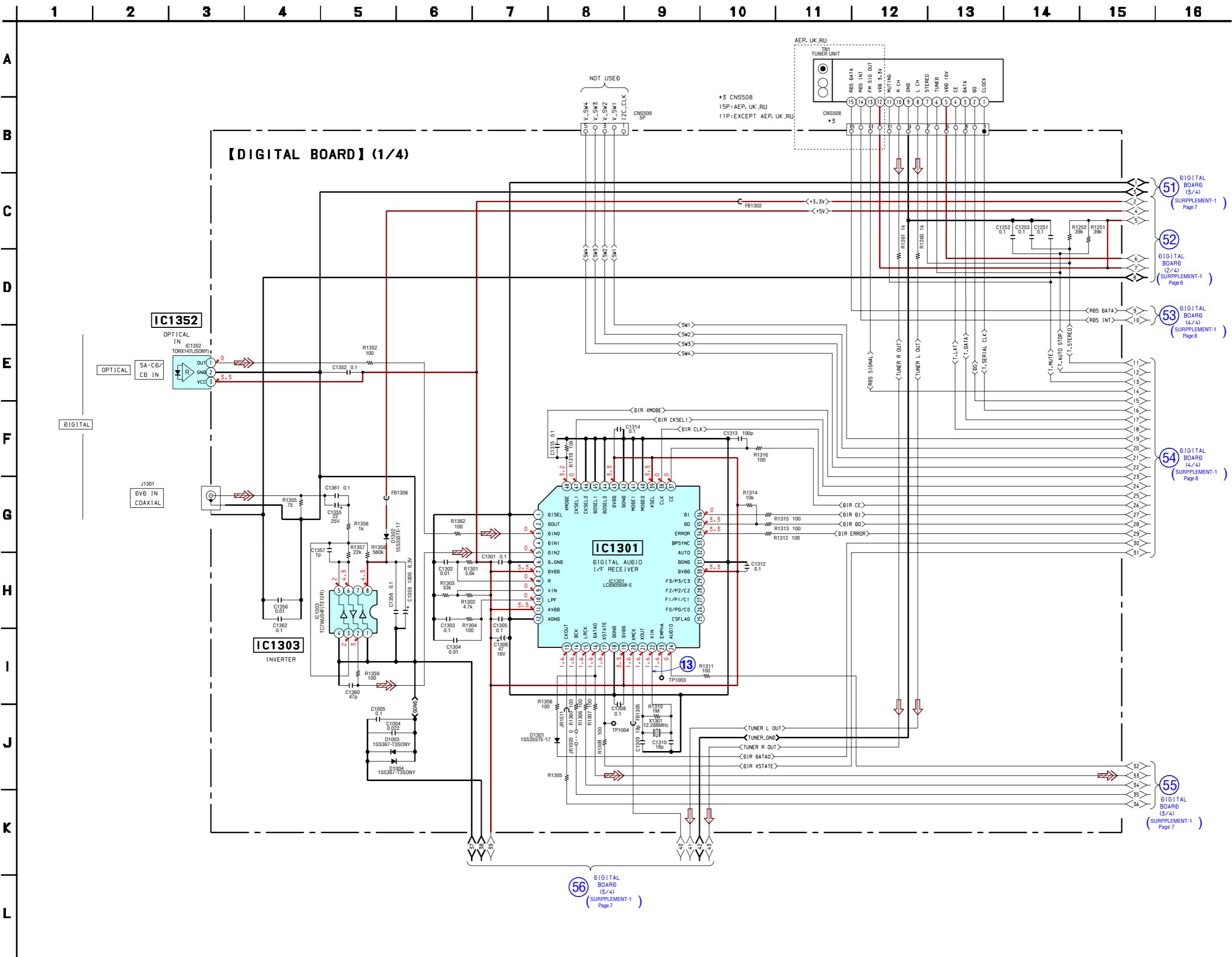
A
B
C
D
E
F
G
H

• Semiconductor Location

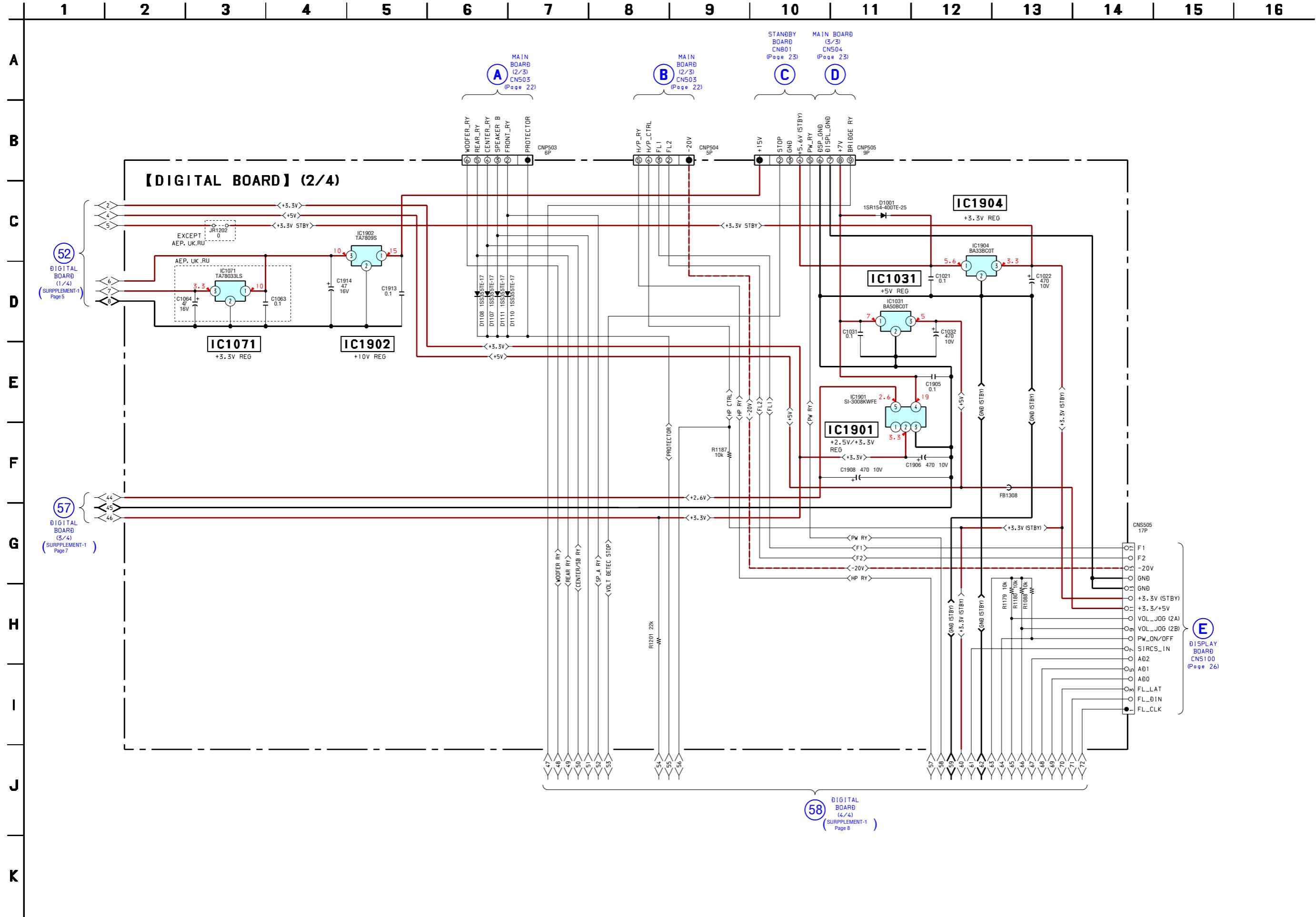
Ref. No.	Location
D1003	F-10
D1004	F-10
D1107	D-3
D1108	D-3
D1110	D-3
D1111	D-3
IC1001	G-9
IC1031	B-4
IC1071	B-6
IC1352	B-11
IC1901	B-3
IC1902	B-5
IC1904	C-4

SCHEMATIC DIAGRAM – DIGITAL BOARD (1/4) –

• See page 2 (SUPPLEMENT-1) for Waveform.

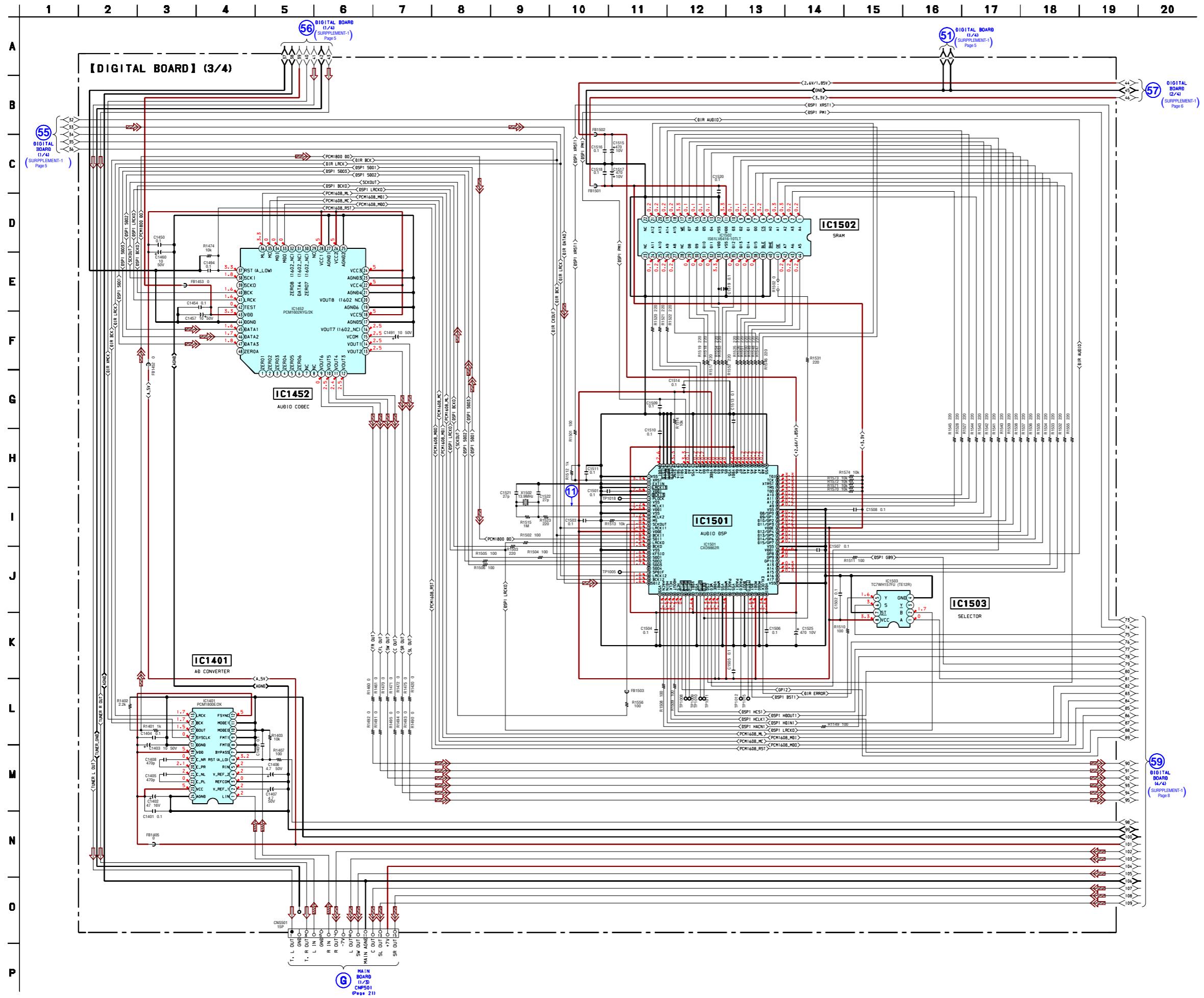


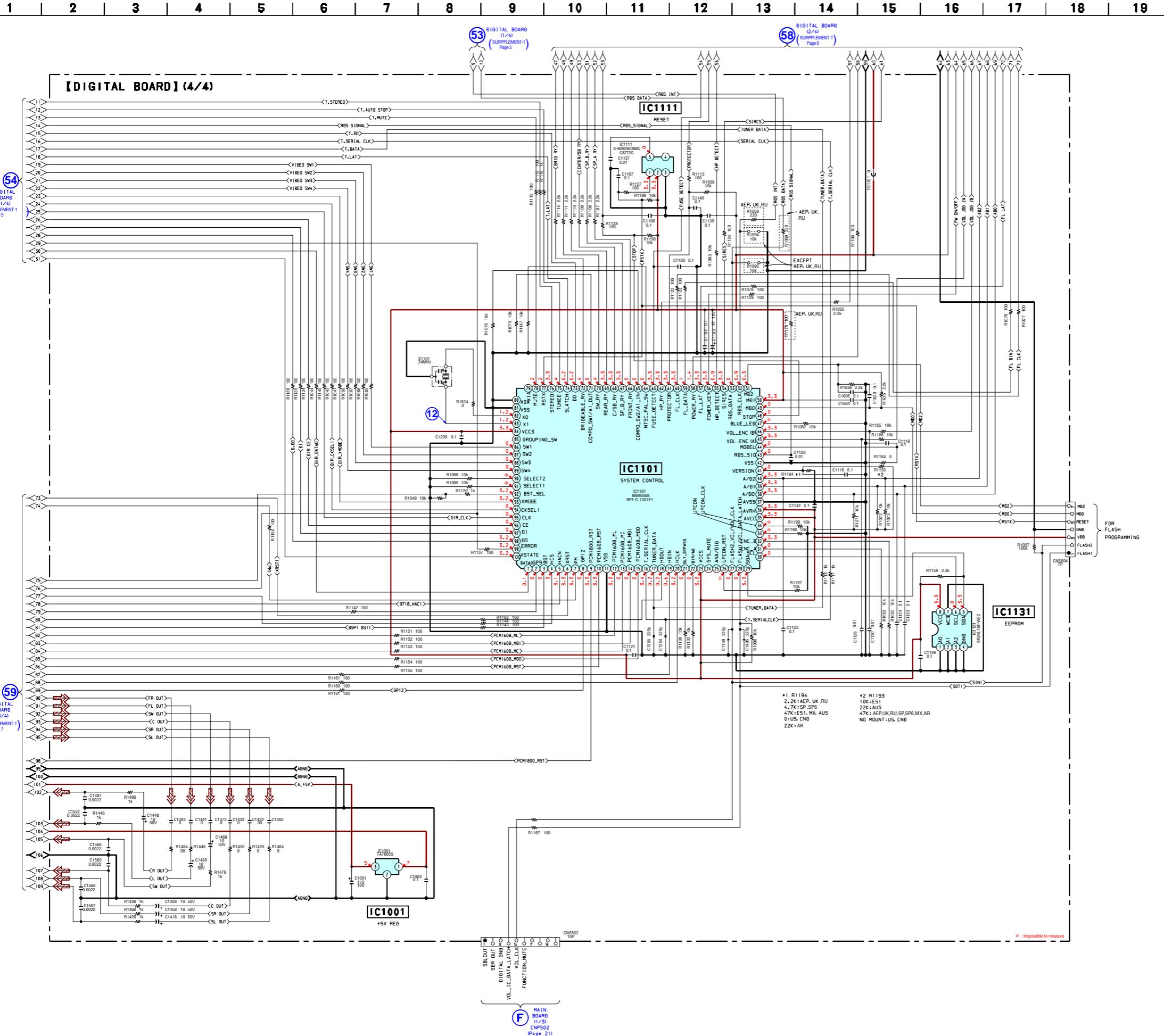
SCHEMATIC DIAGRAM – DIGITAL BOARD (2/4) –



SCHEMATIC DIAGRAM – DIGITAL BOARD (3/4) –

• See page 2 (SUPPLEMENT-1) for Waveform.





• IC Pin Function Description

DIGITAL BOARD IC1101 MB90488BPF-G-130E1 (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	GP12	O	GP12 signal output to DSP
9	PCM1800_RST	O	IC reset signal output to ADC
10	PCM1608_RST	O	IC reset signal output to DAC
11	VSS	—	Ground terminal
12	PCM1608_ML	O	Latch signal output to DAC
13	PCM1608_MC	O	Clock signal output to DAC
14	PCM1608_MDI	O	IC data output to DAC
15	PCM1608_MDO	I	IC data input to DAC
16	T.SERIAL_CLK	O	Tuner clock signal output terminal
17	TUNER_DATA	O	Tuner data signal output terminal
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	DLY_BYPASS	—	Connected to ground terminal
22	DIR/AD	—	Connected to ground terminal
23	VCC5	—	Power supply
24	SYS_MUTE	O	Muting and error signal output
25	ANA/DIG	—	Analog signal or digital signal output terminal (Not used)
26	UPCON_RST	—	Not used
27	FLASH2_VOL/VOL_CLK	O	Volume IC clock signal output terminal
28	FLASH1_VOL/VOL_DATA_LATCH	O	Volume IC data and latch signal output terminal
29	SDA	I	EEPROM data signal input terminal
30	SCL	O	EEPROM clock signal output terminal
31	ENC_A	—	Short to ground terminal
32	ENC_B	—	Short to ground terminal
33	UPCON	—	Not used
34	UPCON_CLK	—	Not used
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	VERSION	I	Version setting input terminal (DESTINATION)
42	VSS	—	Ground terminal
43	RDS SIG	I	RDS signal detect input
44	MODEL	I	Version setting input (MODEL)
45	VOL_ENC (A)	I	Volume signal input from rotary encoder
46	VOL_ENC (B)	I	Volume signal input from rotary encoder
47	BLUE_LED	—	Not used

Pin No.	Pin Name	I/O	Description
48	STOP	I	AC off detect signal input
49	MDO	I	Operation mode setting input
50	MD1	I	Operation mode setting input
51	MD2	I	Operation mode setting input
52	RDS_CLK	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	HP_DETECT	I	Headphone signal input
56	POWER_KEY	I	Power switch key detect signal input
57	FL_LAT	O	FL driver latch signal output terminal
58	POWER_RY	O	Power relay control signal output
59	FL_DATA	O	FL driver signal output terminal
60	FL_CLK	O	FL driver clock signal output terminal
61	PROTECTOR	I	Protector status detect signal input
62	HP_RY	O	Headphone relay control signal output
63	FUSE_DETECT	I	Fuse detect signal input
64	NTSC_PAL_SW	—	Short to ground terminal
65	COMPO_SW2/A1_IN\\	—	Short to ground terminal
66	FRONT_RY	O	Front speaker relay control signal output
67	SP_B_RY	O	Front speaker B relay control signal output
68	C/SB_RY	O	Center speaker or Subwoofer control signal output
69	REAR_RY	O	Rear speaker relay control signal output
70	SW_RY	—	Short to ground terminal
71	COMPO_SW1/A1_OUT	—	Short to ground terminal
72	BRIDGEABLE_RY	O	Bridgeable relay control
73	DO	I	Frequency data signal input from the tuner
74	SLATCH	O	Latch signal output to the tuner
75	TUNED	I	Tuning a frequency signal input from the tuner
76	STEREO	I	Stereo tuning signal input from the tuner
77	RSTX	I	System reset
78	MUTE	O	Muting signal output to the tuner
79	X1A	—	Not used
80	X0A	—	Ground terminal
81	VSS	—	Ground terminal
82	X0	—	Connection for a crystal resonator
83	X1	—	Connection for a crystal resonator
84	VCC3	—	Power supply
85	GROUPING_SW	—	Not used
86	SW1	O	Video select control signal output
87	SW2	O	Video select control signal output
88	SW3	O	Video select control signal output
89	SW4	O	Video select control signal output
90	SELECT2	—	Not used
91	SELECT1	—	Not used
92	BST_SEL	O	BST signal output terminal
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

Pin No.	Pin Name	I/O	Description
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

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.