GDM-FW9011

SERVICE MANUAL

N.Hemisphere Model
Chassis No. SCC-L34C-A
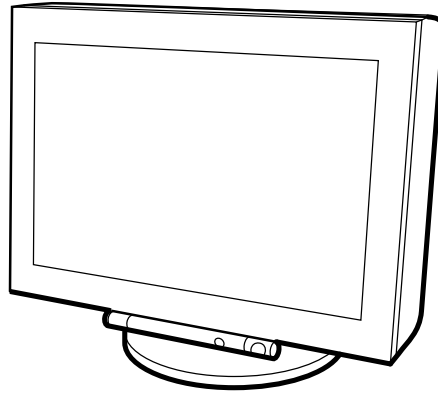
G1WCHASSIS

SPECIFICATIONS

CRT	0.23 – 0.27 mm aperture grille pitch
	24 inches measured diagonally
	90-degree deflection
	FD Trinitron
Viewable image size	Approx. 482.1×308.2 mm (w/h)
	($19 \times 12\ ^1/_4$ inches)
	22.5" viewing image
Resolution	Maximum (16:10)
	Horizontal: 2304 dots
	Vertical: 1440 lines
	Maximum (4:3)
	Horizontal: 2048 dots
	Vertical: 1536 lines
	Recommended (16:10)
	Horizontal: 1920 dots
	Vertical: 1200 lines
Input signal levels	Video signal
	Analog RGB: 0.700 Vp-p
	(positive), 75 Ω
	SYNC signal
	H/V separate or composite sync:
	TTL 2 kΩ, Polarity free
	Sync on Green: 0.3 Vp-p
	(negative)
Standard image area	16:10
	Approx. 474×296 mm (w/h)
	($18\ ^3/_4 \times 11\ ^3/_4$ inches)
	4:3
	Approx. 395×296 mm (w/h)
	($15\ ^5/_8 \times 11\ ^3/_4$ inches)
	5:4
	Approx. 370×296 mm (w/h)
	($14\ ^5/_8 \times 11\ ^3/_4$ inches)

Deflection frequency*	Horizontal: 30 to 121 kHz
	Vertical: 48 to 160 Hz
AC input voltage/current	100 to 240 V, 50/60 Hz, 2.2 – 1.2 A
Power consumption	Approx. 170 W (with no USB devices
	connected)
Operating temperature	10˚C to 40˚C
Dimensions	Approx. $571.5 \times 500 \times$
	d) ($22\ ^1/_2 \times 19\ ^3/_4 \times 20\ ^5/_8$ inches)
Mass	Approx. 42 kg (92 lb 10 oz)
Plug and Play	DDC1/DDC2B/DDC2Bi, GTF**
Supplied accessories	• This operating instruction

* 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 2.3 μsec.
  • Vertical blanking width should be more than 450 μsec.
** If the input signal is Generalized Timing Formula (GTF)
  compliant, the GTF feature of the monitor will automatically
 provide an optimal image for the screen.

Design and specifications are subject to change without notice.

COLOR GRAPHIC DISPLAY

sgi

SAFETY CHECK-OUT

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.
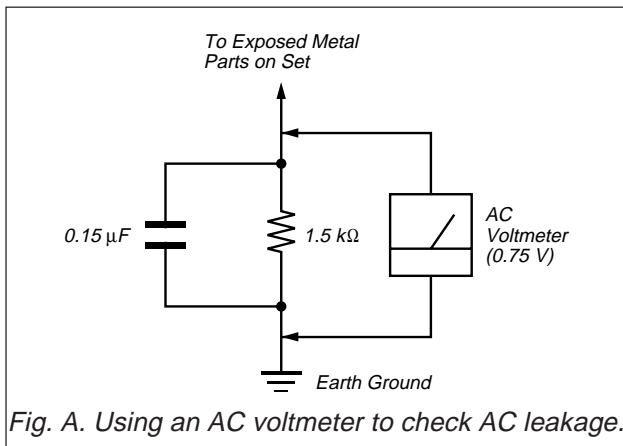
LEAKAGE TEST

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 microampers).

Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive 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 ⚠ 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 ⚠ 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.

POWER SAVING FUNCTION

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

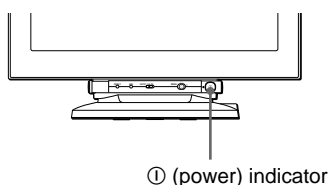| Power mode	Power consumption*	① (power) indicator
normal operation	≤ 170 W	green
1 standby	≤ 15 W	green and orange alternate
2 suspend (sleep)**	≤ 15 W	green and orange alternate
3 active off*** (deep sleep)**	≤ 1 W	orange
power off	0 W	off

* Figures reflect power consumption when no USB compatible peripherals are connected to the monitor.
** "Sleep" and "deep sleep" are power saving modes defined by the Environmental Protection Agency.
*** When your computer enters power saving mode, the input signal is cut and NO INPUT SIGNAL appears on the screen before the monitor enters active off mode. After a few seconds, the monitor enters power saving mode.
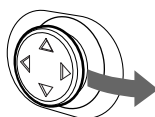
DIAGNOSIS

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 ① (power) indicator will either light up green or flash orange. If the ① (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.

① (power) indicator

■ If the ① (power) indicator is green

1 Disconnect any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).

2 Press the ① (power) button twice to turn the monitor off and then on.

3 Move the joystick to the right for 2 seconds before the monitor enters power saving mode.

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 ① (power) indicator is flashing orange

Press the ① (power) button twice to turn the monitor off and then on.
If the ① (power) indicator lights up green, the monitor is working properly.

If the ① (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ① (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.

GDM-FW9011

TIMING SPECIFICATION

PRIMARY MODE					PRIMARY				
MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7	MODE 8	MODE 9
RESOLUTION (HXV)	640 X 480	720 X 400	1920 X 1080	1600 X 1024	1920 X 1200	2304 X 1440	1600 X 1024	1920 X 1080	1920 X 1080
CLOCK	25.175 MHz	28.322 MHz	172.798 MHz	198.832 MHz	282.744 MHz	383.863 MHz	170.447 MHz	216.023 MHz	216.023 MHz
— HORIZONTAL —									
H-FREQ	31.469 kHz	31.469 kHz	67.080 kHz	91.375 kHz	107.100 kHz	120.560 kHz	81.320 kHz	84.384 kHz	84.384 kHz
	usec	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	31.777	14.908	10.944	9.337	8.295	12.297	11.851	11.851
H. BLK	6.356	6.355	3.796	2.897	2.546	2.292	2.910	2.963	2.963
H. FP	0.636	0.636	0.694	0.563	0.538	0.458	0.188	0.222	0.222
H. SYNC	3.813	3.813	1.204	0.885	0.736	0.667	0.939	1.000	1.000
H. BP	1.907	1.907	1.898	1.448	1.273	1.167	1.784	1.741	1.741
H. ACTIV	25.422	25.422	11.111	8.047	6.791	6.002	9.387	8.888	8.888
— VERTICAL —									
V. FREQ(Hz)	59.940 Hz	70.087 Hz	60.000 Hz	85.000 Hz	85.000 Hz	80.000 Hz	76.000 Hz	72.000 Hz	72.000 Hz
	lines	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	449	1118	1075	1260	1507	1070	1172	1172
V. BLK	45	49	38	51	60	67	46	92	92
V. FP	10	12	1	1	1	1	3	3	3
V. SYNC	2	2	3	3	3	3	3	3	3
V. BP	33	35	34	47	56	63	40	86	86
V. ACTIV	480	400	1080	1024	1200	1440	1024	1080	1080
— SYNC —									
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES N/N	YES N/P	YES N/N	YES N/N	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	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

TABLE OF CONTENTS

Note: Hand degauss <u>must be used on stand-by or power-off condition.</u>
This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.
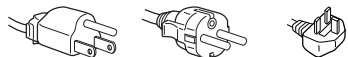
SECTION 1
GENERAL

Precautions

Warning on power connections

Use an appropriate power cord for your local power supply.

Example of plug types

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

- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the screen's surface to discharge.
- After the power is turned on, the screen is demagnetized (degaussed) for about 3 seconds. This generates a strong magnetic field around the screen which may affect data stored on magnetic tapes and disks placed near the monitor. Be sure to keep magnetic recording equipment, tapes, and disks away from the monitor.

The equipment should be installed near an easily accessible outlet.

Installation

Do not install the monitor in the following places:
- on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes
- near heat sources such as radiators or air ducts, or in a place subject to direct sunlight
- in a place subject to severe temperature changes
- in a place subject to mechanical vibration or shock
- on an unstable surface
- near equipment which generates magnetism, such as a transformer or high voltage power lines
- near or on an electrically charged metal surface

Maintenance

- Clean the 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 screen's coating.
- 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.
- 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.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.
Never grasp the control stick when you transport the monitor.
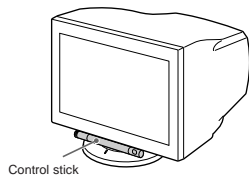
Control stick

Use of the tilt-swivel

This monitor can be adjusted within the angles shown below. To find the center of the monitor's turning radius, align the center of the monitor's screen with the centering dots on the stand.
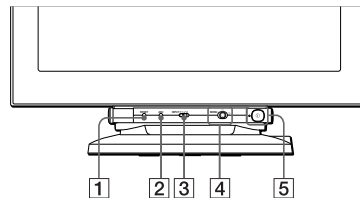Hold the monitor at the bottom with both hands when you turn it horizontally or vertically.

165°
15°
5°
165°
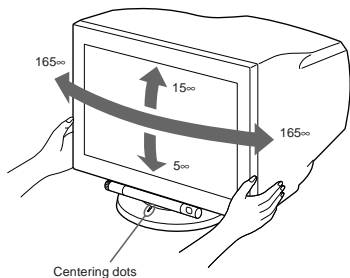
Centering dots

Identifying parts and controls

See the pages in parentheses or further details.

Front

To use the control stick
This monitor has a cylindrical swivel control stick. To operate the controls, turn the knob on the left side downward to expose the control buttons. When the control buttons are not needed, turn the knob up to hide the control buttons.

When not using   When using
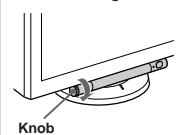
Knob
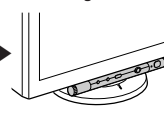
[1] **RESET (reset) button (page 15)**
This button resets the adjustments to the factory settings.

[2] **ASC (auto sizing and centering) button (page 8)**
This button automatically adjusts the size and centering of the picture.

[3] **INPUT (input) switch (page 8)**
This switch selects the HD15 or BNC video input signal.

[4] **Joystick (page 10)**
The joystick is used to display the menu and make adjustments to the monitor, including brightness and contrast adjustments.

[5] **① (power) switch and indicator (pages 7, 15, 19)**
This button turns the monitor on and off. The power indicator lights up in green when the monitor is turned on, and either flashes in green and orange, or lights up in orange when the monitor is in power saving mode.

Rear
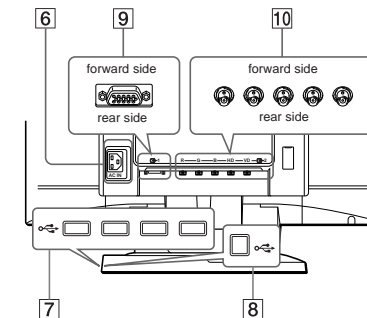
[6] **AC IN connector (page 6)**
This connector provides AC power to the monitor.

[7] **USB (universal serial bus) downstream connectors (page 7)**
Use these connectors to link USB peripheral devices to the monitor.

[8] **USB (universal serial bus) upstream connector (page 7)**
Use this connector to link the monitor to a USB compliant computer.

[9] **Video input 1 connector (HD15) (page 6)**
This connector inputs RGB video signals (0.700 V_{p-p}, positive) and sync signals.

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

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

[10] **Video input 2 connector (BNC) (page 6)**
This connector inputs RGB video signals (0.700 V_{p-p}, positive) and sync signals.

1-1

Setup

This monitor works with platforms running at horizontal frequencies between 30 and 121 kHz.

Step 1: Connect your monitor to your computer

Turn off the monitor and computer before connecting.

Notes
- Do not touch the pins of the video signal cable connector as this might bend the pins.
- When connecting the video signal cable, check the alignment of the connector. Do not force the connector in the wrong way or the pins might bend.

■ Connecting to the HD15 connector

to HD15 input

To a computer with
an HD15 video output

video signal cable
(supplied with host computer)

■ Connecting to the five BNC connectors

to R/G/B input

to HD/VD
input

Refer to the preceding
examples to connect to your
computer.

video signal cable
(not supplied)*

* Connect the cables from left to right in the following order: Red-Green-Blue-HD-VD.

Note
Plug & Play (DDC) does not apply to the five BNC connectors. If you want to use Plug & Play, connect your computer to the connector using the supplied video signal cable.

Step 2: Connect the power cord

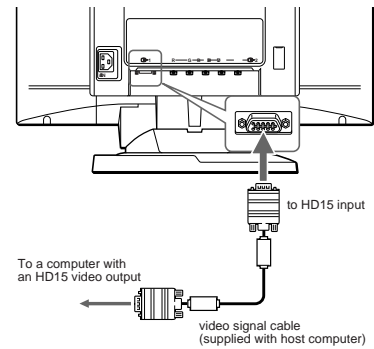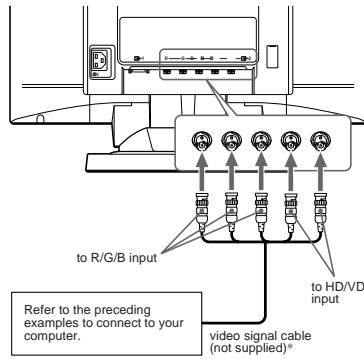With the monitor and computer switched off, first connect the power cord to the monitor, then connect it to a power outlet.

to AC IN

to a power outlet

power cord
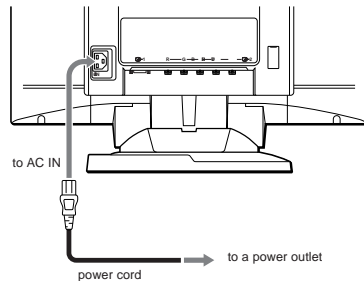
Step 3: Turn on the monitor and computer

First turn on the monitor, then 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.
- If NO INPUT SIGNAL appears on the screen, try changing the input signal (page 8), and confirm that your computer's graphic board is completely seated in the correct bus slot.
- If you are replacing an old monitor with this model and 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 ñ 121 kHz, and the vertical frequency is between 48 ñ 160 Hz.

For more information about the on-screen messages, see ìT rouble symptoms and remediesî on page 17.

Connecting Universal Serial Bus (USB) compliant peripherals

Your monitor has one upstream and four downstream USB connectors. They provide a fast and easy way to connect USB compliant peripheral devices (such as keyboards, mice, printers and scanners) to your computer using a standardized USB cable. To use your monitor as a hub for your peripheral devices, connect the USBs as illustrated below.

to a USB compliant
computer

to USB compliant
peripheral devices
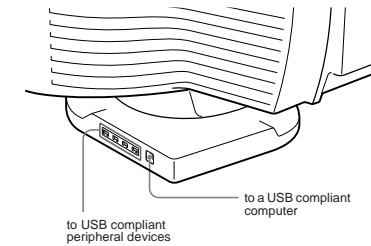
1 **Turn on the monitor and computer.**

2 **Connect your computer to the square upstream connector using the USB cable** (not supplied)**.**

3 **Connect your USB compliant peripheral devices to the rectangular downstream USB connectors.**

Notes
- Not all computers and/or operating systems support USB configurations. Check your computer's instruction manual to see if you can connect USB devices.
- In most cases, USB driver software needs to be installed on the host computer. Refer to the peripheral device's instruction manual for further details.
- The monitor functions as a USB hub as long as the monitor is either ì onî or in power saving mode.
- If you connect a keyboard or mouse to the USB connectors and then boot your computer for the first time, the peripheral devices may not function. First connect the keyboard and mouse directly to the computer and set up the USB compliant devices. Then connect them to this monitor.

Selecting the on-screen menu language (LANG)

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

1 Press the joystick.
See page 10 for more information on using the joystick.

```
MENU          OK → ⏎
┌──────┬────────┬──────┐
│ ▦    │ ⊡      │ ⊞    │
│SCREEN│ CENTER │ CONV │
├──────┼────────┼──────┤
│ ▭    │        │ ▦    │
│GEOM  │  EXIT  │COLOR │
├──────┼────────┼──────┤
│ ▣    │ ▭      │ ▦    │
│LANG  │ SIZE   │OPTION│
└──────┴────────┴──────┘
```
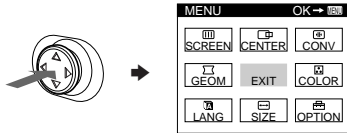
2 Move the joystick to highlight 🄰 LANG and press the joystick again.

```
LANGUAGE
► ENGLISH
  FRANÇAIS
  DEUTSCH
  ESPAÑOL
  ITALIANO
  NEDERLANDS
  SVENSKA
  РУССКИЙ
  日本語
```

3 Move the joystick up or down to select a language and press the joystick again.
- ï ENGLISH
- ï FRANÇAIS : French
- ï DEUTSCH: German
- ï ESPAÑOL: Spanish
- ï ITALIANO: Italian
- ï NEDERLANDS: Dutch
- ï SVENSKA: Swedish
- ï РУССКИЙ: Russian
- ï 日本語: Japanese

To close the menu
Press the joystick once to return to the main menu, and twice to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.

To reset to English
Press the RESET button while the LANGUAGE menu is displayed on the screen.

Selecting the input signal

You can connect two computers to this monitor using the video input 1 (HD15) and video input 2 (BNC) connectors. To switch between the two computers, use the INPUT switch.

Move the INPUT switch.
The currently selected connector (ìINPUT 1î : HD15 or ìINPUT 2î : BNC) appears on the screen for a few seconds.

```
INPUT  1 ⇥ ⇤ 2
        ⟷
```
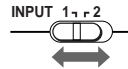
Note
If no signal is input to the selected connector, NO INPUT SIGNAL appears on the screen. After a few seconds, the monitor enters the power saving mode. If this happens, switch to the other connector.

Automatically sizing and centering the picture (AUTO)

You can easily adjust the picture to fill the screen by pressing the ASC (auto sizing and centering) button.

Press the ASC button.
The picture automatically fills the screen.

```
ASC
```

Notes
- ï This function is intended for use with a computer that provides a full-screen picture. It may not work properly if the background color is dark or if the input picture does not fill the screen to the edges.
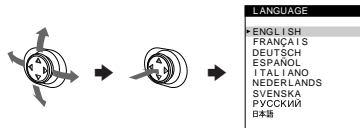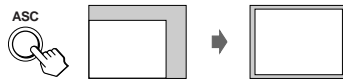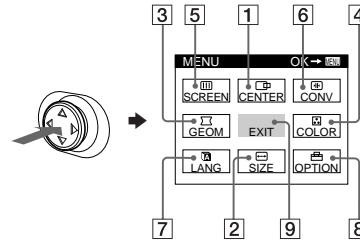- ï The picture will fill the screen to the edges only if the aspect ratio of the picture is 16:10 and the signal is listed on the preset mode timing table in Appendix. Pictures with an aspect ratio other than 16:10 are displayed at their actual resolution and do not fill the screen to the edges.
- ï The displayed image moves for a few seconds while this function is performed. This is not a malfunction.

Customizing Your Monitor

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

Navigating the menu

Press the joystick to display the main MENU on your screen. See page 10 for more information on using the joystick.

```
 ③  ⑤  ①    ⑥  ④
MENU          OK → ⏎
┌──────┬────────┬──────┐
│ ▦    │ ⊡      │ ⊞    │
│SCREEN│ CENTER │ CONV │
├──────┼────────┼──────┤
│ ▭    │        │ ▦    │
│GEOM  │  EXIT  │COLOR │
├──────┼────────┼──────┤
│ ▣    │ ▭      │ ▦    │
│LANG  │ SIZE   │OPTION│
└──────┴────────┴──────┘
 ⑦     ②    ⑨    ⑧
```

Use the joystick to select one of the following menus.

① CENTER (page 11)
Select the CENTER menu to adjust the pictureís centering or zoom.

```
SIZE/CENTER
```
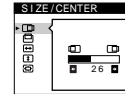
② SIZE (page 11)
Select the SIZE menu to adjust the pictureís size or zoom.

```
SIZE/CENTER
```
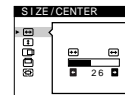
③ GEOM (page 11)
Select the GEOM menu to adjust the pictureís rotation and shape.

```
GEOMETRY
```
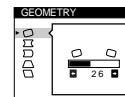
④ COLOR (page 11)
Select the COLOR menu to adjust the pictureís color temperature. You can use this to match the monitorís colors to a printed pictureís colors.

```
COLOR
EASY   EXPERT   sRGB
● 5000K ● 6500K ● 9300K
              5000K
IMAGE
RESTORATION  ON
```
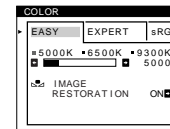
⑤ SCREEN (page 13)
Select the SCREEN menu to adjust the pictureís quality. You can adjust the landing and moire cancellation effect.

```
SCREEN
LANDING
```

---
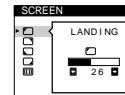
⑥ CONV (page 14)
Select the CONV menu to adjust the pictureís horizontal and vertical convergence.

```
CONVERGENCE
TOP
BOT       26
```
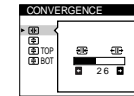
⑦ LANG (page 8)
Select the LANG menu to choose the on-screen menuís language.

```
LANGUAGE
► ENGLISH
  FRANÇAIS
  DEUTSCH
  ESPAÑOL
  ITALIANO
  NEDERLANDS
  SVENSKA
  РУССКИЙ
  日本語
```

⑧ OPTION (page 14)
Select the OPTION menu to adjust the monitorís options. The options include:
- ï degaussing the screen
- ï changing the on-screen menu position
- ï locking the controls

```
OPTION
DEGAUSS
ON
```
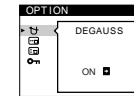
⑨ EXIT
Select EXIT to close the menu.

■ Displaying the current input signal

The horizontal and vertical frequencies of the current input signal are displayed under the main MENU. If the signal matches one of this monitorís factory preset modes, the resolution is also displayed.

```
MENU          OK → ⏎
┌──────┬────────┬──────┐
│ ▦    │ ⊡      │ ⊞    │
│SCREEN│ CENTER │ CONV │
├──────┼────────┼──────┤
│ ▭    │        │ ▦    │
│GEOM  │  EXIT  │COLOR │
├──────┼────────┼──────┤
│ ▣    │ ▭      │ ▦    │
│LANG  │ SIZE   │OPTION│
└──────┴────────┴──────┘
the                107.1kHz /  85Hz    the horiz
resolution         (1920×1200)         and vertical
of the                                 frequencies of
input                                  the current
signals                                input signal
```
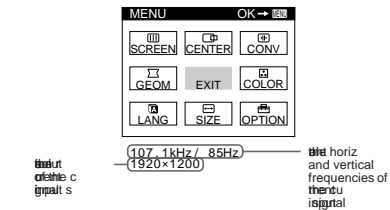
Note
In some cases, even though the aspect ratio of the current input signal is 4:3 or 5:4, the resolution may be displayed with an aspect ratio of 16:10 or 16:9.

■ **Using the joystick**

1 Display the main MENU and select the menu you want to adjust.
Press the joystick once to display the main MENU. Then move the joystick up, down, left, or right to highlight the desired menu. Press the joystick to select the menu item.
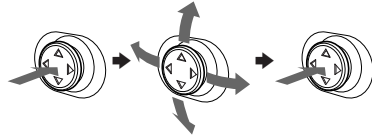
2 Adjust the menu.
Move the joystick up, down, left, or right to make the adjustment.
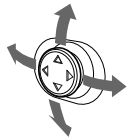
3 Close the menu.
Press the joystick once to return to the main menu, and twice to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.

■ **Resetting the adjustments**
Press the RESET button. See page 15 for more information on resetting the adjustments.

RESET

Adjusting the brightness and contrast

Brightness and contrast adjustments are made using a separate BRIGHTNESS/CONTRAST menu.
These settings are stored in memory for the signals from the currently selected input connector.

1 Move the joystick in any direction.
The BRIGHTNESS/CONTRAST menu appears on the screen.

BRIGHTNESS / CONTRAST
☼ 26   ◑ 26
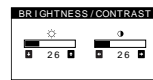
2 Move the joystick up or down to adjust the brightness (☼), and left or right to adjust the contrast (◑).

If you select the sRGB mode in the COLOR menu
Confirm that the brightness (☼) and contrast (◑) values are adjusted respectively to the numbers to be set in the sRGB mode shown in the BRIGHTNESS/CONTRAST menu. If not, press the RESET button (for less than 2 seconds).
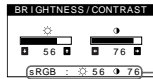
BRIGHTNESS / CONTRAST
☼ 56   ◑ 76
sRGB : ☼ 56 ◑ 76   Values to be set in the sRGB mode

For more information about using the sRGB mode, see ìAdjusting the color of the picture (COLOR)î on page 11.

The menu automatically disappears after about 3 seconds.

Adjusting the centering of the picture (CENTER)

This setting is stored in memory for the current input signal.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ⊡ CENTER and press the joystick again.
The SIZE/CENTER menu appears on the screen.

3 First move the joystick up or down to select ⊡ for horizontal adjustment, or ⊟ for vertical adjustment. Then move the joystick left or right to adjust the centering.

Adjusting the size of the picture (SIZE)

This setting is stored in memory for the current input signal.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ⊟ SIZE and press the joystick again.
The SIZE/CENTER menu appears on the screen.

3 First move the joystick up or down to select ⊟ for horizontal adjustment, or ⊡ for vertical adjustment. Then move the joystick left or right to adjust the size.

Enlarging or reducing the picture (ZOOM)

This setting is stored in memory for the current input signal.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ⊟ SIZE or ⊡ CENTER and press the joystick again.
The SIZE/CENTER menu appears on the screen.

3 Move the joystick up or down to select ⊞ (zoom), and move the joystick left or right to enlarge or reduce the picture.

Note
Adjustment stops when either the horizontal or vertical size reaches its maximum or minimum value.

Adjusting the shape of the picture (GEOM)

The ◠ (rotation) setting is stored in memory for all input signals. All other settings are stored in memory for the current input signal.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ▱ GEOM and press the joystick again.
The GEOMETRY menu appears on the screen.

3 First move the joystick up or down to select the desired adjustment item. Then move the joystick left or right to make the adjustment.

Select	To
◠	rotate the picture
▱	expand or contract the picture sides
▱	shift the picture sides to the left or right
◠	adjust the picture width at the top of the screen
◹	shift the picture to the left or right at the top of the screen

GB

Adjusting the color of the picture (COLOR)

The COLOR settings allow you to adjust the pictureís 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. This adjustment is useful for matching the monitorís color to a printed pictureís colors.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ⊞ COLOR and press the joystick again.
The COLOR menu appears on the screen.

3 Move the joystick left or right to select the adjustment mode.
There are three types of adjustment modes, EASY, EXPERT, and sRGB.

Adjust the selected mode according to the instructions on the next page.
You can set the color temperature in EASY or EXPERT mode for each of the video input connectors.

■ EASY mode

In EASY mode, you can fine tune the color temperature by changing the three preset temperatures ó 50 00K, 6500K, or 9300K.

```
COLOR
┌─────────────────────────────┐
│ EASY    EXPERT     sRGB      │
1 ─ ■5000K •6500K •9300K       ─ 2
│              ■      5000K     │
│                               │
│ ⊠ IMAGE                       │
│    RESTORATION    ON▶         │
└─────────────────────────────┘
```

1 Move the joystick up or down to select the color temperature row 1. Then move the joystick left or right to select a color temperature.
The preset color temperatures are 5000K, 6500K, and 9300K. 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.

2 If necessary, fine tune the color temperature. Move the joystick up or down to select the color temperature row 2. Then move the joystick left or right to fine tune the color temperature.
If you fine tune the color temperature, the new color settings are stored in memory for each of the three color temperatures and item 1 of the on-screen menu changes as follows.
ï [5000K]→[⊡ 1]
ï [6500K]→[⊡ 2]
ï [9300K]→[⊡ 3]

■ EXPERT mode

You can make additional adjustments to the color in greater detail by selecting the EXPERT mode.

```
COLOR
┌─────────────────────────────┐
│ EASY    EXPERT     sRGB      │
1 ─ ■5000K •6500K •9300K       │
│   R BIAS ◄ ■        ► 50     ─ 2
│   G BIAS ◄ ■        ► 50     │
│   B BIAS ◄ ■        ► 50     │
3 ─ R GAIN ◄ ■        ► 50     │
│   G GAIN ◄ ■        ► 50     │
│   B GAIN ◄ ■        ► 50     │
└─────────────────────────────┘
```

1 Move the joystick up or down to select the color temperature row 1. Then move the joystick left or right to select a color temperature.

2 Move the joystick up or down to select the adjustment item 2. Then move joystick left or right to adjust the BIAS (black level).
This adjusts the dark areas of an image.

3 Move the joystick up or down to select the adjustment item 3. Then move the joystick left or right to adjust the GAIN (white level).
This adjusts the light areas of an image.

You can adjust the R (red), G (green), B (blue) component of the input signal when making changes to items 2 and 3.

If you fine tune the color temperature, the new color settings are stored in memory for each of the three color temperatures and item 1 of the on-screen menu change as follows.
ï [5000K]→[⊡ 1]
ï [6500K]→[⊡ 2]
ï [9300K]→[⊡ 3]

■ sRGB mode

The sRGB color setting is an industry standard color space protocol designed to correlate the displayed and printed colors of sRGB compliant computer products. To adjust the colors to the sRGB profile, simply select the sRGB mode in the COLOR menu. Once you select the sRGB mode, the brightness (☼) and contrast (◑) values are automatically set to the values to be set in the sRGB mode.

```
COLOR
┌─────────────────────────────┐
│ EASY    EXPERT     sRGB      │
│                               │
│ ☼ :56  ◑ :76 FOR  sRGB        │
│                               │
│ ⊠ IMAGE                       │
│    RESTORATION   ON▶          │
└─────────────────────────────┘
```

In order to display the sRGB colors correctly (γ = 2.2, 6500K), confirm that:
ï the brightness (☼) and contrast (◑) values are adjusted respectively to the numbers shown in the BRIGHTNESS/CONTRAST menu. If not, press the RESET button (for less than 2 seconds). For information on how to change the brightness and contrast, see ì Adjusting the brightness and contrastî on page 10.
ï the color settings of your computer are set to the sRGB profile.

Note
Your computer and other connected products (such as a printer), must be sRGB compliant.

Restoring the color from the EASY or sRGB menus (IMAGE RESTORATION function)

The colors of most display monitors tend to gradually lose brilliance over several years of service. The IMAGE RESTORATION feature found in the EASY and sRGB menus allows you to restore the color to the original factory quality levels.

1 Move the joystick left or right to select EASY or sRGB mode.

2 First move the joystick up or down to select ⊠ (IMAGE RESTORATION). Then move the joystick to the right.
The picture disappears while the color is being restored (about 2 seconds). After the color is restored, the picture reappears on the screen again.

Notes
ï Before using this feature, the monitor must be in normal operation mode (green power indicator on) for at least 30 minutes. If the monitor goes into power saving mode, you must return the monitor to normal operation mode and wait for 30 minutes for the monitor to be ready. You may need to adjust your computerís power saving settings to keep the monitor in normal operation mode for the full 30 minutes. If the monitor is not ready, the following message will appear.
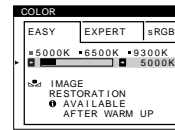
```
COLOR
┌─────────────────────────────┐
│ EASY    EXPERT     sRGB      │
│ ■5000K •6500K •9300K         │
│              ■      5000K     │
│                               │
│ ⊠ IMAGE                       │
│    RESTORATION                │
│  ❶ AVAILABLE                  │
│    AFTER WARM UP              │
└─────────────────────────────┘
```

ï The monitor may gradually lose its ability to perform this function due to the natural aging of the picture tube.

Adjusting the quality of the picture (SCREEN)

The SCREEN settings allow you to adjust the quality of the picture by controlling the moire and landing.
ï If the color is irregular at the corners of the screen, adjust the landing.
ï If elliptical or wavy patterns appear on the screen, cancel the moire.
The CANCEL MOIRE and MOIRE ADJUST settings are stored in memory for the current input signal. All other settings are stored in memory for all input signals.

1 Press the joystick.
The main MENU appears on the screen.

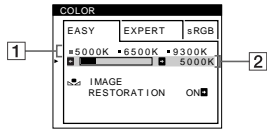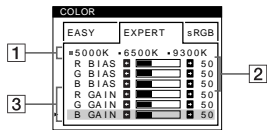**2 Move the joystick to highlight ▥ SCREEN and press the joystick again.**
The SCREEN menu appears on the screen.

3 First move the joystick up or down to select the desired adjustment item. Then move the joystick left or right to make the adjustment.

Select	To
◰ LANDING	reduce any color irregularities in the screenís top left corner to a minimum.
◳ LANDING	reduce any color irregularities in the screenís top right corner to a minimum.
◱ LANDING	reduce any color irregularities in the screenís bottom left corner to a minimum.
◲ LANDING	reduce any color irregularities in the screenís bottom right corner to a minimum.
▥ CANCEL MOIRE*	turn the moire cancellation function ON or OFF. ▥ (MOIRE ADJUST) appears in the menu when you select ON.
▥ MOIRE ADJUST	adjust the degree of moire cancellation until the moire is at a minimum.

* Moire is a type of natural interference which produces soft, wavy lines on your screen. It may appear due to interference between the pattern of the picture on the screen and the phosphor pitch pattern of the monitor.

Example of moire

Note
The picture may become fuzzy when CANCEL MOIRE is set to ON.

Adjusting the convergence (CONV)

The CONV settings allow you to adjust the quality of the picture by controlling the convergence. The convergence refers to the alignment of the red, green, and blue color signals.
If you see red or blue shadows around letters or lines, adjust the convergence.
These settings are stored in memory for all input signals.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ⊞ CONV and press the joystick again.
The CONVERGENCE menu appears on the screen.

3 First move the joystick up or down to select the desired adjustment item. Then move the joystick left or right to make the adjustment.

Select	To
⊞	horizontally shift red or blue shadows
⊞	vertically shift red or blue shadows
⊞ **TOP** V CONVER TOP	vertically shift red or blue shadows at the top of the screen
⊞ **BOT** V CONVER BOTTOM	vertically shift red or blue shadows at the bottom of the screen

Additional settings (OPTION)

You can manually degauss (demagnetize) the monitor, change the menu position, and lock the controls.

1 Press the joystick.
The main MENU appears on the screen.

2 Move the joystick to highlight ⊟ OPTION and press the joystick again.
The OPTION menu appears on the screen.

3 Move the joystick up or down to select the desired adjustment item.
Adjust the selected item according to the following instructions.

■ Degaussing the screen

The monitor is automatically demagnetized (degaussed) when the power is turned on.
To manually degauss the monitor, first move the joystick up or down to select ⊍ (DEGAUSS). Then move the joystick to the right.
The screen is degaussed for about 3 seconds. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

■ Changing the menuís position

Change the menuís position if it is blocking an image on the screen.
To change the menuís on-screen position, first move the joystick up or down to select ⊟ (OSD H POSITION) for horizontal adjustment, or ⊟ (OSD V POSITION) for vertical adjustment. Then move the joystick left or right to shift the on-screen menu.

■ Locking the controls

To protect adjustment data by locking the controls, first move the joystick up or down to select ⊶ (CONTROL LOCK). Then move the joystick to the right, to select ON.
Only the ① (power) switch, EXIT, and ⊶ (CONTROL LOCK) of the ⊟ OPTION menu will operate. If any other items are selected, the ⊶ mark appears on the screen.

To cancel the control lock
Repeat the procedure above and set ⊶ (CONTROL LOCK) to OFF.

Resetting the adjustments

This monitor has the following three reset methods. Use the RESET button to reset the adjustments.

RESET

■ Resetting a single adjustment item

Use the joystick to select the adjustment item you want to reset, and press the RESET button.

■ Resetting all of the adjustment data for the current input signal

Press the RESET button when no menu is displayed on the screen. Note that the following items are not reset by this method:
ï on-screen menu language (page 8)
ï adjustment mode in the COLOR menu (EASY, EXPERT, sRGB) (page 11)
ï on-screen menu position (page 14)
ï control lock (page 14)

■ Resetting all of the adjustment data for all input signals

Press and hold the RESET button for more than 2 seconds.

Note
The RESET button does not function when ⊶ (CONTROL LOCK) is set to ON.

Technical Features

Power saving function

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

Power mode	Power consumption*	① (power) indicator
normal operation	≤ 170 W	green
1 standby	≤ 15 W	green and orange alternate
2 suspend (sleep)**	≤ 15 W	green and orange alternate
3 active off*** (deep sleep)**	≤ 1 W	orange
power off	0 W	off

* Figures reflect power consumption when no USB compatible peripherals are connected to the monitor.
** ì Sleepî and ì deep sleepî are power saving modes defined by the Environmental Protection Agency.
*** When your computer enters power saving mode, the input signal is cut and NO INPUT SIGNAL appears on the screen before the monitor enters active off mode. After a few seconds, the monitor enters power saving mode.

Troubleshooting

Before contacting technical support, refer to this section.

If thin lines appear on your screen (damper wires)

The visible lines on your screen especially when the background screen color is light (usually white), are normal for the Trinitron monitor. This is not a malfunction. These are shadows from the damper wires used to stabilize the aperture grille. The aperture grille is the essential element that makes a Trinitron picture tube unique by allowing more light to reach the screen, resulting in a brighter, more detailed picture.

Damper wires
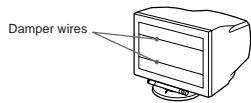
On-screen messages

If there is something wrong with the input signal, one of the following messages appears on the screen.

If NO INPUT SIGNAL appears on line 1

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

```
 INFORMATION
 MONITOR  IS  WORKING
 INPUT    1 :
1  NO  INPUT  SIGNAL               2
    ▪ ACTIVATE  BY  COMPUTER
    ▪ CHECK  INPUT  SELECTOR       3
    ▪ CHECK  SIGNAL  CABLE
 WHITE
 RED
 GREEN
 BLUE
```
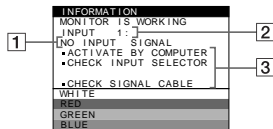
2 The selected connector

This message shows the currently selected connector (INPUT 1 or INPUT 2).

3 The remedies

One or more of the following messages may appear on the screen.
- If ACTIVATE BY COMPUTER appears on the screen, try pressing any key on the computer or moving the mouse, and confirm that your computer's graphic board is completely seated in the correct bus slot.
- If CHECK INPUT SELECTOR appears on the screen, try changing the input signal (page 8).
- If CHECK SIGNAL CABLE appears on the screen, check that the monitor is correctly connected to the computer (page 6).

If OUT OF SCAN RANGE appears on line 1

This indicates that the input signal is not supported by the monitor's specifications.

```
 INFORMATION
 MONITOR  IS  WORKING
 INPUT    1 : 130 . 0kHz /  75Hz   2
1  OUT  OF  SCAN  RANGE
    CHANGE  SIGNAL  TIMING         3
 WHITE
 RED
 GREEN
 BLUE
```
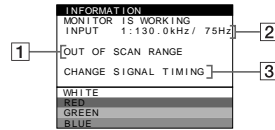
2 The selected connector and the frequencies of the current input signal

This message shows the currently selected connector (INPUT 1 or INPUT 2). If the monitor recognizes the frequencies of the current input signal, the horizontal and vertical frequencies are also displayed.

3 The remedies

CHANGE SIGNAL TIMING appears on the screen. If you are replacing an old monitor with this monitor, reconnect the old monitor. Then adjust the computer's graphic board so that the horizontal frequency is between 30 - 121 kHz, and the vertical frequency is between 48 - 160 Hz.

For more information, see 'Trouble symptoms and remedies' on page 17.

Trouble symptoms and remedies

If the 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 19) if the following recommendations do not resolve the problem.

Symptom	Check these items
No picture	
If the ① (power) indicator is not lit	Check that the power cord is properly connected.
	Check that the ① (power) switch is in the 'on' position.
If the NO INPUT SIGNAL message appears on the screen, or if the ① (power) indicator is either orange or alternating between green and orange	Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 6).
	Check that the INPUT switch setting is correct (page 8).
	Check that the video input connector's pins are not bent or pushed in.
	■Problems caused by the connected computer or other equipment
	The computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.
	Check that the computer's power is 'on.'
	Check that the graphic board is completely seated in the proper bus slot.
If the OUT OF SCAN RANGE message appears on the screen	**■Problems caused by the connected computer or other equipment**
	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. Horizontal: 30 – 121 kHz Vertical: 48 – 160 Hz
If no message is displayed and the ① (power) indicator is green or flashing orange	Use the Self-diagnosis function (page 19).
Picture flickers, bounces, oscillates, or is scrambled	Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, fluorescent lighting, televisions, or electric fans.
	Move the monitor away from power lines.
	Try plugging the monitor into a different AC outlet, preferably on a different circuit.
	Try turning the monitor 90° to the left or right.
	■Problems caused by the connected computer or other equipment
	Check your graphic board manual for the proper monitor setting.
	Confirm that the graphics mode and the frequency of the input signal are supported by this monitor (Appendix). Even if the frequency is within the proper range, some graphic boards may have a sync pulse that is too narrow for the monitor to sync correctly.
	Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.
Picture is fuzzy	Adjust the brightness and contrast (page 10).
	Degauss the monitor* (page 14).
	If CANCEL MOIRE is ON, the picture may become fuzzy. Decrease the moire cancellation effect or set CANCEL MOIRE to OFF (page 13).
Picture is ghosting	Eliminate the use of video cable extensions and/or video switch boxes.
	Check that all plugs are firmly seated in their sockets.
Picture is not centered or sized properly	Press the ASC button (page 8).
	Adjust the size or centering (page 11). Note that some video modes do not fill the screen to the edges.
Edges of the image are curved	Adjust the geometry (page 11).

GB

1-7

Symptom	Check these items
Wavy or elliptical pattern(moire) is visible	ï Set CANCEL MOIRE to ON and adjust the degree of moire cancellation until the moire is at a minimum (page 13).
	■Problems caused by the connected computer or other equipment ï Change your desktop pattern.
Color is not uniform	ï Degauss the monitor* (page 14). If you place equipment that generates a magnetic field, such as a speaker, near the monitor, or if you change the direction the monitor faces, color may lose uniformity. ï Adjust the landing (page 13).
White does not look white	ï Adjust the color temperature (page 11). ï Check that the five BNC connectors are connected in the correct order (page 6).
Letters and lines show red or blue shadows at the edges	ï Adjust the convergence (page 14).
Monitor buttons do not operate (O-n appears on the screen)	ï If the control lock is set to ON, set it to OFF (page 14).
IMAGE RESTORATION function does not operate	ï Before using this function, the monitor must be in normal operation mode (green power indicator on) for at least 30 minutes. For more information on using the IMAGE RESTORATION function, see page 13. ï Adjust the computerís power saving settings to keep the monitor in normal operation mode for more than 30 minutes. ï The monitor may gradually lose its ability to perform this function due to the natural aging of the picture tube.
USB peripherals do not function	ï Check that the appropriate USB connectors are securely connected (page 7). ï Check that the ! (power) switch is in the ì onî position. **■Problems caused by the connected computer or other equipment** ï Check that the power of any self-powered USB compliant peripheral devices is ìon.î ï Install the latest version of the device driver on your computer. Contact your deviceís manufacturer for information about the appropriate device driver. ï If your USB compliant keyboard or mouse does not function, connect them directly to your computer, reboot your computer, and make any necessary adjustments to the USB settings. Then reconnect the keyboard or mouse to the monitor. If you connect a keyboard or mouse to the USB connectors and then boot your computer for the first time, the peripheral devices may not function.
A hum is heard right after the power is turned on	ï This is the normal sound of the auto-degauss cycle. When the power is turned on, the monitor is automatically degaussed for 3 seconds.

* If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. A humming noise may be heard, but this is not a malfunction.

Displaying this monitorís name, serial number, and date of manufacture.

While the monitor is receiving a video signal, press and hold the joystick for more than 5 seconds to display this monitorís information box.
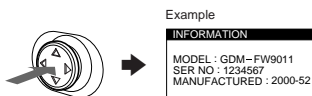
Example

```
INFORMATION

MODEL : GDM−FW9011
SER NO : 1234567
MANUFACTURED : 2000-52
```

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 ! (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.
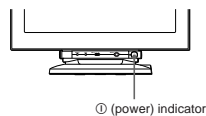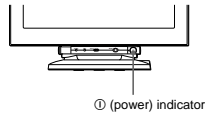
! (power) indicator

■ If the ! (power) indicator is green

1 **Disconnect any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).**

2 **Press the ! (power) button twice to turn the monitor off and then on.**

3 **Move the joystick to the right for 2 seconds before the monitor enters power saving mode.**

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 service personal of the monitorís condition.

■ If the ! (power) indicator is flashing orange

Press the ! (power) button 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 service personal of the monitorís 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

CRT	0.23 ñ 0.27 mm aperture grille pitch 24 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 482.1×308.2 mm (w/h) ($19 \times 12\,^1/4$ inches) 22.5" viewing image

Resolution	Maximum (16:10)
	   Horizontal: 2304 dots
	   Vertical: 1440 lines
	Maximum (4:3)
	   Horizontal: 2048 dots
	   Vertical: 1536 lines
	Recommended (16:10)
	   Horizontal: 1920 dots
	   Vertical: 1200 lines

Input signal levels	Video signal
	   Analog RGB: 0.700 Vp-p
	   (positive), 75 Ω
	SYNC signal
	   H/V separate or composite sync:
	   TTL 2 kΩ, Polarity free
	   Sync on Green: 0.3 Vp-p
	   (negative)

Standard image area	16:10
	   Approx. 474×296 mm (w/h)
	   ($18\,^3/4 \times 11\,^3/4$ inches)
	4:3
	   Approx. 395×296 mm (w/h)
	   ($15\,^5/8 \times 11\,^3/4$ inches)
	5:4
	   Approx. 370×296 mm (w/h)
	   ($14\,^5/8 \times 11\,^3/4$ inches)

Deflection frequency*	Horizontal: 30 to 121 kHz Vertical: 48 to 160 Hz
AC input voltage/current	100 to 240 V, 50/60 Hz, 2.2 ñ 1.2 A
Power consumption	Approx. 170 W (with no USB devices connected)
Operating temperature	10∞C to 40∞C
Dimensions	Approx. $571.5 \times 500 \times 522.5$ mm (w/h/d) ($22\,^1/2 \times 19\,^3/4 \times 20\,^5/8$ inches)
Mass	Approx. 42 kg (92 lb 10 oz)
Plug and Play	DDC1/DDC2B/DDC2Bi, GTF**
Supplied accessories	This operating instruction

* Recommended horizontal and vertical timing condition
  ï Horizontal sync width duty should be more than 4.8% of total horizontal time or 0.8 µs, whichever is larger.
  ï Horizontal blanking width should be more than 2.3 µsec.
  ï Vertical blanking width should be more than 450 µsec.
** If the input signal is Generalized Timing Formula (GTF) compliant, the GTF feature of the monitor will automatically provide an optimal image for the screen.

Design and specifications are subject to change without notice.

GB

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 ① (power) indicator will either light up green or flash orange. If the ① (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.

① (power) indicator

■ If the ① (power) indicator is green

1 **Disconnect any plugs from the video input 1 and 2 connectors, or turn off the connected computer(s).**

2 **Press the ① (power) button twice to turn the monitor off and then on.**

3 **Move the joystick to the right for 2 seconds before the monitor enters power saving mode.**

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 ① (power) indicator is flashing orange

Press the ① (power) button twice to turn the monitor off and then on.
If the ① (power) indicator lights up green, the monitor is working properly.

If the ① (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ① (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

CRT	0.23 – 0.27 mm aperture grille pitch 24 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 482.1 × 308.2 mm (w/h) (19 × 12 ^{1}/4 inches) 19.8" viewing image

Resolution	Maximum (16:10)
	    Horizontal: 2304 dots
	    Vertical: 1440 lines
	Maximum (4:3)
	    Horizontal: 2048 dots
	    Vertical: 1536 lines
	Recommended (16:10)
	    Horizontal: 1920 dots
	    Vertical: 1200 lines

Input signal levels	Video signal
	    Analog RGB: 0.700 Vp-p
	    (positive), 75 Ω
	SYNC signal
	    H/V separate or composite sync:
	    TTL 2 kΩ, Polarity free
	    Sync on Green: 0.3 Vp-p
	    (negative)

Standard image area	16:10
	    Approx. 474 × 296 mm (w/h)
	    (18 ^{3}/4 × 11 ^{3}/4 inches)
	4:3
	    Approx. 395 × 296 mm (w/h)
	    (15 ^{5}/8 × 11 ^{3}/4 inches)
	5:4
	    Approx. 370 × 296 mm (w/h)
	    (14 ^{5}/8 × 11 ^{3}/4 inches)

Deflection frequency*	Horizontal: 30 to 121 kHz Vertical: 48 to 160 Hz
AC input voltage/current	100 to 240 V, 50/60 Hz, 2.2 – 1.2 A
Power consumption	Approx. 170 W (with no USB devices connected)
Operating temperature	10˚C to 40˚C
Dimensions	Approx. 571.5 × 500 × 522.5 mm (w/h/d) (22 ^{1}/2 × 19 ^{3}/4 × 20 ^{5}/8 inches)
Mass	Approx. 42 kg (92 lb 10 oz)
Plug and Play	DDC1/DDC2B/DDC2Bi, GTF**
Supplied accessories	See page 6

* 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 2.3 μsec.
  • Vertical blanking width should be more than 450 μsec.
** If the input signal is Generalized Timing Formula (GTF) compliant, the GTF feature of the monitor will automatically provide an optimal image for the screen.

Design and specifications are subject to change without notice.

SECTION 2
DISASSEMBLY

2-1. CABINET ASSY REMOVAL

⑨ Three screws
(+ BVTT 4 x 8)

⑩ Video shield assembly

⑦ Four screws
(+ BVTT 4 x 8)

① Screw cover(L)

② Screw cover(R)

⑧ Top cover

③ Four screws
(+ BVTP 4 x 16)

④ Two claws

⑤ Two claws

⑥ Cabinet assembly

A Knock lightly cabinet assembly in the direction of arrow **A**.

⑤ Two claws

Claw

Bezel

2-2. D BOARD REMOVAL

③ Screw
(+ P 3.5 x 20)

④ Two screws
(+ BVTP 3 x 12)

⑥ D board

① Three screws
(+ BVTT 4 x 8)

B

GND

CN504

CN505

Tow hooks

⑤ Printed circuit board holder

② Open the D block in the direction of the arrow **A**. and remove of the arrow **B**.

GDM-FW9011

2-3. G BOARD REMOVAL

③ Two screws
(+BVTP 3 x 8)

④ G shield

⑤ Screw
(+BVTP 3 x 8)

① Three screws
(+ BVTT 4 x 8)

CN654
CN653
CN651
CN650 CN655
CN652

CN602

⑦ G board

Ⓑ

CN601
CN603

GND

GND

⑧ Two screws
(+ KTP 3 x 8)

⑨ AC inlet (3P)

Ⓐ

Two hooks

GND

② Open the G block in the direction
of the arrow Ⓐ. and remove of
the arrow Ⓑ.

⑥ Two printed circuit board holders

2-4. A BOARD AND I/O TERMINAL BOARD ASSY REMOVAL

④ A board (2/2)

③ A board (1/2)

① Three screws
(+BVTT 4 x 8)

※ When installing terminal
bracket,be sure to apply
screw lock on 2 spots after
screws (HD15) are fixed.

A board (1/2)

② Screw(M4)
(EXT TOOTH Washer)

A board (1/2)

Screw lock

⑥ Terminal board assembly

⑤ Two screws
(HD15)

2-5. S BOARD REMOVAL

① Screw
(+ BVTT4 x 8)

CN3002

CN3003

CN3001

② S board

2-6. N BOARD REMOVAL

CN003

CN5003

CN001

CN5002

CN002

CN5001

CN010

CN011

CN007

② N board

① Two printed circuit board holders

2-7. SERVICE POSITION

CAUTION : SHORT

D,G boards   Rear shield

※ If the claw is hooked,
opening and closing
the board is impossible.
Do not try to do it by force.

D board (Refer to 2-2.)

※ If the claw is hooked,
opening and closing
the board is impossible.
Do not try to do it by force.

CN602

AC inlet (3P)

G board
(Refer to 2-3.)

2-8. PICTURE TUBE REMOVAL

③ Four screws
(Tapping screw 7 + crown washer)

⑧ Anode cap

① Open the D block.
(Refer to 2-2.)

⑥ A board

⑦ Three connectors

P5

P6   GND

④ Four screws
(+BVTP 4 x 16)

⑫ Neck assembly

② Open the G block.
(Refer to 2-3.)

⑪ Deflection yoke

⑤ Bezel

⑩ Picture tube

PROTECTION SHEET
NOTE: When replaced the picture tube,
stick the PROTECTION SHEET
(Part No. 4-036-700-01) on the
picture tube band.

⑨ Four screws
(+BVTT 4 x 8)

2-9. CONTROL BLOCK ASSY REMOVAL

※ Remove the picture tube.(Refer to 2-8.)

Holder

Connector(11P)

② Picture tube shield
complete assembly

① Two screws
(+ BVTT 4 x 8)

Connector(4P)

Connector(2P)

Connector(4P)

Connector(2P)

④ Control block assembly

GND

③ Two screws
(+ BVTP 3 x 12)

- **REMOVAL OF ANODE-CAP**
NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

- **REMOVING PROCEDURES**

ⓐ →

ⓑ

ⓒ
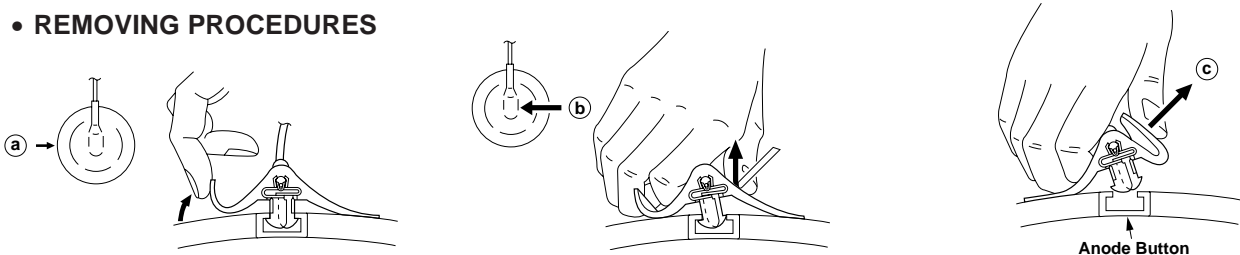
Anode Button

① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

- **HOW TO HANDLE AN ANODE-CAP**
① Don't scratch the surface of anode-caps with sharp shaped material!
② Don't press the rubber hardly not to damage inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or damage the rubber.
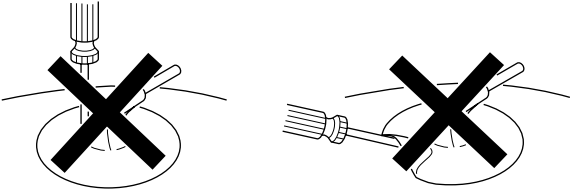
2-10. J BOARD REMOVAL

※ Remove the control block assembly.(Refer to 2-9.)

CN891

② J board

Two hooks

① Claw

2-11. US BOARD REMOVAL

② Stand cover

CN2601

① Two screws
(+BVTP 3 x 12)

Cushion

④ USB shield

⑤ US board

③ Four screws
(+BVTP 3 x 12)
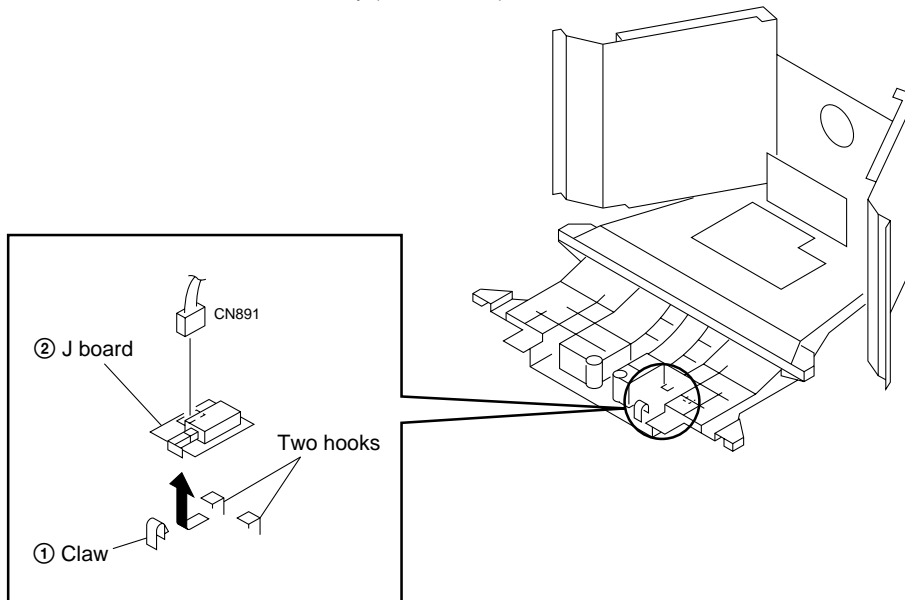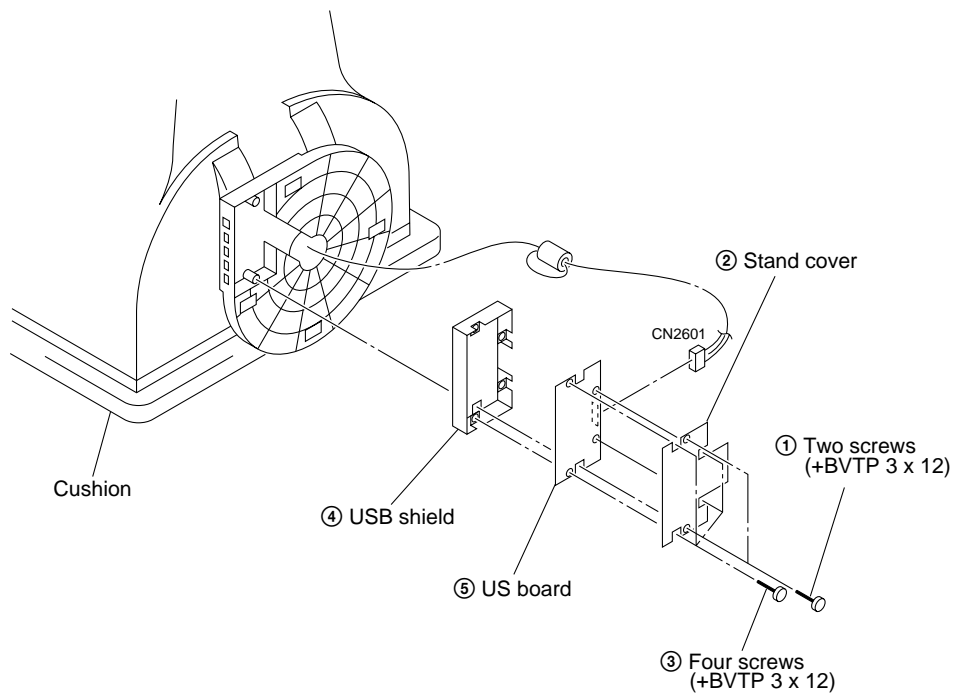
2-12. HARNESS LOCATION
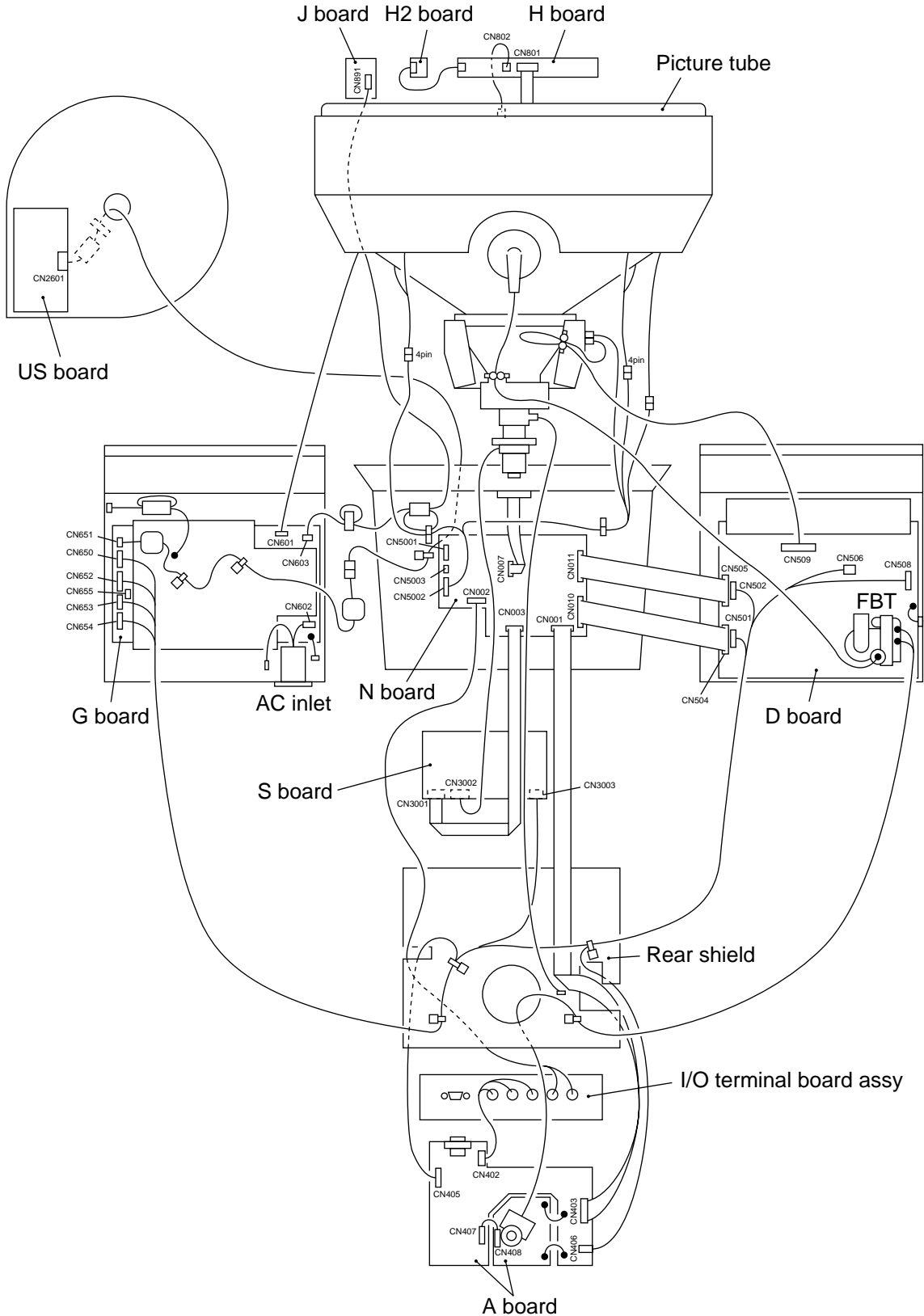
SECTION 3
SAFETY RELATED ADJUSTMENT

When replacing or repairing the shown below table, the following operational checks must be performed as a safety precaution against X-rays emissions from the unit.

	Part Replaced (✕)
HV ADJ	RV901

		Part Replaced (◪)
HV Regulator Circuit Check	D Board	IC901, R923, R924, R929, R943, T902(FBT) • Mounted D Board
HV Protector Circuit Check	D Board	C922, C926, D912, D915, D921, Q907, Q908, R921, R922, R932, R937, R939, T902(FBT) • Mounted D Board
Beam Current Protector Circuit Check	D Board	C921, C933, D901, D913, R920, R928, R930, R931, T902(FBT) • Mounted D Board
	N Board	IC001, R031, R032 • Mounted N Board

* Confirm one minute after turning on the power.

a) HV Regulator Circuit Check

1) Enter black crosshatch signal (black on white background), and check that high voltage is in the specified range.
[Specification]: 28.50 ± 0.10 kV

2) Check that the voltage of D912 cathode on the D board is 29.0 V or more.

b) HV Protector Circuit Check

1) Enter black crosshatch signal (black on white background).

2) Apply the specified voltage to the D912 cathode on the D board, and check that high voltage is 0.1 kV or less.
[Specification]: 34.00 + 0.00/– 0.05 V

c) Beam Current Protector Circuit Check
(1st Protector): D Board

1) Apply 4.5 V DC to CN504 ⑩ pin on the D board, and check high voltage value.

2) Connect constant current source to a section between T902 (FBT) ⑪ pin and ⑫ pin (GND) on the D board, and check that high voltage checked in 1) lowers by 1.50 kV or more when the specified current flows to the ⑪ pin.
[Specification]: 2.00 + 0.00/– 0.01 mA

d) Beam Current Protector Circuit Check
(2nd Protector): D Board

1) Connect constant current source to a section between T902 (FBT) ⑪ pin and ⑫ pin (GND) on the D board, and check that the voltage of CN504 ⑩ pin becomes 0 V or less when the specified current flows to the ⑪ pin.
[Specification]: 1.63 + 0.00/– 0.01 mA

e) Beam Current Protector Circuit Check
: G Board

1) Apply 264 V AC.

2) Enter about 5 V to CN650 ④ pin on the G board, and check that the output voltage of CN653 ② pin is about 15 V.

3) Enter about 0 ± 0.2 V to CN650 ④ pin, and check that the output voltage of CN653 ② pin becomes 1.0 V or less.

f) Beam Current Protector Circuit Check
: N Board

1) Check that the protector operates, when the voltage of CN010 ⑯ pin on the N board is lowered to 0 V or less (for more than 2 seconds).

SECTION 4

ADJUSTMENTS

> **Note: Hand degauss <u>must be used on stand-by or power-off condition.</u>**
> This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.

- **Landing Rough Adjustment**
1. Enter the full white signal. (or the full black dots signal).
2. Adjust the contrast to the maximum.
3. Make the screen monogreen.
Note: Off the outputs from R ch and B ch of SG.
4. Reverse the DY, and adjust coarsely the purity magnet so that a green raster positions in the center of screen.
5. Adjust the tilt of DY, and fix lightly with a clamp.
Note: "TILT" = "128".

- **Landing Fine Adjustment**
1. Put the set inside the Helmholtz coil. ("LCC SW" = "12")
2. Input the single green signal and set the "CONTRAST" = "255".
Note: After the W/B adjustment with 9300K, measure an average of ΣIk when a full white signal is entered in the CONT MAX/BRT CENT status. Then make adjustment so that the specified screen can be attained after aging for 2 hours with Ik equivalent to 30% of the average value.
3. Demagnetize the metal part of the chassis with the hand degausser and coil degausser, and the CRT surface with the hand degausser.
   Input AC 230V to AC IN, turn on and off the power to perform auto degaussing. (Perform auto degaussing by setting "FUNCTION SW" = 1. Return to the original value after use.)
   Demagnetize the CRT surface with the hand degausser again.
Note:
(1) Hand degauss <u>must be used on stand-by or power-off condition.</u>
   This model has an automatic earth magnetism correction function by using an earth magnetism sensor and a LCC coil. When using a hand degauss while monitor (LCC coil) is being operated, it sometimes gets magnetized, and the system may not work properly as a result.
(2) Adjust in a non-magnetic field.
(3) If adjusting in a magnetic fields, add the shift from the non-magnetic field in your estimation.
4. Attach the wobbling coil to the designated part of the CRT neck.
5. Attach the sensor of the landing adjustment unit on the CRT surface.
6. Adjust the DY position and purity, and the DY tilt, and landing of the center and 4 corners with the landing checker. After adjustment, set "LCC SW" to "13".

- Write terrestrial magnetism sensor reading VX and VY to "LCC VX" and LCC VY" respectively. Adjust the landing by moving "LCC NS", "LCC LT", "LCC LB", "LCC RT" and "LCC RB". However, the register adjustment must be limited within the following range.

"LCC NS"	128 ± 45
"LCC LT", "LCC LB", "LCC RT", "LCC RB"	
	128 ± 40

Save the service data.

<Specifications>
Adjust so that the green is within the specification given right.
4 corner adjust target : within $\pm$ 1

		(μm)
0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3

The red and blue must be within the specification given right with respect to the green.

		(μm)
± 6	± 6	± 6
± 6	± 6	± 6
± 6	± 6	± 6

A difference between red and blue must be within the specification given right.

		(μm)
10	10	10
10	7	10
10	10	10

* Adjustment and measurement should be made at the points one inch inside the fluorescent screen.

7. Tighten DY screw.
Note: Torque 22 ± 2 kg.cm (2.2 ± 0.2 Nm) auto degauss it.
8. For the up/down swing, swing the DY and insert a wedge so that the up and down pins are equal at the top and bottom. Adjust the H.TRP VR of DY so that the horizontal trapezoid is equal at the left and right. Insert the wedge firmly so that the DY does not shake.
9. Check the landing of each corner, and if it does not satisfy the specification, adjust the landing of four corners using "LCC LT", "LCC LB", "LCC RT" and "LCC RB".
   However, the register adjustment must be limited within the following range.

"LCC NS"	128 ± 15
"LCC LT", "LCC LB", "LCC RT", "LCC RB"	
	128 ± 45

After adjustment, save the service data.
10. Remove the sensor and wobbling coil.
11. Switch the signal to R.G.B., and check that each color is pure.
12. Check that the DY is not tilting, and fix the purity Mg with a white pen. Fix wedges with RTV.

Connect the communication cable of the computer to the connector located on the D board. Run the service software and then follow the instruction.

① 1-690-391-21 Cord,Connection ② A-1500-819-A Interface Unit 4 pin

IBM AT Computer as a Jig

D-sub (9 pin [female]) mini Din (8 pin) Box Unit Connector Attachment To BUS CONNECTOR
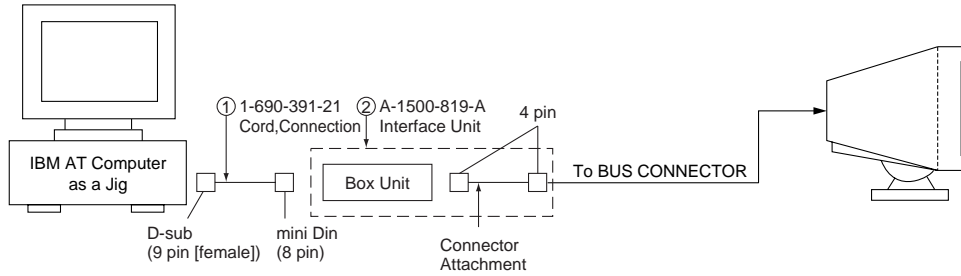
*The parts above (① and ②) are necessary for DAS adjustment.

- **Convergence Rough Adjustment**
(1) Receive an image of the white crosshatch signals (white lines on black).
(2) Place the protrusions of the 6-fold poles magnet attached to the CRT neck upon each other.
(3) Make rough adjustment of the H and V direction convergence by using 4-fold poles magnet.

H-TRP
YCH
TLV
YBH
TLH
Purity
4-pole magnet
6-pole magnet
2-pole magnet
XBV
XCV APH
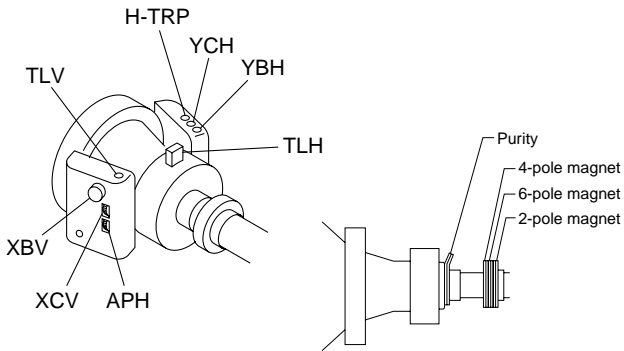
* Set so that the protruding parts of the 2 magnet rings agree with each other.

XCV, XBV, TLH, TLV, YCH, YBH
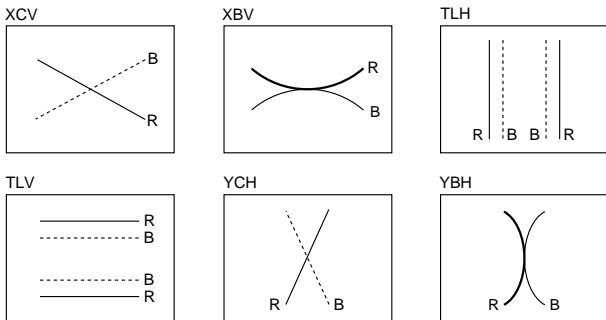
- **Convergence Specification**

fH	70kHz ≦	70kHz >
A	0.24 mm	0.24 mm
B	0.24 mm	0.28 mm
C	0.28 mm	0.32 mm

- **White Balance Adjustment Specification**
1. 9300K
   $x = 0.283 \pm 0.015$
   $y = 0.298 \pm 0.015$
   (All White)
2. 6500K
   $x = 0.313 \pm 0.015$
   $y = 0.329 \pm 0.015$
   (All White)
3. 5000K
   $x = 0.346 \pm 0.015$
   $y = 0.359 \pm 0.015$
   (All White)

- **Vertical and Horizontal Position and Size Specification**

$a \leqq 3.5$ mm
$b \leqq 3.5$ mm
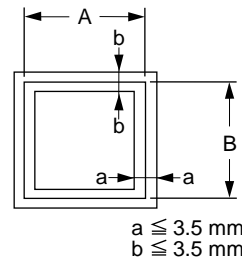
MODE	4 : 3	5 : 4
A	395	370
B	296	296

MODE	16 : 9	16 : 10
A	474	266
B	474	296

- **Focus adjustment**
Adjust the focus volume 1 and 2 for the optimum focus.

Focus 1
Focus 2
FBT

5-1. BLOCK DIAGRAMS

B-SS3536<AEP> -BD1-24

N (μ-COM, V.CONV, H. CONV, LCC, GEO MAGNETIC SENSOR)

B-SS3536<AEP>-BD2-24

US (USB CONTROL)

B-SS3536<AEP>-BD4-24

H (USER CONTROL)

B-SS3536<AEP>-BD5-24

S (CONVERGENCE CONTROL)

B-SS3536<AEP>-BD6-24

G (POWER SUPPLY)
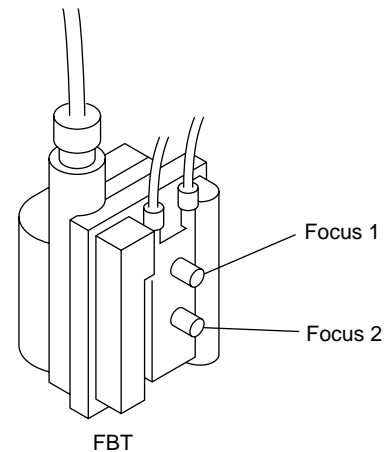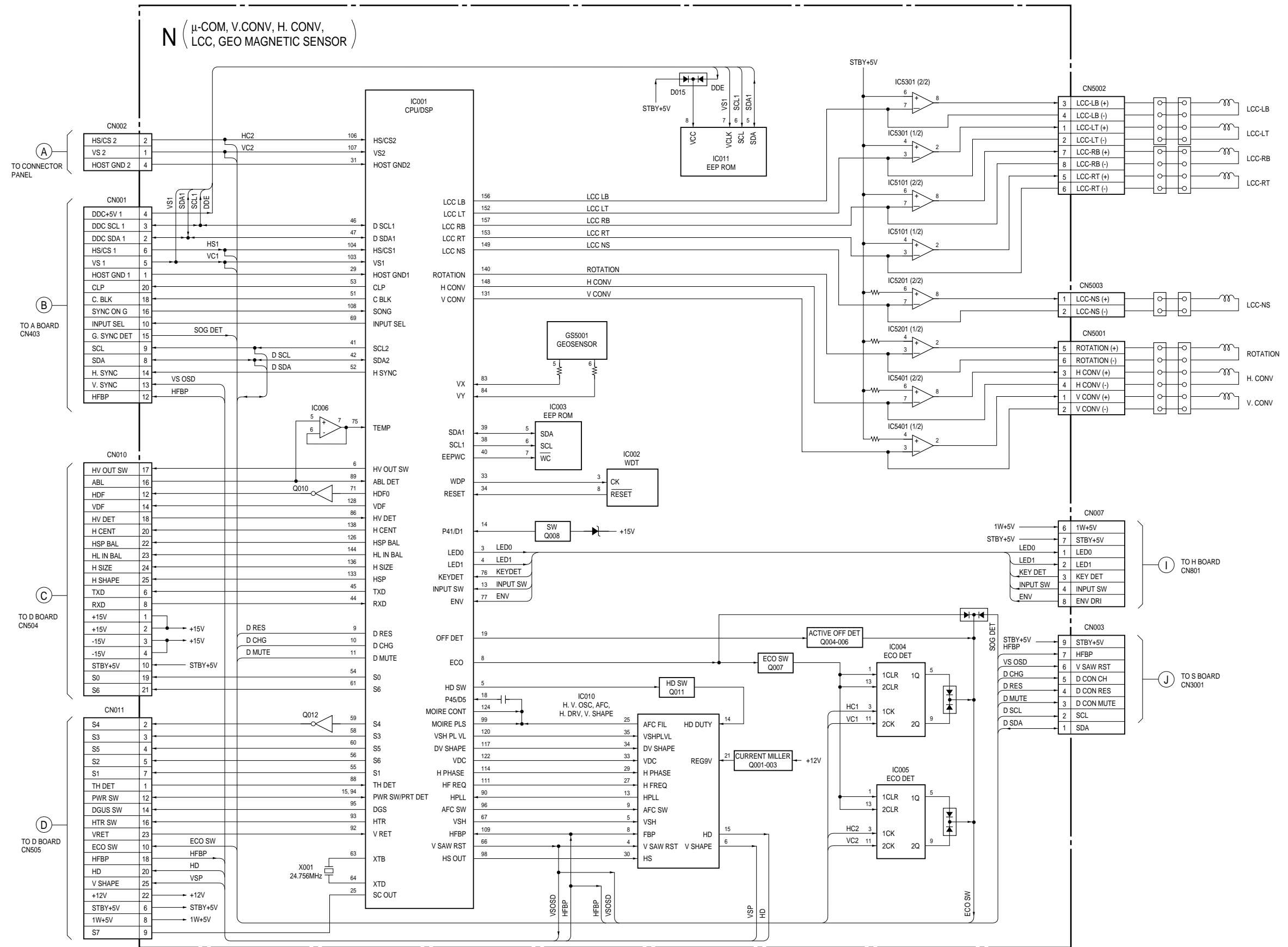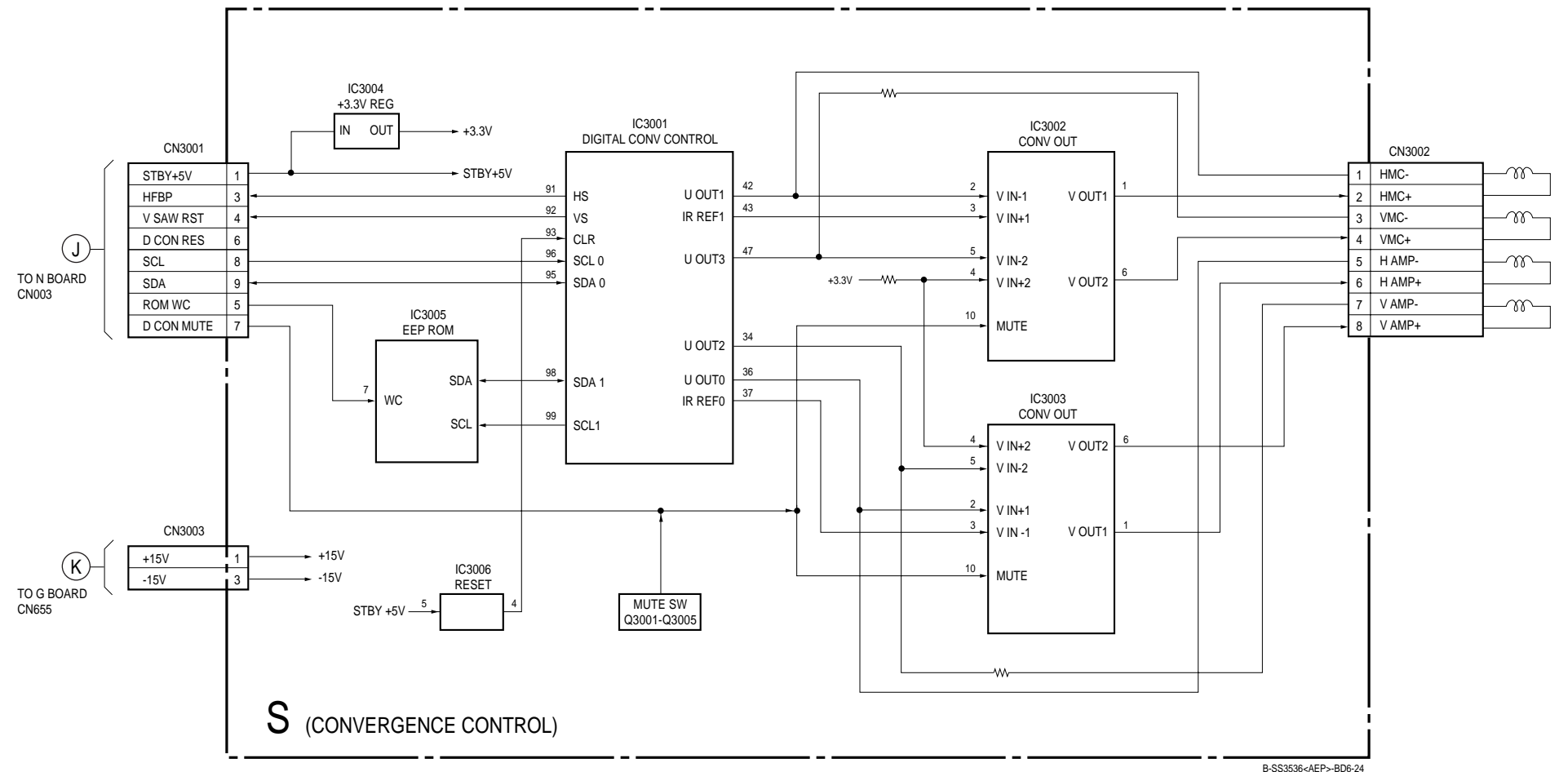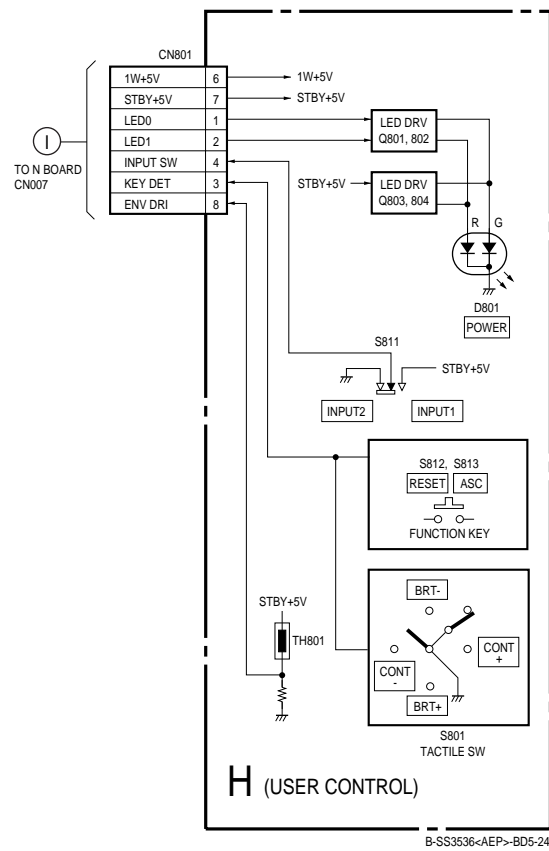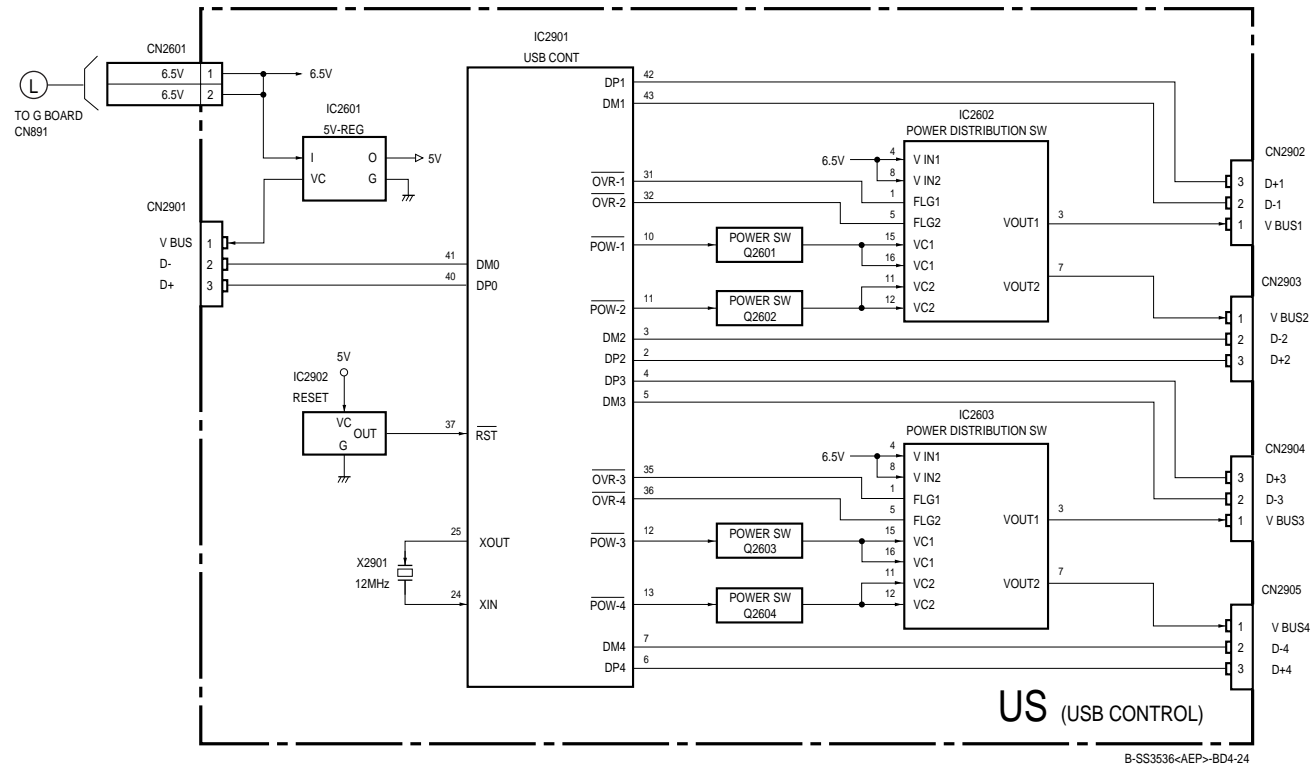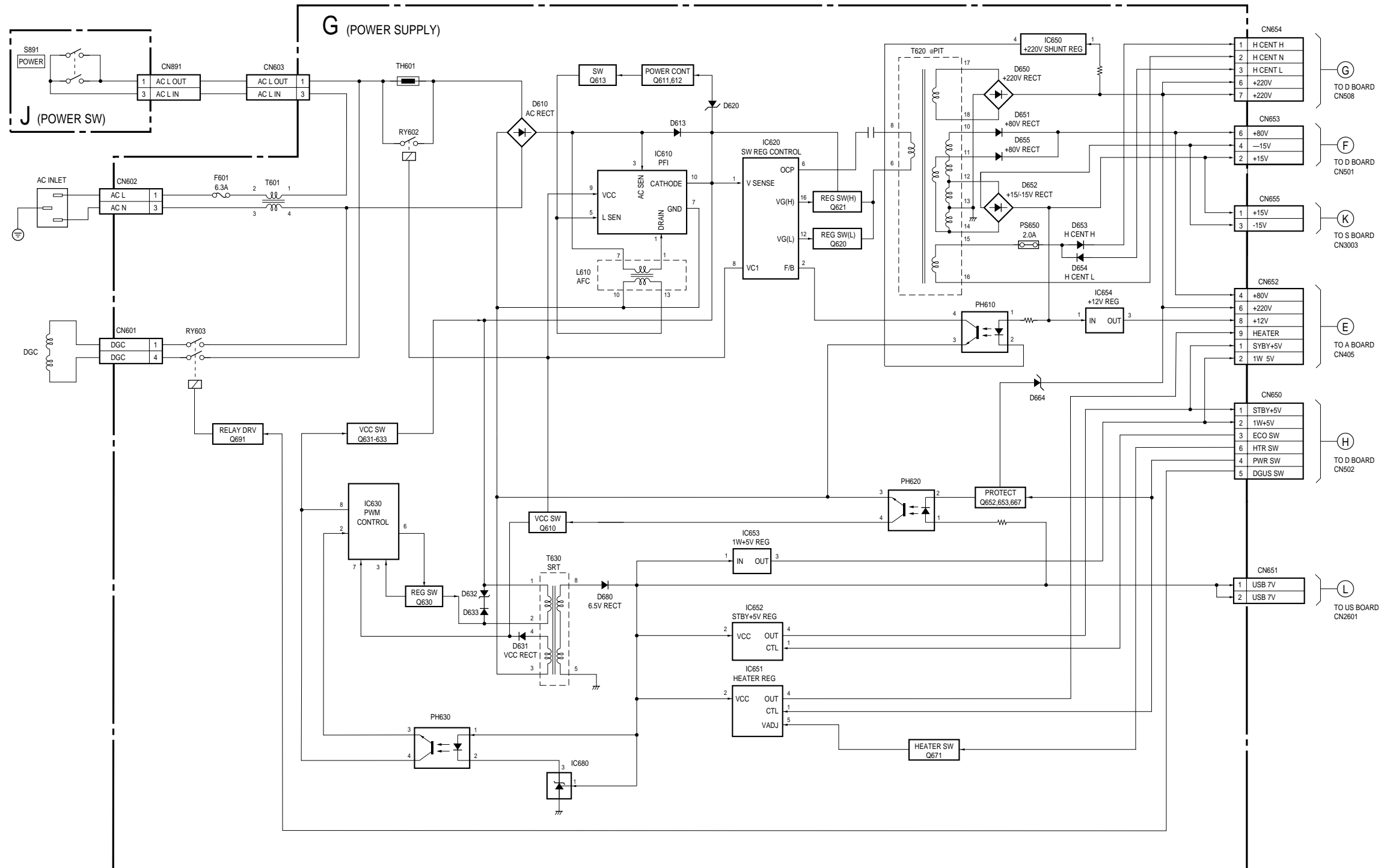
B-SS3536<AEP>-BD3-24

5-2. FRAME SCHEMATIC DIAGRAM
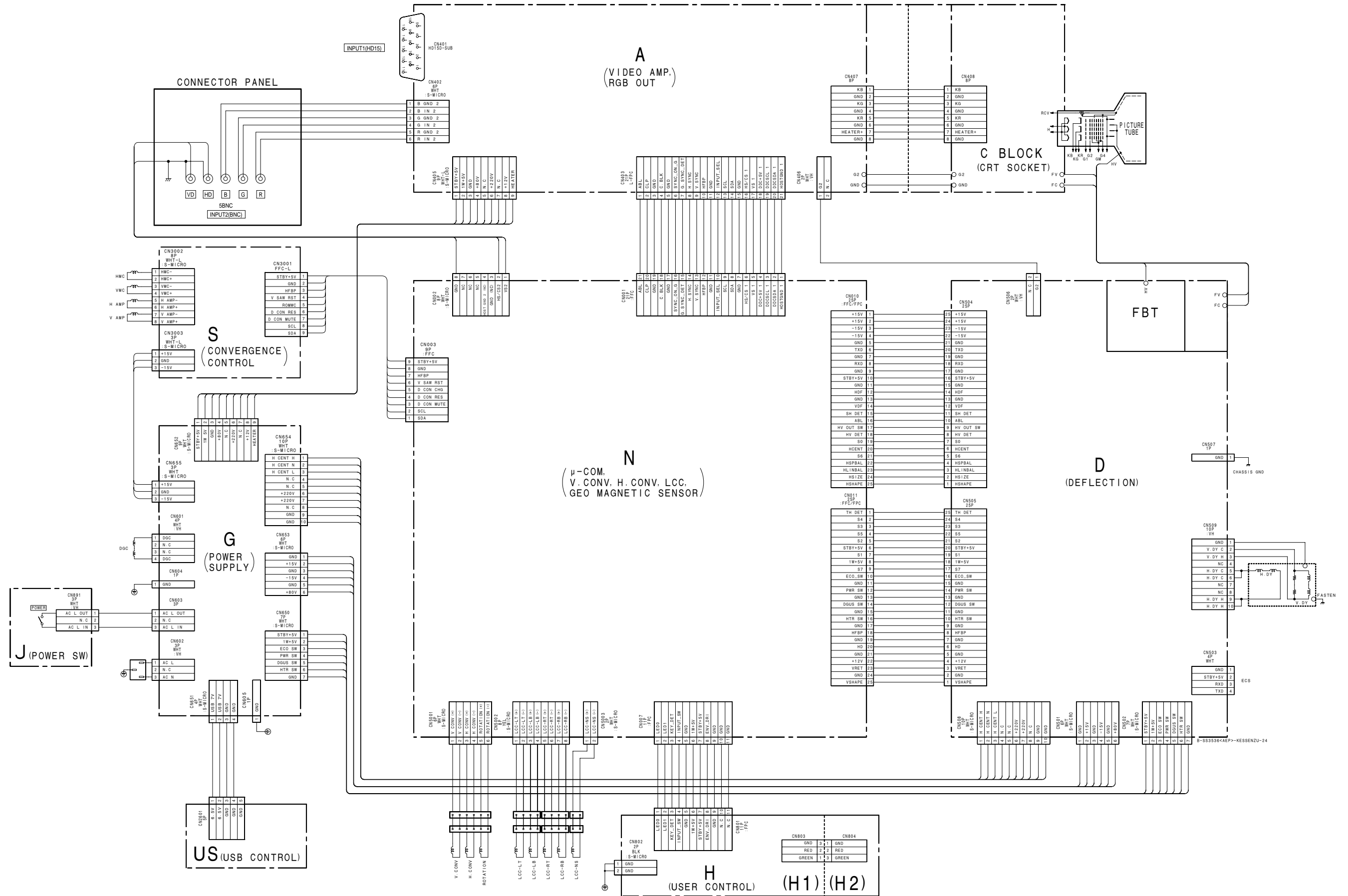
5-3. CIRCUIT BOARDS LOCATION
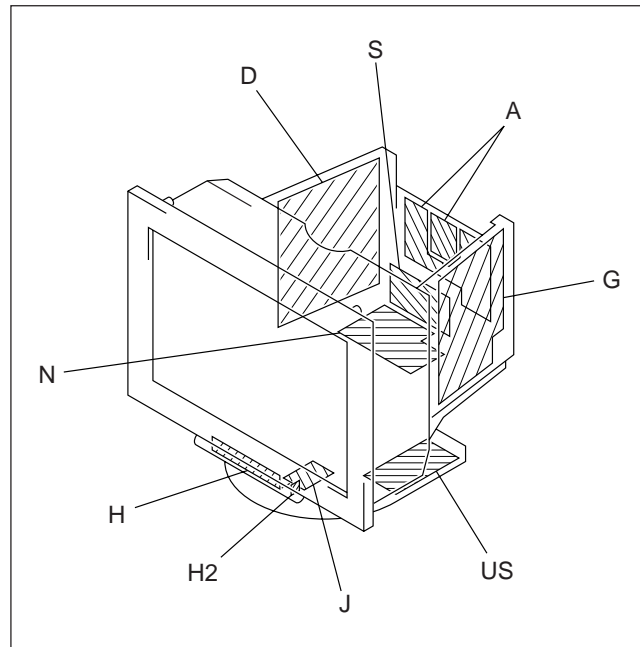
5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:
- All capacitors are in μF unless otherwise noted. (pF: μμF) 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.
- △ : internal component.
- ▭ : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth-ground.
- 〒 : earth-chassis.
- The components identified by ⋈ in this basic schematic diagram 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.
- When replacing components identified by ◪, make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

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

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

- 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 N board circuit diagram is divided into three sheets, each having the code N-ⓐ to N-ⓒ. For example, the destination (ab1) on the code N-ⓐ sheet is connected to (ab1) on the N-ⓑ sheet.

  a b 1
  → Ref. No.
  → Circuit diagram division code

	Part Replaced (⋈)
HV ADJ	RV901

		Part Replaced (◪)
HV Regulator Circuit Check	D Board	IC901, R923, R924, R929, R943, T902(FBT) • Mounted D Board
HV Protector Circuit Check	D Board	C922, C926, D912, D915, D921, Q907, Q908, R921, R922, R932, R937, R939, T902(FBT) • Mounted D Board
Beam Current Protector Circuit Check	D Board	C921, C933, D901, D913, R920, R928, R930, R931, T902(FBT) • Mounted D Board
	N Board	IC001, R031, R032 • Mounted N Board

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 / Cathode Anode	
⑬	Transistor (FET)		Drain Source / Gate	
⑭	Transistor (FET)		Drain Source / Gate	
⑮	Transistor (FET)		Source / Drain / Gate	
⑯	Transistor		Emitter / Collector / Base	
—	Discrete semiconductot			

(Chip semiconductors that are not actually used are included.)   Ver.1.6
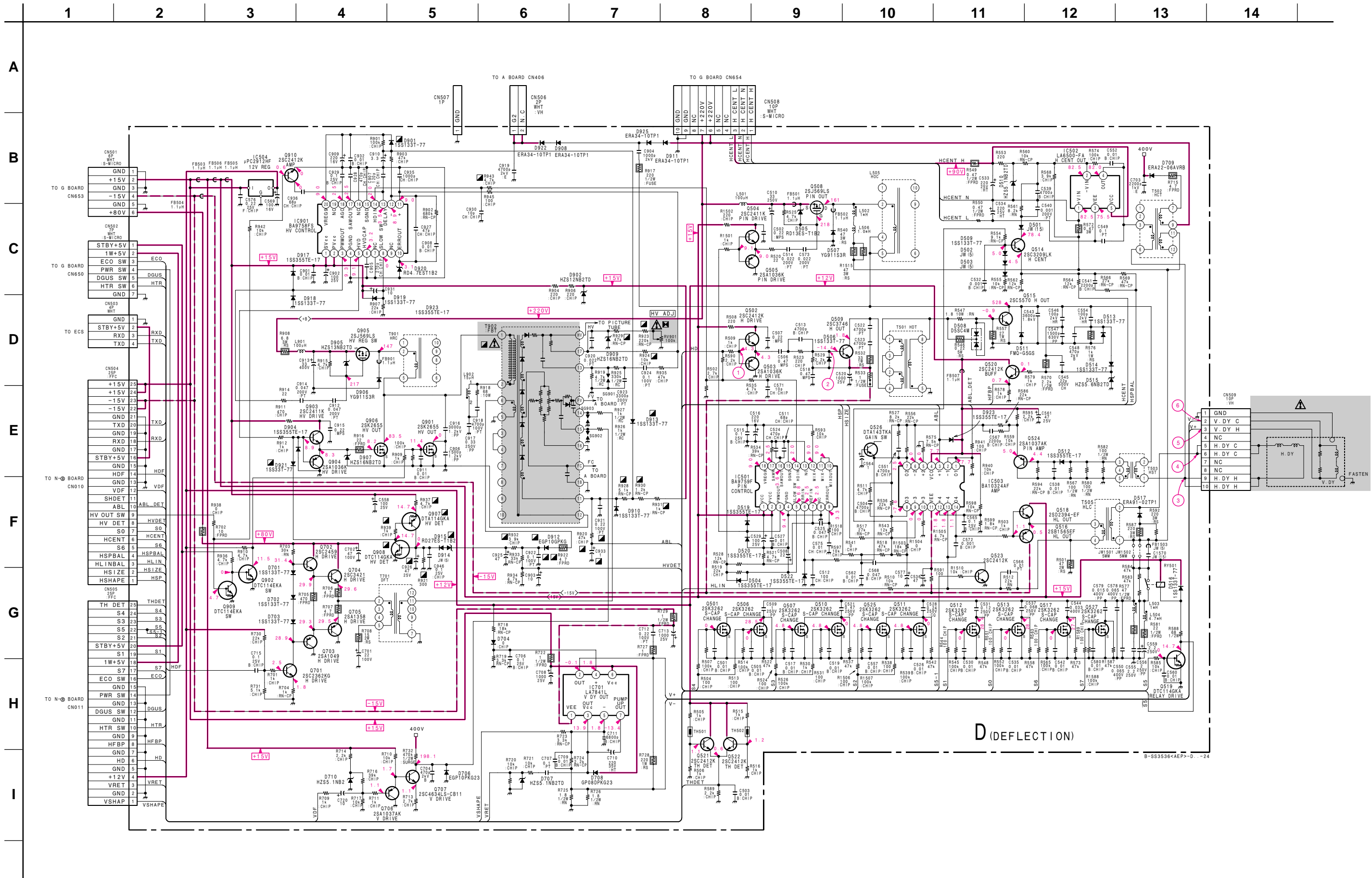
D (DEFLECTION)

• D BOARD WAVEFORMS

| ① 4.5 Vp-p (H) | ② 1.9 Vp-p (H) | ③ 1.25 kVp-p (H) |
| ④ 80.0 Vp-p (H) | ⑤ 54.5 Vp-p (H) | ⑥ 2.1 Vp-p (H) |

• D BOARD SEMICONDUCTOR LOCATION

IC

IC	Conductor Side	Component Side
IC501	D-4	
IC502	A-1	A-5
IC503	C-4	
IC504	D-5	D-1
IC701	A-5	A-1
IC901	B-3	

TRANSISTOR

	Conductor Side	Component Side	✳
Q501	B-5	B-1	–
Q502	B-4		①
Q503	B-4		①
Q504	B-2		①
Q505	B-2		①
Q506	B-5	B-1	–
Q507	B-5	B-1	–
Q508	A-2	A-4	–
Q509	B-4	B-2	–
Q510	B-5	B-1	–
Q511	B-5	B-1	–
Q512	C-5	C-1	–
Q513	C-5	C-1	–
Q514	B-2	B-4	–
Q515	A-3	A-3	–
Q516	B-4	B-2	–
Q517	C-5	C-1	–
Q518	B-4	B-2	–
Q519	C-5		①
Q520	B-3		①
Q521	C-5		①
Q522	C-5		①
Q523	C-5		①
Q524	B-3		–
Q525	B-5	B-1	–
Q526	D-4		–
Q527	B-5	B-1	–
Q701	D-4	D-2	–
Q702	D-3	D-3	–
Q703	D-4	D-2	–
Q704	D-3	D-2	–
Q705	D-4	D-2	–
Q706	D-3		–
Q707	D-2	D-4	–
Q901	C-4	C-2	–
Q902	C-5		①
Q903	C-3		①
Q904	C-3		①
Q905	C-3	C-3	–
Q906	C-3	C-3	–
Q907	C-4		①
Q908	C-4		①
Q909	C-5		①
Q910	B-4		①

DIODE

	Conductor Side	Component Side	✳
D504	D-5		③
D505	A-1	A-5	–
D506	B-4	B-2	–
D507	A-2	A-4	–
D508	A-3	A-3	–
D509	B-2	B-4	–
D510	A-1	A-5	–
D511	A-2	A-4	–
D512	B-3		③
D513	B-2	B-4	–
D514	B-3	B-4	–
D515	B-3		–
D516	C-4	C-2	–
D517	A-3	A-3	–
D519	D-5		③
D520	D-5		③
D522	D-5		③
D701	D-4	D-2	–
D702	D-4	D-2	–
D703	D-4	D-2	–
D706	D-1	D-5	–
D707	A-5	A-1	–
D708	A-5	A-1	–
D709	B-1	B-4	–
D710	D-3	D-3	–
D901	B-3	B-3	–
D902	B-3	B-3	–
D904	C-3		③
D905	C-3	C-3	–
D906	C-3	D-3	–
D907	C-3	C-3	–
D908	B-2	B-4	–
D909	C-1	C-5	–
D910	C-2	C-5	–
D911	B-1	B-4	–
D912	C-2	C-4	–
D913	B-3	B-3	–
D915	B-4	B-2	–
D917	B-3		③
D918	B-3	B-3	–
D919	B-3	B-3	–
D920	B-3	B-3	–
D921	C-3	C-3	–
D922	B-2	B-4	–
D923	C-4		③
D925	B-2	B-4	–

VARIABLE RESISTOR

	Conductor Side	Component Side	✳
RV901	B-1	B-5	–

✳: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-12)

Schematic diagram
← D board

— D BOARD (Conductor Side) —

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

C BLOCK

A (VIDEO AMP, RGB OUT)

B-SS3536<AEP>-A..-P1-24

Schematic diagram

A board ➡

CONNECTOR PANEL

TO A BOARD
CN402

TO N BOARD
CN002

5BNC
INPUT2 (BNC)
B-SS3536<AEP>-A .:-P2-24

VD HD B G R

RCV
H

V901
PICTURE
TUBE
24TXF

KB KR G2 G4
KG G1 GM

HV

TO D BOARD
T902 (FBT) HV

• A BOARD WAVEFORMS

① 4.0 Vp-p (H)	② 56.0 Vp-p (H)	③ 4.0 Vp-p (H)
④ 56.0 Vp-p (H)	⑤ 4.2 Vp-p (H)	⑥ 58.0 Vp-p (H)
⑦ 53.0 Vp-p (H)	⑧ 55.0 Vp-p (H)	⑨ 58.0 Vp-p (H)
⑩ 2.2 Vp-p (8MHz)		

• A BOARD   IC401 M52757FP

Top pins (36–19): Vcc2 (R), OUTPUT (R), GND2 (R), Vcc2 (G), OUTPUT (G), GND2 (G), Vcc2 (B), OUTPUT (B), GND2 (B), G Buffer out, Sync SEP in, Sync SEP out, Vcc3, V-DET in3, GND4, V-DET in2, Vcc4, V-DET in1

Bottom pins (1–18): Input1 (R), Vcc1 (R), Input1 (G), Vcc1 (G), Input1 (B), Vcc1 (B), Input2 (R), GND1, Input2 (G), GND5, Input2 (B), Sync DET1, Sync DET2, S-DET out, Vcc5, Video DET-Hold, V-DET out, SWITCH

R G B G

Sync Sepa

OR

G DET

• A BOARD   IC402 M52749FP

VCC2 (42)
Main Brightness (34)
Retrace BLK IN (30)

OSD IN (R) (4)
INPUT (R) (2)
VCC1 (R) (3)
GND1 (R) (5)
OSD IN (G) (9)
INPUT (G) (6)
VCC1 (G) (8)
GND1 (G) (10)
OSD IN (B) (13)
INPUT (B) (11)
VCC1 (B) (12)
GND1 (B) (16)
ABL IN (17)
INPUT (SOG) (7)
SOG Sep OUT (20)

CLAMP SUB CONTRAST MAIN CONTRAST OSD MIX AMP RETRACE BLANKING (41) OUTPUT (R)
CLAMP F/B
CLAMP SUB CONTRAST MAIN CONTRAST OSD MIX AMP RETRACE BLANKING (38) OUTPUT (G)
CLAMP F/B
CLAMP SUB CONTRAST MAIN CONTRAST OSD MIX AMP RETRACE BLANKING (33) OUTPUT (B)
CLAMP F/B

(35) Contrast ref.
(31) Contrast cont.
(19) VCC=5V
(23) SDA
(22) SCL
(24) GND (5V)

Main CONTRAST 8bit
OSD LEVEL 4bit

Sync On Green Sep

B SUB CONT 8bit
G SUB CONT 8bit
R SUB CONT 8bit

DAC BUS I/F

Clamp Pulse IN (21)
GND (14)
OSD BLK IN (1)
D/A OUT5 (25)
D/A OUT4 (26)
D/A OUT3 (27)
D/A OUT2 (28)
D/A OUT1 (29)
GND (32)
GND (36)
GND2 (39)

A | VIDEO AMP / RGB OUT

— A BOARD (Conductor Side) —

1 2 3

— A BOARD (Component Side) —

1 2 3

• A BOARD SEMICONDUCTOR LOCATION

IC		
	Conductor Side	Component Side
IC401		B-3
IC402		B-2
IC403	A-2	A-2
IC404		C-3
IC405		D-2
IC406	A-3	A-1
IC407		D-2

TRANSISTOR			
	Conductor Side	Component Side	✳
Q101	C-1		①
Q201	C-1		①
Q301	C-1		①
Q401	A-3		①
Q402		D-3	⑲
Q406	D-3		①
Q407		D-2	②
Q410	D-3	D-1	–

DIODE			
	Conductor Side	Component Side	✳
D101	B-1		⑥
D102	A-1		⑥
D103		A-1	⑪
D105	B-3	B-1	–
D106		A-2	③
D107	B-2		③
D201	B-1		⑥
D202	A-1		⑥
D203		A-1	⑪
D205	A-3	A-1	–
D206		A-2	③
D207	A-2		③
D301	B-1		⑥
D302	A-1		⑥
D303		A-1	⑪
D305	A-3	A-1	–
D306	A-3		③
D307	A-3		③
D402		D-3	⑨
D403	A-2	A-2	–
D405	D-3	D-1	–
D406	D-2		⑥
D407	D-2		⑥

CRYSTAL		
	Conductor Side	Component Side
X401	C-2	C-2

✳: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-12)

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

Schematic diagram

← A board

5-23

5-24

S ⎡DIGITAL CONVERGENCE CONTROL⎤

S (DIGITAL CONVERGENCE CONTROL)

B-SS3536<AEP>S.-24
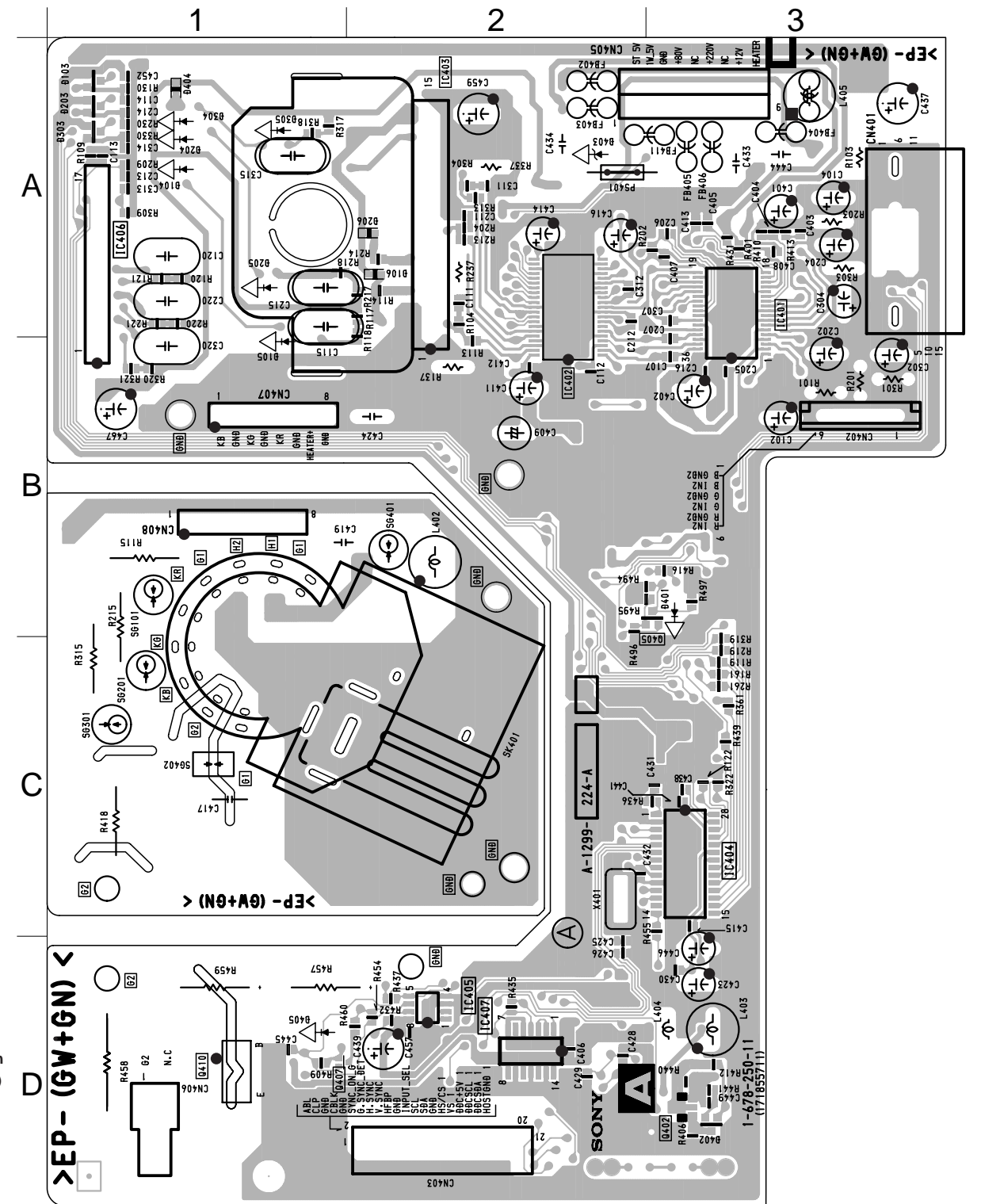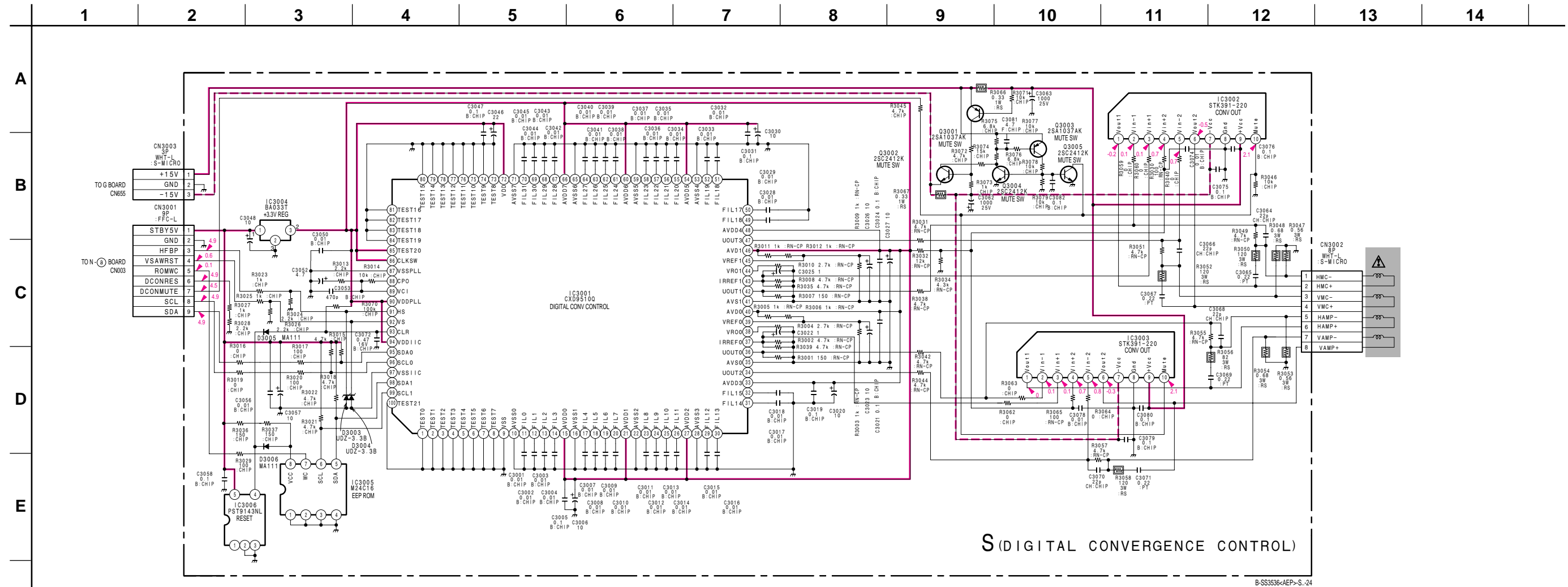
— S BOARD (Conductor Side) —

— S BOARD (Component Side) —
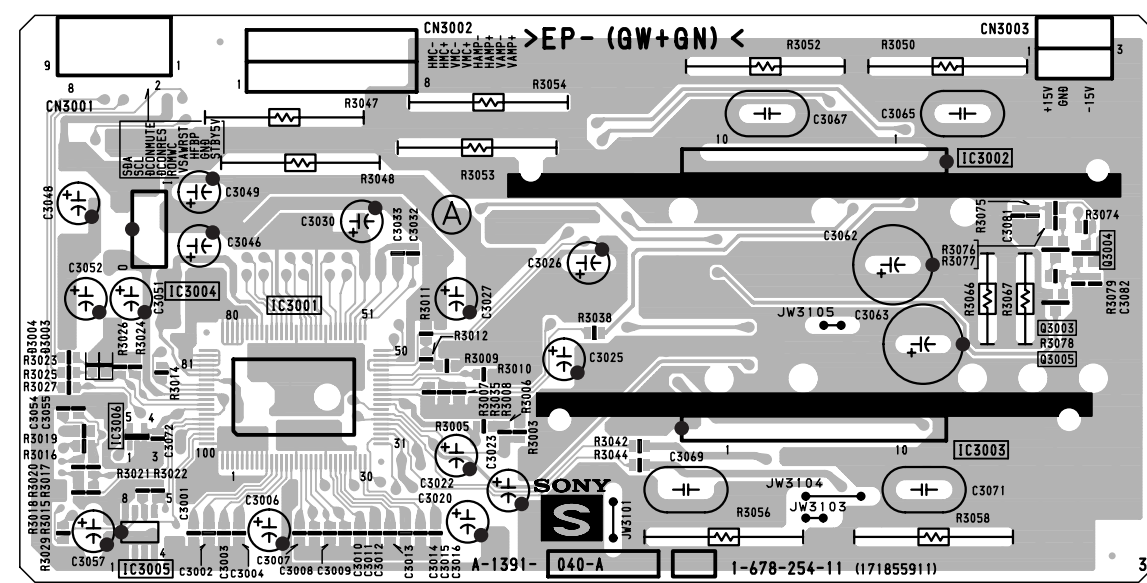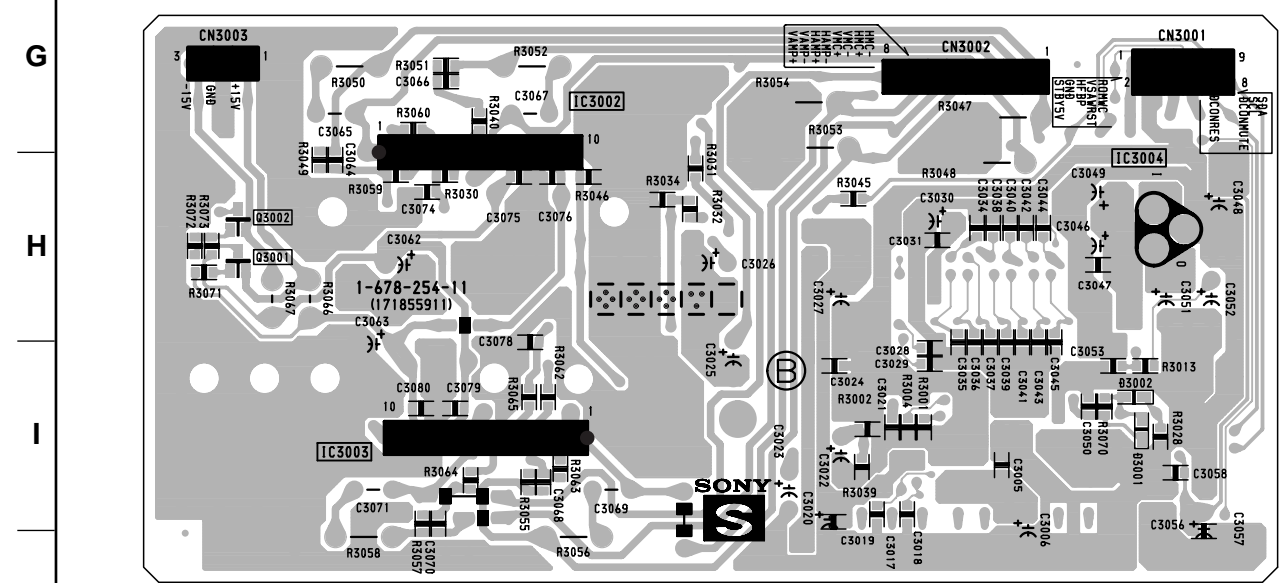
(4) Schematic Diagrams of N (ⓐ, ⓑ, ⓒ) Board

- Divided circuit diagram
  One sheet of N board circuit diagram is divided into three sheets,
  each having the code N-ⓐ to N-ⓒ. For example, the destination
  ⓐb1 on the code N-ⓐ sheet is connected to ⓐb1 on the N-ⓑ sheet.

N-ⓐ
(H. OSC, V. OSC, AFC, H. DRV, V. SHAPE)

B-SS3536<AEP>-N..-P1-24

Schematic diagram
◀ S board

5-27

Schematic diagram
N-ⓐ board ▶

5-28

N -ⓑ

(μ-COM, GEO MAGNETIC SENSOR)

IC001
CX08744Q
CPU/DSP

IC006
TL082CPS-E20
ABL DET AMP

N-ⓒ
(H.V.CONV, LCC)

B-SS3536<AEP>-N..-P3-24

Schematic diagram

N -ⓑ board

5-31

Schematic diagram

N -ⓒ board ➡

5-32
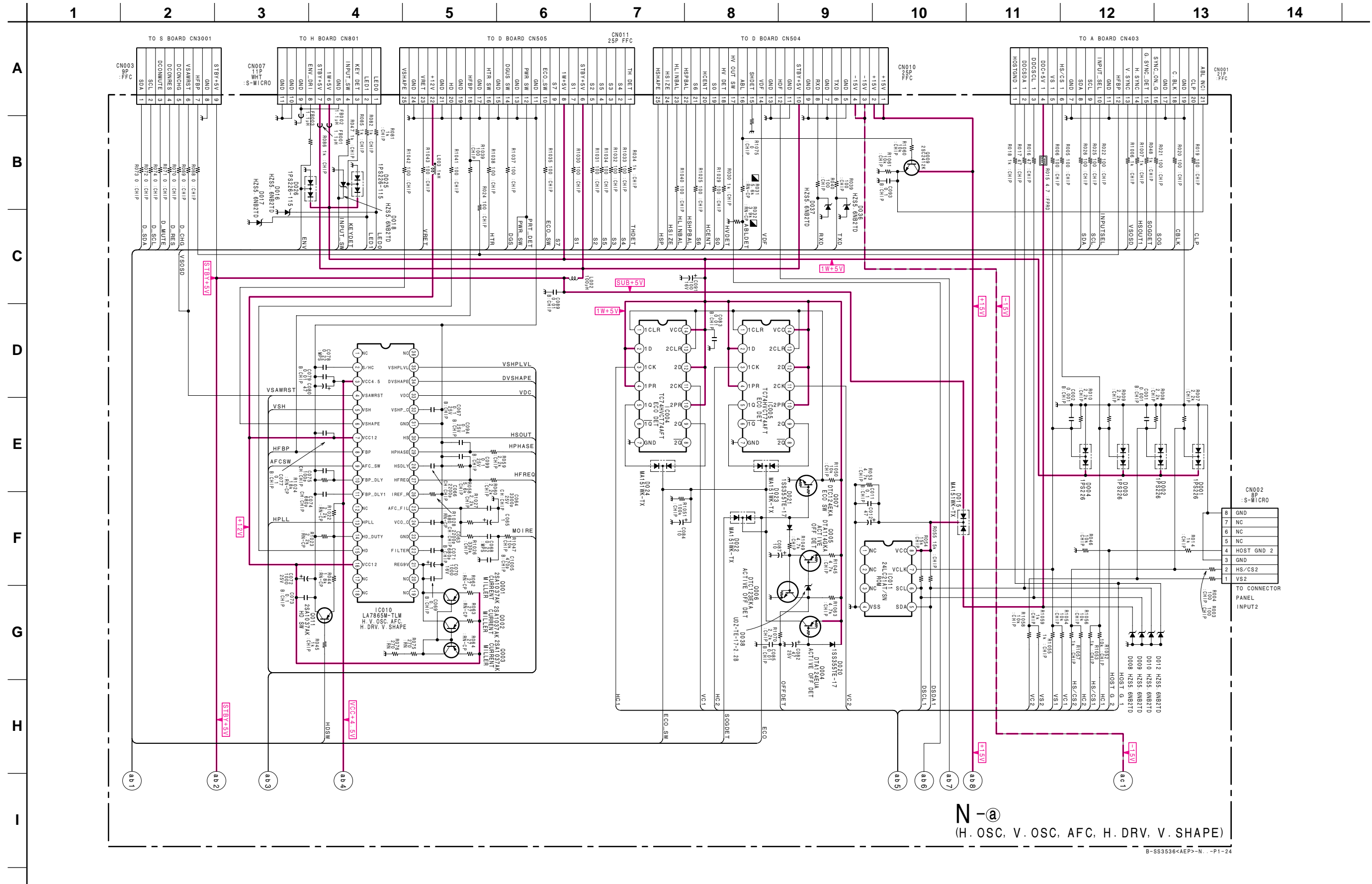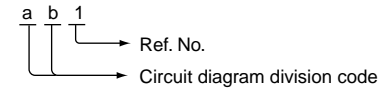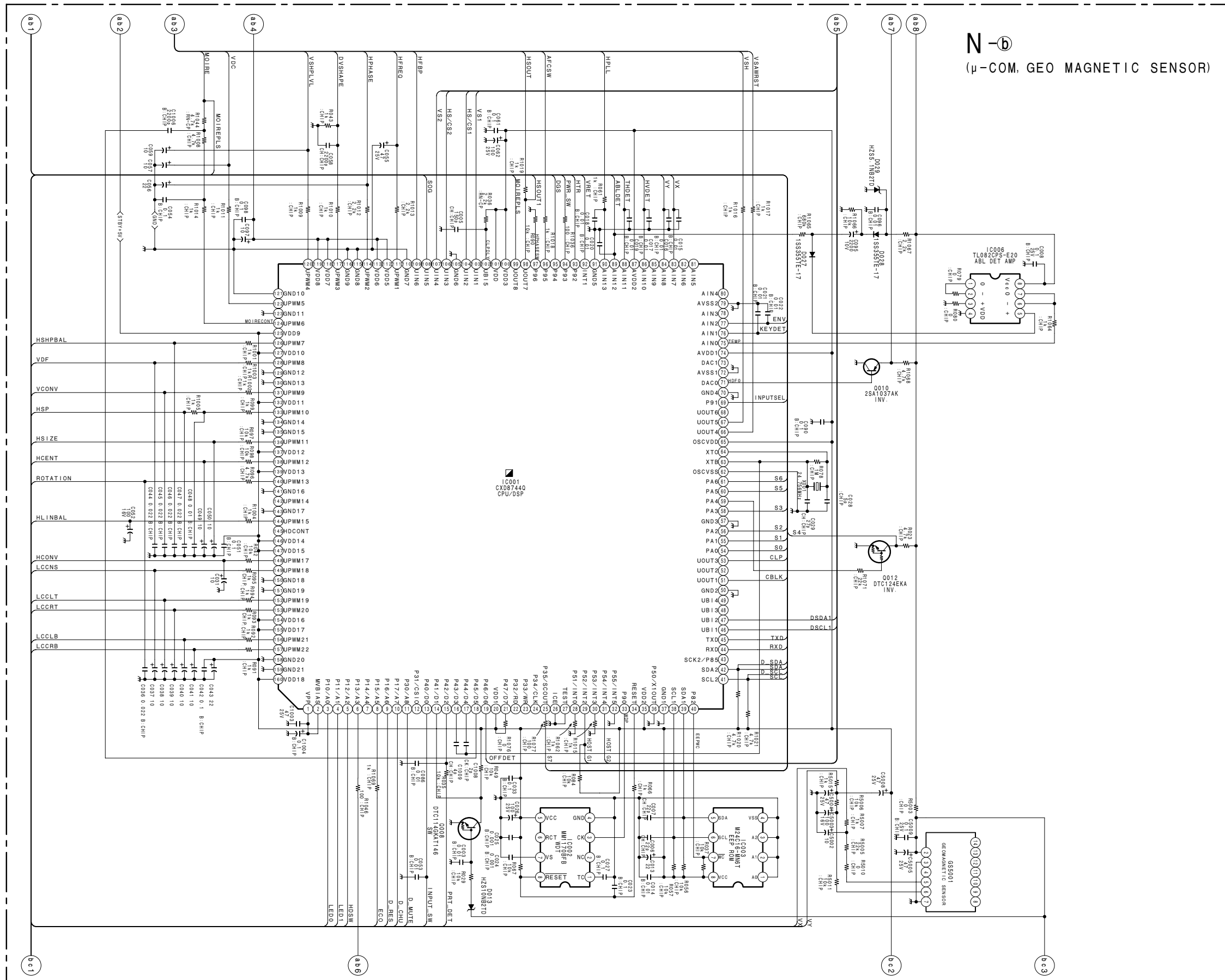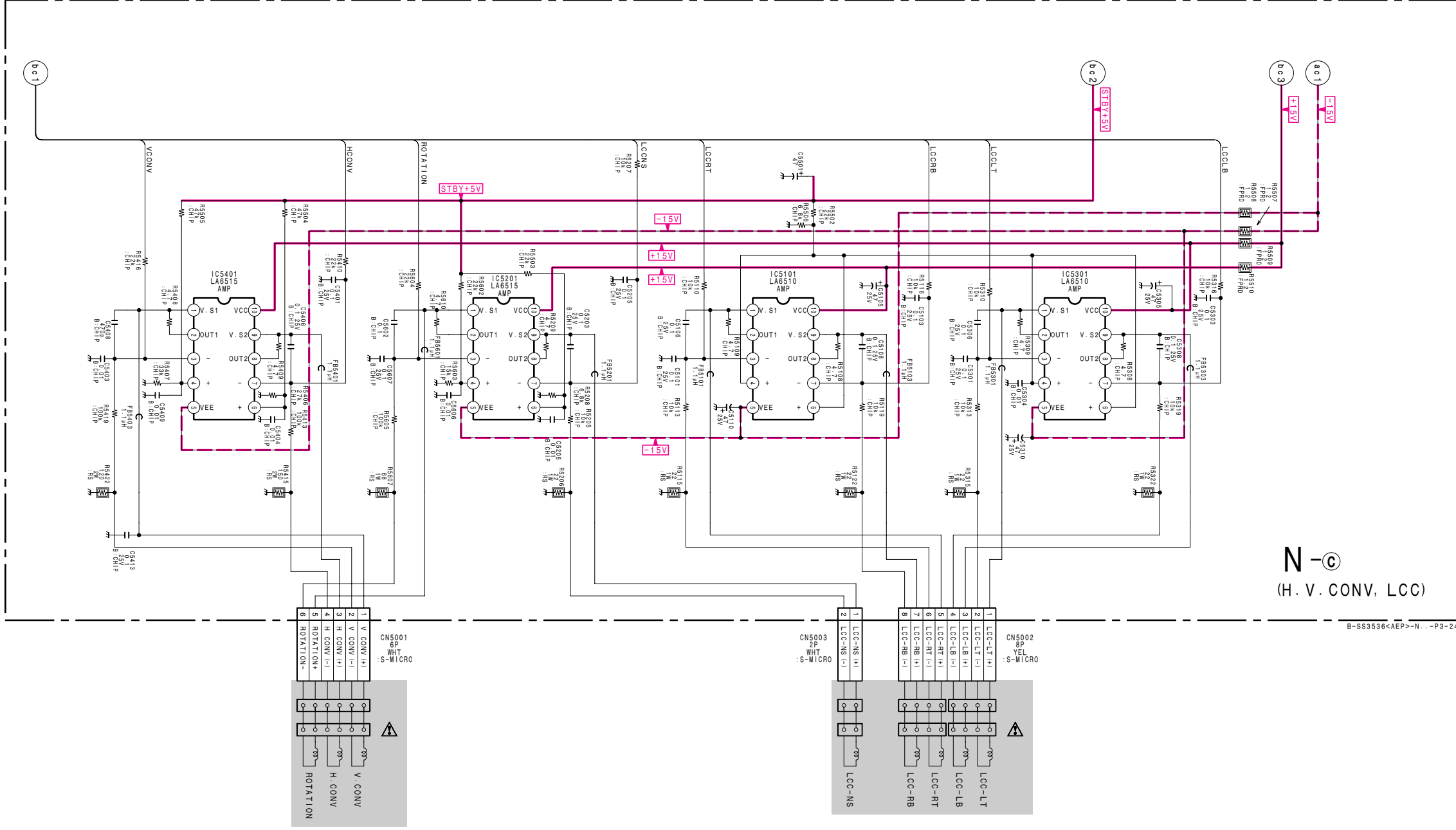
— **N BOARD (Conductor Side)** —
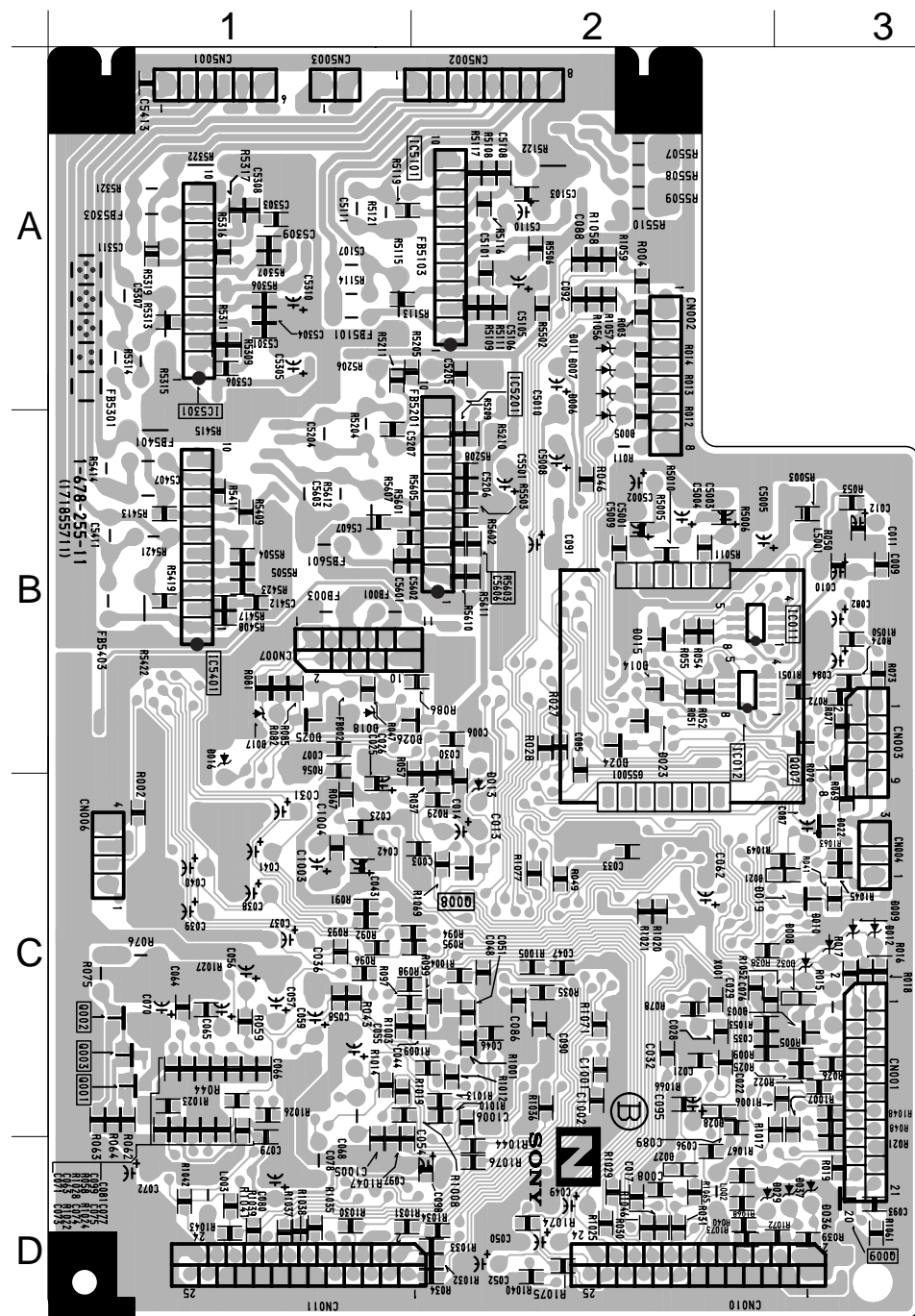
• **N BOARD SEMICONDUCTOR LOCATION**

IC		
	(Conductor Side)	(Component Side)
IC001		C-2
IC002		C-2
IC003		C-2
IC004		B-2
IC005		B-2
IC006		D-1
IC010		C-2
IC011	B-2	
IC5101	A-2	A-2
IC5201	B-2	B-2
IC5301	A-1	A-2
IC5401	B-1	B-2

TRANSISTOR			
	(Conductor Side)	(Component Side)	✳
Q001	C-1		①
Q002	C-1		①
Q003	C-1		①
Q004		B-1	②
Q005		C-1	②
Q006		C-1	②
Q007	B-3		①
Q008	C-2		①
Q010		C-1	②
Q011		C-2	②
Q012		D-2	②

DIODE			
	(Conductor Side)	(Component Side)	✳
D001		A-1	⑦
D002		A-1	⑦
D003	C-3		⑥
D004		C-1	⑦
D008	C-3	C-1	–
D009	C-3	C-1	–
D010	C-3	C-1	–
D012	C-3	C-1	–
D013	C-2	C-2	–
D015	B-2		⑧
D016	B-1	B-2	–
D017	B-1	B-2	–
D018	B-1	B-2	–
D020		B-1	③
D021	C-3		③
D022	C-3		⑧
D023	B-2		⑧
D024	B-2		⑧
D025	B-1		⑥
D026	B-2		⑥
D027	D-2		③
D028	D-2		③
D029	D-3	D-1	–
D036	D-3	D-1	–
D037	D-3	D-1	–
D038		C-1	③

CRYSTAL		
	(Conductor Side)	(Component Side)
X001	C-2	C-1

✳: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-12)

— **N BOARD (Component Side)** —

G (POWER SUPPLY)
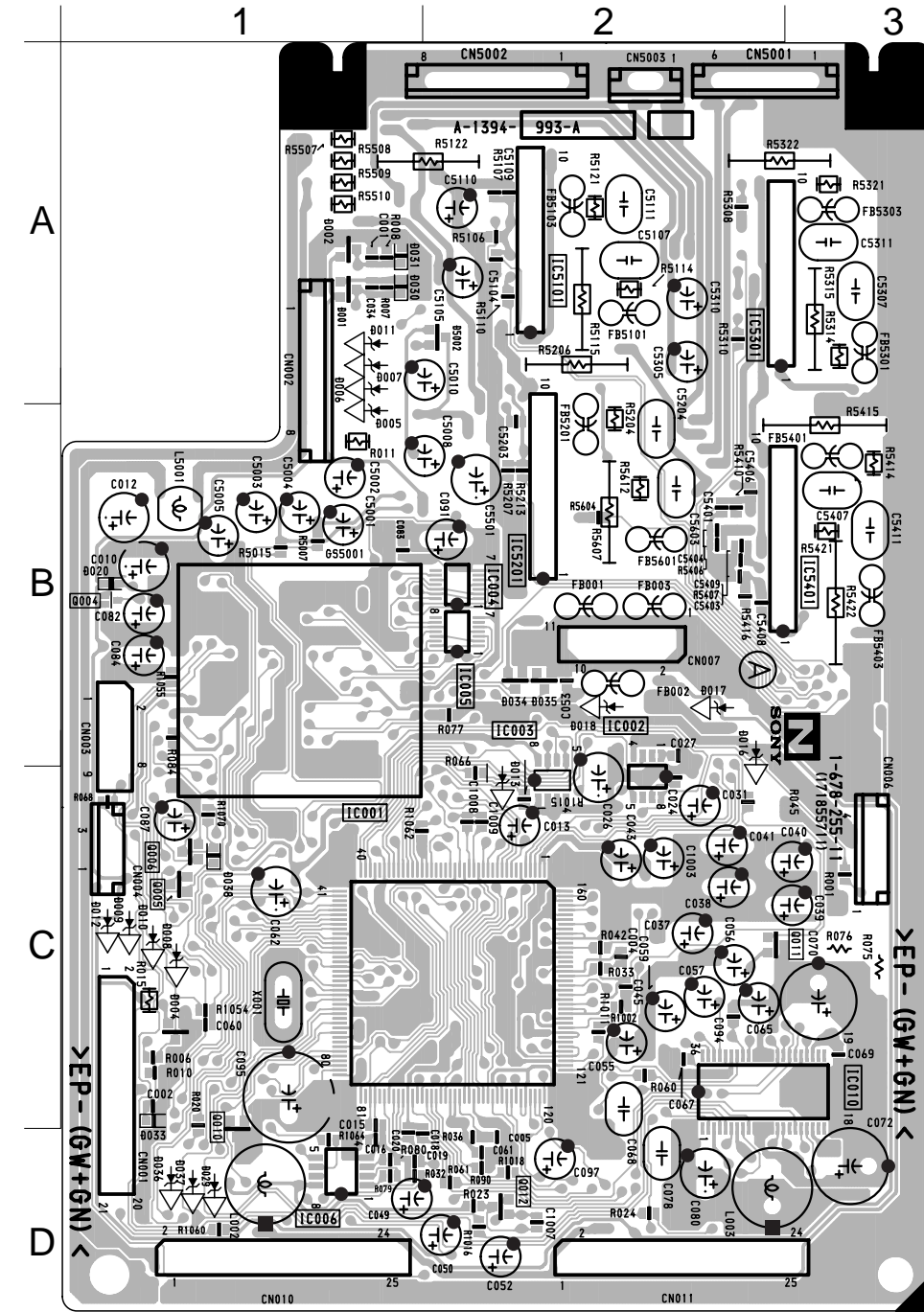
Schematic diagram
G board ➡
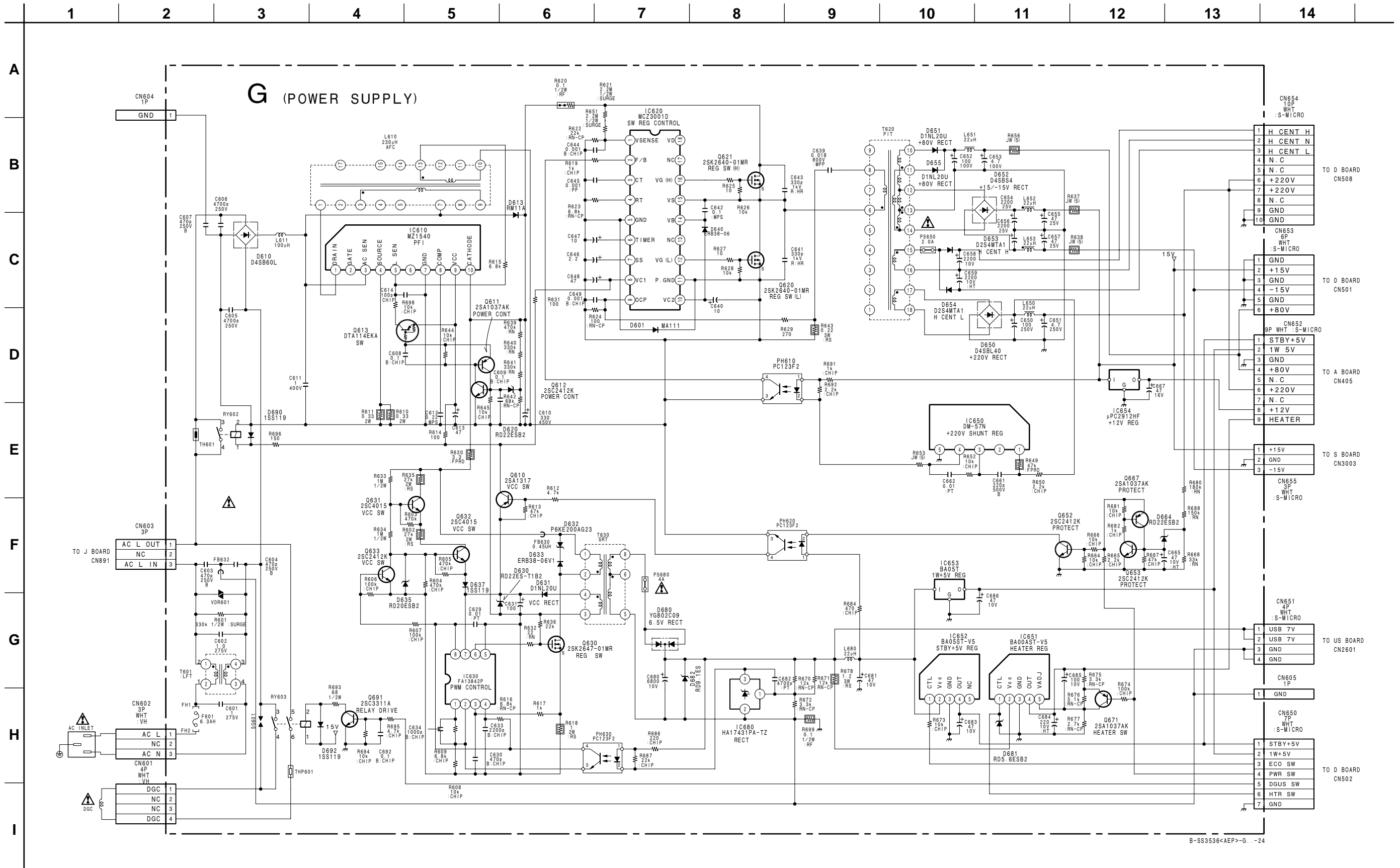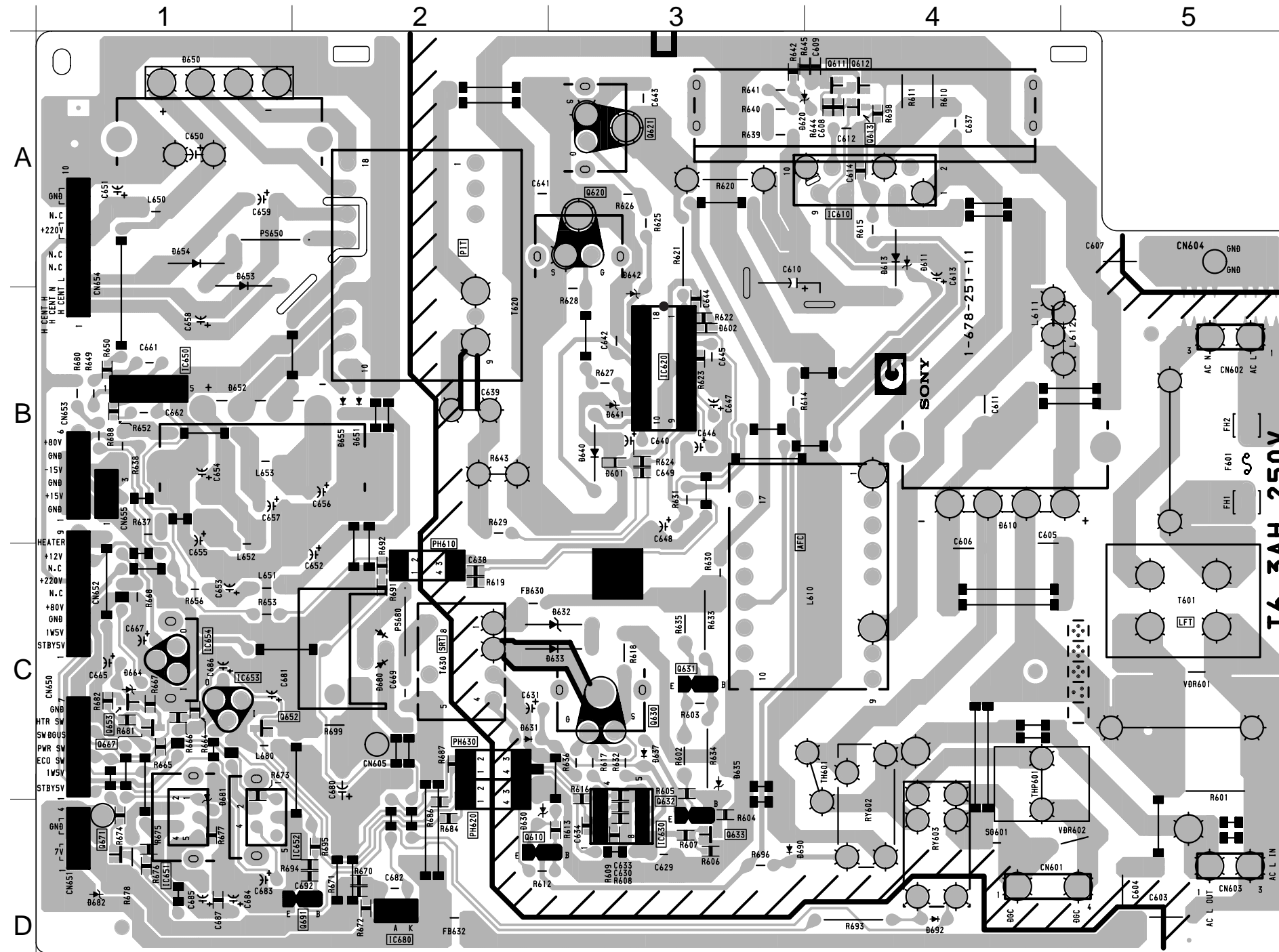
— G BOARD —

• G BOARD SEMICONDUCTOR LOCATION

IC	
IC610	A-4
IC620	B-3
IC630	D-3
IC650	B-1
IC651	D-1
IC652	D-1
IC653	C-1
IC654	C-1
IC680	D-2

TRANSISTOR		
		✻
Q610	D-2	–
Q611	A-4	①
Q612	A-4	①
Q613	A-4	①
Q620	A-3	–
Q621	A-3	–
Q630	C-3	–
Q631	C-3	–
Q632	D-3	–
Q633	D-3	①
Q652	C-1	①
Q653	C-1	①
Q667	C-1	①
Q671	D-1	①
Q691	D-2	–

DIODE		
		✻
D601	B-3	③
D610	B-4	–
D613	A-4	–
D620	A-4	–
D630	D-2	–
D631	C-2	–
D632	C-3	–
D633	C-3	–
D635	C-3	–
D637	C-3	–
D640	B-3	–
D650	A-1	–
D651	B-2	–
D652	B-1	–
D653	A-1	–
D654	A-1	–
D655	B-2	–
D664	C-1	–
D680	C-2	–
D681	C-1	–
D682	D-1	–
D690	D-3	–
D692	D-4	–

✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-12)

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(6) Schematic Diagram of US Board

US
(USB CONTROL)
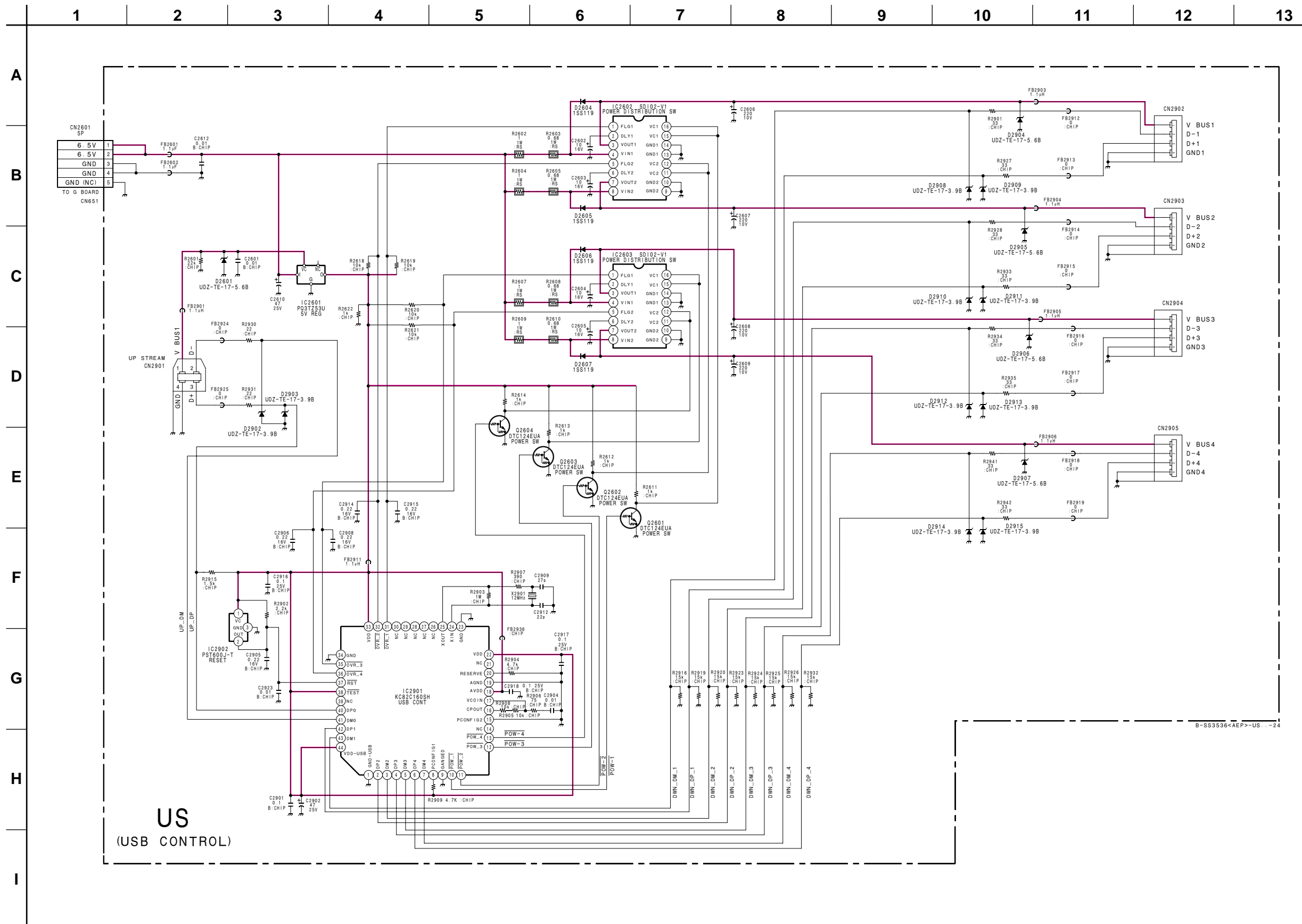
IC		
	(Conductor Side)	(Component Side)
IC2601	A-1	
IC2602	C-1	
IC2603	A-1	
IC2901	B-1	
IC2902	B-1	B-1

TRANSISTOR			
	(Conductor Side)	(Component Side)	
Q2601	C-1		②
Q2602	C-1		②
Q2603	A-1		②
Q2604	A-1		②

DIODE			
	(Conductor Side)	(Component Side)	
D2601		A-2	③
D2604	C-2	C-1	−
D2605	C-2	C-1	−
D2606	A-2	C-1	−
D2607	A-2	A-1	−
D2902		A-1	③
D2903		A-1	③
D2904		C-1	③
D2905		B-1	③
D2906		B-2	③
D2907		B-2	③
D2908		C-2	③
D2909		C-2	③
D2910		B-2	③
D2911		B-2	③
D2912		B-2	③
D2913		B-2	③
D2914		B-2	③
D2915		B-2	③

CRYSTAL		
	(Conductor Side)	(Component Side)
X2901	B-2	B-1

※: Refer to Terminal name of
   semiconductors in silk screen
   printed circuit (see page 5-12)

B-SS3536<AEP>-US...-24

Schematic diagram
US board ➡

— US BOARD (Conductor Side) —
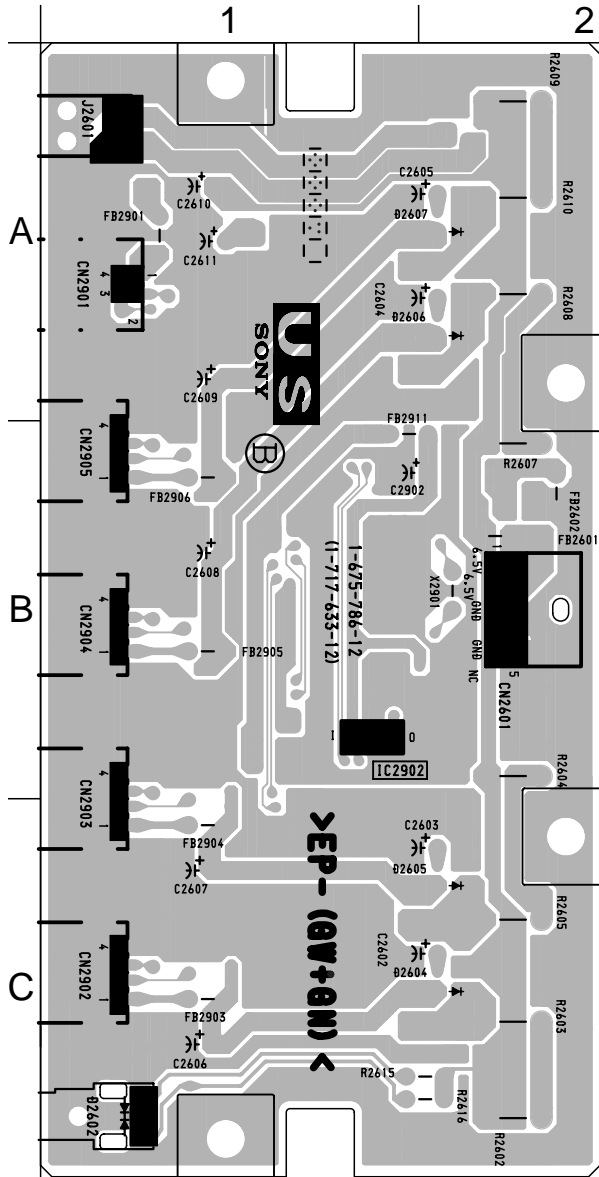
— US BOARD (Component Side) —
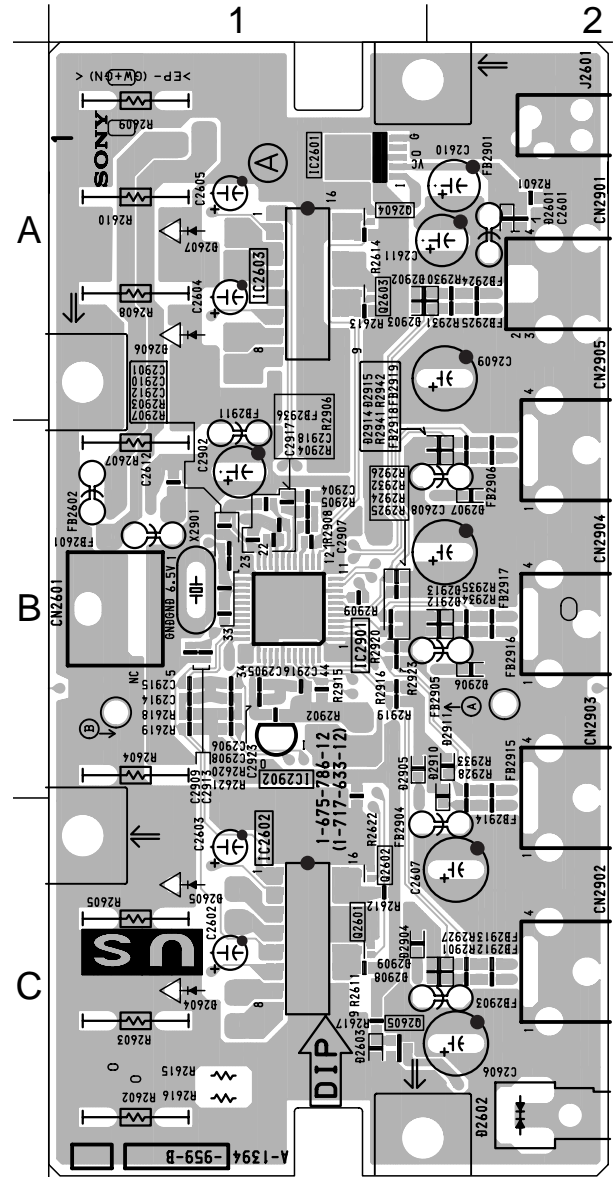
(7) Schematic Diagrams of H and J Boards
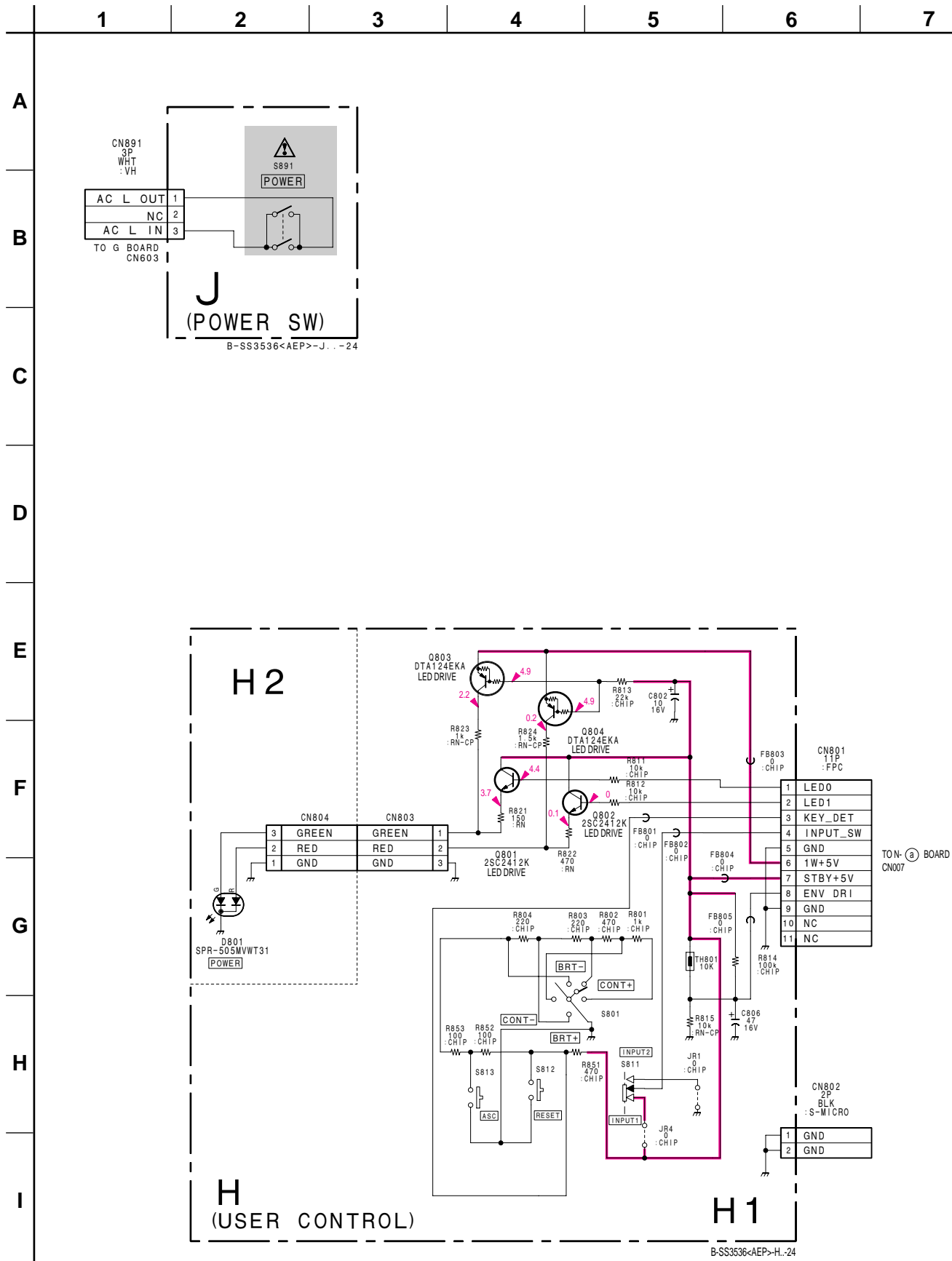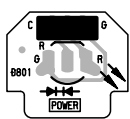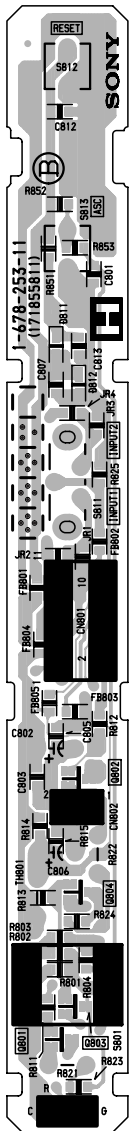
— **H BOARD (Conductor Side)** —   — **H BOARD (Component Side)** —   — **J BOARD** —

(H1)

(H2)
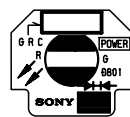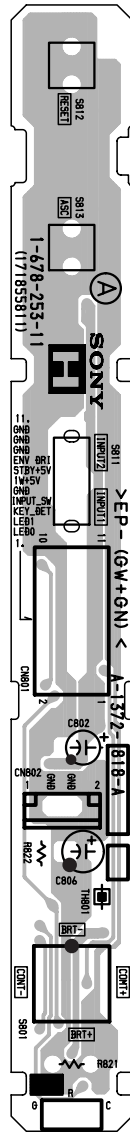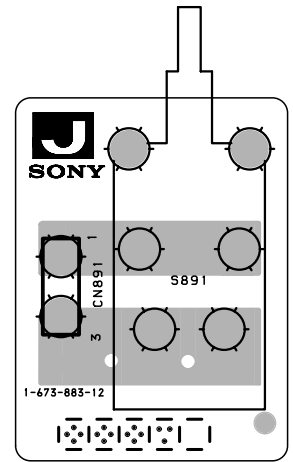
5-5. SEMICONDUCTORS

BA00AST-V5
BA05ST-V5
LA6500FA

BA033T

BA05T

BA10324AF-E2
SN74HC04ANS
SN74HC04ANSR
TC74VHCT74AFT
XRA10324AF

14 pin SOP

BA9758FS-E2

20 pin SOP

BA9759F-E2

18 pin SOP

CXD8744Q

TOP VIEW

160 pin QFP

CXD9510Q

TOP VIEW

100 pin QFP

CXD9514M

TOP VIEW

28 pin SOP

DM-57N

MARKING SIDE VIEW

5 pin SIP

FA13842P

TOP VIEW

8 pin DIP

FA4301

MARKING SIDE VIEW

15 pin SIP

HA17431PA
HA17431PA-TZ

H8D2972

KC82C160SH

TOP VIEW

44 pin QFP

LA6510

LA6515
SDK391-220

MARKING SIDE VIEW

10 pin SIP

LA7841L

MARKING SIDE VIEW

7 pin SIP

LA7865M-TLM

MCZ3001D
27C4002-CPU118V

TOP VIEW

18 pin DIP

MM1170BFB
M24C16-MN6T
NJM082M
NJM2904M
NJM2904M(TE2)
ST24FC21M6TR
TL082CPS-E20
24LC21AT/SN
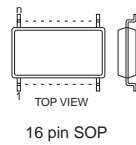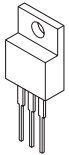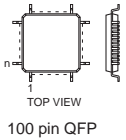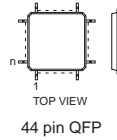
TOP VIEW

8 pin SOP

MZ1530

M52749FP-TP

TOP VIEW

42 pin SOP

M52757FP-TP

TOP VIEW

36 pin SOP

PQ3TZ53U

PST600J-T

Vcc
GND   OUT

SD102-V1

TOP VIEW

16 pin SOP

µPC2912HF(12)

1 2 3
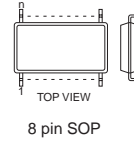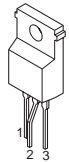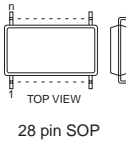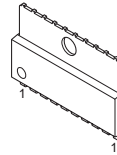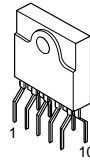
DTA114EKA-T146
DTA114GKAT146
DTA114TUA-T106
DTA124EUA-T106
DTA143TKA-T146
DTC114EK
DTC114EKA-T146
DTC114GKA
DTC114GKAT146
DTC123EKA-T146
DTC124EK
DTC124EKA-T146
DTC124EUA-T106
2SA1036K-Q
2SA1036K-T-146-Q
2SA1037AK-T146-QR
2SA1037AK-T146-R
2SA1162-G
2SB709A-QRS-TX
2SC1623-L5L6
2SC2411K-CQ
2SC2411K-T-146-CQ
2SC2412K-T-146-QR

C
B
E

2SA1049-GR
2SA1049TP-GR
2SC2459-GR-TPE4

E   C   B

2SA1358-Y
2SC3421-Y

E C B

2SB1565EF
2SC3746
2SC5022-02
2SD2394-EF

B C E
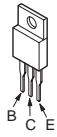
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2SC2362KG-AA

E C B
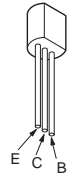
2SC2784
2SC3311A-QRSTA

LETTER SIDE

E C B
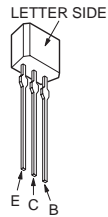
2SC3209LK
2SC3209LK-TP

E C B

2SC4015TV2

E C B

2SC4634LS-CB11

B
C
E

2SC5570(LBSONY)

B
C E

2SJ360-TE12L

G D S
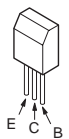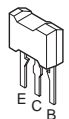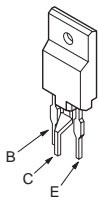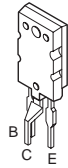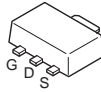
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2SK2640-010MR
2SK2655-01R-F165
2SK3262-01MR-F119

D
G S
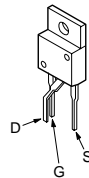
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MA111
MA8039
RD2.2M-T1B
RD5.6S-B
UDZ-TE-17-2.2B
UDZ-TE-17-3.3B
UDZ-TE-17-3.9B
UDZ-TE-17-5.6B
1SS355TE-17

ANODE
CATHODE
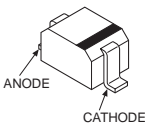
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D2S4MF
D2S4MTA1

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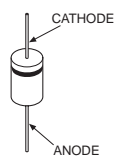
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D4SBS4
D4SBS4-F
D4SB60L

D5SC4M

1 2 3
3
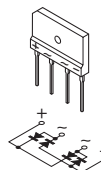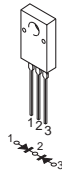
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EGP10DPKG23
ERA91-02
ERA91-02TP1
1SS133T-77

CATHODE
ANODE
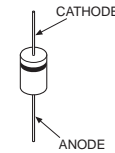
ERA22-06AVRBT
ERA22-08
ERA33-10TP1
ERB38-06V1
GP08D
GP08DPKG23
HSS83TD
RGP02-20EL-6394

CATHODE
ANODE

FMQ-G5GS

1 2
2

HSU83TRF

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2
1 2
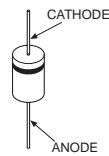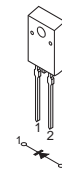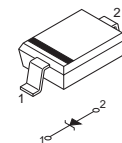
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HZS12NB2TD
HZS13NB2TD
HZS16NB2TD
HZS5.1NB2TD
HZS5.6NB2TD
HZS9.1NB2
MTZJ-T-77-39B
MTZJ-39B
RD10ESB2
RD12ES-B2
RD13ES-B2
RD13ES-T1B2
RD20ES-B2
RD20ES-T1B2
RD22ES-B2
RD22ES-T1B2
RD27ES-B2
RD27ES-T1B2
RD4.7ESB2
RD4.7ES-T1B2
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RD5.6ES-T1B2
RD5.6ESB2
RD9.1ES-T1B
1SS119-25
1SS119-25TD
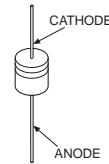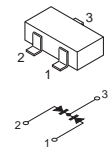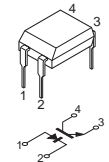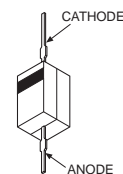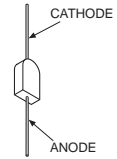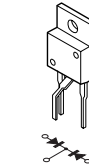
CATHODE
ANODE

MA151WK-TX
1SS184

3
2 1
2 3
1

PC123F2
PC123FY2

4 3
1 2
4
1 3
2

P6KE200AG23

CATHODE
ANODE

RM11A
RM11C

CATHODE
ANODE

YG802C09

YG911S3R

CATHODE
ANODE

1PS181-115

3
2 1
2 3
1

1PS226-115

3
2 1
2 3
1

1SS376TE-17

ANODE
CATHODE

SPR-505MVWT31

1 ANODE (RED)
2 CATHODE
3 ANODE (GRN)
1 2 3

GDM-FW9011
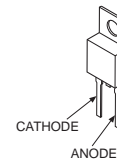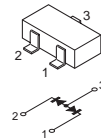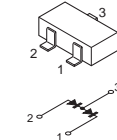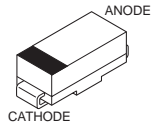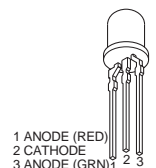
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

- 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 ⚠ marked are critical for safety.
Replace only with the part number specified.

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

6-1. CHASSIS

△ : 7-685-881-09 +BVTT 4x8
◆ : 7-685-648-79 +BVTP 3x12
■ : 7-685-663-71 +BVTP 4x16
◇ : 7-685-646-79 +BVTP 3x8
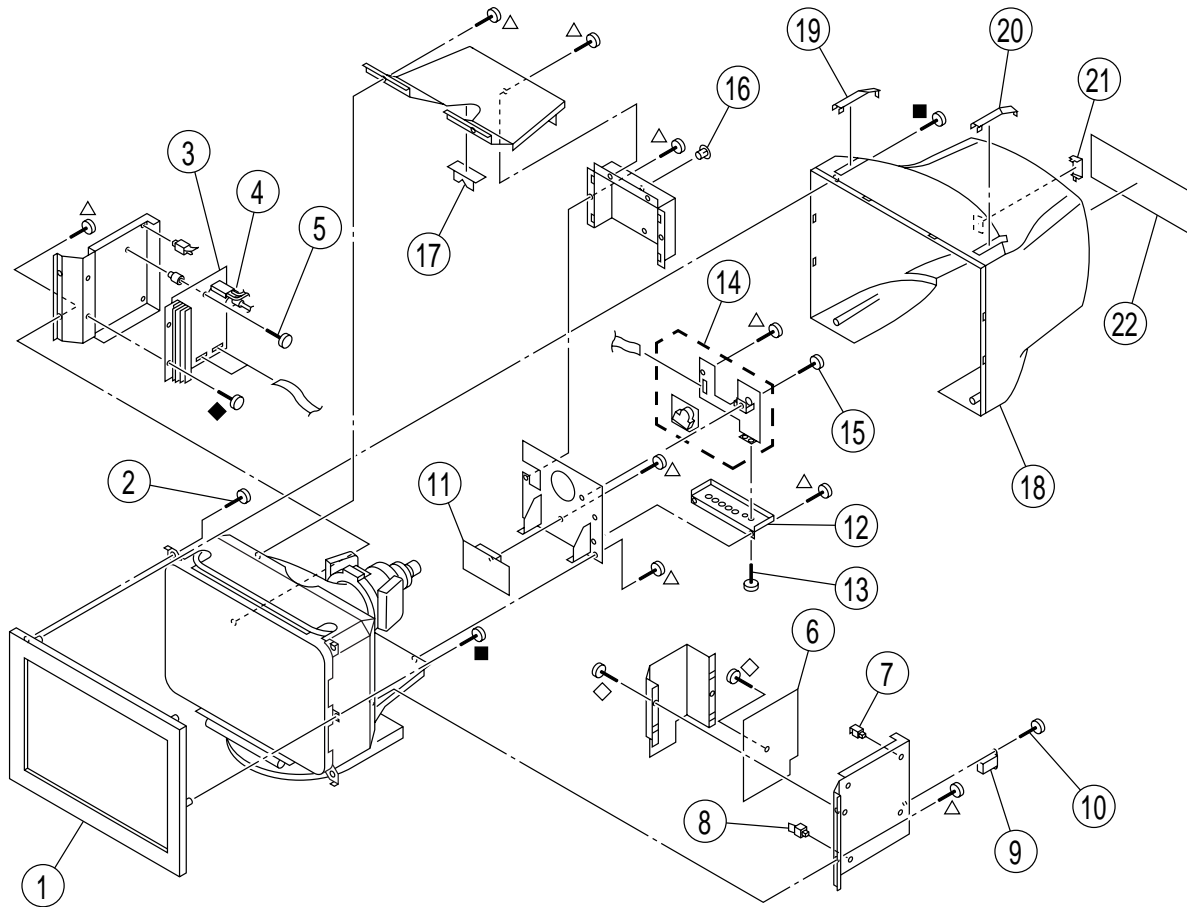
REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-077-500-11	BEZEL	
2	4-046-765-12	SCREW, TAPPING 7+CROWN WASHER	
3	* 8-933-440-00	D BOARD, COMPLETE	4
4	⚠ 1-453-348-11	TRANSFORMER ASSY, FLYBACK	(NX-4504)
5	4-062-115-01	SCREW +P 3.5X20 TYPE2	
6	* 8-933-441-00	G BOARD, COMPLETE	
7	* 3-701-903-11	HOLDER, PRINTED CIRCUIT BOARD	
8	4-070-730-01	HOLDER, PWB	
9	⚠ 1-251-382-31	INLET, AC 3P(WITH NOISE FILTE)	
10	4-052-345-01	SCREW, (3X8) (+K), TAPPING	

REF.NO.	PART NO.	DESCRIPTION	REMARK
11	* 8-933-442-00	S BOARD, COMPLETE	
12	1-694-569-11	TERMINAL BOARD ASSY, I/O	
13	4-070-122-01	SCREW (HD15)	
14	* 8-933-432-00	A BOARD, COMPLETE	
15	4-389-025-11	SCREW (M4) (EXT TOOTH WASHER)	
16	* 4-069-570-01	SPACER, PWB	
17	* 4-063-711-01	SUPPORT, HV CABLE	
18	X-4038-577-1	CABINET ASSY	
19	4-077-514-11	COVER, SCREW (L)	
20	4-077-515-11	COVER, SCREW (R)	
21	4-077-512-11	COVER, ECS	
22	* 4-080-891-01	LABEL, INFORMATION	

6-2. PICTURE TUBE

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

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

△ : 7-685-881-09 +BVTT 4x8
◆ : 7-685-648-79 +BVTP 3x12
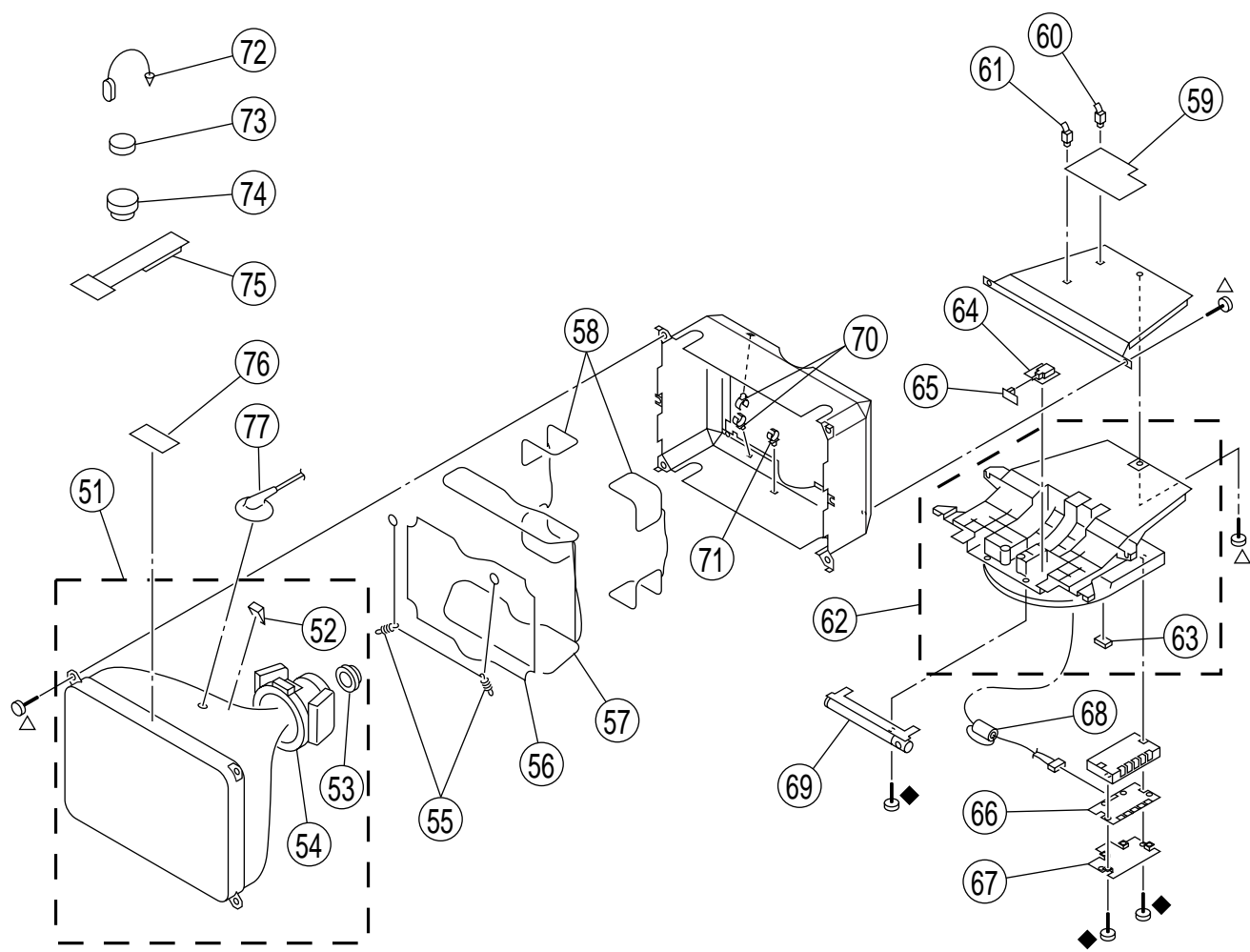
REF.NO.	PART NO.	DESCRIPTION	REMARK
51	⚠ 8-733-007-61	ITC ASSY (24TXF-R1)	52-54
52	2-162-100-21	SPACER, DY	
53	⚠ 1-451-522-11	NECK ASSY (NA-2917)	
54	⚠ 1-451-523-11	DEFLECTION YOKE (Y24TXN-T)	
55	* 4-047-316-01	SPRING, EXTENSION	
56	⚠ 1-419-675-11	COIL, ROTATION	
57	⚠ 1-419-673-11	COIL, DEGAUSSING	
58	⚠ 1-419-674-11	COIL, LANDING CORRECTION	
59	* 8-933-433-00	N BOARD, COMPLETE	
60	4-070-730-01	HOLDER, PWB	
61	* 4-321-929-00	HOLDER, PC BOARD	
62	X-4038-576-1	STAND ASSY	63
63	* 4-061-996-01	CUSHION	
64	* 8-933-396-00	J BOARD, COMPLETE	

REF.NO.	PART NO.	DESCRIPTION	REMARK
65	* 4-394-972-21	CAP, POWER	
66	* 8-933-456-00	US BOARD, COMPLETE	
67	4-072-376-01	COVER, STAND	
68	* 1-543-830-11	CLAMP, SLEEVE FERRITE	
69	* 8-933-489-00	BLOCK ASSY, CONTROL (H BOARD)	
70	4-041-021-02	HOLDER, DEGAUSE COIL	
71	4-071-175-01	HOLDER, DGC	
72	4-308-870-00	CLIP, LEAD WIRE	
73	1-452-032-00	MAGNET, DISK; 10mmφ	
74	1-452-094-00	MAGNET, ROTATABLE DISK; 15mmφ	
75	4-051-736-21	PIECE A(90), CONV. CORRECT	
76	4-036-700-01	SHEET, PROTECTION	
77	1-251-642-21	CAP ASSY,HIGH-VOLTAGE	

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6-3. PACKING MATERIALS
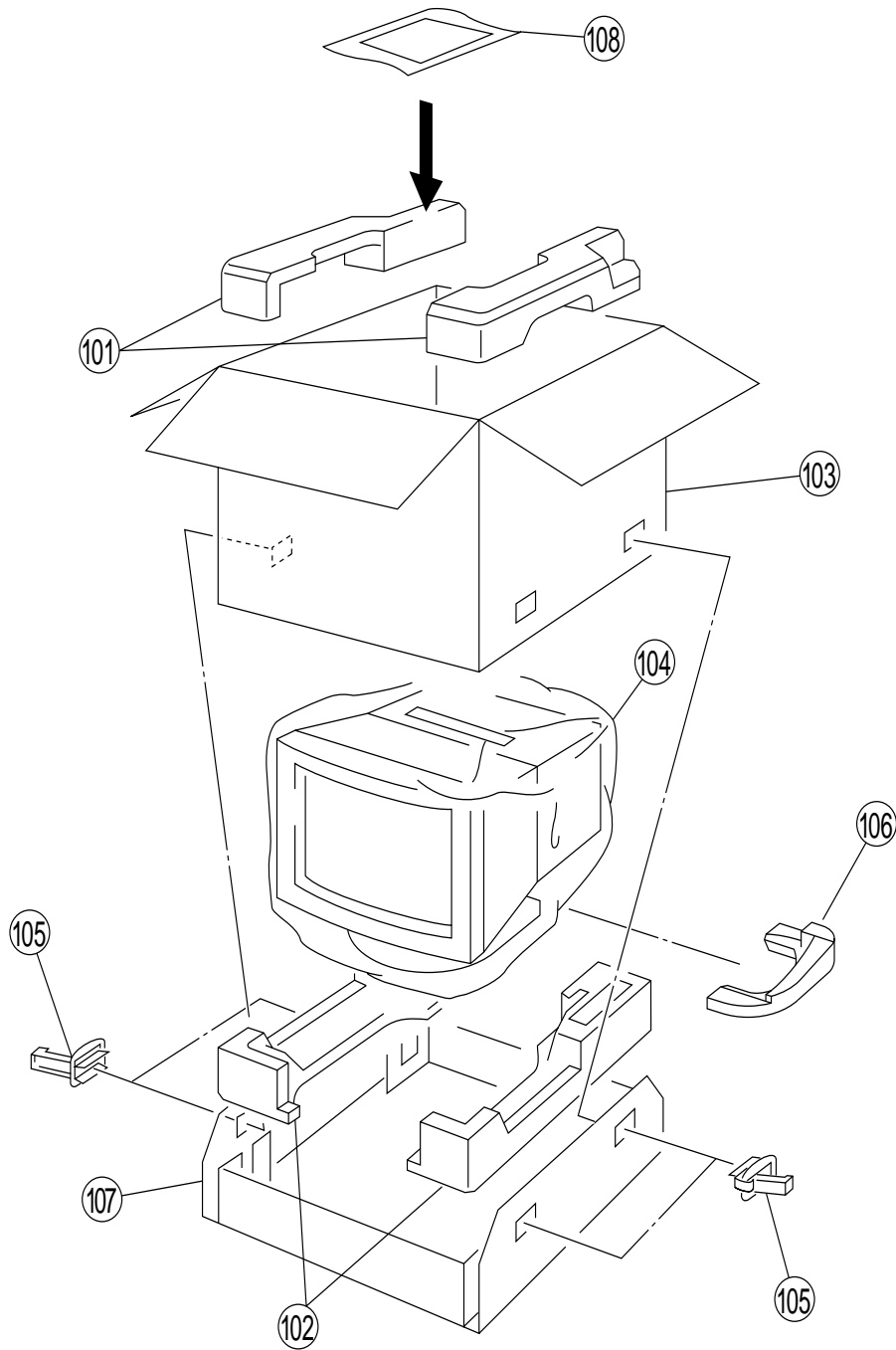
REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	* 4-076-657-01	CUSHION (UPPER) (ASSY)					
102	* 4-076-658-01	CUSHION (LOWER) (ASSY)					
103	* 4-080-718-01	INDIVIDUAL CARTON					
104	* 4-030-594-11	BAG, PROTECTION					
105	* 4-396-077-01	JOINT					
106	* 4-077-239-01	TILT PAD					
107	* 4-055-439-01	TRAY					
108	4-080-892-11	MANUAL, INSTRUCTION					

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

Les composants identifiés par la marque ⚠ 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 ⊠ 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.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

RESISTORS
• All resistors are in ohms
• F : nonflammable

REF.NO.	PART NO.	DESCRIPTION		REMARK		REF.NO.	PART NO.	DESCRIPTION		REMARK	
	* 8-933-396-00	J BOARD, COMPLETE				C027	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
		*************************				C028	1-163-222-11	CERAMIC CHIP 5PF		0.25PF	50V
						C029	1-163-237-11	CERAMIC CHIP 27PF		5.00%	50V
		<CONNECTOR>				C031	1-126-964-11	ELECT	10UF	20.00%	50V
						C033	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
CN891	*1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P				C036	1-163-037-11	CERAMIC CHIP 0.022UF		10.00%	50V
						C037	1-126-964-11	ELECT	10UF	20.00%	50V
		<SWITCH>				C038	1-126-964-11	ELECT	10UF	20.00%	50V
						C039	1-126-964-11	ELECT	10UF	20.00%	50V
S891 ⚠	1-771-727-11	SWITCH, AC POWER PUSH				C040	1-126-964-11	ELECT	10UF	20.00%	50V
						C041	1-126-964-11	ELECT	10UF	20.00%	50V
						C042	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
		****************************				C043	1-126-965-11	ELECT	22UF	20.00%	50V
						C044	1-163-037-11	CERAMIC CHIP 0.022UF		10.00%	50V
						C045	1-163-037-11	CERAMIC CHIP 0.022UF		10.00%	50V
	* 8-933-433-00	N BOARD, COMPLETE				C046	1-163-037-11	CERAMIC CHIP 0.022UF		10.00%	50V
		****************************				C047	1-163-037-11	CERAMIC CHIP 0.022UF		10.00%	50V
						C048	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
		<CAPACITOR>				C049	1-126-964-11	ELECT	10UF	20.00%	50V
						C050	1-126-964-11	ELECT	10UF	20.00%	50V
C001	1-163-009-11	CERAMIC CHIP 0.001UF		10.00%	50V	C051	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
C002	1-163-009-11	CERAMIC CHIP 0.001UF		10.00%	50V	C052	1-126-933-11	ELECT	100UF	20.00%	16V
C003	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V						
C005	1-163-255-11	CERAMIC CHIP 150PF		5.00%	50V	C053	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C006	1-163-235-11	CERAMIC CHIP 22PF		5.00%	50V	C054	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
						C055	1-104-664-11	ELECT	47UF	20.00%	25V
C007	1-163-235-11	CERAMIC CHIP 22PF		5.00%	50V	C056	1-126-965-11	ELECT	22UF	20.00%	50V
C008	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	25V	C057	1-126-964-11	ELECT	10UF	20.00%	50V
C011	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V						
C012	1-126-967-11	ELECT	47UF	20.00%	50V	C058	1-164-690-91	CERAMIC CHIP 0.0022UF		5.00%	50V
C013	1-126-965-11	ELECT	22UF	20.00%	50V	C059	1-126-964-11	ELECT	10UF	20.00%	50V
						C061	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
C014	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V	C062	1-104-665-11	ELECT	100UF	20.00%	25V
C015	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C063	1-164-690-91	CERAMIC CHIP 0.0022UF		5.00%	50V
C016	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V						
C017	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C064	1-115-419-11	CERAMIC CHIP 3300PF		5.00%	25V
C018	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C065	1-126-960-11	ELECT	1UF	20.00%	50V
						C066	1-164-690-91	CERAMIC CHIP 0.0022UF		5.00%	50V
C019	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C067	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	25V
C020	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C068	1-136-169-00	MYLAR	0.22UF	5.00%	50V
C021	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V						
C022	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C069	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
C023	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V	C070	1-126-767-11	ELECT	1000UF	20.00%	16V
						C071	1-163-007-11	CERAMIC CHIP 680PF		10.00%	50V
C024	1-163-009-11	CERAMIC CHIP 0.001UF		10.00%	50V	C072	1-126-942-61	ELECT	1000UF	20.00%	25V
C025	1-163-009-11	CERAMIC CHIP 0.001UF		10.00%	50V	C073	1-115-339-11	CERAMIC CHIP 0.1UF		10.00%	50V
C026	1-104-665-11	ELECT	100UF	20.00%	25V						

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REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION	REMARK	
C074	1-163-137-00	CERAMIC CHIP 680PF	5.00%	50V	C5413	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C075	1-163-251-11	CERAMIC CHIP 100PF	5.00%	50V	C5501	1-126-967-11	ELECT 47UF	20.00%	50V
C077	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V	C5602	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V
C078	1-136-169-00	MYLAR 0.22UF	5.00%	50V	C5606	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C079	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V					
					C5607	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C080	1-126-967-11	ELECT 47UF	20.00%	50V					
C082	1-104-664-11	ELECT 47UF	20.00%	25V					
C083	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V			<CONNECTOR>		
C084	1-126-964-11	ELECT 10UF	20.00%	50V					
C085	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	CN001	1-784-500-11	CONNECTOR, FFC/FPC 21P		
					CN002*	1-564-511-11	PLUG, CONNECTOR 8P		
C086	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	CN003	1-784-488-11	CONNECTOR, FFC/FPC 9P		
C087	1-126-964-11	ELECT 10UF	20.00%	50V	CN007	1-784-490-11	CONNECTOR, FFC/FPC 11P		
C089	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	CN010	1-784-786-11	CONNECTOR, FFC 25P		
C090	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V					
C091	1-126-933-11	ELECT 100UF	20.00%	16V	CN011	1-784-786-11	CONNECTOR, FFC 25P		
					CN5001*	1-564-509-11	PLUG, CONNECTOR 6P		
C093	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V	CN5002*	1-564-511-11	PLUG, CONNECTOR 8P		
C094	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	CN5003*	1-564-505-11	PLUG, CONNECTOR 2P		
C095	1-117-722-11	ELECT 2200UF	20.00%	10V					
C096	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V					
C097	1-126-964-11	ELECT 10UF	20.00%	50V			<DIODE>		
C098	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V	D001	8-719-062-51	DIODE 1PS226-115		
C099	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D002	8-719-062-51	DIODE 1PS226-115		
C1003	1-104-664-11	ELECT 47UF	20.00%	25V	D003	8-719-062-51	DIODE 1PS226-115		
C1004	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V	D004	8-719-062-51	DIODE 1PS226-115		
C1005	1-163-005-11	CERAMIC CHIP 470PF	10.00%	50V	D008	8-719-109-89	ZENER DIODE RD5.6ESB2		
C1006	1-164-161-11	CERAMIC CHIP 0.0022UF	10.00%	50V	D009	8-719-109-89	ZENER DIODE RD5.6ESB2		
C1008	1-163-085-00	CERAMIC CHIP 2PF	0.25PF	50V	D010	8-719-109-89	ZENER DIODE RD5.6ESB2		
C1009	1-163-087-00	CERAMIC CHIP 4PF	0.25PF	50V	D012	8-719-109-89	ZENER DIODE RD5.6ESB2		
C5002	1-126-964-11	ELECT 10UF	20.00%	50V	D013	8-719-110-17	ZENER DIODE RD10ESB2		
C5003	1-126-933-11	ELECT 100UF	20.00%	16V	D015	8-719-801-78	DIODE 1SS184		
C5004	1-104-664-11	ELECT 47UF	20.00%	25V	D016	8-719-109-89	ZENER DIODE RD5.6ESB2		
C5005	1-104-664-11	ELECT 47UF	20.00%	25V	D017	8-719-109-89	ZENER DIODE RD5.6ESB2		
C5008	1-104-664-11	ELECT 47UF	20.00%	25V	D018	8-719-109-89	ZENER DIODE RD5.6ESB2		
C5009	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D020	8-719-988-61	DIODE 1SS355TE-17		
C5101	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D021	8-719-988-61	DIODE 1SS355TE-17		
C5103	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D022	8-719-801-78	DIODE 1SS184		
C5105	1-104-664-11	ELECT 47UF	20.00%	25V	D023	8-719-801-78	DIODE 1SS184		
C5106	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D024	8-719-801-78	DIODE 1SS184		
C5108	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D025	8-719-062-51	DIODE 1PS226-115		
C5110	1-104-664-11	ELECT 47UF	20.00%	25V	D026	8-719-062-51	DIODE 1PS226-115		
C5203	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D027	8-719-988-61	DIODE 1SS355TE-17		
C5205	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D028	8-719-988-61	DIODE 1SS355TE-17		
C5206	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	D029	8-719-109-85	ZENER DIODE RD5.1ESB2		
C5301	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D036	8-719-109-89	ZENER DIODE RD5.6ESB2		
C5303	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	D037	8-719-109-89	ZENER DIODE RD5.6ESB2		
C5304	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	D038	8-719-045-99	ZENER DIODE RD2.2M-T1B		
C5305	1-104-664-11	ELECT 47UF	20.00%	25V					
C5306	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V					
C5308	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V			<FERRITE BEAD>		
C5310	1-104-664-11	ELECT 47UF	20.00%	25V					
					FB001	1-410-397-21	FERRITE 1.1UH		
C5401	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	FB002	1-410-397-21	FERRITE 1.1UH		
C5403	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	FB003	1-410-397-21	FERRITE 1.1UH		
C5404	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	FB5101	1-412-911-11	FERRITE 1.1UH		
C5406	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V	FB5103	1-412-911-11	FERRITE 1.1UH		
C5408	1-163-005-11	CERAMIC CHIP 470PF	10.00%	50V					
					FB5201	1-412-911-11	FERRITE 1.1UH		
C5409	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V	FB5301	1-412-911-11	FERRITE 1.1UH		

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
FB5303	1-412-911-11	FERRITE	1.1UH			R016	1-216-017-91	RES-CHIP	47	5%	1/10W
FB5401	1-412-911-11	FERRITE	1.1UH			R017	1-216-017-91	RES-CHIP	47	5%	1/10W
FB5403	1-412-911-11	FERRITE	1.1UH			R018	1-216-049-91	RES-CHIP	1K	5%	1/10W
						R019	1-216-025-91	RES-CHIP	100	5%	1/10W
FB5601	1-412-911-11	FERRITE	1.1UH			R020	1-216-025-91	RES-CHIP	100	5%	1/10W
						R021	1-216-025-91	RES-CHIP	100	5%	1/10W
		<SENSOR>				R022	1-216-025-91	RES-CHIP	100	5%	1/10W
						R023	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
GS5001	1-418-473-11	SENSOR UNIT, GEOWAGNETIC				R024	1-216-025-91	RES-CHIP	100	5%	1/10W
						R025	1-216-025-91	RES-CHIP	100	5%	1/10W
		<IC>				R026	1-216-025-91	RES-CHIP	100	5%	1/10W
						R029	1-216-073-00	RES-CHIP	10K	5%	1/10W
IC001	8-759-696-57	IC CXD-8744Q-0012				R030	1-216-049-91	RES-CHIP	1K	5%	1/10W
IC002	8-759-162-80	IC MM1170BFB				R031	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
IC003	8-759-527-77	IC M24C16-MN6T				R032	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
IC004	8-759-491-55	IC TC74VHCT74AFT(EL)									
IC005	8-759-491-55	IC TC74VHCT74AFT(EL)				R034	1-216-049-91	RES-CHIP	1K	5%	1/10W
						R035	1-216-073-00	RES-CHIP	10K	5%	1/10W
IC006	8-759-700-78	IC NJM082M				R036	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
IC010	8-759-585-70	IC LA7865M-TLM				R037	1-216-073-00	RES-CHIP	10K	5%	1/10W
IC011	8-759-661-55	IC ST24FC21M6TR				R039	1-216-025-91	RES-CHIP	100	5%	1/10W
IC5101	8-759-822-38	IC LA6510									
IC5201	8-759-822-07	IC LA6515				R040	1-216-025-91	RES-CHIP	100	5%	1/10W
						R042	1-216-073-00	RES-CHIP	10K	5%	1/10W
IC5301	8-759-822-38	IC LA6510				R043	1-216-049-91	RES-CHIP	1K	5%	1/10W
IC5401	8-759-822-07	IC LA6515				R044	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
						R045	1-216-049-91	RES-CHIP	1K	5%	1/10W
		<COIL>				R046	1-216-073-00	RES-CHIP	10K	5%	1/10W
						R047	1-216-049-91	RES-CHIP	1K	5%	1/10W
L002	1-406-665-11	INDUCTOR 100UH				R048	1-216-049-91	RES-CHIP	1K	5%	1/10W
L003	1-406-671-11	INDUCTOR 1MH				R049	1-216-073-00	RES-CHIP	10K	5%	1/10W
						R053	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		<TRANSISTOR>				R054	1-216-077-91	RES-CHIP	15K	5%	1/10W
						R055	1-216-077-91	RES-CHIP	15K	5%	1/10W
Q001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				R056	1-216-073-00	RES-CHIP	10K	5%	1/10W
Q002	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				R057	1-216-073-00	RES-CHIP	10K	5%	1/10W
Q003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				R058	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
Q004	8-729-028-83	TRANSISTOR DTA124EUA-T106									
Q005	8-729-033-26	TRANSISTOR DTA114GKAT146				R059	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
						R060	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
Q006	8-729-027-49	TRANSISTOR DTC123EKA-T146				R061	1-216-049-91	RES-CHIP	1K	5%	1/10W
Q007	8-729-901-00	TRANSISTOR DTC124EK				R062	1-216-613-11	METAL CHIP	27	0.50%	1/10W
Q008	8-729-033-25	TRANSISTOR DTC114GKA				R063	1-216-613-11	METAL CHIP	27	0.50%	1/10W
Q009	8-729-120-28	TRANSISTOR 2SC1623-L5L6									
Q010	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				R064	1-216-613-11	METAL CHIP	27	0.50%	1/10W
						R066	1-216-049-91	RES-CHIP	1K	5%	1/10W
Q011	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R				R067	1-216-073-00	RES-CHIP	10K	5%	1/10W
Q012	8-729-901-00	TRANSISTOR DTC124EK				R068	1-216-295-91	SHORT	0		
						R069	1-216-295-91	SHORT	0		
		<RESISTOR>				R070	1-216-295-91	SHORT	0		
						R071	1-216-295-91	SHORT	0		
R003	1-216-025-91	RES-CHIP	100	5%	1/10W	R072	1-216-295-91	SHORT	0		
R004	1-216-025-91	RES-CHIP	100	5%	1/10W	R073	1-216-295-91	SHORT	0		
R005	1-216-025-91	RES-CHIP	100	5%	1/10W	R074	1-216-295-91	SHORT	0		
R006	1-216-025-91	RES-CHIP	100	5%	1/10W						
R007	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R075	1-215-407-00	METAL	270	1%	1/4W
						R076	1-215-407-00	METAL	270	1%	1/4W
R008	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R078	1-216-121-91	RES-CHIP	1M	5%	1/10W
R009	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R079	1-216-295-91	SHORT	0		
R010	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R080	1-216-295-91	SHORT	0		
R014	1-216-049-91	RES-CHIP	1K	5%	1/10W						
R015	1-249-389-11	CARBON	4.7	5%	1/4W	R081	1-216-049-91	RES-CHIP	1K	5%	1/10W

GDM-FW9011

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REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
R082	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1043	1-216-025-91	RES-CHIP	100	5%	1/10W
R084	1-216-073-00	RES-CHIP	10K	5%	1/10W	R1044	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R085	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R086	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R1046	1-216-025-91	RES-CHIP	100	5%	1/10W
R090	1-216-073-00	RES-CHIP	10K	5%	1/10W	R1047	1-216-073-00	RES-CHIP	10K	5%	1/10W
R091	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1049	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R092	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1050	1-216-073-00	RES-CHIP	10K	5%	1/10W
R093	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1051	1-216-097-91	RES-CHIP	100K	5%	1/10W
R094	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R1052	1-216-073-00	RES-CHIP	10K	5%	1/10W
R095	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1053	1-216-049-91	RES-CHIP	1K	5%	1/10W
R096	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R1054	1-216-073-00	RES-CHIP	10K	5%	1/10W
R097	1-216-073-00	RES-CHIP	10K	5%	1/10W	R1055	1-216-049-91	RES-CHIP	1K	5%	1/10W
R098	1-216-073-00	RES-CHIP	10K	5%	1/10W	R1056	1-216-073-00	RES-CHIP	10K	5%	1/10W
R099	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R1057	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1001	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1058	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1002	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1059	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1003	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1060	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1004	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1061	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1005	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R1062	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1006	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1063	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1007	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1064	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1008	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	R1065	1-216-117-00	RES-CHIP	680K	5%	1/10W
R1009	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1066	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1010	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R1067	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1011	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1068	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1012	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R1069	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1013	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R1070	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1014	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1071	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1015	1-216-049-91	RES-CHIP	1K	5%	1/10W						
						R1075	1-216-295-91	SHORT	0		
R1016	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1076	1-216-295-91	SHORT	0		
R1017	1-216-049-91	RES-CHIP	1K	5%	1/10W	R1077	1-216-025-91	RES-CHIP	100	5%	1/10W
R1018	1-216-049-91	RES-CHIP	1K	5%	1/10W	R5003	1-216-295-91	SHORT	0		
R1019	1-216-049-91	RES-CHIP	1K	5%	1/10W	R5005	1-216-081-00	RES-CHIP	22K	5%	1/10W
R1020	1-216-065-91	RES-CHIP	4.7K	5%	1/10W						
						R5006	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1021	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R5007	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1022	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	R5010	1-216-295-91	SHORT	0		
R1023	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	R5011	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1024	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	R5015	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1025	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R5108	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R1026	1-216-109-00	RES-CHIP	330K	5%	1/10W	R5109	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R1027	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	R5110	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1028	1-216-647-11	METAL CHIP	680	0.50%	1/10W	R5113	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1029	1-216-025-91	RES-CHIP	100	5%	1/10W	R5115	1-215-859-00	METAL OXIDE	22	5%	1W
R1030	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R5116	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1031	1-216-025-91	RES-CHIP	100	5%	1/10W	R5119	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1032	1-216-025-91	RES-CHIP	100	5%	1/10W	R5122	1-215-859-00	METAL OXIDE	22	5%	1W
R1033	1-216-025-91	RES-CHIP	100	5%	1/10W	R5205	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1034	1-216-025-91	RES-CHIP	100	5%	1/10W	R5206	1-215-859-00	METAL OXIDE	22	5%	1W
R1035	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R5207	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1036	1-216-025-91	RES-CHIP	100	5%	1/10W	R5208	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R1037	1-216-025-91	RES-CHIP	100	5%	1/10W	R5209	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R1038	1-216-025-91	RES-CHIP	100	5%	1/10W	R5308	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R1039	1-216-025-91	RES-CHIP	100	5%	1/10W	R5309	1-216-308-00	RES-CHIP	4.7	5%	1/10W
R1040	1-216-025-91	RES-CHIP	100	5%	1/10W						
						R5310	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1041	1-216-025-91	RES-CHIP	100	5%	1/10W	R5313	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1042	1-216-025-91	RES-CHIP	100	5%	1/10W	R5315	1-215-859-00	METAL OXIDE	22	5%	1W

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
R5316	1-216-073-00	RES-CHIP	10K	5%	1/10W	C3011	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5319	1-216-073-00	RES-CHIP	10K	5%	1/10W	C3012	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3013	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5322	1-215-859-00	METAL OXIDE	22	5%	1W	C3014	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5406	1-216-083-00	RES-CHIP	27K	5%	1/10W	C3015	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5407	1-216-085-00	RES-CHIP	33K	5%	1/10W						
R5408	1-216-308-00	RES-CHIP	4.7	5%	1/10W	C3016	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5409	1-216-308-00	RES-CHIP	4.7	5%	1/10W	C3017	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3018	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5410	1-216-081-00	RES-CHIP	22K	5%	1/10W	C3019	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
R5413	1-216-097-91	RES-CHIP	100K	5%	1/10W	C3020	1-126-964-11	ELECT	10UF	20.00%	50V
R5415	1-215-887-00	METAL OXIDE	150	5%	2W						
R5416	1-216-081-00	RES-CHIP	22K	5%	1/10W	C3021	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
R5419	1-216-097-91	RES-CHIP	100K	5%	1/10W	C3022	1-126-960-11	ELECT	1UF	20.00%	50V
						C3023	1-126-964-11	ELECT	10UF	20.00%	50V
R5422	1-216-451-11	METAL OXIDE	120	5%	2W	C3024	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
R5502	1-216-081-00	RES-CHIP	22K	5%	1/10W	C3025	1-126-960-11	ELECT	1UF	20.00%	50V
R5503	1-216-081-00	RES-CHIP	22K	5%	1/10W						
R5504	1-216-089-91	RES-CHIP	47K	5%	1/10W	C3026	1-126-964-11	ELECT	10UF	20.00%	50V
R5505	1-216-089-91	RES-CHIP	47K	5%	1/10W	C3027	1-126-964-11	ELECT	10UF	20.00%	50V
						C3028	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5506	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	C3029	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5507	1-249-382-11	CARBON	1.2	5%	1/4W	C3030	1-126-964-11	ELECT	10UF	20.00%	50V
R5508	1-249-382-11	CARBON	1.2	5%	1/4W						
R5509	1-249-382-11	CARBON	1.2	5%	1/4W	C3031	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
R5510	1-249-382-11	CARBON	1.2	5%	1/4W	C3032	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3033	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5602	1-216-081-00	RES-CHIP	22K	5%	1/10W	C3034	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5603	1-216-077-91	RES-CHIP	15K	5%	1/10W	C3035	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5604	1-216-081-00	RES-CHIP	22K	5%	1/10W						
R5605	1-216-097-91	RES-CHIP	100K	5%	1/10W	C3036	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5607	1-215-862-11	METAL OXIDE	68	5%	1W	C3037	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3038	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
R5610	1-216-308-00	RES-CHIP	4.7	5%	1/10W	C3039	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3040	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
		<CRYSTAL>				C3041	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3042	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
X001	1-760-682-21	VIBRATOR, CRYSTAL (24.756MHz)				C3043	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3044	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
						C3045	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C3046	1-126-965-11	ELECT	22UF	20.00%	50V
C3047	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
C3048	1-126-964-11	ELECT	10UF	20.00%	50V
C3050	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
C3052	1-126-963-11	ELECT	4.7UF	20.00%	50V
C3053	1-163-005-11	CERAMIC CHIP 470UF		10.00%	50V
C3056	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3057	1-126-964-11	ELECT	10UF	20.00%	50V
C3058	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	25V
C3062	1-126-942-61	ELECT	1000UF	20.00%	25V
C3063	1-126-942-61	ELECT	1000UF	20.00%	25V
C3064	1-163-235-11	CERAMIC CHIP 22PF		5.00%	50V
C3065	1-137-378-11	MYLAR	0.22UF	5.00%	50V
C3066	1-163-235-11	CERAMIC CHIP 22PF		5.00%	50V
C3067	1-137-378-11	MYLAR	0.22UF	5.00%	50V
C3068	1-163-235-11	CERAMIC CHIP 22PF		5.00%	50V
C3069	1-137-378-11	MYLAR	0.22UF	5.00%	50V
C3070	1-163-235-11	CERAMIC CHIP 22PF		5.00%	50V
C3071	1-137-378-11	MYLAR	0.22UF	5.00%	50V
C3072	1-107-823-11	CERAMIC CHIP 0.47UF		10.00%	16V
C3074	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V

* 8-933-442-00 S BOARD, COMPLETE
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4-077-446-01 HEAT SINK (S1) (IC3002, IC3003)
* 4-381-906-01 SPRING (F) (IC3002, IC3003)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C3001	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3002	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3003	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3004	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3005	1-164-004-11	CERAMIC CHIP 0.1UF		10.00%	50V
C3006	1-126-964-11	ELECT	10UF	20.00%	50V
C3007	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3008	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3009	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V
C3010	1-163-021-91	CERAMIC CHIP 0.01UF		10.00%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C3075	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%		25V
C3076	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%		25V
C3078	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%		50V
C3079	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%		25V
C3080	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%		25V
C3081	1-117-720-11	CERAMIC CHIP 4.7UF			10V
C3082	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%		25V

\<CONNECTOR\>

CN3001	1-784-451-11	CONNECTOR, FFC/FPC 9P	
CN3002*	1-564-523-11	PLUG, CONNECTOR 8P	
CN3003*	1-564-518-11	PLUG, CONNECTOR 3P	

\<DIODE\>

D3003	8-719-978-04	ZENER DIODE DTZ-TT11-3.3B
D3004	8-719-978-04	ZENER DIODE DTZ-TT11-3.3B
D3005	8-719-073-01	DIODE MA111-(K8).SO
D3006	8-719-073-01	DIODE MA111-(K8).SO

\<IC\>

IC3001	8-759-586-18	IC CXD9510Q
IC3002	8-749-017-48	IC STK391-220
IC3003	8-749-017-48	IC STK391-220
IC3004	8-759-445-59	IC BA033T
IC3005	8-759-699-33	IC M24C16-MN6T(A)
IC3006	8-759-352-91	IC PST9143NL

\<TRANSISTOR\>

Q3001	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q3002	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q3003	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q3004	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q3005	8-729-120-28	TRANSISTOR 2SC1623-L5L6

\<RESISTOR\>

R3001	1-216-631-11	METAL CHIP	150		0.50%1/10W
R3002	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3003	1-216-651-11	METAL CHIP	1K		0.50%1/10W
R3004	1-216-661-11	METAL CHIP	2.7K		0.50%1/10W
R3005	1-216-651-11	METAL CHIP	1K		0.50%1/10W
R3006	1-216-651-11	METAL CHIP	1K		0.50%1/10W
R3007	1-216-631-11	METAL CHIP	150		0.50%1/10W
R3008	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3009	1-216-651-11	METAL CHIP	1K		0.50%1/10W
R3010	1-216-661-11	METAL CHIP	2.7K		0.50%1/10W
R3011	1-216-651-11	METAL CHIP	1K		0.50%1/10W
R3012	1-216-651-11	METAL CHIP	1K		0.50%1/10W
R3013	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3014	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3015	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3016	1-216-295-91	SHORT	0		
R3017	1-216-025-91	RES-CHIP	100	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R3018	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3019	1-216-295-91	SHORT	0		
R3020	1-216-025-91	RES-CHIP	100	5%	1/10W
R3021	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3022	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3023	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3024	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3025	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3026	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3027	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3028	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3029	1-216-025-91	RES-CHIP	100	5%	1/10W
R3030	1-216-627-11	METAL CHIP	100		0.50%1/10W
R3031	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3032	1-216-677-11	METAL CHIP	12K		0.50%1/10W
R3034	1-216-666-11	METAL CHIP	4.3K		0.50%1/10W
R3035	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3036	1-216-029-00	RES-CHIP	150	5%	1/10W
R3037	1-216-029-00	RES-CHIP	150	5%	1/10W
R3038	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3039	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3040	1-216-295-91	SHORT	0		
R3042	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3044	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3045	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3046	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3047	1-216-386-11	METAL OXIDE	0.56	5%	3W
R3048	1-216-387-11	METAL OXIDE	0.68	5%	3W
R3049	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3050	1-216-475-11	METAL OXIDE	120	5%	3W
R3051	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3052	1-216-475-11	METAL OXIDE	120	5%	3W
R3053	1-216-386-11	METAL OXIDE	0.56	5%	3W
R3054	1-216-387-11	METAL OXIDE	0.68	5%	3W
R3055	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3056	1-216-474-11	METAL OXIDE	82	5%	3W
R3057	1-216-667-11	METAL CHIP	4.7K		0.50%1/10W
R3058	1-216-475-11	METAL OXIDE	120	5%	3W
R3059	1-216-295-91	SHORT	0		
R3060	1-216-295-91	SHORT	0		
R3062	1-216-295-91	SHORT	0		
R3063	1-216-295-91	SHORT	0		
R3064	1-216-295-91	SHORT	0		
R3065	1-216-627-11	METAL CHIP	100		0.50%1/10W
R3066	1-216-343-00	METAL OXIDE	0.33	5%	1W
R3067	1-216-343-00	METAL OXIDE	0.33	5%	1W
R3070	1-216-097-91	RES-CHIP	100K	5%	1/10W
R3071	1-216-073-00	RES-CHIP	10K	5%	1/10W
R3072	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R3073	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3074	1-216-077-91	RES-CHIP	15K	5%	1/10W
R3075	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R3076	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R3077	1-216-073-00	RES-CHIP	10K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
R3078	1-216-073-00	RES-CHIP	10K	5%	1/10W	C536	1-126-967-11	ELECT	47UF	20.00%	50V
R3079	1-216-073-00	RES-CHIP	10K	5%	1/10W	C537	1-119-858-11	FILM	0.068UF	5.00%	250V
						C538	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
						C539	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
						C540	1-104-987-11	MYLAR	0.001UF	10.00%	200V

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						C541	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
	* 8-933-440-00	D BOARD, COMPLETE				C542	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
		*************************				C543	1-135-350-11	FILM	3600PF	3%	1.8KV
						C544	1-117-953-11	FILM	0.033UF	5.00%	400V
						C545	1-107-597-11	CERAMIC	22PF	5.00%	500V
	3-710-578-01	COVER, VOLUME, 6 MOLD (RV901)				C546	1-107-444-11	CERAMIC	100PF	5.00%	2KV
	4-070-828-01	INSULATING SHEET (Q515)				C547	1-130-061-91	FILM	0.0015UF	5.00%	630V
	4-070-829-02	INSULATING SHEET (IC502)				C548	1-162-134-11	CERAMIC	470PF	10.00%	2KV
	4-070-830-01	INSULATING SHEET (IC701)				C549	1-130-495-00	MYLAR	0.1UF	5.00%	50V
	4-077-445-01	HEAT SINK (D5) (R918, Q905, Q906)				C550	1-137-711-61	FILM	0.065UF	5.00%	50V
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC701, Q704, Q705, Q901, Q905, Q906, D508, R918)				C551	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V
						C552	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 TT(B) (IC502, Q508, Q515, D511, R547)				C554	1-107-444-11	CERAMIC	100PF	5.00%	2KV
						C555	1-107-683-11	ELECT	2.2UF		250V
						C556	1-117-892-11	FILM	2UF	5.00%	250V
		<CAPACITOR>				C557	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
						C558	1-104-665-11	ELECT	100UF	20.00%	25V
C501	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C559	1-107-649-11	ELECT	2.2UF	20.00%	250V
C502	1-136-169-00	MYLAR	0.22UF	5.00%	50V	C560	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C503	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C561	1-104-664-11	ELECT	47UF	20.00%	25V
C504	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V						
C505	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C562	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
						C564	1-126-960-11	ELECT	1UF	20.00%	50V
C506	1-137-194-81	MYLAR	0.47UF	5.00%	50V	C565	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C507	1-136-169-00	MYLAR	0.22UF	5.00%	50V	C566	1-137-150-11	MYLAR	0.01UF	5.00%	50V
C508	1-126-965-11	ELECT	22UF	20.00%	50V	C567	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C509	1-115-522-11	FILM	1UF	5.00%	250V						
C510	1-117-398-11	ELECT	33UF	20.00%	250V	C568	1-104-760-11	CERAMIC CHIP	0.047UF	10.00%	50V
						C569	1-126-933-11	ELECT	100UF	20.00%	16V
C511	1-163-113-00	CERAMIC CHIP	68PF	5.00%	50V	C571	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50V
C512	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V	C572	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C513	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00%	50V	C573	1-106-375-12	MYLAR	0.022UF		200V
C514	1-106-375-12	MYLAR	0.022UF		200V						
C515	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V	C575	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
						C576	1-164-222-11	CERAMIC CHIP	0.22UF		25V
C516	1-126-934-11	ELECT	220UF	20.00%	16V	C577	1-126-964-11	ELECT	10UF	20.00%	50V
C517	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C578	1-137-711-61	FILM	0.065UF	5%	400V
C518	1-137-194-81	MYLAR	0.47UF	5.00%	50V	C579	1-135-932-91	FILM	0.015UF	5%	400V
C519	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V						
C520	1-107-914-11	ELECT	1000UF	20.00%	25V	C580	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
						C701	1-128-560-11	ELECT	22UF	20.00%	100V
C521	1-115-518-11	FILM	0.47UF	5.00%	250V	C702	1-128-562-11	ELECT	47UF	20.00%	100V
C522	1-137-368-11	MYLAR	0.0047UF	5.00%	50V	C703	1-104-331-11	CERAMIC	0.0022UF	10.00%	1KV
C523	1-137-368-11	MYLAR	0.0047UF	5.00%	50V	C704	1-104-568-11	CERAMIC	470PF	10.00%	2KV
C524	1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V						
C525	1-104-760-11	CERAMIC CHIP	0.047UF	10.00%	50V	C706	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
						C707	1-130-495-00	MYLAR	0.1UF	5.00%	50V
C526	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C708	1-126-942-61	ELECT	1000UF	20.00%	25V
C527	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C709	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C528	1-117-412-11	FILM	0.24UF	5.00%	250V	C710	1-107-894-11	ELECT	220UF	20.00%	35V
C529	1-104-665-11	ELECT	100UF	20.00%	25V						
C530	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V	C711	1-163-019-00	CERAMIC CHIP	0.0068UF	10.00%	50V
						C712	1-137-401-11	MYLAR	0.22UF	10.00%	100V
C531	1-117-660-21	FILM	0.12UF	5.00%	250V	C713	1-126-942-61	ELECT	1000UF	20.00%	25V
C532	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V	C715	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C533	1-107-889-11	ELECT	220UF	20.00%	25V	C720	1-126-964-11	ELECT	10UF	20.00%	50V
C534	1-107-889-11	ELECT	220UF	20.00%	25V						
C535	1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V						

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REF.NO.	PART NO.	DESCRIPTION		REMARK		REF.NO.	PART NO.	DESCRIPTION		REMARK
C901	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V		D510	8-719-109-85	ZENER DIODE RD5.1ESB2		
						D511	8-719-066-36	DIODE FMQ-G5GS		
C902	1-104-665-11	ELECT	100UF	20.00%	25V	D512	8-719-988-61	DIODE 1SS355TE-17		
						D513	8-719-991-33	DIODE 1SS133T-77		
C903	1-126-964-11	ELECT	10UF	20.00%	50V					
C904	1-104-570-11	CERAMIC	0.001UF	10.00%	2KV	D514	8-719-991-33	DIODE 1SS133T-77		
C905	1-163-127-00	CERAMIC CHIP 270PF	5.00%	50V		D515	8-719-109-89	ZENER DIODE RD5.6ESB2		
C906	1-117-623-11	FILM	1500PF	3.00%	1.2KV	D516	8-719-991-33	DIODE 1SS133T-77		
C907	1-163-253-11	CERAMIC CHIP 120PF	5.00%	50V		D517	8-719-951-30	DIODE ERA91-02		
						D519	8-719-988-61	DIODE 1SS355TE-17		
C908	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V						
C909	1-126-934-11	ELECT	220UF	20.00%	16V	D520	8-719-988-61	DIODE 1SS355TE-17		
C910	1-126-962-11	ELECT	3.3UF	20.00%	50V	D522	8-719-988-61	DIODE 1SS355TE-17		
C911	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V		D701	8-719-991-33	DIODE 1SS133T-77		
C912	1-106-383-00	MYLAR	0.047UF	10.00%	200V	D702	8-719-991-33	DIODE 1SS133T-77		
						D703	8-719-991-33	DIODE 1SS133T-77		
C913	1-119-748-11	ELECT	33UF	20.00%	400V					
C914	1-106-383-00	MYLAR	0.047UF	10.00%	200V	D704	1-216-295-91	SHORT	0	
C915	1-136-169-00	MYLAR	0.22UF	5.00%	50V	D706	8-719-979-58	DIODE EGP10D		
C916	1-117-630-11	FILM	3000PF	3.00%	1.2KV	D707	8-719-109-85	ZENER DIODE RD5.1ESB2		
C917	1-117-665-11	FILM	0.33UF	5.00%	250V	D708	8-719-908-03	DIODE GP08D		
						D709	8-719-948-45	DIODE ERA22-08		
C918	1-106-359-00	MYLAR	0.0047UF	10.00%	100V					
C919	1-115-350-51	CERAMIC	0.0047UF		2KV	D710	8-719-109-85	ZENER DIODE RD5.1ESB2		
C920	1-137-372-11	MYLAR	0.022UF	5.00%	50V	D901	8-719-991-33	DIODE 1SS133T-77		
C921	1-137-401-11	MYLAR	0.22UF	10.00%	100V	D902	8-719-110-31	ZENER DIODE RD12ES-B2		
C922	1-106-220-00	MYLAR	0.1UF	10.00%	100V	D904	8-719-988-61	DIODE 1SS355TE-17		
						D905	8-719-110-36	ZENER DIODE RD13ES-B2		
C923	1-106-355-12	MYLAR	0.0033UF	10.00%	200V					
C924	1-106-220-00	MYLAR	0.1UF	10.00%	100V	D906	8-719-063-89	DIODE YG911S3R		
C925	1-126-967-11	ELECT	47UF	20.00%	50V	D907	8-719-930-97	ZENER DIODE HZS16NB2TD		
C926	1-104-664-11	ELECT	47UF	20.00%	25V	D908	8-719-018-82	DIODE RGP02-20EL-6394		
C927	1-163-243-11	CERAMIC CHIP 47PF	5.00%	50V		D909	8-719-930-97	ZENER DIODE HZS16NB2TD		
						D910	8-719-991-33	DIODE 1SS133T-77		
C928	1-163-133-00	CERAMIC CHIP 470PF	5.00%	50V						
C929	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V		D911	8-719-018-82	DIODE RGP02-20EL-6394		
C930	1-163-227-11	CERAMIC CHIP 10PF	0.50PF	50V		D912	8-719-979-58	DIODE EGP10D		
C931	1-126-964-11	ELECT	10UF	20.00%	50V	D913	8-719-991-33	DIODE 1SS133T-77		
C932	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V		D915	8-719-110-67	ZENER DIODE RD27ES-B2		
						D917	8-719-988-61	DIODE 1SS355TE-17		
C933	1-126-960-11	ELECT	1UF	20.00%	50V					
C935	1-163-275-11	CERAMIC CHIP 0.001UF	5.00%	50V		D918	8-719-991-33	DIODE 1SS133T-77		
C936	1-163-113-00	CERAMIC CHIP 68PF	5.00%	50V		D919	8-719-991-33	DIODE 1SS133T-77		
C946	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V		D920	8-719-109-81	ZENER DIODE RD4.7ES-B2		
						D921	8-719-991-33	DIODE 1SS133T-77		
						D922	8-719-018-82	DIODE RGP02-20EL-6394		
		<CONNECTOR>								
						D923	8-719-988-61	DIODE 1SS355TE-17		
CN501	*1-564-509-11	PLUG, CONNECTOR 6P				D925	8-719-018-82	DIODE RGP02-20EL-6394		
CN502	*1-564-510-11	PLUG, CONNECTOR 7P								
CN503	*1-508-879-11	BASE POST								
CN504	1-784-786-11	CONNECTOR, FFC 25P						<FERRITE BEAD>		
CN505	1-784-786-11	CONNECTOR, FFC 25P								
						FB501	1-410-397-21	FERRITE	1.1UH	
CN506	1-764-101-11	PIN, CONNECTOR (PC BOARD) 2P				FB502	1-410-397-21	FERRITE	1.1UH	
CN508	*1-764-333-11	PLUG, CONNECTOR 10P				FB503	1-412-911-11	FERRITE	1.1UH	
CN509	*1-778-955-11	PIN, CONNECTOR (PC BOARD) 10P				FB504	1-412-911-11	FERRITE	1.1UH	
						FB505	1-412-911-11	FERRITE	1.1UH	
		<DIODE>				FB506	1-410-397-21	FERRITE	1.1UH	
						FB507	1-410-397-21	FERRITE	1.1UH	
D504	8-719-988-61	DIODE 1SS355TE-17				FB901	1-410-397-21	FERRITE	1.1UH	
D505	8-719-110-36	ZENER DIODE RD13ES-B2								
D506	8-719-991-33	DIODE 1SS133T-77								
D507	8-719-063-89	DIODE YG911S3R						<IC>		
D508	8-719-031-79	DIODE D5SC4M								
						IC501	8-759-585-82	IC BA9759F-E2		
D509	8-719-991-33	DIODE 1SS133T-77				IC502	8-759-803-42	IC LA6500-FA		
						IC503	8-759-058-50	IC XRA10324AF		
						IC504	8-759-643-66	IC uPC2912HF(12)		

REF.NO.	PART NO.	DESCRIPTION	REMARK		
IC701	8-759-444-82	IC LA7841L			
IC901	8-759-585-81	IC BA9758FS-E2			
		<COIL>			
L501	1-412-537-31	INDUCTOR 100UH			
L502	1-406-671-11	INDUCTOR 1MH			
L503	1-406-671-11	INDUCTOR 1MH			
L504	1-406-675-11	INDUCTOR 4.7MH			
L505	1-416-401-31	INDUCTOR 5MH			
L506	1-406-671-11	INDUCTOR 1MH			
L901	1-412-537-31	INDUCTOR 100UH			
L902	1-406-660-41	INDUCTOR 15UH			
		<TRANSISTOR>			
Q501	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q502	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q503	8-729-901-97	TRANSISTOR 2SA1036K-Q			
Q504	8-729-901-87	TRANSISTOR 2SC2411K-CQ			
Q505	8-729-901-97	TRANSISTOR 2SA1036K-Q			
Q506	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q507	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q508	8-729-048-53	TRANSISTOR 2SJ569LS-CB11			
Q509	8-729-820-73	TRANSISTOR 2SC3746			
Q510	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q511	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q512	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q513	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q514	8-729-140-50	TRANSISTOR 2SC3209LK			
Q515	8-729-048-48	TRANSISTOR 2SC5570(LBSONY)			
Q516	8-729-024-95	TRANSISTOR 2SB1565EF			
Q517	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q518	8-729-019-01	TRANSISTOR 2SD2394-EF			
Q519	8-729-033-25	TRANSISTOR DTC114GKA			
Q520	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q521	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q522	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q523	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q525	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q526	8-729-027-35	TRANSISTOR DTA143TKA-T146			
Q527	8-729-048-49	TRANSISTOR 2SK3262-01MR-F119			
Q701	8-729-800-32	TRANSISTOR 2SC2362K-G			
Q702	8-729-178-43	TRANSISTOR 2SC2784			
Q703	8-729-204-91	TRANSISTOR 2SA1049-GR			
Q704	8-729-207-82	TRANSISTOR 2SC3421-Y			
Q705	8-729-207-89	TRANSISTOR 2SA1358-Y			
Q706	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R			
Q707	8-729-046-80	TRANSISTOR 2SC4634LS-CB11			
Q901	8-729-044-21	TRANSISTOR 2SK2655-01R-F165			
Q902	8-729-900-53	TRANSISTOR DTC114EK			
Q903	8-729-901-87	TRANSISTOR 2SC2411K-CQ			
Q904	8-729-901-97	TRANSISTOR 2SA1036K-Q			
Q905	8-729-048-53	TRANSISTOR 2SJ569LS-CB11			
Q906	8-729-044-21	TRANSISTOR 2SK2655-01R-F165			
Q907	8-729-033-26	TRANSISTOR DTA114GKAT146			
Q908	8-729-033-25	TRANSISTOR DTC114GKA			
Q909	8-729-900-53	TRANSISTOR DTC114EK			
Q910	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		<RESISTOR>			
R501	1-215-884-11	METAL OXIDE	47	5%	2W
R502	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R503	1-216-049-91	RES-CHIP	1K	5%	1/10W
R504	1-216-025-91	RES-CHIP	100	5%	1/10W
R505	1-216-049-91	RES-CHIP	1K	5%	1/10W
R506	1-216-049-91	RES-CHIP	1K	5%	1/10W
R507	1-216-097-91	RES-CHIP	100K	5%	1/10W
R508	1-249-409-11	CARBON	220	5%	1/4W
R509	1-216-049-91	RES-CHIP	1K	5%	1/10W
R510	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R511	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R512	1-215-453-00	METAL	22K	1%	1/4W
R513	1-216-025-91	RES-CHIP	100	5%	1/10W
R514	1-216-097-91	RES-CHIP	100K	5%	1/10W
R515	1-216-049-91	RES-CHIP	1K	5%	1/10W
R516	1-216-049-91	RES-CHIP	1K	5%	1/10W
R517	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R518	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R519	1-216-081-00	RES-CHIP	22K	5%	1/10W
R520	1-247-791-91	CARBON	22	5%	1/4W
R521	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R522	1-249-437-11	CARBON	47K	5%	1/4W
R523	1-216-033-00	RES-CHIP	220	5%	1/10W
R524	1-216-025-91	RES-CHIP	100	5%	1/10W
R525	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R526	1-216-097-91	RES-CHIP	100K	5%	1/10W
R527	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R528	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R529	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R530	1-216-025-91	RES-CHIP	100	5%	1/10W
R531	1-216-097-91	RES-CHIP	100K	5%	1/10W
R532	1-215-860-11	METAL OXIDE	33	5%	1W
R533	1-211-796-11	FUSIBLE	1	5%	1/2W
R534	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R535	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R536	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R537	1-249-437-11	CARBON	47K	5%	1/4W
R538	1-216-025-91	RES-CHIP	100	5%	1/10W
R539	1-216-097-91	RES-CHIP	100K	5%	1/10W
R540	1-215-909-11	METAL OXIDE	47	5%	3W
R541	1-216-295-91	SHORT	0		
R542	1-249-437-11	CARBON	47K	5%	1/4W
R543	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R544	1-216-025-91	RES-CHIP	100	5%	1/10W
R545	1-216-097-91	RES-CHIP	100K	5%	1/10W
R546	1-219-728-11	METAL	0.22	10%	5W
R547	1-219-677-11	METAL	1.8	5%	10W
R548	1-249-437-11	CARBON	47K	5%	1/4W
R549	1-260-288-11	CARBON	0.47	5%	1/2W
R550	1-260-288-11	CARBON	0.47	5%	1/2W
R551	1-216-025-91	RES-CHIP	100	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
R552	1-216-097-91	RES-CHIP	100K	5%	1/10W	R711	1-216-049-91	RES-CHIP	1K	5%	1/10W
R553	1-249-409-11	CARBON	220	5%	1/4W	R713	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R554	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W	R714	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R555	1-216-675-91	METAL CHIP	10K	0.50%	1/10W						
						R715	1-249-389-11	CARBON	4.7	5%	1/4W
R556	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	R716	1-216-689-11	RES-CHIP	39K	5%	1/10W
R557	1-216-423-11	METAL OXIDE	27	5%	1W	R717	1-216-073-00	RES-CHIP	10K	5%	1/10W
R558	1-249-437-11	CARBON	47K	5%	1/4W	R718	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R559	1-216-073-00	RES-CHIP	10K	5%	1/10W	R719	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R560	1-216-675-91	METAL CHIP	10K	0.50%	1/10W						
						R720	1-216-073-00	RES-CHIP	10K	5%	1/10W
R561	1-215-443-00	METAL	8.2K	1%	1/4W	R721	1-216-073-00	RES-CHIP	10K	5%	1/10W
R562	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	R722	1-260-292-11	CARBON	1	5%	1/2W
R563	1-216-025-91	RES-CHIP	100	5%	1/10W	R723	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R564	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	R724	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R565	1-216-097-91	RES-CHIP	100K	5%	1/10W						
						R725	1-214-798-21	METAL	1.8	1%	1/2W
R566	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	R726	1-214-798-21	METAL	1.8	1%	1/2W
R567	1-214-840-00	METAL	100	1%	1/2W	R727	1-249-381-11	CARBON	1	5%	1/4W
R568	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	R728	1-215-865-11	METAL OXIDE	220	5%	1W
R569	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	R729	1-260-292-11	CARBON	1	5%	1/2W
R570	1-260-332-51	CARBON	2.2K	5%	1/2W						
						R730	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R572	1-216-385-11	METAL OXIDE	0.47	5%	3W	R731	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R573	1-249-437-11	CARBON	47K	5%	1/4W	R732	1-219-510-11	CARBON	470K	5%	1/2W
R574	1-216-097-91	RES-CHIP	100K	5%	1/10W	R901	1-216-097-91	RES-CHIP	100K	5%	1/10W
R575	1-216-672-11	METAL CHIP	7.5K	0.50%	1/10W	R902	1-216-117-00	RES-CHIP	680K	5%	1/10W
R576	1-215-869-11	METAL OXIDE	1K	5%	1W						
						R903	1-216-089-91	RES-CHIP	47K	5%	1/10W
R577	1-260-312-11	CARBON	47	5%	1/2W	R904	1-216-033-00	RES-CHIP	220	5%	1/10W
R578	1-216-049-91	RES-CHIP	1K	5%	1/10W	R905	1-216-097-91	RES-CHIP	100K	5%	1/10W
R579	1-216-049-91	RES-CHIP	1K	5%	1/10W	R906	1-216-033-00	RES-CHIP	220	5%	1/10W
R580	1-214-840-00	METAL	100	1%	1/2W	R907	1-216-081-00	RES-CHIP	22K	5%	1/10W
R581	1-260-308-11	CARBON	22	5%	1/2W						
						R908	1-216-399-00	METAL OXIDE	6.8	5%	3W
R582	1-214-840-00	METAL	100	1%	1/2W	R909	1-216-049-91	RES-CHIP	1K	5%	1/10W
R583	1-249-437-11	CARBON	47K	5%	1/4W	R910	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R584	1-249-437-11	CARBON	47K	5%	1/4W	R911	1-216-041-00	RES-CHIP	470	5%	1/10W
R585	1-216-073-00	RES-CHIP	10K	5%	1/10W	R912	1-216-049-91	RES-CHIP	1K	5%	1/10W
R586	1-216-683-11	METAL CHIP	22K	0.50%	1/10W						
						R913	1-216-097-11	RES-CHIP	100K	5%	1/10W
R587	1-215-913-11	METAL OXIDE	220	5%	3W	R914	1-247-791-91	CARBON	22	5%	1/4W
R588	1-260-085-11	CARBON	68	5%	1/2W	R915	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R589	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R916	1-249-397-11	CARBON	22	5%	1/4W
R590	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R917	1-211-824-71	FUSIBLE	220	5%	1/2W
R591	1-247-807-31	CARBON	100	5%	1/4W						
						R918	1-219-727-11	METAL	68	5%	10W
R592	1-215-913-11	METAL OXIDE	220	5%	3W	R919	1-219-748-11	CARBON	4.7K	5%	1/2W
R593	1-216-073-00	RES-CHIP	10K	5%	1/10W	R920	1-216-089-91	RES-CHIP	47K	5%	1/10W
R594	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	R921	1-215-408-00	METAL	300	1%	1/4W
R595	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	R922	1-249-389-11	CARBON	4.7	5%	1/4W
R597	1-216-073-00	RES-CHIP	10K	5%	1/10W						
						R923	1-218-760-11	METAL CHIP	220K	0.50%	1/10W
R598	1-216-675-91	METAL CHIP	10K	0.50%	1/10W	R924	1-216-073-00	RES-CHIP	10K	5%	1/10W
R599	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	R925	1-220-825-11	CARBON	330K	5%	1/2W
R701	1-216-049-91	RES-CHIP	1K	5%	1/10W	R926	1-219-746-11	CARBON	1K	5%	1/2W
R702	1-249-393-11	CARBON	10	5%	1/4W	R927	1-219-746-11	CARBON	1K	5%	1/2W
R703	1-215-456-00	METAL	30K	1%	1/4W						
						R928	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R704	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	R929	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R705	1-249-413-11	CARBON	470	5%	1/4W	R930	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R706	1-249-389-11	CARBON	4.7	5%	1/4W	R931	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R707	1-249-389-11	CARBON	4.7	5%	1/4W	R932	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R708	1-215-881-11	METAL OXIDE	15	5%	2W						
						R933	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R709	1-216-049-91	RES-CHIP	1K	5%	1/10W	R934	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R710	1-216-073-00	RES-CHIP	10K	5%	1/10W	R935	1-216-089-91	RES-CHIP	47K	5%	1/10W

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D	G

REF.NO.	PART NO.	DESCRIPTION			REMARK
R936	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R937	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R938	1-216-295-91	SHORT	0		
R939	1-216-049-91	RES-CHIP	1K	5%	1/10W
R940	1-216-073-00	RES-CHIP	10K	5%	1/10W
R941	1-216-025-91	RES-CHIP	100	5%	1/10W
R942	1-216-073-00	RES-CHIP	10K	5%	1/10W
R943	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R945	1-216-025-91	RES-CHIP	100	5%	1/10W
R1501	1-216-049-91	RES-CHIP	1K	5%	1/10W
R1502	1-216-033-00	RES-CHIP	220	5%	1/10W
R1503	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1504	1-216-295-91	SHORT	0		
R1505	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R1506	1-216-025-91	RES-CHIP	100	5%	1/10W
R1507	1-216-097-91	RES-CHIP	100K	5%	1/10W
R1510	1-216-073-00	RES-CHIP	10K	5%	1/10W
R1515	1-215-909-11	METAL OXIDE	47	5%	3W
R1518	1-216-025-91	RES-CHIP	100	5%	1/10W
R1587	1-249-437-11	CARBON	47K	5%	1/4W
R1588	1-216-097-91	RES-CHIP	100K	5%	1/10W
R1589	1-216-025-91	RES-CHIP	100	5%	1/10W

<VARIABLE RESISTOR>

⊠ RV901 ⚠ 1-241-767-21 RES, ADJ, CERMET 100K (HV ADJ)

<RELAY>

RY501 1-755-198-11 RELAY

<SPARK GAP>

SG901 1-517-499-21 GAP, SPARK
SG902 1-519-422-11 GAP, SPARK
SG903 1-519-422-11 GAP, SPARK

<TRANSFORMER>

T501 1-435-070-11 TRANSFORMER, HORIZONTAL DRIVE
T502 1-429-301-11 TRANSFORMER, FERRITE (HCT)
T503 1-426-998-11 TRANSFORMER, FERRITE (HST)
T505 1-419-884-11 COIL, HORIZONATAL LINERRITY
T701 1-435-719-11 TRANSFORMER, FERRITE (DFT)

T901 1-416-402-11 INDUCTOR 500UH
T902 ⚠ 8-598-861-00 TRANSFORMER ASSY, FLYBACK
(NX-4504)

<THERMISTOR>

TH501 1-807-796-11 THERMISTOR

REF.NO.	PART NO.	DESCRIPTION			REMARK
TH502	1-807-796-11	THERMISTOR			

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* 8-933-441-00 G BOARD, COMPLETE
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4-382-854-11 SCREW (M3X10), P, SW (+)
(IC652, IC654, Q620, Q621, Q630, Q651, D610, D652, D680)
7-682-950-01 SCREW +PSW 3X12 (IC610)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C601 ⚠	1-113-513-11	FILM	1UF	20.00%	275V
C602 ⚠	1-113-513-11	FILM	1UF	20.00%	275V
C603 ⚠	1-113-900-51	CERAMIC	470PF	10.00%	250V
C604 ⚠	1-113-900-51	CERAMIC	470PF	10.00%	250V
C605 ⚠	1-113-926-91	CERAMIC	0.0047UF		250V
C606 ⚠	1-113-926-91	CERAMIC	0.0047UF		250V
C607 ⚠	1-113-900-51	CERAMIC	470PF	10.00%	250V
C608	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C609	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C610	1-117-849-11	ELECT	330UF	20.00%	450V
C611	1-137-479-11	MYLAR	1UF	10.00%	400V
C612	1-136-169-00	MYLAR	0.22UF	5.00%	50V
C613	1-126-967-11	ELECT	47UF	20.00%	50V
C614	1-163-251-11	CERAMIC CHIP	100PF	5.00%	50V
C629	1-137-150-11	MYLAR	0.01UF	5.00%	50V
C630	1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
C631	1-107-910-11	ELECT	100UF	20.00%	50V
C633	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C634	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C639	1-135-833-21	FILM	18000PF	3%	800V
C640	1-126-964-11	ELECT	10UF	20.00%	50V
C641	1-162-115-00	CERAMIC	330PF	10.00%	1KV
C642	1-136-165-00	MYLAR	0.1UF	5.00%	50V
C643	1-162-115-00	CERAMIC	330PF	10.00%	1KV
C644	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C645	1-136-479-11	FILM	0.001UF	2.00%	50V
C646	1-126-961-11	ELECT	2.2UF	20.00%	50V
C647	1-126-964-11	ELECT	10UF	20.00%	50V
C648	1-126-967-11	ELECT	47UF	20.00%	50V
C649	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C650	1-107-656-11	ELECT	100UF	20.00%	250V
C651	1-107-651-11	ELECT	4.7UF	20.00%	250V
C652	1-128-563-11	ELECT	100UF	20.00%	100V
C653	1-128-581-11	ELECT	4.7UF	20.00%	100V
C654	1-111-070-51	ELECT	2200UF	20.00%	25V
C655	1-104-664-11	ELECT	47UF	20.00%	25V
C656	1-111-070-51	ELECT	2200UF	20.00%	25V
C657	1-104-664-11	ELECT	47UF	20.00%	25V
C658	1-126-927-11	ELECT	2200UF	20.00%	10V
C659	1-128-339-11	ELECT	2200UF	20.00%	10V

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G

REF.NO.	PART NO.	DESCRIPTION			REMARK
C661	1-102-244-00	CERAMIC	220PF	10.00%	500V
C662	1-137-150-11	MYLAR	0.01UF	5.00%	50V
C665	1-107-909-11	ELECT	47UF	20.00%	10V
C667	1-107-909-11	ELECT	47UF	20.00%	16V
C680	1-115-747-51	ELECT	0.0068F	20.00%	10V
C681	1-104-664-11	ELECT	47UF	20.00%	10V
C682	1-137-368-11	MYLAR	0.0047UF	5.00%	50V
C683	1-104-664-11	ELECT	47UF	20.00%	10V
C684	1-107-889-11	ELECT	220UF	20.00%	10V
C685	1-128-526-11	ELECT	100UF	20.00%	10V
C686	1-104-664-11	ELECT	47UF	20.00%	10V
C692	1-115-339-11	CERAMIC CHIP	0.1UF	10.00%	50V

<CONNECTOR>

CN601*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN602*	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
CN603*	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
CN605	1-900-251-20	CONNECTOR ASSY	
CN650*	1-564-510-11	PLUG, CONNECTOR 7P	
CN651*	1-564-507-11	PLUG, CONNECTOR 4P	
CN652*	1-564-512-11	PLUG, CONNECTOR 9P	
CN653*	1-564-509-11	PLUG, CONNECTOR 6P	
CN654*	1-764-333-11	PLUG, CONNECTOR 10P	
CN655*	1-564-506-11	PLUG, CONNECTOR 3P	

<DIODE>

D601	8-719-073-01	DIODE MA111-(K8.)S0
D610 ⚠	8-719-510-53	DIODE D4SB60L
D613	8-719-304-63	DIODE RM11C
D620	8-719-110-57	ZENER DIODE RD22ES-B2
D630	8-719-110-57	ZENER DIODE RD22ES-B2
D631	8-719-063-73	DIODE D1NL20U-TR
D632	8-719-059-23	DIODE P6KE200AG23
D633	8-719-069-63	DIODE ERB38-06V1
D635	8-719-110-53	ZENER DIODE RD20ES-B2
D637	8-719-911-19	DIODE 1SS119-25
D640	8-719-069-63	DIODE ERB38-06V1
D650	8-719-064-49	DIODE D4SBL40
D651	8-719-063-73	DIODE D1NL20U-TR
D652	8-719-052-91	DIODE D4SBS4-F
D653	8-719-022-97	DIODE D2S4MF
D654	8-719-022-97	DIODE D2S4MF
D655	8-719-063-73	DIODE D1NL20U-TR
D664	8-719-110-57	ZENER DIODE RD22ES-B2
D680	8-719-989-87	DIODE YG802C09
D681	8-719-109-89	ZENER DIODE RD5.6ES-B2
D682	8-719-929-15	ZENER DIODE HZS9.1NB2
D690	8-719-911-19	DIODE 1SS119-25
D692	8-719-911-19	DIODE 1SS119-25

<FUSE>

F601 ⚠	1-576-233-11	FUSE (H.B.C.) (6.3A/250A)
FH1	1-533-223-11	HOLDER, FUSE; F601
FH2	1-533-223-11	HOLDER, FUSE; F601

<FERRITE BEAD>

FB630	1-410-396-41	FERRITE	0.45UH
FB632 ⚠	1-410-397-31	FERRITE	1.1UH

<IC>

IC610	8-749-015-27	IC MZ1540
IC620	8-759-670-30	IC MCZ3001D
IC630	8-759-535-32	IC FA13842P
IC650	8-749-012-49	IC DM-57N
IC651	8-759-592-79	IC BA00AST-V5
IC652	8-759-496-15	IC BA05ST-V5
IC653	8-759-450-47	IC BA05T
IC654	8-759-643-66	IC uPC2912HF(12)
IC680	8-759-321-95	IC HA17431PA

<COIL>

L610	1-419-585-11	INDUCTOR 230UH
L611	1-419-726-11	INDUCTOR 100UH
L650	1-414-742-21	INDUCTOR 22UH
L651	1-414-742-21	INDUCTOR 22UH
L652	1-406-661-21	INDUCTOR 22UH
L653	1-406-661-21	INDUCTOR 22UH
L680	1-406-661-21	INDUCTOR 22UH

<PHOTO COUPLER>

PH610	8-749-010-64	PHOTO COUPLER PC123F2
PH620	8-749-010-64	PHOTO COUPLER PC123F2
PH630	8-749-010-64	PHOTO COUPLER PC123F2

<IC LINK>

PS650 ⚠	1-533-593-31	LINK, IC (2A/90V AC, 60V DC)
PS680 ⚠	1-533-596-31	LINK, IC (4A/90V AC, 60V DC)

<TRANSISTOR>

Q610	8-729-821-04	TRANSISTOR 2SA1317-STU
Q611	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q612	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q613	8-729-027-23	TRANSISTOR DTA114EKA-T146
Q620	8-729-053-36	TRANSISTOR 2SK2640-010MR
Q621	8-729-053-36	TRANSISTOR 2SK2640-010MR
Q630	8-729-045-03	TRANSISTOR 2SK2647-01MR-F91
Q631	8-729-041-66	TRANSISTOR 2SC4015TV2
Q632	8-729-041-66	TRANSISTOR 2SC4015TV2
Q633	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q652	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q653	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q667	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q671	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q691	8-729-423-33	TRANSISTOR 2SC3311A-QRSTA

<RESISTOR>

The components identified ⚠ marked are critical for safety.
Replace only with the part number specified.

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Ne les remplacer que par une pièce portant le numéro spécifié.

⬜G ⬜A

REF.NO.	PART NO.	DESCRIPTION			REMARK
R601 ⚠	1-220-825-91	CARBON	330K	5%	1/2W
R602	1-216-465-11	METAL OXIDE	27K	5%	2W
R603	1-247-895-91	CARBON	470K	5%	1/4W
R604	1-216-113-00	RES-CHIP	470K	5%	1/10W
R605	1-216-113-00	RES-CHIP	470K	5%	1/10W
R606	1-216-097-91	RES-CHIP	100K	5%	1/10W
R607	1-216-097-91	RES-CHIP	100K	5%	1/10W
R608	1-216-073-00	RES-CHIP	10K	5%	1/10W
R609	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R610	1-217-152-00	METAL	0.33	10%	2W
R611	1-217-152-00	METAL	0.33	10%	2W
R612	1-249-425-11	CARBON	4.7K	5%	1/4W
R613	1-216-089-91	RES-CHIP	47K	5%	1/10W
R614	1-247-807-31	CARBON	100	5%	1/4W
R615	1-249-427-11	CARBON	6.8K	5%	1/4W
R616	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R617	1-249-417-11	CARBON	1K	5%	1/4W
R618	1-216-369-00	METAL OXIDE	1	5%	2W
R619	1-216-049-91	RES-CHIP	1K	5%	1/10W
R620	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R621	1-219-512-11	CARBON	2.2M	5%	1/2W
R622	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R623	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R624	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R625	1-249-393-11	CARBON	10	5%	1/4W
R626	1-249-429-11	CARBON	10K	5%	1/4W
R627	1-249-393-11	CARBON	10	5%	1/4W
R628	1-249-429-11	CARBON	10K	5%	1/4W
R629	1-249-410-11	CARBON	270	5%	1/4W
R630	1-249-387-11	CARBON	3.3	5%	1/4W
R631	1-247-807-31	CARBON	100	5%	1/4W
R632	1-215-381-00	METAL	22	1%	1/4W
R633	1-260-135-11	CARBON	1M	5%	1/2W
R634	1-260-135-11	CARBON	1M	5%	1/2W
R635	1-216-465-11	METAL OXIDE	27K	5%	2W
R636	1-249-433-11	CARBON	22K	5%	1/4W
R639	1-215-485-00	METAL	470K	1%	1/4W
R640	1-215-481-00	METAL	330K	1%	1/4W
R641	1-215-481-00	METAL	330K	1%	1/4W
R642	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R643	1-216-381-11	METAL OXIDE	0.22	5%	3W
R644	1-216-073-00	RES-CHIP	10K	5%	1/10W
R645	1-216-073-00	RES-CHIP	10K	5%	1/10W
R649	1-249-437-11	CARBON	47K	5%	1/4W
R650	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R651	1-219-512-11	CARBON	2.2K	5%	1/2W
R652	1-216-073-00	RES-CHIP	10K	5%	1/10W
R664	1-216-073-00	RES-CHIP	10K	5%	1/10W
R665	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R666	1-216-073-00	RES-CHIP	10K	5%	1/10W
R667	1-216-089-91	RES-CHIP	47K	5%	1/10W
R668	1-215-457-00	METAL	33K	1%	1/4W
R670	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R671	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R672	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R673	1-216-073-00	RES-CHIP	10K	5%	1/10W
R674	1-216-097-91	RES-CHIP	100K	5%	1/10W
R675	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R676	1-216-668-11	METAL CHIP	5.1K	0.50%	1/10W
R677	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R678	1-216-390-11	METAL OXIDE	1.2	5%	3W
R680	1-215-475-00	METAL	180K	1%	1/4W
R681	1-216-073-00	RES-CHIP	10K	5%	1/10W
R682	1-216-049-91	RES-CHIP	1K	5%	1/10W
R684	1-216-041-00	RES-CHIP	470	5%	1/10W
R686	1-216-033-00	RES-CHIP	220	5%	1/10W
R687	1-216-081-00	RES-CHIP	22K	5%	1/10W
R688	1-215-473-00	METAL	150K	1%	1/4W
R691	1-216-049-91	RES-CHIP	1K	5%	1/10W
R692	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R693	1-260-085-11	CARBON	68	5%	1/2W
R694	1-216-073-00	RES-CHIP	10K	5%	1/10W
R695	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R696	1-249-407-11	CARBON	150	5%	1/4W
R698	1-216-073-00	RES-CHIP	10K	5%	1/10W
R699	1-202-933-61	FUSIBLE	0.1	10%	1/2W

<RELAY>

RY602 ⚠ 1-755-318-11 RELAY, POWER
RY603 ⚠ 1-755-067-21 RELAY

<SPARK GAP>

SG601 ⚠ 1-533-982-21 GAP, SPARK

<TRANSFORMER>

T601 ⚠ 1-435-710-11 TRANSFORMER, LINE FILTER
T620 1-435-441-11 TRANSFORMER, CONVERTER (PIT)
T630 1-433-895-41 TRANSFORMER, CONVERTER (SRT)

<THERMISTOR>

TH601 ⚠ 1-809-260-11 THERMISTOR, POWER
THP601 ⚠ 1-809-827-31 THERMISTOR, POSITIVE

<VARISTOR>

VDR601 ⚠ 1-801-268-51 VARISTOR TNR14V471K660

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* 8-933-432-00 A BOARD, COMPLETE
****

7-682-950-01 SCREW +PSW 3X12 (IC403)

GDM-FW9011

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	
		<CAPACITOR>		
C101	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C102	1-104-664-11	ELECT 47UF	20.00%	25V
C103	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C104	1-104-664-11	ELECT 47UF	20.00%	25V
C107	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C108	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C109	1-163-239-11	CERAMIC CHIP 33PF	5.00%	50V
C110	1-163-275-11	CERAMIC CHIP 0.001UF	5.00%	50V
C111	1-163-227-11	CERAMIC CHIP 10PF	0.50PF	50V
C112	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C113	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C114	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C115	1-136-189-00	MYLAR 0.1UF	10.00%	250V
C117	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C120	1-136-189-00	MYLAR 0.1UF	10.00%	250V
C201	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C202	1-104-664-11	ELECT 47UF	20.00%	25V
C203	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C204	1-104-664-11	ELECT 47UF	20.00%	25V
C205	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C206	1-109-982-11	CERAMIC CHIP 1UF	10.00%	10V
C207	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C208	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C209	1-163-237-11	CERAMIC CHIP 27PF	5.00%	50V
C210	1-163-275-11	CERAMIC CHIP 0.001UF	5.00%	50V
C211	1-163-227-11	CERAMIC CHIP 10PF	0.50PF	50V
C212	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C213	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C214	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C215	1-136-189-00	MYLAR 0.1UF	10.00%	250V
C216	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C217	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C220	1-136-189-00	MYLAR 0.1UF	10.00%	250V
C301	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C302	1-104-664-11	ELECT 47UF	20.00%	25V
C303	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C304	1-104-664-11	ELECT 47UF	20.00%	25V
C307	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C308	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C309	1-163-239-11	CERAMIC CHIP 33PF	5.00%	50V
C310	1-163-275-11	CERAMIC CHIP 0.001UF	5.00%	50V
C311	1-163-227-11	CERAMIC CHIP 10PF	0.50PF	50V
C312	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C313	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C314	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C315	1-136-189-00	MYLAR 0.1UF	10.00%	250V
C317	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C320	1-136-189-00	MYLAR 0.1UF	10.00%	250V
C401	1-126-964-11	ELECT 10UF	20.00%	50V
C402	1-104-664-11	ELECT 47UF	20.00%	25V
C403	1-163-259-91	CERAMIC CHIP 220PF	5.00%	50V
C404	1-163-259-91	CERAMIC CHIP 220PF	5.00%	50V
C405	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C406	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C407	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C408	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C410	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C411	1-104-664-11	ELECT 47UF	20.00%	25V
C412	1-115-340-11	CERAMIC CHIP 0.22UF	10.00%	25V
C413	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C415	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C416	1-126-961-11	ELECT 2.2UF	20.00%	50V
C417	1-104-574-11	CERAMIC 0.0047UF	10.00%	2KV
C419	1-162-318-11	CERAMIC 0.001UF	10.00%	500V
C420	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C421	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C422	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C423	1-104-664-11	ELECT 47UF	20.00%	25V
C424	1-162-318-11	CERAMIC 0.001UF	10.00%	500V
C425	1-163-251-11	CERAMIC CHIP 100PF	5.00%	50V
C426	1-163-251-11	CERAMIC CHIP 100PF	5.00%	50V
C427	1-163-235-11	CERAMIC CHIP 22PF	5.00%	50V
C430	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C431	1-163-275-11	CERAMIC CHIP 0.001UF	5.00%	50V
C432	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C433	1-162-318-11	CERAMIC 0.001UF	10.00%	500V
C434	1-162-318-11	CERAMIC 0.001UF	10.00%	500V
C435	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C436	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C437	1-126-934-11	ELECT 220UF	20.00%	16V
C438	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V
C440	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C441	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C442	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C443	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C444	1-162-318-11	CERAMIC 0.001UF	10.00%	500V
C446	1-104-664-11	ELECT 47UF	20.00%	25V
C449	1-109-982-11	CERAMIC CHIP 1UF	10.00%	10V
C450	1-107-823-11	CERAMIC CHIP 0.47UF	10.00%	16V
C452	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C456	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C457	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C458	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V
C459	1-128-560-11	ELECT 22UF	20.00%	100V
C462	1-115-339-11	CERAMIC CHIP 0.1UF	10.00%	50V
C463	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C464	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C467	1-107-957-11	ELECT 1UF	20.00%	250V
		<CONNECTOR>		
CN401	1-793-183-11	CONNECTOR, D SUB 15P		
CN402*	1-564-509-11	PLUG, CONNECTOR 6P		
CN403	1-784-463-11	CONNECTOR, FFC/FPC 21P		
CN405*	1-564-524-11	PLUG, CONNECTOR 9P		
CN406*	1-766-179-11	PIN, CONNECTOR (PC BOARD) 2P		
		<DIODE>		
D101	8-719-062-51	DIODE 1PS226-115		
D102	8-719-062-51	DIODE 1PS226-115		
D103	8-719-066-10	DIODE 1PS181-115		

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REF.NO.	PART NO.	DESCRIPTION				REMARK
D105	8-719-051-85	DIODE HSS83TD				
D106	8-719-052-12	DIODE 1SS376TE-17				
D107	8-719-052-12	DIODE 1SS376TE-17				
D201	8-719-062-51	DIODE 1PS226-115				
D202	8-719-062-51	DIODE 1PS226-115				
D203	8-719-066-10	DIODE 1PS181-115				
D205	8-719-051-85	DIODE HSS83TD				
D206	8-719-052-12	DIODE 1SS376TE-17				
D207	8-719-052-12	DIODE 1SS376TE-17				
D301	8-719-062-51	DIODE 1PS226-115				
D302	8-719-062-51	DIODE 1PS226-115				
D303	8-719-066-10	DIODE 1PS181-115				
D305	8-719-051-85	DIODE HSS83TD				
D306	8-719-052-12	DIODE 1SS376TE-17				
D307	8-719-052-12	DIODE 1SS376TE-17				
D402	8-719-801-78	DIODE 1SS184				
D403	8-719-982-36	ZENER DIODE MTZJ-39B				
D405	8-719-911-19	DIODE 1SS119-25				
D406	8-719-062-51	DIODE 1PS226-115				
D407	8-719-062-51	DIODE 1PS226-115				

<FERRITE BEAD>

FB402	1-412-911-11	FERRITE	1.1UH
FB403	1-412-911-11	FERRITE	1.1UH
FB404	1-412-911-11	FERRITE	1.1UH
FB405	1-412-911-11	FERRITE	1.1UH
FB406	1-412-911-11	FERRITE	1.1UH
FB411	1-412-911-11	FERRITE	1.1UH

<IC>

IC401	8-759-584-87	IC M52757FP-TP
IC402	8-759-584-86	IC M52749FP-TP
IC403	8-749-015-91	IC FA4301
IC404	8-759-585-72	IC CXD9514M
IC405	8-759-701-01	IC NJM2904M
IC406	8-749-015-92	IC H8D2972
IC407	8-759-925-74	IC SN74HC04ANS

<COIL>

L101	1-410-805-11	INDUCTOR 68NH
L201	1-410-805-11	INDUCTOR 68NH
L301	1-410-805-11	INDUCTOR 68NH
L402	1-412-529-11	INDUCTOR 22UH
L403	1-412-537-31	INDUCTOR 100UH
L404	1-414-940-21	INDUCTOR 100UH
L405	1-412-529-11	INDUCTOR 22UH

<IC LINK>

PS401	⚠ 1-533-590-31	LINK, IC (1A/90V AC, 60V DC)

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
Q402	8-729-050-41	TRANSISTOR 2SJ360-TE12L				
Q406	8-729-216-22	TRANSISTOR 2SA1162-G				
Q407	8-729-028-74	TRANSISTOR DTA114TUA-T106				
Q410	8-729-032-61	TRANSISTOR 2SC5022-02				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			
R101	1-215-394-00	METAL	75	1%	1/4W
R103	1-215-394-00	METAL	75	1%	1/4W
R104	1-216-049-91	RES-CHIP	1K	5%	1/10W
R105	1-216-017-91	RES-CHIP	47	5%	1/10W
R106	1-216-017-91	RES-CHIP	47	5%	1/10W
R107	1-216-045-00	RES-CHIP	680	5%	1/10W
R109	1-216-075-00	RES-CHIP	12K	5%	1/10W
R110	1-216-097-91	RES-CHIP	100K	5%	1/10W
R111	1-216-041-00	RES-CHIP	470	5%	1/10W
R112	1-216-015-00	RES-CHIP	39	5%	1/10W
R113	1-216-017-91	RES-CHIP	47	5%	1/10W
R114	1-216-009-91	RES-CHIP	22	5%	1/10W
R115	1-219-742-11	CARBON	47	5%	1/2W
R116	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R117	1-216-121-91	RES-CHIP	1M	5%	1/10W
R118	1-216-121-91	RES-CHIP	1M	5%	1/10W
R119	1-216-077-91	RES-CHIP	15K	5%	1/10W
R120	1-216-113-00	RES-CHIP	470K	5%	1/10W
R121	1-216-113-00	RES-CHIP	470K	5%	1/10W
R122	1-216-081-00	RES-CHIP	22K	5%	1/10W
R128	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R130	1-216-113-00	RES-CHIP	470K	5%	1/10W
R137	1-249-412-11	CARBON	390	5%	1/4W
R138	1-216-027-00	RES-CHIP	120	5%	1/10W
R161	1-216-041-00	RES-CHIP	470	5%	1/10W
R201	1-215-394-00	METAL	75	1%	1/4W
R202	1-216-097-91	RES-CHIP	100K	5%	1/10W
R203	1-215-394-00	METAL	75	1%	1/4W
R204	1-216-049-91	RES-CHIP	1K	5%	1/10W
R205	1-216-017-91	RES-CHIP	47	5%	1/10W
R206	1-216-017-91	RES-CHIP	47	5%	1/10W
R207	1-216-045-00	RES-CHIP	680	5%	1/10W
R209	1-216-075-00	RES-CHIP	12K	5%	1/10W
R210	1-216-097-91	RES-CHIP	100K	5%	1/10W
R211	1-216-025-91	RES-CHIP	100	5%	1/10W
R212	1-216-019-00	RES-CHIP	56	5%	1/10W
R213	1-216-017-91	RES-CHIP	47	5%	1/10W
R214	1-216-009-91	RES-CHIP	22	5%	1/10W
R215	1-219-742-11	CARBON	47	5%	1/2W
R216	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R217	1-216-121-91	RES-CHIP	1M	5%	1/10W
R218	1-216-121-91	RES-CHIP	1M	5%	1/10W
R219	1-216-077-91	RES-CHIP	15K	5%	1/10W
R220	1-216-113-00	RES-CHIP	470K	5%	1/10W
R221	1-216-113-00	RES-CHIP	470K	5%	1/10W

GDM-FW9011

| A | H |

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
						R431	1-216-113-00	RES-CHIP	470K	5%	1/10W
R222	1-216-081-00	RES-CHIP	22K	5%	1/10W	R436	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R228	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R438	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R230	1-216-113-00	RES-CHIP	470K	5%	1/10W	R439	1-216-041-00	RES-CHIP	470	5%	1/10W
R237	1-249-412-11	CARBON	390	5%	1/4W	R441	1-216-121-91	RES-CHIP	1M	5%	1/10W
R238	1-216-027-00	RES-CHIP	120	5%	1/10W						
						R442	1-216-049-91	RES-CHIP	1K	5%	1/10W
R261	1-216-041-00	RES-CHIP	470	5%	1/10W	R443	1-216-025-91	RES-CHIP	100	5%	1/10W
R301	1-215-394-00	METAL	75	1%	1/4W	R444	1-216-025-91	RES-CHIP	100	5%	1/10W
R303	1-215-394-00	METAL	75	1%	1/4W	R445	1-216-025-91	RES-CHIP	100	5%	1/10W
R304	1-216-049-91	RES-CHIP	1K	5%	1/10W	R446	1-216-025-91	RES-CHIP	100	5%	1/10W
R305	1-216-017-91	RES-CHIP	47	5%	1/10W						
						R447	1-216-017-91	RES-CHIP	47	5%	1/10W
R306	1-216-017-91	RES-CHIP	47	5%	1/10W	R448	1-216-017-91	RES-CHIP	47	5%	1/10W
R307	1-216-045-00	RES-CHIP	680	5%	1/10W	R449	1-216-081-00	RES-CHIP	22K	5%	1/10W
R309	1-216-075-00	RES-CHIP	12K	5%	1/10W	R450	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R310	1-216-097-91	RES-CHIP	100K	5%	1/10W	R451	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R311	1-216-041-00	RES-CHIP	470	5%	1/10W						
						R453	1-216-073-00	RES-CHIP	10K	5%	1/10W
R312	1-216-017-91	RES-CHIP	47	5%	1/10W	R454	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R313	1-216-017-91	RES-CHIP	47	5%	1/10W	R455	1-216-097-91	RES-CHIP	100K	5%	1/10W
R314	1-216-009-91	RES-CHIP	22	5%	1/10W	R456	1-216-025-91	RES-CHIP	100	5%	1/10W
R315	1-219-742-11	CARBON	47	5%	1/2W	R457	1-211-895-11	METAL	10M	10%	1/4W
R316	1-216-065-91	RES-CHIP	4.7K	5%	1/10W						
						R458	1-219-398-51	METAL	2.2M	5%	1W
R317	1-216-121-91	RES-CHIP	1M	5%	1/10W	R459	1-211-895-11	METAL	10M	10%	1/4W
R318	1-216-121-91	RES-CHIP	1M	5%	1/10W	R460	1-216-073-00	RES-CHIP	10K	5%	1/10W
R319	1-216-077-91	RES-CHIP	15K	5%	1/10W	R463	1-216-097-91	RES-CHIP	100K	5%	1/10W
R320	1-216-113-00	RES-CHIP	470K	5%	1/10W	R464	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R321	1-216-113-00	RES-CHIP	470K	5%	1/10W						
						R488	1-216-089-91	RES-CHIP	47K	5%	1/10W
R322	1-216-081-00	RES-CHIP	22K	5%	1/10W	R490	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R328	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R491	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R330	1-216-113-00	RES-CHIP	470K	5%	1/10W						
R337	1-249-412-11	CARBON	390	5%	1/4W						
R338	1-216-027-00	RES-CHIP	120	5%	1/10W			<SPARK GAP>			
R361	1-216-041-00	RES-CHIP	470	5%	1/10W	SG101	1-576-354-21	GAP, SPARK			
R402	1-216-049-91	RES-CHIP	1K	5%	1/10W	SG201	1-576-354-21	GAP, SPARK			
R403	1-216-081-00	RES-CHIP	22K	5%	1/10W	SG301	1-576-354-21	GAP, SPARK			
R404	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	SG401	1-576-354-21	GAP, SPARK			
R405	1-216-045-00	RES-CHIP	680	5%	1/10W	SG402	1-519-422-11	GAP, SPARK			
R406	1-216-097-91	RES-CHIP	100K	5%	1/10W						
R407	1-218-768-11	METAL CHIP	470K	0.50%	1/10W			<SOCKET>			
R409	1-216-129-00	RES-CHIP	2.2M	5%	1/10W						
R411	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	SK401	⚠ 1-451-524-11	SOCKET, PICTURE TUBE			
R412	1-216-105-91	RES-CHIP	220K	5%	1/10W						
R413	1-216-097-91	RES-CHIP	100K	5%	1/10W			<CRYSTAL>			
R414	1-216-089-91	RES-CHIP	47K	5%	1/10W						
R415	1-216-097-91	RES-CHIP	100K	5%	1/10W	X401	1-781-472-21	VIBRATOR, CERAMIC (8MHz)			
R417	1-216-121-91	RES-CHIP	1M	5%	1/10W						
R418	1-260-127-11	CARBON	220K	5%	1/2W						
R419	1-216-033-00	RES-CHIP	220	5%	1/10W	**
R420	1-216-025-91	RES-CHIP	100	5%	1/10W						
R421	1-216-025-91	RES-CHIP	100	5%	1/10W						
R422	1-216-025-91	RES-CHIP	100	5%	1/10W	* 8-933-439-00 BLOCK ASSY, CONTROL (H BOARD)
R424	1-216-049-91	RES-CHIP	1K	5%	1/10W	***
R425	1-216-049-91	RES-CHIP	1K	5%	1/10W						
R426	1-216-105-91	RES-CHIP	220K	5%	1/10W			<CAPACITOR>			
R427	1-216-049-91	RES-CHIP	1K	5%	1/10W						
R428	1-216-025-91	RES-CHIP	100	5%	1/10W	C802	1-126-791-11	ELECT	10UF	20.00%	16V
R430	1-216-025-91	RES-CHIP	100	5%	1/10W	C806	1-126-786-11	ELECT	47UF	20.00%	16V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN801	1-573-397-11	CONNECTOR, F.P.C 11P	
CN802*	1-564-505-11	PLUG, CONNECTOR 2P	

<DIODE>

D801	8-719-059-93	DIODE SPR-505MVWT31 (POWER)	

<FERRITE BEAD>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB801	1-216-295-91	SHORT	0
FB802	1-216-295-91	SHORT	0
FB803	1-216-295-91	SHORT	0
FB804	1-216-295-91	SHORT	0
FB805	1-216-295-91	SHORT	0

<CHIP CONDUCTOR>

JR1	1-216-295-91	SHORT	0
JR4	1-216-295-91	SHORT	0

<TRANSISTOR>

Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q802	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q803	8-729-027-31	TRANSISTOR DTA124EKA-T146
Q804	8-729-027-31	TRANSISTOR DTA124EKA-T146

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			
R801	1-216-049-91	RES-CHIP	1K	5%	1/10W
R802	1-216-041-00	RES-CHIP	470	5%	1/10W
R803	1-216-033-00	RES-CHIP	220	5%	1/10W
R804	1-216-033-00	RES-CHIP	220	5%	1/10W
R811	1-216-073-00	RES-CHIP	10K	5%	1/10W
R812	1-216-073-00	RES-CHIP	10K	5%	1/10W
R813	1-216-081-00	RES-CHIP	22K	5%	1/10W
R814	1-216-097-91	RES-CHIP	100K	5%	1/10W
R815	1-216-675-91	METAL CHIP	10K	0.50%	1/10W
R821	1-215-401-11	METAL	150	1%	1/4W
R822	1-215-413-00	METAL	470	1%	1/4W
R823	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R824	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R851	1-216-041-00	RES-CHIP	470	5%	1/10W
R852	1-216-025-91	RES-CHIP	100	5%	1/10W
R853	1-216-025-91	RES-CHIP	100	5%	1/10W

<SWITCH>

S801	1-771-734-11	SWITCH, TACTILE (BRT +/-, CONT +/-)
S811	1-572-347-21	SWITCH, SLIDE (INPUT 1/2)
S812	1-571-760-11	SWITCH, KEYBOARD (RESET)
S813	1-571-760-11	SWITCH, KEYBOARD (ASC)

<THERMISTOR>

TH801	1-807-796-11	THERMISTOR

****

* 8-933-456-00 US BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			
C2601	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C2602	1-126-791-11	ELECT	10UF	20.00%	16V
C2603	1-126-791-11	ELECT	10UF	20.00%	16V
C2604	1-126-791-11	ELECT	10UF	20.00%	16V
C2605	1-126-791-11	ELECT	10UF	20.00%	16V
C2606	1-126-176-11	ELECT	220UF	20.00%	10V
C2607	1-126-176-11	ELECT	220UF	20.00%	10V
C2608	1-126-176-11	ELECT	220UF	20.00%	10V
C2609	1-126-176-11	ELECT	220UF	20.00%	10V
C2610	1-113-340-11	ELECT	47UF	20.00%	25V
C2612	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C2901	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C2902	1-113-340-11	ELECT	47UF	20.00%	25V
C2904	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V
C2905	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C2906	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C2908	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C2909	1-163-237-11	CERAMIC CHIP 27PF	5.00%	50V
C2912	1-163-235-11	CERAMIC CHIP 22PF	5.00%	50V
C2914	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C2915	1-164-489-11	CERAMIC CHIP 0.22UF	10.00%	16V
C2916	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C2917	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C2918	1-164-004-11	CERAMIC CHIP 0.1UF	10.00%	25V
C2923	1-163-021-91	CERAMIC CHIP 0.01UF	10.00%	50V

<CONNECTOR>

CN2601	*1-778-681-11	PIN, CONNECTOR (PC BOARD) 5P
CN2901	1-779-677-11	CONNECTOR, USB (B)
CN2902	1-779-676-11	CONNECTOR, USB (A)
CN2903	1-779-676-11	CONNECTOR, USB (A)
CN2904	1-779-676-11	CONNECTOR, USB (A)
CN2905	1-779-676-11	CONNECTOR, USB (A)

<DIODE>

D2601	8-719-158-15	ZENER DIODE RD5.6S-B
D2604	8-719-911-19	DIODE 1SS119-25
D2605	8-719-911-19	DIODE 1SS119-25
D2606	8-719-911-19	DIODE 1SS119-25
D2607	8-719-911-19	DIODE 1SS119-25
D2902	8-719-422-12	ZENER DIODE MA8039
D2903	8-719-422-12	ZENER DIODE MA8039
D2904	8-719-158-15	ZENER DIODE RD5.6S-B

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2905	8-719-158-15	ZENER DIODE RD5.6S-B	
D2906	8-719-158-15	ZENER DIODE RD5.6S-B	
D2907	8-719-158-15	ZENER DIODE RD5.6S-B	
D2908	8-719-422-12	ZENER DIODE MA8039	
D2909	8-719-422-12	ZENER DIODE MA8039	
D2910	8-719-422-12	ZENER DIODE MA8039	
D2911	8-719-422-12	ZENER DIODE MA8039	
D2912	8-719-422-12	ZENER DIODE MA8039	
D2913	8-719-422-12	ZENER DIODE MA8039	
D2914	8-719-422-12	ZENER DIODE MA8039	
D2915	8-719-422-12	ZENER DIODE MA8039	

<FERRITE BEAD>

REF.NO.	PART NO.	DESCRIPTION	
FB2601	1-412-911-11	FERRITE	1.1UH
FB2602	1-412-911-11	FERRITE	1.1UH
FB2901	1-412-911-11	FERRITE	1.1UH
FB2903	1-412-911-11	FERRITE	1.1UH
FB2904	1-412-911-11	FERRITE	1.1UH
FB2905	1-412-911-11	FERRITE	1.1UH
FB2906	1-412-911-11	FERRITE	1.1UH
FB2911	1-412-911-11	FERRITE	1.1UH
FB2912	1-216-295-91	SHORT	0
FB2913	1-216-295-91	SHORT	0
FB2914	1-216-295-91	SHORT	0
FB2915	1-216-295-91	SHORT	0
FB2916	1-216-295-91	SHORT	0
FB2917	1-216-295-91	SHORT	0
FB2918	1-216-295-91	SHORT	0
FB2919	1-216-295-91	SHORT	0
FB2924	1-216-295-91	SHORT	0
FB2925	1-216-295-91	SHORT	0
FB2936	1-414-766-22	INDUCTOR CHIP	

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC2601	8-759-431-14	IC PQ3TZ53U
IC2602	8-759-639-01	IC SDI02-V1
IC2603	8-759-639-01	IC SDI02-V1
IC2901	8-759-660-89	IC KC82C160SH
IC2902	8-759-165-87	IC PST600J-T

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q2601	8-729-029-06	TRANSISTOR DTC124EUA-T106
Q2602	8-729-029-06	TRANSISTOR DTC124EUA-T106
Q2603	8-729-029-06	TRANSISTOR DTC124EUA-T106
Q2604	8-729-029-06	TRANSISTOR DTC124EUA-T106

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
R2601	1-216-081-00	RES-CHIP	22K	5%	1/10W
R2602	1-216-349-00	METAL OXIDE	1	5%	1W
R2603	1-216-347-11	METAL OXIDE	0.68	5%	1W
R2604	1-216-349-00	METAL OXIDE	1	5%	1W
R2605	1-216-347-11	METAL OXIDE	0.68	5%	1W
R2607	1-216-349-00	METAL OXIDE	1	5%	1W
R2608	1-216-347-11	METAL OXIDE	0.68	5%	1W
R2609	1-216-349-00	METAL OXIDE	1	5%	1W
R2610	1-216-347-11	METAL OXIDE	0.68	5%	1W
R2611	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2612	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2613	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2614	1-216-049-91	RES-CHIP	1K	5%	1/10W
R2618	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2619	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2620	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2621	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2622	1-216-033-00	RES-CHIP	220	5%	1/10W
R2901	1-216-013-00	RES-CHIP	33	5%	1/10W
R2902	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R2903	1-216-121-91	RES-CHIP	1M	5%	1/10W
R2904	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2905	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2906	1-216-022-00	RES-CHIP	75	5%	1/10W
R2907	1-216-039-00	RES-CHIP	390	5%	1/10W
R2908	1-216-073-00	RES-CHIP	10K	5%	1/10W
R2909	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R2915	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R2916	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2919	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2920	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2923	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2924	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2925	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2926	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2927	1-216-013-00	RES-CHIP	33	5%	1/10W
R2928	1-216-013-00	RES-CHIP	33	5%	1/10W
R2930	1-216-009-91	RES-CHIP	22	5%	1/10W
R2931	1-216-009-91	RES-CHIP	22	5%	1/10W
R2932	1-216-077-91	RES-CHIP	15K	5%	1/10W
R2933	1-216-013-00	RES-CHIP	33	5%	1/10W
R2934	1-216-013-00	RES-CHIP	33	5%	1/10W
R2935	1-216-013-00	RES-CHIP	33	5%	1/10W
R2941	1-216-013-00	RES-CHIP	33	5%	1/10W
R2942	1-216-013-00	RES-CHIP	33	5%	1/10W

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X2901	1-767-925-21	VIBRATOR, CRYSTAL (12MHz)