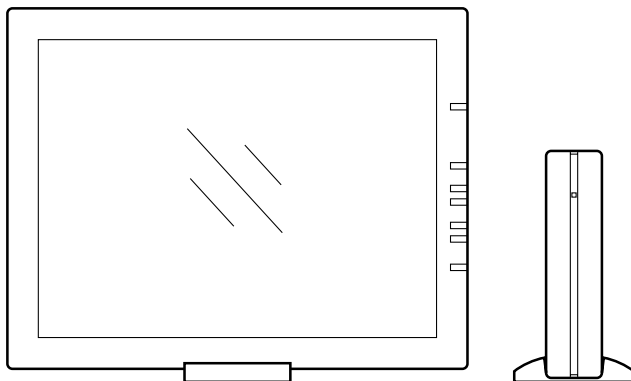


# SDM-N50PS

## SERVICE MANUAL

US Model  
Canadian Model  
AEP Model  
Chassis No. SCC-L32B-A



## ST5 CHASSIS

### SPECIFICATIONS

LCD panel	Panel type: a-Si TFT Active Matrix Picture size: 15 inch (38 cm)	Mass	Display (with stand): Approx. 1.75 kg (3 lb 140 oz)
Input signal format	RGB operating frequency* Horizontal: 30 – 61 kHz Vertical: 48 – 85 Hz (only XGA mode at 75 Hz)	Plug & Play Accessories	Media engine (with stand): Approx. 0.85 kg (1 lb 14 oz) DDC1/DDC2B/DDC2Bi
Resolution	Horizontal: Max.1024 dots Vertical: Max.768 lines		<ul style="list-style-type: none"><li>• LCD display</li><li>• Media engine</li><li>• Display stand</li><li>• Media engine stand</li><li>• Power cord</li><li>• System connecting cable (2 m) (applicable cable type: DP-2)</li><li>• HD15 (RGB) video signal cable</li><li>• Audio cord (stereo miniplug)</li><li>• Macintosh adapter</li><li>• Windows Monitor Information Disk/Utility Disk</li><li>• Macintosh Utility Disk</li><li>• Software for use when installing the display vertically (WinPortrait/MacPortrait)</li><li>• Warranty card</li><li>• Notes for Macintosh users</li><li>• This instruction manual</li></ul>
Input signal levels	RGB video signal 0.700 Vp-p, 75 Ω, positive SYNC signal TTL level, 2 kΩ, positive or negative (Separate horizontal and vertical, or composite sync) 0.3 Vp-p, 75Ω, negative (Sync on green)		* Recommended horizontal and vertical timing condition
Headphones jack	Stereo minijack Accepts impedance of more than 16Ω		<ul style="list-style-type: none"><li>• Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 μs, whichever is larger.</li><li>• Horizontal blanking width should be more than 2.5 μsec.</li><li>• Vertical blanking width should be more than 450 μsec.</li></ul>
AUDIO IN jack	Stereo minijack Accepts impedance of 47 kΩ Accepts level 0.5 Vrms		Design and specifications are subject to change without notice.
Power requirements	100 – 240 V, 50 – 60 Hz, 0.45 – 0.25 A		
Power consumption	Max. 28 W		
Operating temperature	5 – 35 °C		
Dimensions (width/height/depth)	Display (without stand): Approx. 356 × 280 × 26 mm (14 1/16 × 11 1/6 × 1 1/16 inches) Display (with stand, at maximum angle: 40 °): Approx. 356 × 225 × 203 mm (14 1/16 × 8 7/8 × 8 inches) Media engine (without stand): Approx. 45 × 180 × 180 mm (1 3/4 × 7 1/8 × 7 1/8 inches) Media engine (with stand): Approx. 94 × 185 × 180 mm (3 11/16 × 7 1/4 × 7 1/8 inches)		

TFT LCD COLOR COMPUTER DISPLAY  
**SONY**®

## DIAGNOSIS

	Factorial preservation register	LED	LED indicates
Display part trouble	SHUTDOWN_LOG1 bit4 (16)	Part of the body only	Red (0.5 sec) and Off (0.5 sec)
Backlight trouble	SHUTDOWN_LOG1 bit2 (4)	Parts of the body and the display	Amber (0.5 sec) and Off (1.5 sec)
Body temperature trouble	SHUTDOWN_LOG1 bit3 (8)	Parts of the body and the display	Amber (1.0 sec) and Off (1.0 sec)
5V voltage anomalous	SHUTDOWN_LOG1 bit5 (32)	Parts of the body and the display	Amber (1.5 sec) and Off (0.5 sec)
3.3V voltage anomalous	SHUTDOWN_LOG1 bit6 (64)	Parts of the body and the display	Amber (1.5 sec) and Off (0.5 sec)

\*Aging mode ..... No input signal and press CONT key for longer than 2 second.

## Power saving function

This monitor meets the power-saving guidelines set by VESA, NUTEK, and ENERGY STAR. If the monitor is connected to a computer or graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically enter the power saving mode.

Power consumption state	Power consumption	AC power indicator	⏻ (power) indicator
normal operation	28 W	green	green
power saving mode	≤ 3 W	orange	orange
⏻ (power): off	≤ 3 W	red	off
AC power: off	0 W	off	off

## TIMING SPECIFICATION

PRIMARY MODE MODE AT PRODUCTION	MODE 0	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7
RESOLUTION	640 X 480	640 X 480	640 X 480	640 X 480	720 X 400	720 X 400	720 X 480	720 X 480
CLOCK	25.175 MHz	30.240 MHz	31.500 MHz	36.000 MHz	28.350 MHz	35.500 MHz	35.573 MHz	31.505 MHz
— HORIZONTAL —								
H-FREQ	31.469 kHz	35.000 kHz	37.500 kHz	43.269 kHz	31.500 kHz	37.927 kHz	37.683 kHz	35.162 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	28.571	26.667	23.111	31.746	26.366	26.537	28.440
H. BLK	6.356	7.407	6.349	5.333	6.349	6.085	6.297	5.586
H. FP	0.636	2.116	0.508	1.556	0.635	1.014	0.450	1.079
H. SYNC	3.813	2.116	2.032	1.556	3.810	2.028	2.024	1.270
H. BP	1.907	3.175	3.810	2.222	1.905	3.042	3.823	3.238
H. ACTIV	25.422	21.164	20.317	17.778	25.397	20.282	20.240	22.854
— VERTICAL —								
V. FREQ(Hz)	59.940 Hz	66.667 Hz	75.000 Hz	85.008 Hz	70.156 Hz	85.039 Hz	75.066 Hz	59.901 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	525	500	509	449	446	502	587
V. BLK	45	45	20	29	49	46	22	107
V. FP	10	3	1	1	12	1	2	12
V. SYNC	2	3	3	3	3	3	3	2
V. BP	33	39	16	25	34	42	17	93
V. ACTIV	480	480	480	480	400	400	480	480
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/N	YES N/N	YES N/N	YES N/P	YES N/P	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 8	MODE 9	MODE 10	MODE 11	MODE 12	MODE 13	MODE 14	MODE 15
RESOLUTION	800 X 600	800 X 600	800 X 600	800 X 600	—	—	832 X 624	1024 X 768
CLOCK	36.000 MHz	40.000 MHz	49.500 MHz	56.250 MHz	—	—	57.285 MHz	65.000 MHz
— HORIZONTAL —								
H-FREQ	35.156 kHz	37.879 kHz	46.875 kHz	53.674 kHz	—	—	46.727 kHz	48.363 kHz
	usec	usec	usec	usec	—	—	usec	usec
H. TOTAL	28.444	26.400	21.333	18.631	—	—	20.110	20.677
H. BLK	6.222	6.400	5.172	4.409	—	—	5.586	4.923
H. FP	0.667	1.000	0.323	0.569	—	—	0.559	0.369
H. SYNC	0.889	3.200	1.616	1.138	—	—	1.117	2.092
H. BP	4.667	2.200	3.232	2.702	—	—	3.910	2.462
H. ACTIV	22.222	20.000	16.162	14.222	—	—	14.524	15.754
— VERTICAL —								
V. FREQ(Hz)	56.250 Hz	60.317 Hz	75.000 Hz	85.061 Hz	—	—	74.553 Hz	60.004 Hz
	lines	lines	lines	lines	—	—	lines	lines
V. TOTAL	625	628	625	631	—	—	667	806
V. BLK	25	28	25	31	—	—	43	38
V. FP	1	1	1	1	—	—	3	3
V. SYNC	2	4	3	3	—	—	3	6
V. BP	22	23	21	27	—	—	37	29
V. ACTIV	600	600	600	600	—	—	624	768
— SYNC —								
INT(G)	NO	NO	NO	NO	—	—	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES P/P	NO P/P	YES P/P	—	—	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	—	—	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	—	—	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 16	MODE 17	MODE 18	MODE 19	MODE 20	MODE 21	MODE 22	MODE 23
RESOLUTION	1024 X 768	1024 X 768	—	1024 X 768	800 X 600	1024 X 768	1024 X 768	848 X 480
CLOCK	75.000 MHz	78.750 MHz	—	80.000 MHz	50.000 MHz	71.640 MHz	80.000 MHz	38.336 MHz
— HORIZONTAL —								
H-FREQ	56.476 kHz	60.023 kHz	—	60.241 kHz	48.077 kHz	53.946 kHz	60.241 kHz	35.300 kHz
	usec	usec	—	usec	usec	usec	usec	usec
H. TOTAL	17.707	16.660	—	16.600	20.800	18.537	16.600	28.328
H. BLK	4.053	3.657	—	3.800	4.800	4.243	3.800	6.208
H. FP	0.320	0.203	—	0.400	1.120	0.223	0.400	1.409
H. SYNC	1.813	1.219	—	1.200	2.400	2.457	2.200	3.130
H. BP	1.920	2.235	—	2.200	1.280	1.563	1.200	1.669
H. ACTIV	13.653	13.003	—	12.800	16.000	14.294	12.800	22.120
— VERTICAL —								
V. FREQ(Hz)	70.069 Hz	75.029 Hz	—	74.927 Hz	72.188 Hz	66.110 Hz	74.927 Hz	59.932 Hz
	lines	lines	—	lines	lines	lines	lines	lines
V. TOTAL	806	800	—	804	666	816	804	589
V. BLK	38	32	—	36	66	48	36	109
V. FP	3	1	—	3	37	8	3	11
V. SYNC	6	3	—	3	6	4	3	3
V. BP	29	28	—	30	23	36	30	95
V. ACTIV	768	768	—	768	600	768	768	480
— SYNC —								
INT(G)	NO	NO	—	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES P/P	—	YES N/N	YES N/N	YES N/N	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	—	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	—	NON INT	NON INT	NON INT	NON INT	NON INT

# SDM-N50PS

PRIMARY MODE MODE AT PRODUCTION	MODE 24	MODE 25	MODE 26	MODE 27	MODE 28	MODE 29	MODE 30	MODE 31
RESOLUTION	640 X 400	640 X 350	640 X 400	640 X 480	1024 X 768	640 X 400	720 X 400	800 X 600
CLOCK	25.180 MHz	31.500 MHz	31.500 MHz	31.500 MHz	65.000 MHz	24.870 MHz	28.320 MHz	36.000 MHz
— HORIZONTAL —								
H-FREQ	31.475 kHz	37.861 kHz	37.861 kHz	37.861 kHz	48.077 kHz	30.478 kHz	31.467 kHz	35.156 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.771	26.413	26.413	26.413	20.800	32.811	31.780	28.444
H. BLK	6.354	6.095	6.095	6.095	5.046	7.077	6.356	6.222
H. FP	0.953	1.016	1.016	0.762	0.462	0.322	0.636	0.167
H. SYNC	2.542	2.032	2.032	1.270	1.477	3.860	3.814	5.111
H. BP	2.859	3.048	3.048	4.063	3.108	2.895	1.907	0.944
H. ACTIV	25.417	20.317	20.317	20.317	15.754	25.734	25.424	22.222
— VERTICAL —								
V. FREQ(Hz)	70.100 Hz	85.080 Hz	85.080 Hz	72.809 Hz	59.797 Hz	59.996 Hz	50.026 Hz	56.160 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	449	445	445	520	804	508	629	626
V. BLK	49	95	45	40	36	108	229	26
V. FP	11	32	1	9	3	37	102	2
V. SYNC	2	3	3	3	4	2	2	1
V. BP	36	60	41	28	29	69	125	23
V. ACTIV	400	350	400	480	768	400	400	600
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES P/N	YES N/P	YES N/N	YES N/N	YES N/N	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

PRIMARY MODE MODE AT PRODUCTION	MODE 32	MODE 33	MODE 34	MODE 35	MODE 36
RESOLUTION	800 X 600	1024 X 768	1024 X 768	1024 X 768	800 X 600
CLOCK	50.000 MHz	64.000 MHz	65.000 MHz	64.000 MHz	39.530 MHz
— HORIZONTAL —					
H-FREQ	48.828 kHz	48.780 kHz	48.363 kHz	48.485 kHz	37.434 kHz
	usec	usec	usec	usec	usec
H. TOTAL	20.480	20.500	20.677	20.625	26.714
H. BLK	4.480	4.500	4.923	4.625	6.476
H. FP	0.960	1.000	0.615	1.219	1.012
H. SYNC	1.600	1.500	3.200	1.219	2.530
H. BP	1.920	2.000	1.108	2.188	2.934
H. ACTIV	16.000	16.000	15.754	16.000	20.238
— VERTICAL —					
V. FREQ(Hz)	66.888 Hz	59.561 Hz	60.078 Hz	59.637 Hz	59.608 Hz
	lines	lines	lines	lines	lines
V. TOTAL	730	819	805	813	628
V. BLK	130	51	37	45	28
V. FP	48	12	3	39	5
V. SYNC	6	6	3	3	1
V. BP	76	33	31	3	22
V. ACTIV	600	768	768	768	600
— SYNC —					
INT(G)	YES	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/N	YES N/N	YES N/N	YES N/N
EXT(CS)/POLARITY	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

2000.1.11 VER.

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

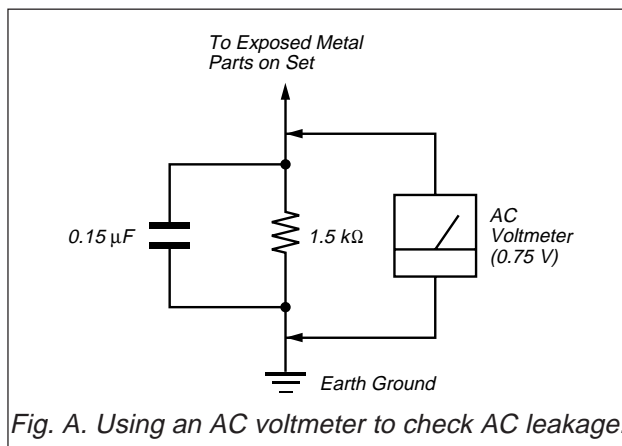


Fig. A. Using an AC voltmeter to check AC leakage.

## 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 VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

### WARNING!!

**NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.**

**SAFETY-RELATED COMPONENT WARNING!!**  
**COMPONENTS IDENTIFIED BY SHADING AND MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.**

### AVERTISSEMENT!!

**NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVÉE.**

### ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

**LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE  $\triangle$  SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.**

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# SECTION 1 GENERAL

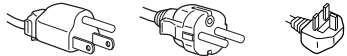
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

## Precautions

### Warning on power connections

- Use the supplied power cord. If you use a different power cord, be sure that it is compatible with your local power supply.  
**For the customers in the U.S.A.**  
 If you do not use the appropriate cord, this monitor will not conform to mandatory FCC standards.  
**For the customers in the UK**  
 If you use the monitor in the UK, please use the appropriate UK power cord.

Example of plug types



for 100 to 120 V AC    for 200 to 240 V AC    for 240 V AC only

The equipment should be installed near an easily accessible outlet.

### Installation

Do not install or leave the monitor:

- In places subject to extreme temperatures, for example near a radiator, heating vent, or in direct sunlight. Subjecting the monitor to extreme temperatures, such as in an automobile parked in direct sunlight or near a heating vent, could cause deformations of the casing or malfunctions.
- In places subject to mechanical vibration or shock.
- Near any equipment that generates a strong magnetic field, such as a TV or various other household appliances.
- In places subject to inordinate amounts of dust, dirt, or sand, for example near an open window or an outdoor exit. If setting up temporarily in an outdoor environment, be sure to take adequate precautions against airborne dust and dirt. Otherwise irreparable malfunctions could occur.

### Handling the LCD screen

- Do not leave the LCD screen facing the sun as it can damage the LCD screen. Take care when you place the monitor by a window.
- Do not push on or scratch the LCD screen. Do not place a heavy object on the LCD screen. This may cause the screen to lose uniformity or cause LCD panel malfunctions.
- If the monitor is used in a cold place, a residual image may appear on the screen. This is not a malfunction. The screen returns to normal as the temperature rises to a normal operating level.
- If a still picture is displayed for a long time, a residual image may appear for a while. The residual image will eventually disappear.
- The LCD panel becomes warm during operation. This is not a malfunction.

### About the bright points of light or black dots

**Bright points of light (red, blue or green) or black dots may appear on the LCD screen. This is not a malfunction. The LCD screen is made with high-precision technology and more than 99.99% of the picture element is intact. However, some of the picture element may not appear or some of the picture element may appear constantly.**

### Replacement of the fluorescent tube

A specially designed fluorescent tube is installed as the lighting apparatus for this monitor. If the screen becomes dark, unstable, or does not turn on, replace the fluorescent tube with a new one. Consult your Sony dealer when replacing the fluorescent tube.

### Maintenance

- Be sure to unplug the power cord from the power outlet before cleaning your monitor.
- Clean the LCD screen with a soft cloth. If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the LCD screen's coating.
- Clean the cabinet, panel, and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent, such as alcohol or benzene.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.
- Note that material deterioration or LCD screen coating degradation may occur if the monitor is exposed to volatile solvents such as insecticide, or if prolonged contact is maintained with rubber or vinyl materials.

### Transporting

- When transporting, first disconnect all cables from the monitor, then grasp the monitor with both hands to carry it. Be careful when transporting the monitor, if dropped it may cause injury or damage.
- When you transport this monitor for repair or shipment, use the original carton and packing materials.

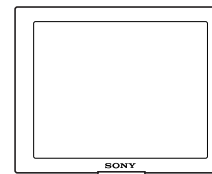
### Disposal of the monitor

- Do not dispose of this monitor with general household waste.**
- The fluorescent tube used in this monitor contains mercury. Disposal of this monitor must be carried out in accordance to the regulations of your local sanitation authority.**

### To install the display horizontally or vertically

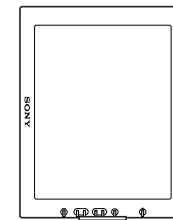
This display can be installed either horizontally or vertically using the supplied display stand. Open the display stand until the click sound is heard. Put the display on the stand, aligning the mark which shows the stand position on the display. To switch to the horizontal or vertical viewing position, see page 10.

#### Horizontal installation



The stand positioning mark

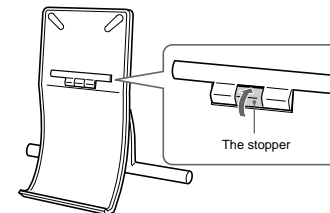
#### Vertical installation



The stand positioning mark

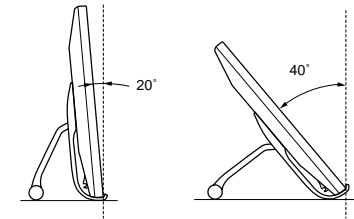
### To close the display stand

While sliding the stopper up, close the display stand.



### To adjust the angle

This display can be adjusted within the angles shown below with the supplied display stand. To adjust the angle, hold the front base and push (or pull) the rear leg outward (or inward) until the desired angle is attained. To install the display on the display stand, put it softly.



#### Note

Do not exceed the angles shown above, otherwise the display could fall and cause damage or a malfunction.

### To use the display comfortably

This display is designed so that you can set it up at a comfortable viewing angle. Adjust the viewing angle of your display according to the height of the desk and chair, and so that light is not reflected from the screen to your eyes.

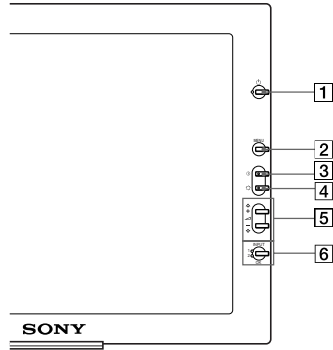
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## Identifying parts and controls

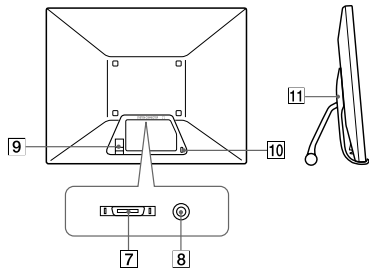
See the pages in parentheses for further details.

### LCD display

#### Front

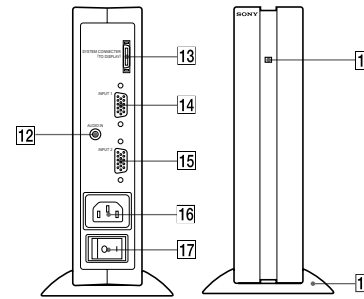


#### Rear/Side

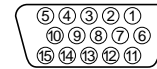


- 1** **(Power) switch and indicator (pages 9, 17, 21)**  
This switch turns the display on and off.  
The indicator lights up in green when the monitor is turned on.  
The indicator lights up in orange when the monitor is in power saving mode.
- 2** **MENU button (page 13)**  
This button displays the main menu.
- 3** **(contrast) button (page 13)**  
This button displays the CONTRAST menu.
- 4** **(brightness) button (page 13)**  
This button displays the BRITGHTNESS menu.
- 5** **(volume) +/- and ↑(+)/↓(-) buttons (pages 10, 13)**  
These buttons display the VOLUME menu and function as the ↑(+)/↓(-) buttons when selecting the menu items and making adjustments.
- 6** **INPUT and OK button, and indicator (pages 11, 13)**  
This button selects the INPUT 1 or INPUT 2 video input signal. The input signal and corresponding input indicator change each time you press this button.  
This button also functions as the OK button when displaying the menu on the screen.
- 7** **SYSTEM CONNECTOR (page 8)**  
This connector inputs signals from the media engine when the display and the media engine are connected with a system connecting cable.
- 8** **Headphones jack (page 10)**  
This jack outputs audio signals to the headphones.
- 9** **Cable holder**  
This holder is used to keep the system connecting cable out of the way.
- 10** **Security Lock Hole (Ⓜ)**  
The security lock hole should be applied with the Kensington Micro Saver Security System.  
Micro Saver Security System is a trademark of Kensington.
- 11** **Display stand**  
This stand is used to install the display.

### Media engine



- 12** **AUDIO IN jack (page 10)**  
This jack inputs audio signals when connecting to the audio output jack of the computer or other audio equipment.
- 13** **SYSTEM CONNECTOR (TO DISPLAY) (page 8)**  
This connector outputs signals to the display when the display and the media engine are connected with a system connecting cable.
- 14** **HD15 (RGB) input 1 connector (INPUT1) (page 8)**  
This connector inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals.



Pin No.	Signal
1	Red
2	Green (Sync on Green)
3	Blue
4	ID (Ground)
5	DDC Ground*
6	Red Ground
7	Green Ground
8	Blue Ground
9	DDC + 5V*
10	Ground
11	ID (Ground)
12	Bi-Directional Data (SDA)*
13	H. Sync
14	V. Sync
15	Data Clock (SCL)*

\* DDC (Display Data Channel) is a standard of VESA.

- 15** **HD15 (RGB) input 2 connector (INPUT2) (page 8)**  
This connector inputs RGB video signals (0.700 Vp-p, positive) and SYNC signals. The pin assignment is the same as **14**.
- 16** **AC IN connector (page 9)**  
This connector provides AC power to the monitor.
- 17** **AC power switch (page 9)**  
This switch turns the media engine on and off. When the AC power switch is turned on or off, the display automatically turns on or off.
- 18** **AC power indicator (page 17)**  
This indicator lights up in green when the media engine is turned on. The indicator lights up in red when the display is turned off with the media engine on. The indicator lights up in orange when the monitor is in the power saving mode.
- 19** **Media engine stand**  
This stand is used to install the media engine vertically.

#### Caution

Be sure to install the media engine vertically shown as left. Installing the media engine lying flat may block ventilation, and may cause a malfunction.

GB



## Setup

Before using your monitor, check that the following accessories are included in your carton:

- LCD display
- Media engine
- Display stand
- Media engine stand
- Power cord
- System connecting cable (2 m) (applicable cable type: DP-2)
- HD15 (RGB) video signal cable
- Audio cord (stereo miniplug)
- Macintosh adapter
- Windows Monitor Information Disk/Utility Disk
- Macintosh Utility Disk
- Software for use when installing the display vertically (WinPortrait/MacPortrait)
- Warranty card
- Notes for Macintosh users
- This instruction manual

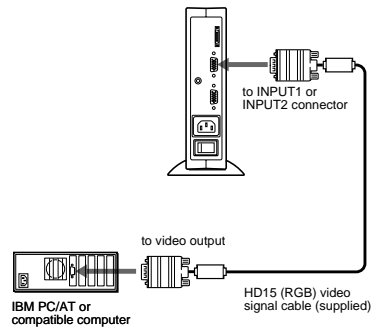
### Step 1: Connect the media engine to your computer

Turn off the media engine and computer before connecting.

#### Note

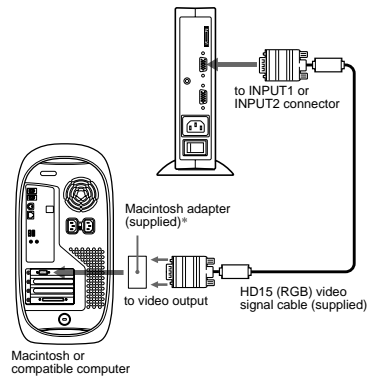
Do not touch the pins of the video signal cable connector as this might bend the pins.

### ■ Connecting to an IBM PC/AT or compatible computer



### ■ Connecting to a Macintosh or compatible computer

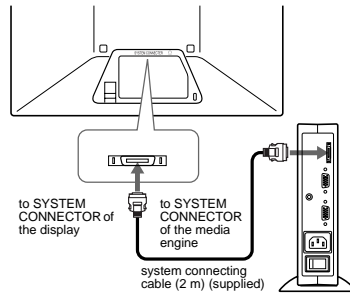
Use the supplied Macintosh adapter.



\* Refer to the supplied "Notes for Macintosh users" for further details.

### Step 2: Connect the display and media engine

Turn off the display and media engine before connecting.



#### Caution

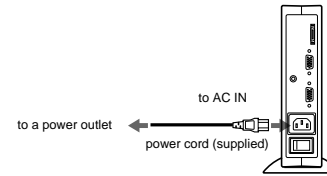
Be sure to install the media engine vertically shown as above. Installing the media engine lying flat may block ventilation, and may cause a malfunction.

#### Note

Grasp the plug when connecting the cable.

### Step 3: Connect the power cord

With the display, media engine, and computer switched off, first connect the power cord to the media engine, then connect it to a power outlet.



### Step 4: Turn on the monitor and computer

#### 1 Turn on the media engine.

The display automatically turns on. The indicators of the display and media engine light up in green.



#### 2 Turn on the computer.

The installation of your monitor is complete. If necessary, use the monitor's controls to adjust the picture.

### If no picture appears on your screen

- Check that the monitor is correctly connected to the computer.
- Check that the media engine is on.
- If NO INPUT SIGNAL appears on the screen, the computer is in the power saving mode. Try pressing any key on the keyboard or moving the mouse.
- If CABLE DISCONNECTED appears on the screen, try changing the input signal (page 11), and check that the video input cable is properly connected.
- If OUT OF SCAN RANGE appears on the screen, reconnect the old monitor. Then adjust the computer's graphic board so that the horizontal frequency is between 30 – 61 kHz, and the vertical frequency is between 48 – 85 Hz (only XGA mode at 75 Hz).

For more information about the on-screen messages, see "Trouble symptoms and remedies" on page 19.

### For customers using Windows 95/98

To maximize the potential of your monitor, install the new model information file from the supplied Windows Monitor Information Disk onto your PC.

This monitor complies with the "VESA DDC" Plug & Play standard. If your PC graphics board complies with DDC, select "Plug & Play Monitor (VESA DDC)" or this monitor's model name as the monitor type in the "Control Panel" of Windows 95/98. If your PC graphics board has difficulty communicating with this monitor, load the Windows Monitor Information Disk and select this monitor's model name as the monitor type.

### For customers using Windows NT4.0

Monitor setup in Windows NT4.0 is different from Windows 95/98 and does not involve the selection of monitor type. Refer to the Windows NT4.0 instruction manual for further details on adjusting the resolution, refresh rate (vertical frequency), and number of colors.

### Adjusting the monitor's resolution and color number

Adjust the monitor's resolution and color number by referring to your computer's instruction manual. The color number may vary according to your computer or graphics board. The color palette setting and the actual number of colors are as follows:

- High Color (16 bit) → 65,536 colors
- True Color (24 bit) → about 16.77 million colors

In true color mode (24 bit), speed may be slower.

## Installing the display vertically

This display can be installed either horizontally or vertically using the supplied display stand.

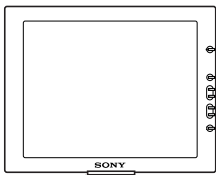
### To switch to the horizontal or vertical viewing position

First install the supplied WinPortrait (for Windows 95/98 and NT4.0) or MacPortrait (for Macintosh). To switch the view, press Shift + Ctrl + R on the keyboard. For more information, see the supplied software's instruction manual.

### To install the display horizontally or vertically

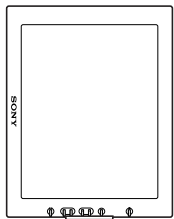
Open the display stand until the click sound is heard. Put the display on the stand, aligning the mark which shows the stand position on the display.

#### Horizontal installation



The stand positioning mark

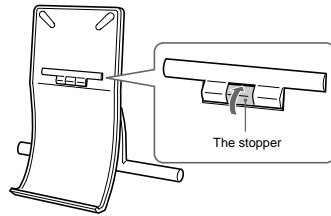
#### Vertical installation



The stand positioning mark

## To close the display stand

While sliding the stopper up, close the display stand.



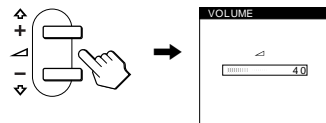
## Using the headphones

You can listen to the audio signals from your computer or other audio equipment using headphones. Connect the AUDIO IN jack to the audio output jack of your computer or other audio equipment using the supplied audio cord.

### Adjusting the volume

#### 1 Press the $\triangle/\nabla$ buttons.

The VOLUME menu appears on the screen.



#### 2 Press the $\triangle/\nabla$ button to adjust the volume.

The menu automatically disappears after about 3 seconds.

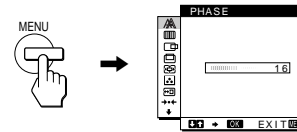
#### Notes

- You cannot adjust the volume when displaying the main menu on the screen.
- When your monitor is in power saving mode, no sound comes from the headphones.

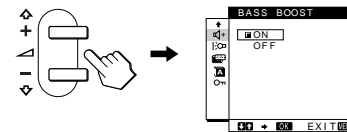
## Selecting the on-screen menu language (LANGUAGE)

English, German, French, Spanish, Italian, and Japanese versions of the on-screen menus are available. The default setting is English.

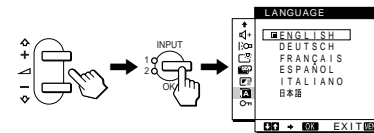
#### 1 Press the MENU button.



#### 2 Press the $\uparrow$ (+) $\downarrow$ (-) buttons to select $\downarrow$ .



#### 3 Press the $\uparrow$ (+) $\downarrow$ (-) buttons to select $\square$ (LANGUAGE) and press the OK button.



#### 4 Press the $\uparrow$ (+) $\downarrow$ (-) button to select a language.

- ENGLISH
- DEUTSCH: German
- FRANÇAIS: French
- ESPAÑOL: Spanish
- ITALIANO: Italian
- 日本語: Japanese

#### To close the menu

Press the MENU button once to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.

## Selecting the input signal

You can connect two computers to this monitor using the INPUT 1 and INPUT 2 connectors. To select one of the two computers, use the INPUT button.

### Press the INPUT button.

The input signal and corresponding input indicator, "1" (INPUT 1) or "2" (INPUT 2) change each time you press this button.



#### Notes

- You cannot select the input signal when displaying the main menu on the screen.
- If no signal is input to the selected connector, NO INPUT SIGNAL or CABLE DISCONNECTED appears on the screen. After a few seconds, the monitor enters the power saving mode. If this happens, select the other connector using the INPUT button.

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## Customizing Your Monitor

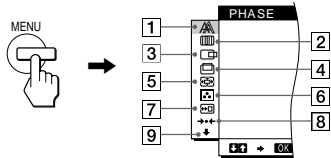
### Before making adjustments

Connect the monitor and the computer, and turn them on. Wait for at least 30 minutes before making adjustments for the best result.

You can make numerous adjustments to your monitor using the on-screen menu.

### Navigating the menu

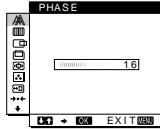
Press the MENU button to display the main menu on your screen. See page 13 for more information on using the MENU button.



Use the  $\uparrow(+)/\downarrow(-)$  and OK buttons to select one of the following menus. See page 13 for more information on using the  $\uparrow(+)/\downarrow(-)$  and OK buttons.

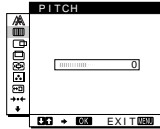
#### 1 PHASE (page 14)

Select the PHASE menu to adjust the phase when the characters or pictures appear fuzzy throughout the entire screen. Adjust the phase after adjusting the pitch.



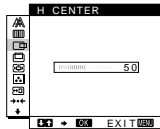
#### 2 PITCH (page 14)

Select the PITCH menu to adjust the pitch when the characters or pictures are unclear in some areas of the screen.



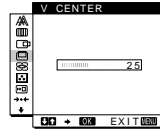
#### 3 H CENTER (page 14)

Select the H CENTER menu to adjust the picture's horizontal centering.



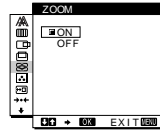
#### 4 V CENTER (page 14)

Select the V CENTER menu to adjust the picture's vertical centering.



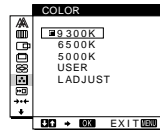
#### 5 ZOOM (page 15)

Select the ZOOM menu to adjust the picture's size according to the input signal's aspect ratio or resolution.



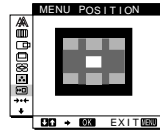
#### 6 COLOR (page 15)

Select the COLOR menu to adjust the color tone of the screen.



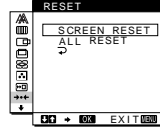
#### 7 MENU POSITION (page 15)

Select the MENU POSITION to change the on-screen menu position.



#### 8 RESET (page 16)

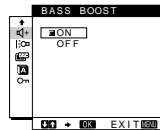
Select the RESET menu to reset the adjustments.



#### 9 Option (page 16)

Select  $\downarrow$  (option) menu to adjust the monitor's options. The options include:

- BASS BOOST
- BACKLIGHT
- POWER SAVE
- LANGUAGE
- MENU LOCK



### Using the MENU, $\uparrow(+)/\downarrow(-)$ , and OK buttons

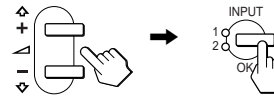
#### 1 Display the main menu.

Press the MENU button to display the main menu on your screen.



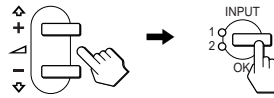
#### 2 Select the menu you want to adjust.

Press the  $\uparrow(+)/\downarrow(-)$  buttons to display the desired menu. Press the OK button to select the menu item.



#### 3 Adjust the menu.

Press the  $\uparrow(+)/\downarrow(-)$  buttons to make the adjustment. Then press the OK button to return to the previous menu.



#### 4 Close the menu.

Press the MENU button once to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.



### Resetting the adjustments

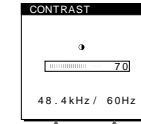
You can reset the adjustments using the RESET menu. See page 16 for more information on resetting the adjustments.

## Adjusting the contrast (CONTRAST)

Contrast adjustment is made using a separate CONTRAST menu from the main menu (page 12). This setting is stored in memory for the signal from the currently selected input connector.

#### 1 Press the $\odot$ (contrast) button.

The CONTRAST menu appears on the screen.



Horizontal frequency of the current input signal      Vertical frequency of the current input signal

#### Displaying the current input signal

The horizontal and vertical frequencies of the current input signal are displayed in the CONTRAST and BRIGHTNESS menu.

#### 2 Press the $\uparrow(+)/\downarrow(-)$ buttons to adjust the contrast.

The menu automatically disappears after about 3 seconds.

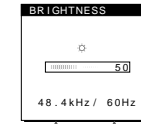
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## Adjusting the black level of an image (BRIGHTNESS)

Brightness adjustment is made using a separate BRIGHTNESS menu from the main menu (page 12). This setting is stored in memory for the signal from the currently selected input connector.

#### 1 Press the $\odot$ (brightness) button.

The BRIGHTNESS menu appears on the screen.



Horizontal frequency of the current input signal      Vertical frequency of the current input signal

#### 2 Press the $\uparrow(+)/\downarrow(-)$ buttons to adjust the brightness.

The menu automatically disappears after about 3 seconds.

#### If the screen is too bright

Adjust the backlight. For more information about adjusting the backlight see "Adjusting the backlight" on page 16.

#### Note

You can adjust neither contrast nor brightness when displaying the main menu on the screen.

## Eliminating flicker or blurring (PHASE/PITCH)

When the monitor receives an input signal, the automatic picture quality function of this monitor is activated. This function automatically adjusts the phase, pitch, and picture position to ensure that a clear picture appears on the screen. For more information about this function, see "Automatic picture quality adjustment function" on page 17.

For some input signals, this function may not completely adjust the phase, pitch, and picture position. In this case, you can manually set these adjustments according to the following instructions. If you manually set these adjustments, they are stored in memory and automatically recalled whenever the monitor receives the same input signals.

These settings may have to be repeated if you change the input signal after reconnecting your computer.

### 1 Set the resolution to 1024 × 768 on the computer.

### 2 Load the Utility Disk.

Use the appropriate disk for your computer.

**For Windows 95/98**

Windows Monitor Information Disk/Utility Disk

**For Macintosh**

Macintosh Utility Disk

### 3 Start the Utility Disk and display the test pattern.

**For Windows 95/98**

Click [Utility Disk] → [Windows]/[Utility.exe].

**For Macintosh**

Click [Utility Disk] → [SONY-Utility].

### 4 Press the MENU button.

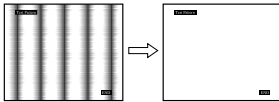
The main menu appears on the screen.

### 5 Press the ↑(+)/↓(-) buttons to select [PITCH] and press the OK button.

The PITCH menu appears on the screen.

### 6 Press the ↑(+)/↓(-) buttons to adjust the pitch.

Adjust so that the vertical stripes disappear.



### 7 Press the OK button.

The main menu appears on the screen.

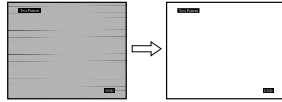
If horizontal stripes are observed over the entire screen, adjust the phase as the next step.

### 8 Press the ↑(+)/↓(-) buttons to select [PHASE] and press the OK button.

The PHASE menu appears on the screen.

### 9 Press the ↑(+)/↓(-) buttons to adjust the phase.

Adjust so that the horizontal stripes are at a minimum.



### 10 Click [END] on the screen to turn off the test pattern.

**To reset the automatic picture quality adjustment**

Select SCREEN RESET and activate it using the RESET menu. See page 16 for more information on using the RESET menu.

## Adjusting the picture position (H CENTER/V CENTER)

If the picture is not in the center of the screen, adjust the picture's centering as follows.

These settings may have to be repeated if you change the input signal after reconnecting your computer.

### 1 Start the Utility Disk and display the test pattern.

Repeat steps 2 and 3 of "Eliminating flicker or blurring (PHASE/PITCH)."

### 2 Press the MENU button.

The main menu appears on the screen.

### 3 Press the ↑(+)/↓(-) buttons to select [H CENTER] or [V CENTER] and press the OK button.

The H CENTER or V CENTER menu appears on the screen.

### 4 Move the picture up, down, left, or right until the frame at the perimeter of the test pattern disappears.

Press the ↑(+)/↓(-) buttons to adjust the picture's centering using the H CENTER menu for horizontal adjustment, or the V CENTER menu for vertical adjustment.

### 5 Click [END] on the screen to turn off the test pattern.

## Displaying a low-resolution signal at the actual resolution (ZOOM)

This monitor is preset at the factory to display pictures on the screen in full, irrespective of the picture's mode or resolution. You can also view the picture at its actual resolution.

### 1 Press the MENU button.

The main menu appears on the screen.

### 2 Press the ↑(+)/↓(-) buttons to select [ZOOM] and press the OK button.

The ZOOM menu appears on the screen.

### 3 Press the ↓(-) button to select OFF.

The input signal is displayed on the screen at its actual resolution.



**To display the picture on the screen in full**

Select ON in step 3.

## Adjusting the color temperature (COLOR)

The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high.

9300K is generally suitable for word processing and other text oriented applications, and 6500K is generally suitable for video images.

You can set the color temperature to 5000K, 6500K, 9300K or user adjustment.

### 1 Press the MENU button.

The main menu appears on the screen.

### 2 Press the ↑(+)/↓(-) buttons to select [COLOR] and press the OK button.

The COLOR menu appears on the screen.

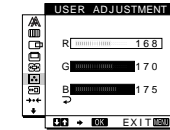
### 3 Press the ↑(+)/↓(-) buttons to select the desired color temperature.

The preset color temperatures are 5000K, 6500K, and 9300K. Since the default setting is 9300K, the whites will change from a bluish hue to a reddish hue as the temperature is lowered to 6500K and 5000K.

You can set separate color temperatures for each of the video input signals.

### 4 If necessary, fine tune the color temperature.

First press the ↑(+)/↓(-) buttons to select L ADJUST and press the OK button. Then press the ↑(+)/↓(-) buttons to select R (Red) or B (Blue) and press the OK button, and then press the ↑(+)/↓(-) buttons to adjust the color temperature. Since this adjustment changes the color temperature by increasing or decreasing the R and B components with respect to G (green), the G component is fixed.



If you fine tune the color temperature, the new color setting is stored in memory for USER ADJUSTMENT and automatically recalled whenever USER is selected. The USER ADJUSTMENT setting is common to both the input signals. If you change the user adjustment setting for one input signal, the setting for the other input signal is also changed.

## Changing the menu's position (MENU POSITION)

You can change the menu position if it is blocking an image on the screen.

### 1 Press the MENU button.

The main menu appears on the screen.

### 2 Press the ↑(+)/↓(-) buttons to select [MENU POSITION] and press the OK button.

The MENU POSITION menu appears on the screen.

### 3 Press the ↑(+)/↓(-) buttons to select the desired position.

There are three positions each for the top of the screen and the bottom of the screen, and one for the screen center.

## Resetting the adjustments (RESET)

You can reset the adjustments.

- 1 Press the **MENU** button.  
The main menu appears on the screen.
- 2 Press the **↑(+)/↓(-)** buttons to select **---** (RESET) and press the **OK** button.  
The RESET menu appears on the screen.  
You can reset the adjustment data in either of the following two ways:

### Resetting the adjustment data most appropriately for the current input signal

Press the **↑(+)/↓(-)** buttons to select **SCREEN RESET** and press the **OK** button.

The automatic picture quality adjustment function of this monitor automatically adjusts the phase, pitch, and picture position, to the most appropriate value. If this function is activated, the phase is automatically adjusted whenever the monitor receives the same input signal.

The RESET menu is automatically returned to the main menu after the adjustment data is reset.

### Resetting all of the adjustment data for all input signals

Press the **↑(+)/↓(-)** buttons to select **ALL RESET** and press the **OK** button.

The RESET menu is automatically returned to the main menu after the adjustment data is reset.

### To cancel resetting

Press the **↑(+)/↓(-)** buttons to select **↶** and press the **OK** button.

The RESET menu returns to the main menu without resetting the adjustment data.

## Additional settings (Option)

You can adjust the following options:

- BASS BOOST
- BACKLIGHT
- POWER SAVE
- LANGUAGE
- MENU LOCK

- 1 Press the **MENU** button.  
The main menu appears on the screen.
- 2 Press the **↑(+)/↓(-)** buttons to select **↓**.  
The option menu appears on the screen.
- 3 Press the **↑(+)/↓(-)** buttons to select the desired option item and press the **OK** button.  
Adjust the selected option item according to the following instructions.

### Boosting the bass (bass boost function)

This option increases the bass output.

First press the **↑(+)/↓(-)** buttons to select **⏮** (BASS BOOST) and press the **OK** button. Then press the **↑(+)/↓(-)** buttons to select either **ON** or **OFF**.

### Adjusting the backlight

If the screen is too bright, adjust the backlight.

First press the **↑(+)/↓(-)** buttons to select **⏮** (BACKLIGHT) and press the **OK** button. Then press the **↑(+)/↓(-)** buttons to adjust the desired light level.

### Setting up the power saving mode

This monitor has a function which enables it to enter the power save mode automatically according to the power saving settings of the computer. You can prevent the monitor from entering the power saving mode by setting the following option to OFF.  
First press the **↑(+)/↓(-)** buttons to select **⏻** (POWER SAVE) and press the **OK** button. Then press the **↑(+)/↓(-)** buttons to select either **ON** or **OFF**.

### Selecting the on-screen menu language

See "Selecting the on-screen menu language (LANGUAGE)" on page 11.

### Locking the menus and controls (the menu lock function)

You can protect adjustment data by locking the menus and controls.

First press the **↑(+)/↓(-)** buttons to select **⏻** (MENU LOCK) and press the **OK** button. Then press the **↑(+)/↓(-)** buttons and select **ON**.

Only the power switch, and **⏻** (MENU LOCK) of the option menu will operate. If any other items are selected, the **⏻** mark appears on the screen.

### To cancel the menu lock function

Repeat the procedure above and set and **⏻** (MENU LOCK) to OFF.

## Technical Features

### Power saving function

This monitor meets the power-saving guidelines set by VESA, NUTEK, and ENERGY STAR. If the monitor is connected to a computer or graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically enter the power saving mode.

Power consumption state	Power consumption	AC power indicator	⏻ (power) indicator
normal operation	28 W	green	green
power saving mode	≤ 3 W	orange	orange
⏻ (power): off	≤ 3 W	red	off
AC power: off	0 W	off	off

DPMS defines three power saving states according to the state of the sync signals supplied from the computer. This monitor's power consumption is input at approximately 3 W in all of these states if the power saving function is set to ON.

When your computer enters in the power saving mode, the input signal is cut and NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters power saving mode.

Power saving state	Sync signal state
suspend (sleep)*	horizontal: on / vertical: off
standby (sleep)*	horizontal: off / vertical: on
active off (deep sleep)*	horizontal: off / vertical: off

\* "Sleep" and "deep sleep" are power saving modes defined by the Environmental Protection Agency.

#### Note

The power saving function may not work normally if sync signals other than those listed above are supplied. In such a case, set the power saving function to OFF.

### Automatic picture quality adjustment function

When the monitor receives an input signal, it automatically matches the signal to one of the factory preset modes stored in the monitor's memory to provide a high quality picture at the center of the screen. (See Appendix for a list of the factory preset modes.)

For input signals that do not match one of the factory preset modes, the automatic picture quality adjustment function of this monitor automatically adjusts the phase, pitch, and picture position, and ensures that a clear picture appears on the screen for any timing within the monitor's frequency range (horizontal: 30 – 61 kHz, vertical: 48 – 85 Hz).

Consequently, the first time the monitor receives input signals that do not match one of the factory preset modes, the monitor may take a longer time than normal for displaying the picture on the screen. This adjustment data is automatically stored in memory so that next time, the monitor will function in the same way as when the monitor receives the signals that match one of the factory preset modes.

In all modes, if the picture is adjusted, the adjustment data is stored as a user mode and automatically recalled whenever the same input signal is received.

#### Note on the adjusting the phase

If the automatic picture quality adjustment function is activated, the picture moves slightly whenever the monitor receives the input signal, regardless of the stored adjustment.

## Troubleshooting

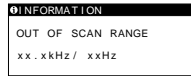
Before contacting technical support, refer to this section.

### On-screen messages

If there is something wrong with the input signal, one of the following messages appears on the screen. To solve the problem, see “Trouble symptoms and remedies” on page 19.

#### If OUT OF SCAN RANGE appears on the screen

This indicates that the input signal is not supported by the monitor’s specifications. Check the following items.



#### If “xx.x kHz/xx Hz” is displayed

This indicates that either the horizontal or vertical frequency is not supported by the monitor’s specifications.

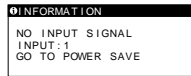
The figures indicate the horizontal and vertical frequencies of the current input signal. The horizontal frequencies above 100 kHz and the vertical frequencies above 100 Hz are represented by 99.9 kHz and 99 Hz, respectively.

#### If “RESOLUTION > XGA” is displayed

This indicates that the resolution is not supported by the monitor’s specifications.

#### If NO INPUT SIGNAL appears on the screen

This indicates that no signal is input, or that no signal is input from the currently selected connector.



#### INPUT:

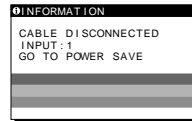
This indicates the currently selected connector (INPUT: 1 or INPUT: 2).

#### GO TO POWER SAVE

The monitor will enter the power saving mode after about 4 seconds from the message is displayed.

#### If CABLE DISCONNECTED appears on the screen

This indicates that the video signal cable has been disconnected from the currently selected connector.



#### INPUT:

This indicates the currently selected connector (INPUT: 1 or INPUT: 2).

#### GO TO POWER SAVE

The monitor will enter the power saving mode after about 4 seconds from the message is displayed.

## Trouble symptoms and remedies

If a problem is caused by the connected computer or other equipment, please refer to the connected equipment’s instruction manual. Use the self-diagnosis function (page 21) if the following recommendations do not resolve the problem.

Symptom	Check these items
<b>No picture</b>	
If the media engine’s AC power indicator is not lit	<ul style="list-style-type: none"> <li>Check that the power cord is properly connected.</li> </ul>
If the media engine’s AC power indicator is red	<ul style="list-style-type: none"> <li>Check that the display’s ⏻ (power) switch is in the “on” position.</li> </ul>
The media engine’s AC power indicator is flashing red	<ul style="list-style-type: none"> <li>Check that the system connecting cable is properly connected and all plugs are firmly seated in their sockets (page 8).</li> <li>Press the media engine’s AC power switch twice to turn the monitor off and then on.</li> </ul>
If the display’s ⏻ (power) indicator is not lit, or if the ⏻ (power) indicator will not light up when the ⏻ (power) switch is pressed	<ul style="list-style-type: none"> <li>Check that the display’s ⏻ (power) switch is in the “on” position.</li> <li>Check that the media engine’s AC power switch is in the “on” position.</li> <li>Check that the system connecting cable is properly connected and all plugs are firmly seated in their sockets (page 8).</li> </ul>
If the display’s ⏻ (power) indicator is green or flashing orange	<ul style="list-style-type: none"> <li>Use the self-diagnostics function (page 21).</li> </ul>
If CABLE DISCONNECTED appears on the screen	<ul style="list-style-type: none"> <li>Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 8).</li> <li>Check that the input select setting is correct (page 11).</li> <li>Check that the video input connector’s pins are not bent or pushed in.</li> <li>A non-supplied video signal cable is connected. If you connect a non-supplied video signal cable, CABLE DISCONNECTED appears on the screen before entering the power saving mode. This is not a malfunction.</li> </ul>
If NO INPUT SIGNAL appears on the screen, or the display’s ⏻ (power) indicator is orange	<ul style="list-style-type: none"> <li>Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 8).</li> <li>Check that the input select setting is correct (page 11).</li> <li>Check that the video input connector’s pins are not bent or pushed in.</li> <li><b>■Problems caused by the connected computer or other equipment</b> <ul style="list-style-type: none"> <li>The computer is in the power saving mode. Try pressing any key on the keyboard or moving the mouse.</li> <li>Check that the computer’s power is “on.”</li> </ul> </li> </ul>
If OUT OF SCAN RANGE appears on the screen	<ul style="list-style-type: none"> <li><b>■Problems caused by the connected computer or other equipment</b> <ul style="list-style-type: none"> <li>Check that the video frequency range is within that specified for the monitor. If you replaced an old monitor with this monitor, reconnect the old monitor and adjust the frequency range to the following:                             <ul style="list-style-type: none"> <li>Horizontal: 30 – 61 kHz</li> <li>Vertical frequency: 48 – 85 Hz (only XGA mode at 75 Hz)</li> </ul> </li> </ul> </li> </ul>
If using Windows 95/98	<ul style="list-style-type: none"> <li>If you replaced an old monitor with this monitor, reconnect the old monitor and do the following. Install the Windows Monitor Information Disk (page 9) and select this monitor (“SDM-N50PS”) from among the Sony monitors in the Windows 95/98 monitor selection screen.</li> </ul>
If using a Macintosh system	<ul style="list-style-type: none"> <li>Check and refer to the supplied “Notes for Macintosh users.”</li> </ul>

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(continued)

Symptom	Check these items
<b>The picture does not switch to the vertical view</b>	<p>■ <b>Problems caused by the connected computer or other equipment</b></p> <ul style="list-style-type: none"> <li>Install the supplied WinPortrait (for Windows 95/98 and NT4.0) or MacPortrait (for Macintosh) (page 10). For more information, see the supplied software's instruction manual. If the software does not work properly, contact the software's customer service.</li> </ul>
<b>Picture flickers, bounces, oscillates, or is scrambled</b>	<ul style="list-style-type: none"> <li>Adjust the pitch and phase (page 14).</li> <li>Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, fluorescent lighting, televisions, or electric fans.</li> <li>Move the monitor away from power lines or place a magnetic shield near the monitor.</li> <li>Try plugging the monitor into a different AC outlet, preferably on a different circuit.</li> </ul> <p>■ <b>Problems caused by the connected computer or other equipment</b></p> <ul style="list-style-type: none"> <li>Check your graphics board manual for the proper monitor setting.</li> <li>Confirm that the graphics mode (VESA, Macintosh 19" Color, etc.) and the frequency of the input signal are supported by this monitor (Appendix). Even if the frequency is within the proper range, some graphics boards may have a sync pulse that is too narrow for the monitor to sync correctly.</li> <li>Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.</li> </ul>
<b>Picture is fuzzy</b>	<ul style="list-style-type: none"> <li>Adjust the brightness and contrast (page 13).</li> <li>Adjust the pitch and phase (page 14).</li> </ul>
<b>Picture is ghosting</b>	<ul style="list-style-type: none"> <li>Eliminate the use of video cable extensions and/or video switch boxes.</li> <li>Check that all plugs are firmly seated in their sockets.</li> </ul>
<b>Picture is not centered or sized properly</b>	<ul style="list-style-type: none"> <li>Adjust the pitch and phase (page 14).</li> <li>Adjust the picture position (page 14). Note that for some input signals or graphics boards, the picture may not fill the screen to the edges.</li> </ul>
<b>The picture is too small</b>	<ul style="list-style-type: none"> <li>Set the zoom setting to ON (page 15).</li> </ul> <p>■ <b>Problems caused by the connected computer or other equipment</b></p> <ul style="list-style-type: none"> <li>Set the computer's resolution to the screen's resolution.</li> </ul>
<b>Wavy or elliptical pattern (moire) is visible</b>	<ul style="list-style-type: none"> <li>Adjust the pitch and phase (page 14).</li> </ul>
<b>Color is not uniform</b>	<ul style="list-style-type: none"> <li>Adjust the pitch and phase (page 14).</li> </ul>
<b>White does not look white</b>	<ul style="list-style-type: none"> <li>Adjust the color temperature (page 15).</li> </ul>
<b>Monitor buttons do not operate (O<sub>1</sub> appears on the screen)</b>	<ul style="list-style-type: none"> <li>If the menu lock is set to ON, set it to OFF (page 16).</li> </ul>
<b>The monitor turns off after a while</b>	<ul style="list-style-type: none"> <li>Set the power saving function to OFF (page 16).</li> </ul> <p>■ <b>Problems caused by the connected computer or other equipment</b></p> <ul style="list-style-type: none"> <li>Set the computer's power saving setting to off.</li> </ul>

#### Displaying this monitor's name, serial number, and date of manufacture.

While the monitor is receiving a video signal, press and hold the MENU button for more than 5 seconds to display this monitor's information box.





Example

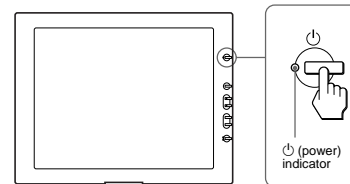
i INFORMATION	
MODEL : SDM-N50PS	Model name
SER_NO : 1234567	Serial number
MANUFACTURED : 2000-15	Week and year of manufacture

If any problem persists, call your authorized Sony dealer and give the following information:

- Model name: SDM-N50PS
- Serial number
- Name and specifications of your computer and graphics board.

## Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer(s), the screen will go blank and the display's  (power) indicator will either light up green or flash orange. If the  (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.




#### If the display's (power) indicator is green


- Turn off the media engine's AC power switch and disconnect the video signal cables from the INPUT1 and INPUT2 connectors of the media engine.



If all four color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cables and check the condition of your computer(s).

If the color bars do not appear, there is a potential monitor failure. Inform your authorized Sony dealer of the monitor's condition.

#### If the display's (power) indicator is flashing orange

Press the  (power) switch twice to turn the monitor off and then on.

If the  (power) indicator lights up green, the monitor is working properly.

If the  (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the  (power) indicator and inform your authorized Sony dealer of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and graphic board.

## Specifications

LCD panel	Panel type: a-Si TFT Active Matrix Picture size: 15 inch (38 cm)
Input signal format	RGB operating frequency* Horizontal: 30 – 61 kHz Vertical: 48 – 85 Hz (only XGA mode at 75 Hz)
Resolution	Horizontal: Max.1024 dots Vertical: Max.768 lines
Input signal levels	RGB video signal 0.700 Vp-p, 75 Ω, positive SYNC signal TTL level, 2 kΩ, positive or negative (Separate horizontal and vertical, or composite sync) 0.3 Vp-p, 75Ω, negative (Sync on green)
Headphones jack	Stereo minijack Accepts impedance of more than 16Ω
AUDIO IN jack	Stereo minijack Accepts impedance of 47 kΩ Accepts level 0.5 Vrms
Power requirements	100 – 240 V, 50 – 60 Hz, 0.45 – 0.25 A
Power consumption	Max. 28 W
Operating temperature	5 – 35 °C
Dimensions (width/height/depth)	Display (without stand): Approx. 356 × 280 × 26 mm (14 1/16 × 11 1/8 × 1 1/16 inches) Display (with stand, at maximum angle: 40 °): Approx. 356 × 225 × 203 mm (14 1/16 × 8 7/8 × 8 inches) Media engine (without stand): Approx. 45 × 180 × 180 mm (1 3/4 × 7 1/8 × 7 1/8 inches) Media engine (with stand): Approx. 94 × 185 × 180 mm (3 11/16 × 7 1/4 × 7 1/8 inches) Display (with stand): Approx. 1.75 kg (3 lb 14 oz) Media engine (with stand): Approx. 0.85 kg (1 lb 14 oz)
Mass	DDC1/DDC2B/DDC2Bi See page 8.
Plug & Play Accessories	

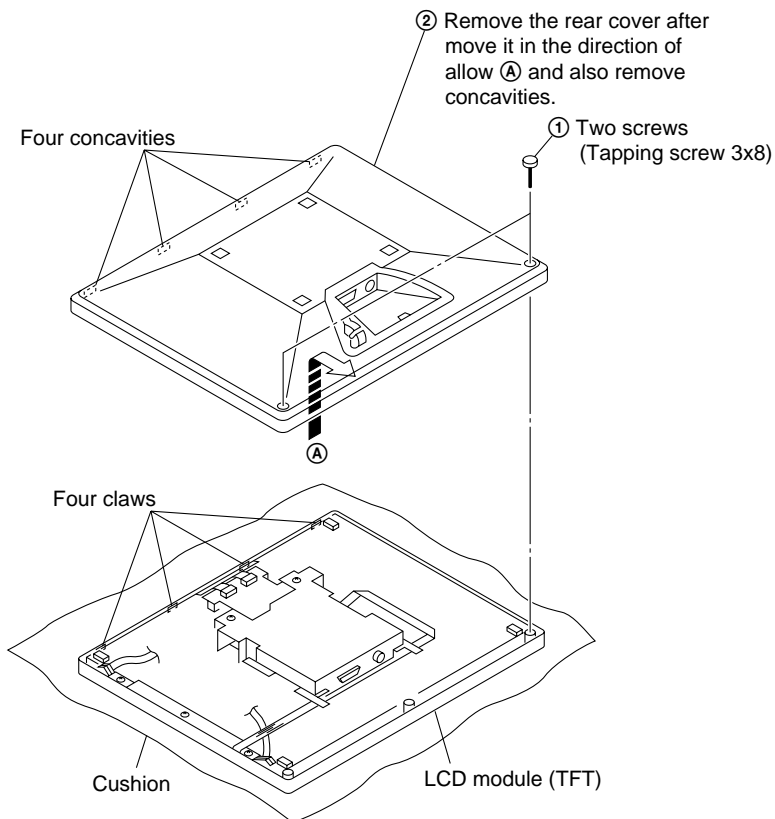
- \* Recommended horizontal and vertical timing condition
- Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 μs, whichever is larger.
  - Horizontal blanking width should be more than 2.5 μsec.
  - Vertical blanking width should be more than 450 μsec.

Design and specifications are subject to change without notice.

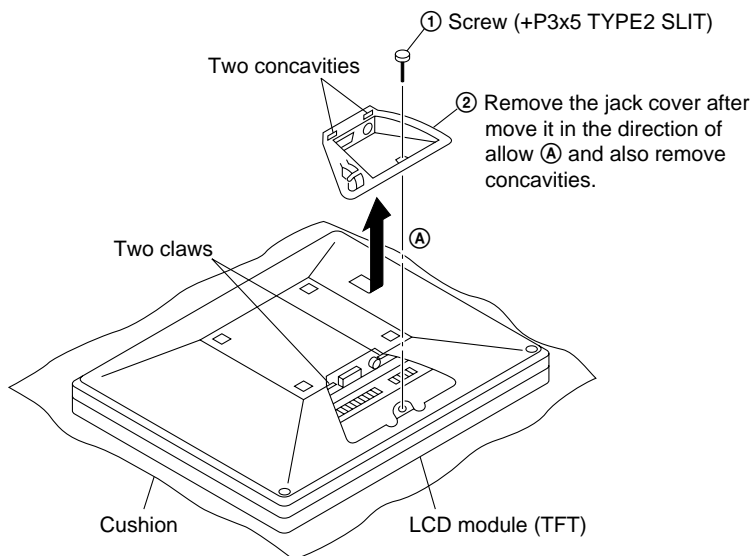
GB

## SECTION 2 DISASSEMBLY

### 2-1. REAR COVER REMOVAL

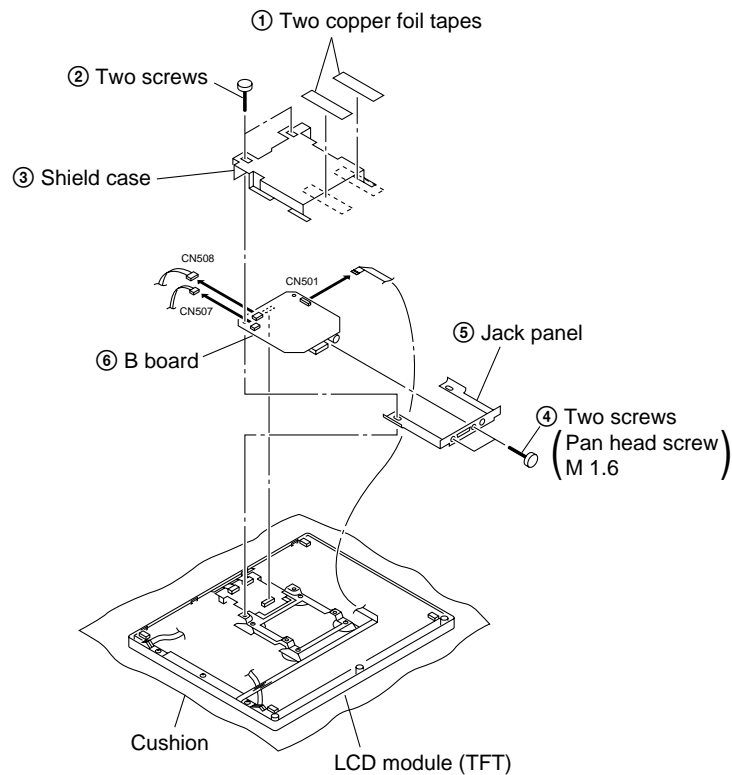


### 2-2. JACK COVER REMOVAL

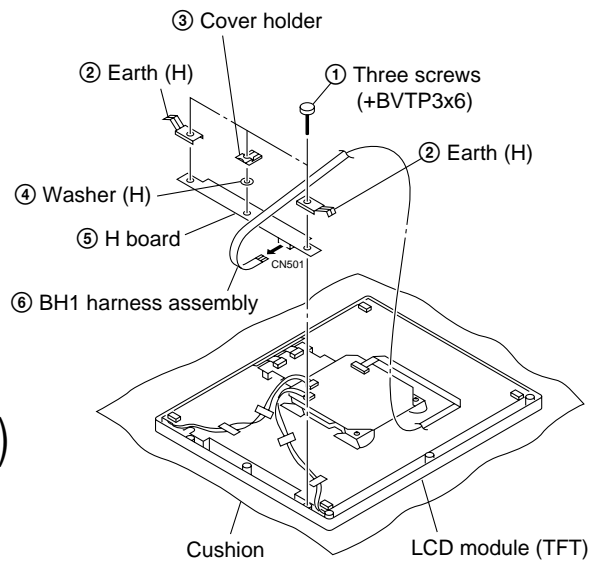




### 2-3. B BOARD REMOVAL

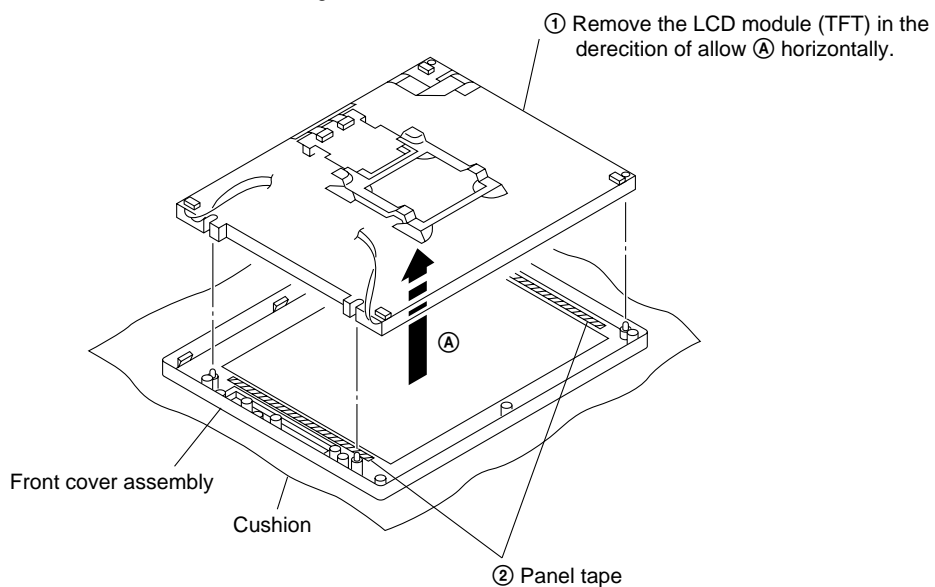


### 2-4. H BOARD REMOVAL

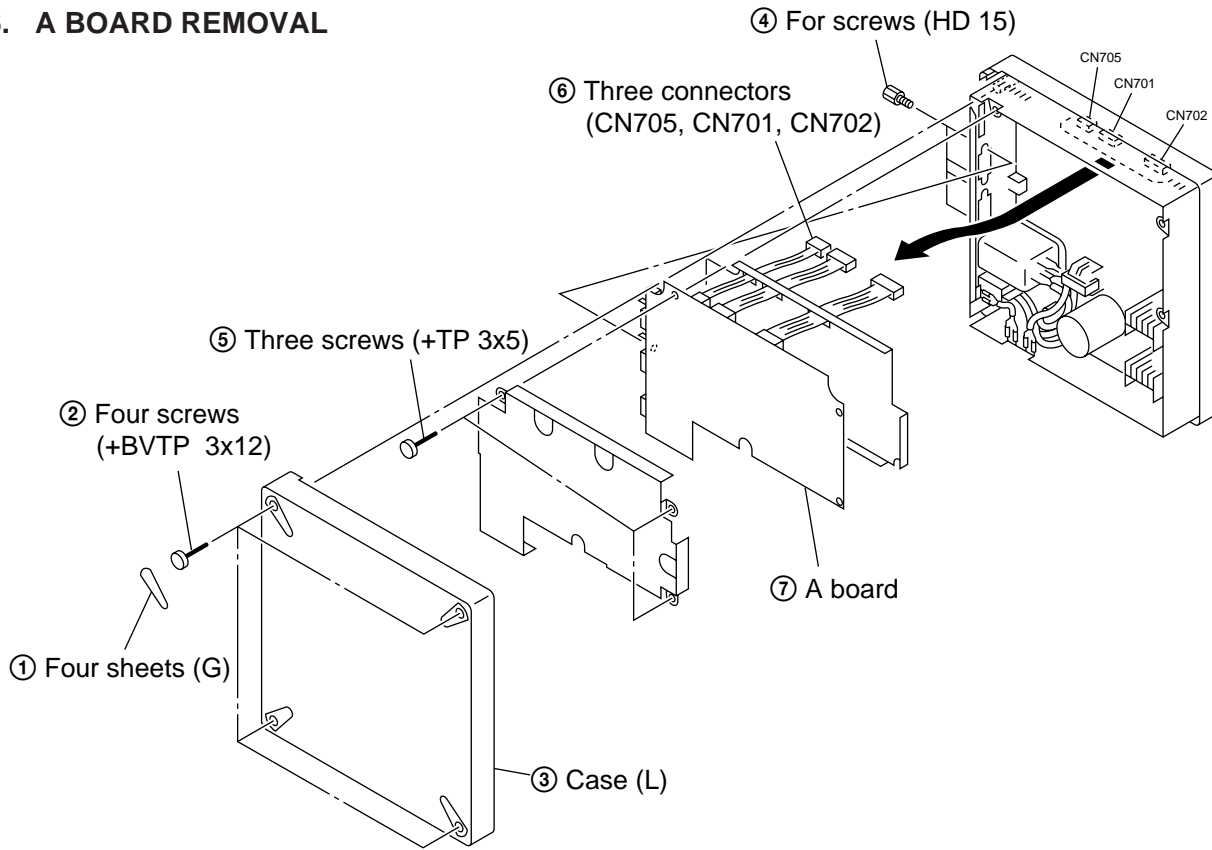


### 2-5. LCD MODULE (TFT) REMOVAL

\*Remove the B and H boards referring 2-3 and 2-4.

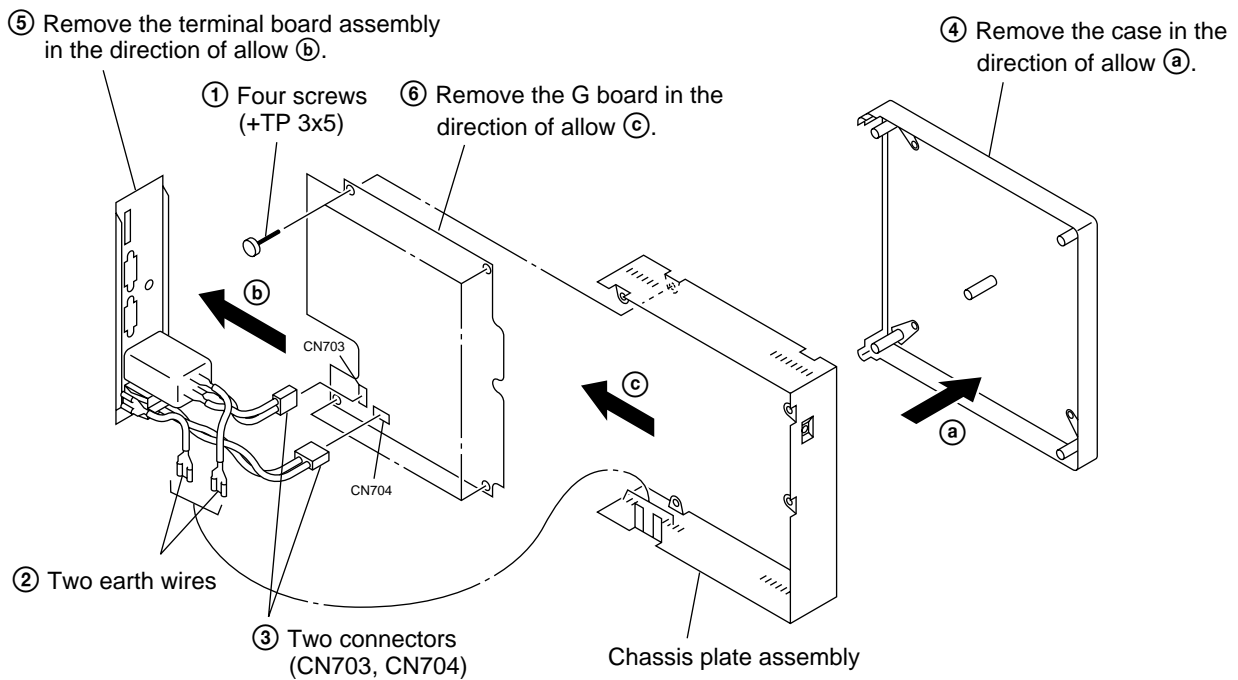


2-6. A BOARD REMOVAL



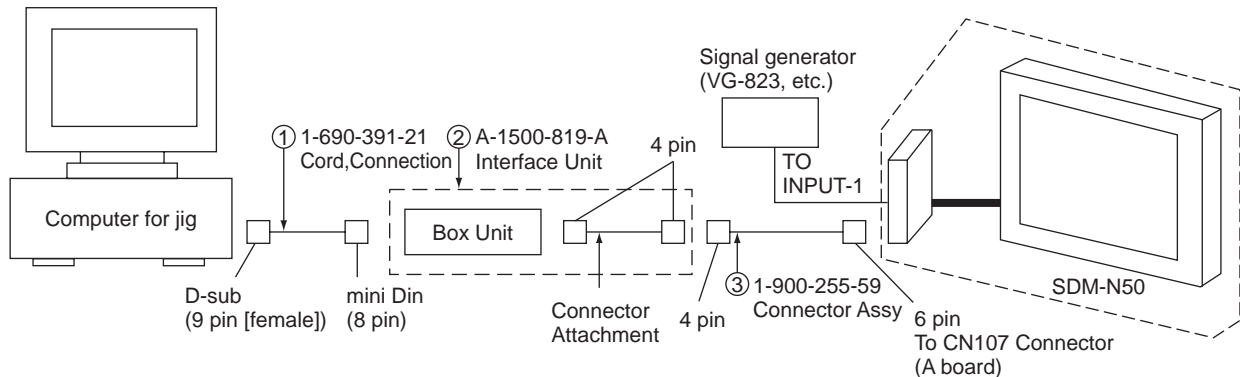
2-7. G BOARD REMOVAL

\* Remove A board referring 2-6.



## SECTION 3 ADJUSTMENTS

Connect the personal computer, monitor, and signal generator as shown below, and control the monitor.



\* The parts above (①-③) are necessary for DAS adjustment.

### • Preset mode adjustment

Confirm the screen by below three kinds of the modes within preseted frequency.

Signal mode

1. MODE 0 (640X480 60Hz)
  2. MODE 10 (800X600 75Hz)
  3. MODE 17 (1024X768 75Hz)
- (1) Input a cross hatch signal.
  - (2) Confirm both edges can see or white lines of edges are not separating from indicated area edges.  
Errors in the range of 2dot are permit.  
Be satiefy one of both edges that is within above specification.

### • White balance adjustment

When no measuring instrument is used, compare the color with the reference set so that the colors will be the same.

1. Adjustment of 9300°K
  - (1) Confirm every R/G/B\_USER\_BKG are initialized value.
  - (2) Receive MODE 15 (1024X768 60Hz) 80IRE.  
Set COLOR to 9300°K. (COLOR\_INDEX=1)
  - (3) Make adjustment with R/G\_USR\_DRV to set the chromaticity within the specification.  
y adjustment ..... Make adjustment with B\_USR\_DRV.  
(Also x value changes simultaneous)  
B\_USR\_DRV UP Values x and y decrease.  
B\_USR\_DRV DOWN Values x and y increase.  
x adjustment ..... Make adjustment with R\_USR\_DRV.  
R\_USR\_DRV UP Value y increases.  
R\_USR\_DRV DOWN Value y decreases.  
Adjust again and bring down G\_USR\_DRV 10 STEP to become within the specification ; however, in case of adjustment range of y value become deficiently and when B\_USR\_DRV=255.
  - (4) Make the signal 30IRE all white to check that it is within the specification.
  - (5) Adjust R/B\_USER\_BKG to become within the specification when (4) deviates the specification.
  - (6) Input a grayscale and perform picture quality confirmation.

- (7) Perform color save (select C with ALT+M).  
Spec: 9300°K 80IRE (x, y) = (0.285, 0.294)  
Within 3JND  
9300°K 30IRE (x, y) = (0.265, 0.268)  
Within 4JND  
Note: Make adjustment up to ±0.002.

2. Adjustment of 6500°K
  - (1) Confirm every R/G/B\_USER\_BKG are initialized value.
  - (2) Receive MODE 15 (1024X768 60Hz) 80IRE.  
Set COLOR to 6500°K. (COLOR\_INDEX=2)
  - (3) Make adjustment with R/G\_USR\_DRV to set the chromaticity within the specification.  
y adjustment ..... Make adjustment with B\_USR\_DRV.  
(Also x value changes simultaneous)  
B\_USR\_DRV UP Values x and y decrease.  
B\_USR\_DRV DOWN Values x and y increase.  
x adjustment ..... Make adjustment with R\_USR\_DRV.  
R\_USR\_DRV UP Value y increases.  
R\_USR\_DRV DOWN Value y decreases.  
Adjust again and bring down G\_USR\_DRV 10 STEP to become within the specification ; however, in case of adjustment range of y value become deficiently and when B\_USR\_DRV=255.
  - (4) Make the signal 30IRE all white to check that it is within the specification.
  - (5) Adjust R/B\_USER\_BKG to become within the specification when (4) deviates the specification.
  - (6) Input a grayscale and perform picture quality confirmation.
  - (7) Perform color save (select C with ALT+M).  
Spec: 6500°K 80IRE (x, y) = (0.314, 0.324)  
Within 3JND  
6500°K 30IRE (x, y) = (0.295, 0.305)  
Within 4JND  
Note: Make adjustment up to ±0.002.

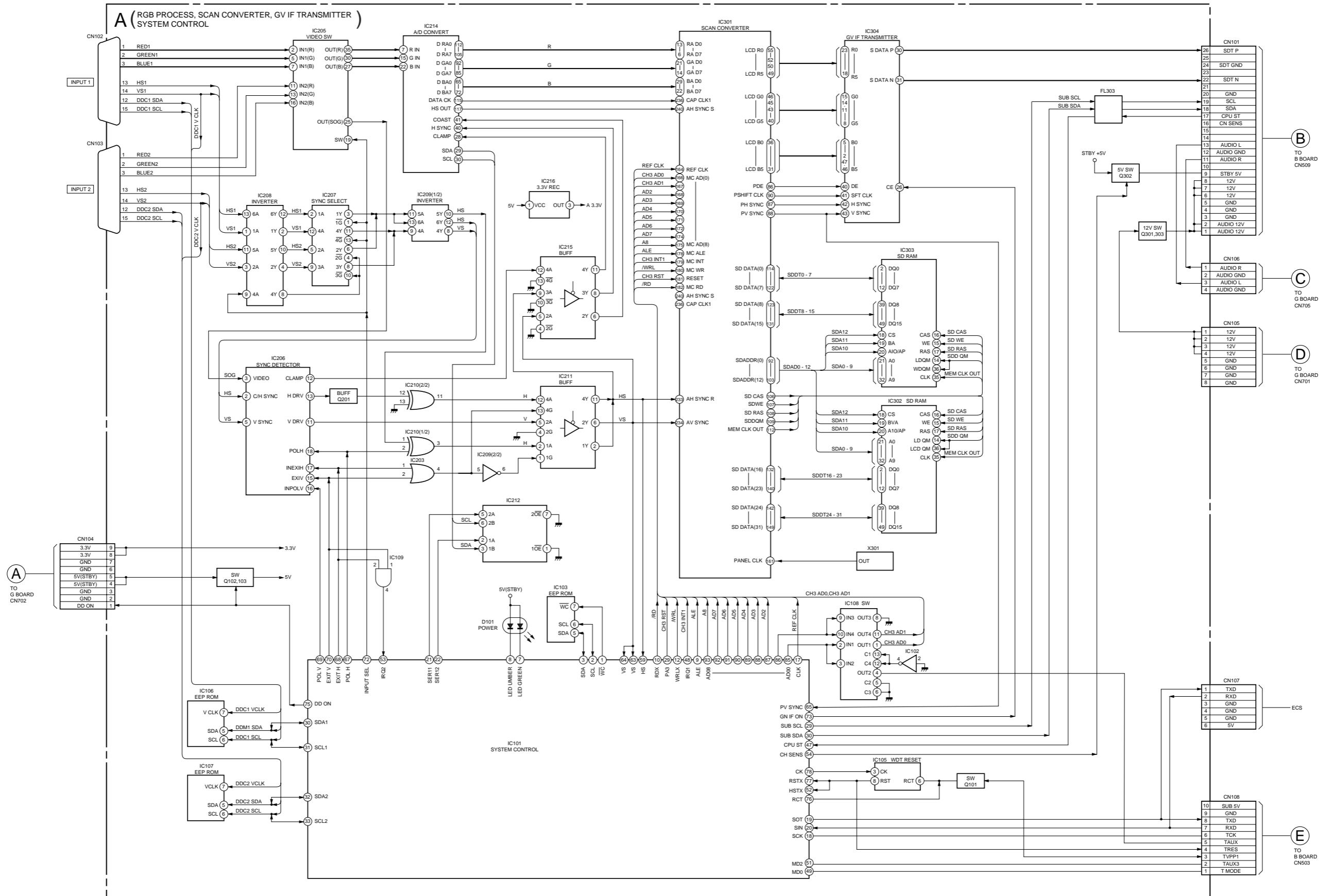
# SDM-N50PS

## 3. Adjustment of 5000°K

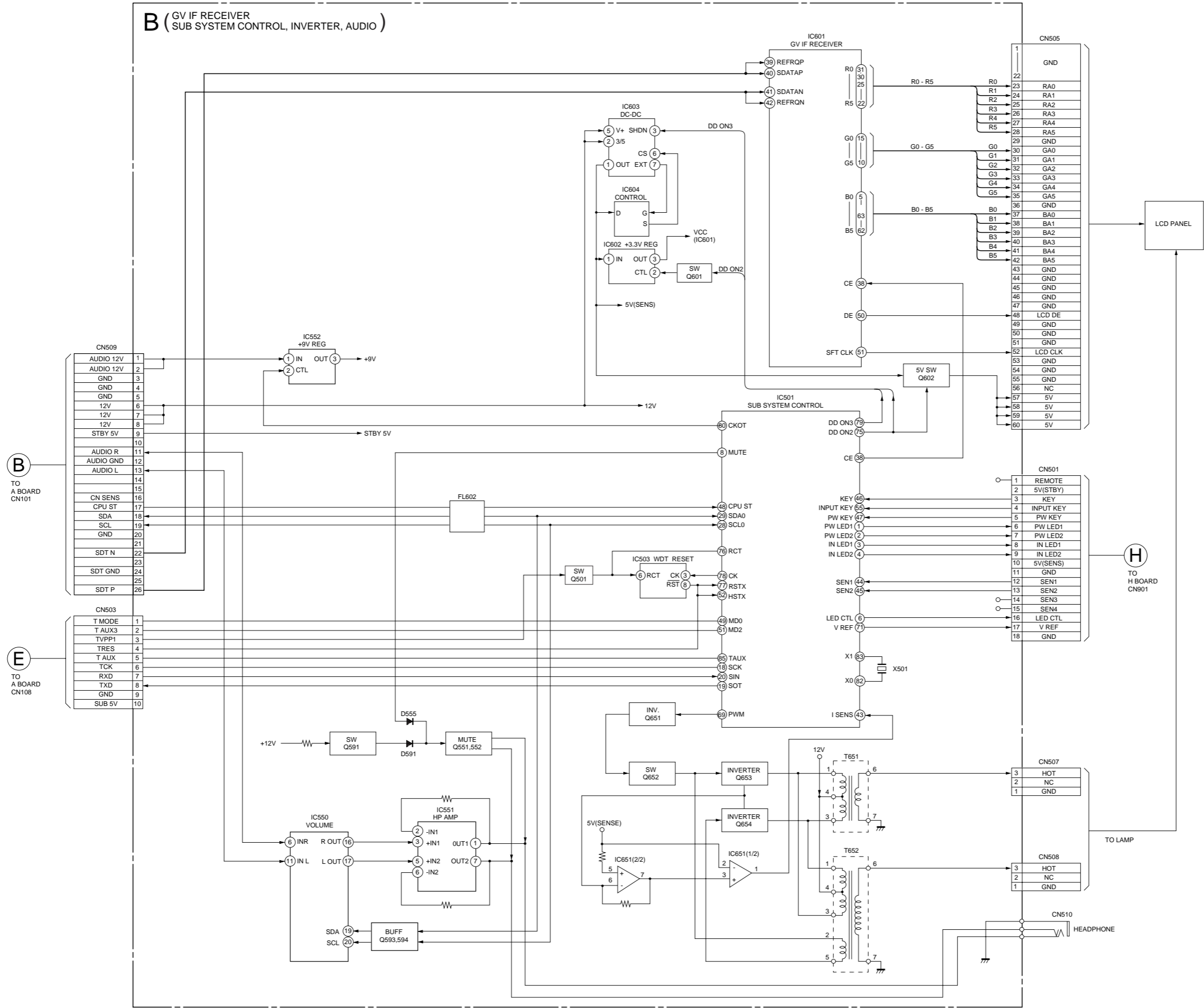
- (1) Confirm every R/G/B\_USER\_BKG are initialized value.
- (2) Receive MODE 15 (1024X768 60Hz) 80IRE.  
Set COLOR to 5000°K. (COLOR\_INDEX=3)
- (3) Make adjustment with R/G\_USR\_DRV to set the chromaticity within the specification.  
y adjustment ..... Make adjustment with B\_USR\_DRV.  
(Also x value changes simultaneous)  
B\_USR\_DRV UP Values x and y decrease.  
B\_USR\_DRV DOWN Values x and y increase.  
x adjustment ..... Make adjustment with R\_USR\_DRV.  
R\_USR\_DRV UP Value y increases.  
R\_USR\_DRV DOWN Value y decreases.  
Adjust again and bring down G\_USR\_DRV 10 STEP to become within the specification ; however, in case of adjustment range of y value become deficiently and when B\_USR\_DRV=255.
- (4) Make the signal 30IRE all white to check that it is within the specification.
- (5) Adjust R/B\_USER\_BKG to become within the specification when (4) deviates the specification.
- (6) Input a grayscale and perform picture quality confirmation.
- (7) Perform color save (select C with ALT+M).  
Spec: 5000°K 80IRE (x, y) = (0.345, 0.352)  
Within 3JND  
5000°K 30IRE (x, y) = (0.322, 0.332)  
Within 4JND  
Note: Make adjustment up to ±0.002.position.

# SECTION 4 DIAGRAMS

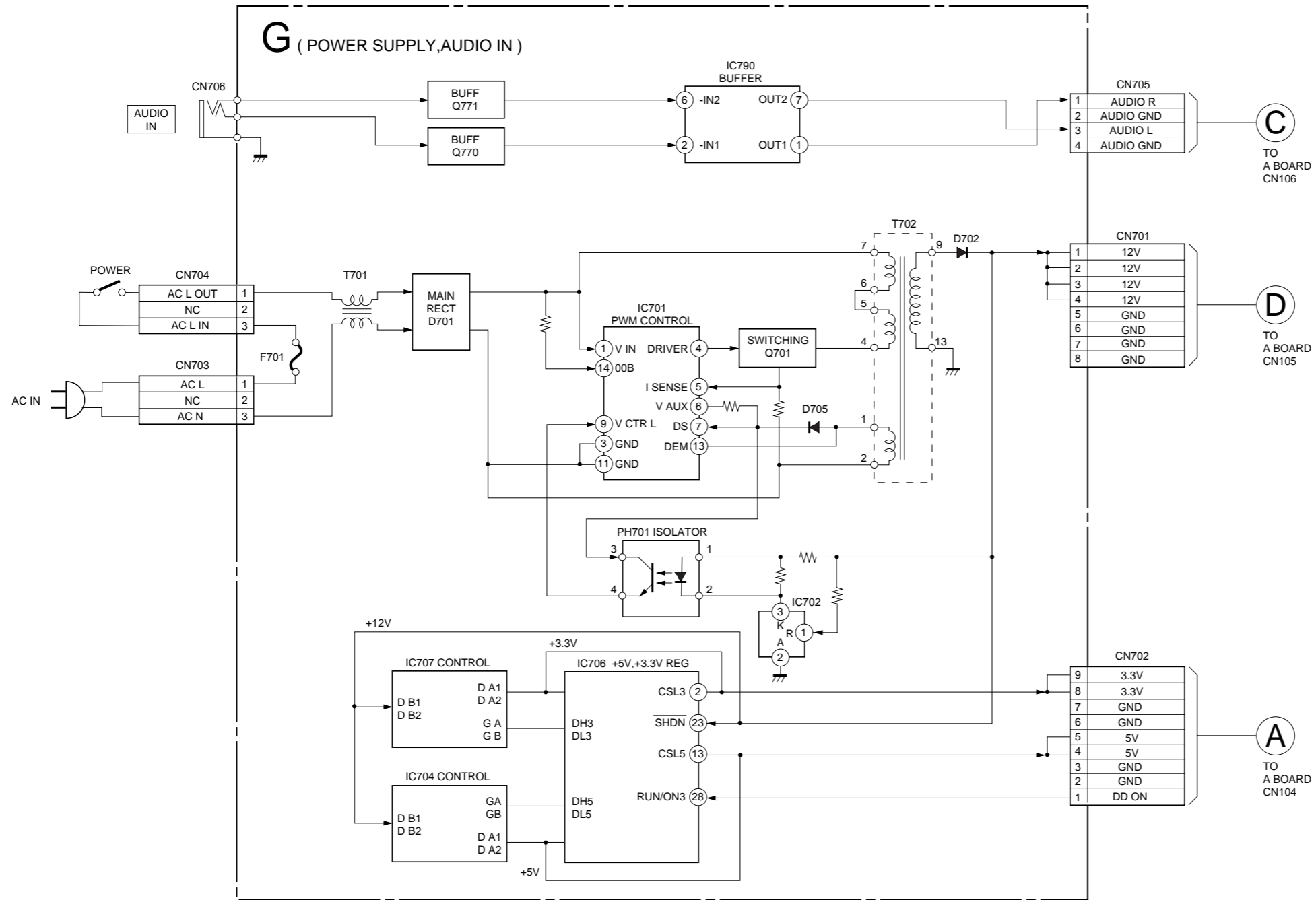
## 4-1. BLOCK DIAGRAMS



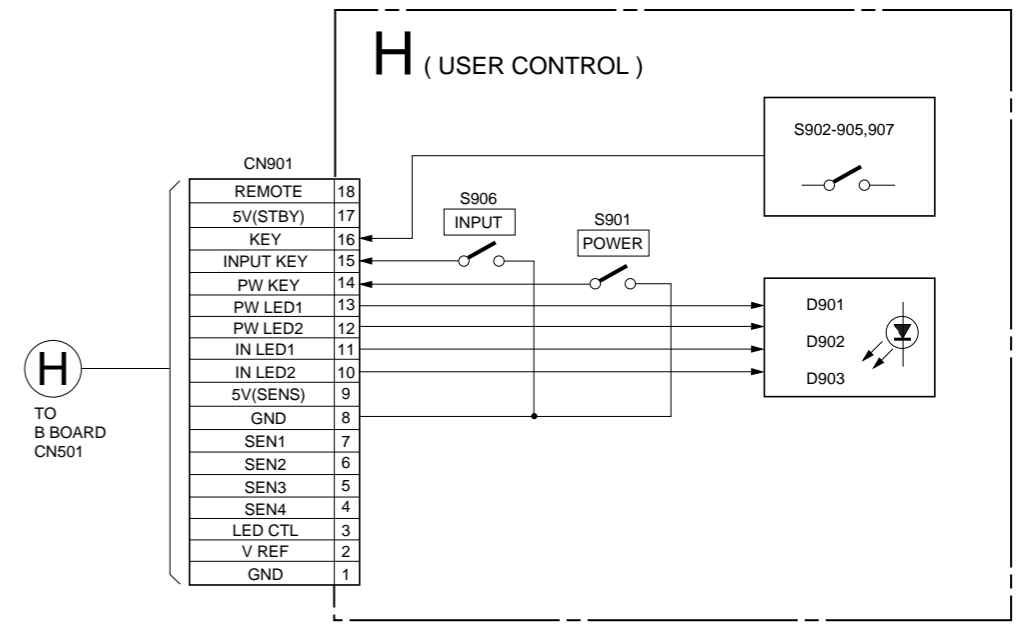
**B (GV IF RECEIVER  
SUB SYSTEM CONTROL, INVERTER, AUDIO)**



B-SS3534<AEP>-B-24



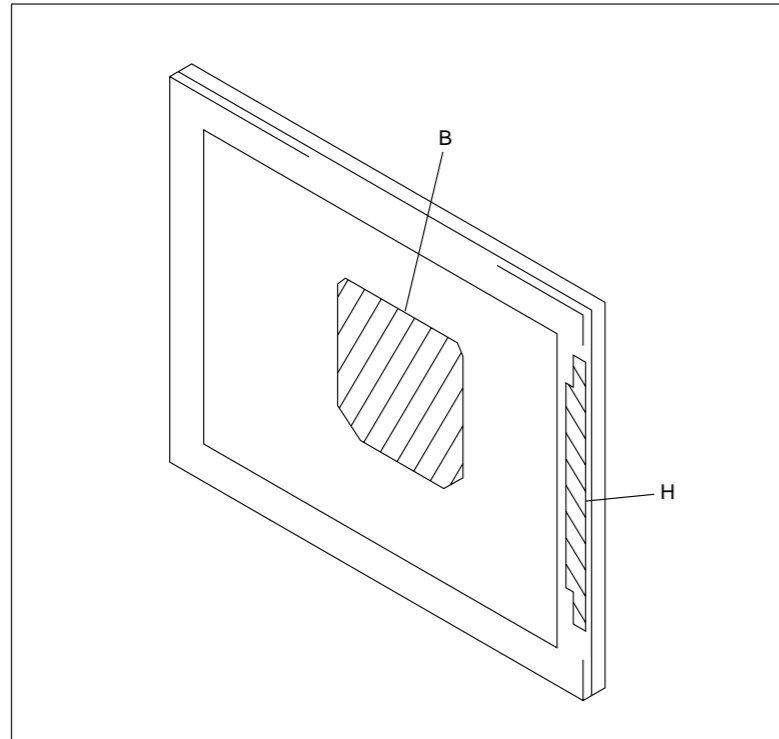
B-SS3534<AEP>-G-24



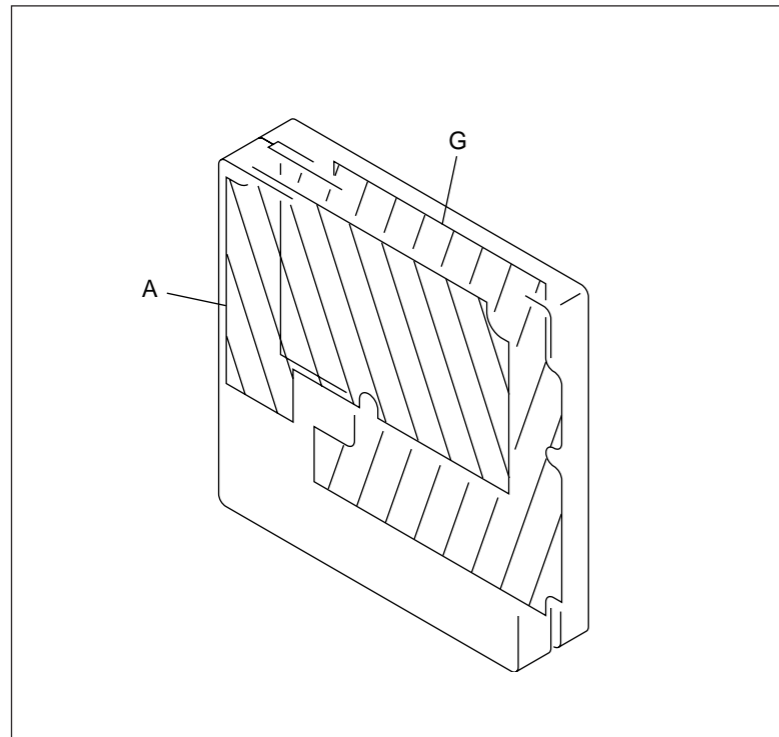
B-SS3534<AEP>-H-24

## 4-2. CIRCUIT BOARDS LOCATION

### DISPLAY



### MEDIA ENGINE



## 4-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### Note:

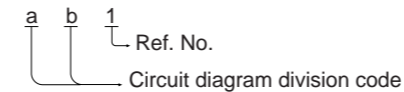
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. (pF:  $\mu\text{pF}$ ) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm  
Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- $\Delta$  : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$  : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- \* : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B - bus.

### Divided circuit diagram

One sheet of A, U boards circuit diagrams are divided into two sheets, each having the code A-P1- $\text{\textcircled{a}}$  to A-P1- $\text{\textcircled{b}}$ , A-P2- $\text{\textcircled{a}}$  to A-P2- $\text{\textcircled{b}}$ , A-P3- $\text{\textcircled{a}}$  to A-P3- $\text{\textcircled{b}}$ . For example, the destination  $\text{\textcircled{ab1}}$  on the A-P1- $\text{\textcircled{a}}$  sheet is connected to  $\text{\textcircled{ab1}}$  on the A-P1- $\text{\textcircled{b}}$  sheet.



**Note: The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.**

## Terminal name of semiconductors in silk screen printed circuit (\*):

Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode Anode	
④ Diode		Cathode Anode (NC)	
⑤ Diode		Cathode Anode (NC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode		Common Anode Anode	
⑩ Diode		Common Cathode Cathode	
⑪ Diode		Common Cathode Cathode	
⑫ Diode		Anode Cathode Anode Anode	
⑬ Transistor (FET)		Drain Source Gate	
⑭ Transistor (FET)		Drain Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
-		Discrete semiconductot	

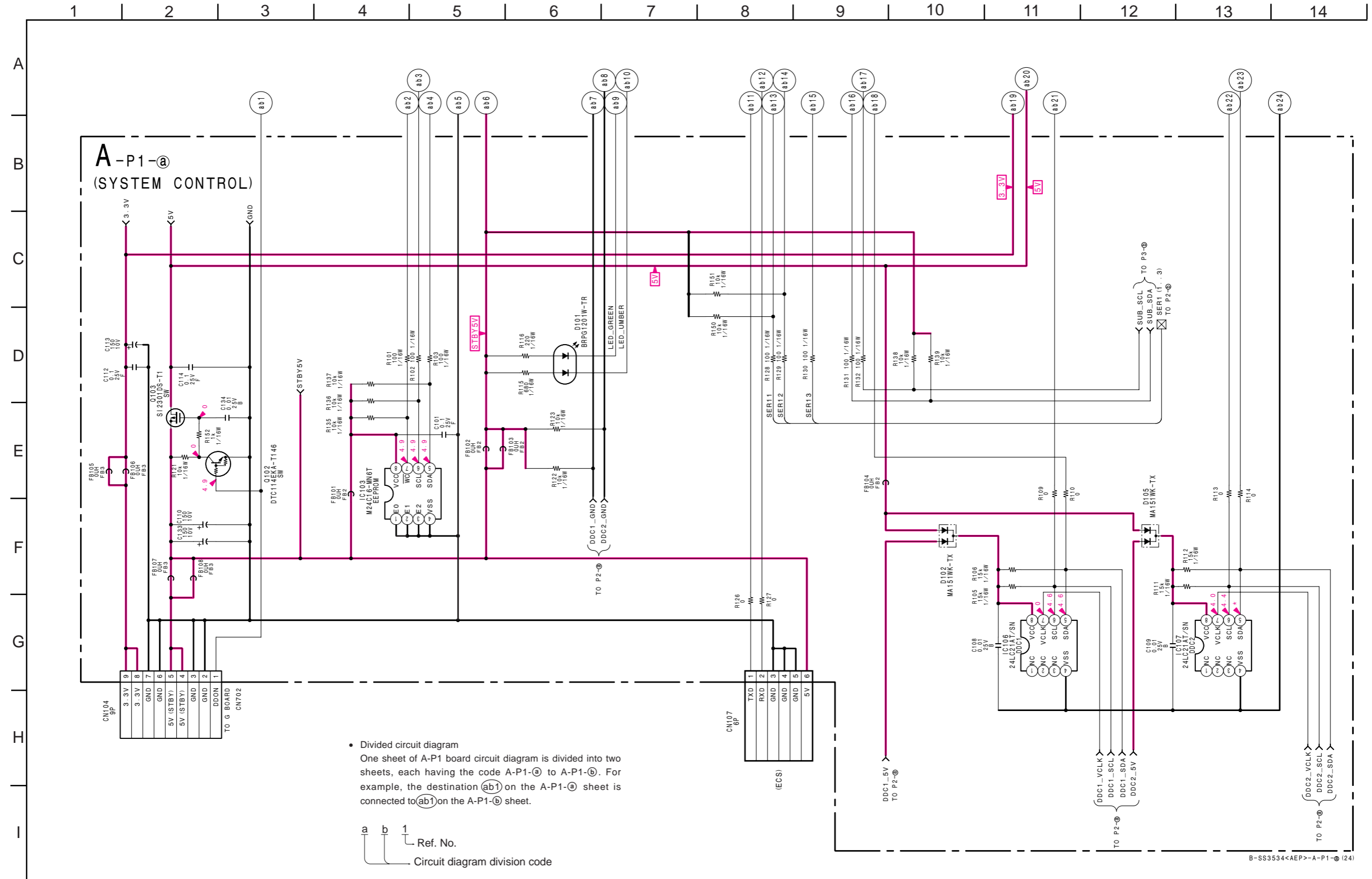
(Chip semiconductors that are not actually used are included.)

Ver.1.0

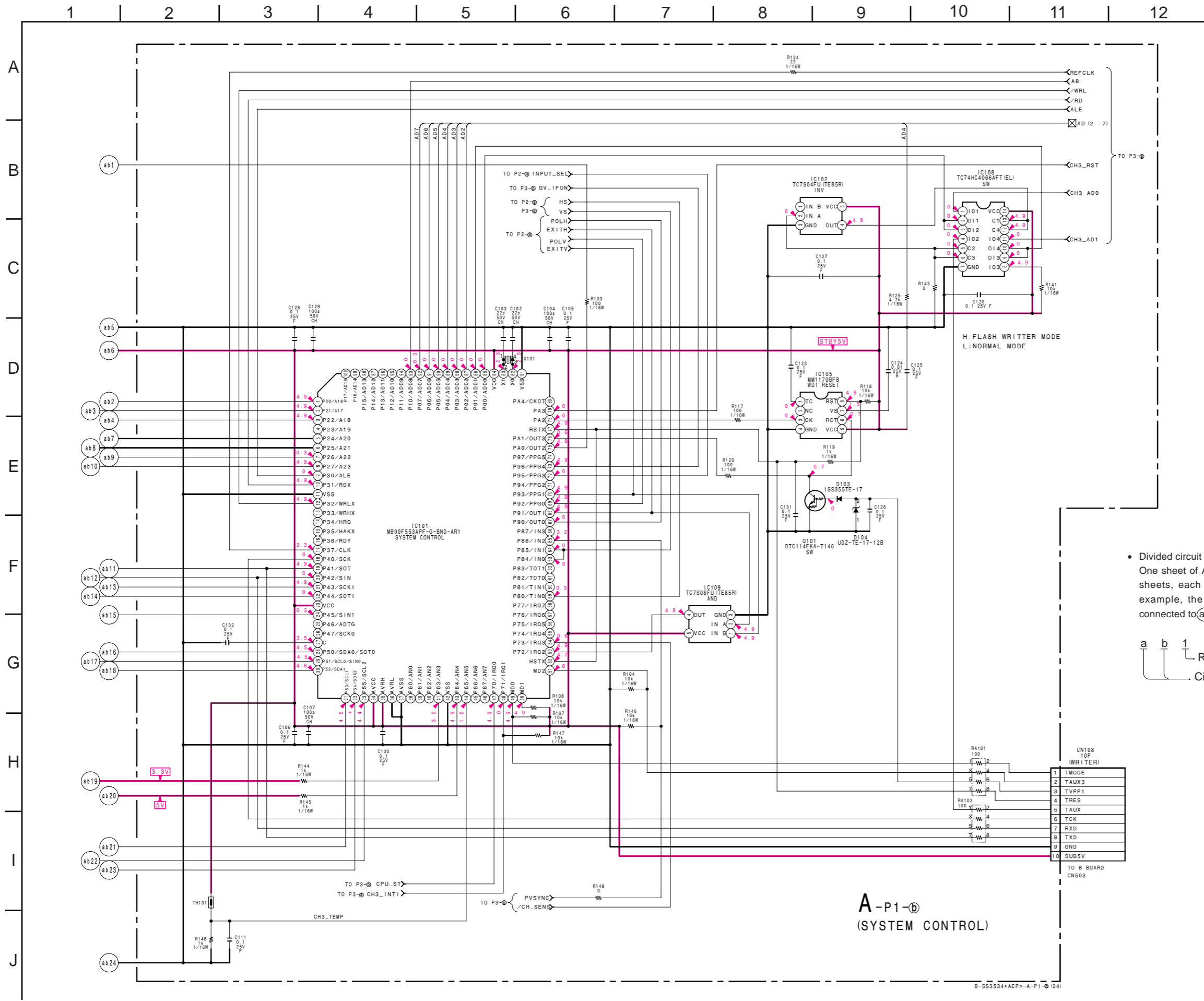
**Note: Les composants identifiés par un tramé et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.**



(1) Schematic Diagrams of A (P1-P3) Boards



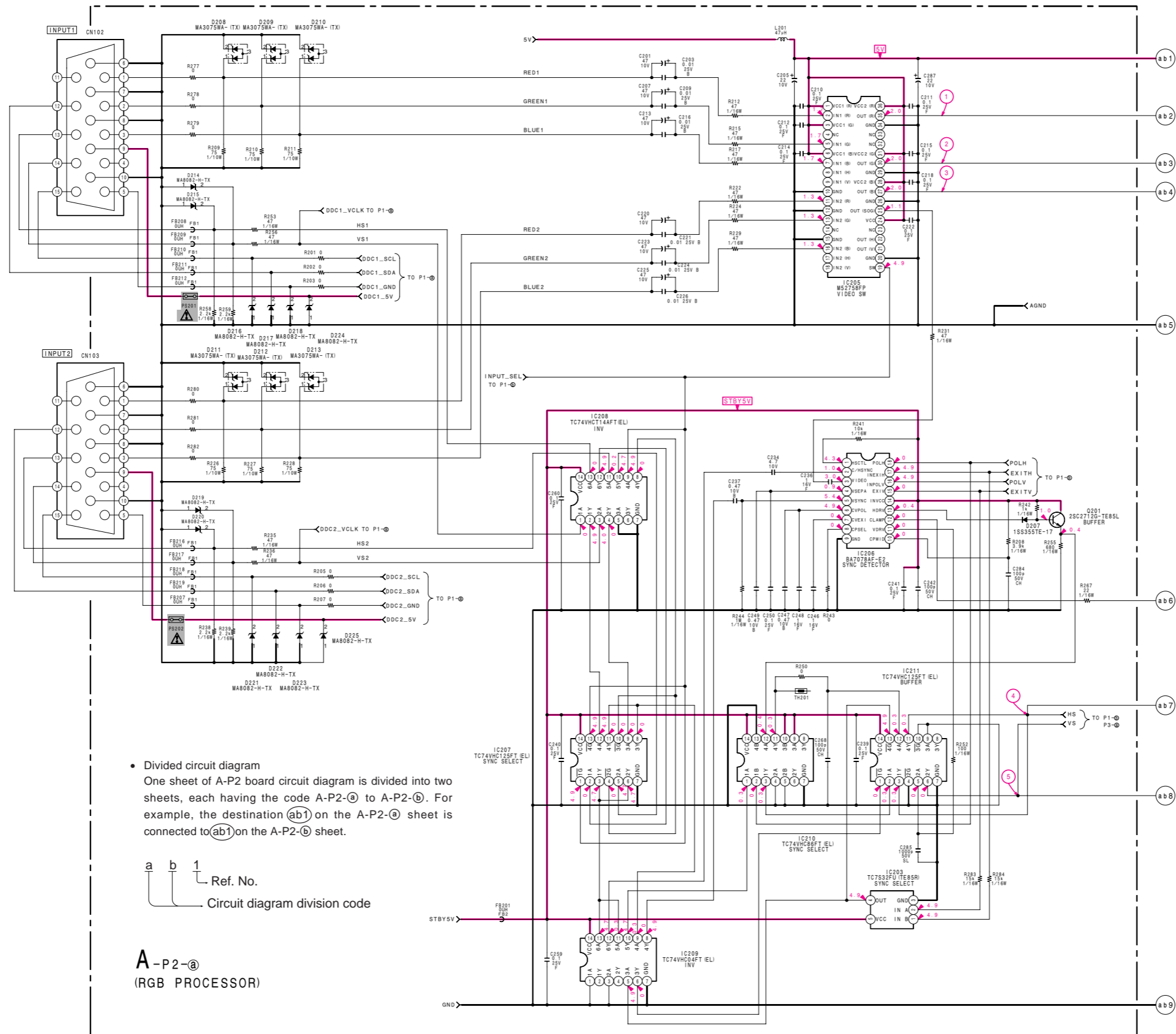
B-SS3534<AEP>-A-P1-a (24)



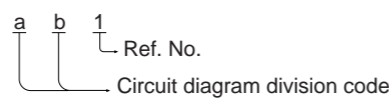
- Divided circuit diagram
- One sheet of A-P1 board circuit diagram is divided into two sheets, each having the code A-P1-ⓐ to A-P1-ⓑ. For example, the destination (ⓐ1) on the A-P1-ⓐ sheet is connected to (ⓐ1) on the A-P1-ⓑ sheet.

a b 1 Ref. No.  
 Circuit diagram division code

B-SS3534<4EP>-A-P1-ⓐ (24)

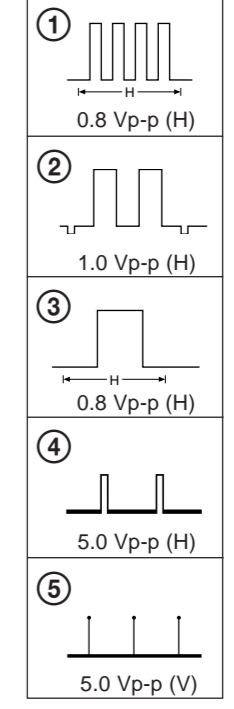


• Divided circuit diagram  
 One sheet of A-P2 board circuit diagram is divided into two sheets, each having the code A-P2-**a** to A-P2-**b**. For example, the destination **(ab1)** on the A-P2-**a** sheet is connected to **(ab1)** on the A-P2-**b** sheet.

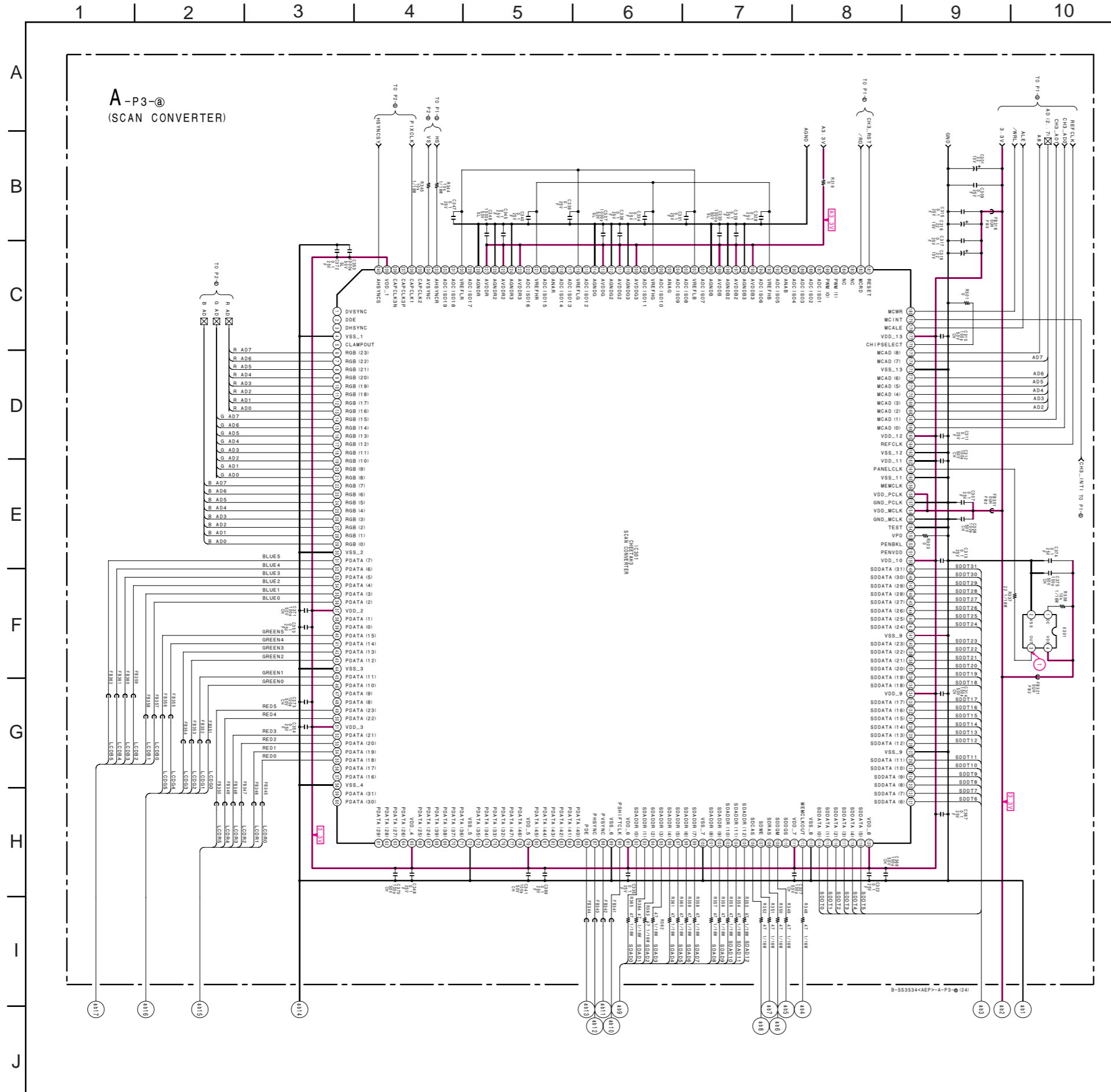


**A-P2-a**  
 (RGB PROCESSOR)

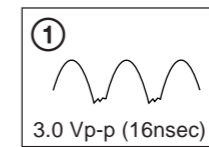
• A - P2-a BOARD WAVEFORMS



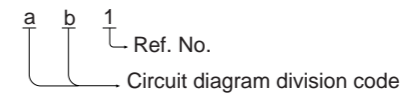


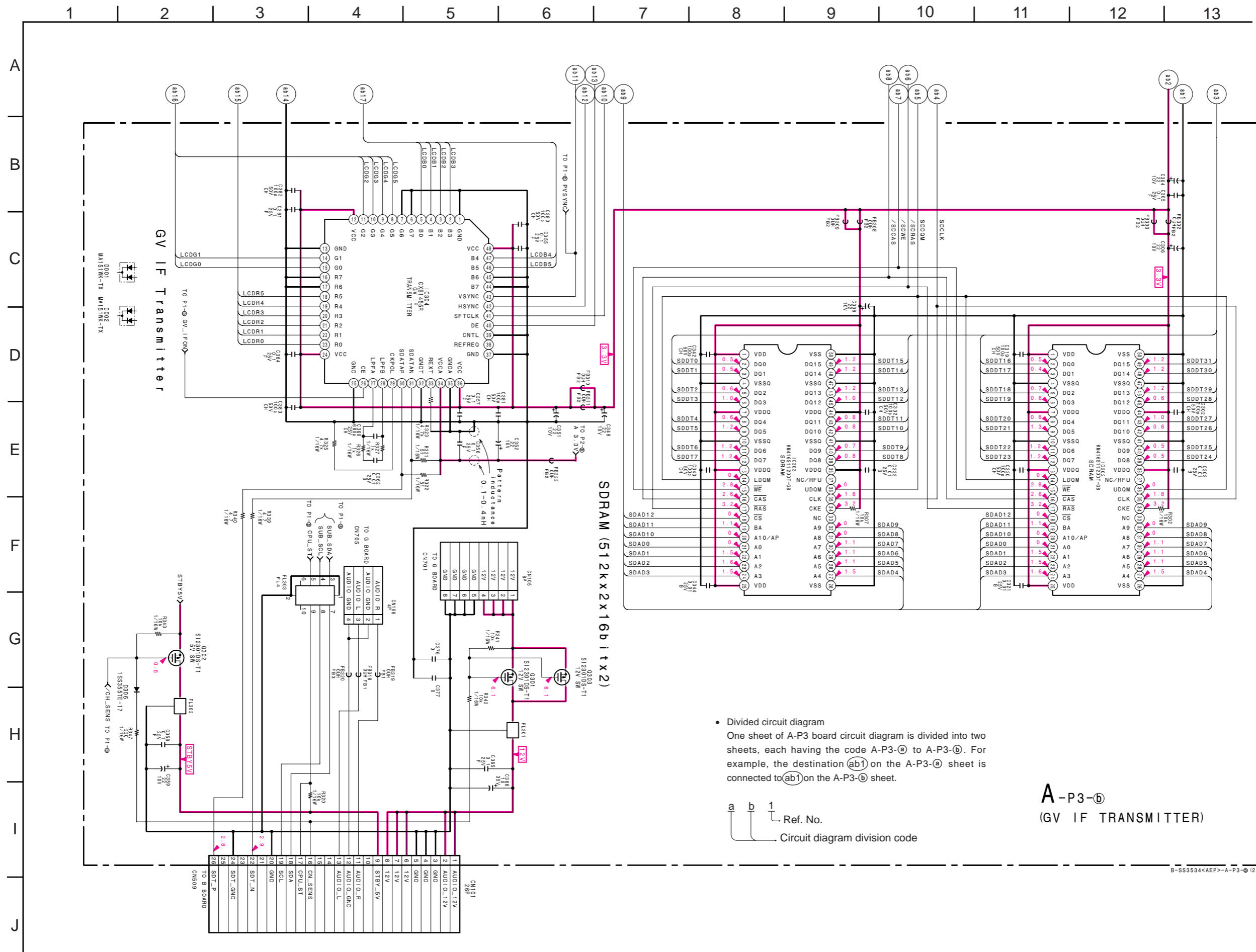


• A - P3-@ BOARD WAVEFORMS

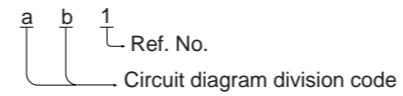


- Divided circuit diagram  
One sheet of A-P3 board circuit diagram is divided into two sheets, each having the code A-P3-@ to A-P3-@. For example, the destination (ab1) on the A-P3-@ sheet is connected to (ab1) on the A-P3-@ sheet.





• Divided circuit diagram  
 One sheet of A-P3 board circuit diagram is divided into two sheets, each having the code A-P3-ⓐ to A-P3-ⓑ. For example, the destination ⓐb1 on the A-P3-ⓐ sheet is connected to ⓐb1 on the A-P3-ⓑ sheet.

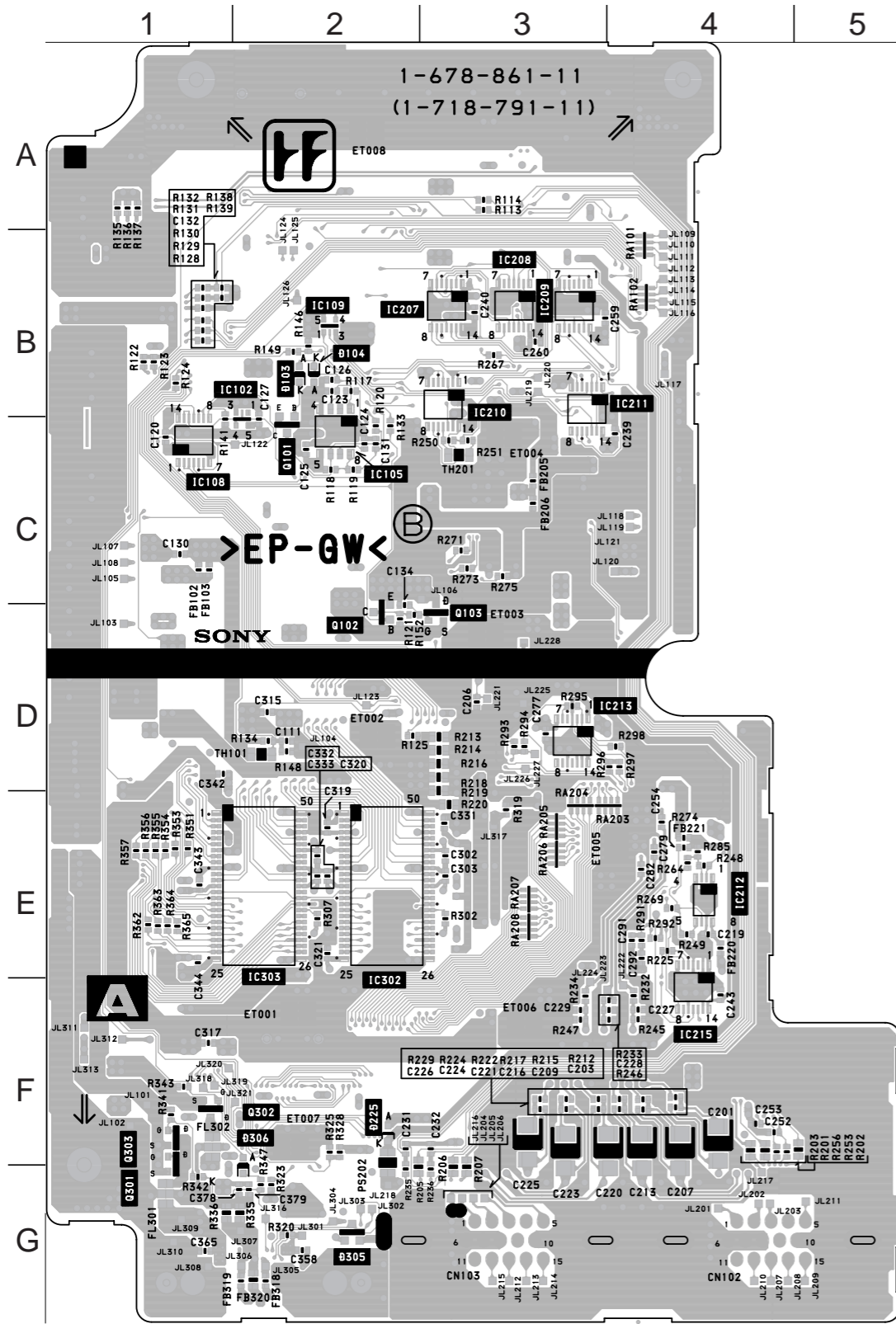


**A-P3-ⓑ**  
 (GV IF TRANSMITTER)

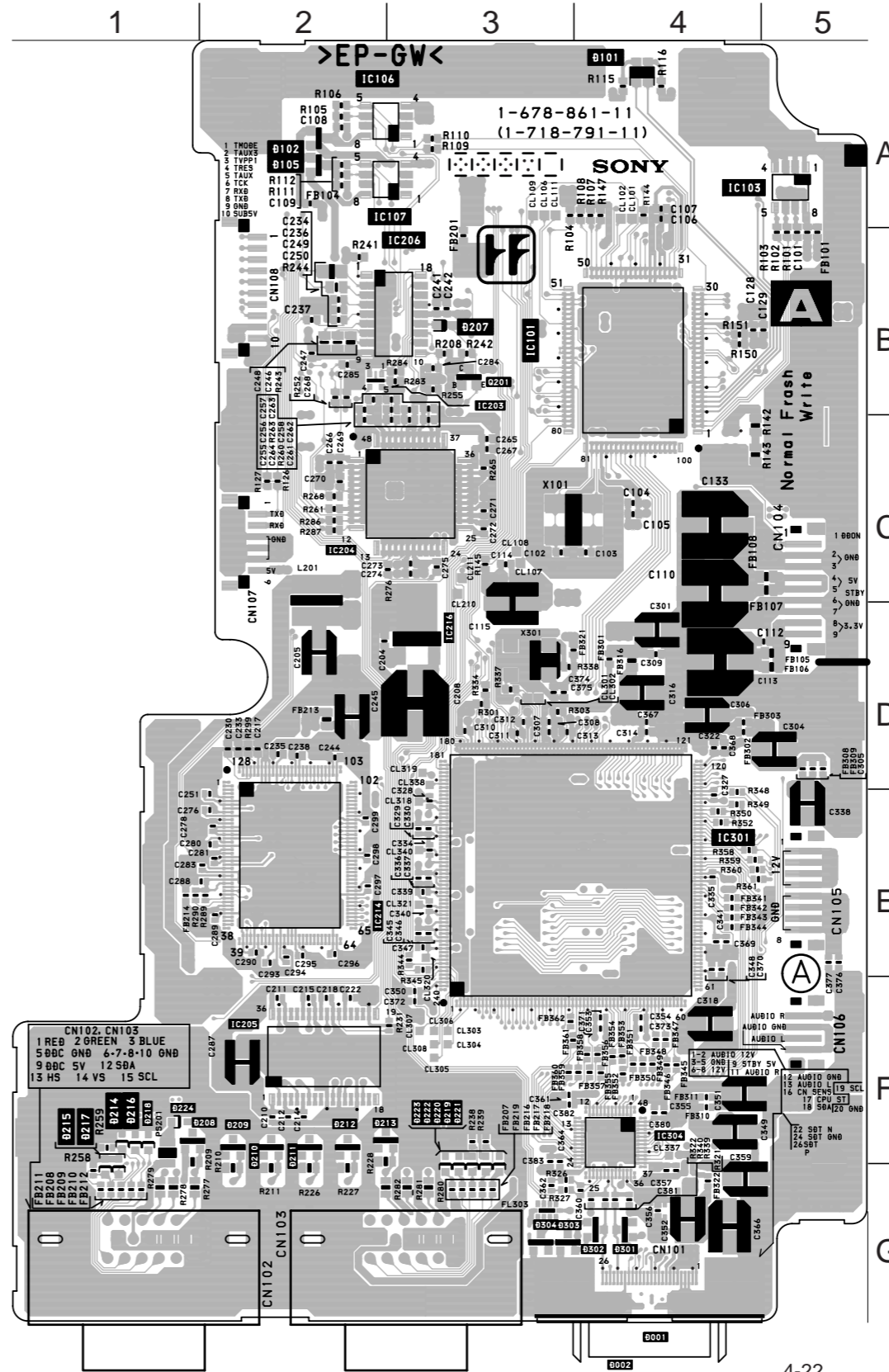
B-SS3534<AEP>-A-P3-ⓑ (2/4)

**A** [ RGB PROCESS, SCAN CONVERTER, GVIF TRANSMITTER, SYSTEM CONTROL ]

— A BOARD (Conductor Side) —



— A BOARD (Component Side) —



• A BOARD SEMICONDUCTOR LOCATION

IC		
(Conductor Side)	(Component Side)	
IC101		B-4
IC102	B-1	
IC103		A-4
IC105	C-2	
IC106	A-2	
IC107	A-2	
IC108	C-1	
IC109	B-2	
IC203	B-3	
IC205		F-2
IC206		B-2
IC207	B-3	
IC208	B-3	
IC209	B-3	
IC210	B-3	
IC211	B-4	
IC212	E-4	
IC214		E-2
IC215	F-4	
IC216		D-3
IC301		E-4
IC302	E-2	
IC303	E-2	
IC304		F-4

TRANSISTOR		
(Conductor Side)	(Component Side)	*
Q101	C-2	⊙
Q102	D-2	⊙
Q103	D-3	⊙
Q201		B-3
Q301	G-1	⊙
Q302	F-2	⊙
Q303	F-1	⊙

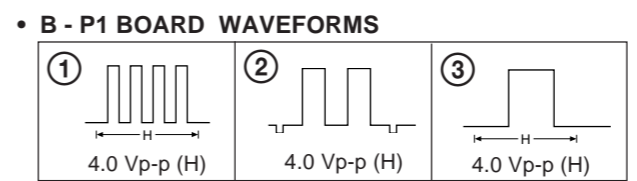
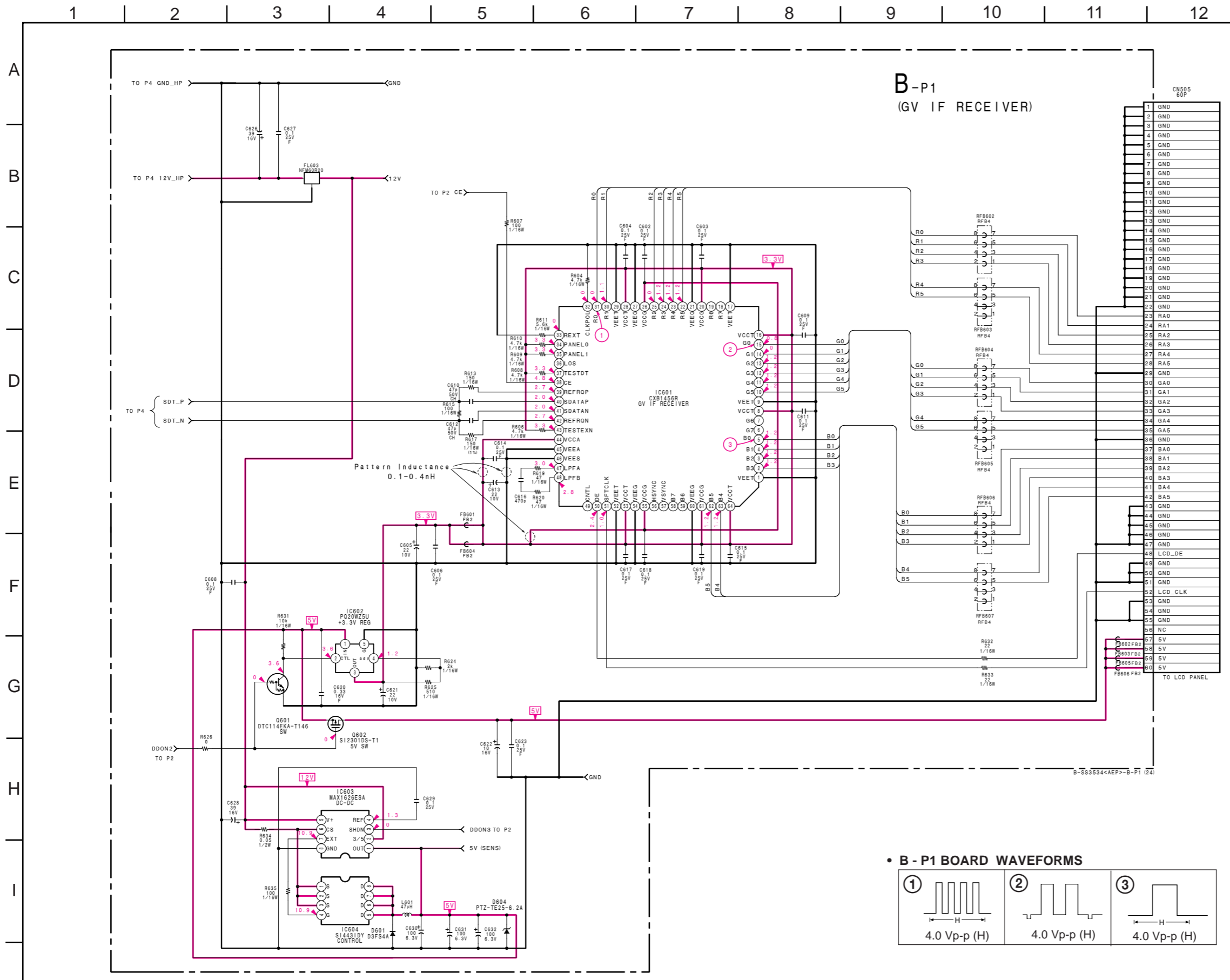
DIODE		
(Conductor Side)	(Component Side)	*
D101	A-4	-
D102	A-2	⊙
D103	B-2	⊙
D104	B-2	⊙
D105	A-2	⊙
D207	B-3	⊙
D208	F-1	⊙
D209	F-2	⊙
D210	F-2	⊙
D211	F-2	⊙
D212	F-2	⊙
D213	F-2	⊙
D214	F-1	⊙
D215	F-1	⊙
D216	F-1	⊙
D217	F-1	⊙
D218	F-1	⊙
D219	F-3	⊙
D220	F-3	⊙
D221	F-3	⊙
D222	F-3	⊙
D223	F-3	⊙
D224	F-1	⊙
D225	F-2	⊙
D306	F-2	⊙

CLYSTRAL		
(Conductor Side)	(Component Side)	
X101	C-3	
X301	D-3	

\*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-8)

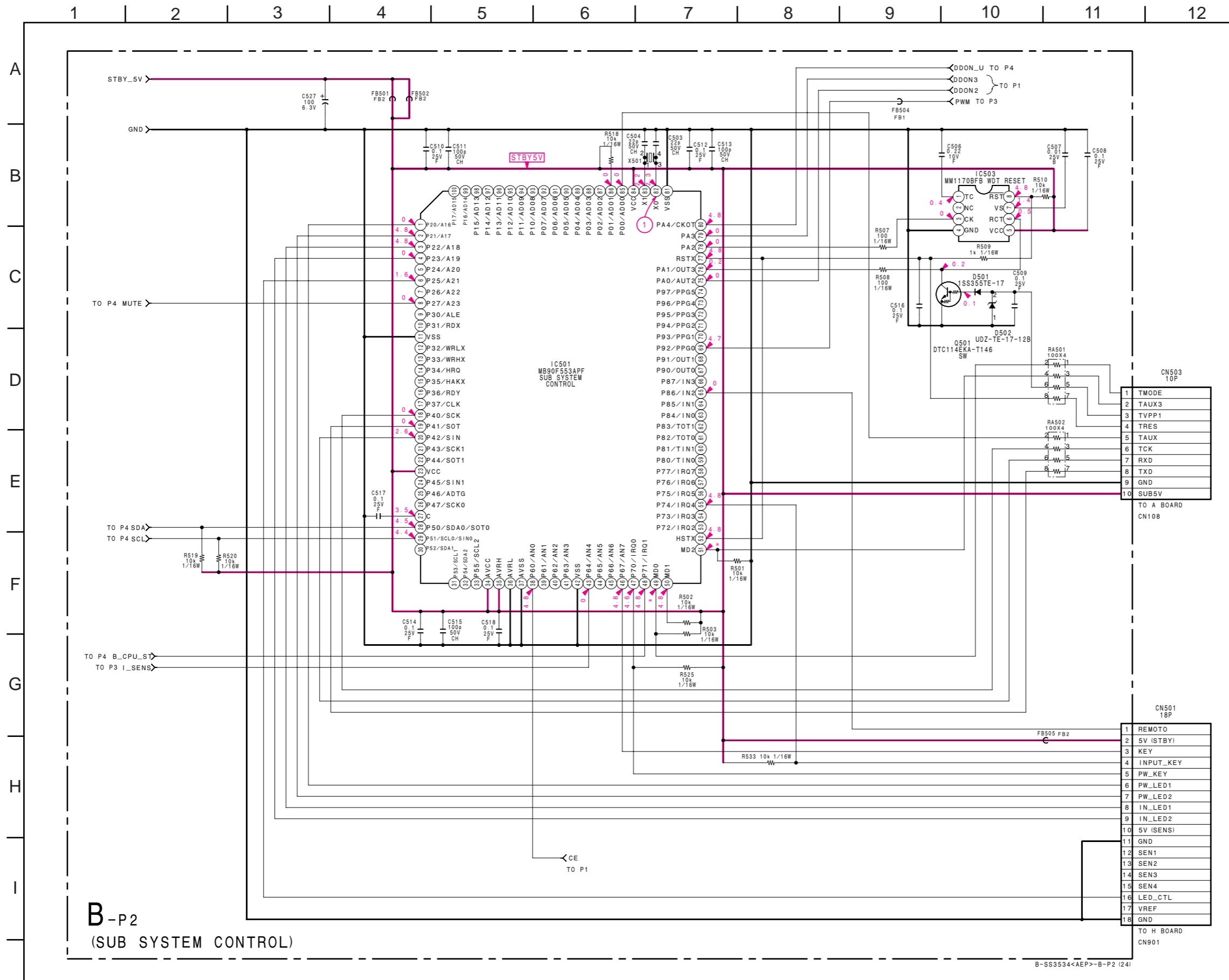
(2) Schematic Diagrams of B (P1-P4) Boards



Schematic diagram

**B** -P1 board →





**B-P2**  
(SUB SYSTEM CONTROL)

CN503 10P	
1	TMODE
2	TAUX3
3	TVPP1
4	TRES
5	TAUX
6	TCK
7	RXD
8	TXD
9	GND
10	SUB5V

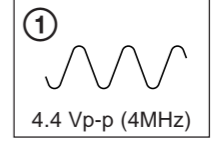
TO A BOARD  
CN108

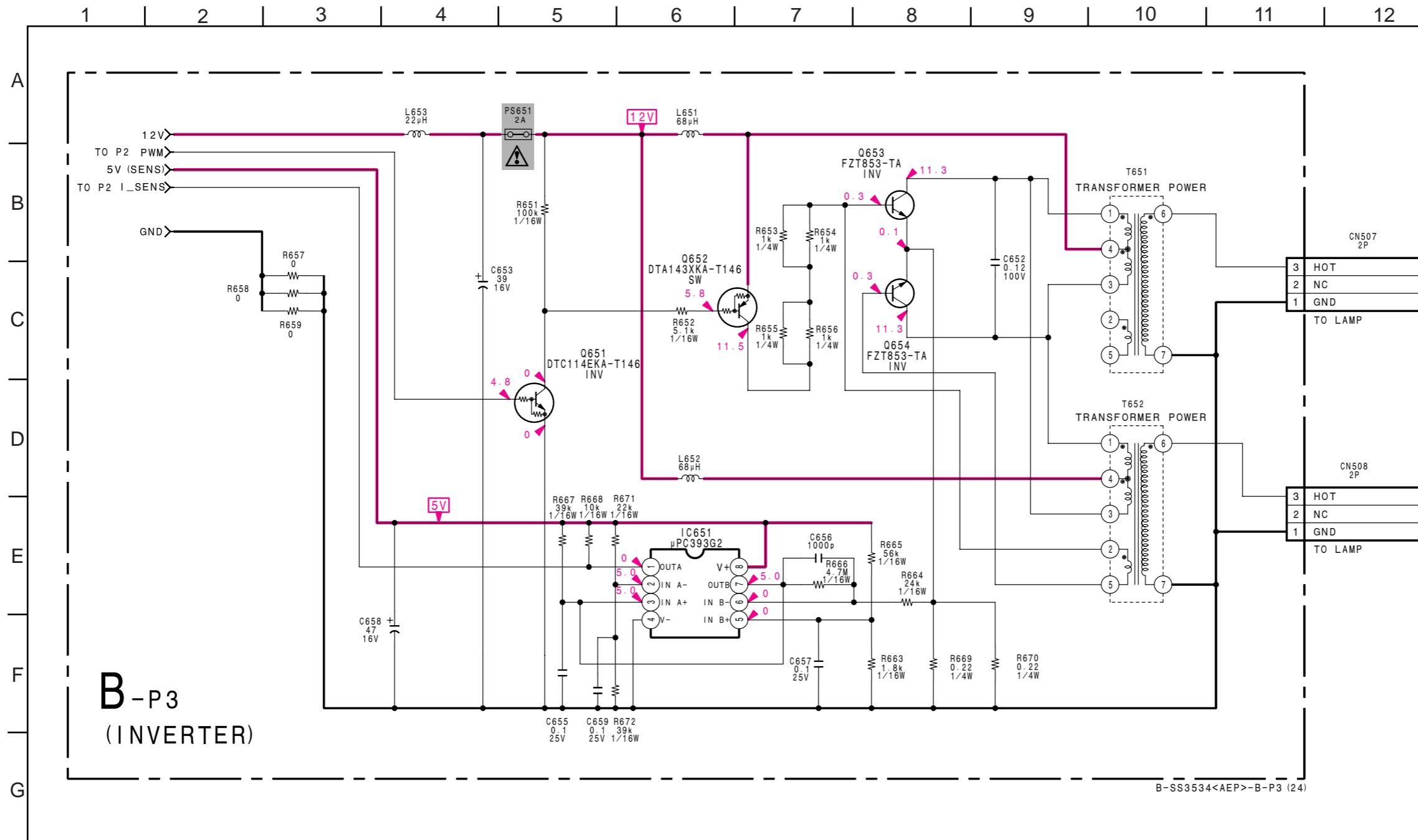
CN501 18P	
1	REMOTO
2	5V (STBY)
3	KEY
4	INPUT_KEY
5	PW_KEY
6	PW_LED1
7	PW_LED2
8	IN_LED1
9	IN_LED2
10	5V (SENS)
11	GND
12	SEN1
13	SEN2
14	SEN3
15	SEN4
16	LED_CTL
17	VREF
18	GND

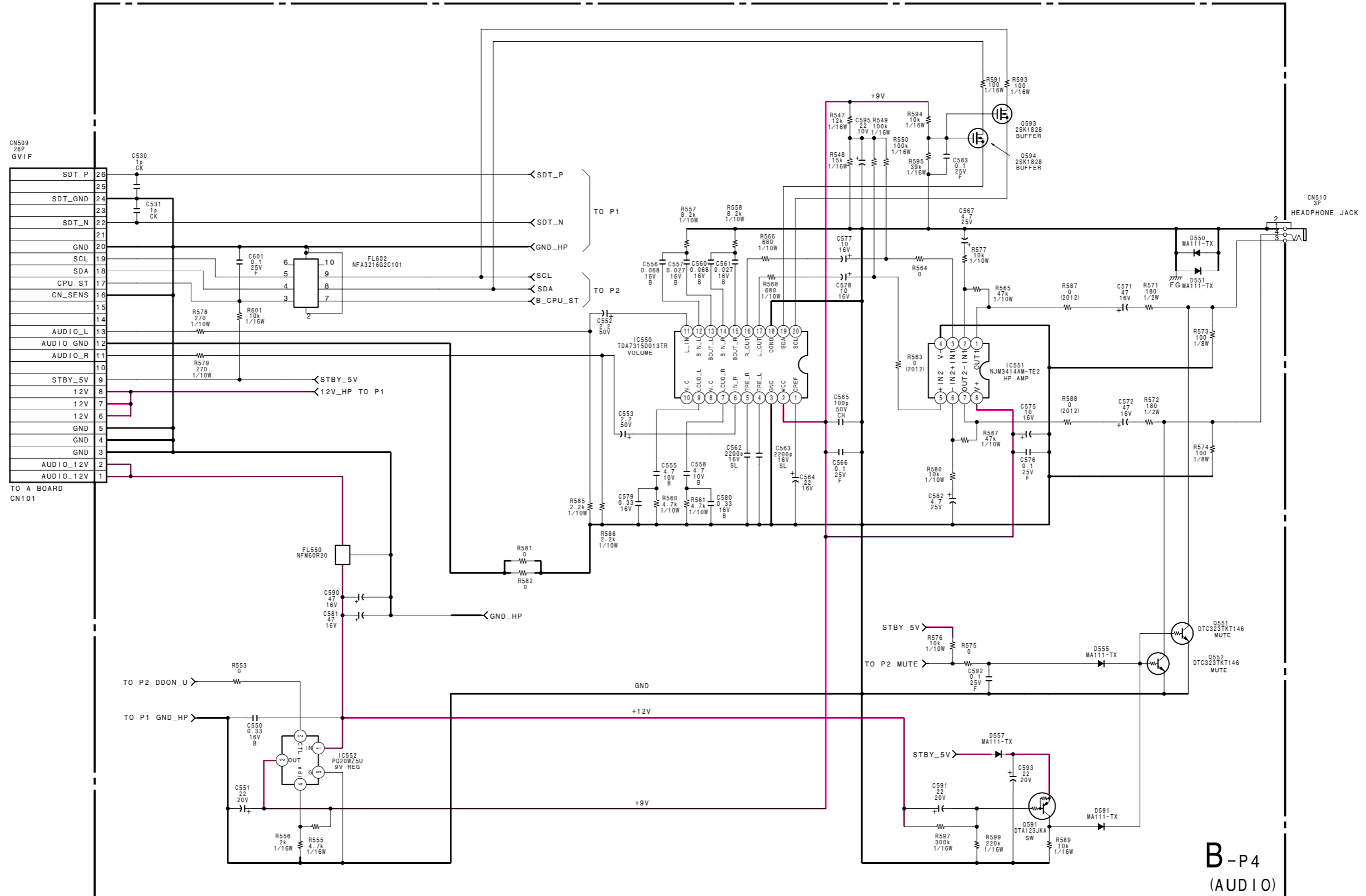
TO H BOARD  
CN901

B-SS3534<AEP>-B-P2 (24)

• B - P2 BOARD WAVEFORMS







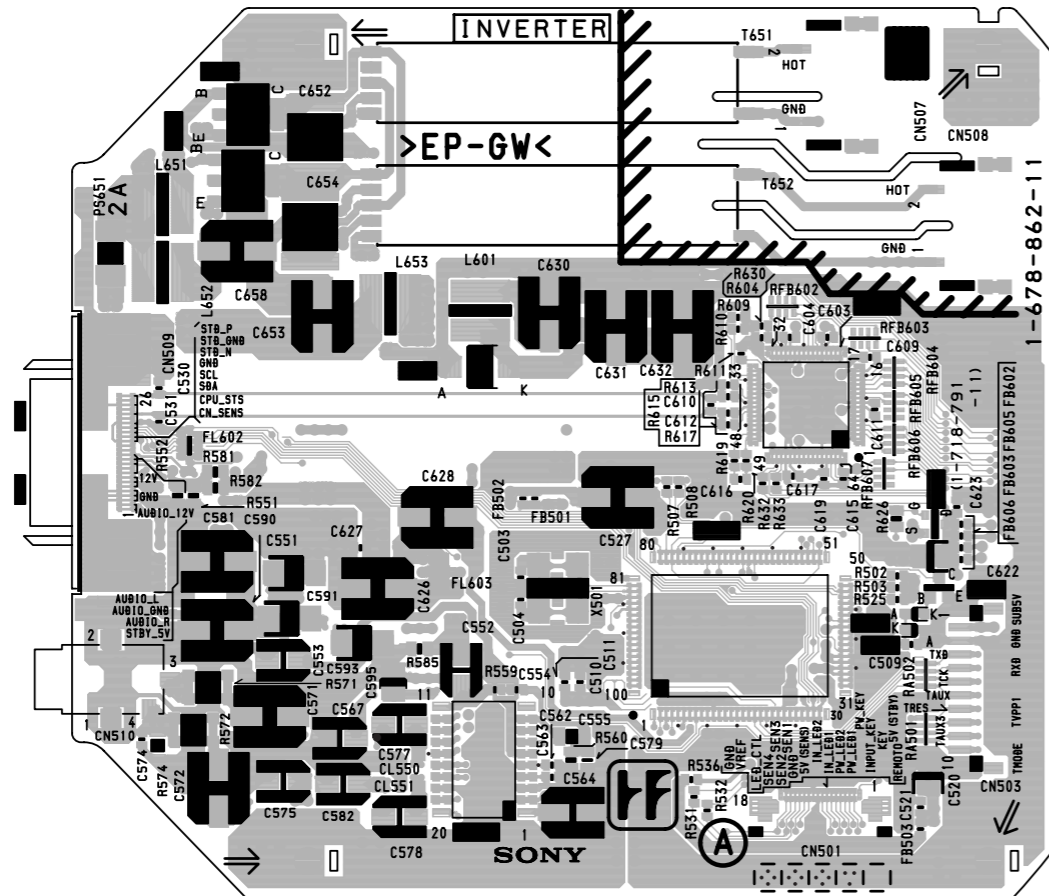
B-P4  
(AUDIO)

B-SS3534<AEP>-B-P4 (24)

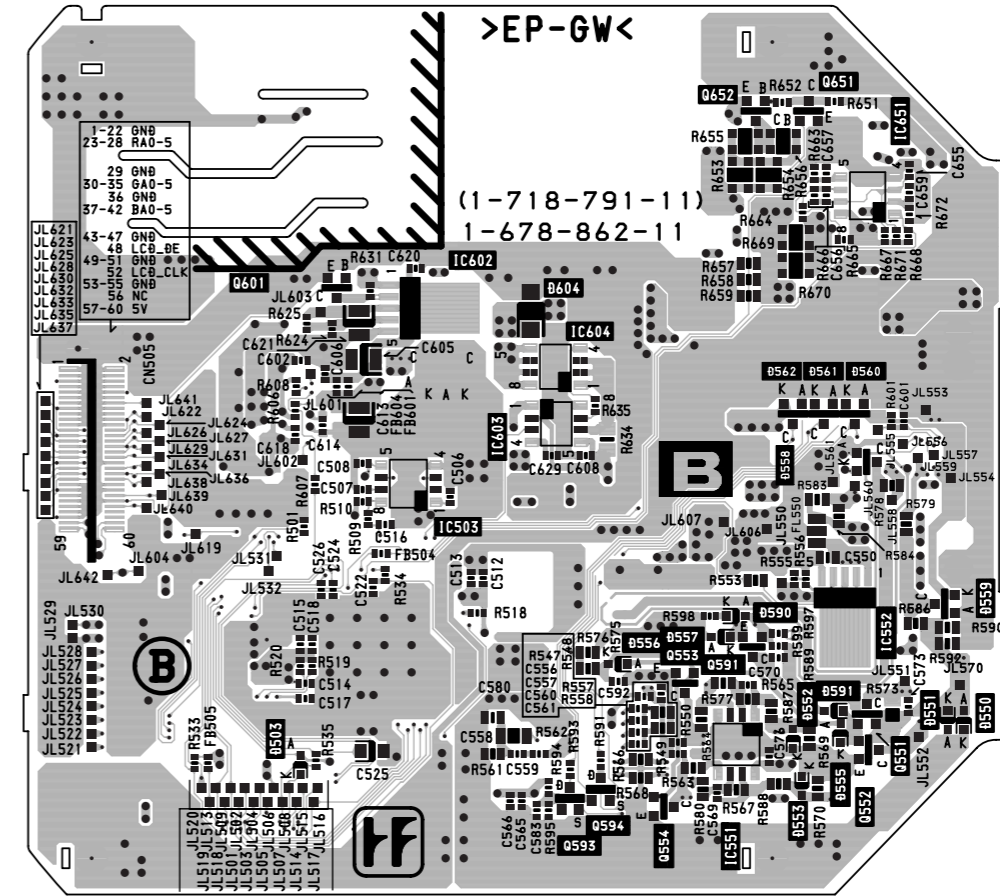
**B**

[ GV IF RECOVER SIB SYSTEM CONTROL, INVERTER, AUDIO ]

— B BOARD (Component Side) —



— B BOARD (Conductor Side) —



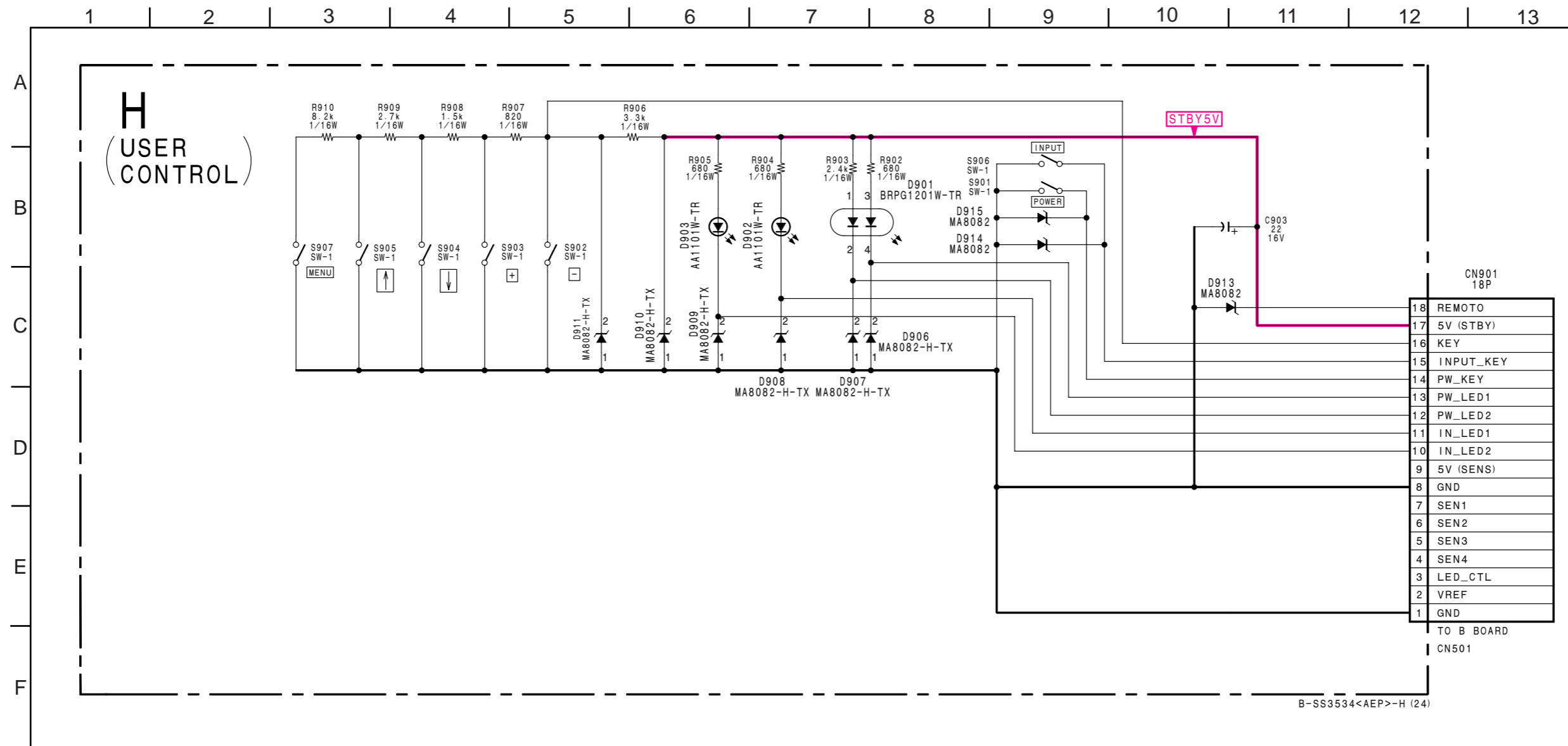
**B BOARD**

Terminal name of semiconductors in silk screen printed circuit (\*)

Ref.	*
Q501, Q551, Q552, Q591, Q601, Q651, Q652, Q653, Q654	②
Q593, Q594, Q602	⑬
D501, D502, D550, D551, D555, D557, D591, D601, D604	③

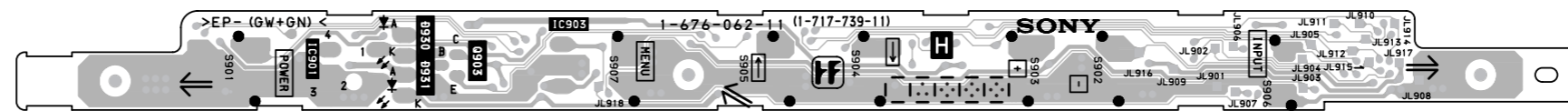
※: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-8)

(3) Schematic Diagram of H Board

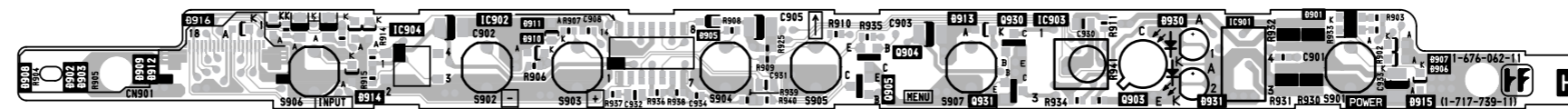


**H** [ USER CONTROL ]

— H BOARD (Component Side) —



— H BOARD (Conductor Side) —



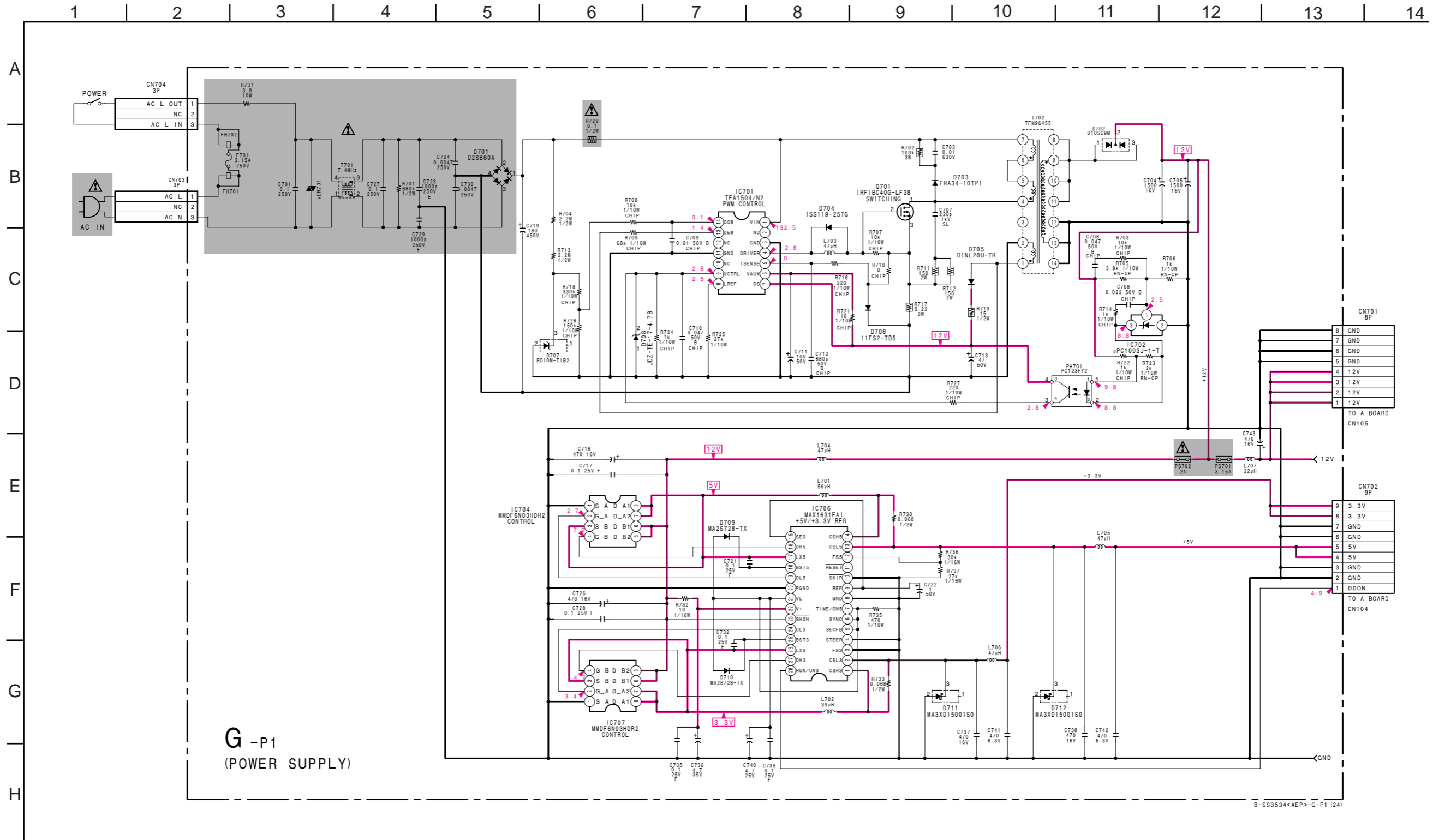
**H BOARD**

Terminal name of semiconductors in silk screen printed circuit (\*)

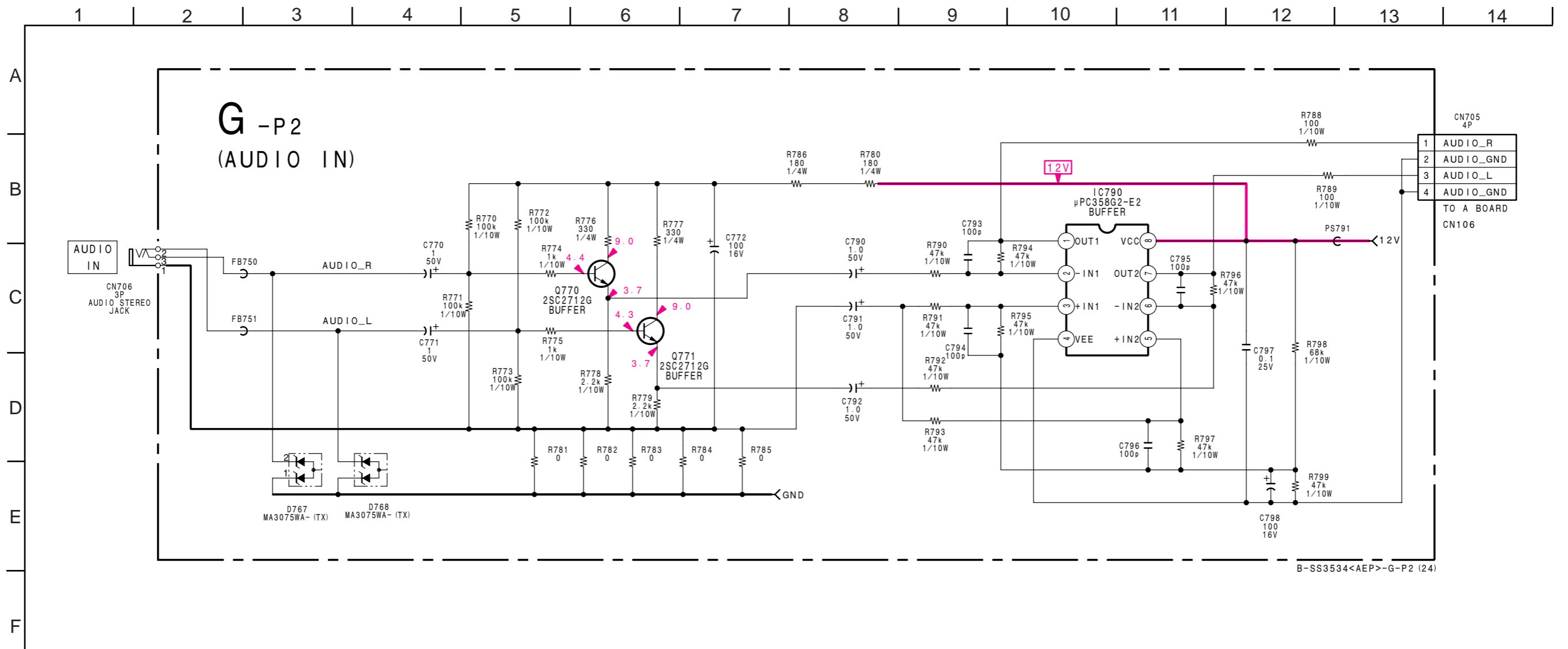
Ref.	*
D906 - D911, D913 - D915	③

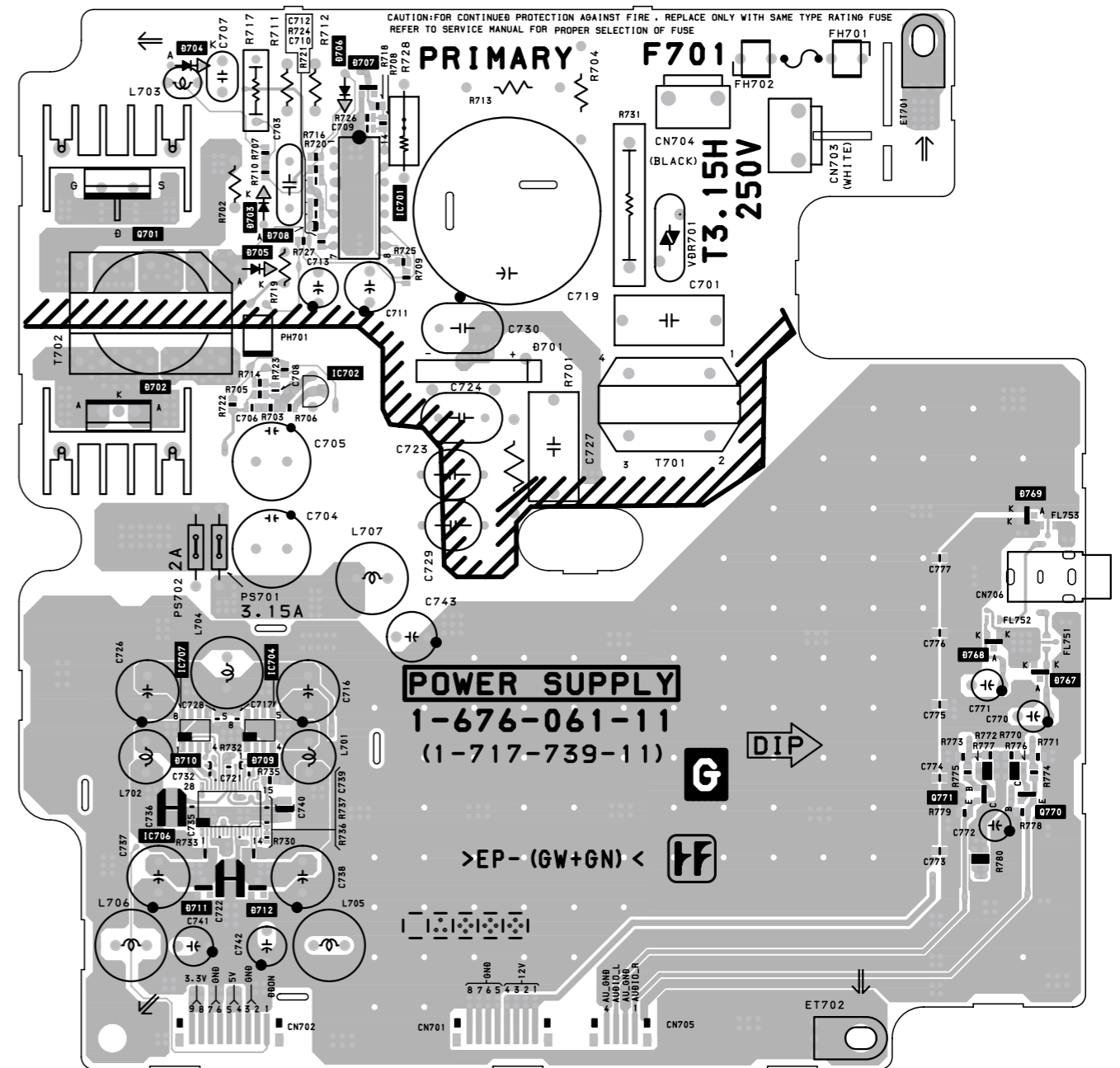
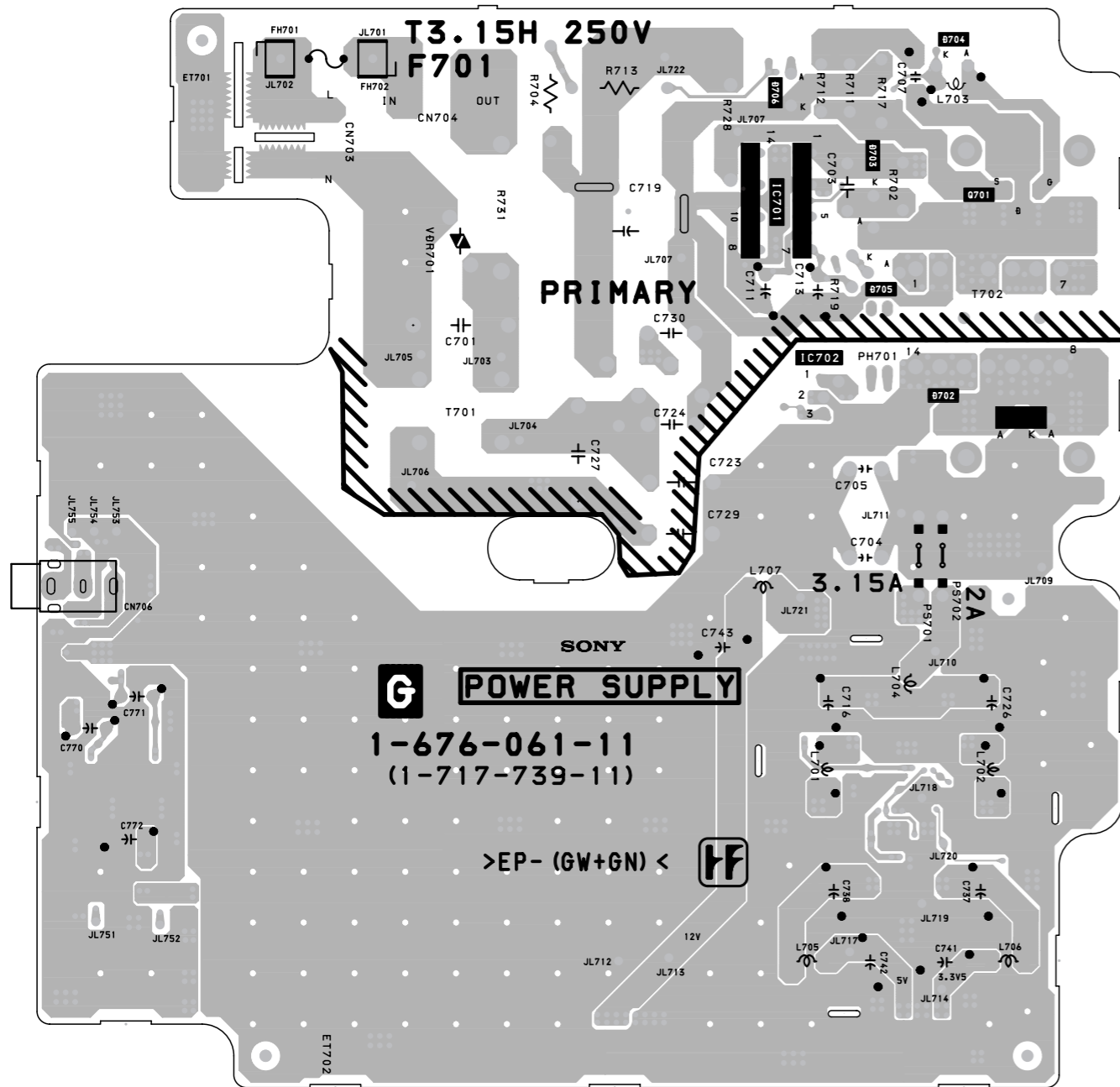
\*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 4-8)

(4) Schematic Diagrams of G (P1-P2) Boards



B-SS3534<AEP>-G-P1 (24)





**G BOARD**  
Terminal name of semiconductors  
in silk screen printed circuit (\*)

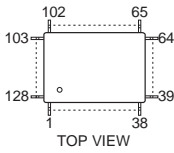
Ref.	*
Q770, Q771	②
D708 - D710	③
D707, D711, D712	⑤
D767, D768	⑪

※: Refer to Terminal name of semiconductors  
in silk screen printed circuit (see page 4-8)

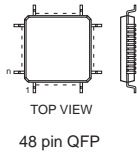


## 4-4. SEMICONDUCTORS

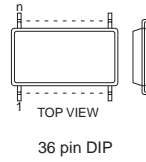
**AD9884-AKS-100S**



**CXB1455R**

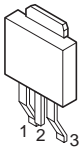


**M52758FP**

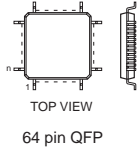


**TC74HC4066AFT(EL)**  
**TC74VHCT04AFT(EL)**  
**TC74VHCT14AFT(EL)**  
**TC74VHC04FT(EL)**  
**TC74VHC125FT(EL)**  
**TC74VHC86FT(EL)**

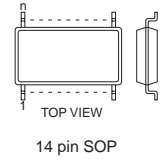
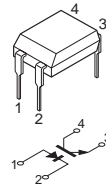
**BA033FP-E2**



**CXB1456R**

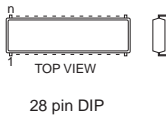


**PC123F2**  
**PC123FY2**

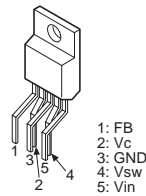


**BA10358F-E2**  
**MAX1626ESA-TE2**  
**MM1170BFB**  
**NJM3414AM**  
**SN74CBTD3306PWR**  
**ST24FC21M6TR**  
**UPC358G2**  
**UPC393G2**  
**24LC21AT/SN**

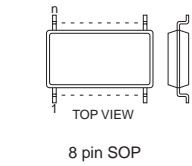
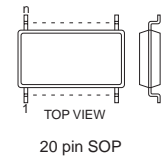
**MAX1631EAI-TG068**



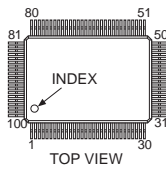
**PQ20VW5U**



**TDA7315D013TR**

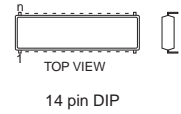


**MB90F553APF-G-BND**

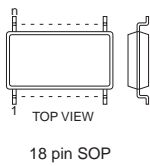


**TC7S04FU(TE85R)**  
**TC74S08FU(TE85R)**  
**TC74S32FU(TE85R)**

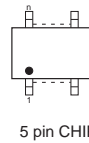
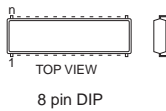
**TEA1504/N2**



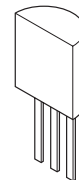
**BA7078AF-E2**



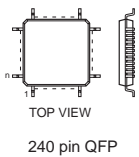
**MMD6N03HDR2**  
**M24C16-MN6T**



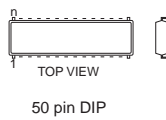
**UPC1093J-1-T**



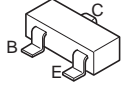
**CHEETAH3**



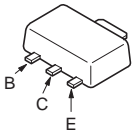
**MSM56V16160D-10**  
**KM416S1120DT-G8**



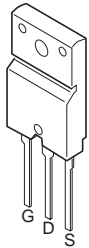
DTA114EKA-T146  
 DTA123JKA-T146  
 DTA143XKA-T146  
 DTC114EK  
 DTC114EKA-T146  
 DTC323TK  
 DTC323TKT146  
 2SC2712G-TE85L  
 2SC2712-YG



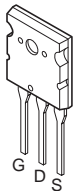
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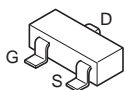
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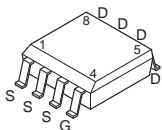
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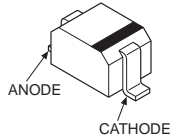
SI2301DS-T1  
 2SK1828  
 2SK1828TE85L



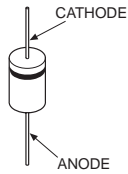
SI4431DY-T1



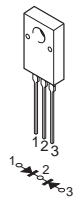
DTZ4.7C  
 MA111  
 RD12SB2  
 UDZ-TE-17-12B  
 UDZ-TE-17-4.7B  
 1SS355TE-17



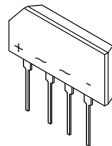
D1NL20U-TR



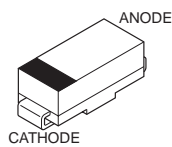
D10SC9M



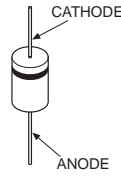
D2SB60A-F04



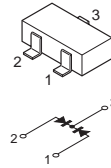
D3FS4A-TA  
 MA2S728  
 PTZ-TE25-6.2A



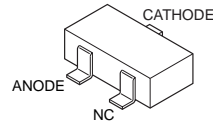
ERA34-10TP1  
 RGP02-20EL-6394



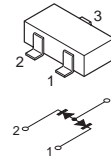
MA151WK-TX  
 1SS184



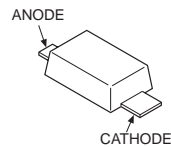
MA3XD15001S0



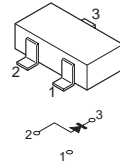
MA3075WA-TX  
 MA3130WA-TX



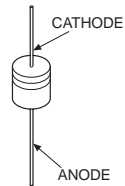
MA8082-H-TX



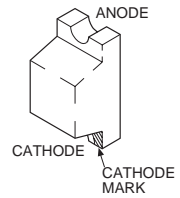
RE10M-B2  
 RE10M-T1B2



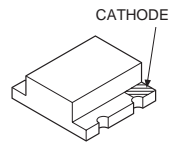
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 11ES2



AA1101W



BRPG1201W



## SECTION 5

### EXPLODED VIEWS

## NOTE:

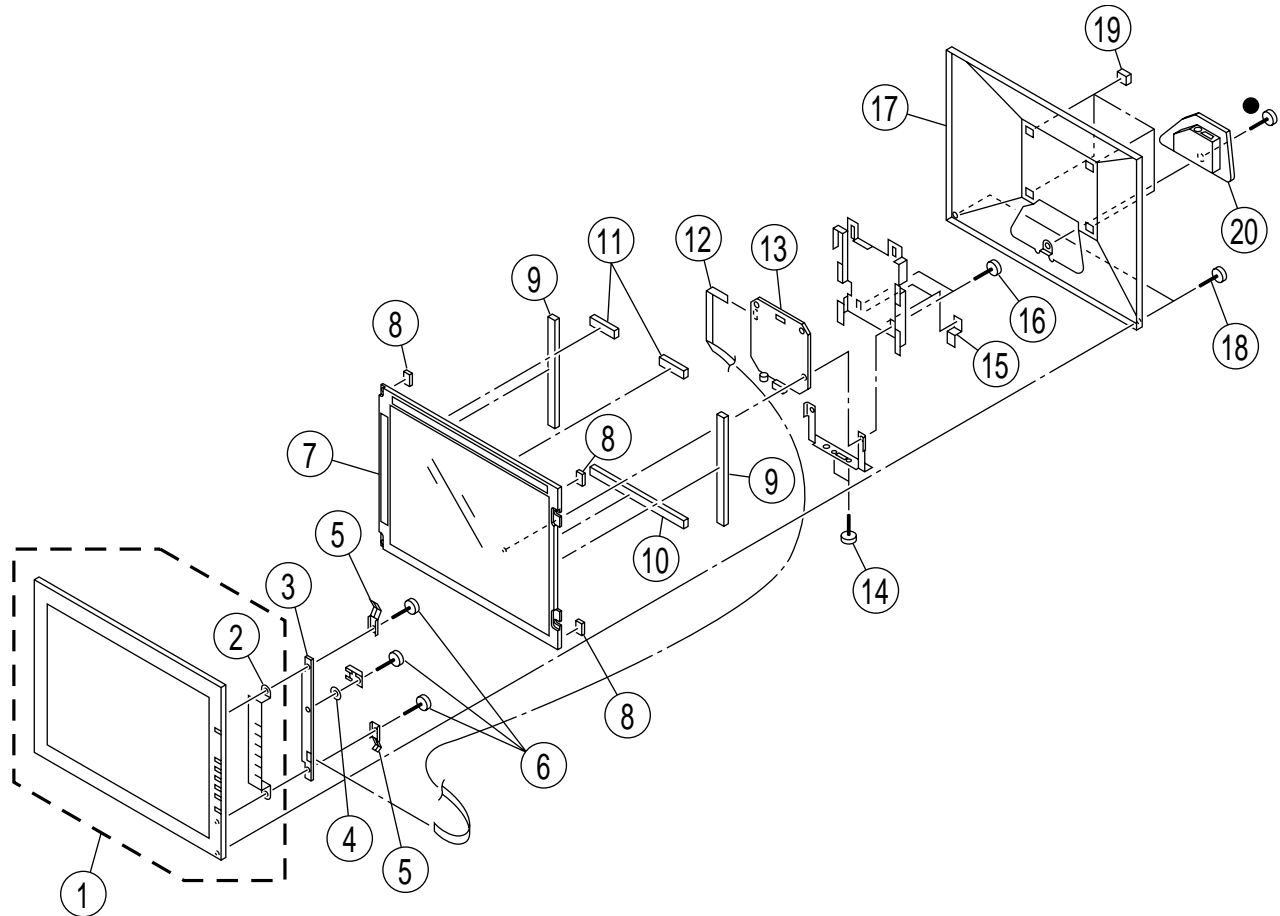
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

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

**5-1. DISPLAY**

- 7-685-144-19 +P 3X5



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4038-117-1	COVER ASSY, FRONT	2	11	4-078-644-01	GASKET (C)	
2	4-073-832-11	BOTTOM, MULTI		12	1-900-251-29	HARENSS ASSY, BH1	
3	* A-1375-205-A	H BOARD, COMPLETE		13	* A-1136-112-A	B BOARD, COMPLETE	
4	4-076-723-01	WASHER (H)		14	4-075-598-21	PAN HEAD SCREW M1.6	
5	4-074-707-01	EARTH (H)		15	4-078-645-01	TAPE, COPPER FOIL	
6	4-077-238-01	BINDING HEAD SCREW 3X7		16	4-639-967-01	SCREW, 0 PLATE SPECIAL HEAD	
7	1-803-900-11	LCD MODULE (TFT)		17	4-076-991-01	COVER, PS REAR	
8	4-074-712-01	HOLDER, PANEL		18	4-075-607-01	TAPPING SCREW 3X8	
9	4-078-642-01	GASKET (A)		19	4-078-256-01	SEAL, COVER	
10	4-078-643-01	GASKET (B)		20	4-076-992-01	COVER, JACK	

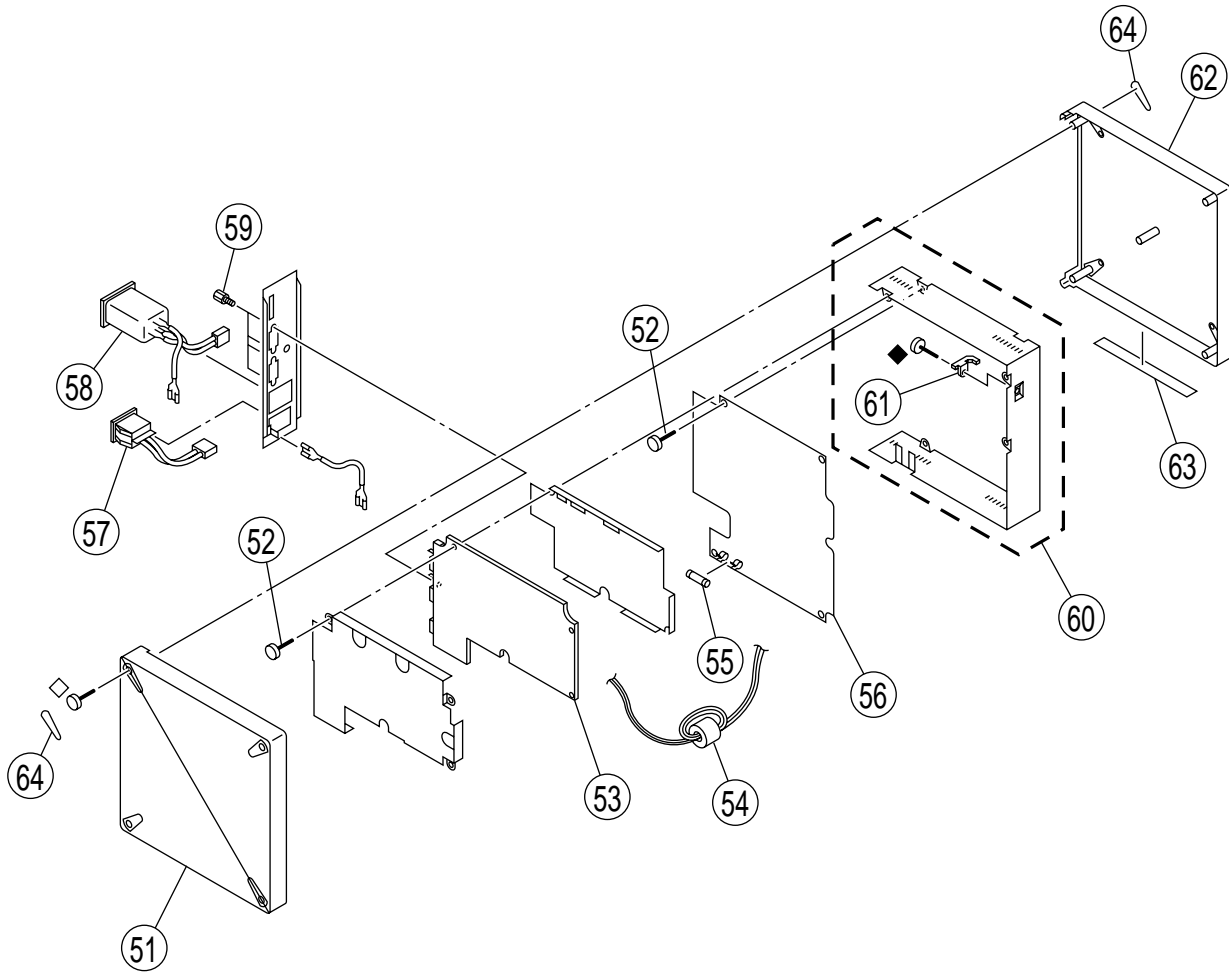
# SDM-N50PS

## 5-2. CHASSIS

- ◇ 7-685-648-79 +BVTP 3X12
- ◆ 7-682-545-01 +B 3X4

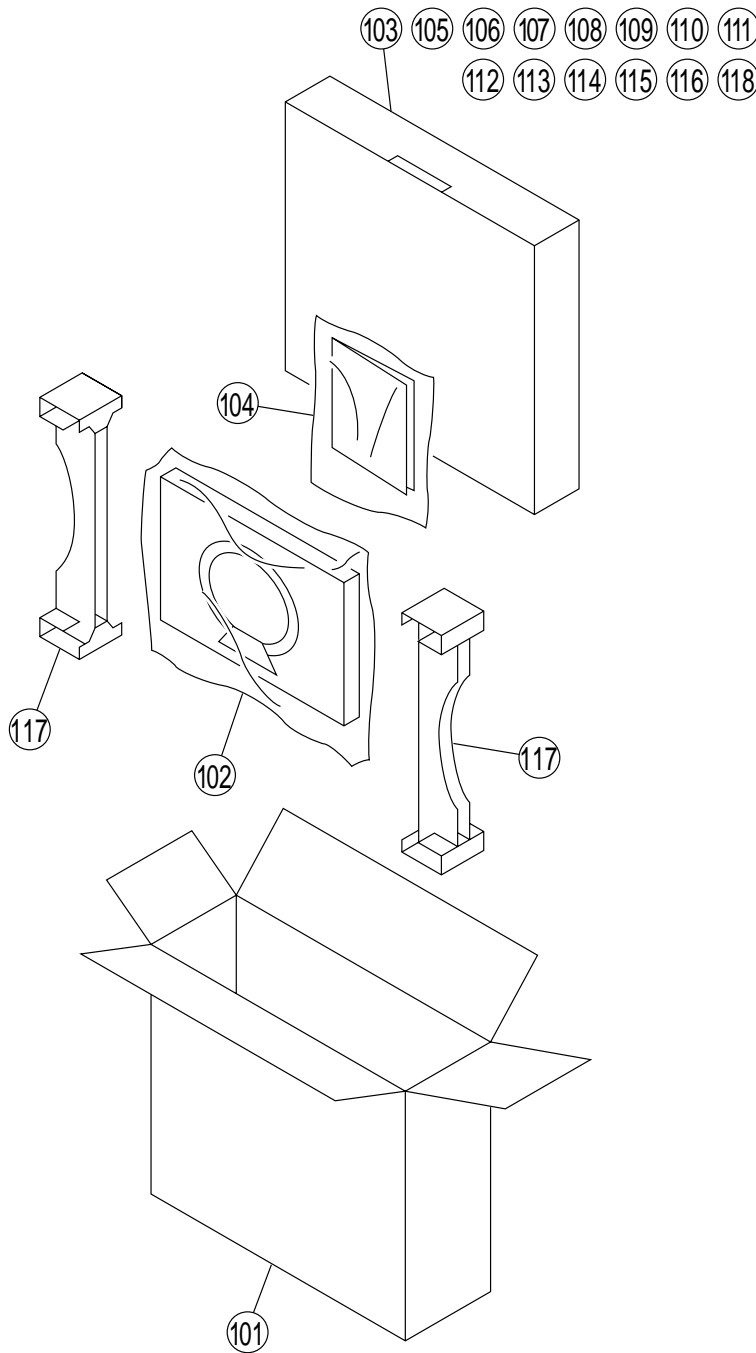
The components identified by mark  $\triangle$  are critical for safety. Replace only with part number specified.

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



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	4-073-836-02	CASE (L)		61	4-073-814-01	GUIDE, LIGHT	
52	4-076-680-01	+TP 3X5		62	4-073-835-02	CASE (R)	
53	*A-1299-260-A	A BOARD, COMPLETE		63	*4-077-824-01	LABEL, INFORMATION	
54	1-500-249-11	BEAD, FERRITE (CASE)		64	4-073-830-01	SHEET (G)	
55	$\triangle$ 1-576-230-11	FUSE (H.B.C.) (3.15A/250V)					
56	*A-1316-521-A	G BOARD, COMPLETE					
57	1-572-434-31	SWITCH, SEESAW (AC PWOER)					
58	$\triangle$ 1-794-122-11	INLET, AC (WITH FILTER)					
59	4-070-122-01	SCREW (HD15)					
60	X-4037-532-2	PLATE ASSY, CHASSIS	61				

5-3. PACKING MATERIALS



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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	*4-077-252-01	INDIVIDUAL CARTON		110	$\Delta$ 1-765-718-11	CORD SET, POWER	(U/C)
102	*4-075-110-01	BAG, PROTECTION		110	$\Delta$ 1-765-719-11	CORD SET, POWER	(AEP)
103	1-772-738-11	PIVOT CD-ROM		111	1-775-444-31	CORD, CONNECTION	
104	4-077-619-11	MANUAL, INSTRUCTION		112	*4-075-109-01	BAG, PROTECTION	
105	1-759-626-21	DISK, UTILITY		113	*4-075-111-01	BAG, PROTECTION	
106	1-759-627-24	DISK, INFORMATION		114	*4-077-762-01	BOX, ACCESSORY	
107	1-778-967-11	ADAPTOR, CONVERSION	(U/C)	115	X-4037-533-1	STAND ASSY	
107	1-785-512-31	CONNECTOR, D SUB (15P CHANGER)	(AEP)	116	X-4038-039-1	STAND ASSY	
108	1-792-515-11	CORD, CONNECTION		117	*4-078-321-01	CUSHION	
109	1-757-013-11	CABLE ASSY (15P DSUB CONNECTOR X2)		118	*4-078-322-01	HOLDER	

## SECTION 6

**B**

## ELECTRICAL PARTS LIST

## NOTE:

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

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

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

The components identified by  $\square$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

- All resistors are in ohms
- F : nonflammable
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## CAPACITORS

MF :  $\mu$ F

## COILS

UH :  $\mu$ H

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1136-112-A	B BOARD, COMPLETE	*****		C572	1-128-704-11	ELECT 47PF	16V
				C575	1-135-854-21	ELECT CHIP 10UF	20% 16V
				C576	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C577	1-135-854-21	ELECT CHIP 10UF	20% 16V
				C578	1-135-854-21	ELECT CHIP 10UF	20% 16V
4-075-598-01	PAN HEAD SCREW M1.6			C579	1-110-501-11	CERAMIC CHIP 0.33UF	10.00% 16V
	<CAPACITOR>			C580	1-110-501-11	CERAMIC CHIP 0.33UF	10.00% 16V
C503	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V	C581	1-128-704-11	ELECT 47PF	16V
C504	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V	C582	1-135-970-21	ELECT CHIP 4.7UF	20% 25V
C506	1-115-467-11	CERAMIC CHIP 0.22UF	10.00% 10V	C583	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C507	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C590	1-128-704-11	ELECT 47PF	16V
C508	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C591	1-113-981-11	TANTAL. CHIP 22UF	20.00% 20V
C509	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C592	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C510	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C593	1-113-981-11	TANTAL. CHIP 22UF	20.00% 20V
C511	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C595	1-128-694-91	TANTAL. CHIP 22UF	20% 10V
C512	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C601	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C513	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C602	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C514	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C603	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C515	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C604	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C516	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C605	1-128-694-91	TANTAL. CHIP 22UF	20% 10V
C517	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C606	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C518	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C608	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C527	1-128-705-11	ELECT 100PF	6.3V	C609	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C530	1-162-905-11	CERAMIC CHIP 1PF	0.25PF 50V	C610	1-162-923-11	CERAMIC CHIP 47PF	5.00% 50V
C531	1-162-905-11	CERAMIC CHIP 1PF	0.25PF 50V	C611	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C550	1-110-501-11	CERAMIC CHIP 0.33UF	10.00% 16V	C612	1-162-923-11	CERAMIC CHIP 47PF	5.00% 50V
C551	1-113-981-11	TANTAL. CHIP 22UF	20.00% 20V	C613	1-128-694-91	TANTAL. CHIP 22UF	20% 10V
C552	1-135-972-21	ELECT CHIP 2.2UF	20% 50V	C614	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C553	1-135-972-21	ELECT CHIP 2.2UF	20% 50V	C615	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C555	1-115-566-11	CERAMIC CHIP 4.7UF	10.00% 10V	C616	1-164-315-11	CERAMIC CHIP 470PF	5.00% 50V
C556	1-110-563-11	CERAMIC CHIP 0.068UF	10.00% 16V	C617	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C557	1-104-700-11	CERAMIC CHIP 0.027UF	10.00% 16V	C618	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C558	1-115-566-11	CERAMIC CHIP 4.7UF	10.00% 10V	C619	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C560	1-110-563-11	CERAMIC CHIP 0.068UF	10.00% 16V	C620	1-165-112-11	CERAMIC CHIP 0.33UF	16V
C561	1-104-700-11	CERAMIC CHIP 0.027UF	10.00% 16V	C621	1-128-694-91	TANTAL. CHIP 22UF	20% 10V
C562	1-164-676-11	CERAMIC CHIP 2200PF	5.00% 16V	C622	1-104-913-11	TANTAL. CHIP 10UF	20.00% 16V
C563	1-164-676-11	CERAMIC CHIP 2200PF	5.00% 16V	C623	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C564	1-135-973-21	ELECT CHIP 22UF	20% 16V	C626	1-135-599-21	ELECT 39UF	20% 16V
C565	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C627	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C566	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C628	1-135-599-21	ELECT 39UF	20% 16V
C567	1-135-970-21	ELECT CHIP 4.7UF	20% 25V	C629	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C571	1-128-704-11	ELECT 47PF	16V	C630	1-135-595-21	ELECT 100UF	20% 6.3V
				C631	1-135-595-21	ELECT 100UF	20% 6.3V

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

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

**B**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK	
C632	1-128-705-11	ELECT	100PF	6.3V	IC550	8-759-273-12	IC TDA7315D013TR	
C652	1-131-616-11	MYLAR CHIP	0.12UF	10%	100V	IC551	8-759-545-66	IC NJM3414AM-TE2
C653	1-135-599-21	ELECT	39UF	20%	16V	IC552	8-759-521-89	IC PQ20WZ5U
C655	1-164-156-11	CERAMIC CHIP	0.1UF	25V	IC601	8-752-088-88	IC CXB1456R	
C656	1-164-357-11	CERAMIC CHIP	1000PF	5.00%	50V	IC602	8-759-521-89	IC PQ20WZ5U
C657	1-164-156-11	CERAMIC CHIP	0.1UF	25V	IC603	8-759-485-63	IC MAX162ESA-TE2	
C658	1-128-704-11	ELECT	47PF	6.3V	IC604	8-729-043-74	TRANSISTOR SI4435DY-T1-REVA	
C659	1-164-156-11	CERAMIC CHIP	0.1UF	25V	IC651	8-759-100-93	IC uPC393G2-E2	
<CONNECTOR>				<COIL>				
CN501	1-691-356-21	CONNECTOR, FFC/FPC (ZIF)	18P	L601	1-419-424-21	INDUCTOR	47UH	
CN503	*1-695-223-21	PIN, CONNECTOR (SMD)	10P	L651	1-469-954-21	INDUCTOR	68UH	
CN505	1-793-912-21	CONNECTOR, BOARD TO BOARD	60P	L652	1-469-954-21	INDUCTOR	68UH	
CN507	*1-766-311-21	PIN, CONNECTOR (PC BOARD)	2P	L653	1-419-426-21	INDUCTOR	22UH	
CN508	*1-766-311-21	PIN, CONNECTOR (PC BOARD)	2P	<IC LINK>				
CN509	1-794-071-21	CONNECTOR, INTERFACE	26P	PS651	$\Delta$ 1-533-999-21	FUSE, (SMD)	(2.0A)	
CN510	1-794-582-21	JACK		<TRANSISTOR>				
<DIODE>				<RESISTOR>				
D005	8-719-801-78	DIODE 1SS184		Q501	8-729-900-53	TRANSISTOR	DTC114EK	
D006	8-719-801-78	DIODE 1SS184		Q551	8-729-015-39	TRANSISTOR	DTC323TK	
D501	8-719-988-61	DIODE 1SS355TE-17		Q552	8-729-015-39	TRANSISTOR	DTC323TK	
D502	8-719-158-49	ZENER DIODE RD12SB2		Q591	8-729-027-29	TRANSISTOR	DTA123JKA-T146	
D550	8-719-073-01	DIODE MA111-(K8).S0		Q593	8-729-025-28	TRANSISTOR	2SK1828	
D551	8-719-073-01	DIODE MA111-(K8).S0		Q594	8-729-025-28	TRANSISTOR	2SK1828	
D555	8-719-073-01	DIODE MA111-(K8).S0		Q601	8-729-900-53	TRANSISTOR	DTC114EK	
D557	8-719-073-01	DIODE MA111-(K8).S0		Q602	8-729-046-75	TRANSISTOR	SI2301DS-T1	
D591	8-719-073-01	DIODE MA111-(K8).S0		Q651	8-729-900-53	TRANSISTOR	DTC114EK	
D601	8-719-054-47	DIODE D3FS4A-TA		Q652	8-729-027-36	TRANSISTOR	DTA143XKA-T146	
D604	8-719-073-69	ZENER DIODE PTZ-TE25-6.2A		Q653	8-729-051-52	TRANSISTOR	FZT853-TA	
<FERRITE BEAD>				Q654	8-729-051-52	TRANSISTOR	FZT853-TA	
FB501	1-414-445-11	FERRITE	0UH	<RESISTOR>				
FB502	1-414-445-11	FERRITE	0UH	R501	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FB504	1-469-118-21	FERRITE	0UH	R502	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FB505	1-414-445-11	FERRITE	0UH	R503	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FB601	1-414-445-11	FERRITE	0UH	R507	1-216-809-11	RES-CHIP	100 5% 1/16W	
FB602	1-414-445-11	FERRITE	0UH	R508	1-216-809-11	RES-CHIP	100 5% 1/16W	
FB603	1-414-445-11	FERRITE	0UH	R509	1-216-821-11	RES-CHIP	1K 5% 1/16W	
FB604	1-414-445-11	FERRITE	0UH	R510	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FB605	1-414-445-11	FERRITE	0UH	R518	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FB606	1-414-445-11	FERRITE	0UH	R519	1-216-833-91	RES-CHIP	10K 5% 1/16W	
<FILTER>				R520	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FL550	1-234-498-21	FILTER, EMI		R525	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FL602	1-469-461-21	FERRITE	0UH	R533	1-216-833-91	RES-CHIP	10K 5% 1/16W	
FL603	1-234-498-21	FILTER, EMI		R547	1-216-834-11	RES-CHIP	12K 5% 1/16W	
<IC>				R548	1-216-835-11	RES-CHIP	15K 5% 1/16W	
IC501	8-759-686-58	IC MB90F553APF-G-BND-AR2		R549	1-216-845-11	RES-CHIP	100K 5% 1/16W	
IC503	8-759-162-80	IC MM1170BFB		R550	1-216-845-11	RES-CHIP	100K 5% 1/16W	
				R553	1-216-295-91	SHORT	0	
				R555	1-218-708-11	METAL CHIP	4.7K 0.50% 1/16W	
				R556	1-218-271-11	RES-CHIP	2K 5% 1/16W	
				R557	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	

**SDM-N50PS**



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R558	1-216-071-00	RES-CHIP	8.2K 5% 1/10W	R654	1-220-264-11	RES-CHIP	1K 5% 1/4W
R560	1-240-079-21	RES-CHIP	4.7K 5% 1/10W	R655	1-220-264-11	RES-CHIP	1K 5% 1/4W
R561	1-240-079-21	RES-CHIP	4.7K 5% 1/10W	R656	1-220-264-11	RES-CHIP	1K 5% 1/4W
R563	1-216-295-91	SHORT	0	R657	1-216-295-91	SHORT	0
R564	1-216-295-91	SHORT	0	R658	1-216-295-91	SHORT	0
R565	1-240-091-21	RES-CHIP	47K 5% 1/10W	R659	1-216-295-91	SHORT	0
R566	1-216-647-11	RES-CHIP	680 5% 1/10W	R663	1-218-698-11	METAL CHIP	1.8K 0.50%1/16W
R567	1-240-091-21	RES-CHIP	47K 5% 1/10W	R664	1-218-725-11	RES-CHIP	24K 5% 1/16W
R568	1-216-647-11	RES-CHIP	680 5% 1/10W	R665	1-218-734-11	METAL CHIP	56K 0.50%1/16W
R571	1-220-267-11	RES-CHIP	180 5% 1/2W	R666	1-220-397-11	RES-CHIP	4.7M 5% 1/16W
R572	1-220-267-11	RES-CHIP	180 5% 1/2W	R667	1-216-840-11	RES-CHIP	39K 5% 1/16W
R573	1-240-128-21	RES-CHIP	100 5% 1/8W	R668	1-216-833-91	RES-CHIP	10K 5% 1/16W
R574	1-240-128-21	RES-CHIP	100 5% 1/8W	R669	1-211-899-11	RES-CHIP	0.22 10% 1/4W
R575	1-216-295-91	SHORT	0	R670	1-211-899-11	RES-CHIP	0.22 10% 1/4W
R576	1-216-675-11	RES-CHIP	10K 5% 1/10W	R671	1-216-837-11	RES-CHIP	22K 5% 1/16W
R577	1-216-675-11	RES-CHIP	10K 5% 1/10W	R672	1-216-840-11	RES-CHIP	39K 5% 1/16W
R578	1-240-064-21	RES-CHIP	270 5% 1/10W	<NETWORK RESISTOR>			
R579	1-240-064-21	RES-CHIP	270 5% 1/10W	RA501	1-239-412-11	NETWORK RESISTOR (CHIP)	100
R580	1-216-675-11	RES-CHIP	10K 5% 1/10W	RA502	1-239-412-11	NETWORK RESISTOR (CHIP)	100
R581	1-216-295-91	SHORT	0	<FERRITE>			
R582	1-216-295-91	SHORT	0	RFB602	1-469-312-21	ARRAY, FERRITE CHIP	
R585	1-216-659-11	RES-CHIP	2.2K 5% 1/10W	RFB603	1-469-312-21	ARRAY, FERRITE CHIP	
R586	1-216-659-11	RES-CHIP	2.2K 5% 1/10W	RFB604	1-469-312-21	ARRAY, FERRITE CHIP	
R587	1-216-295-91	SHORT	0	RFB605	1-469-312-21	ARRAY, FERRITE CHIP	
R588	1-216-295-91	SHORT	0	RFB606	1-469-312-21	ARRAY, FERRITE CHIP	
R589	1-216-833-91	RES-CHIP	10K 5% 1/16W	RFB607	1-469-312-21	ARRAY, FERRITE CHIP	
R591	1-216-809-11	RES-CHIP	100 5% 1/16W	<TRANSFORMER>			
R593	1-216-809-11	RES-CHIP	100 5% 1/16W	T651	1-435-299-11	TRANSFORMER, INVERTER (SMD)	
R594	1-216-833-91	RES-CHIP	10K 5% 1/16W	T652	1-435-299-11	TRANSFORMER, INVERTER (SMD)	
R595	1-216-840-11	RES-CHIP	39K 5% 1/16W	<CRYSTAL>			
R597	1-218-751-11	RES-CHIP	300K 5% 1/16W	X501	1-767-340-11	VIBRATOR, CRYSTAL	
R599	1-216-849-11	RES-CHIP	220K 5% 1/16W	*****			
R601	1-216-833-91	RES-CHIP	10K 5% 1/16W				
R604	1-216-829-11	RES-CHIP	4.7K 5% 1/16W				
R606	1-216-829-11	RES-CHIP	4.7K 5% 1/16W				
R607	1-216-809-11	RES-CHIP	100 5% 1/16W				
R608	1-216-829-11	RES-CHIP	4.7K 5% 1/16W				
R609	1-216-829-11	RES-CHIP	4.7K 5% 1/16W				
R610	1-216-829-11	RES-CHIP	4.7K 5% 1/16W				
R611	1-218-710-91	METAL CHIP	5.6K 0.50%1/16W				
R613	1-218-672-11	METAL CHIP	150 0.50%1/16W				
R615	1-218-668-11	METAL CHIP	100 0.50%1/16W				
R617	1-218-672-11	METAL CHIP	150 0.50%1/16W				
R619	1-218-660-91	METAL CHIP	47 0.50%1/16W				
R620	1-218-660-91	METAL CHIP	47 0.50%1/16W				
R624	1-218-271-11	RES-CHIP	2K 5% 1/16W				
R625	1-218-685-11	METAL CHIP	510 0.50%1/16W				
R626	1-216-295-91	SHORT	0				
R631	1-216-833-91	RES-CHIP	10K 5% 1/16W				
R632	1-216-801-11	RES-CHIP	22 5% 1/16W				
R633	1-216-801-11	RES-CHIP	22 5% 1/16W				
R634	1-240-941-91	METAL CHIP	0.05 1% 1/2W				
R635	1-216-809-11	RES-CHIP	100 5% 1/16W				
R651	1-216-845-11	RES-CHIP	100K 5% 1/16W				
R652	1-218-272-11	RES-CHIP	5.1K 5% 1/16W				
R653	1-220-264-11	RES-CHIP	1K 5% 1/4W				





REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	* A-1375-205-A	H BOARD, COMPLETE *****			* A-1299-260-A	A BOARD, COMPLETE *****	
		<CAPACITOR>			4-075-598-01	PAN HEAD SCREW M1.6	
C903	1-119-751-11	TANTAL. CHIP 22UF	20.00% 16V		4-076-495-01	SHEET, INSULATION (A)	
		<CONNECTOR>			<CAPACITOR>		
CN901	1-691-356-21	CONNECTOR, FFC/FPC (ZIF) 18P		C101	1-164-156-11	CERAMIC CHIP 0.1UF	25V
		<DIODE>		C102	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V
D901	8-719-991-97	DIODE BRPG1201W		C103	1-162-919-11	CERAMIC CHIP 22PF	5.00% 50V
D902	8-719-951-14	DIODE AA1101W		C104	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
D903	8-719-951-14	DIODE AA1101W		C105	1-164-156-11	CERAMIC CHIP 0.1UF	25V
D906	8-719-422-89	ZENER DIODE MA8082-H-TX		C106	1-164-156-11	CERAMIC CHIP 0.1UF	25V
D907	8-719-422-89	ZENER DIODE MA8082-H-TX		C107	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
D908	8-719-422-89	ZENER DIODE MA8082-H-TX		C108	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
D909	8-719-422-89	ZENER DIODE MA8082-H-TX		C109	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
D910	8-719-422-89	ZENER DIODE MA8082-H-TX		C110	1-104-606-11	ELECT CHIP 150UF	20.00% 10V
D911	8-719-422-89	ZENER DIODE MA8082-H-TX		C111	1-164-156-11	CERAMIC CHIP 0.1UF	25V
D913	8-719-422-89	ZENER DIODE MA8082-H-TX		C112	1-164-156-11	CERAMIC CHIP 0.1UF	25V
D914	8-719-422-89	ZENER DIODE MA8082-H-TX		C113	1-104-606-11	ELECT CHIP 150UF	20.00% 10V
D915	8-719-422-89	ZENER DIODE MA8082-H-TX		C114	1-164-156-11	CERAMIC CHIP 0.1UF	25V
		<RESISTOR>		C120	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R902	1-216-819-11	RES-CHIP 680	5% 1/16W	C123	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R903	1-218-701-11	RES-CHIP 2.4K	5% 1/16W	C124	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
R904	1-216-819-11	RES-CHIP 680	5% 1/16W	C125	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R905	1-216-819-11	RES-CHIP 680	5% 1/16W	C126	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R906	1-216-827-11	RES-CHIP 3.3K	5% 1/16W	C127	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R907	1-216-820-11	RES-CHIP 820	5% 1/16W	C128	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R908	1-216-823-11	RES-CHIP 1.5K	5% 1/16W	C129	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
R909	1-216-826-11	RES-CHIP 2.7K	5% 1/16W	C130	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R910	1-216-832-11	RES-CHIP 8.2K	5% 1/16W	C131	1-164-156-11	CERAMIC CHIP 0.1UF	25V
		<SWITCH>		C132	1-164-156-11	CERAMIC CHIP 0.1UF	25V
S901	1-771-855-21	SWITCH, KEYBOARD (POWER)		C133	1-104-606-11	ELECT CHIP 150UF	20.00% 10V
S902	1-771-855-21	SWITCH, KEYBOARD (-)		C134	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
S903	1-771-855-21	SWITCH, KEYBOARD (+)		C201	1-113-642-11	TANTAL. CHIP 47UF	20.00% 10V
S904	1-771-855-21	SWITCH, KEYBOARD (DOWN)		C203	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
S905	1-771-855-21	SWITCH, KEYBOARD (UP)		C204	1-164-156-11	CERAMIC CHIP 0.1UF	25V
S906	1-771-855-21	SWITCH, KEYBOARD (INPUT)		C205	1-128-993-21	ELECT CHIP 22UF	20% 10V
S907	1-771-855-21	SWITCH, KEYBOARD (MENU)		C206	1-164-156-11	CERAMIC CHIP 0.1UF	25V
		*****		C207	1-113-642-11	TANTAL. CHIP 47UF	20.00% 10V
				C208	1-104-606-11	ELECT CHIP 150UF	20.00% 10V
				C209	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
				C210	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C211	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C212	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C213	1-113-642-11	TANTAL. CHIP 47UF	20.00% 10V
				C214	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C215	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C216	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
				C217	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C218	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C219	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C220	1-113-642-11	TANTAL. CHIP 47UF	20.00% 10V
				C221	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
				C222	1-164-156-11	CERAMIC CHIP 0.1UF	25V

## SDM-N50PS



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C223	1-113-642-11	TANTAL. CHIP 47UF	20.00% 10V	C307	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C224	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C308	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C225	1-113-642-11	TANTAL. CHIP 47UF	20.00% 10V	C309	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C226	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C310	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C230	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C311	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C233	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C312	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C234	1-115-566-11	CERAMIC CHIP 4.7UF	10.00% 10V	C313	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C235	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C314	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C236	1-164-346-11	CERAMIC CHIP 1UF	16V	C315	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C237	1-125-891-11	CERAMIC CHIP 0.47UF	10.00% 10V	C316	1-128-993-21	ELECT CHIP 22UF	20% 10V
C238	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C317	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C239	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C318	1-128-993-21	ELECT CHIP 22UF	20% 10V
C240	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C319	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C241	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C320	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C242	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C321	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
C243	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C322	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C244	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C327	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C245	1-128-993-21	ELECT CHIP 22UF	20% 10V	C328	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C246	1-164-346-11	CERAMIC CHIP 1UF	16V	C329	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C247	1-125-891-11	CERAMIC CHIP 0.47UF	10.00% 10V	C330	1-164-357-11	CERAMIC CHIP 1000PF	5.00% 50V
C248	1-164-346-11	CERAMIC CHIP 1UF	16V	C331	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C249	1-125-891-11	CERAMIC CHIP 0.47UF	10.00% 10V	C332	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C250	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C333	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
C251	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C334	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C254	1-110-563-11	CERAMIC CHIP 0.068UF	10.00% 16V	C335	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C259	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C336	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C260	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C337	1-164-357-11	CERAMIC CHIP 1000PF	5.00% 50V
C268	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C338	1-128-993-21	ELECT CHIP 22UF	20% 10V
C276	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C339	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C278	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C340	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C279	1-110-563-11	CERAMIC CHIP 0.068UF	10.00% 16V	C341	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C280	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C342	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C281	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C343	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
C282	1-110-563-11	CERAMIC CHIP 0.068UF	10.00% 16V	C344	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
C283	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C345	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C284	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C346	1-164-357-11	CERAMIC CHIP 1000PF	5.00% 50V
C285	1-164-357-11	CERAMIC CHIP 1000PF	5.00% 50V	C347	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C287	1-128-993-21	ELECT CHIP 22UF	20% 10V	C348	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C288	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C349	1-128-993-21	ELECT CHIP 22UF	20% 10V
C289	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C350	1-164-357-11	CERAMIC CHIP 1000PF	5.00% 50V
C290	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C351	1-128-993-21	ELECT CHIP 22UF	20% 10V
C291	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C352	1-128-993-21	ELECT CHIP 22UF	20% 10V
C292	1-115-467-11	CERAMIC CHIP 0.22UF	10.00% 10V	C353	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C293	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C354	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C294	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C355	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C295	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C356	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C296	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C357	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C297	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C358	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C298	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C359	1-128-993-21	ELECT CHIP 22UF	20% 10V
C299	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C360	1-115-412-11	CERAMIC CHIP 680PF	5.00% 25V
C301	1-128-993-21	ELECT CHIP 22UF	20% 10V	C361	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C302	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	C362	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V
C303	1-162-970-11	CERAMIC CHIP 0.01UF	10.00% 25V	C364	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C304	1-128-993-21	ELECT CHIP 22UF	20% 10V	C365	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C305	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C366	1-126-200-11	ELECT CHIP 10UF	20.00% 35V
C306	1-128-993-21	ELECT CHIP 22UF	20% 10V	C367	1-164-156-11	CERAMIC CHIP 0.1UF	25V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C368	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V			<TERMINAL>	
C369	1-164-156-11	CERAMIC CHIP 0.1UF	25V				
C370	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	ET001	1-694-592-31	TERMINAL	
C371	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	ET002	1-694-592-31	TERMINAL	
C372	1-164-156-11	CERAMIC CHIP 0.1UF	25V	ET007	1-694-592-31	TERMINAL	
C373	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V				
C374	1-164-156-11	CERAMIC CHIP 0.1UF	25V			<FERRITE BEAD>	
C375	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V				
C376	1-216-864-11	SHORT 0		FB101	1-414-445-11	FERRITE	0UH
C377	1-216-864-11	SHORT 0		FB102	1-414-445-11	FERRITE	0UH
				FB103	1-414-445-11	FERRITE	0UH
C380	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	FB104	1-414-445-11	FERRITE	0UH
C381	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	FB105	1-469-324-21	FERRITE	0UH
C382	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V				
C383	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V	FB106	1-469-324-21	FERRITE	0UH
				FB107	1-469-324-21	FERRITE	0UH
				FB108	1-469-324-21	FERRITE	0UH
				FB201	1-414-445-11	FERRITE	0UH
				FB207	1-469-118-21	FERRITE	0UH
				FB208	1-469-118-21	FERRITE	0UH
CN101	1-794-071-21	CONNECTOR, INTERFACE 26P		FB209	1-469-118-21	FERRITE	0UH
CN102	1-793-183-11	CONNECTOR, D SUB 15P		FB210	1-469-118-21	FERRITE	0UH
CN103	1-793-183-11	CONNECTOR, D SUB 15P		FB211	1-469-118-21	FERRITE	0UH
CN104	*1-766-376-11	PIN, CONNECTOR (1.5MM)(SMD) 9P		FB212	1-469-118-21	FERRITE	0UH
CN105	*1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P					
				FB213	1-469-324-21	FERRITE	0UH
CN106	1-573-290-21	PIN, CONNECTOR (1.5MM) (SMD)4P		FB214	1-469-647-21	FERRITE	0UH
CN107	*1-580-789-21	PIN, CONNECTOR (SMD) 6P		FB216	1-469-118-21	FERRITE	0UH
CN108	*1-695-223-21	PIN, CONNECTOR (SMD) 10P		FB217	1-469-118-21	FERRITE	0UH
				FB218	1-469-118-21	FERRITE	0UH
				FB219	1-469-118-21	FERRITE	0UH
D001	8-719-801-78	DIODE 1SS184		FB220	1-414-445-11	FERRITE	0UH
D002	8-719-801-78	DIODE 1SS184		FB221	1-414-445-11	FERRITE	0UH
D101	8-719-991-97	DIODE BRPG1201W-TR		FB301	1-414-445-11	FERRITE	0UH
D102	8-719-801-78	DIODE 1SS184		FB302	1-414-445-11	FERRITE	0UH
D103	8-719-988-61	DIODE 1SS355TE-17					
				FB303	1-414-445-11	FERRITE	0UH
D104	8-719-158-49	ZENER DIODE RD12SB2		FB308	1-414-445-11	FERRITE	0UH
D105	8-719-801-78	DIODE 1SS184		FB309	1-414-445-11	FERRITE	0UH
D207	8-719-988-61	DIODE 1SS355TE-17		FB310	1-414-445-11	FERRITE	0UH
D208	8-719-421-59	DIODE MA3075WA-TX		FB311	1-414-445-11	FERRITE	0UH
D209	8-719-421-59	DIODE MA3075WA-TX					
				FB316	1-469-324-21	FERRITE	0UH
D210	8-719-421-59	DIODE MA3075WA-TX		FB318	1-469-118-21	FERRITE	0UH
D211	8-719-421-59	DIODE MA3075WA-TX		FB319	1-469-118-21	FERRITE	0UH
D212	8-719-421-59	DIODE MA3075WA-TX		FB320	1-469-324-21	FERRITE	0UH
D213	8-719-421-59	DIODE MA3075WA-TX		FB321	1-414-445-11	FERRITE	0UH
D214	8-719-422-89	ZENER DIODE MA8082-H-TX					
				FB322	1-414-445-11	FERRITE	0UH
D215	8-719-422-89	ZENER DIODE MA8082-H-TX		FB341	1-469-113-21	FERRITE	0UH
D216	8-719-422-89	ZENER DIODE MA8082-H-TX		FB342	1-469-113-21	FERRITE	0UH
D217	8-719-422-89	ZENER DIODE MA8082-H-TX		FB343	1-469-113-21	FERRITE	0UH
D218	8-719-422-89	ZENER DIODE MA8082-H-TX		FB344	1-469-113-21	FERRITE	0UH
D219	8-719-422-89	ZENER DIODE MA8082-H-TX					
				FB345	1-469-113-21	FERRITE	0UH
D220	8-719-422-89	ZENER DIODE MA8082-H-TX		FB346	1-469-113-21	FERRITE	0UH
D221	8-719-422-89	ZENER DIODE MA8082-H-TX		FB347	1-469-113-21	FERRITE	0UH
D222	8-719-422-89	ZENER DIODE MA8082-H-TX		FB348	1-469-113-21	FERRITE	0UH
D223	8-719-422-89	ZENER DIODE MA8082-H-TX		FB349	1-469-113-21	FERRITE	0UH
D224	8-719-422-89	ZENER DIODE MA8082-H-TX					
				FB350	1-469-113-21	FERRITE	0UH
D225	8-719-422-89	ZENER DIODE MA8082-H-TX		FB351	1-469-113-21	FERRITE	0UH
D306	8-719-988-61	DIODE 1SS355TE-17		FB352	1-469-113-21	FERRITE	0UH
				FB353	1-469-113-21	FERRITE	0UH





REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R152	1-216-821-11	RES-CHIP	1K	5%	1/16W	R283	1-216-835-11 RES-CHIP 15K 5% 1/16W
R201	1-216-295-91	SHORT	0			R284	1-216-835-11 RES-CHIP 15K 5% 1/16W
R202	1-216-295-91	SHORT	0			R285	1-216-833-91 RES-CHIP 10K 5% 1/16W
R203	1-216-295-91	SHORT	0			R289	1-216-833-91 RES-CHIP 10K 5% 1/16W
R205	1-216-295-91	SHORT	0			R290	1-216-833-91 RES-CHIP 10K 5% 1/16W
R206	1-216-295-91	SHORT	0			R291	1-216-822-11 RES-CHIP 1.2K 5% 1/16W
R207	1-216-295-91	SHORT	0			R292	1-216-833-91 RES-CHIP 10K 5% 1/16W
R208	1-218-706-11	METAL CHIP	3.9K	0.50%	1/16W	R294	1-216-864-11 SHORT 0
R209	1-216-022-00	RES-CHIP	75	5%	1/10W	R295	1-216-864-11 SHORT 0
R210	1-216-022-00	RES-CHIP	75	5%	1/10W	R296	1-216-808-11 RES-CHIP 82 5% 1/16W
R211	1-216-022-00	RES-CHIP	75	5%	1/10W	R298	1-216-801-11 RES-CHIP 22 5% 1/16W
R212	1-216-805-11	RES-CHIP	47	5%	1/16W	R299	1-216-833-91 RES-CHIP 10K 5% 1/16W
R213	1-216-295-91	SHORT	0			R301	1-216-864-11 SHORT 0
R214	1-216-295-91	SHORT	0			R302	1-216-833-91 RES-CHIP 10K 5% 1/16W
R215	1-216-805-11	RES-CHIP	47	5%	1/16W	R303	1-216-864-11 SHORT 0
R216	1-216-295-91	SHORT	0			R307	1-216-833-91 RES-CHIP 10K 5% 1/16W
R217	1-216-805-11	RES-CHIP	47	5%	1/16W	R319	1-216-864-11 SHORT 0
R218	1-216-295-91	SHORT	0			R320	1-216-833-91 RES-CHIP 10K 5% 1/16W
R219	1-216-295-91	SHORT	0			R321	1-218-661-11 METAL CHIP 51 0.50%1/16W
R220	1-216-295-91	SHORT	0			R322	1-218-661-11 METAL CHIP 51 0.50%1/16W
R222	1-216-805-11	RES-CHIP	47	5%	1/16W	R323	1-218-708-11 METAL CHIP 4.7K 0.50%1/16W
R224	1-216-805-11	RES-CHIP	47	5%	1/16W	R325	1-218-708-11 METAL CHIP 4.7K 0.50%1/16W
R225	1-216-864-11	SHORT	0			R326	1-218-692-11 METAL CHIP 1K 0.50%1/16W
R226	1-216-022-00	RES-CHIP	75	5%	1/10W	R327	1-218-692-11 METAL CHIP 1K 0.50%1/16W
R227	1-216-022-00	RES-CHIP	75	5%	1/10W	R337	1-216-801-11 RES-CHIP 22 5% 1/16W
R228	1-216-022-00	RES-CHIP	75	5%	1/10W	R338	1-216-833-91 RES-CHIP 10K 5% 1/16W
R229	1-216-805-11	RES-CHIP	47	5%	1/16W	R339	1-216-793-11 RES-CHIP 4.7 5% 1/16W
R231	1-216-805-11	RES-CHIP	47	5%	1/16W	R340	1-216-793-11 RES-CHIP 4.7 5% 1/16W
R232	1-216-801-11	RES-CHIP	22	5%	1/16W	R341	1-216-833-91 RES-CHIP 10K 5% 1/16W
R233	1-216-801-11	RES-CHIP	22	5%	1/16W	R342	1-216-833-91 RES-CHIP 10K 5% 1/16W
R234	1-216-801-11	RES-CHIP	22	5%	1/16W	R343	1-216-833-91 RES-CHIP 10K 5% 1/16W
R235	1-216-805-11	RES-CHIP	47	5%	1/16W	R344	1-216-833-91 RES-CHIP 10K 5% 1/16W
R236	1-216-805-11	RES-CHIP	47	5%	1/16W	R345	1-216-833-91 RES-CHIP 10K 5% 1/16W
R238	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R347	1-216-813-11 RES-CHIP 220 5% 1/16W
R239	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R348	1-216-805-11 RES-CHIP 47 5% 1/16W
R241	1-216-833-91	RES-CHIP	10K	5%	1/16W	R349	1-216-805-11 RES-CHIP 47 5% 1/16W
R242	1-216-821-11	RES-CHIP	1K	5%	1/16W	R350	1-216-805-11 RES-CHIP 47 5% 1/16W
R243	1-216-295-91	SHORT	0			R351	1-216-805-11 RES-CHIP 47 5% 1/16W
R244	1-216-857-11	RES-CHIP	1M	5%	1/16W	R352	1-216-805-11 RES-CHIP 47 5% 1/16W
R250	1-216-864-11	SHORT	0			R353	1-216-805-11 RES-CHIP 47 5% 1/16W
R252	1-216-809-11	RES-CHIP	100	5%	1/16W	R354	1-216-805-11 RES-CHIP 47 5% 1/16W
R253	1-216-805-11	RES-CHIP	47	5%	1/16W	R355	1-216-805-11 RES-CHIP 47 5% 1/16W
R255	1-216-819-11	RES-CHIP	680	5%	1/16W	R356	1-216-805-11 RES-CHIP 47 5% 1/16W
R256	1-216-805-11	RES-CHIP	47	5%	1/16W	R357	1-216-805-11 RES-CHIP 47 5% 1/16W
R258	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R358	1-216-805-11 RES-CHIP 47 5% 1/16W
R259	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R359	1-216-805-11 RES-CHIP 47 5% 1/16W
R264	1-216-809-11	RES-CHIP	100	5%	1/16W	R360	1-216-805-11 RES-CHIP 47 5% 1/16W
R267	1-216-801-11	RES-CHIP	22	5%	1/16W	R361	1-216-805-11 RES-CHIP 47 5% 1/16W
R269	1-216-809-11	RES-CHIP	100	5%	1/16W	R362	1-216-805-11 RES-CHIP 47 5% 1/16W
R274	1-216-833-91	RES-CHIP	10K	5%	1/16W	R363	1-216-805-11 RES-CHIP 47 5% 1/16W
R277	1-216-295-91	SHORT	0			R364	1-216-805-11 RES-CHIP 47 5% 1/16W
R278	1-216-295-91	SHORT	0			R365	1-216-805-11 RES-CHIP 47 5% 1/16W
R279	1-216-295-91	SHORT	0				
R280	1-216-295-91	SHORT	0				
R281	1-216-295-91	SHORT	0				
R282	1-216-295-91	SHORT	0				

## SDM-N50PS



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<NETWORK RESISTOR>		C735	1-164-156-11	CERAMIC CHIP 0.1UF	25V
RA101	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C736	1-126-603-11	ELECT CHIP 4.7UF	20.00% 35V
RA102	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C737	1-128-949-31	ELECT 470UF	20% 16V
RA203	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C738	1-128-949-31	ELECT 470UF	20% 16V
RA204	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C739	1-164-156-11	CERAMIC CHIP 0.1UF	25V
RA205	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C740	1-113-987-11	TANTAL. CHIP 4.7UF	20.00% 25V
RA206	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C741	1-126-935-11	ELECT 470UF	20.00% 6.3V
RA207	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C742	1-126-935-11	ELECT 470UF	20.00% 6.3V
RA208	1-239-412-11	NETWORK RESISTOR (CHIP) 100		C743	1-126-935-11	ELECT 470UF	20.00% 16V
		<THERMISTOR>		C770	1-126-960-11	ELECT 1UF	20.00% 50V
TH101	1-809-050-21	THERMISTOR		C771	1-126-960-11	ELECT 1UF	20.00% 50V
TH201	1-809-050-21	THERMISTOR		C772	1-126-933-11	ELECT 100UF	20.00% 16V
		<CRYSTAL>		C790	1-126-960-11	ELECT 1UF	20.00% 50V
X101	1-767-340-11	VIBRATOR, CRYSTAL		C791	1-126-960-11	ELECT 1UF	20.00% 50V
X301	1-781-723-21	OSCILLATOR, CRYSTAL		C792	1-126-960-11	ELECT 1UF	20.00% 50V
				C793	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
				C794	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
				C795	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
				C796	1-162-927-11	CERAMIC CHIP 100PF	5.00% 50V
				C797	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C798	1-126-933-11	ELECT 100UF	20.00% 16V
*****						<CONNECTOR>	
	* A-1316-521-A	G BOARD, COMPL	*****	CN701	* 1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P	
	7-682-649-09	SCREW +PS 3X10		CN702	* 1-766-376-11	PIN, CONNECTOR (1.5MM)(SMD) 9P	
				CN703	* 1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
				CN704	* 1-691-960-21	PIN, CONNECTOR (PC BOARD) 3P	
				CN705	1-573-290-21	PIN, CONNECTOR (1.5MM) (SMD)4P	
		<CAPACITOR>		CN706	1-507-678-51	JACK	
C701	$\Delta$ 1-104-705-51	MYLAR 0.1UF	20.00% 250V			<DIODE>	
C703	1-136-203-91	MYLAR 0.01UF	20.00% 630V	D701	$\Delta$ 8-719-077-76	DIODE D2SB60A-F04	
C704	1-135-362-31	ELECT 1500UF	20% 16V	D702	8-719-510-41	DIODE D10SC9M	
C705	1-135-362-31	ELECT 1500UF	20% 16V	D703	8-719-018-82	DIODE RGP02-20EL-6394	
C706	1-104-760-11	CERAMIC CHIP 0.047UF	10.00% 50V	D704	8-719-911-19	DIODE 1SS119-25	
C707	1-107-824-11	CERAMIC 220PF	5.00% 1KV	D705	8-719-063-73	DIODE D1NL20U-TR	
C708	1-163-037-11	CERAMIC CHIP 0.022UF	10.00% 50V	D706	8-719-200-82	DIODE 11ES2	
C709	1-163-021-91	CERAMIC CHIP 0.01UF	10.00% 50V	D707	8-719-106-53	ZENER DIODE RD10M-B2	
C710	1-104-760-11	CERAMIC CHIP 0.047UF	10.00% 50V	D708	8-719-976-96	ZENER DIODE DTZ4.7C	
C711	1-126-968-11	ELECT 100UF	20.00% 50V	D709	8-719-046-85	DIODE MA2S728	
C712	1-163-007-11	CERAMIC CHIP 680PF	10.00% 50V	D710	8-719-046-85	DIODE MA2S728	
C713	1-126-967-11	ELECT 47UF	20.00% 50V	D711	8-719-074-74	DIODE MA3XD15001S0	
C716	1-128-949-31	ELECT 470UF	20% 16V	D712	8-719-074-74	DIODE MA3XD15001S0	
C717	1-164-156-11	CERAMIC CHIP 0.1UF	25V	D767	8-719-421-59	DIODE MA3130WA-TX	
C719	1-125-991-11	ELECT 180UF	20% 450V	D768	8-719-421-59	DIODE MA3130WA-TX	
C721	1-164-156-11	CERAMIC CHIP 0.1UF	25V			<TERMINAL>	
C722	1-126-193-11	ELECT CHIP 1UF	20.00% 50V	ET701	* 1-537-738-21	TERMINAL, EARTH	
C723	$\Delta$ 1-117-699-41	CERAMIC 0.001UF	250V	ET702	* 1-537-738-21	TERMINAL, EARTH	
C724	$\Delta$ 1-113-924-91	CERAMIC 0.0047UF	20.00% 250V				
C726	1-128-949-31	ELECT 470UF	20% 16V				
C727	$\Delta$ 1-104-705-51	MYLAR 0.1UF	20.00% 250V				
C728	1-164-156-11	CERAMIC CHIP 0.1UF	25V				
C729	$\Delta$ 1-117-699-41	CERAMIC 0.001UF	250V				
C730	$\Delta$ 1-113-924-91	CERAMIC 0.0047UF	20.00% 250V				
C732	1-164-156-11	CERAMIC CHIP 0.1UF	25V				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<FERRITE BEAD>		R710	1-216-295-91	SHORT	0
FB750	1-469-136-21	FERRITE	0UH	R711	1-215-887-00	METAL OXIDE	150 5% 2W
FB751	1-469-136-21	FERRITE	0UH	R712	1-215-887-00	METAL OXIDE	150 5% 2W
		<FUSE>		R713	1-219-776-11	CARBON	2.2M 10% 1/2W
F701	$\Delta$ 1-576-230-11	FUSE (H.B.C) (3.15A/250V)		R714	1-216-049-91	RES-CHIP	1K 5% 1/10W
FH701	1-533-223-11	HOLDER, FUSE		R716	1-216-635-11	METAL CHIP	220 0.50%1/10W
FH702	1-533-223-11	HOLDER, FUSE		R717	1-217-151-00	METAL	0.22 10% 2W
		<IC>		R718	1-216-109-00	RES-CHIP	330K 5% 1/10W
IC701	8-759-594-75	IC TEA1504/N2		R719	1-260-306-51	CARBON	15 5% 1/2W
IC702	8-759-198-31	IC uPC1093J-1-T		R721	1-216-001-00	RES-CHIP	10 5% 1/10W
IC704	8-759-652-21	IC MMDF6N03HDR2		R722	1-216-049-91	RES-CHIP	1K 5% 1/10W
IC706	8-759-651-71	IC MAX1631EAI-TG068		R723	1-216-658-11	METAL CHIP	2K 0.50%1/10W
IC707	8-759-652-21	IC MMDF6N03HDR2		R724	1-216-049-91	RES-CHIP	1K 5% 1/10W
IC790	8-759-510-71	IC BA10358F-E2		R725	1-208-816-11	METAL CHIP	27K 0.50%1/10W
		<COIL>		R726	1-216-101-00	RES-CHIP	150K 5% 1/10W
L701	1-412-534-31	INDUCTOR 56UH		R727	1-216-033-00	RES-CHIP	220 5% 1/10W
L702	1-412-532-11	INDUCTOR 39UH		R728	$\Delta$ 1-220-778-21	FUSIBLE	0.1 10% 1/2W
L703	1-408-611-31	INDUCTOR 47UH		R730	1-243-290-91	METAL CHIP	0.068 1% 1/2W
L704	1-406-663-21	INDUCTOR 47UH		R731	$\Delta$ 1-240-581-11	CEMENTED	3.9 5% 10W
L705	1-406-663-21	INDUCTOR 47UH		R732	1-216-797-11	RES-CHIP	10 5% 1/16W
L706	1-406-663-21	INDUCTOR 47UH		R733	1-243-290-91	METAL CHIP	0.068 1% 1/2W
L707	1-406-661-11	INDUCTOR 22UH		R735	1-216-041-00	RES-CHIP	470 5% 1/10W
		<PHOTO COUPLER>		R736	1-218-727-11	METAL CHIP	30K 0.50%1/16W
PH701	8-749-010-64	PHOTO COUPLER PC123F2		R737	1-218-726-11	METAL CHIP	27K 0.50%1/16W
		<IC LINK>		R770	1-216-699-11	RES-CHIP	100K 5% 1/10W
PS701	$\Delta$ 1-533-595-31	LINK, IC		R771	1-216-699-11	RES-CHIP	100K 5% 1/10W
PS702	$\Delta$ 1-533-593-31	LINK, IC		R772	1-216-699-11	RES-CHIP	100K 5% 1/10W
PS791	1-469-136-21	FERRITE	0UH	R774	1-216-651-11	RES-CHIP	1K 5% 1/10W
		<TRANSISTOR>		R775	1-216-651-11	RES-CHIP	1K 5% 1/10W
Q701	8-729-926-79	TRANSISTOR IRFIBC40		R776	1-218-478-11	RES-CHIP	330 5% 1/4W
Q770	8-729-230-49	TRANSISTOR 2SC2712-YG		R777	1-218-478-11	RES-CHIP	330 5% 1/4W
Q771	8-729-230-49	TRANSISTOR 2SC2712-YG		R778	1-216-659-11	RES-CHIP	2.2K 5% 1/10W
		<RESISTOR>		R779	1-216-659-11	RES-CHIP	2.2K 5% 1/10W
R701	$\Delta$ 1-219-754-91	CARBON	680K 5% 1/2W	R780	1-218-476-11	RES-CHIP	180 5% 1/4W
R702	1-215-929-11	METAL OXIDE	100K 5% 3W	R781	1-216-295-91	SHORT	0
R703	1-216-073-00	RES-CHIP	10K 5% 1/10W	R782	1-216-295-91	SHORT	0
R704	1-219-776-11	CARBON	2.2M 10% 1/2W	R783	1-216-295-91	SHORT	0
R705	1-216-665-11	METAL CHIP	3.9K 0.50%1/10W	R784	1-216-295-91	SHORT	0
R706	1-216-651-11	METAL CHIP	1K 0.50%1/10W	R785	1-216-295-91	SHORT	0
R707	1-216-073-00	RES-CHIP	10K 5% 1/10W	R786	1-218-476-11	RES-CHIP	180 5% 1/4W
R708	1-216-073-00	RES-CHIP	10K 5% 1/10W	R788	1-216-627-11	RES-CHIP	100 5% 1/10W
R709	1-216-093-91	RES-CHIP	68K 5% 1/10W	R789	1-216-627-11	RES-CHIP	100 5% 1/10W
				R790	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R791	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R792	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R793	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R794	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R795	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R796	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R797	1-240-091-21	RES-CHIP	47K 5% 1/10W
				R798	1-240-093-21	RES-CHIP	68K 5% 1/10W
				R799	1-240-091-21	RES-CHIP	47K 5% 1/10W

# SDM-N50PS



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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<TRANSFORMER>					
T701	△ 1-419-663-11	COIL, LINE FILTER					
T702	1-435-291-21	TRANSFORMER, CONVERTER (SRT)					
		<VARISTOR>					
VDR701	△1-801-073-11	VARISTOR ERZV14D471					
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