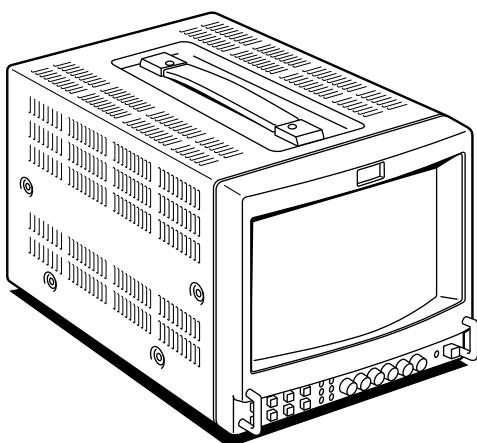


# SERVICE MANUAL

**S MIC CHASSIS**

<i>MODEL</i>	<i>DEST.</i>	<i>CHASSIS NO.</i>	<i>MODEL</i>	<i>DEST.</i>	<i>CHASSIS NO.</i>
PVM-8042Q	US/CND	SCC-E96H-A	PVM-9042QM	AEP	SCC-F09H-A
PVM-8045Q	US/CND	SCC-E96J-A	PVM-9042QM	AUS	SCC-F90F-A
			PVM-9045QM	AEP	SCC-F09J-A
			PVM-9045QM	AUS	SCC-F90G-A
			PVM-9045PM	BRZ	SCC-F31B-A



TRINITRON® COLOR VIDEO MONITOR

**SONY**®

## **⚠ WARNING**

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

### **WARNING!!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

### **ATTENTION!!**

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDE À L'ALIMENTATION SECTEUR.

### **SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

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

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  $\Delta$  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDUIT DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

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**SONY**®

3-865-058-11 (1)

## *Trinitron*<sup>®</sup> **Color Video Monitor**

### **SECTION 1** **OPERATING INSTRUCTIONS**

Operating Instructions US

Mode d'emploi FR

Manual de instrucciones ES



**Trinitron**

**PVM-8045Q**

**PVM-8042Q**  
**PVM-8040**

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This section is extracted  
from operating instructions.

## WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

**Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.**

**THIS APPARATUS MUST BE EARTHED**



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

2 (US)

## Precautions

### On safety

- **PVM-8045Q/8042Q:** Operate the unit on 120 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type. For the battery operation, use only the NP-1B battery pack and BP-L60A/L90A with DC-L10 (not supplied). Do not use any other batteries.
- **PVM-8040:** Operate the unit only on 120 V AC. Use only the supplied AC power cord. Do not use any other type.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

### On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

### On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.  
As a safety precaution, unplug the unit before cleaning it.

### On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

### ATTENTION – When the product is installed in a rack:

- a) **Elevated operating ambient temperature**  
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature of 0 to +35°C (32 to 95°F) (Tmra).

#### b) Reduced air flow

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

#### c) Mechanical loading

Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

#### d) Circuit overloading

Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

#### e) Reliable earthing

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

#### f) Gap keeping

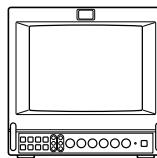
The upper and lower gaps of rack-mounted equipment should be least 44 mm (1 3/4 inches).

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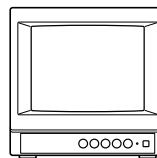
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This instruction manual covers the PVM-8045Q, PVM-8042Q and PVM-8040. The differences among the models are clearly described in the text.

### PVM-8045Q/8042Q



### PVM-8040



## Features

### Four color systems available (PVM-8045Q/8042Q only)

The monitor can display NTSC, PAL, SECAM and NTSC4.43<sup>1)</sup> signals. The appropriate color system is selected automatically.

### HR (High Resolution) Trinitron®<sup>2)</sup> picture tube (PVM-8045Q)

The HR Trinitron picture tube (0.25 mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

### Trinitron picture tube (PVM-8042Q/8040)

The Trinitron picture tube (0.5mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 250 TV lines at the center of the picture.

### Beam current feedback circuit

The built-in beam current feedback circuit assures stable white balance.

### Comb filter

When NTSC video signals are received, a comb filter activates to increase the resolution, resulting fine picture detail without color spill or color noise.

### Multiple input signals (PVM-8045Q/8042Q only)

In addition to the composite video signals and the Y/C signals, analog RGB signals and component signals can be input.

### External sync input (PVM-8045Q/8042Q only)

When the EXT SYNC button is pressed, the monitor can be operated on the sync signal fed through an external sync connector.

### Blue only picture (PVM-8045Q/8042Q only)

Black and white apparent picture consisting from only the blue signal will be displayed. This facilitates the "chroma" and "phase" adjustment, and the observation of the video noise.

### 16:9 selector (PVM-8045Q/8042Q only)

The monitor can display the 16:9 signal with the correct ratio of width and height, compressing the picture vertically.

### Under scan mode (PVM-8045Q/8042Q only)

The monitor can display signals that are scanned outside the normal screen so you can monitor the whole image.

### Audio circuit and built-in speaker

A speaker (0.5 W, monaural) is built into the monitor for sound monitoring.

### Automatic/Manual DEGAUSS

The screen is automatically demagnetized when the monitor is turned on. Manual degauss is also available for PVM-8045Q/8042Q by pressing the DEGAUSS button.

### Automatic termination

(only connectors marked ~\~)  
The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

### EIA standard 19-inch rack mounting

By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.

### Varied power sources

In addition to AC power, you can use battery pack or external DC 12 V power. The monitor can operate with one or two Sony NP-1B\* battery packs. If you use the DC-L10\* battery adaptor, the monitor can operate with a Sony BP-L60A/L90A\* lithium ion battery pack.

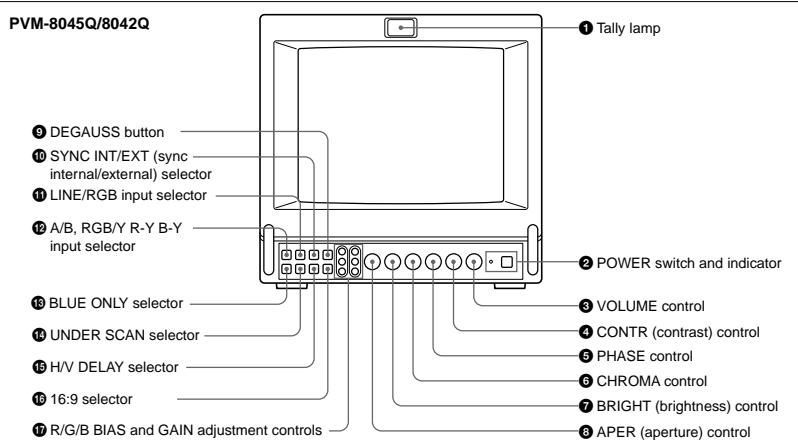
\* The NP-1B battery pack, DC-L10 battery adaptor and BP-L60A/L90A battery pack are not supplied.

1) An NTSC 4.43 signal is used for playing back NTSC-recorded video cassettes with a video tape recorder/player especially designed for use with this system.

2) Trinitron is a trademark of Sony Corporation.

## Location and Function of Parts and Controls

### Front



#### ① Tally lamp

This indicator lights up. The tally control connection is needed.

For the pin assignment, see "Specifications" on page 12 (US).

#### ② POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC 12 V IN jack decreases, the indicator flashes.

#### ③ VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

#### ④ CONTR (contrast) control

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

#### ⑤ PHASE control

This control is effective only for the NTSC and NTSC4.43 color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

6 (US)

#### ⑥ CHROMA control

Turn clockwise to make the colour intensity stronger and counterclockwise to make it weaker.

#### ⑦ BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

#### ⑧ APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

#### Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component signals.
- The PHASE control setting is effective only for the NTSC system.

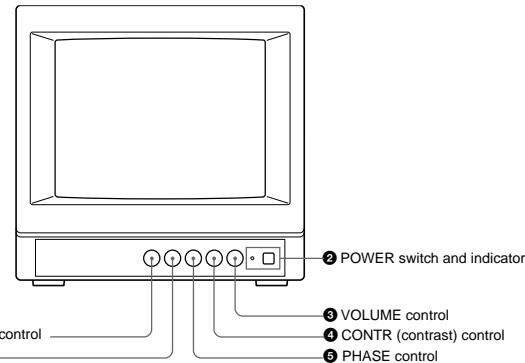
#### ⑨ DEGAUSS button

Press this button momentarily. The screen will be demagnetized.

#### Note

If you press the DEGAUSS button again too soon, the color shades may be uneven.

### PVM-8040



#### Note

The PHASE control adjustments is effective only for the NTSC system.

#### ⑪ UNDER SCAN selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the picture are visible.

#### ⑫ LINE/RGB input selector

Select the programme to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

#### ⑬ A/B, RGB/Y R-Y B-Y input selector

When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Press this button (B) to monitor the signals from the LINE B connector.

#### ⑭ H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

#### ⑮ 16:9 selector

Press this selector to monitor the signals of 16:9 picture.

Pressing the UNDER SCAN selector ⑪ in 16:9 mode displays the whole 16:9 picture up to the four corners.

#### ⑯ R/G/B BIAS and GAIN adjustment controls

Used for white balance fine adjustment. BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

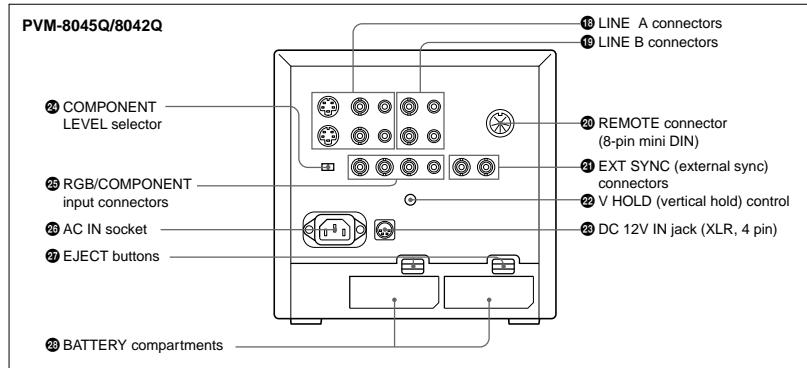
**BIAS:** Adjust the white balance and brightness of the screen at the lowlight.

**GAIN:** Adjust the white balance and brightness of the screen at the highlight.

7 (US)

## Location and Function of Parts and Controls

### Rear



#### ⑨ LINE A connectors (PVM-8045Q/8042Q)

#### ⑩ LINE connectors (PVM-8040)

**Y/C IN (4-pin mini DIN):** Connect to the Y/C separate output of a video camera, VCR or other video equipment.

**Y/C OUT (4-pin mini DIN):** Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

**VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.

**VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

**AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

**AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

#### Note

The Y/C IN connector has a priority over the VIDEO IN connector.

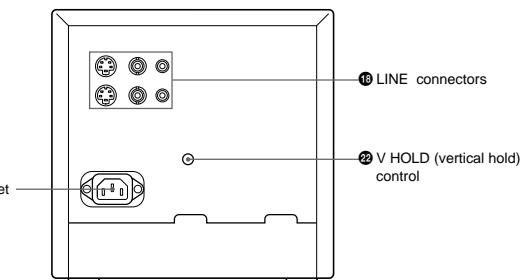
When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

#### Note

(PVM-8045Q/8042Q only)

To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

### PVM-8040



#### ⑪ EXT SYNC (external sync) connectors

**IN (BNC):** When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).

**OUT (BNC):** Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

#### ⑬ V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

#### ⑭ DC 12V IN jack (XLR, 4 pin)

Connect the Sony battery adaptor DC-L10 (not supplied).

#### ⑮ COMPONENT LEVEL selector

Select the component level from among two modes.

**N10/SMPTE:** for 100/0/100/0 signal

**BETA 0:** for 100/0/75/0 signal

#### ⑯ RGB/COMPONENT input connectors

#### R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):

To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

#### To monitor the analog RGB signal

Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

#### To monitor the component signal

Connect to the R-Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

#### ⑯ AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

#### ⑰ EJECT buttons

Press the EJECT button upwards to remove the battery pack.

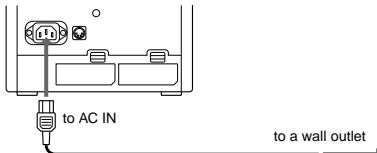
#### ⑱ BATTERY compartments

Insert the NP-1B battery pack (not supplied).

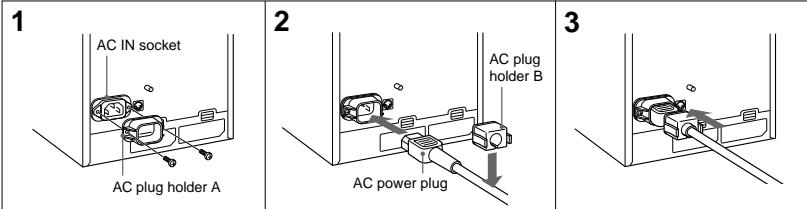
## Power Sources

### House Current (for all models)

Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



To connect an AC power cord securely with AC plug holders.



**1** Remove the AC IN socket screws and then use them to attach the AC plug holder A (supplied) to the AC IN socket.

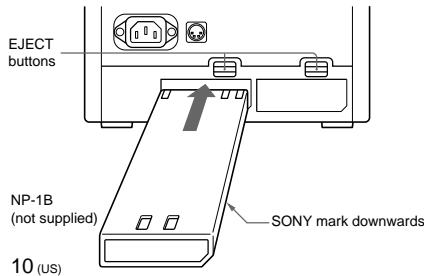
**2** Plug the power cord to the AC IN socket. Then, attach the supplied AC plug holder B on top of the AC power cord.

**3** Slide AC plug holder B over the cord until it locks.

**To remove the AC power cord**  
Pull out AC plug holder B by squeezing the left and right sides.

### Rechargeable Battery (PVM-8045Q/8042Q only)

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



**To remove the battery pack**, press the EJECT button upwards.

**For charging**, use the BC-1WD for the NP-1B.

#### Note

Make sure you disconnect the cables connected to the connectors (AC IN, DC 12 V IN) at the rear of the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

## Specifications

### Video signal

Colour system	PVM-8045Q/8042Q: NTSC, PAL, SECAM, NTSC4.43 PVM-8040: NTSC
Resolution	PVM-8045Q: 450 TV lines PVM-8042Q/8040: 250 TV lines
Aperture correction	-4.0 dB to +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3.0 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

### Inputs

Y/C IN: 4-pin mini DIN connector

*See the pin assignment on page 12 (US).*

VIDEO IN: BNC connector  
1 Vp-p ± 6 dB, sync negative

AUDIO IN: phono jack, -5 dBu<sup>a</sup>, less than 47 kohms  
R/R-Y, G/Y, B/B-Y: BNC connector

R, G, B channels: 0.7 Vp-p, ± 6 dB Sync on green: 0.3 Vp-p, negative,

R-Y, Y, B-Y channels: 0.7 Vp-p, ± 6 dB (Standard colour bar signal of 75% chrominance)

EXT SYNC IN: BNC connector  
Composite sync 4 Vp-p, ±6 dB, negative

### Loop-through outputs

Y/C OUT: 4-pin mini DIN connector, 75 ohms terminated (75 ohms automatic termination)

VIDEO OUT: BNC connector, 75 ohms terminated (75 ohms automatic termination)

AUDIO OUT: phono jack

EXT SYNC OUT: BNC connector, 75 ohms terminated

Output level 0.5 W

REMOTE: 8-pin mini DIN connector (75 ohms automatic termination)

*See the pin assignment on page 12 (US).*

Speaker output  
Remote input

### Inputs and Outputs

Connector	Model	PVM-8045Q PVM-8042Q	PVM-8040
LINE A	Y/C IN Y/C OUT VIDEO IN VIDEO OUT AUDIO IN AUDIO OUT	yes yes yes yes yes yes	yes yes yes yes yes yes
LINE B	VIDEO IN VIDEO OUT AUDIO IN AUDIO OUT	yes yes yes yes	no no no no
RGB/ COMPONENT	R/R-Y IN G/Y IN B/B-Y IN AUDIO IN	yes yes yes yes	no no no no
EXT SYNC	IN OUT	yes yes	no no
REMOTE		yes	no

a) 0 dBu = 0.775 Vr.m.s.

### General

#### Power consumption & requirements

PVM-8045Q/8042Q:  
0.6 A 45 W MAX at 120 V AC operation

3.7 A 38 W at 12 V DC operation

PVM-8040:  
0.6 A 39 W MAX at 120 V AC operation

#### Operating conditions

Temperature 0 to +35°C (32 to 95°F)

Humidity 0 to 90% (no condensation)

Pressure 700 to 1060 hPa

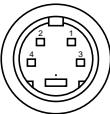
## Specifications

Transport and storage conditions	
Temperature	-10 to +40°C (14 to 104°F)
Humidity	0 to 90%
Pressure	700 to 1060 hPa
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8" x 8 5/8" x 14 inches) not incl. projecting parts and controls
Mass	Approx. 8.2 kg (18 lb 1 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (1) (PVM-8045Q/8042Q only) AC plug holders (1 set) Tally plate (1) (PVM-8045Q/ 8042Q only)

Design and specifications are subject to change  
without notice.

### Pin Assignment

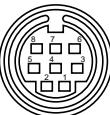
**Y/C IN connector (4-pin mini DIN)**



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	286 mVp-p (NTSC), burst Delay time between Y and C: within 0 ±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

### REMOTE connector (8-pin mini DIN)

(PVM-8045Q/8042Q only)



Pin No.	Signal
1	16:9
2	H/V delay
3	GND
4	EXT SYNC
5	Tally
6	Underscan
7	A/B or RGB/Y R-Y B-Y
8	LINE/RGB

### Notes

- For remote control, connect the pin of the desired function to pin 3 (GND).
- For remote control, set the front button to OFF (the switch is out).

**SONY®**

3-865-058-21 (1)

# *Trinitron®* **Color Video Monitor**

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**Trinitron****PVM-9045QM****PVM-9042QM****PVM-9040ME**

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English

## WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

**Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.**

In the event of a malfunction or when maintenance is necessary, consult an authorized Sony dealer.

**THIS APPARATUS MUST BE EARTHED**

**For the customers in the UNITED KINGDOM**

**IMPORTANT**

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow	: Earth
Blue	: Neutral
Brown	: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol  $\frac{1}{2}$  or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Ensure that your equipment is connected correctly.

If you are in any doubt consult a qualified electrician.

**CAUTION:**

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

**Voor de klanten in Nederland**



Bij dit product zijn batterijen geleverd.  
Wanneer deze leeg zijn, moet u ze niet weggoien maar inleveren als KCA.

## Precautions

### On safety

- **PVM-9045QM/9042QM:** Operate the unit on 100 - 240 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type. For the battery operation, use only the NP-1B battery pack and BP-L60A/L90A with DC-L10 (not supplied). Do not use any other batteries.
- **PVM-9040ME:** Operate the unit only on 100 - 240 V AC. Use only the supplied AC power cord. Do not use any other type.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

### On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

### On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet. As a safety precaution, unplug the unit before cleaning it.

### On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

### ATTENTION – When the product is installed in a rack:

- a) **Elevated operating ambient temperature**  
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature of 0 to +35°C (32 to 95°F) (Tmra).
- b) **Reduced air flow**  
Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- c) **Mechanical loading**  
Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- d) **Circuit overloading**  
Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- e) **Reliable earthing**  
Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).
- f) **Gap keeping**  
The upper and lower gaps of rack-mounted equipment should be least 44 mm (1  $\frac{3}{4}$  inches).

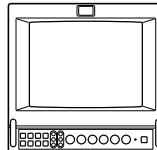
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English

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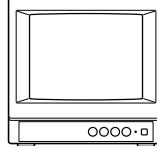
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This instruction manual covers the PVM-9045QM, PVM-9042QM and PVM-9040ME. The differences among the models are clearly described in the text.

### PVM-9045QM/9042QM



### PVM-9040ME



## Features

- Four colour systems available  
(PVM-9045QM/9042QM only)**  
The monitor can display PAL, SECAM, NTSC and NTSC4.43<sup>1)</sup> signals. The appropriate colour system is selected automatically.
- HR (High Resolution) Trinitron®<sup>2)</sup> picture tube  
(PVM-9045QM)**  
The HR Trinitron picture tube (0.25 mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.
- Trinitron picture tube (PVM-9042QM/9040ME)**  
The Trinitron picture tube (0.5mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 250 TV lines at the center of the picture.

- Beam current feedback circuit**  
The built-in beam current feedback circuit assures stable white balance.

- Multiple input signals  
(PVM-9045QM/9042QM only)**  
In addition to the composite video signals and the Y/C signals, analog RGB signals and component signals can be input.

- External sync input  
(PVM-9045QM/9042QM only)**  
When the EXT SYNC button is pressed, the monitor can be operated on the sync signal fed through an external sync connector.

- Blue only picture (PVM-9045QM/9042QM only)**  
Black and white apparent picture consisting from only the blue signal will be displayed. This facilitates the chroma adjustment, and the observation of the video noise.

- 16:9 selector (PVM-9045QM/9042QM only)**  
The monitor can display the 16:9 signal with the correct ratio of width and height, compressing the picture vertically.

- Under scan mode (PVM-9045QM/9042QM only)**  
The monitor can display signals that are scanned outside the normal screen so you can monitor the whole image.

- Audio circuit and built-in speaker**  
A speaker (0.5 W, monaural) is built into the monitor for sound monitoring.

- Automatic/Manual DEGAUSS**  
The screen is automatically demagnetized when the monitor is turned on. Manual degauss is also available for PVM-9045QM/9042QM by pressing the DEGAUSS button.

- Automatic termination**  
(only connectors marked  $\wedge\vee$ )  
The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

- EIA standard 19-inch rack mounting**  
By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.

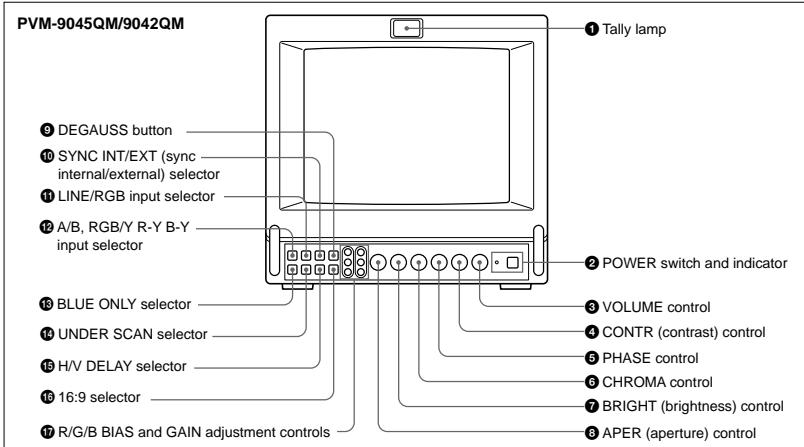
- Varied power sources**  
In addition to AC power, you can use battery pack or external DC 12 V power. The monitor can operate with one or two Sony NP-1B\* battery packs. If you use the DC-L10\* battery adaptor, the monitor can operate with a Sony BP-L60A/L90A\* lithium ion battery pack.

\* The NP-1B battery pack, DC-L10 battery adaptor and BP-L60A/L90A battery pack are not supplied.

1) An NTSC 4.43 signal is used for playing back NTSC-recorded video cassettes with a video tape recorder/player especially designed for use with this system.  
2) Trinitron is a trademark of Sony Corporation.

## Location and Function of Parts and Controls

### Front



#### ① Tally lamp

This indicator lights up. The tally control connection is needed.

For the pin assignment, see "Specifications" on page 12 (GB).

#### ② POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC 12 V IN jack decreases, the indicator flashes.

#### ③ VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

#### ④ CONTR (contrast) control

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

#### ⑤ PHASE control

This control is effective only for the NTSC and NTSC4.43 colour systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

#### ⑥ CHROMA control

Turn clockwise to make the colour intensity stronger and counterclockwise to make it weaker.

#### ⑦ BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

#### ⑧ APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

#### Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component signals.
- The PHASE control setting is effective only for the NTSC system.

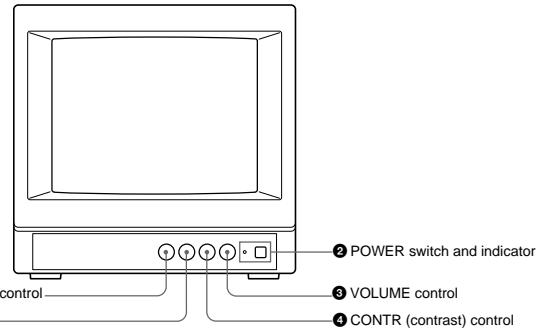
#### ⑨ DEGAUSS button

Press this button momentarily. The screen will be demagnetized.

#### Note

If you press the DEGAUSS button again too soon, the color shades may be uneven.

### PVM-9040ME



#### ⑩ SYNC INT/EXT (sync internal/external) selector

Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

#### ⑪ LINE/RGB input selector

Select the programme to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

#### ⑫ A/B, RGB/Y R-Y B-Y input selector

When the LINE/RGB input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Press this button (B) to monitor the signals from the LINE B connectors.

#### When the LINE/RGB input selector is set to RGB,

select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Press this button (Y R-Y B-Y) to monitor the component signals.

#### ⑬ 16:9 selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the picture are visible.

#### ⑭ H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

#### ⑮ 16:9 selector

Press this selector to monitor the signals of 16:9 picture.

Pressing the UNDER SCAN selector ⑭ in 16:9 mode displays the whole 16:9 picture up to the four corners.

#### ⑯ R/G/B BIAS and GAIN adjustment controls

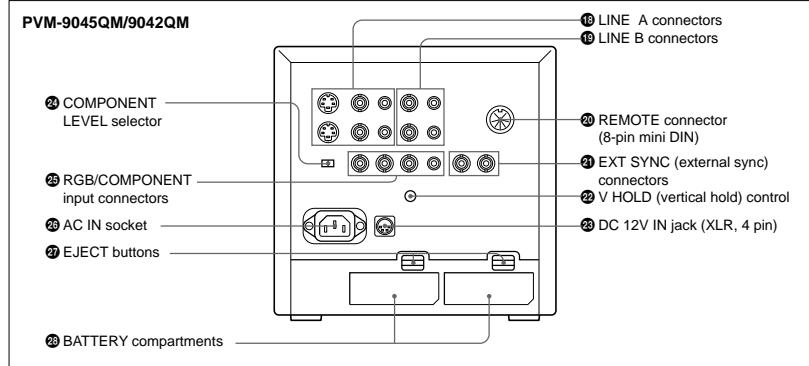
Used for white balance fine adjustment. BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

**BIAS:** Adjust the white balance and brightness of the screen at the lowlight.

**GAIN:** Adjust the white balance and brightness of the screen at the highlight.

## Location and Function of Parts and Controls

### Rear



#### ⑩ LINE A connectors (PVM-9045QM/9042QM)

#### ⑪ LINE connectors (PVM-9040ME)

**Y/C IN (4-pin mini DIN):** Connect to the Y/C separate output of a video camera, VCR or other video equipment.

**Y/C OUT (4-pin mini DIN):** Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

**VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.

**VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

**AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

**AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

#### Note

The Y/C IN connector has a priority over the VIDEO IN connector.

When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

#### Note

(PVM-9045QM/9042QM only)

To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

#### ⑯ LINE B connectors

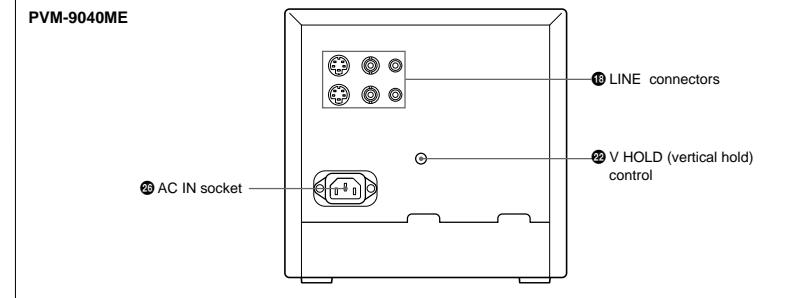
To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector on the front panel (B).

**VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.

**VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

**AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

**AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.



#### ⑰ REMOTE connector (8-pin mini DIN)

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller.

For the pin assignment of this connector, see "Specifications" on page 12 (GB).

#### ⑱ EXT SYNC (external sync) connectors

**IN (BNC):** When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).

**OUT (BNC):** Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

#### ⑲ V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

#### ⑳ DC 12V IN jack (XLR, 4 pin)

Connect the Sony battery adaptor DC-L10 (not supplied).

#### ㉑ COMPONENT LEVEL selector

Select the component level from among two modes.

**N10/SMPTE:** for 100/0/100/0 signal

**BETA 0:** for 100/0/75/0 signal

#### ㉒ RGB/COMPONENT input connectors

##### R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):

To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

#### To monitor the analog RGB signal

Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

#### To monitor the component signal

Connect to the R-Y/Y-B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

#### ㉓ AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

#### ㉔ EJECT buttons

Press the EJECT button upwards to remove the battery pack.

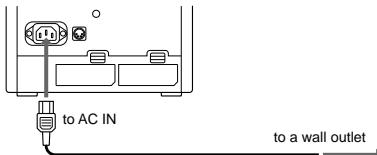
#### ㉕ BATTERY compartments

Insert the NP-1B battery pack (not supplied).

## Power Sources

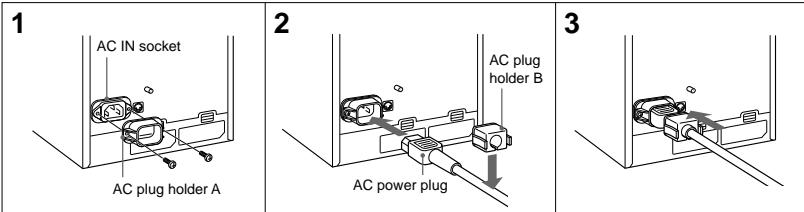
### House Current (for all models)

Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



**For the PVM-9045QM/9042QM**  
When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the DC 12 V IN jack (if connected) is automatically disconnected.

To connect an AC power cord securely with AC plug holders.



**1** Remove the AC IN socket screws and then use them to attach the AC plug holder A (supplied) to the AC IN socket.

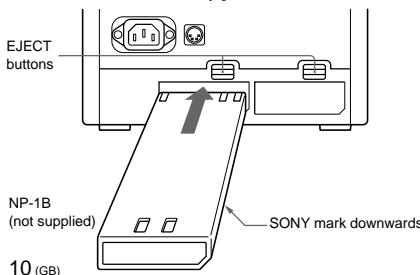
**2** Plug the power cord to the AC IN socket. Then, attach the supplied AC plug holder B on top of the AC power cord.

**3** Slide AC plug holder B over the cord until it locks.

**To remove the AC power cord**  
Pull out AC plug holder B by squeezing the left and right sides.

### Rechargeable Battery (PVM-9045QM/9042QM only)

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



**To remove the battery pack**, press the EJECT button upwards.

**For charging**, use the BC-1WDCE for the NP-1B.

**Note**

Make sure you disconnect the cables connected to the connectors (AC IN, DC 12 V IN) at the rear of the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

## Specifications

### Video signal

Colour system	PVM-9045QM/9042QM: PAL, SECAM, NTSC, NTSC4.43 PVM-9040ME: PAL, SECAM
Resolution	PVM-9045QM: 450 TV lines PVM-9042QM/9040ME: 250 TV lines
Aperture correction	-4.0 dB to +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3.0 dB)
Synchronization	AFC time constant 1.0 msec.

### Inputs

Y/C IN: 4-pin mini DIN connector  
*See the pin assignment on page 12 (GB).*  
VIDEO IN: BNC connector  
1 Vp-p ± 6 dB, sync negative  
AUDIO IN: phono jack, -5 dBu<sup>a</sup>, less than 47 kohms  
R/R-Y, G/Y, B/B-Y: BNC connector  
R, G, B channels: 0.7 Vp-p, ± 6 dB Sync on green: 0.3 Vp-p, negative  
R-Y, Y, B-Y channels: 0.7 Vp-p, ± 6 dB (Standard colour bar signal of 100% chrominance)  
EXT SYNC IN: BNC connector  
Composite sync 4 Vp-p, ± 6 dB, negative

### Loop-through outputs

Y/C OUT: 4-pin mini DIN connector, 75 ohms terminated (75 ohms automatic termination)  
VIDEO OUT: BNC connector, 75 ohms terminated (75 ohms automatic termination)  
AUDIO OUT: phono jack  
EXT SYNC OUT: BNC connector, 75 ohms terminated  
Speaker output  
Remote input  
*See the pin assignment on page 12 (GB).*

*a) 0 dBu = 0.775 Vr.m.s.*

### General

Power consumption & requirements  
PVM-9045QM/9042QM:  
0.7 to 0.4A 43W at 100 to 240V  
AC operation  
3.7A 40W at 12 V DC operation  
PVM-9040ME:  
0.7 to 0.4A 39W at 100 to 240V  
AC operation

### Operating conditions

Temperature	0 to +35°C (32 to 95°F)
Humidity	0 to 90% (no condensation)
Pressure	700 to 1060 hPa

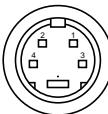
## Specifications

Transport and storage conditions	
Temperature	-10 to +40°C (14 to 104°F)
Humidity	0 to 90%
Pressure	700 to 1060 hPa
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8 x 8 5/8 x 14 inches) not incl. projecting parts and controls
Mass	Approx. 8.2 kg (18 lb 1 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (1) (PVM-9045QM/9042QM only) AC plug holders (1 set) Tally plate (1) (PVM-9045QM/ 9042QM only)

Design and specifications are subject to change  
without notice.

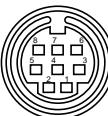
### Pin Assignment

Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p (PAL), burst Delay time between Y and C: within 0 ±100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

REMOTE connector (8-pin mini DIN)  
(PVM-9045QM/9042QM only)



Pin No.	Signal
1	16:9
2	H/V delay
3	GND
4	EXT SYNC
5	Tally
6	Underscan
7	A/B or RGB/Y R-Y B-Y
8	LINE/RGB

### Notes

- For remote control, connect the pin of the desired function to pin 3 (GND).
- For remote control, set the front button to OFF (the switch is out).

**SONY**<sup>®</sup>

3-865-341-11 (1)

***Trinitron<sup>®</sup>***  
***Color Video Monitor***

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Operating Instructions

US



**PVM-9045PM**

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English

## WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

**Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.**

**THIS APPARATUS MUST BE EARTHED**



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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## Precautions

### On safety

- **PVM-9045PM:** Operate the unit on 120 V AC or 12 V DC. For the AC operation, use only the supplied AC power cord or the AC power adaptor recommended (not supplied). Do not use any other type. For the battery operation, use only the NP-1B battery pack and BP-L60A/L90A with DC-L10 (not supplied). Do not use any other batteries.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet if it is not to be used for several days.
- To disconnect the AC power cord, pull it out by the plug. Never pull the cord itself.

### On installation

- Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Keep the unit away from a loudspeaker or motor, as the picture may be affected.

### On cleaning

Clean the unit with a slightly dampened soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet. As a safety precaution, unplug the unit before cleaning it.

### On repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

If you have any questions about this unit, contact your authorized Sony dealer.

### ATTENTION – When the product is installed in a rack:

- a) **Elevated operating ambient temperature**  
If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature of 0 to +35°C (32 to 95°F) (Tmra).

b) **Reduced air flow**

Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

c) **Mechanical loading**

Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

d) **Circuit overloading**

Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

e) **Reliable earthing**

Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

US  
English

## Table of Contents

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## Features

**PAL-M and NTSC color systems available**  
 The monitor can display PAL-M, NTSC signals. The appropriate color system is selected automatically.

**HR (High Resolution) Trinitron®<sup>①</sup>) picture tube**  
 The HR Trinitron picture tube (0.25 mm aperture grill pitch) provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

**Beam current feedback circuit**  
 The built-in beam current feedback circuit assures stable white balance.

**Comb filter**  
 When NTSC video signals are received, a comb filter activates to increase the resolution, resulting fine picture detail without color spill or color noise.

**Multiple input signals**  
 In addition to the composite video signals and the Y/C signals, analog RGB signals and component signals can be input.

**External sync input**  
 When the EXT SYNC button is pressed, the monitor can be operated on the sync signal fed through an external sync connector.

**Blue only picture**  
 Black and white apparent picture consisting from only the blue signal will be displayed. This facilitates the "chroma" and "phase" adjustment, and the observation of the video noise.

**16:9 selector**  
 The monitor can display the 16:9 signal with the correct ratio of width and height, compressing the picture vertically.

**Under scan mode**  
 The monitor can display signals that are scanned outside the normal screen so you can monitor the whole image.

**Audio circuit and built-in speaker**  
 A speaker (0.5 W, monaural) is built into the monitor for sound monitoring.

**Automatic/Manual DEGAUSS**  
 The screen is automatically demagnetized when the monitor is turned on. Manual degauss is also available by pressing the DEGAUSS button.

**Automatic termination**  
 (only connectors marked  $\wedge\vee$ )  
 The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors.  
 When a cable is connected to an output connector, the 75-ohm termination is automatically released.

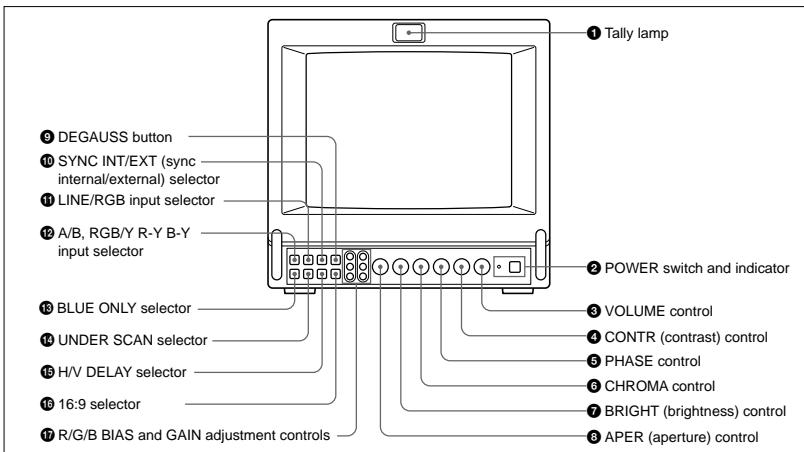
**EIA standard 19-inch rack mounting**  
 By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.

**Varied power sources**  
 In addition to AC power, you can use battery pack or external DC 12 V power. The monitor can operate with one or two Sony NP-1B\* battery packs. If you use the DC-L10\* battery adaptor, the monitor can operate with a Sony BP-L60A/L90A\* lithium ion battery pack.

\* The NP-1B battery pack, DC-L10 battery adaptor and BP-L60A/L90A battery pack are not supplied.

## Location and Function of Parts and Controls

### Front



#### ① Tally lamp

This indicator lights up. The tally control connection is needed.

For the pin assignment, see "Specifications" on page 12 (US).

#### ② POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC 12 V IN jack decreases, the indicator flashes.

#### ③ VOLUME control

Turn this control clockwise or counterclockwise to obtain the desired volume.

#### ④ CONTR (contrast) control

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

#### ⑤ PHASE control

This control is effective only for the NTSC and NTSC4.43 color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

6 (US)

#### ⑥ CHROMA control

Turn clockwise to make the colour intensity stronger and counterclockwise to make it weaker.

#### ⑦ BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

#### ⑧ APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

#### Notes

- The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.
- The PHASE control has no effect on component signals.
- The PHASE control setting is effective only for the NTSC system.

#### ⑨ DEGAUSS button

Press this button momentarily. The screen will be demagnetized.

#### Note

If you press the DEGAUSS button again too soon, the color shades may be uneven.

#### ⑩ SYNC INT/EXT (sync internal/external) selector

Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

#### ⑪ LINE/RGB input selector

Select the programme to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

#### ⑫ A/B, RGB/Y R-Y B-Y input selector

**When the LINE/RGB input selector is set to LINE,** keep this button released (A) for a signal fed through the LINE A connectors. Press this button (B) to monitor the signals from the LINE B connector.

**When the LINE/RGB input selector is set to RGB,** select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Press this button (Y R-Y B-Y) to monitor the component signals.

#### ⑬ BLUE ONLY selector

Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" control adjustments and the observation of video noise.

#### Note

The PHASE control adjustments is effective only for the NTSC system.

#### ⑭ UNDER SCAN selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the picture are visible.

#### ⑮ H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

#### ⑯ 16:9 selector

Press this selector to monitor the signals of 16:9 picture.

Pressing the UNDER SCAN selector ⑭ in 16:9 mode displays the whole 16:9 picture up to the four corners.

#### ⑰ R/G/B BIAS and GAIN adjustment controls

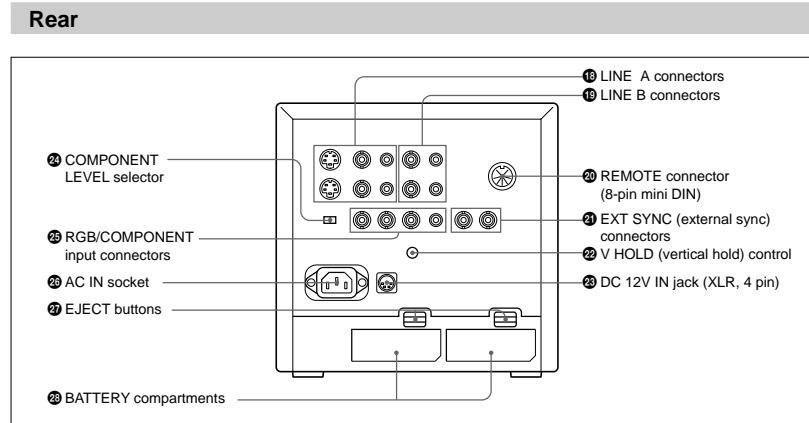
Used for white balance fine adjustment. BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

**BIAS:** Adjust the white balance and brightness of the screen at the lowlight.

**GAIN:** Adjust the white balance and brightness of the screen at the highlight.

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## Location and Function of Parts and Controls



### ⑮ LINE A connectors

**Y/C IN (4-pin mini DIN):** Connect to the Y/C separate output of a video camera, VCR or other video equipment.

**Y/C OUT (4-pin mini DIN):** Loop-through output of the Y/C IN connector. Connect to the Y/C separate input of a VCR or another monitor.

**VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.

**VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

**AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

**AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

#### Note

The Y/C IN connector has a priority over the VIDEO IN connector.

When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

### ⑯ LINE B connectors

To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector on the front panel (B).

**VIDEO IN (BNC):** Connect to the video output of a video camera, VCR or other video equipment.

**VIDEO OUT (BNC):** Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

**AUDIO IN (phono jack):** Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

**AUDIO OUT (phono jack):** Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

### ⑰ REMOTE connector (8-pin mini DIN)

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller.

For the pin assignment of this connector, see "Specifications" on page 12 (US).

### ㉑ EXT SYNC (external sync) connectors

**IN (BNC):** When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).

**OUT (BNC):** Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

### ㉒ V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

### ㉓ DC 12V IN jack (XLR, 4 pin)

Connect the Sony battery adaptor DC-L10 (not supplied).

### ㉔ COMPONENT LEVEL selector

Select the component level from among two modes.

**N10/SMPTE:** for 100/0/100/0 signal

**BETA 0:** for 100/0/75/0 signal

### ㉕ RGB/COMPONENT input connectors

#### R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):

To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

#### To monitor the analog RGB signal

Connect to the analog RGB signal outputs of a video camera. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

#### To monitor the component signal

Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

### ㉖ AC IN socket

Connect the supplied AC power cord to this socket and to a wall outlet.

### ㉗ EJECT buttons

Press the EJECT button upwards to remove the battery pack.

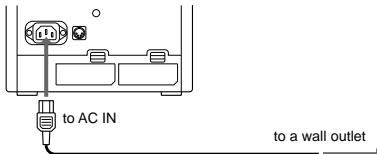
### ㉘ BATTERY compartments

Insert the NP-1B battery pack (not supplied).

## Power Sources

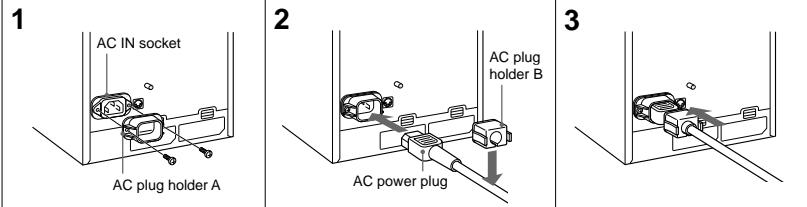
### House Current (for all models)

Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the AC power adaptor (if connected) is automatically disconnected.

To connect an AC power cord securely with AC plug holders.



**1** Remove the AC IN socket screws and then use them to attach the AC plug holder A (supplied) to the AC IN socket.

**2** Plug the power cord to the AC IN socket. Then, attach the supplied AC plug holder B on top of the AC power cord.

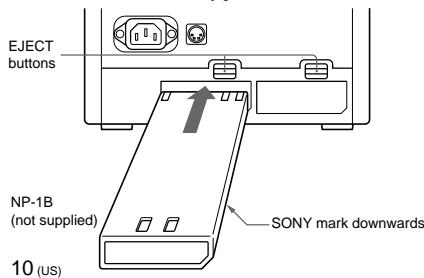
**3** Slide AC plug holder B over the cord until it locks.

#### To remove the AC power cord

Pull out AC plug holder B by squeezing the left and right sides.

### Rechargeable Battery

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



**To remove the battery pack**, press the EJECT button upwards.

**For charging**, use the BC-1WD for the NP-1B.

#### Note

Make sure you disconnect the cables connected to the connectors (AC IN, DC 12 V IN) at the rear of the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

## Specifications

### Video signal

Color system	PAL-M, NTSC
Resolution	450 TV lines
Aperture correction	-4.0 dB to +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

### Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 5.0% (typical)
V. linearity	Less than 5.0% (typical)
Convergence	Central area: 0.43 mm (typical) Peripheral area: 0.53 mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

### Inputs and Outputs

Inputs	Y/C IN: 4-pin mini DIN connector <i>See the pin assignment on page 12 (US).</i> VIDEO IN: BNC connector 1 Vp-p ± 6 dB, sync negative AUDIO IN: phono jack, -5 dBu <sup>a</sup> , less than 47 kohms R/R-Y, G/Y, B/B-Y: BNC connector R, G, B channels: 0.7 Vp-p, ± 6 dB Sync on green: 0.3 Vp-p, negative, R-Y, Y, B-Y channels: 0.7 Vp-p, ± 6 dB (Standard colour bar signal of 75% chrominance) EXT SYNC IN: BNC connector Composite sync 4 Vp-p, ± 6 dB, negative
Transport and storage conditions	Temperature 0 to +35°C (32 to 95°F) Humidity 0 to 90% (no condensation) Pressure 700 to 1060 hPa
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8 x 8 5/8 x 14 inches) not incl. projecting parts and controls
Mass	Approx. 8.2 kg (18 lb 1 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (1) AC plug holders (1 set) Tally plate (1)

### Loop-through outputs

Y/C OUT: 4-pin mini DIN connector, 75 ohms terminated (75 ohms automatic termination)  
 VIDEO OUT: BNC connector, 75 ohms terminated (75 ohms automatic termination)  
 AUDIO OUT: phono jack  
 EXT SYNC OUT: BNC connector, 75 ohms terminated  
 Output level 0.5 W  
 REMOTE: 8-pin mini DIN connector (75 ohms automatic termination)  
*See the pin assignment on page 12 (US).*  
 a) 0 dBu = 0.775 Vrms.

### General

Power consumption & requirements	0.6 A 45 W MAX at 120 V AC operation 3.7 A 38 W at 12 V DC operation
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### Operating conditions

Temperature	0 to +35°C (32 to 95°F)
Humidity	0 to 90% (no condensation)
Pressure	700 to 1060 hPa
Transport and storage conditions	Temperature -10 to +40°C (14 to 104°F) Humidity 0 to 90% Pressure 700 to 1060 hPa
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8 x 8 5/8 x 14 inches) not incl. projecting parts and controls
Mass	Approx. 8.2 kg (18 lb 1 oz) not incl. battery packs
Accessory supplied	AC power cord (1) Cable with an 8-pin connector (1) AC plug holders (1 set) Tally plate (1)

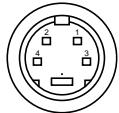
Design and specifications are subject to change without notice.

## Specifications

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### Pin Assignment

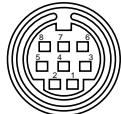
Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier-input	300 mVp-p (PAL-M), 286 mVp-p (NTSC), burst Delay time between Y and C: within $0 \pm 100$ nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA-input	GND

REMOTE connector (8-pin mini DIN)

(PVM-8045Q/8042Q only)



Pin No.	Signal
1	16:9
2	H/V delay
3	GND
4	EXT SYNC
5	Tally
6	Underscan
7	A/B or RGB/Y R-Y B-Y
8	LINE/RGB

### Notes

- For remote control, connect the pin of the desired function to pin 3 (GND).
- For remote control, set the front button to OFF (the switch is out).

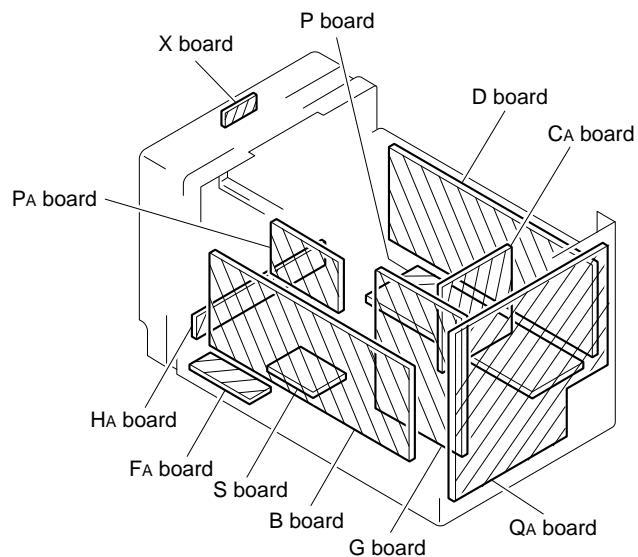
12 (us)



## SECTION 2

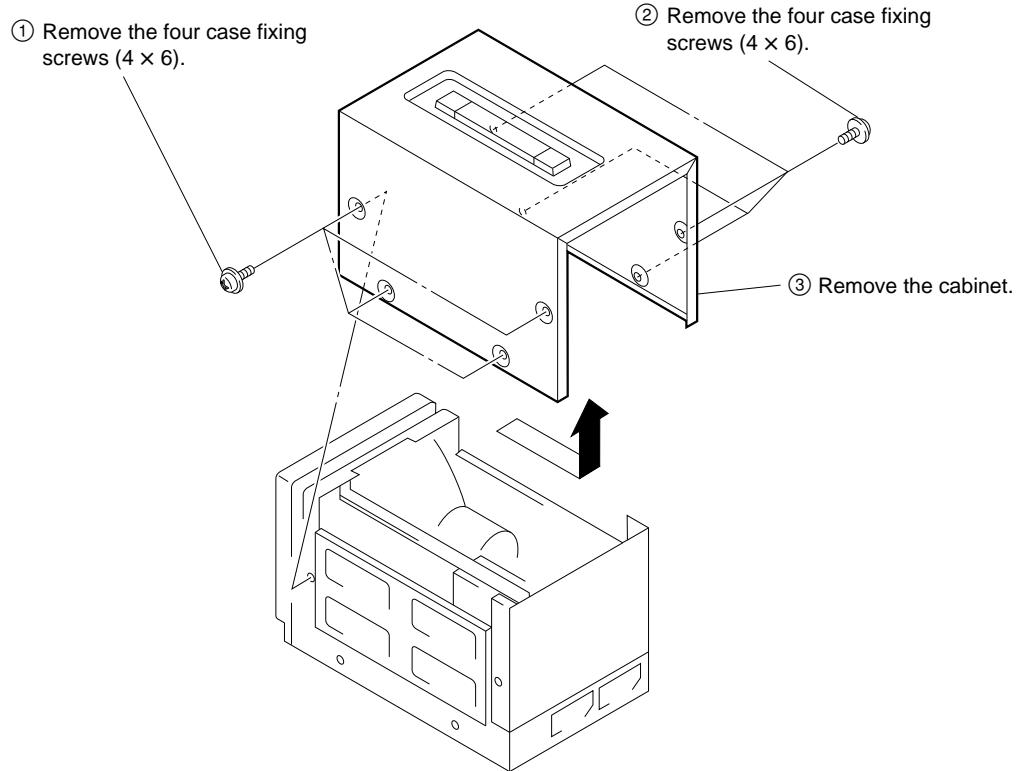
### SERVICE INFORMATION

#### 2-1. CIRCUIT BOARDS LOCATION

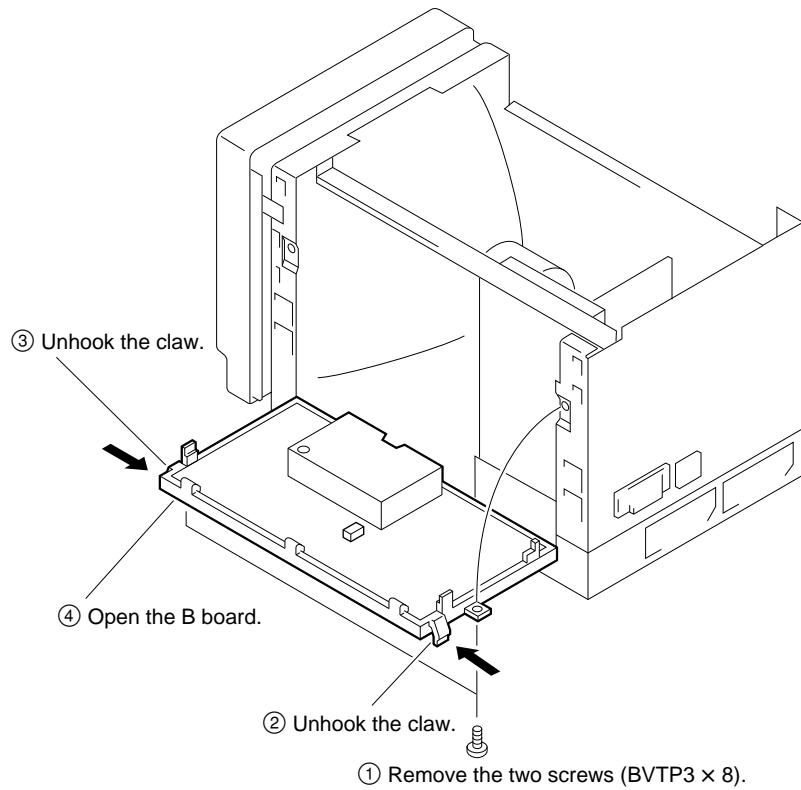


## 2-2. DISASSEMBLY

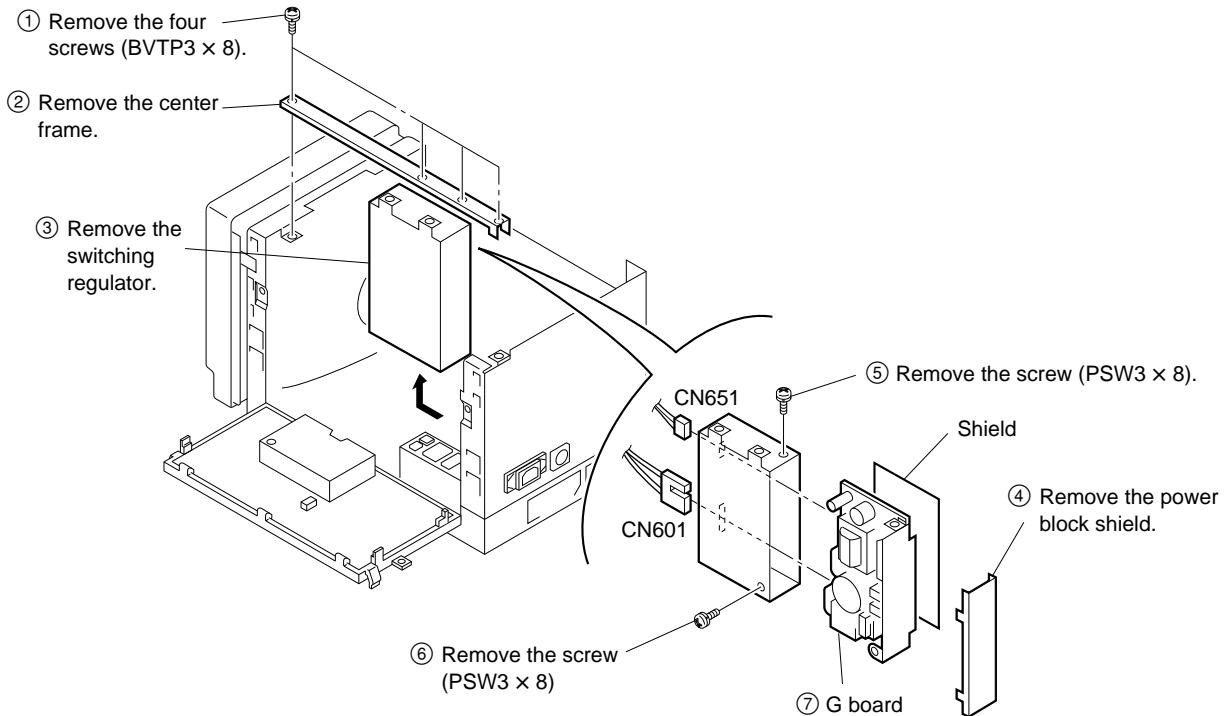
### 2-2-1. Cabinet Removal



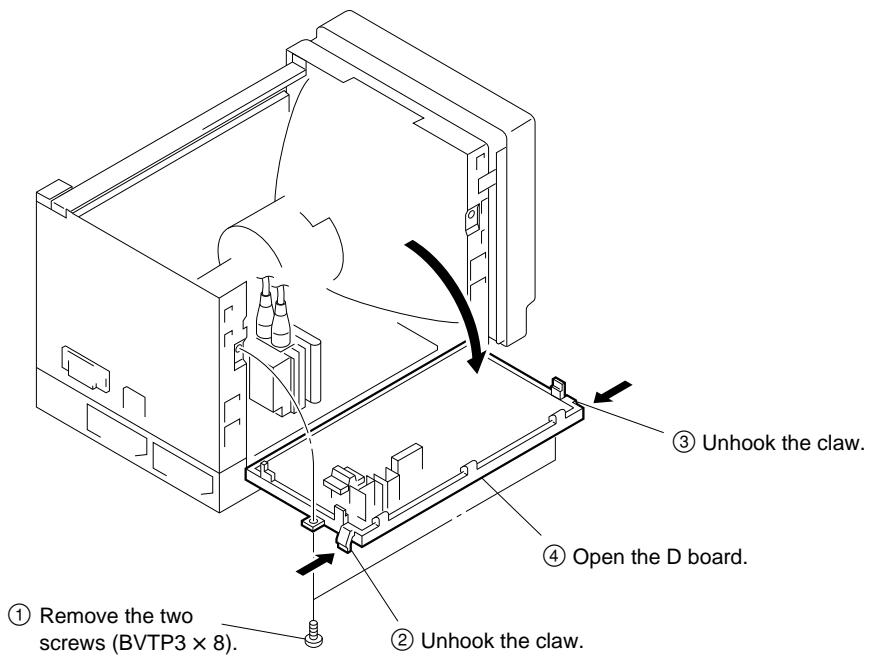
### 2-2-2. B Board Removal



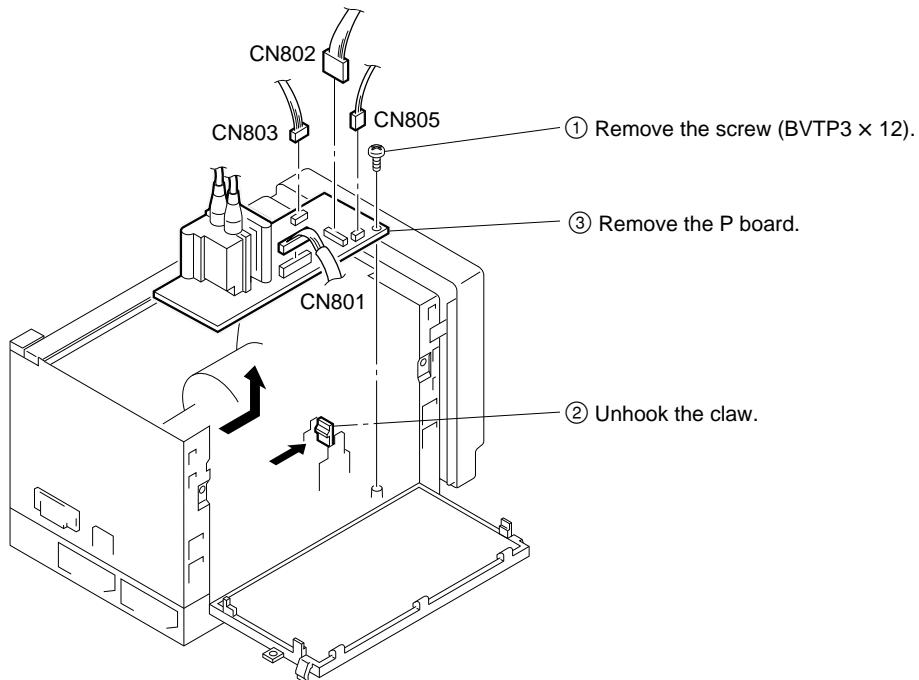
### 2-2-3. Switching Regulator Removal



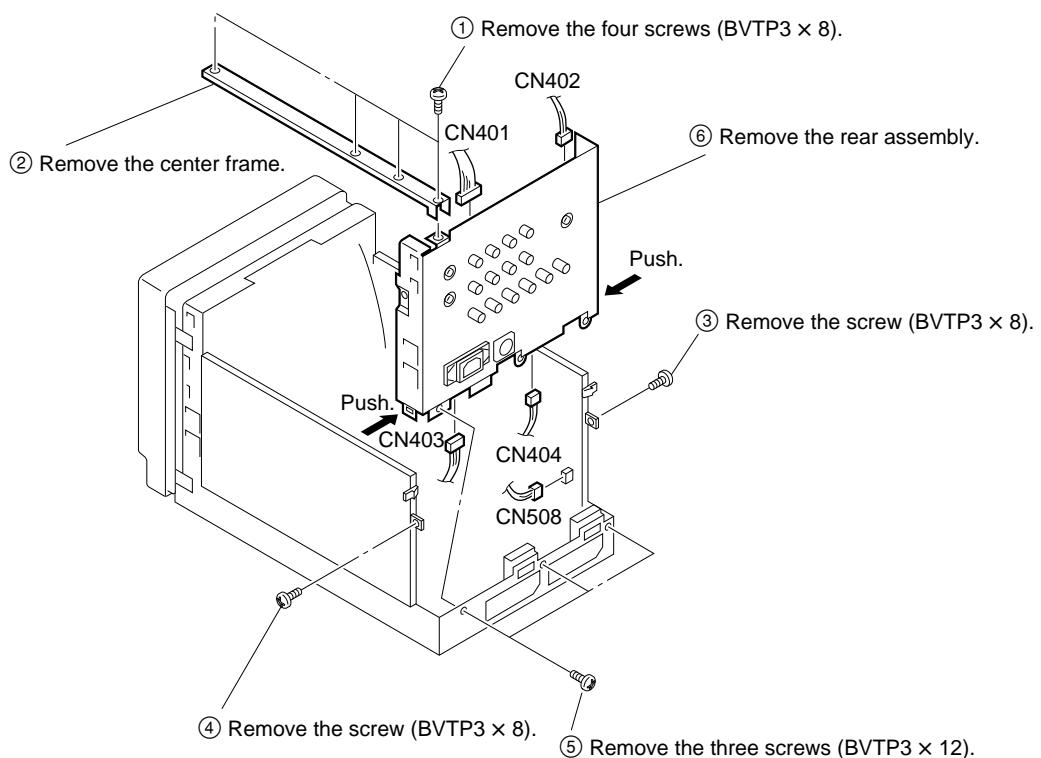
### 2-2-4. D Board Removal



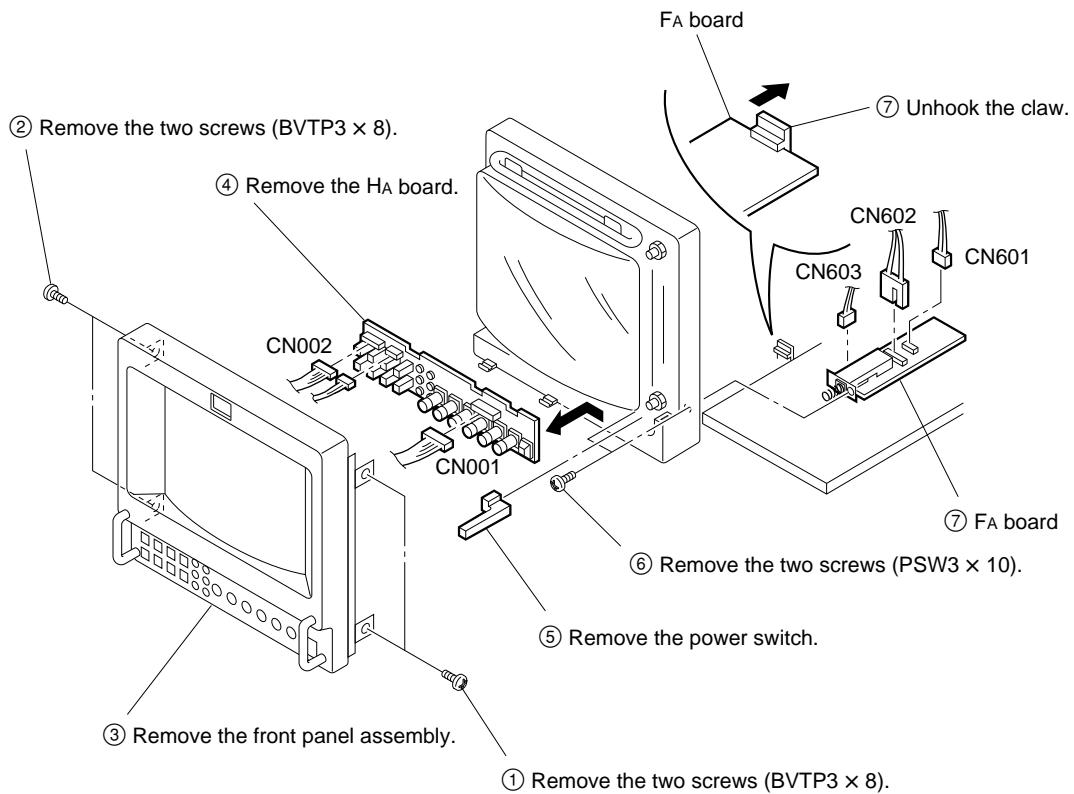
## 2-2-5. P Board Removal



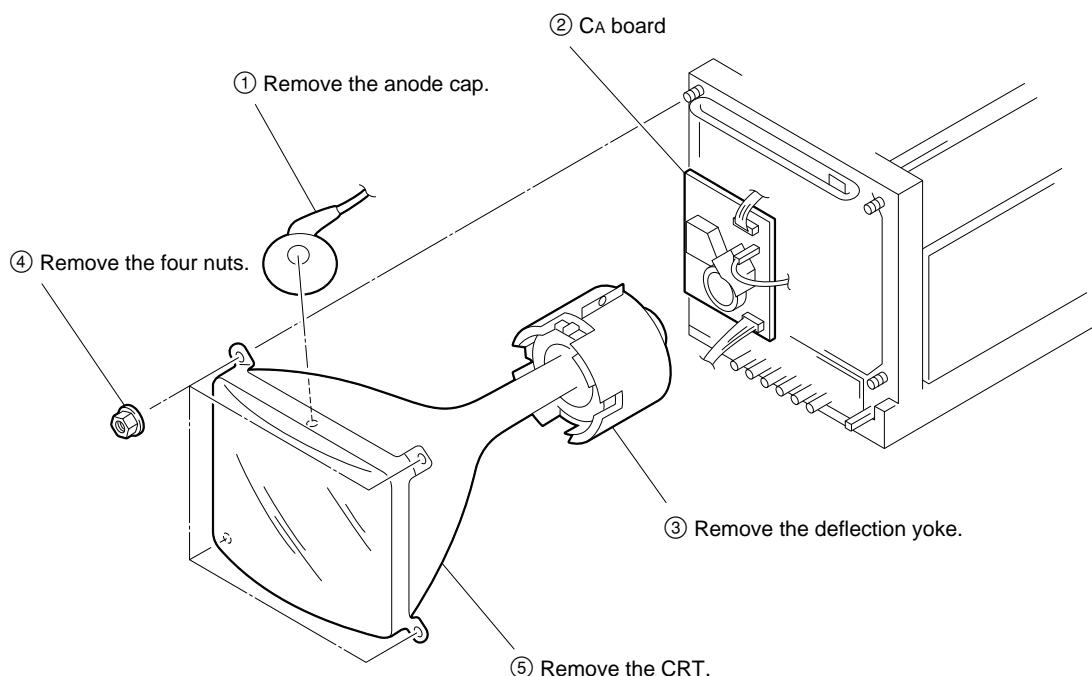
## 2-2-6. Rear Assembly Removal



## 2-2-7. HA Board Removal



## 2-2-8. CRT Removal

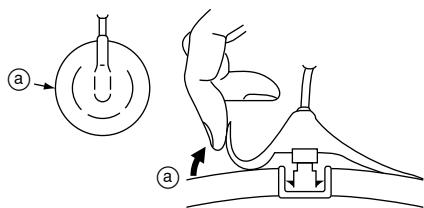


## 2-2-9. Removal of Anode-cap

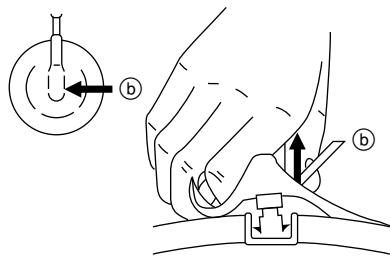
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, picture tube shield or carbon painted on the picture tube, after removing the anode.

### 1. Removing Procedures

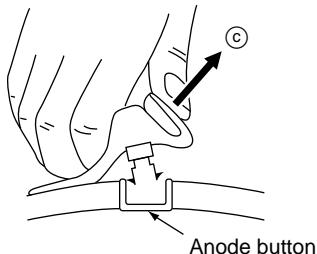
- (1) Turn up one side of the rubber cap in the direction indicated by the arrow ①.



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



- (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 ③.



### 2. Handling Precautions

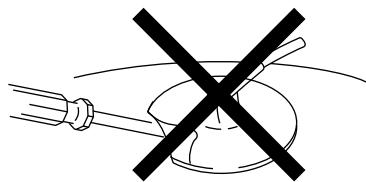
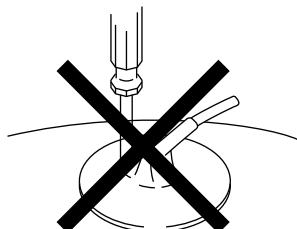
(1) Don't hurt the surface of anode-caps with sharp shaped material!

(2) Don't press the rubber hardly not to hurt 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 hurt the rubber.



## 2-2-10. Equipment Required

- Oscilloscope                         Tektronix 2465 or equivalent (band width: 350 MHz or more)
- NTSC, PAL, PAL-M, SECAM component signal generator                         Tektronix TG2000 + AVG1 (optional module) + AWVG1 (optional module) or equivalent
- Monoscope signal generator                         Shibasoku TP22AX or equivalent
- Frequency counter                         Advantest TR5821AK or equivalent
- Digital voltmeter                         Advantest TR6845 or equivalent
- Variable step-up transformer  
(or NF power supply)
- High-tension meter
- Regulated DC power supply
- Ammeter
- Luminance meter



## **SECTION 3**

### **SET-UP ADJUSTMENTS**

#### **3-1. PREPARATIONS**

The following adjustments should be made when a complete realignment is required or a new picture tube is installed. These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and selectors below should be set as follows unless otherwise noted.

Perform the adjustment in order as follows:

- 3-2. Landing Adjustment
- 3-3. Convergence Adjustment
- 3-4. Focus Adjustment
- 3-5. White Balance Adjustment

#### **Front Panel Controls**

VOLUME control .....	50 %
CONTR control .....	80 %
PHASE control .....	50 % (center click)
CHROMA control .....	50 % (center click)
BRIGHT control .....	50 % (center click)
APER control.....	50 % (center click)

#### **Front Panel Selectors**

SYNC INT/EXT selector .....	Pull (INT)
LINE/RGB selector .....	Pull (LINE)
A/B, RGB/Y R-Y B-Y selector .....	Pull (RGB)
BLUE ONLY selector .....	Pull (OFF)
UNDER SCAN selector .....	Pull (OFF)
H/V DELAY selector .....	Pull (OFF)
16 : 9 selector.....	Pull (4 : 3)

#### **Rear Panel Control**

V HOLD control .....	Stable position
----------------------	-----------------

## 3-2. LANDING ADJUSTMENT

### 3-2-1. Preparations

1. To reduce geomagnetism effects, face the CRT screen to the east or west.
2. Turn on the power switch, and erase the magnetic force using a degausser.

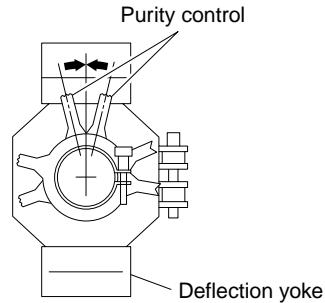


Fig. 3-1

### 3-2-2. Landing Adjustment

1. Receive the white signal, and set the CONTR and BRIGHT controls as follows:  
CONTR: MAXIMUM  
BRIGHT: set easy to observe
2. Adjust the white balance, screen (G2) voltage, and convergence roughly.
3. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig. 3-1.
4. Set the test signal generator to green.
5. Move the deflection yoke backward, and adjust the purity control so that the green is in the center and blue and red are at the sides, evenly. (See Fig. 3-2.)
6. Move the deflection yoke forward, and adjust so that the entire screen becomes green.  
(Repeat steps 4 to 7 as to red and blue.)
7. When the landing at the corners is not right, correct by using the magnet. (See Fig. 3-3.)

**Note:** When correction magnet is used, be sure to degauss the unit.

8. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.

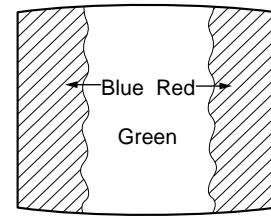


Fig. 3-2

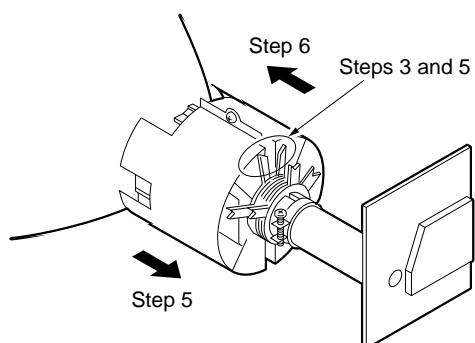
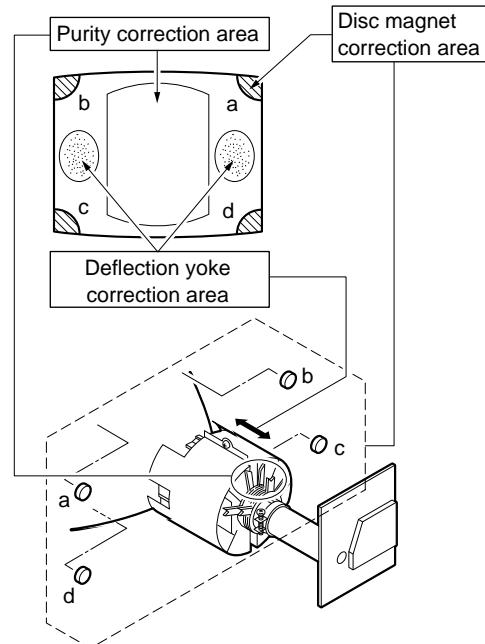


Fig. 3-3

### 3-3. CONVERGENCE ADJUSTMENT

#### 3-3-1. Horizontal and Vertical Convergence Adjustment on the Center of Screen

1. Before starting the fine adjustment, perform V.SIZE, V.CENT, H.SIZE, H.CENT and screen distortion adjustments roughly.
2. Receive a dot signal, and set the BRIGHT control to minimum and CONTR control to normal.
3. Adjust RV701 (H.STAT) on the CA board to coincide the Red, Green, and Blue dots on the center of screen (horizontal movement).
4. Adjust V.STAT magnet to coincide the Red, Green, and Blue dots on the center of screen (vertical movement).

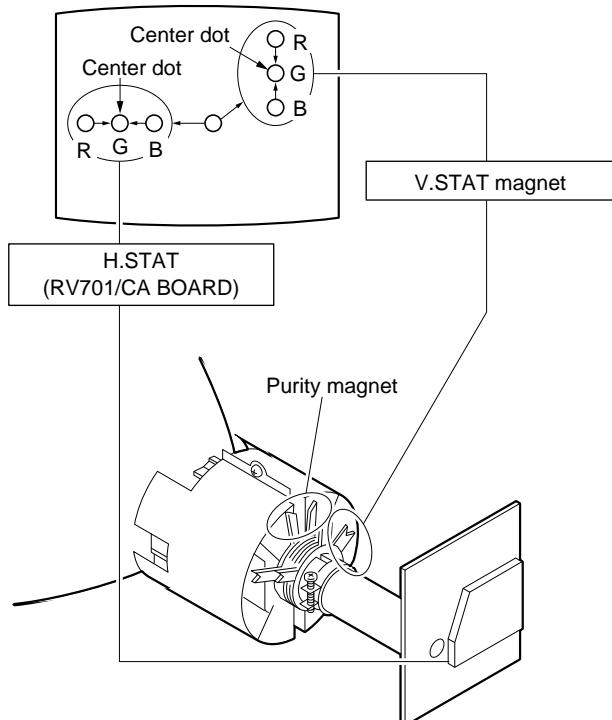


Fig. 3-4

**Note:** If Red, Green, and Blue dots do not coincide on the center of screen with RV701 (H.STAT) on the CA board, perform adjustment using V.STAT magnet at the same time while tracking. Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.

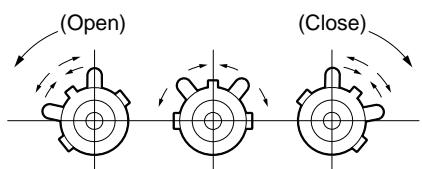


Fig. 3-5

5. The movement of Red, Green, and Blue dots by means of tilting, opening, and closing of the vertical static convergence magnet are as follows:

- ① When opening or closing the V.STAT magnet:

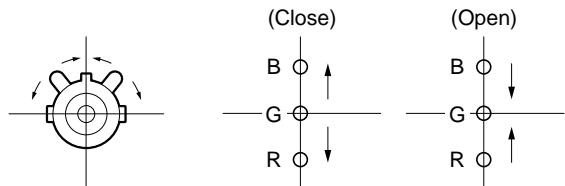


Fig. 3-6

- ② When tilting the V.STAT magnet counterclockwise:

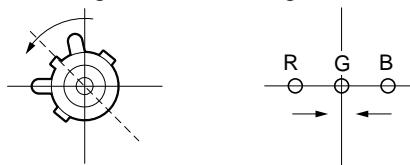


Fig. 3-7

- ③ When tilting the V.STAT magnet clockwise:

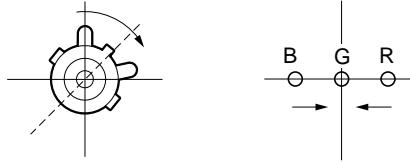


Fig. 3-8

- ④ When tilting the V.STAT magnet then open or close it:

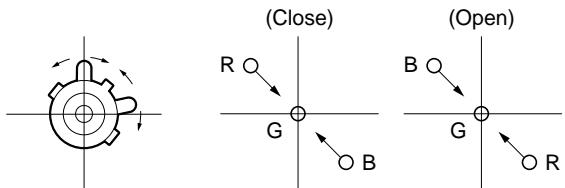


Fig. 3-9

**Note:** If Red and Green dots do not coincide with Blue dot, adjust with BMC (6-pole) magnet.

6. HMC/VMC correction with BMC (6-pole) magnet

- ① HMC (Horizontal Misconvergence) correction and motion of the electron beam with BMC (6-pole) magnet:

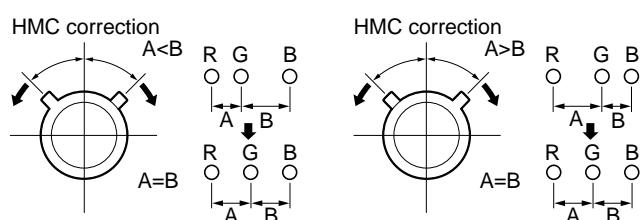


Fig. 3-10

② VMC (Vertical Misconvergence) correction and motion of the electron beam with BMC (6-pole) magnet:

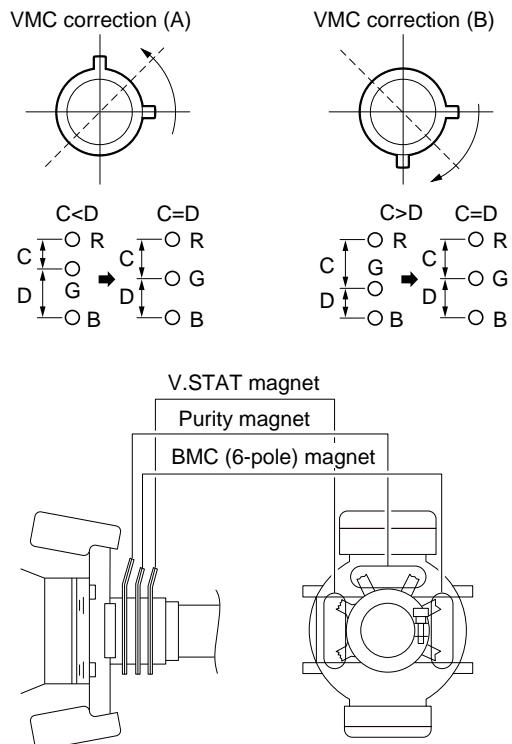


Fig. 3-11

### 3-3-2. Horizontal and Vertical Dynamic Convergence Adjustment in the Vicinity of Screen

- When there is misconvergence at the sides of the screen, adjust the inclination of deflection yoke in accordance with the following steps.
- Insert the three DY spacers between the deflection yoke and picture tube's funnel as shown in Fig. 3-12.
- Adjust the convergence around the four corners with a permalloy.

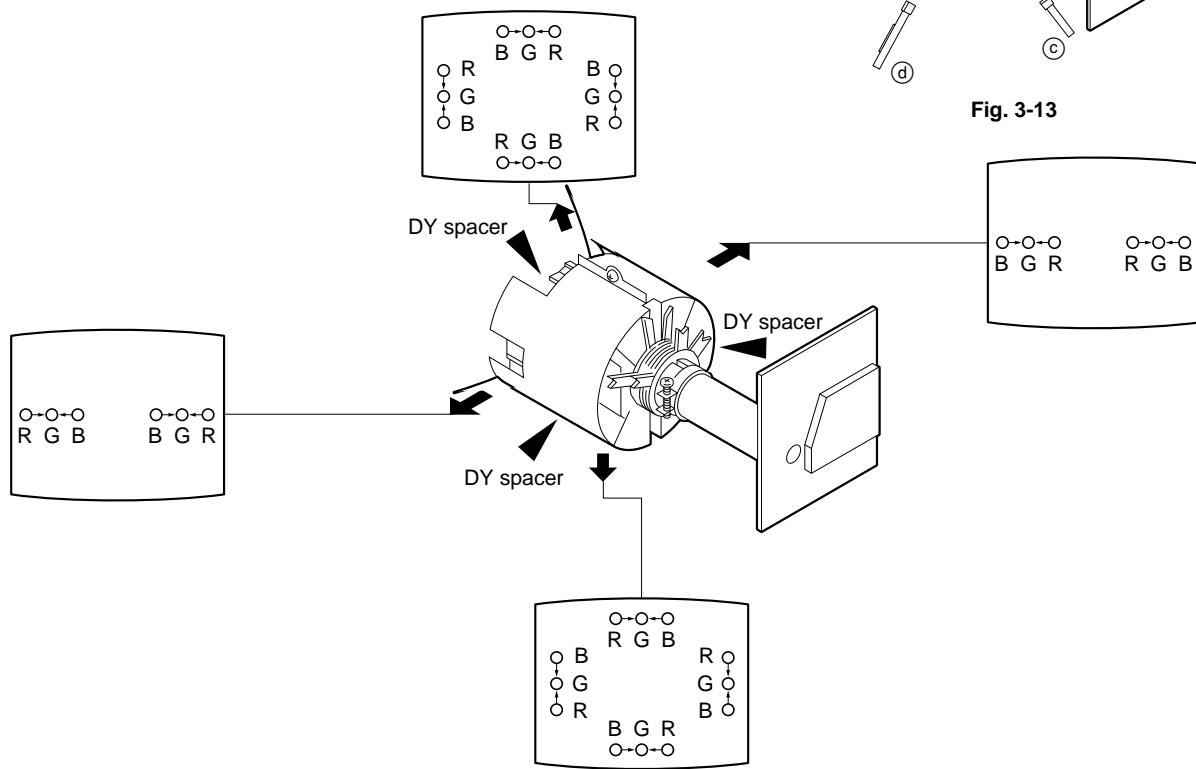
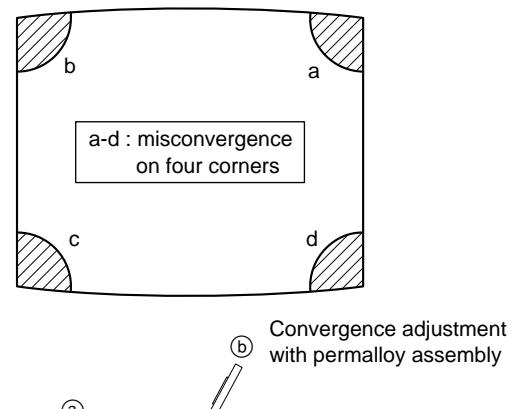


Fig. 3-12

### 3-4. FOCUS ADJUSTMENT

1. Receive the monoscope signal.
2. Set the CONTR control to normal.
3. Adjust the FOCUS control of the FBT so that the focus at the center of CRT screen and around the CRT screen become optimum.

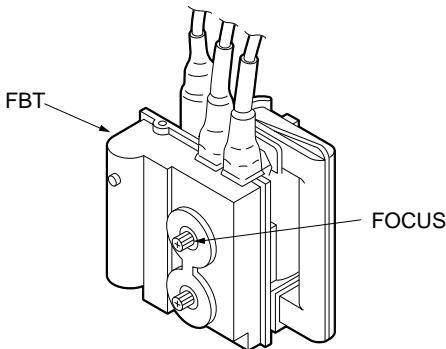


Fig. 3-14

### 3-5. WHITE BALANCE ADJUSTMENT

#### 3-5-1. Screen Voltage Adjustment

1. Receive the dot signal.
2. Connect a digital voltmeter to pin 5 (KG) of CRT socket. Adjust RV119 (G C/O) on the B board so that the voltage is 103 Vdc.
3. Connect a digital voltmeter to pin 9 (KB) of CRT socket. Adjust RV121 (B C/O) on the B board so that the voltage is 103 Vdc.
4. Adjust the SCREEN control of the FBT to the position where just before the flyback line disappears from the CRT screen.

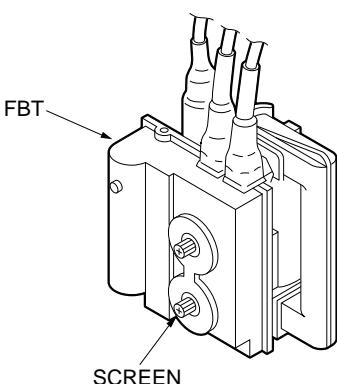


Fig. 3-15

#### 3-5-2. White Balance Adjustment

1. Receive the color bars signal. (Set the BURST switch of the test signal generator to OFF.)
2. Set the following controls on the front panel as follows:

BRIGHT	⇒ Center click
CONTR	⇒ Minimum
BIAS (Front panel)	⇒ 50 %
GAIN (Front panel)	⇒ 50 %
3. Adjust RV118 (SUB BRT) on the B board so that the blue stripe portion on the color bars signal is bright dimly.

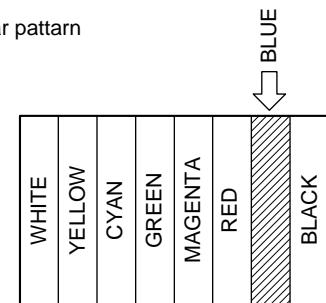


Fig. 3-16

4. Receive the white signal. (Set the BURST switch of the test signal generator to OFF.)
5. Set the CONTR control to 90 degrees clockwise from the center position.
6. Using the luminance meter, adjust the luminance level of the CRT screen so that it is 3 Nit. (Screen is bright dimly.)
7. Adjust the white balance of the cut-off with RV119 (G C/O) and RV121 (B C/O) on the B board.
8. Set the luminance level of white signal to 100 IRE with test signal generator.
9. Adjust the white balance of the high-light with RV120 (G GAIN) and RV122 (B GAIN) on the B board.
10. Press the BLUE ONLY switch on the front panel.
11. Adjust the white balance of the high-light with RV124 (R GAIN/BL) and RV125 (G GAIN/BL) on the B board.
12. Using the luminance meter, adjust the luminance level on the CRT screen with test signal generator so that it is 8 Nit. Then confirm that the white balance is adjusted correctly.



## SECTION 4

### SAFETY RELATED ADJUSTMENTS

**Note:** The “4-1. B+ Voltage Check” and “4-2. Protection Circuit (Hold-down circuit) Check” should always be performed when replacing the following components marked with **☒** and **☐** on the schematic diagram.

#### D board

**☒** components ..... RV833, RV1603

**☐** components ..... C519, C843, C844, C845, C846, C847, C848, C1601, C1602, D835, D836, D1601, D1603, IC502, Q833, Q834, Q835, Q836, Q1601, Q1602, Q1603, R523, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R1601, R1602, R1603, R1604, R1605, R1606, R1607, R1608, R1628, R1629, R1630, RV833, RV1601, RV1603

#### G board

**☒** components ..... RV651

**☐** components ..... C654, IC601, IC651, PH601, R653, R655, R656, R657, RV651

#### P board

**☐** components ..... C814, NL801, T802 (FBT)

#### 4-1. B+ VOLTAGE CHECK

##### 4-1-1. B+ Voltage Check in AC Operation

**Note:** Be sure to use the NF power supply. If not, use an ordinary variable step-up transformer of its distortion factor is 3 % or less.

Input signal: Dot pattern signal

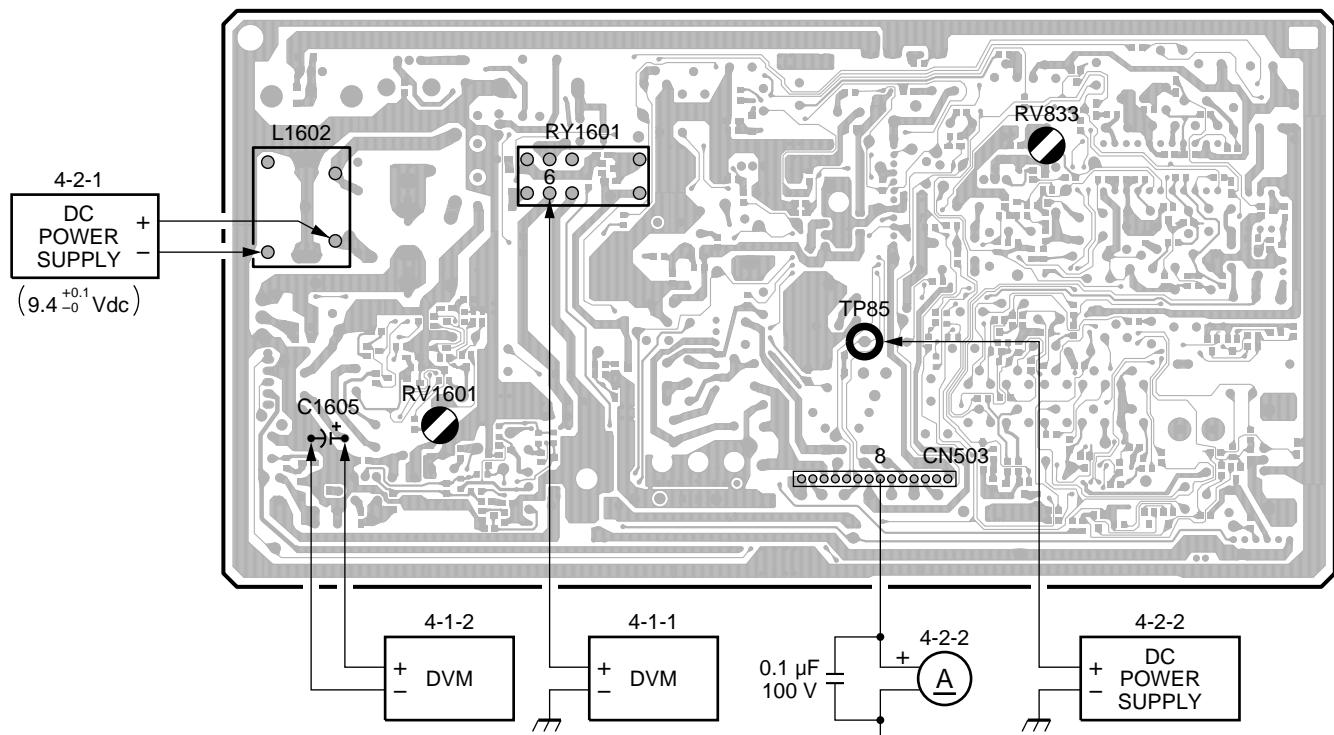
Controls: BRIGHT  $\Rightarrow$  Minimum  
CONTR  $\Rightarrow$  Minimum

1. Input  $130 \pm 5$  Vac from the NF power supply (or variable step-up transformer of its distortion factor is 3 % or less).
2. Connect the digital voltmeter to pin 6 of RY1601 and ground on the D board.
3. Make sure that the voltage is within the following specification.

##### Specification:

RY1601 Pin-6 (D board) = 41.9 Vdc or less

4. If the above voltage is out of specification, adjust voltage with RV651 on the G board. After adjusting, be sure to apply paint to RV651.



#### 4-1-2. B+ Voltage Check in DC Operation

Input signal: Dot pattern signal  
Controls: BRIGHT  $\Rightarrow$  Minimum  
CONTR  $\Rightarrow$  Minimum

1. Input  $12 \pm 0.4$  Vdc from the regulated DC power supply to DC 12V IN.
2. Connect the digital voltmeter to plus (+) terminal of C1605 and ground on the D board.
3. Make sure that the voltage is within the following specification.  
**Specification:**  
C1605 plus terminal (D board) =  $40 \pm 0.1$  Vdc or less
4. If the above voltage is out of specification, adjust voltage with RV1601 on the D board. After adjusting, be sure to apply paint to RV1601.

### 4-2. PROTECTION CIRCUIT (HOLD-DOWN CIRCUIT) CHECK

#### 4-2-1. Shutdown Voltage Adjustment

Input signal: Dot pattern signal  
Controls: BRIGHT  $\Rightarrow$  Minimum  
CONTR  $\Rightarrow$  Minimum

1. Turn RV1602 on the D board and stops where the protection circuit doesn't shut down.
2. Apply voltage of  $9.4 \pm 0.1$  Vdc from the DC power supply between pin 5 of L1602 and ground on the D board.
3. Turn on the power.
4. Gradually turn RV1602 on the D board and stops where the shutdown circuit works.

#### 4-2-2. Protection Circuit Operation Check

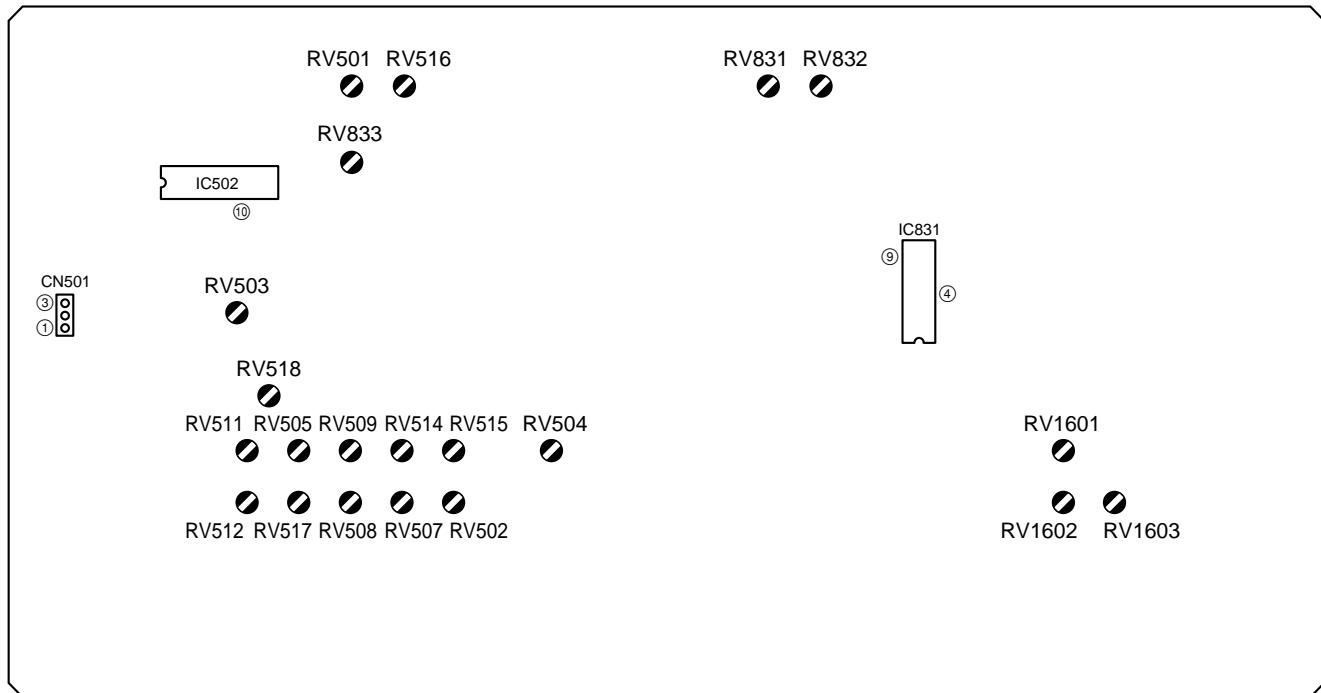
Input signal: Dot pattern signal  
Controls: BRIGHT  $\Rightarrow$  Minimum  
CONTR  $\Rightarrow$  Minimum

1. Connect (+) side of ammeter to pin 8 of CN503 on the D board and (-) side to pin 8 of CN801 on the P board.  
**Note:** Connect film capacitor of  $0.1 \mu\text{F}/100 \text{ V}$  in parallel to the ammeter.
2. Adjust BRIGHT and CONTR controls of the front panel so that the reading (IABL) on the ammeter becomes the following specification.  
**Specification:** IABL =  $160 \pm 30 \mu\text{A}$
3. Apply  $18.4 \pm 0.1$  Vdc from the regulated DC power supply to TP85 (or pin 6 of CN503) on the D board. Adjust RV833 on the D board so that the protection circuit works.
4. Apply  $17.6 \pm 0.1$  Vdc from the regulated DC power supply to TP85 (or pin 6 of CN503) on the D board.  
**Specification:** Protection circuit becomes inoperative.
5. Input the all white signal from the test signal generator.
6. Adjust BRIGHT and CONTR controls of the front panel so that the reading (IABL) on the ammeter becomes the following specification.  
**Specification:** IABL =  $520 \pm 30 \mu\text{A}$
7. Apply  $17.7 \pm 0.1$  Vdc from the regulated DC power supply to TP85 (or pin 6 of CN503) on the D board.  
**Specification:** Protection circuit becomes operative.
8. Apply  $16.9 \pm 0.1$  Vdc from the regulated DC power supply to TP85 (or pin 6 of CN503) on the D board.  
**Specification:** Protection circuit becomes inoperative.
9. After the completion of steps 2 to 9, be sure to apply paint to RV833.

## SECTION 5

### CIRCUIT ADJUSTMENTS

#### 5-1. D BOARD ADJUSTMENTS

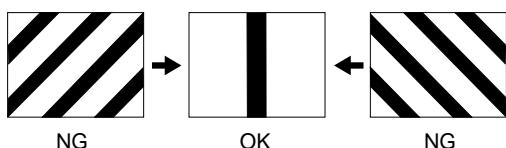


D Board Adjusting Components Location

##### 5-1-1. Horizontal Oscillating Frequency Adjustment (RV503)

Input signal: Monoscope signal

1. Connect (+) side of electrolytic capacitor of  $0.1 \mu\text{F}/100 \text{ V}$  to pin 1 of CN501 (or pin 1 of IC502) and (-) side to pin 3 of CN501 (or ground).
2. Connect a frequency counter to pin 10 of IC502. Adjust RV503 (H.FREQ) so that the frequency reading becomes the following specification.  
**Specification:** Frequency =  $15.734 \text{ kHz} \pm 50 \text{ Hz}$
3. If the frequency counter is not available, adjust RV503 so that a horizontal-hold becomes stable.

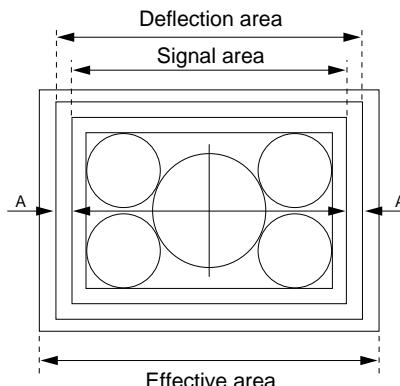


##### 5-1-2. Video Phase Adjustment (RV512, RV516, RV502)

Input signal: Monoscope signal

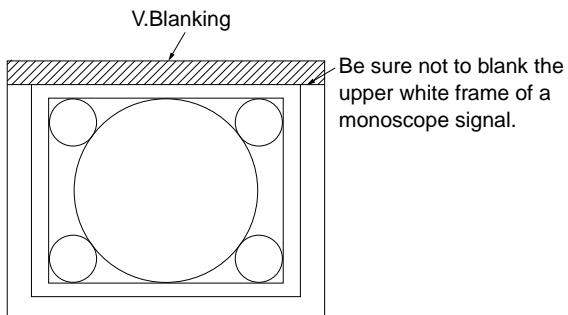
Switches: UNDER SCAN  $\Rightarrow$  Push (ON)  
16 : 9  $\Rightarrow$  Pull (4 : 3)  
Controls: BRIGHT  $\Rightarrow$  Maximum  
CONTR  $\Rightarrow$  Minimum

1. Adjust RV512 (U/H.SIZE) so that the white frame of monoscope signal is visible on the CRT screen.
2. Adjust RV516 (H.BLKG) so that the entire deflection area is visible on the CRT screen.
3. Turn RV502 (VIDEO PHASE) and make sure that the video phase is moving smoothly. Adjust RV502 so that the monoscope signal comes in the center of the signal area.



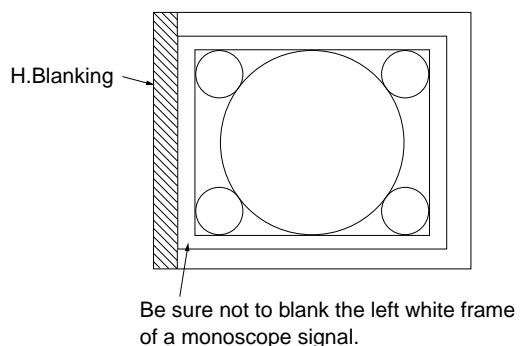
### 5-1-3. Vertical Blanking Adjustment (RV501)

- Input signal: Monoscope signal  
 Switches: UNDER SCAN  $\Rightarrow$  Push (ON)  
 $16 : 9 \Rightarrow$  Pull (4 : 3)  
 Controls: BRIGHT  $\Rightarrow$  Maximum  
 CONTR  $\Rightarrow$  Minimum
1. Adjust RV501 (V.BLKG) so that the upper white frame of monoscope signal is not blanked.



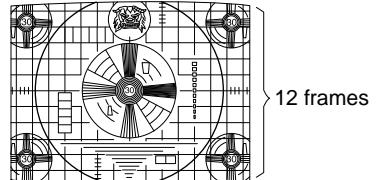
### 5-1-4. Horizontal Blanking Adjustment (RV516)

- Input signal: Monoscope signal  
 Switches: UNDER SCAN  $\Rightarrow$  Push (ON)  
 $16 : 9 \Rightarrow$  Pull (4 : 3)  
 Controls: BRIGHT  $\Rightarrow$  Maximum  
 CONTR  $\Rightarrow$  Minimum
1. Adjust RV516 (H.BLKG) so that the left white frame of monoscope signal is not blanked.

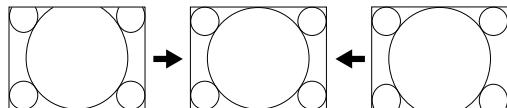


### 5-1-5. Vertical Deflection System Adjustment (RV505, RV507, RV504, RV518)

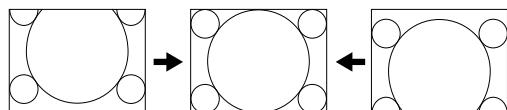
- Input signal: Monoscope signal  
 Switches: UNDER SCAN  $\Rightarrow$  Pull (OFF)  
 $16 : 9 \Rightarrow$  Pull (4 : 3)  
 Controls: BRIGHT  $\Rightarrow$  50 % (Center click)  
 CONTR  $\Rightarrow$  70 %
1. Adjust RV505 (V.SIZE) so that the vertical size of monoscope signal on the CRT screen is 12 frames.



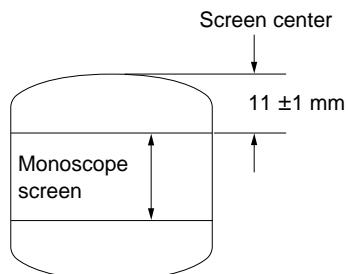
2. Adjust the vertical linearity with RV507 (V.LINE).



3. Adjust the vertical position with RV504 (V.CENT).



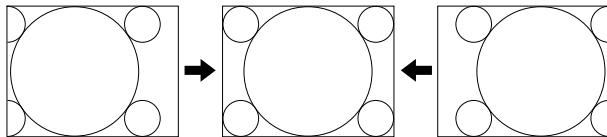
4. Press the UNDER SCAN switch of the front panel.
5. Press the  $16 : 9$  switch of the front panel.
6. Adjust the vertical size with RV518 (16 : 9 V.SIZE).



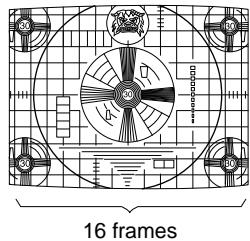
### 5-1-6. Horizontal Deflection System Adjustment (RV508, RV509, RV511, RV514, RV515, and RV801/P Board)

- Input signal: Monoscope signal  
 Switches: UNDER SCAN  $\Rightarrow$  Pull (OFF)  
 $16 : 9 \Rightarrow$  Pull (4 : 3)  
 Controls: BRIGHT  $\Rightarrow$  50 % (Center click)  
 CONTR  $\Rightarrow$  70 %

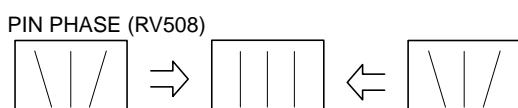
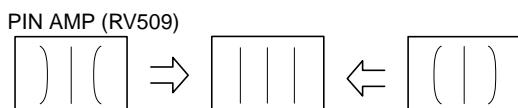
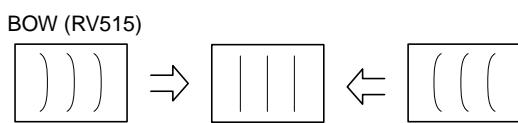
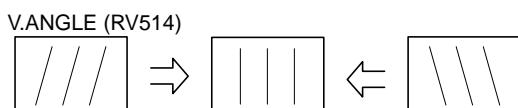
1. Adjust the horizontal position with RV801 (H.CENT).



2. Adjust RV511 (H.SIZE) so that the horizontal size of monoscope signal on the CRT screen is 16 frames.



3. While adjusting vertical angular and bow distortions with RV514 (V.ANG) and RV515 (BOW), adjust RV509 (PIN AMP) and RV508 (PIN PHASE) so that the vertical lines become straight.



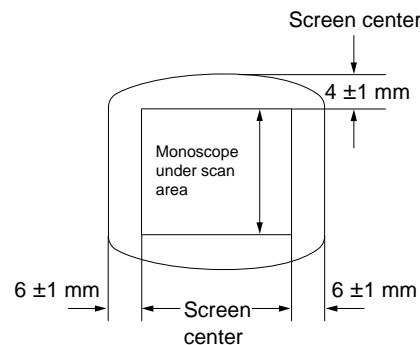
4. Adjust RV511 (H.SIZE) so that the horizontal size of monoscope signal on the CRT screen is 16 frames.

### 5-1-7. Under Scan Adjustment (RV517, RV512)

- Input signal: Monoscope signal  
 Switches: UNDER SCAN  $\Rightarrow$  Push (ON)  
 $16 : 9 \Rightarrow$  Pull (4 : 3)  
 Controls: BRIGHT  $\Rightarrow$  50 % (Center click)  
 CONTR  $\Rightarrow$  70 %

1. Adjust the horizontal size and vertical size with RV517 (U/V.SIZE) and RV512 (U/H.SIZE) as shown below.

**Note:** Be careful not to wane four corners.



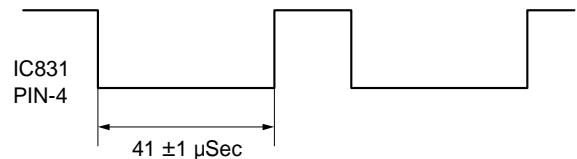
### 5-1-8. Horizontal/Vertical Delay Adjustment (RV832, RV831)

- Input signal: Monoscope signal  
 Switches: UNDER SCAN  $\Rightarrow$  Push (ON)  
 $16 : 9 \Rightarrow$  Pull (4 : 3)  
 Controls: BRIGHT  $\Rightarrow$  50 % (Center click)  
 CONTR  $\Rightarrow$  70 %

1. Connect an oscilloscope to pin 4 of IC831.

#### 2. Horizontal Delay Adjustment (RV832)

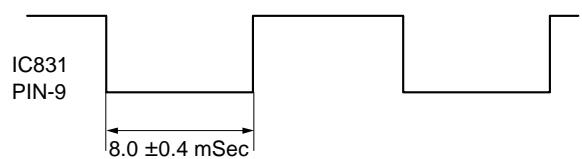
Adjust the pulse width with RV832 as shown below.



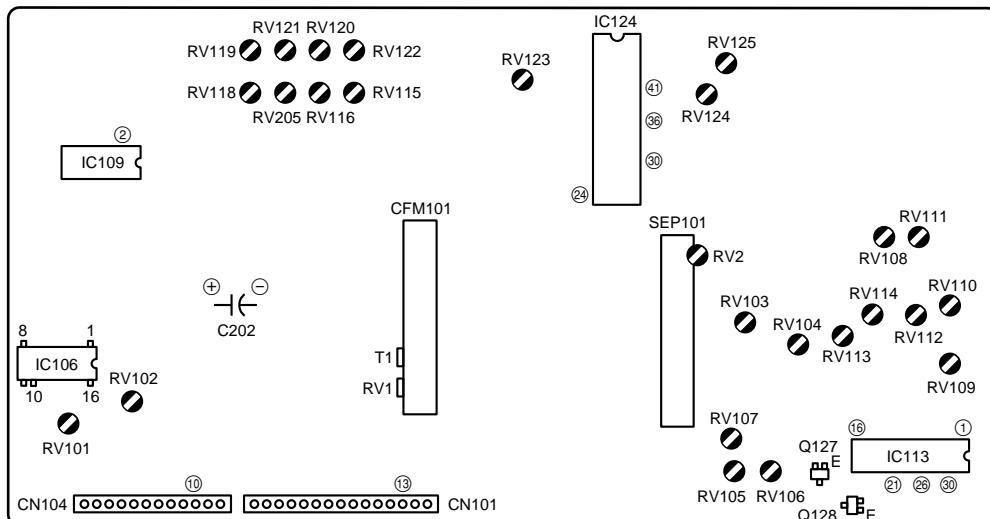
3. Connect an oscilloscope to pin 9 of IC831.

#### 4. Vertical Delay Adjustment (RV831)

Adjust the pulse width with RV831 as shown below.



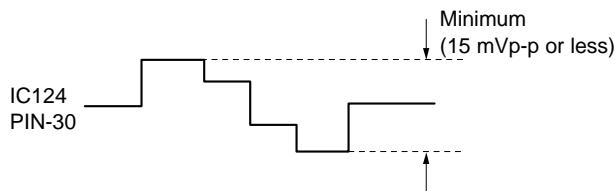
## 5-2. B BOARD ADJUSTMENTS



B Board Adjusting Components Location

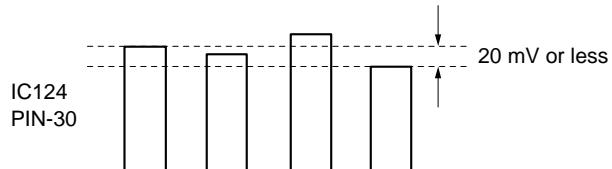
### 5-2-1. Primary Color Matrix Adjustment (1) (RV115)

- Input signal: Component color bars signal  
(75 % chroma color bars signal)
- Switches: UNDER SCAN  $\Rightarrow$  Pull (OFF)  
16 : 9  $\Rightarrow$  Pull (4 : 3)  
SYNC INT/EXT  $\Rightarrow$  EXT  
LINE/RGB  $\Rightarrow$  RGB
- Supply a sync signal from the test signal generator to EXT SYNC IN connector of the rear panel.
  - Supply Y signal and R-Y signal from the test signal generator to RGB/COMPONENT connector of the rear panel.
  - Connect an oscilloscope to pin 30 (B OUT) of IC124.
  - Adjust RV115 (SUB HUE) to minimize (15 mVp-p or less) the B signal level.



### 5-2-2. Primary Color Matrix Adjustment (2) (RV116, RV123)

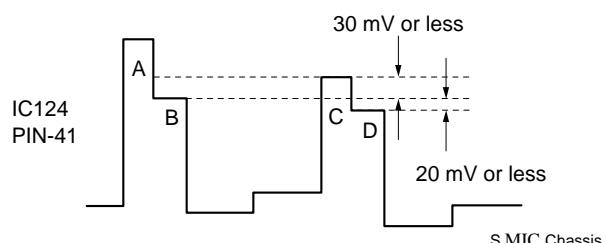
- Input signal: Component color bars signal  
(75 % chroma color bars signal)
- Switches: UNDER SCAN  $\Rightarrow$  Pull (OFF)  
16 : 9  $\Rightarrow$  Pull (4 : 3)  
SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  RGB
- Supply Y, R-Y, and B-Y signals from the test signal generator to RGB/COMPONENT connectors.
  - Connect an oscilloscope to pin 30 (B OUT) of IC124.
  - Adjust RV116 (SUB COL) to minimize each peak level (20 mVp-p or less). Adjust so that the 1st and the 4th peaks should have the same level.



- Connect an oscilloscope to pin 41 (R OUT) of IC124.
- Adjust RV123 (MATRIX R-Y) so that the level difference of R signal is shown below.

#### Specification:

Level difference of B and D = Minimum (20 mV or less)  
Level difference of B and C = Minimum (30 mV or less)



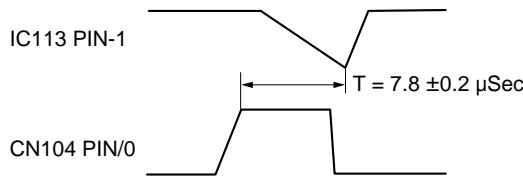
### 5-2-3. Burst Gate Pulse Width Adjustment (RV109)

Input signal: Color bars signal (LINE A/VIDEO IN)

Switches: UNDER SCAN ⇒ Pull (OFF)  
 16 : 9 ⇒ Pull (4 : 3)  
 SYNC INT/EXT ⇒ INT  
 LINE/RGB ⇒ LINE

1. Connect an oscilloscope to pin 10 (COMP SYNC) of CN104 and pin 1 (BGP GEN) of IC113.
2. Adjust the pulse width (T) with RV109 (BGP WIDTH) as shown below.

**Specification:**  $T = 7.8 \pm 0.2 \mu\text{sec}$



### 5-2-4. NTSC Subcarrier Frequency Adjustment (RV1400)

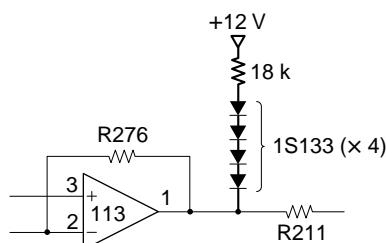
Input signal: NTSC Color bars signal (LINE A/VIDEO IN)

Switches: UNDER SCAN ⇒ Pull (OFF)  
 16 : 9 ⇒ Pull (4 : 3)  
 SYNC INT/EXT ⇒ INT  
 LINE/RGB ⇒ LINE

1. Apply +5 V to pin 26 of IC113 via 4.7 kΩ resistor.
2. Connect pin 2 of IC109 to ground.
3. Connect the following circuit to pin 1 of IC113.

**Part Required**

Resistor 18 kΩ ..... 1 pc  
 Diode 1SS133 ..... 4 pcs



4. Connect the frequency counter to pin 21 of IC113.
5. Adjust the frequency with RV1400 (3.58 F0).

**Specification:**  $F0 = 3,579,545 \pm 20 \text{ Hz}$

### 5-2-5. PAL Subcarrier Frequency Adjustment (RV1401)

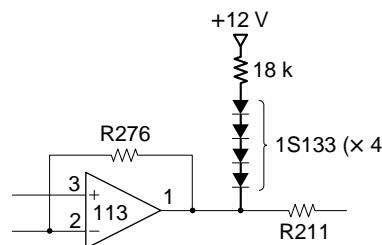
Input signal: PAL Color bars signal (LINE A/VIDEO IN)

Switches: UNDER SCAN ⇒ Pull (OFF)  
 16 : 9 ⇒ Pull (4 : 3)  
 SYNC INT/EXT ⇒ INT  
 LINE/RGB ⇒ LINE

1. Apply +5 V to pin 26 of IC113 via 4.7 kΩ resistor.
2. Connect pin 2 of IC109 to +12 V line.
3. Connect the following circuit to pin 1 of IC113.

**Part Required**

Resistor 18 kΩ ..... 1 pc  
 Diode 1SS133 ..... 4 pcs



4. Connect the frequency counter to pin 21 of IC113.
5. Adjust the frequency with RV1401 (4.43 F0).

**Specification:**  $F0 = 4,433,619 \pm 20 \text{ Hz}$

### 5-2-6. NTSC Comb Filter Adjustment (RV1, T1/CFM101)

Input signal: NTSC Color bars signal (LINE A/VIDEO IN)

Switches: UNDER SCAN ⇒ Pull (OFF)  
 16 : 9 ⇒ Pull (4 : 3)  
 SYNC INT/EXT ⇒ INT  
 LINE/RGB ⇒ LINE

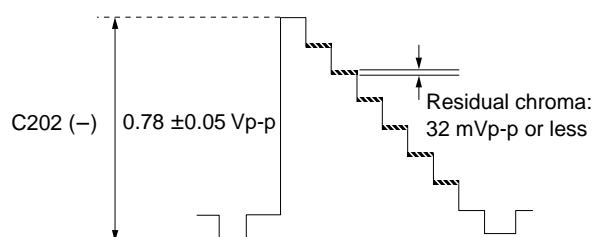
1. Connect an oscilloscope to minus (-) terminal of capacitor C202, and confirm the Y and residual chroma levels.

**Specification:**

Y level =  $0.78 \pm 0.05 \text{ Vp-p}$

Residual chroma level = 32 mVp-p or less

2. If the residual chroma level is out of specification, adjust RV1 and T1 alternately so that it is minimum.

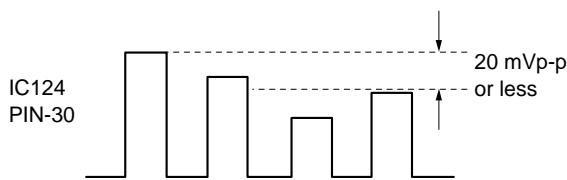


### 5-2-7. NTSC 3.58 MHz Color Demodulation (B-Y) Adjustment (RV114, RV111)

Input signal: 3.58 MHz NTSC 75 % Color bars signal  
(Set Y and B-Y of test signal generator to off.)

Switches: SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to emitter of Q128.
2. Adjust RV114 (3.58 NTSC HUE) so that the level other than the burst portion is flat (Voltage difference = 10 mV or less).
3. Set Y and B-Y of test signal generator to on.
4. Connect an oscilloscope to pin 30 of IC124.
5. Adjust RV111 (3.58 NTSC COL) so that the level difference of B signal is minimum (20 mVp-p or less). Adjust so that the 1st and the 4th peaks should have the same level.



### 5-2-8. NTSC 3.58 MHz Color Demodulation (R-Y) Adjustment (RV104, RV107)

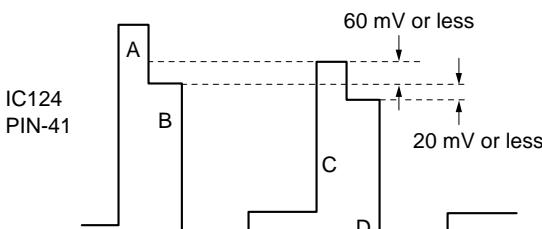
Input signal: 3.58 MHz NTSC 75 % Color bars signal  
(Set Y and R-Y of test signal generator to off.)

Switches: SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to emitter of Q127.
2. Adjust RV104 (3.58 NTSC SHIFT) so that the R level is flat (Voltage difference =  $\pm 15$  mV or less).
3. Set Y and R-Y of test signal generator to on.
4. Connect an oscilloscope to pin 41 of IC124.
5. Adjust RV107 (3.58 NTSC COL) so that the level difference of R signal is minimum.

#### Specification:

Level difference of B and D = Minimum (20 mV or less)  
Level difference of B and C = Minimum (60 mV or less)



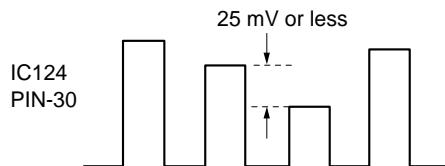
6. After adjustment, perform section "5-2-7. NTSC 3.58 MHz Color Demodulation (B-Y) Adjustment" again.

### 5-2-9. NTSC 4.43 MHz Color Demodulation Adjustment (RV108, RV112)

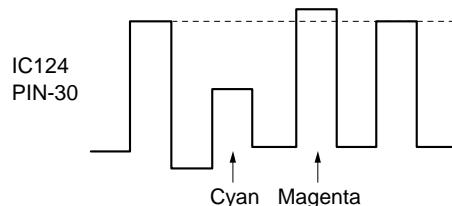
Input signal: 4.43 MHz NTSC 75 % Color bars signal  
(Set Y and B-Y of test signal generator to off.)

Switches: SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to pin 30 of IC124.
2. Adjust RV108 (4.43 NTSC COL) so that the level is flat (Voltage difference = 25 mV or less).



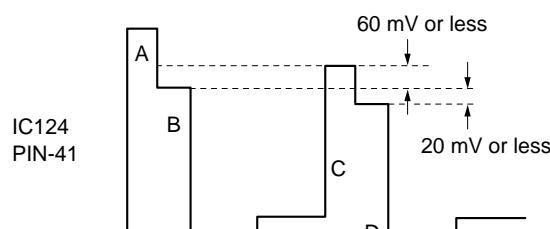
3. If cyan and magenta levels are different, adjust RV112 (4.43 NTSC HUE) and RV108 (4.43 NTSC COL) alternately.



4. Connect an oscilloscope to emitter of Q127.
5. Adjust RV103 (4.43 NTSC SHIFT) so that the R level is flat (Voltage difference =  $\pm 15$  mV or less).
6. Connect an oscilloscope to pin 41 of IC124.
7. Adjust RV106 (4.43 NTSC COL) so that the level difference of R signal is minimum.

#### Specification:

Level difference of B and D = Minimum (20 mV or less)  
Level difference of B and C = Minimum (60 mV or less)



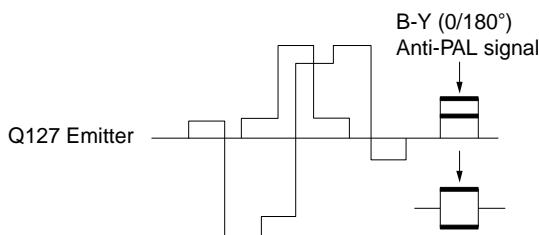
8. After adjustment, readjust from steps 1 to 7.

## 5-2-10. PAL Color Demodulation Adjustment (RV113, RV2/SEP101, RV110, RV105)

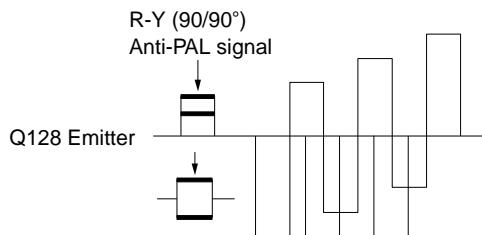
Input signal: PAL Special Color bars signal  
PAL Color bars signal

Switches: SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  LINE

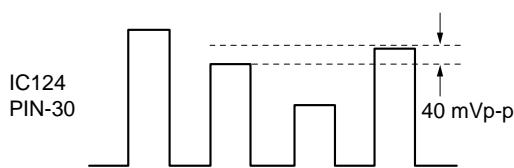
1. Connect an oscilloscope to emitter of Q127.
2. Adjust RV113 (PAL HUE) so that the B-Y (0/180°) anti-PAL signal on the R-Y demodulated signal is flat.



3. Connect an oscilloscope to emitter of Q128.
4. Adjust RV2 on the SEP101 so that the R-Y (90/90°) anti-PAL signal on the B-Y demodulated signal is flat.



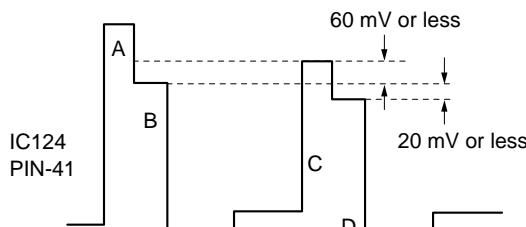
5. Turn CHROMA control of the front panel maximum clockwise, and make sure of no color is visible at the anti-PAL signal portion on the CRT screen.
6. Input the PAL color bars signal.
7. Connect an oscilloscope to pin 30 of IC124.
8. Adjust RV110 (PAL COL) to minimize each peak level.



9. Connect an oscilloscope to pin 41 of IC124.
10. Adjust RV105 (PAL COL) so that the level difference of R signal is minimum.

**Specification:**

Level difference of B and D = Minimum (20 mV or less)  
Level difference of B and C = Minimum (60 mV or less)



11. After adjustment, readjust from steps 7 to 10.

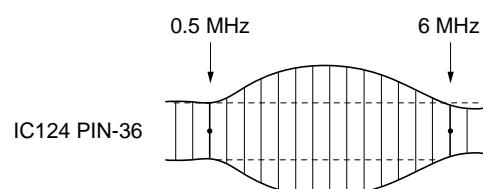
## 5-2-11. Sub-Sharpness Adjustment (RV205)

Input signal: Sweep signal

Bandwidth: 10 MHz or more (flat)  
Burst: OFF  
Composite Sync: ON

Switches: SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to pin 36 of IC124.
2. Adjust RV205 (SUB SHARP) so that the 0.5 MHz and 6 MHz portions of the sweep signal is equal level (0  $\pm$  0.5 dB).

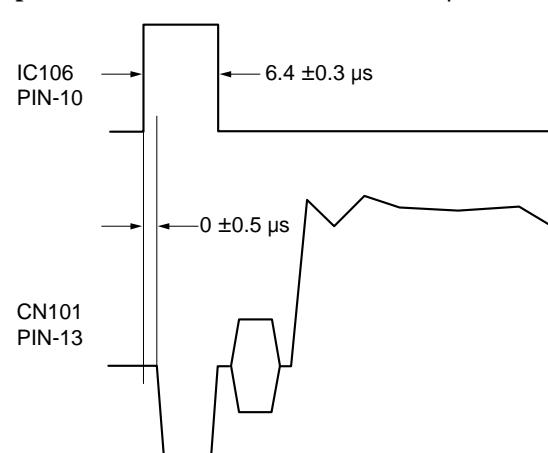


## 5-2-12. Chroma H Pulse Adjustment (RV101, RV102)

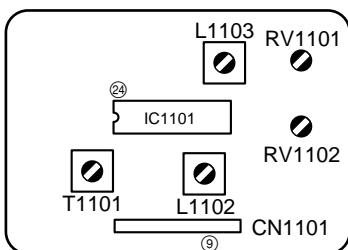
Input signal: SECAM Color Bars signal

Switches: SYNC INT/EXT  $\Rightarrow$  INT  
LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to pin 10 of IC106 and pin 13 of CN101.
2. Adjust RV101 (PULSE WIDTH) so that the pulse width is shown in the following specification.  
**Specification:** Pulse width =  $6.4 \pm 0.3 \mu s$   
**Note:** No adjustment is required for the PAL-M model.
3. Adjust RV102 (PULSE POSI) so that the phase difference of H sync to chroma H pulse is shown in the following specification.  
**Specification:** Phase difference =  $0 \pm 0.5 \mu s$



## 5-3. S BOARD ADJUSTMENTS



S Board Adjusting Components Location

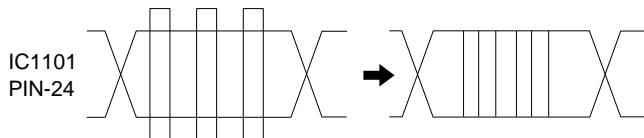
### 5-3-1. SECAM Bell Filter Adjustment (T1101)

Input signal: SECAM color bars signal

Switches: SYNC INT/EXT  $\Rightarrow$  INT

LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to pin 24 of IC1101.
2. Adjust T1101 (BELL FILTER) so that the envelope of chroma signal is flat.



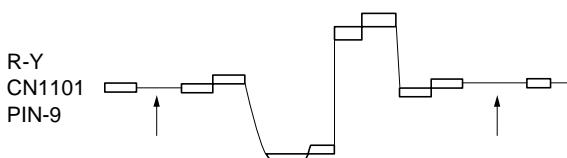
### 5-3-2. SECAM Color Balance Adjustment (L1102, L1103)

Input signal: SECAM color bars signal

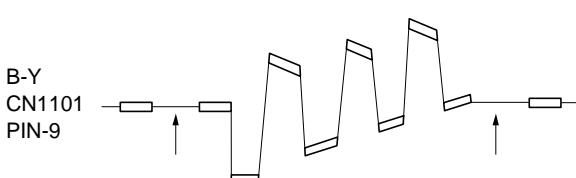
Switches: SYNC INT/EXT  $\Rightarrow$  INT

LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to pin 9 of CN1101.
2. Adjust L1102 so that no chroma component (no colored) portions of R-Y signal is flat.



3. Adjust L1103 so that no chroma component (no colored) portions of B-Y signal is flat.



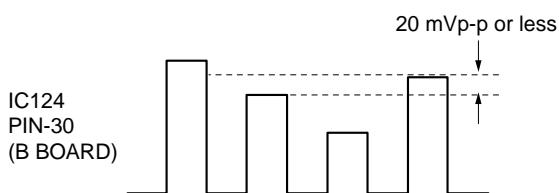
### 5-3-3. SECAM Demodulation Level Adjustment (RV1101, RV1102)

Input signal: SECAM color bars signal

Switches: SYNC INT/EXT  $\Rightarrow$  INT

LINE/RGB  $\Rightarrow$  LINE

1. Connect an oscilloscope to pin 30 of IC124 on the B board.
2. Adjust RV1101 (SECAM COL) so that the peak level difference of B signal is minimum (20 mVp-p or less). Adjust so that the 1st and the 4th peaks should have the same level.

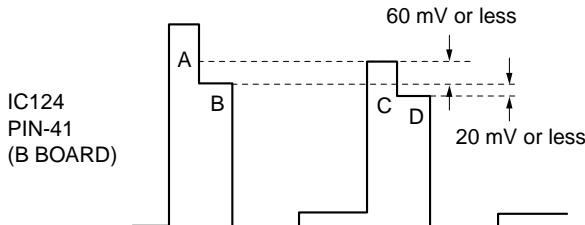


3. Connect an oscilloscope to pin 41 of IC124 on the B board.
4. Adjust RV1102 (SECAM R-Y) so that the level difference of R signal is minimum.

#### Specification:

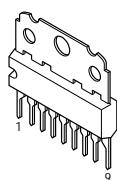
Level difference of B and D = Minimum (20 mV or less)

Level difference of B and C = Minimum (60 mV or less)

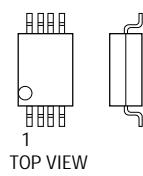


## SECTION 6

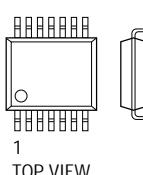
### SEMICONDUCTORS

**AN5265**

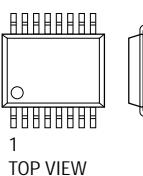
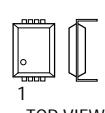
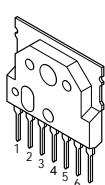
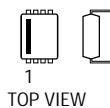
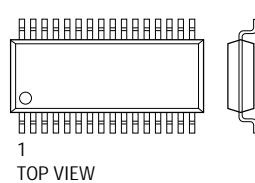
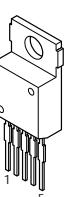
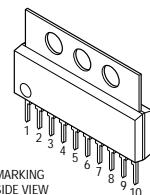
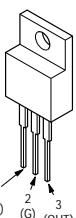
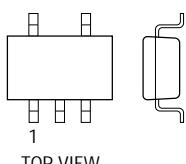
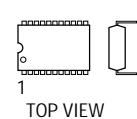
**BA10393F-E2**  
**MM1111XFBE**  
**MM1113XBE**  
**MM1114XFBE**  
**TC4W53F**



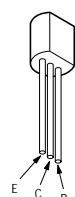
**BU4011BF-E2**  
**MC14066BF**  
**BU4070BF-E2**  
**BU4584BF-E2**



**BU4053BCF**  
**TC4052BFHB**

**CXA1478S****CX23025****LA7830****LM358D****M51279FP****MC14538BF****MM1113XFBE****TA7805S**  
**TA7812S****TC4S01F**  
**TC4S11F**  
**TC4S81F****UPC1377**

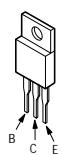
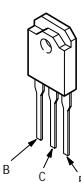
**2SA1091-0**  
**2SC2551-0**



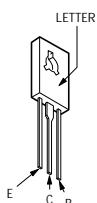
**2SA1162-G**  
**2SC1623-L5L6**  
**DTA144EK**  
**DTC124EK**  
**DTC144EK-T147**  
**DTC144EKA-T146**



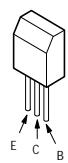
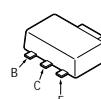
**2SC2334-L**  
**2SD1134-C**  
**2SD835**

**2SC2555-2**

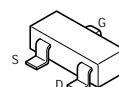
**2SC2611**  
**2SX2688-LK**



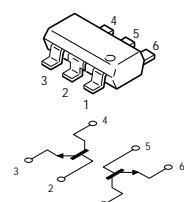
**2SC2958-L**  
**2SD774-34**

**2SD1615A-GP**

**2SK94-X2X3X4**  
**2SK94-X4**

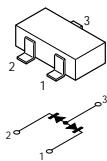


**IMH2**  
**IMX1**

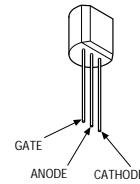


# DIODE

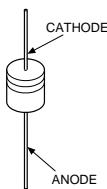
**1S2836**



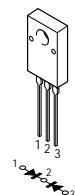
**CR02AM-4TB**



**1SS119-25**  
**RD3.6ESB1**  
**RD5.6ESB2**  
**RD8.2ESB3**

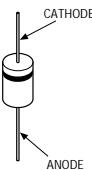
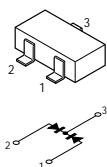


**D10C4M**

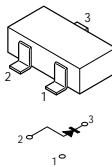


**ERC81-004**

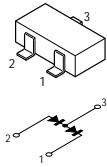
**1SS184**



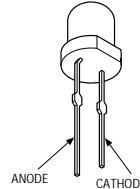
**RD6.2M-B1**



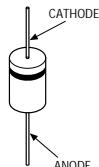
**1SS226**



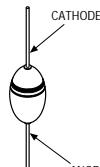
**SEL3810DLC05**  
**SLP281C-50**



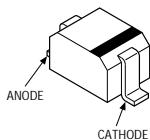
**1SS83**  
**EGP20G**  
**EL1Z**  
**GP08D**



**V11N**



**1SV230TPH3**  
**DTZ-TT11-5.6A**  
**DTZ15B**  
**DTZ20B**  
**DTZ24B**  
**DTZ8.2B**  
**MA111**



## SECTION 7

### EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.

• The construction parts of an assembled part are indicated with a collation number in the remark column.

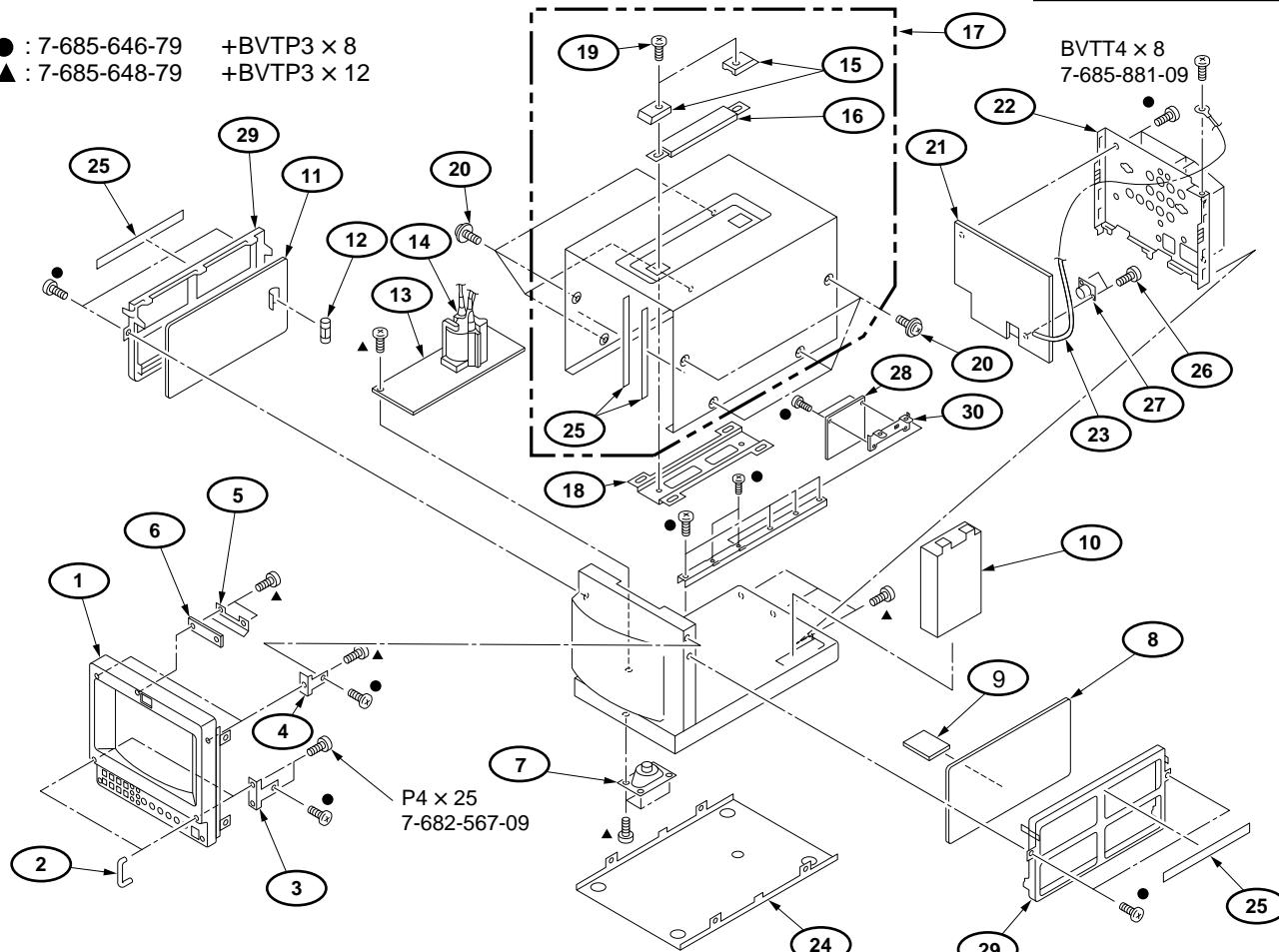
The components identified by mark  $\triangle$  are critical for safety. Replace only with part number specified.

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

#### 7-1. CHASSIS

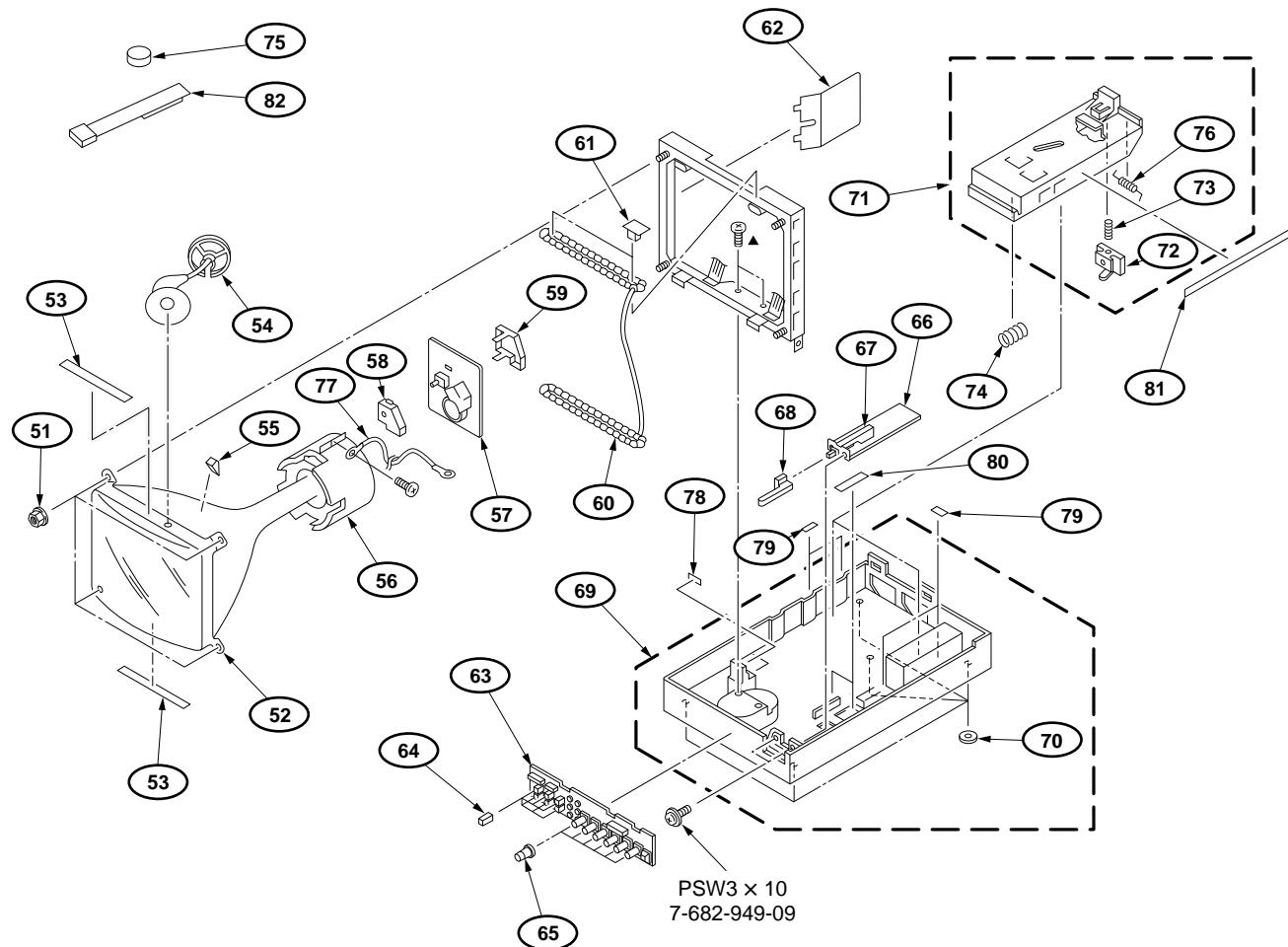
● : 7-685-646-79 +BVTP3 x 8  
 ▲ : 7-685-648-79 +BVTP3 x 12



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
1	X-4036-091-1	BEZEL ASSY (PVM-8045Q, 9045QM, 9045PM)		13	* A-1195-146-A	P BOARD, COMPLETE	
1	X-4036-092-1	BEZEL ASSY (PVM-8042Q, 9042QM)		14	$\triangle$ 1-439-526-11	TRANSFORMER ASSY, FLYBACK	
2	4-037-569-01	HANDLE, PROTECTOR		15	4-034-847-01	HANDLE (BASE)	
3	* 4-034-845-01	BRACKET (L), BEZEL		16	3-419-372-31	HANDLE	
4	* 4-034-846-01	BRACKET (U), BEZEL		17	X-4030-165-7	CABINET ASSY	15, 16, 19
5	* 4-035-388-01	PLATE, LIGHT INTERCEPTION		18	* X-4030-273-1	REINFORCEMENT ASSY, HANDLE	
6	1-641-724-12	X BOARD		19	4-035-452-01	SCREW (M4X10)	
7	1-505-375-11	SPEAKER (4X7CM)		20	4-034-834-01	SCREW (CLAW) (4X6), CASE	
8	* A-1135-964-A	B BOARD, COMPLETE (PVM-8042Q, 8045Q)		21	* A-1275-162-A	QA BOARD, COMPLETE	
8	* A-1135-977-A	B BOARD, COMPLETE (PVM-9042QM, 9045QM)		22	* 4-034-864-81	CHASSIS, R	
8	* A-1135-981-A	B BOARD, COMPLETE (PVM-9045PM)		23	1-555-724-00	WIRE, GROUND (PVM-8042Q, 8045Q, 9045PM)	
9	* A-1394-917-A	S BOARD, COMPLETE		23	1-941-913-02	CORE, ASSY, FERRITE (PVM-9042QM, 9045PM, 9045QM)	
10	$\triangle$ 1-413-720-21	SWITCHING REGULATOR (SOP-1021 (A))		24	* 4-034-870-02	CABINET, BOTTOM	
11	* A-1346-787-A	D BOARD, COMPLETE (PVM-8042Q, 8045Q, 9042QM, 9045QM)		25	* 4-035-691-01	CLOTH, VIBRATION PROOF	
11	* A-1346-806-A	D BOARD, COMPLETE (PVM-9045PM)		26	4-035-802-01	SCREW (M2.6X6)	
12	$\triangle$ 1-532-747-11	FUSE, GLASS TUBE (5.0A/125V) (PVM-8042Q, 8045Q, 9045PM)		27	1-900-157-02	CONNECTOR ASSY, MICRO 5P	
12	$\triangle$ 1-576-232-11	FUSE (H.B.C) (5.0A/250V) (PVM-9042QM, 9045QM)		28	* A-1190-333-A	PA MOUNT	
				29	* X-4030-274-1	FRAME ASSY, PWB	
				30	* 4-067-394-01	HOLDER, PA PWB	

## 7-2. PICTURE TUBE

▲ : 7-685-648-79 +BVTP3 × 12



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
51	4-304-511-00	NUT (M5), FLANGE		66	* A-1241-070-A	MOUNTED PWB, FA	
52	△8-737-154-05	PICTURE TUBE SD-167	(PVM-8042Q, 9042Q)			(PVM-9042QM, 9045QM)	
52	△8-737-651-05	PICTURE TUBE 09FX	(PVM-8045Q, 9045PM)	67	△1-692-049-11	SWITCH, PUSH (AC POWER) (1 KEY)	(3A/250V) (PVM-8042Q, 8045Q, 9045PM)
53	4-035-332-01	CLOTH, PROTECTION		67	△1-692-050-11	SWITCH, PUSH (AC POWER) 5A/250V	(PVM-8042QM, 9045QM)
54	* 4-034-856-01	HOLDER, HV CABLE		68	4-034-841-11	BUTTON, POWER SWITCH	
55	4-309-369-00	SPACER, DEFLECTION YOKE		69	* X-4036-112-2	CHASSIS ASSY, BOTTOM	
56	△1-451-319-22	DEFLECTION YOKE (Y9FXC)		70	4-034-840-01	RUBBER, FOOT	
57	* A-1331-183-B	CA BOARD, COMPLETE		71	* X-4030-163-1	GUIDE ASSY, BATTERY	
58	* 4-376-133-11	COVER (MAIN), CV VOL		72	4-034-861-01	KNOB, BATTERY	
59	* 4-376-132-11	COVER (REAR LID), CV VOL		73	4-876-347-01	SPRING, COMPRESSION	
60	△1-416-882-11	COIL, DEMAGNETIC		74	3-669-594-00	SPRING, COMPRESSION	
61	4-380-534-01	CAP, DGC		75	* 1-452-884-11	MAGNET	
62	* 4-034-850-01	INSULATOR		76	* 3-669-592-00	SPRING (A), TORSION	
63	* A-1372-542-A	HA BOARD, COMPLETE		77	1-923-511-84	WIRE UL1007 AWG18 110MM BLK	
64	4-034-849-01	SWITCH (SMALL), PUSH		78	* 4-036-047-02	RUBBER, VIBRATION PROOF	
65	4-043-802-02	KNOB, CONTROL		79	3-839-640-00	CUSHION	
66	* A-1241-055-A	MOUNTED PWB, FA	(PVM-8042Q, 8045Q, 9045PM)	80	3-831-441-11	CUSHION (F)	
				81	* 4-035-691-01	CLOTH, VIBRATION PROOF	
				82	4-051-735-22	PIECE A (75), CONV. CORRECT	

## SECTION 8

### ELECTRICAL PARTS LIST

#### NOTE:

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

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

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

#### RESISTORS

- All resistors are in ohms
- F: nonflammable

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

#### CAPACITORS PF: $\mu\mu$ F

- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.
- The components identified by  $\square$  in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
	* A-1135-964-A	B BOARD, COMPLETE (PVM-8042Q, 8045Q)		C142	1-163-031-11	CERAMIC CHIP 0.01μF	50V
	* A-1135-977-A	B BOARD, COMPLETE (PVM-9042QM, 9045QM)		C143	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
	* A-1135-981-A	B BOARD, COMPLETE (PVM-9045PM) *****		C144	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
				C145	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
				C146	1-126-157-11	ELECT 10μF	20% 16V
		<BAND PASS FILTER>		C147	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
BPF101	1-236-363-11	FILTER, BAND PASS		C148	1-126-160-11	ELECT 1μF	20% 50V
BPF102	1-236-363-11	FILTER, BAND PASS (PVM-9045PM)		C149	1-163-022-00	CERAMIC CHIP 0.012μF	10% 50V
BPF102	1-236-364-11	FILTER, BAND PASS (PVM-8042Q, 8045Q, 9042QM, 9045QM)		C150	1-124-589-11	ELECT 47μF	20% 16V
		<CAPACITOR>		C151	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C101	1-124-589-11	ELECT 47μF	20% 16V	C152	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C102	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C153	1-163-259-91	CERAMIC CHIP 220PF	5% 50V
C103	1-126-157-11	ELECT 10μF	20% 16V	C154	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C104	1-163-031-11	CERAMIC CHIP 0.01μF (PVM-8042Q, 8045Q, 9042QM, 9045QM)	50V	C155	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C105	1-163-031-11	CERAMIC CHIP 0.01μF (PVM-8042Q, 8045Q, 9042QM, 9045QM)	50V	C156	1-164-299-11	CERAMIC CHIP 0.22μF	10% 25V
C106	1-104-664-11	ELECT 47μF	20% 16V	C157	1-163-229-11	CERAMIC CHIP 12PF (PVM-8042Q, 8045Q, 9042QM, 9045QM)	5% 50V
C107	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C158	1-104-664-11	ELECT 47μF	20% 16V
C108	1-104-664-11	ELECT 47μF	20% 16V	C159	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C109	1-104-664-11	ELECT 47μF	20% 16V	C160	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C110	1-104-666-11	ELECT 220μF	20% 16V	C161	1-124-902-00	ELECT 0.47μF	20% 50V
C111	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C162	1-124-903-11	ELECT 1μF	20% 50V
C112	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C163	1-163-809-11	CERAMIC CHIP 0.047μF	10% 25V
C113	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C164	1-163-809-11	CERAMIC CHIP 0.047μF	10% 25V
C114	1-104-664-11	ELECT 47μF	20% 16V	C165	1-163-009-11	CERAMIC CHIP 0.001μF	10% 50V
C115	1-163-031-11	CERAMIC CHIP 0.01μF (PVM-8042Q, 8045Q, 9042QM, 9045QM)	50V	C166	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C116	1-124-589-11	ELECT 47μF	20% 16V	C167	1-104-664-11	ELECT 47μF	20% 16V
C117	1-124-589-11	ELECT 47μF	20% 6.3V	C168	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C118	1-124-589-11	ELECT 47μF	20% 6.3V	C169	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C119	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C170	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C120	1-124-589-11	ELECT 47μF	20% 6.3V	C171	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C121	1-124-589-11	ELECT 47μF	20% 6.3V	C172	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C122	1-104-664-11	ELECT 47μF	20% 16V	C173	1-124-589-11	ELECT 47μF	20% 16V
C123	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C174	1-104-664-11	ELECT 47μF	20% 16V
C124	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C175	1-104-987-11	MYLAR 0.001μF	5% 50V
C125	1-124-589-11	ELECT 47μF	20% 6.3V	C176	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C126	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C177	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C127	1-124-589-11	ELECT 47μF	20% 6.3V	C178	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C128	1-124-589-11	ELECT 47μF	20% 6.3V	C179	1-126-160-11	ELECT 1μF	20% 50V
C129	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C180	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C130	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C181	1-124-589-11	ELECT 47μF	20% 6.3V
C131	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C182	1-124-259-11	ELECT 4.7μF	20% 16V
C132	1-124-589-11	ELECT 47μF	20% 16V	C183	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V
C133	1-124-589-11	ELECT 47μF	20% 16V	C184	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C134	1-163-275-11	CERAMIC CHIP 0.001μF	5%	C185	1-163-031-11	CERAMIC CHIP 0.01μF	50V
		(PVM-8042Q, 8045Q, 9042QM, 9045QM)		C186	1-163-233-11	CERAMIC CHIP 18PF	5% 50V
C135	1-163-113-00	CERAMIC CHIP 68PF	5% 50V (PVM-8042Q, 8045Q, 9042QM, 9045QM)	C187	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C136	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C188	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C137	1-163-249-11	CERAMIC CHIP 82PF	5% 50V	C189	1-163-035-00	CERAMIC CHIP 0.047μF	50V
C138	1-124-589-11	ELECT 47μF	20% 16V	C190	1-163-121-00	CERAMIC CHIP 150PF	5% 50V (PVM-8042Q, 8045Q, 9042QM, 9045QM)
C139	1-163-031-11	CERAMIC CHIP 0.01μF	50V	C192	1-163-031-11	CERAMIC CHIP 0.01μF	50V
C140	1-163-205-00	CERAMIC CHIP 0.001μF	5% 50V	C193	1-124-589-11	ELECT 47μF	20% 16V (PVM-8042Q, 8045Q, 9042QM, 9045QM)
C141	1-163-141-00	CERAMIC CHIP 0.001μF	5% 50V	C194	1-124-589-11	ELECT 47μF	20% 16V
				C195	1-124-589-11	ELECT 47μF	20% 16V
				C196	1-124-589-11	ELECT 47μF	20% 16V
				C197	1-124-589-11	ELECT 47μF	20% 16V (PVM-8042Q, 8045Q, 9042QM, 9045QM)

Ref.No.	Part No.	Description		Remark	Ref.No.	Part No.	Description		Remark		
C198	1-124-589-11	ELECT	47μF	20%	16V	C260	1-124-465-00	ELECT	0.47μF	20%	50V
C199	1-124-589-11	ELECT	47μF	20%	16V	C261	1-137-193-11	FILM	0.39μF	5%	50V
C202	1-124-589-11	ELECT	47μF	20%	16V	C262	1-124-465-00	ELECT	0.47μF	20%	50V
C203	1-124-589-11	ELECT	47μF	20%	16V	C264	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C204	1-124-589-11	ELECT	47μF	20%	16V	C265	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C205	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C266	1-107-714-11	ELECT	10μF	20%	16V
C206	1-164-298-11	CERAMIC CHIP	0.15μF	10%	25V	C267	1-107-714-11	ELECT	10μF	20%	16V
C207	1-164-298-11	CERAMIC CHIP	0.15μF	10%	25V	C268	1-104-664-11	ELECT	47μF	20%	16V
C208	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C269	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C209	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V	C270	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C210	1-124-589-11	ELECT	47μF	20%	16V	C271	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C211	1-124-589-11	ELECT	47μF	20%	16V	C272	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C212	1-124-589-11	ELECT	47μF	20%	16V	C273	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C213	1-124-589-11	ELECT	47μF	20%	16V	C274	1-104-664-11	ELECT	47μF	20%	16V
C214	1-126-157-11	ELECT	10μF	20%	16V	C275	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C215	1-126-157-11	ELECT	10μF	20%	16V	C277	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C216	1-126-157-11	ELECT	10μF	20%	16V	C278	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C217	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C279	1-126-157-11	ELECT	10μF	20%	16V
C218	1-164-298-11	CERAMIC CHIP	0.15μF	10%	25V	C280	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C219	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	C281	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C220	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C282	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C221	1-124-903-11	ELECT	1μF	20%	50V	C283	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C222	1-163-093-00	CERAMIC CHIP	10PF	5%	50V	C299	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C223	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C300	1-126-157-11	ELECT	10μF	20%	16V
C225	1-104-664-11	ELECT	47μF	20%	16V	C301	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C226	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C302	1-124-589-11	ELECT	47μF	20%	16V
C227	1-163-038-91	CERAMIC CHIP	0.1μF		25V	C303	1-126-157-11	ELECT	10μF	20%	16V
C228	1-163-986-00	CERAMIC CHIP	0.027μF	10%	25V	C304	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C229	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C305	1-117-378-11	FILM	1μF	5%	50V
C230	1-163-038-91	CERAMIC CHIP	0.1μF		25V	C306	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C231	1-163-986-00	CERAMIC CHIP	0.027μF	10%	25V	C307	1-163-145-00	CERAMIC CHIP	0.0015μF	5%	50V
C232	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C308	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C233	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C309	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C234	1-163-038-91	CERAMIC CHIP	0.1μF		25V	C310	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C235	1-163-986-00	CERAMIC CHIP	0.027μF	10%	25V	C308	(PVM-8042Q, 8045Q, 9042QM, 9045QM)				
C236	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C311	(PVM-8042Q, 8045Q, 9042QM, 9045QM)				
C237	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C312	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C238	1-164-299-11	CERAMIC CHIP	0.22μF	10%	25V	C313	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C239	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C314	1-126-157-11	ELECT	10μF	20%	16V
C240	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C315	1-164-299-11	CERAMIC CHIP	0.22μF	10%	25V
C241	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C316	1-126-157-11	ELECT	10μF	20%	16V
C242	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	C317	1-163-031-11	CERAMIC CHIP	0.01μF		50V
C243	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C318	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C244	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	C319	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C245	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	C320	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C246	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C321	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C247	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C322	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C248	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V	C324	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C249	1-104-665-11	ELECT	100μF	20%	16V	C340	1-163-205-00	CERAMIC CHIP	0.001μF	5%	50V
C250	1-163-017-00	CERAMIC CHIP	0.0047μF	10%	50V	C344	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V
C251	1-110-364-11	MYLAR	0.1μF	10%	200V	C345	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C252	1-107-638-11	ELECT	33μF	20%	160V	C346	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C253	1-104-664-11	ELECT	47μF	20%	16V	C347	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C254	1-163-031-11	CERAMIC CHIP	0.01μF		50V	C1293	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C255	1-104-664-11	ELECT	47μF	20%	16V	C1294	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C256	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	C1295	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C257	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	C1296	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C258	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	C1297	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C259	1-163-031-11	CERAMIC CHIP	0.01μF		50V						

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C1298	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	D125	8-719-404-49	DIODE MA111	
C1299	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	D126	8-719-404-49	DIODE MA111	
C1300	1-126-160-11	ELECT 1μF	20% 50V	D127	8-719-404-49	DIODE MA111	
C1301	1-126-160-11	ELECT 1μF	20% 50V	D128	8-719-801-78	DIODE 1SS184	
C1302	1-126-160-11	ELECT 1μF	20% 50V	D129	8-719-404-49	DIODE MA111	
C1303	1-126-160-11	ELECT 1μF	20% 50V	D130	8-719-800-76	DIODE 1SS226	
C1400	1-163-141-00	CERAMIC CHIP 0.001μF	5% 50V	D131	8-719-800-76	DIODE 1SS226	
C1401	1-163-141-00	CERAMIC CHIP 0.001μF	5% 50V	D132	8-719-800-76	DIODE 1SS226	
C1402	1-163-031-11	CERAMIC CHIP 0.01μF	50V	D133	8-719-404-49	DIODE MA111	
C1403	1-163-021-91	CERAMIC CHIP 0.01μF	10% 50V	D134	8-719-404-49	DIODE MA111	
C1404	1-164-004-11	CERAMIC CHIP 0.1μF	10% 25V	D135	8-719-404-49	DIODE MA111	
		<FILTER>		D136	8-719-404-49	DIODE MA111	
CFM101	1-464-880-11	FILTER BLOCK, COM (CFB-2)		D137	8-719-404-49	DIODE MA111	
		<CONNECTOR>		D138	8-719-404-49	DIODE MA111	
CN101	1-506-480-11	PIN, CONNECTOR 15P		D139	8-719-404-49	DIODE MA111	
CN102	* 1-564-506-11	PLUG, CONNECTOR 3P		D144	8-719-404-49	DIODE MA111	
CN103	* 1-565-503-11	CONNECTOR, BOARD TO BOARD 12P (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D145	8-719-404-49	DIODE MA111	
CN104	* 1-564-011-11	PIN, CONNECTOR 12P		D146	8-719-404-49	DIODE MA111	
CN105	* 1-564-509-11	PLUG, CONNECTOR 6P		D147	8-719-404-49	DIODE MA111	
CN106	1-506-473-11	PIN, CONNECTOR 8P		D148	8-719-404-49	DIODE MA111	
CN107	1-506-478-11	PIN, CONNECTOR 13P		D149	8-719-404-49	DIODE MA111	
CN108	* 1-564-506-11	PLUG, CONNECTOR 3P		D150	8-719-404-49	DIODE MA111	
		<TRAP MODULE>		D151	8-719-404-49	DIODE MA111	
CTR101	1-236-366-11	MODULE, TRAP (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D152	8-719-404-49	DIODE MA111	
CTR101	1-236-369-11	MODULE, TRAP (PVM-9045PM)		D153	8-719-977-20	DIODE DTZ8.2B	
CTR102	1-236-365-11	MODULE, TRAP (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D154	8-719-404-49	DIODE MA111	
		<DIODE>		D155	8-719-404-49	DIODE MA111	
D102	8-719-404-49	DIODE MA111 (PVM-9045PM)		D156	8-719-404-49	DIODE MA111	
D103	8-719-404-49	DIODE MA111		D157	8-719-901-83	DIODE 1SS83	
D104	8-719-404-49	DIODE MA111		D158	8-719-901-83	DIODE 1SS83	
D105	8-719-404-49	DIODE MA111 (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D159	8-719-901-83	DIODE 1SS83	
D106	8-719-404-49	DIODE MA111		D160	8-719-404-49	DIODE MA111	
D107	8-719-404-49	DIODE MA111		D161	8-719-404-49	DIODE MA111	
D108	8-719-404-49	DIODE MA111 (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D162	8-719-404-49	DIODE MA111	
D109	8-719-404-49	DIODE MA111		D170	8-719-404-49	DIODE MA111	
D110	8-719-404-49	DIODE MA111		D185	8-719-104-34	DIODE 1S2836 (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
D111	8-719-404-49	DIODE MA111		D186	8-719-801-78	DIODE 1SS184 (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
D112	8-719-404-49	DIODE MA111		D187	8-719-800-76	DIODE 1SS226	
D113	8-719-404-49	DIODE MA111		D188	8-719-800-76	DIODE 1SS226	
D116	8-719-404-49	DIODE MA111 (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D191	8-719-104-34	DIODE 1S2836	
D117	8-719-404-49	DIODE MA111		D285	8-719-404-49	DIODE MA111	
D120	8-719-404-49	DIODE MA111		D289	8-719-404-49	DIODE MA111	
D121	8-719-404-49	DIODE MA111 (PVM-8042Q, 8045Q, 9042QM, 9045QM)		D341	8-719-404-49	DIODE MA111	
D122	8-719-404-49	DIODE MA111		D342	8-719-104-34	DIODE 1S2836 (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
D123	8-719-404-49	DIODE MA111		D343	8-719-800-76	DIODE 1SS226	
				D344	8-719-105-99	DIODE RD6.2M-B1 (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
				D345	8-719-901-83	DIODE 1SS83	
				D346	8-719-901-83	DIODE 1SS83	
				D347	8-719-901-83	DIODE 1SS83	
				D348	8-719-800-76	DIODE 1SS226	
				D349	8-719-800-76	DIODE 1SS226	
				D350	8-719-800-76	DIODE 1SS226	
				D390	8-719-800-76	DIODE 1SS226 (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
				D393	8-719-404-49	DIODE MA111	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
D1400	8-719-045-70	DIODE 1SV230TPH3		L104	1-412-002-31	INDUCTOR CHIP 4.7µH	
D1401	8-719-404-49	DIODE MA111		L105	1-412-002-31	INDUCTOR CHIP 4.7µH	
		<DELAY LINE>		L106	1-410-470-11	INDUCTOR 10µH	
				L107	1-410-470-11	INDUCTOR 10µH	
DL101	1-415-632-11	DELAY LINE, Y		L112	1-408-613-31	INDUCTOR 68µH	
DL102	1-415-633-11	DELAY LINE, Y		L113	1-410-947-31	INDUCTOR CHIP 33µH	
		<IC>		L114	1-410-947-31	INDUCTOR CHIP 3µH	
IC101	8-759-432-78	IC MM1111XFBE (PVM-8042Q, 8045Q, 9042QM, 9045QM)		L115	1-410-947-31	INDUCTOR CHIP 33µH	
IC102	8-759-446-66	IC MM1113XFBE		L116	1-412-011-31	INDUCTOR CHIP 27µH	
IC103	8-759-446-66	IC MM1113XFBE		L117	1-412-011-31	INDUCTOR CHIP 27µH	
IC104	8-759-446-66	IC MM1113XFBE		L118	1-412-011-31	INDUCTOR CHIP 27µH	
IC105	8-759-432-78	IC MM1111XFBE		L252	1-410-478-11	INDUCTOR 47µH	
IC106	8-759-009-51	IC MC14538BF				<TRANSISTOR>	
IC107	8-759-473-08	IC BU4584BF-E2		Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC108	8-759-932-67	IC BU4053BCF		Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC109	8-759-473-07	IC BU4070BF-E2		Q103	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC110	8-759-932-67	IC BU4053BCF		Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC111	8-759-932-67	IC BU4053BCF		Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC112	8-759-231-53	IC TA7805S		Q106	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC113	8-759-631-08	IC M51279FP		Q107	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC114	8-759-208-09	IC TC4052BFHB		Q108	8-729-216-22	TRANSISTOR 2SA1162-G	
IC115	8-759-208-09	IC TC4052BFHB		Q109	1-801-806-11	TRANSISTOR DTC144EK-T147	
IC116	8-759-008-67	IC MC14066BF		Q112	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC117	8-759-358-46	IC MM1114XFBE		Q113	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC118	8-759-358-46	IC MM1114XFBE		Q114	8-729-216-22	TRANSISTOR 2SA1162-G	
IC119	8-759-358-46	IC MM1114XFBE		Q115	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC120	8-759-008-67	IC MC14066BF		Q116	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC121	8-759-932-67	IC BU4053BCF		Q117	8-729-216-22	TRANSISTOR 2SA1162-G	
IC122	8-759-998-98	IC LM358D		Q118	8-729-120-28	TRANSISTOR 2SC1623-L5L6 (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
IC123	8-759-998-98	IC LM358D		Q119	8-729-216-22	TRANSISTOR 2SA1162-G (PVM-8042Q, 8045Q, 9042QM, 9045QM)	
IC124	8-752-052-62	IC CXA1478S		Q120	8-729-216-22	TRANSISTOR 2SA1162-G	
IC125	8-759-008-67	IC MC14066BF		Q121	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC126	8-759-932-67	IC BU4053BCF		Q122	8-729-216-22	TRANSISTOR 2SA1162-G	
IC127	8-759-998-98	IC LM358D		Q123	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC128	8-759-998-98	IC LM358D (PVM-8042Q, 8045Q, 9042QM, 9045QM)		Q124	8-729-216-22	TRANSISTOR 2SA1162-G	
IC129	8-759-998-98	IC LM358D		Q125	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1400	8-759-242-64	IC TC4W53F		Q126	1-801-806-11	TRANSISTOR DTC144EK-T147	
IC1401	8-759-209-97	IC TC4S81F		Q127	8-729-216-22	TRANSISTOR 2SA1162-G	
		<CHIP CONDUCTOR>		Q128	8-729-216-22	TRANSISTOR 2SA1162-G	
JR105	1-216-295-91	SHORT 0		Q129	1-801-806-11	TRANSISTOR DTC144EK-T147	
JR110	1-216-295-91	SHORT 0		Q130	8-729-216-22	TRANSISTOR 2SA1162-G	
JR113	1-216-295-91	SHORT 0 (PVM-9045PM)		Q132	8-729-216-22	TRANSISTOR 2SA1162-G	
JR133	1-216-295-91	SHORT 0		Q134	1-801-806-11	TRANSISTOR DTC144EK-T147	
JR138	1-216-295-91	SHORT 0		Q136	8-729-907-26	TRANSISTOR IMX1	
JR178	1-216-295-91	SHORT 0		Q137	8-729-907-26	TRANSISTOR IMX1	
		<COIL>		Q138	8-729-907-26	TRANSISTOR IMX1	
L101	1-410-470-11	INDUCTOR 10µH		Q139	8-729-216-22	TRANSISTOR 2SA1162-G	
L102	1-410-090-41	INDUCTOR 18mH		Q140	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L103	1-412-002-31	INDUCTOR CHIP 4.7µH (PVM-8042Q, 8045Q, 9042QM, 9045QM)		Q141	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q142	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q143	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q144	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q145	8-729-120-28	TRANSISTOR 2SC1623-L5L6	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
Q146	8-729-255-12	TRANSISTOR 2SC2551-O				<RESISTOR>	
Q147	8-729-255-12	TRANSISTOR 2SC2551-O		R101	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q148	8-729-216-22	TRANSISTOR 2SA1162-G		R102	1-216-025-91	RES,CHIP	100 5% 1/10W
Q149	8-729-200-17	TRANSISTOR 2SA1091-O		R103	1-216-091-00	RES,CHIP	56K 5% 1/10W
Q150	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R104	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
Q151	8-729-216-22	TRANSISTOR 2SA1162-G		R105	1-216-025-91	RES,CHIP	100 5% 1/10W
Q152	8-729-200-17	TRANSISTOR 2SA1091-O		R106	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q153	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R107	1-216-025-91	RES,CHIP	100 (PVM-8042Q, 8045Q, 9042QM, 9045QM) 5% 1/10W
Q154	8-729-216-22	TRANSISTOR 2SA1162-G		R108	1-216-113-00	RES,CHIP	470K 5% 1/10W
Q155	8-729-200-17	TRANSISTOR 2SA1091-O		R109	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q157	8-729-326-11	TRANSISTOR 2SC2611		R110	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q158	8-729-326-11	TRANSISTOR 2SC2611		R111	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
Q159	8-729-326-11	TRANSISTOR 2SC2611		R112	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q160	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R113	1-249-401-11	CARBON	47 5% 1/4W F
Q161	8-729-216-22	TRANSISTOR 2SA1162-G		R114	1-216-045-00	RES,CHIP	680 5% 1/10W
Q164	1-801-806-11	TRANSISTOR DTC144EK-T147		R115	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
Q165	8-729-216-22	TRANSISTOR 2SA1162-G		R117	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q166	8-729-216-22	TRANSISTOR 2SA1162-G		R118	1-216-025-91	RES,CHIP	100 5% 1/10W
Q167	8-729-216-22	TRANSISTOR 2SA1162-G		R119	1-216-647-11	METAL CHIP	680 0.50% 1/10W
Q168	8-729-216-22	TRANSISTOR 2SA1162-G		R120	1-216-647-11	METAL CHIP	680 0.50% 1/10W
Q170	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R121	1-216-025-91	RES,CHIP	100 5% 1/10W
Q171	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R122	1-216-083-00	RES,CHIP	27K 5% 1/10W
Q172	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R123	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q173	8-729-216-22	TRANSISTOR 2SA1162-G		R124	1-216-073-00	RES,CHIP	(PVM-8042Q, 8045Q, 9042QM, 9045QM) 10K 5% 1/10W
Q174	8-729-216-22	TRANSISTOR 2SA1162-G		R125	1-216-083-00	RES,CHIP	27K 5% 1/10W
Q175	8-729-216-22	TRANSISTOR 2SA1162-G		R126	1-216-093-00	RES,CHIP	68K 5% 1/10W
Q176	8-729-216-22	TRANSISTOR 2SA1162-G		R127	1-216-037-00	RES,CHIP	330 5% 1/10W
Q177	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R128	1-216-083-00	RES,CHIP	27K 5% 1/10W
Q178	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R129	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
Q179	1-801-806-11	TRANSISTOR DTC144EK-T147		R130	1-216-097-91	RES,CHIP	(PVM-8042Q, 8045Q, 9042QM, 9045QM) 100K 5% 1/10W
Q189	8-729-907-26	TRANSISTOR IMX1		R131	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q190	8-729-216-22	TRANSISTOR 2SA1162-G		R132	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
Q191	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R133	1-216-079-00	RES,CHIP	18K 5% 1/10W
Q192	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R134	1-216-645-11	METAL CHIP	560 0.50% 1/10W
Q193	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R135	1-216-645-11	METAL CHIP	560 0.50% 1/10W
Q194	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R136	1-216-091-00	RES,CHIP	56K 5% 1/10W
Q195	8-729-216-22	TRANSISTOR 2SA1162-G		R137	1-216-045-00	RES,CHIP	680 5% 1/10W
Q196	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R138	1-216-657-11	METAL CHIP	1.8K 0.50% 1/10W
Q197	8-729-216-22	TRANSISTOR 2SA1162-G		R139	1-216-079-00	RES,CHIP	18K 5% 1/10W
Q198	8-729-216-22	TRANSISTOR 2SA1162-G		R140	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W
Q199	8-729-216-22	TRANSISTOR 2SA1162-G		R141	1-216-063-91	RES,CHIP	3.9K 5% 1/10W
Q200	8-729-901-06	TRANSISTOR DTA144EK	(PVM-8042Q, 8045Q, 9042QM, 9045QM)	R142	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q201	8-729-216-22	TRANSISTOR 2SA1162-G		R143	1-216-085-00	RES,CHIP	33K 5% 1/10W
Q202	8-729-216-22	TRANSISTOR 2SA1162-G		R145	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q203	8-729-216-22	TRANSISTOR 2SA1162-G		R146	1-216-037-00	RES,CHIP	330 5% 1/10W
Q204	8-729-216-22	TRANSISTOR 2SA1162-G		R147	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q205	8-729-216-22	TRANSISTOR 2SA1162-G		R148	1-216-671-11	METAL CHIP	6.8K 0.50% 1/10W
Q206	8-729-216-22	TRANSISTOR 2SA1162-G		R155	1-216-655-11	METAL CHIP	(PVM-8042Q, 8045Q, 9042QM, 9045QM) 1.5K 0.50% 1/10W
Q208	8-729-216-22	TRANSISTOR 2SA1162-G		R157	1-216-679-11	METAL CHIP	15K 0.50% 1/10W
Q209	8-729-255-12	TRANSISTOR 2SC2551-O		R158	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
Q210	8-729-255-12	TRANSISTOR 2SC2551-O		R160	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
Q211	8-729-255-12	TRANSISTOR 2SC2551-O		R161	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q212	8-729-141-53	TRANSISTOR 2SK94-X2X3X4		R163	1-216-073-00	RES,CHIP	(PVM-8042Q, 8045Q, 9042QM, 9045QM) 10K 5% 1/10W
Q299	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R164	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
Q1400	8-729-141-53	TRANSISTOR 2SK94-X2X3X4					
Q1401	8-729-141-53	TRANSISTOR 2SK94-X2X3X4					

Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description		Remark			
R165	1-216-107-00	RES,CHIP	270K	5%	1/10W	R218	1-216-295-91	SHORT	0				
R166	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	R219	1-216-043-91	RES,CHIP	560	5%	1/10W		
R167	1-216-635-11	METAL CHIP	220	0.50%	1/10W	R220	1-216-043-91	RES,CHIP	560	5%	1/10W		
R168	1-216-103-00	RES,CHIP	180K	5%	1/10W	R221	1-216-035-00	RES,CHIP	270	5%	1/10W		
R169	1-216-033-00	RES,CHIP	220	5%	1/10W	R222	1-216-033-00	RES,CHIP	220	5%	1/10W		
R170	1-216-089-91	RES,CHIP	47K	5%	1/10W	R223	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R171	1-216-053-00	RES,CHIP	1.5K	5%	1/10W	R224	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R172	1-216-043-91	RES,CHIP	560	5%	1/10W	R225	1-216-095-00	RES,CHIP	82K	5%	1/10W		
R173	1-216-093-00	RES,CHIP	68K	5%	1/10W	R226	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R174	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	R227	1-216-035-00	RES,CHIP	270	5%	1/10W		
R175	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	R228	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R176	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R229	1-216-113-00	RES,CHIP	470K	5%	1/10W		
R177	1-216-073-00	RES,CHIP	10K	5%	1/10W	R230	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R178	1-216-089-91	RES,CHIP	47K	5%	1/10W	R231	1-216-113-00	RES,CHIP	470K	5%	1/10W		
R179	1-216-081-00	RES,CHIP	22K	5%	1/10W	R232	1-216-105-91	RES,CHIP	220K	5%	1/10W		
R180	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	R233	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R181	1-216-071-00	RES,CHIP	8.2K	5%	1/10W	R234	1-216-041-00	RES,CHIP	470	5%	1/10W		
R182	1-216-682-11	METAL CHIP	20K	0.50%	1/10W	(PVM-8042Q, 8045QM, 9042QM, 9045QM)							
R182	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	R236	1-216-077-00	RES,CHIP	15K	5%	1/10W		
						R237	1-216-025-91	RES,CHIP	100	5%	1/10W		
R183	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	R238	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R184	1-216-760-11	METAL CHIP	220K	0.50%	1/10W	R239	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R185	1-216-073-00	RES,CHIP	10K	5%	1/10W	R240	1-216-033-00	RES,CHIP	220	5%	1/10W		
R186	1-216-113-00	RES,CHIP	470K	5%	1/10W	R241	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R187	1-216-073-00	RES,CHIP	10K	5%	1/10W	R242	1-216-051-00	RES,CHIP	1.2K	5%	1/10W		
R188	1-216-113-00	RES,CHIP	470K	5%	1/10W	R243	1-216-113-00	RES,CHIP	470K	5%	1/10W		
R189	1-216-103-00	RES,CHIP	180K	5%	1/10W	R244	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R190	1-216-107-00	RES,CHIP	270K	5%	1/10W	R245	1-216-679-11	METAL CHIP	15K	0.50%	1/10W		
R191	1-216-097-91	RES,CHIP	100K	5%	1/10W	R246	1-216-103-00	RES,CHIP	180K	5%	1/10W		
R192	1-216-103-00	RES,CHIP	180K	5%	1/10W	R247	1-216-093-00	RES,CHIP	68K	5%	1/10W		
R193	1-216-105-91	RES,CHIP	220K	5%	1/10W	R248	1-216-095-00	RES,CHIP	82K	5%	1/10W		
R194	1-216-089-91	RES,CHIP	47K	5%	1/10W	R249	1-216-109-00	RES,CHIP	330K	5%	1/10W		
R195	1-216-113-00	RES,CHIP	470K	5%	1/10W	R250	1-216-101-00	RES,CHIP	150K	5%	1/10W		
R196	1-216-073-00	RES,CHIP	10K	5%	1/10W	R251	1-216-105-91	RES,CHIP	220K	5%	1/10W		
R197	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	R252	1-216-101-00	RES,CHIP	150K	5%	1/10W		
R198	1-216-049-91	RES,CHIP	1K	5%	1/10W	R253	1-216-101-00	RES,CHIP	150K	5%	1/10W		
R199	1-216-065-91	RES,CHIP	4.7K	5%	1/10W				(PVM-8042Q, 8045Q, 9042QM, 9045QM)				
R200	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R256	1-216-107-00	RES,CHIP	270K	5%	1/10W		
R201	1-216-043-91	RES,CHIP	560	5%	1/10W	R259	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R202	1-216-033-00	RES,CHIP	220	5%	1/10W	R261	1-216-105-91	RES,CHIP	220K	5%	1/10W		
R203	1-216-045-00	RES,CHIP	680	5%	1/10W	R264	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R204	1-216-073-00	RES,CHIP	10K	5%	1/10W	R266	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R205	1-216-073-00	RES,CHIP	10K	5%	1/10W	R268	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R206	1-216-043-91	RES,CHIP	560	5%	1/10W	R269	1-216-103-00	RES,CHIP	180K	5%	1/10W		
R207	1-216-045-00	RES,CHIP	680	5%	1/10W	R270	1-216-091-00	RES,CHIP	22K	5%	1/10W		
R208	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	R271	1-216-025-91	RES,CHIP	100	5%	1/10W		
R209	1-216-043-91	RES,CHIP	560	5%	1/10W	R272	1-216-103-00	RES,CHIP	180K	5%	1/10W		
R210	1-216-033-00	RES,CHIP	220	5%	1/10W	R273	1-216-113-00	RES,CHIP	470K	5%	1/10W		
			(PVM-8042Q, 8045Q, 9042QM, 9045QM)					R275	1-216-081-00	RES,CHIP	22K	5%	1/10W
R211	1-216-099-00	RES,CHIP	120K	5%	1/10W	R276	1-216-037-00	RES,CHIP	330	5%	1/10W		
R212	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	R277	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R213	1-216-043-91	RES,CHIP	560	5%	1/10W	R278	1-216-059-00	RES,CHIP	2.7K	5%	1/10W		
			(PVM-8042Q, 8045Q, 9042QM, 9045QM)					R280	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R214	1-216-043-91	RES,CHIP	560	5%	1/10W	R281	1-216-061-00	RES,CHIP	3.3K	5%	1/10W		
R215	1-216-127-11	RES,CHIP	1.8M	5%	1/10W	R282	1-216-037-00	RES,CHIP	330	5%	1/10W		
R216	1-216-043-91	RES,CHIP	560	5%	1/10W	R283	1-216-049-91	RES,CHIP	1K	5%	1/10W		
R217	1-216-033-00	RES,CHIP	220	5%	1/10W	R284	1-216-059-00	RES,CHIP	2.7K	5%	1/10W		
			(PVM-8042Q, 8045Q, 9042QM, 9045QM)					R286	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R218	1-216-295-91	SHORT	0			R287	1-216-061-00	RES,CHIP	3.3K	5%	1/10W		

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R288	1-216-037-00	RES,CHIP	330 5% 1/10W	R352	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W
R289	1-216-049-91	RES,CHIP	1K 5% 1/10W	R353	1-216-650-11	METAL CHIP	910 0.50% 1/10W
R290	1-216-059-00	RES,CHIP	2.7K 5% 1/10W	R354	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W
R292	1-216-061-00	RES,CHIP	3.3K 5% 1/10W	R355	1-216-113-00	RES,CHIP	470K 5% 1/10W
R293	1-216-061-00	RES,CHIP	3.3K 5% 1/10W	R356	1-216-113-00	RES,CHIP	470K 5% 1/10W
R295	1-216-057-00	RES,CHIP	2.2K 5% 1/10W	R357	1-216-095-00	RES,CHIP	82K 5% 1/10W
R296	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	R358	1-216-113-00	RES,CHIP	470K 5% 1/10W
R297	1-216-659-11	METAL CHIP	2.2K 0.50% 1/10W	R359	1-216-081-00	RES,CHIP	22K 5% 1/10W
R298	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R360	1-216-089-91	RES,CHIP	47K 5% 1/10W
R300	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R363	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
R301	1-216-059-00	RES,CHIP	2.7K 5% 1/10W	R364	1-216-073-00	RES,CHIP	10K 5% 1/10W
R302	1-216-113-00	RES,CHIP	470K 5% 1/10W	R365	1-216-073-00	RES,CHIP	10K 5% 1/10W
R303	1-216-065-91	RES,CHIP	4.7K 5% 1/10W	R366	1-216-244-00	RES,CHIP	82K 5% 1/8W
R304	1-216-049-91	RES,CHIP	1K 5% 1/10W	R367	1-216-244-00	RES,CHIP	82K 5% 1/8W
R305	1-216-049-91	RES,CHIP	1K 5% 1/10W	R368	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
R306	1-216-089-91	RES,CHIP	47K 5% 1/10W	R369	1-216-248-00	RES,CHIP	120K 5% 1/8W
R307	1-216-033-00	RES,CHIP	220 5% 1/10W	R370	1-216-115-00	RES,CHIP	560K 5% 1/10W
R308	1-216-089-91	RES,CHIP	47K 5% 1/10W	R371	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
R309	1-216-089-91	RES,CHIP	47K 5% 1/10W	R372	1-216-115-00	RES,CHIP	560K 5% 1/10W
R310	1-216-033-00	RES,CHIP	220 5% 1/10W	R374	1-216-115-00	RES,CHIP	560K 5% 1/10W
R311	1-216-089-91	RES,CHIP	47K 5% 1/10W	R375	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
R312	1-216-089-91	RES,CHIP	47K 5% 1/10W	R376	1-216-663-11	METAL CHIP	3.3K 0.50% 1/10W
R313	1-216-033-00	RES,CHIP	220 5% 1/10W	R378	1-216-025-91	RES,CHIP	100 5% 1/10W
R314	1-216-089-91	RES,CHIP	47K 5% 1/10W	R379	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R315	1-216-113-00	RES,CHIP	470K 5% 1/10W	R380	1-216-668-11	METAL CHIP	5.1K 0.50% 1/10W
R316	1-216-105-91	RES,CHIP	220K 5% 1/10W	R381	1-216-089-91	RES,CHIP	47K 5% 1/10W
R317	1-216-109-00	RES,CHIP	330K 5% 1/10W	R382	1-216-025-91	RES,CHIP	100 5% 1/10W
R318	1-216-105-91	RES,CHIP	220K 5% 1/10W	R383	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R319	1-216-099-00	RES,CHIP	120K 5% 1/10W	R384	1-216-668-11	METAL CHIP	5.1K 0.50% 1/10W
R320	1-216-099-00	RES,CHIP	120K 5% 1/10W	R385	1-216-117-00	RES,CHIP	680K 5% 1/10W
R321	1-216-043-91	RES,CHIP	560 5% 1/10W	R386	1-216-025-91	RES,CHIP	100 5% 1/10W
R322	1-216-109-00	RES,CHIP	330K 5% 1/10W	R387	1-216-641-11	METAL CHIP	390 0.50% 1/10W
R323	1-216-109-00	RES,CHIP	330K 5% 1/10W	R388	1-216-668-11	METAL CHIP	5.1K 0.50% 1/10W
R324	1-216-109-00	RES,CHIP	330K 5% 1/10W	R389	1-216-089-91	RES,CHIP	47K 5% 1/10W (PVM-8042Q, 8045Q, 9042QM, 9045QM)
R325	1-216-097-91	RES,CHIP	100K 5% 1/10W	R390	1-216-105-91	RES,CHIP	220K 5% 1/10W
R326	1-216-113-00	RES,CHIP	470K 5% 1/10W	R391	1-216-081-00	RES,CHIP	22K 5% 1/10W
R328	1-216-073-00	RES,CHIP	10K 5% 1/10W	R392	1-216-113-00	RES,CHIP	470K 5% 1/10W
R329	1-216-107-00	RES,CHIP	270K 5% 1/10W	R393	1-216-085-00	RES,CHIP	33K 5% 1/10W
R330	1-216-105-91	RES,CHIP	220K 5% 1/10W	R394	1-216-113-00	RES,CHIP	470K 5% 1/10W
R331	1-216-025-91	RES,CHIP	100 5% 1/10W	R397	1-249-437-11	CARBON	47K 5% 1/4W F
R332	1-216-097-91	RES,CHIP	100K 5% 1/10W	R398	1-249-434-11	CARBON	27K 5% 1/4W F
R333	1-216-097-91	RES,CHIP	100K 5% 1/10W	R399	1-216-073-00	RES,CHIP	10K 5% 1/10W
R334	1-216-025-91	RES,CHIP	100 5% 1/10W	R4001	1-216-073-00	RES,CHIP	10K 5% 1/10W
R335	1-216-099-00	RES,CHIP	120K 5% 1/10W	R4002	1-216-047-91	RES,CHIP	820 5% 1/10W
R336	1-216-095-00	RES,CHIP	82K 5% 1/10W	R4003	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
R337	1-216-105-91	RES,CHIP	220K 5% 1/10W	R4004	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R338	1-216-025-91	RES,CHIP	100 5% 1/10W	R4005	1-216-047-91	RES,CHIP	820 5% 1/10W
R339	1-216-099-00	RES,CHIP	120K 5% 1/10W	R4006	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
R340	1-216-095-00	RES,CHIP	82K 5% 1/10W	R4007	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R341	1-216-105-91	RES,CHIP	220K 5% 1/10W	R4008	1-216-047-91	RES,CHIP	820 5% 1/10W
R342	1-216-047-91	RES,CHIP	820 5% 1/10W	R4009	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R343	1-216-053-00	RES,CHIP	1.5K 5% 1/10W	R4010	1-216-061-00	RES,CHIP	3.3K 5% 1/10W
R344	1-216-664-11	METAL CHIP	3.6K 0.50% 1/10W	R4011	1-216-033-00	RES,CHIP	220 5% 1/10W
R345	1-216-661-11	METAL CHIP	2.7K 0.50% 1/10W	R4012	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
R346	1-216-105-91	RES,CHIP	220K 5% 1/10W	R4013	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
R348	1-216-061-00	RES,CHIP	3.3K 5% 1/10W	R4014	1-216-246-00	RES,CHIP	100K 5% 1/8W
R349	1-216-650-11	METAL CHIP	910 0.50% 1/10W	R4015	1-216-033-00	RES,CHIP	220 5% 1/10W
R350	1-216-653-11	METAL CHIP	1.2K 0.50% 1/10W				
R351	1-216-650-11	METAL CHIP	910 0.50% 1/10W				





Ref.No.	Part No.	Description		Remark		Ref.No.	Part No.	Description		Remark
RV205	1-241-765-11	RES, ADJ, CARBON	22K							*****
RV1400	1-237-036-11	RES, ADJ, CERMET	10K							* A-1195-146-A P BOARD, COMPETE
RV1401	1-237-036-11	RES, ADJ, CERMET	10K							*****
		<MODULE>								* 4-043-154-01 HOLDER, IC
SEP101	1-808-654-11	MODULE	(PVM-8042Q, 8045Q, 9042QM, 9045QM)							4-382-854-01 SCREW (M3X8), P, SW (+)
SEP101	1-809-347-11	MODULE	(PVM-9045PM)							4-879-937-00 SHEET, MICA
		<CRYSTAL>								
X1400	1-527-722-00	VIBRATOR, CRYSTAL				C801	1-126-971-11	ELECT	470 $\mu$ F	20% 35V
X1401	1-527-523-00	OSCILLATOR CRYSTAL	(PVM-9045PM)			C802	1-102-228-00	CERAMIC	470PF	10% 500V
X1401	1-577-259-11	VIBRATOR, CRYSTAL	(PVM-8042Q, 8045Q, 9042QM, 9045QM)			C803	1-102-228-00	CERAMIC	470PF	10% 500V
						C804	1-107-638-11	ELECT	33 $\mu$ F	20% 160V
						C806	1-124-480-11	ELECT	470 $\mu$ F	20% 25V
						C807	1-102-228-00	CERAMIC	470PF	10% 500V
						C808	1-137-150-11	MYLAR	0.01 $\mu$ F	10% 100V
						C809	1-106-375-12	MYLAR	0.022 $\mu$ F	10% 100V
						C810	1-162-318-11	CERAMIC	0.001 $\mu$ F	10% 500V
						C811	△1-137-544-11	FILM	0.01 $\mu$ F	3% 600V
										*****
		* A-1190-333-A MOUNTED PWB, PA				C812	△1-137-545-11	FILM	0.013 $\mu$ F	3% 600V
						C813	1-107-385-11	MYLAR	0.056 $\mu$ F	5% 200V
						C814	1-137-353-11	MYLAR	0.047 $\mu$ F	10% 100V
						C815	1-124-910-11	ELECT	47 $\mu$ F	20% 50V
						C816	1-107-675-11	ELECT	1 $\mu$ F	20% 160V
		<CAPACITOR>				C818	1-102-228-00	CERAMIC	470PF	10% 500V
C815	1-126-964-11	ELECT		10 $\mu$ F	20%	C819	1-162-116-00	CERAMIC	680PF	10% 2KV
C816	1-117-228-11	FILM		2.2 $\mu$ F	10%	C820	1-162-116-00	CERAMIC	680PF	10% 2KV
C817	1-117-228-11	FILM		2.2 $\mu$ F	10%	C821	1-162-116-00	CERAMIC	680PF	10% 2KV
						C825	1-123-024-21	ELECT	33 $\mu$ F	160V
		<CONNECTOR>				C880	1-163-031-11	CERAMIC CHIP	0.01 $\mu$ F	50V
CN806	1-695-915-11	TAB (CONTACT)				C883	1-129-720-00	FILM	0.033 $\mu$ F	5% 630V
CN807	* 1-564-506-11	PLUG, CONNECTOR 3P								
CN808	* 1-564-506-11	PLUG, CONNECTOR 3P								
CN809	* 1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P								
		<DIODE>								
D815	8-719-911-19	DIODE 1SS119-25				CN801	* 1-564-595-11	PLUG, CONNECTOR 14P		
						CN802	* 1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P		
						CN803	* 1-564-508-11	PLUG, CONNECTOR 5P		
						CN810	1-695-915-11	TAB (CONTACT)		
						CN811	* 1-564-506-11	PLUG, CONNECTOR 3P		
		<TRANSISTOR>								
Q815	8-729-906-24	TRANSISTOR 2SD835								
Q816	8-729-140-96	TRANSISTOR 2SD774-34				D801	8-719-302-43	DIODE EL1Z		
						D802	8-719-302-43	DIODE EL1Z		
						D803	8-719-302-43	DIODE EL1Z		
						D804	8-719-979-85	DIODE EGP20G		
						D805	8-719-302-43	DIODE EL1Z		
		<RESISTOR>								
R815	1-215-929-11	METAL OXIDE	100K	5%	3W	F	D806	8-719-302-43	DIODE EL1Z	
R816	1-249-429-11	CARBON	10K	5%	1/4W		D808	8-719-018-72	THYRISTOR CR02AM-4TB	
R817	1-247-843-11	CARBON	3.3K	5%	1/4W		D809	8-719-908-03	DIODE GP08D	
R818	1-202-846-00	SOLID	470K	10%	1/2W		D810	8-719-908-03	DIODE GP08D	
							D811	8-719-908-03	DIODE GP08D	
		<RELAY>					D813	8-719-302-43	DIODE EL1Z	
RY815	1-515-738-11	RELAY					D814	8-719-901-19	DIODE V11N	
		<COIL>								
						L802	1-459-442-00	INDUCTOR	15 $\mu$ H	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
L803	1-422-613-11	COIL, AIR CORE 0.68 $\mu$ H				<FUSE>	
L805	△1-460-225-11	COIL, HORIZONTAL LINEARITY 48.80		F601	△1-532-745-11	FUSE, GLASS TUBE 3.15A/125V (PVM-8042Q, 8045Q, 9045PM)	
L807	1-406-987-21	INDUCTOR 4.7mH		F601	△1-576-230-11	FUSE (H.B.C) 3.15A/250V (PVM-9042QM, PVM-9045QM)	
L810	1-412-529-11	INDUCTOR 22 $\mu$ H					
			<NEON LAMP>				
NL801	1-519-108-99	LAMP, NEON				<RESISTOR>	
			<TRANSISTOR>	R602	△1-202-887-91	SOLID 1.5M 20% 1/2W	
Q801	8-729-195-82	TRANSISTOR 2SC2958-L				<SWITCH>	
Q802	8-729-201-62	TRANSISTOR 2SC2555-2		S601	△1-692-049-11	SWITCH, PUSH (AC POWER) (1KEY) (3.0A/250V) (PVM-8042Q, 8045Q, 9045PM)	
			<RESISTOR>	S601	△1-692-050-11	SWITCH, PUSH (AC POWER) (1KEY) (PVM-9042QM, 9045QM)	
R801	1-249-383-11	CARBON 1.5 5% 1/4W F				*****	
R802	1-249-377-11	CARBON 0.47 5% 1/4W F					
R803	1-216-049-91	RES,CHIP 1K 5% 1/10W					
R804	1-249-419-11	CARBON 1.5K 5% 1/4W F					
R805	1-215-892-11	METAL OXIDE 1K 5% 2W F					
R807	1-216-425-11	METAL OXIDE 56 5% 1W F			* A-1275-162-A QA COMPLETE		
R808	1-202-846-00	SOLID 470K 20% 1/2W			*****		
R809	1-216-089-91	RES,CHIP 47K 5% 1/10W					
R810	1-249-421-11	CARBON 2.2K 5% 1/4W F			1-537-408-21 TERMINAL BOARD, INPUT/OUTPUT		
R811	1-216-049-91	RES,CHIP 1K 5% 1/10W			1-537-410-11 TERMINAL BOARD, INPUT/OUTPUT		
R813	1-249-414-11	CARBON 560 5% 1/4W F			<CAPACITOR>		
R814	1-249-377-11	CARBON 0.47 5% 1/4W F					
R817	1-216-065-91	RES,CHIP 4.7K 5% 1/10W					
			<VARIABLE RESISTOR>				
RV801	1-223-102-00	RES, ADJ, WIREWOUND 120					
			<TRANSFORMER>				
T801	1-437-082-31	HDT					
T802	△1-439-526-12	TRANSFORMER ASSY, FLYBACK					
			*****				
			* A-1241-055-A MOUNTED PWB, FA (PVM-8042Q, 8045Q, 9045PM)				
			* A-1241-070-A MOUNTED PWB, FA (PVM-9042QM, 9045QM)				
			*****				
			1-533-223-11 CLIP, FUSE				
			* 1-641-723-11 PC BOARD, FA				
			<CAPACITOR>				
C601	△1-136-889-11	FILM 0.22 $\mu$ F 20% 250V					
			<CONNECTOR>				
CN601	* 1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P					
CN602	* 1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P					
CN603	* 1-564-507-11	PLUG, CONNECTOR 4P					

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
C431	1-126-514-11	ELECT	22μF 20%	16V	D417	8-719-404-49	DIODE MA111
C432	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D418	8-719-404-49	DIODE MA111
C433	1-126-514-11	ELECT	22μF 20%	16V	D419	8-719-404-49	DIODE MA111
C434	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D420	8-719-404-49	DIODE MA111
C435	1-126-514-11	ELECT	22μF 20%	16V	D421	8-719-404-49	DIODE MA111
C436	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D422	8-719-404-49	DIODE MA111
C437	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D423	8-719-404-49	DIODE MA111
C438	1-126-514-11	ELECT	22μF 20%	16V	D424	8-719-404-49	DIODE MA111
C439	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D425	8-719-404-49	DIODE MA111
C440	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D426	8-719-404-49	DIODE MA111
C441	1-126-514-11	ELECT	22μF 20%	16V	D427	8-719-404-49	DIODE MA111
C442	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D428	8-719-404-49	DIODE MA111
C443	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D429	8-719-404-49	DIODE MA111
C444	1-163-033-91	CERAMIC CHIP	0.022μF	50V	D430	8-719-404-49	DIODE MA111
C445	1-163-031-11	CERAMIC CHIP	0.01μF	50V	D431	8-719-404-49	DIODE MA111
C446	1-163-031-11	CERAMIC CHIP	0.01μF	50V			
C447	1-115-871-11	ELECT	1μF 20%	50V			<IC>
C448	1-126-514-11	ELECT	22μF 20%	16V			
C449	1-163-031-11	CERAMIC CHIP	0.01μF	50V			
C450	1-126-514-11	ELECT	22μF 20%	16V	IC401	8-759-446-66	IC MM1113XFBE
C451	1-163-033-91	CERAMIC CHIP	0.022μF	50V	IC402	8-759-446-66	IC MM1113XFBE
C452	1-128-126-11	ELECT	100μF 20%	25V	IC403	8-759-420-04	IC AN5265
C453	1-126-514-11	ELECT	22μF 20%	16V			<COIL>
C454	1-128-499-11	ELECT	220μF 20%	16V			
C460	1-115-871-11	ELECT	1μF 20%	50V			
C461	1-115-871-11	ELECT	1μF 20%	50V	L401	1-410-682-31	INDUCTOR 470μH
C462	1-115-871-11	ELECT	1μF 20%	50V	L402	1-410-682-31	INDUCTOR 470μH
C464	1-163-031-11	CERAMIC CHIP	0.01μF	50V			<TRANSISTOR>
C465	1-163-031-11	CERAMIC CHIP	0.01μF	50V			
C466	1-163-031-11	CERAMIC CHIP	0.01μF	50V			
C467	1-163-031-11	CERAMIC CHIP	0.01μF	50V	Q401	8-729-120-28	TRANSISTOR 2SC1623-L5L6
C475	1-163-031-11	CERAMIC CHIP	0.01μF	50V	Q402	8-729-120-28	TRANSISTOR 2SC1623-L5L6
C1401	1-128-126-11	ELECT	100μF 20%	25V	Q403	8-729-216-22	TRANSISTOR 2SA1162-G
				Q404	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q405	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q406	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q407	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q408	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q409	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q410	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q411	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q412	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q413	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q414	8-729-216-22	TRANSISTOR 2SA1162-G	
D401	8-719-404-49	DIODE MA111		Q416	8-729-106-68	TRANSISTOR 2SD1615A-GP	
D402	8-719-404-49	DIODE MA111					
D403	8-719-110-09	DIODE RD8.2ESB3					
D404	8-719-404-49	DIODE MA111					
D405	8-719-404-49	DIODE MA111					
D406	8-719-404-49	DIODE MA111					
D407	8-719-404-49	DIODE MA111					
D408	8-719-404-49	DIODE MA111					
D409	8-719-404-49	DIODE MA111					
D410	8-719-404-49	DIODE MA111					
D411	8-719-404-49	DIODE MA111					
D412	8-719-404-49	DIODE MA111					
D413	8-719-404-49	DIODE MA111					
D414	8-719-404-49	DIODE MA111					
D415	8-719-404-49	DIODE MA111					
D416	8-719-404-49	DIODE MA111					



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R1427	1-216-073-00	RES,CHIP	10K 5% 1/10W		1-533-189-11	HOLDER, FUSE	
R1428	1-249-465-11	CARBON	47K 5% 1/4W	* 3-738-015-01	COVER, (DIA. 6) CARBON VR		
R1429	1-216-089-91	RES,CHIP	47K 5% 1/10W	4-382-854-01	SCREW (M3X8), P, SW (+)		
R1430	1-216-049-91	RES,CHIP	1K 5% 1/10W	4-382-854-11	SCREW (M3X10), P, SW (+)		
		<VARIABLE RESISTOR>			<CAPACITOR>		
RV401	1-237-994-11	RES, VAR, CARBON 20K		C501	1-104-664-11	ELECT (PVM-8042Q, 8045Q, 9042QM, 9045QM)	47μF 20% 16V
		<SWITCH>		C502	1-126-964-11	ELECT	10μF 20% 50V
S401	1-570-145-11	SWITCH, SLIDE		C503	1-126-935-11	ELECT	470μF 20% 16V
				C504	1-126-959-11	ELECT	0.47μF 20% 50V
				C505	1-106-381-12	MYLAR	0.039μF 10% 100V
				C506	1-126-960-11	ELECT	1μF 20% 50V
				C507	1-137-150-11	MYLAR	0.01μF 10% 100V
				C508	1-126-960-11	ELECT	1μF 20% 50V
				C509	1-137-194-81	FILM	0.47μF 5% 50V
				C510	1-136-161-00	FILM	0.047μF 5% 50V
				C511	1-107-902-11	ELECT	1μF 20% 50V
		<CAPACITOR>		C512	1-106-375-12	MYLAR	0.022μF 10% 100V
C701	1-162-114-00	CERAMIC	0.0047μF 10% 2KV	C513	1-106-375-12	MYLAR	0.022μF 10% 100V
C710	1-161-830-00	CERAMIC	0.0047μF 99% 500V	C514	1-137-350-11	MYLAR	0.015μF 10% 100V
		<CONNECTOR>		C515	1-126-961-11	ELECT	2.2μF 20% 50V
CN701	* 1-564-509-11	PLUG, CONNECTOR 6P		C516	1-126-961-11	ELECT	2.2μF 20% 50V
CN702	* 1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		C517	1-130-480-00	FILM	0.0056μF 5% 50V
CN703	* 1-564-508-11	PLUG, CONNECTOR 5P		C518	1-163-245-11	CERAMIC CHIP	56PF 5% 50V (PVM-8042Q, 8045Q, 9042QM, 9045QM)
L701	1-410-668-11	INDUCTOR 27μH		C519	1-126-963-11	ELECT	4.7μF 20% 50V
		<COIL>		C520	1-163-129-00	CERAMIC CHIP	330PF 5% 50V
R701	1-202-822-00	SOLID	2.2K 20% 1/2W	C521	1-107-906-11	ELECT	10μF 20% 50V
R702	1-202-822-00	SOLID	2.2K 20% 1/2W	C523	1-106-363-00	MYLAR	0.0068μF 10% 100V
R703	1-202-822-00	SOLID	2.2K 20% 1/2W	C524	1-102-116-00	CERAMIC	680PF 10% 50V
R704	1-202-838-00	SOLID	100K 20% 1/2W	C525	1-102-820-00	CERAMIC	330PF 5% 50V
R706	1-202-842-11	SOLID	220K 20% 1/2W	C526	1-102-074-00	CERAMIC	0.001μF 10% 50V
R707	1-202-838-00	SOLID	100K 10% 1/2W	C527	1-107-910-11	ELECT	100μF 20% 50V
		<RESISTOR>		C528	1-102-125-00	CERAMIC	0.0047μF 10% 50V
		<VARIABLE RESISTOR>		C529	1-107-909-11	ELECT	47μF 20% 50V
RV701	1-230-164-00	RES, ADJ, METAL GLAZE 55M		C530	1-163-097-00	CERAMIC CHIP	15PF 5% 50V
				C531	1-131-370-00	TANTALUM	6.8μF 10% 16V
				C532	1-107-914-11	ELECT	1000μF 20% 25V
		<CAPACITOR>		C533	1-126-963-11	ELECT	4.7μF 20% 50V
				C534	1-107-713-11	ELECT	4.7μF 20% 50V
				C535	1-136-161-00	FILM	0.047μF 5% 50V
				C536	1-126-963-11	ELECT	4.7μF 20% 50V
				C537	1-107-894-11	ELECT	220μF 20% 35V
				C538	1-126-967-11	ELECT	47μF 20% 50V
				C539	1-136-113-00	FILM	2μF 5% 200V
				C540	1-163-017-00	CERAMIC CHIP	0.0047μF 10% 50V
				C541	1-163-035-00	CERAMIC CHIP	0.047μF 50V (PVM-8042Q, 8045Q, 9042QM, 9045QM)
				C542	1-126-935-11	ELECT	470μF 20% 16V
				C545	1-126-933-11	ELECT	100μF 20% 16V
				C546	1-126-964-11	ELECT	10μF 20% 50V
				C547	1-126-964-11	ELECT	10μF 20% 50V
				C548	1-126-964-11	ELECT	10μF 20% 50V
				C549	1-126-964-11	ELECT	10μF 20% 50V
				C550	1-126-964-11	ELECT	10μF 20% 50V
				C551	1-126-963-11	ELECT	4.7μF 20% 50V
				C552	1-101-004-00	CERAMIC	0.01μF 50V
				C553	1-126-935-11	ELECT	470μF 20% 16V

Ref.No.	Part No.	Description		Remark	Ref.No.	Part No.	Description	Remark
C563	1-137-353-11	MYLAR	0.047μF	10%	100V	CN600	* 1-564-001-11	PIN, CONNECTOR 2P
C564	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	D501	8-719-404-49	DIODE MA111
C567	1-107-906-11	ELECT	10μF	20%	50V	D502	8-719-404-49	DIODE MA111
C568	1-130-736-11	FILM	0.01μF	5%	50V	D503	8-719-404-49	DIODE MA111
C569	1-136-479-11	FILM	0.001μF	5%	50V	D504	8-719-404-49	DIODE MA111
C570	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D506	8-719-908-03	DIODE GP08D
C571	1-126-971-11	ELECT	470μF	20%	50V	D507	8-719-404-49	DIODE MA111
C572	1-101-004-00	CERAMIC	0.01μF		50V	D508	8-719-404-49	DIODE MA111
C574	1-136-481-11	MYLAR	0.0022μF	10%	100V	D511	8-719-404-49	DIODE MA111
C575	1-136-481-11	MYLAR	0.0022μF	10%	100V	D512	8-719-404-49	DIODE MA111
C578	1-163-031-11	CERAMIC CHIP	0.01μF		50V	D514	8-719-404-49	DIODE MA111
C831	1-107-906-11	ELECT	10μF	20%	50V	D520	8-719-800-76	DIODE 1SS226
C832	1-107-906-11	ELECT	10μF	20%	50V	D521	8-719-800-76	DIODE 1SS226
C833	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	D831	8-719-404-49	DIODE MA111
C834	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	D832	8-719-404-49	DIODE MA111
C835	1-163-209-00	CERAMIC CHIP	0.0015μF	5%	50V	D833	8-719-404-49	DIODE MA111
C836	1-126-964-11	ELECT	10μF	20%	50V	D834	8-719-404-49	DIODE MA111
C837	1-163-209-00	CERAMIC CHIP	0.0015μF	5%	50V	D835	8-719-109-89	DIODE RD5.6ESB2
C838	1-136-495-11	FILM	0.068μF	5%	50V	D836	8-719-977-69	DIODE DTZ24B
C839	1-136-481-11	MYLAR	0.0022μF	10%	100V	D848	8-719-800-76	DIODE 1SS226
C840	1-163-209-00	CERAMIC CHIP	0.0015μF	5%	50V	D1601	8-719-105-99	DIODE RD6.2M-B1
C841	1-163-209-00	CERAMIC CHIP	0.0015μF	5%	50V	D1603	8-719-977-61	DIODE DTZ20B
C843	1-107-901-11	ELECT	0.47μF	20%	50V	D1606	8-719-981-00	DIODE ERC81-004
C844	1-107-901-11	ELECT	0.47μF	20%	50V	D1607	8-719-981-00	DIODE ERC81-004
C845	1-107-888-11	ELECT	47μF	20%	25V	D1608	8-719-978-24	DIODE DTZ-TT11-5.6A
C846	1-107-906-11	ELECT	10μF	20%	50V	D1609	8-719-977-49	DIODE DTZ15B
C847	1-126-965-11	ELECT	22μF	20%	50V	D1610	8-719-404-49	DIODE MA111
C848	1-131-351-00	TANTALUM	4.7μF	10%	35V	D1612	8-719-404-49	DIODE MA111
C849	1-164-182-11	CERAMIC CHIP	0.0033μF	10%	50V	D1615	8-719-404-49	DIODE MA111
C1601	1-126-964-11	ELECT	10μF	20%	50V	D1617	8-719-977-49	DIODE DTZ15B
C1602	1-164-161-11	CERAMIC CHIP	0.0022μF	10%	50V	D1618	8-719-977-49	DIODE DTZ15B
C1603	1-111-108-11	ELECT	18μF	20%	50V	D1620	8-719-801-78	DIODE 1SS184
C1604	1-115-842-11	ELECT	0.001F	20%	50V	D1621	8-719-510-12	DIODE D10SC4M
C1605	1-126-972-11	ELECT	1000μF	20%	50V	D1622	8-719-801-78	DIODE 1SS184
C1606	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	D1623	8-719-801-78	DIODE 1SS184
C1607	1-126-964-11	ELECT	10μF	20%	50V	D1626	8-719-404-49	DIODE MA111
C1608	1-126-965-11	ELECT	22μF	20%	50V	D1627	8-719-404-49	DIODE MA111
C1609	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	D1628	8-719-404-49	DIODE MA111
C1610	1-126-963-11	ELECT	4.7μF	20%	50V	D1635	8-719-404-49	DIODE MA111
C1611	1-104-668-11	ELECT	33μF	20%	35V	D1699	8-719-404-49	DIODE MA111
C1612	1-136-257-00	FILM	0.0039μF	5%	50V	<b>&lt;CONNECTOR&gt;</b>		
C1613	1-163-009-11	CERAMIC CHIP	0.001μF	10%	50V	F1601	△ 1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A/125V
C1614	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V	F1602	△ 1-532-747-11	FUSE, GLASS TUBE (H.B.C) 5A/125V (PVM-8042Q, 8045Q, 9045PM)
C1615	1-107-901-11	ELECT	0.47μF	20%	50V	F1602	△ 1-576-232-11	FUSE, (H.B.C.) 5A/250V (PVM-9042QM, 9045QM)
C1620	1-163-133-00	CERAMIC CHIP	470PF	5%	50V			
C1621	1-163-117-00	CERAMIC CHIP	100PF	5%	50V			
C1641	1-163-035-00	CERAMIC CHIP	0.047μF		50V	<b>&lt;IC&gt;</b>		
C1642	1-126-964-11	ELECT	10μF	20%	50V	IC501	8-759-909-70	IC CX23025 (PVM-8042Q, 8045Q, 9042QM, 9045QM)
C1643	1-126-964-11	ELECT	10μF	20%	50V	IC502	8-759-100-60	IC UPC1377C
						IC503	8-759-801-98	IC LA7830
						IC504	8-759-231-58	IC TA7812S
						IC505	8-759-009-51	IC MC14538BF
CN501	* 1-564-506-11	PLUG, CONNECTOR 3P						
CN502	* 1-564-011-11	PIN, CONNECTOR 12P						
CN504	* 1-564-508-11	PLUG, CONNECTOR 5P						
CN505	* 1-564-509-11	PLUG, CONNECTOR 6P						
CN507	* 1-564-511-11	PLUG, CONNECTOR 8P						
CN508	* 1-580-837-11	PIN, CONNECTOR (PC BOARD) 3P						
CN509	* 1-564-506-11	PLUG, CONNECTOR 3P						

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
IC506	8-759-209-54	IC TC4S01F		Q1603	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC507	8-759-209-69	IC TC4S11F		Q1604	8-729-216-22	TRANSISTOR 2SA1162-G	
IC831	8-759-473-06	IC BU4011BF-E2		Q1605	8-729-119-80	TRANSISTOR 2SC2688-LK	
IC832	8-759-473-07	IC BU4070BF-E2		Q1606	8-729-133-42	TRANSISTOR 2SC2334-L	
IC833	8-759-009-51	IC MC14538BF		Q1607	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
IC1601	8-759-510-73	IC BA10393F-E2		Q1608	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<CHIP CONDUCTOR>		Q1609	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR507	1-216-295-91	SHORT 0 (PVM-8042Q, 8045Q, 9042QM, 9045QM)		Q1610	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR510	1-216-295-91	SHORT 0		Q1611	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR518	1-216-295-91	SHORT 0		Q1612	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR601	1-216-295-91	SHORT 0		Q1613	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
JR602	1-216-295-91	SHORT 0		Q1614	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<COIL>		Q1615	8-729-216-22	TRANSISTOR 2SA1162-G	
L501	1-414-502-41	INDUCTOR 33mH		Q1616	8-729-216-22	TRANSISTOR 2SA1162-G	
L502	1-410-665-31	INDUCTOR 15μH		Q1617	8-729-216-22	TRANSISTOR 2SA1162-G	
L503	1-424-625-11	INDUCTOR 381.4μH		Q1618	8-729-216-22	TRANSISTOR 2SA1162-G	
L506	1-412-530-31	INDUCTOR 27μH		Q1619	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L1601	1-459-155-00	COIL (WITH CORE) 45μH		Q1620	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
L1602	1-402-785-11	INDUCTOR 600μH				<RESISTOR>	
L1603	1-410-397-21	FERRITE 1.1μH		R501	1-216-089-91	RES,CHIP	47K 5% 1/10W
		<TRANSISTOR>			(PVM-8042Q, 8045Q, 9042QM, 9045QM)		
Q501	1-801-806-11	TRANSISTOR DTC144EKA-T146 (PVM-8042Q, 8045Q, 9042QM, 9045QM)		R502	1-216-089-91	RES,CHIP	47K 5% 1/10W
Q502	1-801-806-11	TRANSISTOR DTC144EKA-T146 (PVM-8042Q, 8045Q, 9042QM, 9045QM)			(PVM-8042Q, 8045Q, 9042QM, 9045QM)		
Q503	8-729-901-06	TRANSISTOR DTA144EK (PVM-8042Q, 8045Q, 9042QM, 9045QM)		R503	1-249-437-11	CARBON	47K 5% 1/4W F
Q504	1-801-806-11	TRANSISTOR DTC144EKA-T146 (PVM-8042Q, 8045Q, 9042QM, 9045QM)			(PVM-8042Q, 8045Q, 9042QM, 9045QM)		
Q505	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R504	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q508	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R505	1-249-393-11	CARBON	10 5% 1/4W F
Q509	8-729-120-28	TRANSISTOR 2SC1623-L5L6					
Q512	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R506	1-216-071-00	RES,CHIP	8.2K 5% 1/10W
Q513	8-729-216-22	TRANSISTOR 2SA1162-G		R507	1-216-059-00	RES,CHIP	2.7K 5% 1/10W
Q514	8-729-216-22	TRANSISTOR 2SA1162-G		R508	1-216-085-00	RES,CHIP	33K 5% 1/10W
		<TRANSISTOR>		R509	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
Q515	8-729-313-42	TRANSISTOR 2SD1134-C		R510	1-216-683-11	METAL CHIP	22K 0.50% 1/10W
Q518	8-729-120-28	TRANSISTOR 2SC1623-L5L6					
Q519	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R511	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
Q532	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R512	1-218-761-11	METAL CHIP	240K 0.50% 1/10W
Q569	8-729-907-26	TRANSISTOR IMX1		R513	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
				R514	1-218-754-11	METAL CHIP	120K 0.50% 1/10W
Q570	8-729-901-00	TRANSISTOR DTC124EK			(PVM-8042Q, 8045Q, 9042QM, 9045QM)		
Q571	8-729-901-00	TRANSISTOR DTC124EK		R515	1-216-081-00	RES,CHIP	22K 5% 1/10W
Q576	1-801-806-11	TRANSISTOR DTC144EKA-T146					
Q579	8-729-920-48	TRANSISTOR IMH2		R516	1-216-073-00	RES,CHIP	10K 5% 1/10W
Q599	8-729-920-48	TRANSISTOR IMH2		R517	1-218-762-11	METAL CHIP	270K 0.50% 1/10W
				R518	1-249-422-11	CARBON	2.7K 5% 1/4W F
Q600	8-729-901-00	TRANSISTOR DTC124EK		R519	1-216-085-00	RES,CHIP	33K 5% 1/10W
Q601	8-729-901-00	TRANSISTOR DTC124EK		R520	1-216-677-11	METAL CHIP	12K 0.50% 1/10W
Q833	8-729-216-22	TRANSISTOR 2SA1162-G					
Q834	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R521	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
Q835	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R522	1-216-107-00	RES,CHIP	270K 5% 1/10W
					(PVM-8042Q, 8045Q, 9042QM, 9045QM)		
Q836	8-729-255-12	TRANSISTOR 2SC2551-O		R523	1-216-081-00	RES,CHIP	22K 5% 1/10W
Q1601	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R524	1-216-049-91	RES,CHIP	1K 5% 1/10W
Q1602	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R525	1-216-434-11	METAL OXIDE	1.8K 5% 1W F
R526	1-216-079-00	RES,CHIP	18K 5% 1/10W				
R527	1-249-437-11	CARBON	47K 5% 1/4W F				
R528	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R529	1-216-073-00	RES,CHIP	10K 5% 1/10W				
R530	1-216-089-91	RES,CHIP	47K 5% 1/10W				
				R531	1-216-089-91	RES,CHIP	47K 5% 1/10W
					(PVM-8042Q, 8045Q, 9042QM, 9045QM)		
R532	1-216-097-91	RES,CHIP	100K 5% 1/10W				



Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark	
R1622	1-216-073-00	RES,CHIP	10K	5%	1/10W	RV517	1-241-760-11	RES, ADJ, CARBON 470
R1623	1-216-073-00	RES,CHIP	10K	5%	1/10W	RV518	1-241-763-11	RES, ADJ, CARBON 4.7K
R1624	1-216-246-00	RES,CHIP	100K	5%	1/8W	RV831	1-228-997-00	RES, ADJ, METAL GLAZE 100K
R1625	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	RV832	1-241-764-11	RES, ADJ, CERMET 10K
R1626	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	RV833 $\triangle$		RES, ADJ, METAL GLAZE 47K
R1627	1-216-049-91	RES,CHIP	1K	5%	1/10W	RV1601 $\triangle$	1-241-762-11	RES, ADJ, CERMET 2.2K
R1628	1-216-073-00	RES,CHIP	10K	5%	1/10W	RV1602	1-241-761-11	RES, ADJ, CARBON 1K
R1629	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	RV1603 $\triangle$		RES, ADJ, METAL GLAZE 47K
R1630	1-216-683-11	METAL CHIP	22K	0.50%	1/10W			
R1631	1-216-057-00	RES,CHIP	2.2K	5%	1/10W			
R1632	1-216-042-00	RES,CHIP	510	5%	1/10W			<RELAY>
R1633	1-216-109-00	RES,CHIP	330K	5%	1/10W	RY1601	1-755-022-11	RELAY, POWER
R1634	1-216-099-00	RES,CHIP	120K	5%	1/10W			
R1635	1-216-097-91	RES,CHIP	100K	5%	1/10W			
R1636	1-216-073-00	RES,CHIP	10K	5%	1/10W			<TRANSFORMER>
R1640	1-216-063-91	RES,CHIP	3.9K	5%	1/10W	T1601	1-437-216-11	TRANSFORMER, DRIVE
R1641	1-216-073-00	RES,CHIP	10K	5%	1/10W			
R1642	1-216-073-00	RES,CHIP	10K	5%	1/10W			
R1643	1-216-069-00	RES,CHIP	6.8K	5%	1/10W			
R1644	1-216-069-00	RES,CHIP	6.8K	5%	1/10W			*****
R1645	1-216-073-00	RES,CHIP	10K	5%	1/10W			
R1646	1-216-073-00	RES,CHIP	10K	5%	1/10W			* A-1372-542-A MOUNTED PWB, HA
R1647	1-216-685-11	METAL CHIP	27K	0.50%	1/10W			*****
R1648	1-216-069-00	RES,CHIP	6.8K	5%	1/10W			
R1649	1-216-069-00	RES,CHIP	6.8K	5%	1/10W			* 4-348-208-00 HOLDER, LED
R1650	1-216-069-00	RES,CHIP	6.8K	5%	1/10W			
R1651	1-216-069-00	RES,CHIP	6.8K	5%	1/10W			<CAPACITOR>
R1652	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	C001	1-163-038-91	CERAMIC CHIP 0.1 $\mu$ F 25V
R1653	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	C002	1-163-038-91	CERAMIC CHIP 0.1 $\mu$ F 25V
R1654	1-216-681-11	METAL CHIP	18K	0.50%	1/10W			
R1655	1-216-081-00	RES,CHIP	22K	5%	1/10W			<CONNECTOR>
R1656	1-216-643-11	METAL CHIP	470	0.50%	1/10W			
R1657	1-216-081-00	RES,CHIP	22K	5%	1/10W	CN001	1-506-478-11	PIN, CONNECTOR 13P
R1658	1-216-063-91	RES,CHIP	3.9K	5%	1/10W	CN002	* 1-564-009-11	PIN, CONNECTOR 10P
R1659	1-216-049-91	RES,CHIP	1K	5%	1/10W	CN003	* 1-564-004-11	PIN, CONNECTOR 5P
R1660	1-216-649-11	METAL CHIP	820	0.50%	1/10W			
R1661	1-216-065-91	RES,CHIP	4.7K	5%	1/10W			<DIODE>
R1691	1-216-073-00	RES,CHIP	10K	5%	1/10W	D001	8-719-920-05	DIODE SLP281C-50
R1692	1-216-081-00	RES,CHIP	22K	5%	1/10W	D002	8-719-109-68	DIODE RD3.6ESB1
R1693	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	D003	8-719-404-49	DIODE MA111
R1694	1-216-081-00	RES,CHIP	22K	5%	1/10W			<IC>
R1695	1-216-061-00	RES,CHIP	3.3K	5%	1/10W			
R1696	1-216-073-00	RES,CHIP	10K	5%	1/10W	IC001	8-759-209-69	IC TC4S11F
		<VARIABLE RESISTOR>						
RV501	1-238-019-11	RES, ADJ, CARBON 47K						<CHIP CONDUCTOR>
RV502	1-241-765-11	RES, ADJ, CARBON 22K						
RV503	1-241-763-11	RES, ADJ, CERMET 4.7K				JR003	1-216-295-91	SHORT 0
RV504	1-224-250-XX	RES, ADJ, METAL GLAZE 2.2K				JR006	1-216-295-91	SHORT 0
RV505	1-241-759-11	RES, ADJ, CARBON 220				JR007	1-216-295-91	SHORT 0
RV507	1-241-762-11	RES, ADJ, CARBON 2.2K						<TRANSISTOR>
RV508	1-241-761-11	RES, ADJ, CARBON 1K						
RV509	1-241-768-11	RES, ADJ, CARBON 220K				Q001	8-729-120-28	TRANSISTOR 2SC1623-L5L6
RV511	1-241-763-11	RES, ADJ, CARBON 4.7K						
RV512	1-241-763-11	RES, ADJ, CARBON 4.7K						
RV514	1-238-019-11	RES, ADJ, CARBON 47K						
RV515	1-241-768-11	RES, ADJ, CARBON 220K						
RV516	1-241-763-11	RES, ADJ, CERMET 4.7K						

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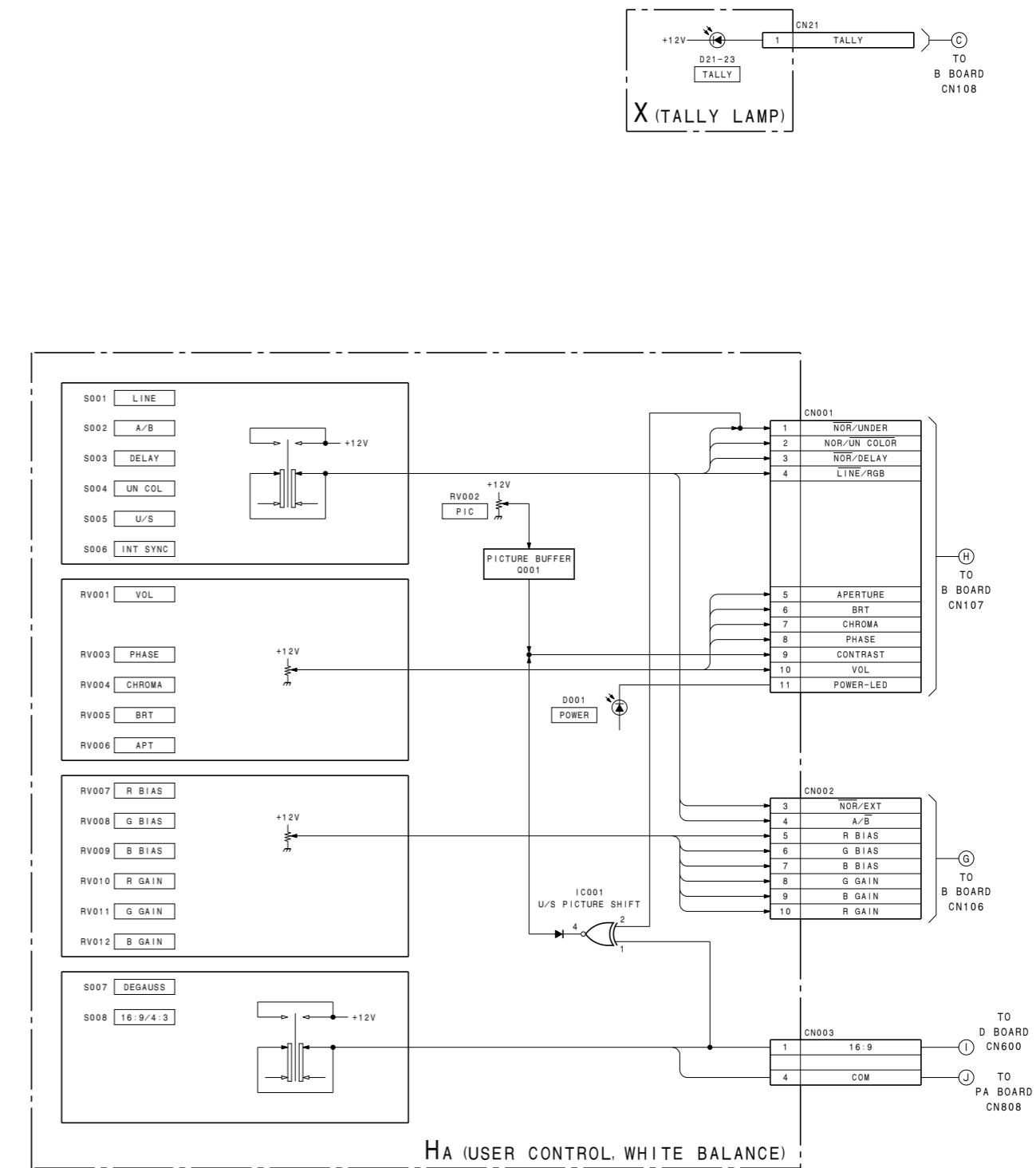
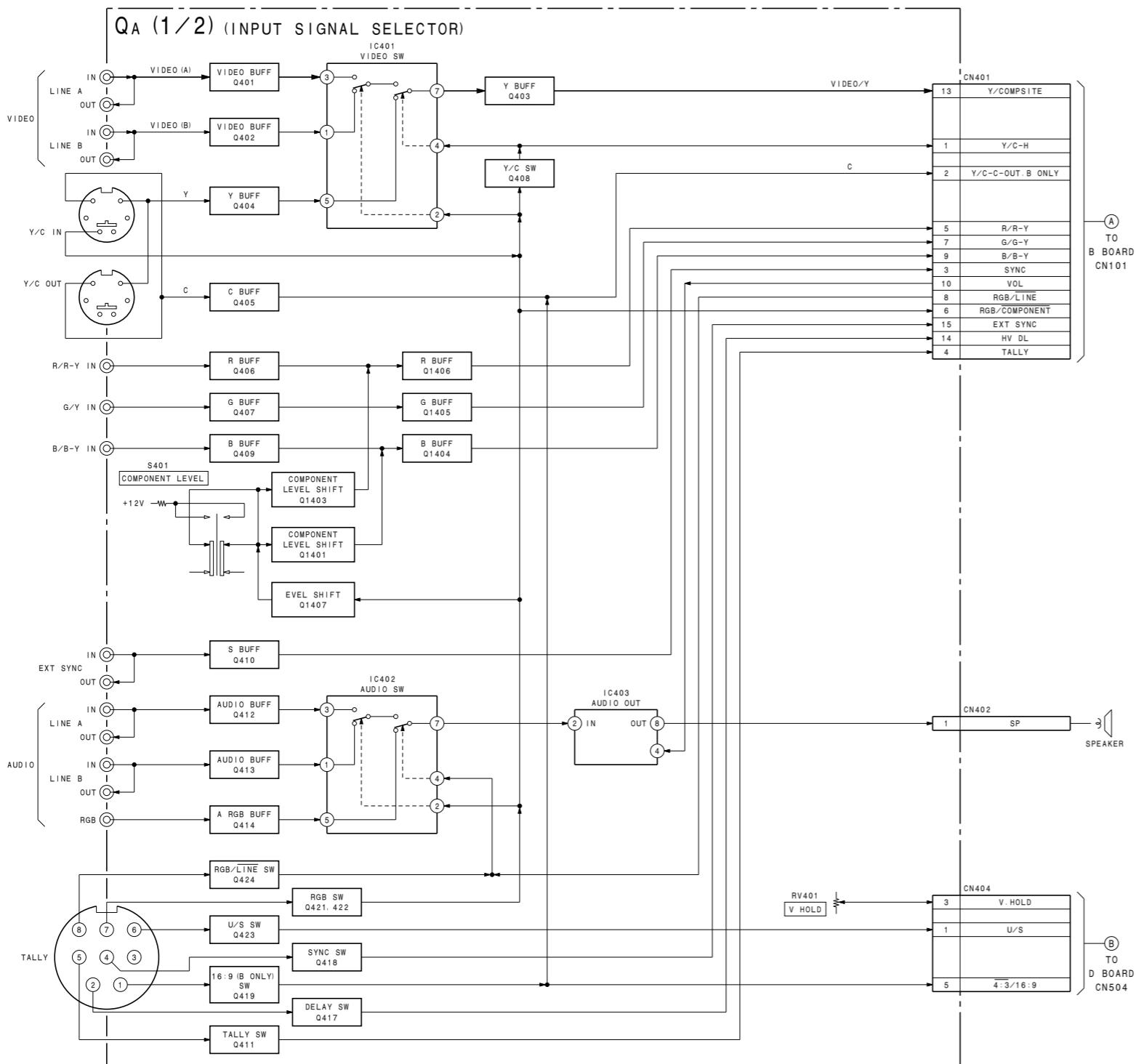
Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark			
<RESISTOR>				<CAPACITOR>						
R001	1-247-713-11	CARBON	1K	5%	1/4W	C1101	1-163-119-00	CERAMIC CHIP 120PF	5%	50V
R004	1-216-081-00	RES,CHIP	22K	5%	1/10W	C1102	1-164-004-11	CERAMIC CHIP 0.1μF	10%	25V
R006	1-216-049-91	RES,CHIP	1K	5%	1/10W	C1103	1-124-589-11	ELECT 47μF	20%	16V
R007	1-216-049-91	RES,CHIP	1K	5%	1/10W	C1104	1-163-031-11	CERAMIC CHIP 0.01μF	50V	
R008	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	C1105	1-163-248-11	CERAMIC CHIP 75PF	5%	50V
R009	1-216-049-91	RES,CHIP	1K	5%	1/10W	C1106	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
R010	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	C1107	1-164-004-11	CERAMIC CHIP 0.1μF	10%	25V
<VARIABLE RESISTOR>				C1108	1-163-119-00	CERAMIC CHIP 120PF	5%	50V		
RV001	1-225-385-11	RES, VAR, CARBON 20K			C1109	1-163-031-11	CERAMIC CHIP 0.01μF	50V		
RV002	1-225-385-11	RES, VAR, CARBON 20K			C1110	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
RV003	1-225-385-11	RES, VAR, CARBON 20K			C1111	1-163-018-00	CERAMIC CHIP 0.0056μF	10%	50V	
RV004	1-225-385-11	RES, VAR, CARBON 20K			C1112	1-126-160-11	ELECT 1μF	20%	50V	
RV005	1-225-385-11	RES, VAR, CARBON 20K			C1113	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
RV006	1-225-385-11	RES, VAR, CARBON 20K			C1114	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
RV007	1-226-773-11	RES, ADJ, METAL GLAZE 22K			C1115	1-164-004-11	CERAMIC CHIP 0.1μF	10%	25V	
RV008	1-226-773-11	RES, ADJ, METAL GLAZE 22K			C1116	1-163-248-11	CERAMIC CHIP 75PF	5%	50V	
RV009	1-226-773-11	RES, ADJ, METAL GLAZE 22K			C1117	1-124-589-11	ELECT 47μF	20%	16V	
RV010	1-226-773-11	RES, ADJ, METAL GLAZE 22K			C1118	1-164-004-11	CERAMIC CHIP 0.1μF	10%	25V	
RV011	1-226-773-11	RES, ADJ, METAL GLAZE 22K			C1119	1-163-020-00	CERAMIC CHIP 0.0082μF	10%	50V	
RV012	1-226-773-11	RES, ADJ, METAL GLAZE 22K			C1120	1-163-231-11	CERAMIC CHIP 15PF	5%	50V	
<SWITCH>				C1121	1-163-231-11	CERAMIC CHIP 15PF	5%	50V		
S001	1-554-419-00	SWITCH, PUSH (1 KEY)			C1122	1-163-222-11	CERAMIC CHIP 5PF 0.25PF	50V		
S002	1-554-419-00	SWITCH, PUSH (1 KEY)			C1123	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
S003	1-554-419-00	SWITCH, PUSH (1 KEY)			C1130	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
S004	1-554-419-00	SWITCH, PUSH (1 KEY)			C1131	1-163-097-00	CERAMIC CHIP 15PF	5%	50V	
S005	1-554-419-00	SWITCH, PUSH (1 KEY)			<CONNECTOR>					
S006	1-554-419-00	SWITCH, PUSH (1 KEY)			CN1101	* 1-565-488-11	CONNECTOR, BOARD TO BOARD 12P			
S007	1-572-522-11	SWITCH, PUSH (1 KEY)			<DIODE>					
S008	1-554-419-00	SWITCH, PUSH (1 KEY)			D1101	8-719-404-49	DIODE MA111			
*****										
*1-641-724-11 PC BOARD, X				D1102	8-719-404-49	DIODE MA111				
*****				<IC>						
<CONNECTOR>				IC1101	8-752-056-67	IC CXA1214P				
CN21 * 1-564-518-11 PLUG, CONNECTOR 3P				<COIL>						
<DIODE>				L1101	1-408-605-31	INDUCTOR 15μH				
D21	8-719-023-78	DIODE SEL3810DLC05		L1102	1-404-496-00	COIL				
D22	8-719-023-78	DIODE SEL3810DLC05		L1103	1-404-496-00	COIL				
D23	8-719-023-78	DIODE SEL3810DLC05		L1104	1-408-605-31	INDUCTOR 15μH				
*****				L1105	1-412-008-31	INDUCTOR CHIP 15μH				
* A-1394-917-A S BOARD, COMPLETE				<TRANSISTOR>						
*****				Q1101	8-729-216-22	TRANSISTOR 2SA1162-G				
				Q1102	8-729-120-28	TRANSISTOR 2SC1623-L5L6				
				Q1103	8-729-216-22	TRANSISTOR 2SA1162-G				
				Q1104	8-729-216-22	TRANSISTOR 2SA1162-G				
				Q1105	1-801-806-11	TRANSISTOR DTC144EK-T147				
				Q1106	1-801-806-11	TRANSISTOR DTC144EK-T147				
				Q1107	8-729-109-44	TRANSISTOR 2SK94-X4				

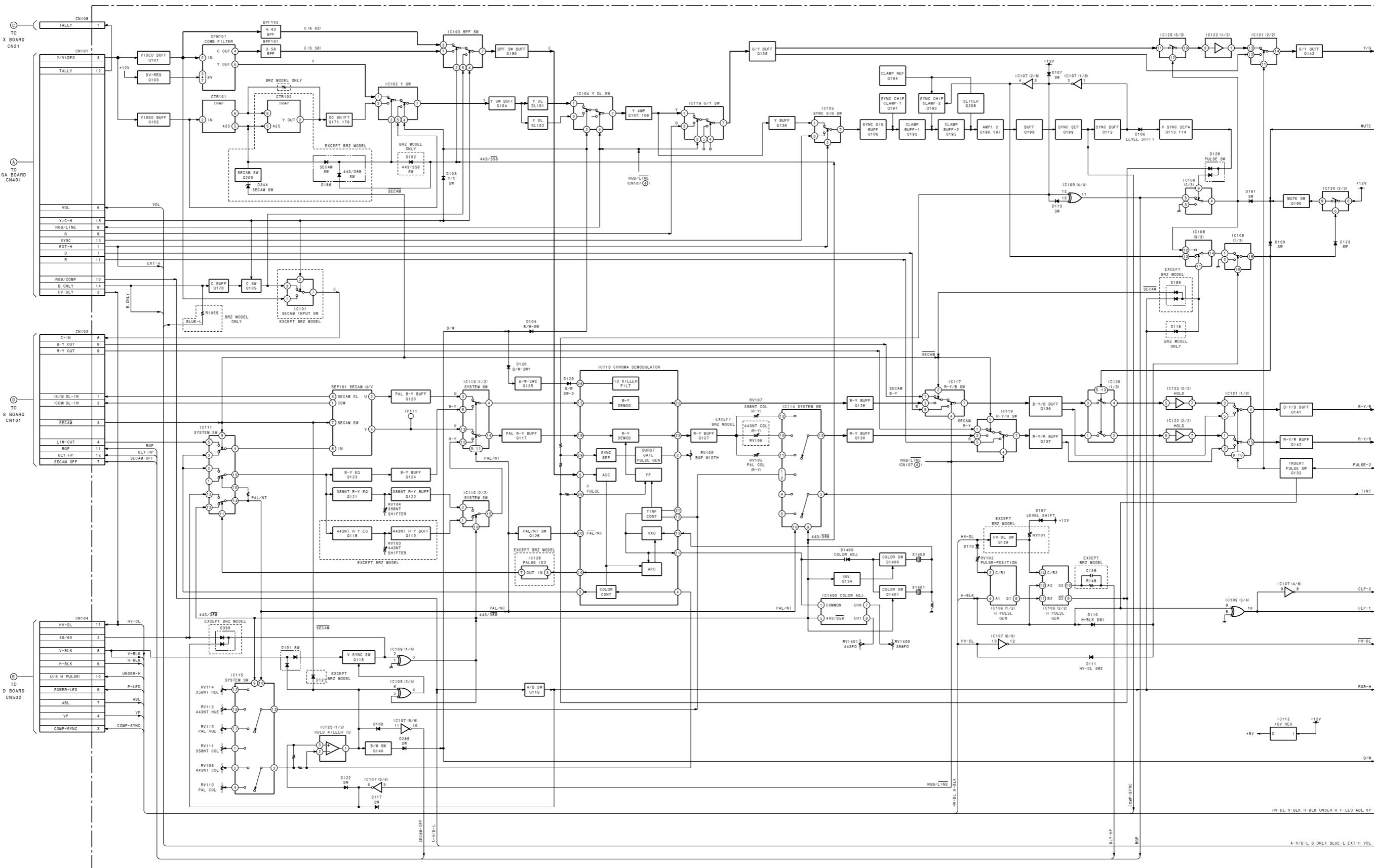
Ref.No.	Part No.	Description			Remark	Ref.No.	Part No.	Description			Remark	
Q1108	8-729-120-28	TRANSISTOR 2SC1623-L5L6				C604	△1-161-741-51	CERAMIC	1000PF	10%	400V	
		<RESISTOR>				C605	△1-161-741-51	CERAMIC	1000PF	10%	400V	
R1101	1-216-053-00	RES,CHIP	1.5K	5%	1/10W	C608	1-162-599-12	CERAMIC	4700PF	20%	400V	
R1102	1-216-067-00	RES,CHIP	5.6K	5%	1/10W	C609	1-162-599-12	CERAMIC	4700PF	20%	400V	
R1103	1-216-059-00	RES,CHIP	2.7K	5%	1/10W	C610	1-125-724-11	ELECT	100MF	20%	400V	
R1104	1-216-073-00	RES,CHIP	10K	5%	1/10W	C611	1-136-206-11	FILM	0.33MF	10%	630V	
R1105	1-216-031-00	RES,CHIP	180	5%	1/10W	C612	1-107-909-11	ELECT	47MF	20%	50V	
R1106	1-216-059-00	RES,CHIP	2.7K	5%	1/10W	C613	1-136-169-00	FILM	0.22MF	5%	50V	
R1107	1-216-071-00	RES,CHIP	8.2K	5%	1/10W	C614	1-136-169-00	FILM	0.22MF	5%	50V	
R1108	1-216-039-00	RES,CHIP	390	5%	1/10W	C615	1-130-471-00	FILM	0.001MF	5%	50V	
R1109	1-216-063-91	RES,CHIP	3.9K	5%	1/10W	C616	1-130-479-91	FILM	4700PF	5%	50V	
R1110	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	C651	1-161-825-11	CERAMIC	220PF	10%	500V	
R1111	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	C652	1-111-065-11	ELECT	680MF	20%	25V	
R1112	1-216-059-00	RES,CHIP	2.7K	5%	1/10W	C653	1-126-969-11	ELECT	220MF	20%	35V	
R1113	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	C654	1-130-483-91	FILM	0.01MF	5%	50V	
R1114	1-216-055-00	RES,CHIP	1.8K	5%	1/10W	<CONNECTOR>						
R1115	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	CN610	* 1-560-436-00	PIN,CONNECTOR 3P				
R1116	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	CN651	* 1-564-518-11	PLUG,CONNECTOR 3P				
R1117	1-216-061-00	RES,CHIP	3.3K	5%	1/10W	<DIODE>						
R1118	1-216-073-00	RES,CHIP	10K	5%	1/10W	D601	△8-719-510-22	DIODE D3SB60				
R1119	1-216-049-91	RES,CHIP	1K	5%	1/10W	D602	8-719-911-19	DIODE 1SS119-25				
R1120	1-216-097-91	RES,CHIP	100K	5%	1/10W	D603	8-719-970-87	DIODE ERA38-06				
R1121	1-216-121-91	RES,CHIP	1M	5%	1/10W	D604	8-719-970-87	DIODE ERA38-06				
R1122	1-216-039-00	RES,CHIP	390	5%	1/10W	D605	8-719-110-53	DIODE RD20ESB3				
R1123	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	D651	△9-907-820-01	DIODE ESAC39M				
R1124	1-216-029-00	RES,CHIP	150	5%	1/10W	<IC>						
R1125	1-216-029-00	RES,CHIP	150	5%	1/10W	IC601	1-809-086-12	IC CH-1018				
R1126	1-216-053-00	RES,CHIP	1.5K	5%	1/10W	IC651	8-759-908-15	IC TL431CLP				
R1127	1-216-043-91	RES,CHIP	560	5%	1/10W	<COIL>						
R1128	1-216-049-91	RES,CHIP	1K	5%	1/10W	L601	△1-424-616-11	L.F.T				
R1129	1-216-091-00	RES,CHIP	56K	5%	1/10W	L602	△1-424-574-11	L.F.T				
R1131	1-216-073-00	RES,CHIP	10K	5%	1/10W	L651	1-424-255-11	COIL, CHOCKE (MOLDE) 10μH				
R1132	1-216-073-00	RES,CHIP	10K	5%	1/10W	L652	1-424-615-21	COIL,CHOKE				
R1133	1-216-073-00	RES,CHIP	10K	5%	1/10W	<PHOTO COUPLER>						
R1134	1-216-091-00	RES,CHIP	56K	5%	1/10W	PH601	8-719-159-90	PHOTO COUPLER PS2652-P				
<VARIABLE RESISTOR>						<TRANSISTOR>						
RV1101	1-241-763-11	RES, ADJ, CARBON	4.7K			Q601	8-729-322-18	TRANSISTOR 2SK1402A				
RV1102	1-241-762-11	RES, ADJ, CARBON	2.2K			<RESISTOR>						
<TRANSFORMER>						R601	1-216-411-11	METAL OXIDE	1.5	5%	5W	F
T1101	1-404-584-11	COIL				R602	1-216-411-11	METAL OXIDE	1.5	5%	5W	F
*****						R603	1-215-904-11	METAL OXIDE	100K	5%	2W	F
G BOARD (SOP8-1021)						R604	1-215-904-11	METAL OXIDE	100K	5%	2W	F
*****						R605	1-212-865-00	FUSIBLE	22	5%	1/4W	F
4-812-134-11 RIVET,NYLON						R606	1-249-404-00	CARBON	82	5%	1/4W	
<CAPACITOR>												
C602	△1-136-889-11	FILM	0.22MF	20%	250V							
C603	△1-161-741-51	CERAMIC	1000PF	10%	400V							

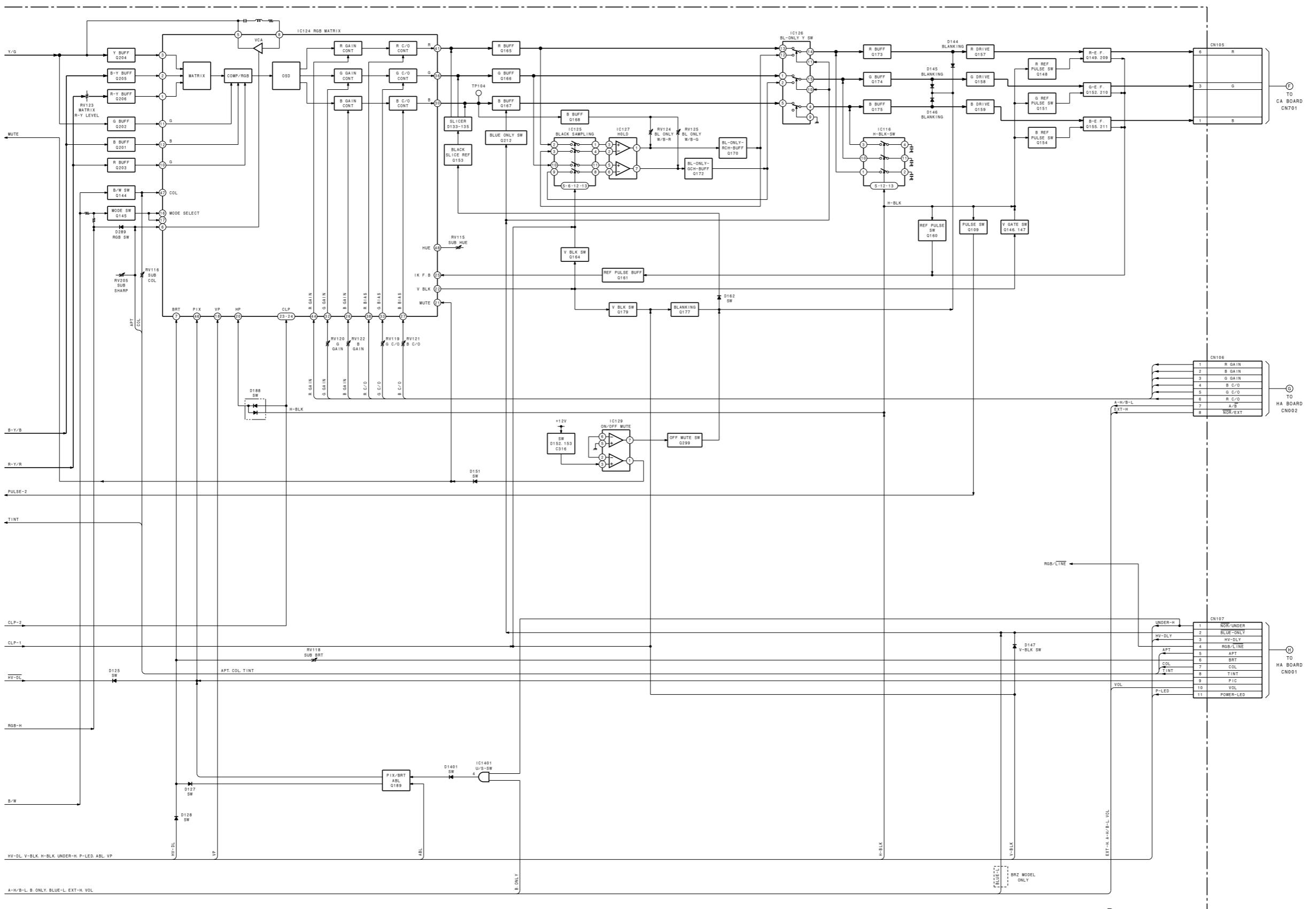
Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R607	1-260-128-91	CARBON	270K 5%	1/2W			*****
R608	1-260-128-91	CARBON	270K 5%	1/2W			*****
R609	1-215-904-51	METAL OXIDE	100K 5%	2W F		MISCELLANEOUS	
R610	1-216-341-11	METAL OXIDE	0.22 10%	1/2W		*****	
R611	1-249-395-11	CARBON	15 5%	1/4W		△1-413-720-21 SWITCHING REGULATOR	
R612	1-249-399-11	CARBON	33 5%	1/4W		△1-416-882-11 COIL, DEMAGNETIC	
R613	1-215-904-51	METAL OXIDE	100K 5%	2W F		△1-451-319-22 DEFLECTION YOKE (Y9FXC)	
R614	1-247-815-91	CARBON	220 5%	1/4W			
R620	1-218-265-11	METAL GRAZE	8.2M 5%	1W		△8-737-154-05 PICTURE TUBE SD-167 (PVM-8042Q, 9042QM (AEP))	
R651	1-215-886-11	METAL OXIDE	100 5%	2W F		△8-737-651-05 PICTURE TUBE 09FX (PVM-8045Q, 9042QM (AUS),	
R652	1-215-886-11	METAL OXIDE	100 5%	2W F		9045QM (AEP), 9045QM (AUS),	
R653	1-260-107-11	CARBON	4.7K 5%	1/2W		9045PM (BRZ))	
R654	1-260-107-11	CARBON	4.7K 5%	1/2W			
R655	1-249-435-11	CARBON	33K 5%	1/4W			
R656	1-249-435-11	CARBON	33K 5%	1/4W			
R657	1-249-420-11	CARBON	1.8K 5%	1/4W			
R658	1-249-435-11	CARBON	33K 5%	1/4W			
 <b>&lt;VARIABLE RESISTOR&gt;</b>							
☒ RV651	△	RES,ADJ,CARBON	1K				
 <b>&lt;TRANSFORMER&gt;</b>							
T601	1-450-760-12	TRANSFORMER, CONVERTER					
 *****							
<b>ACCESSORIES AND PACKING MATERIALS</b>							
 *****							
1-690-871-11	CABLE (MINI DIN) 8P						
2-990-241-02	HOLDER (A), PLUG						
2-990-242-01	HOLDER (B), PLUG						
3-865-058-11	OPERATING INSTRUCTIONS (PVM-8042Q, 8045Q) (ENGLISH, FRENCH, SPANISH)						
3-865-058-21	OPERATING INSTRUCTIONS (PVM-9042Q, 9045QM) (ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH, CHINESE)						
3-865-341-11	OPERATING INSTRUCTIONS (PVM-9045PM) (ENGLISH)						
4-034-835-01	PLATE, TALLY						
△1-765-718-11	CORD SET, POWER (125V/10.0A) (PVM-8042Q, 8045Q, 9045PM)						
△1-782-929-11	CORD, POWER SUPPLY (BS 3P) (250V/10.0A) (PVM-9042QM, 9045QM)						
* 4-034-955-01	CUSHION (UPPER) (ASSY)						
* 4-034-956-01	CUSHION (LOWER) (ASSY)						
* 4-384-927-11	BAG, PROTECTION						

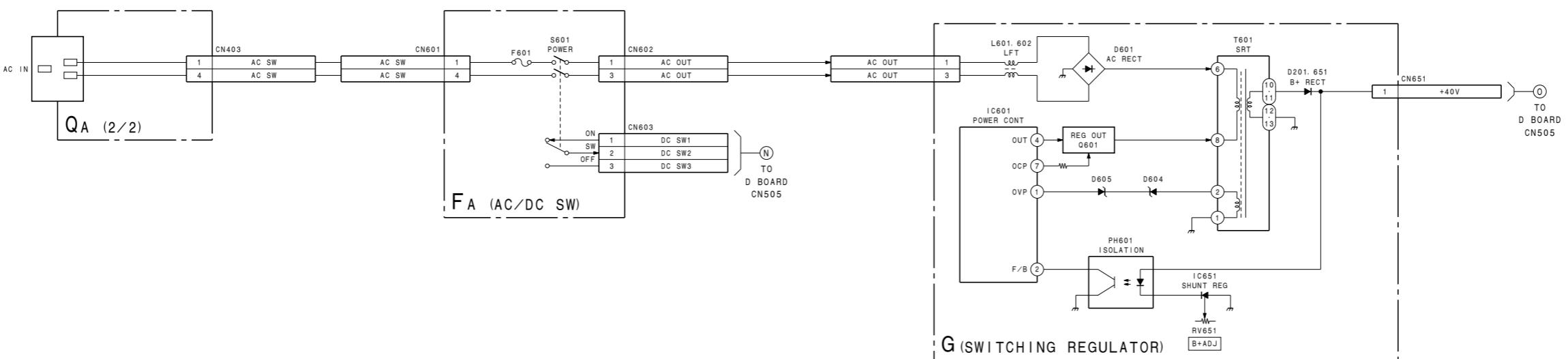
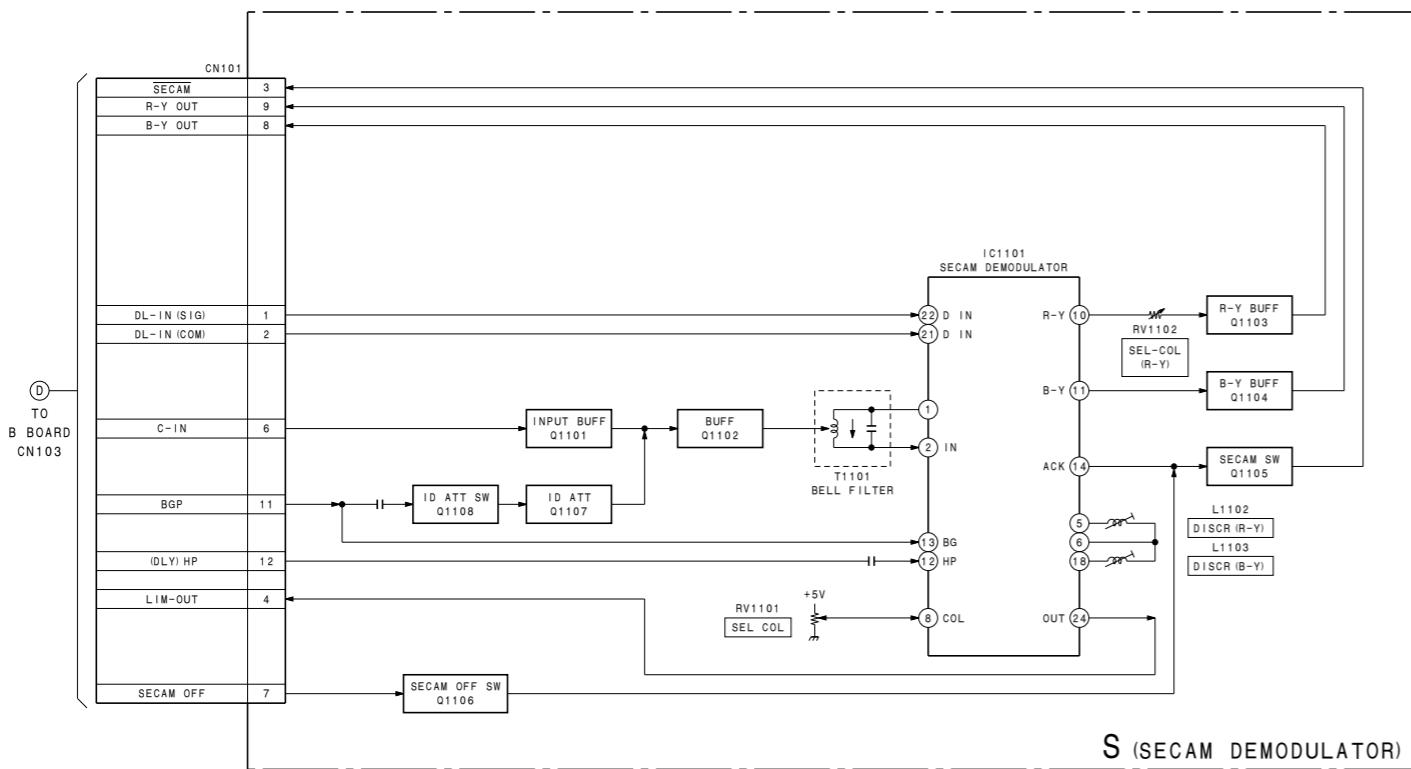
## SECTION 9

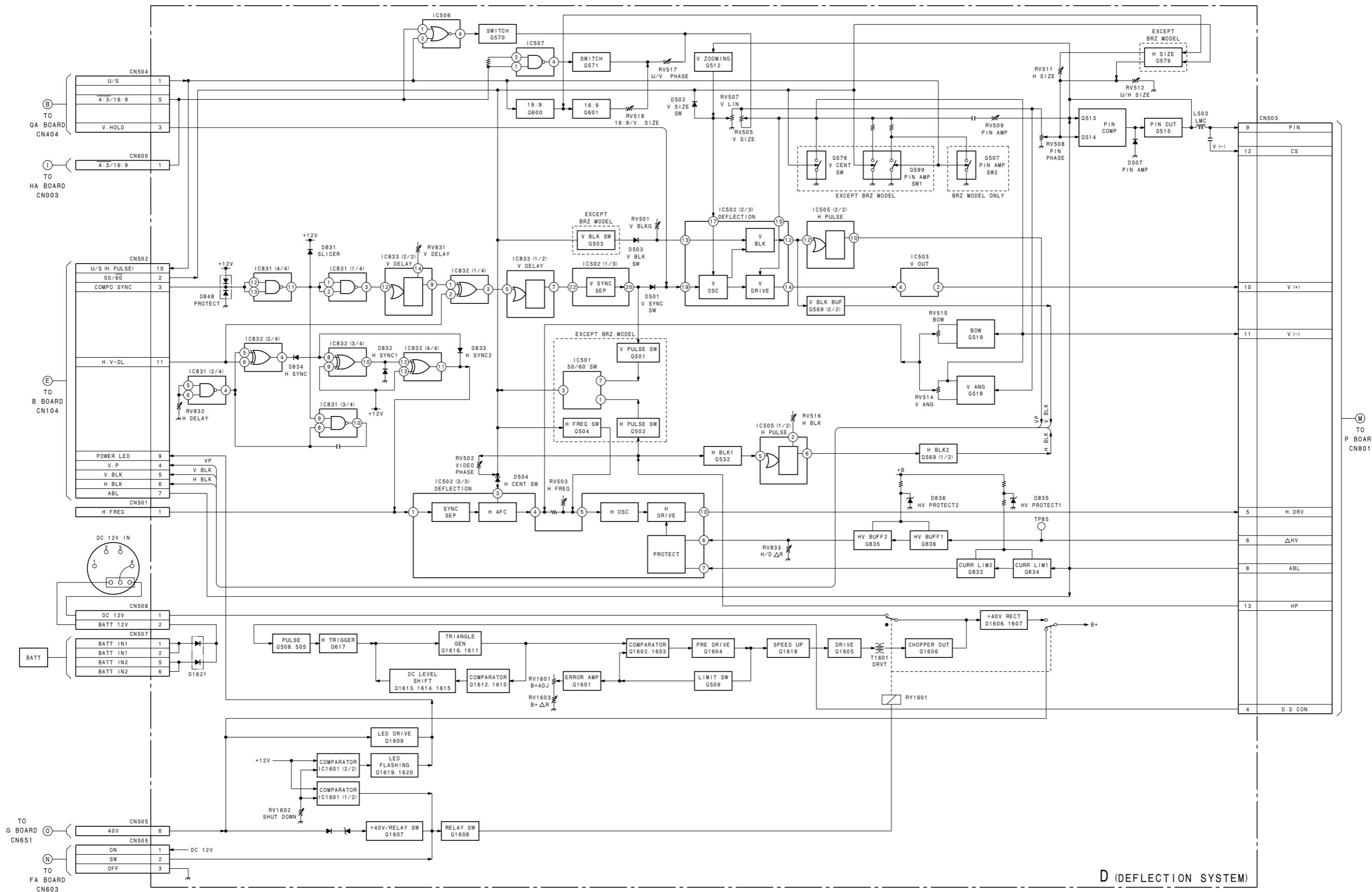
### BLOCK DIAGRAMS

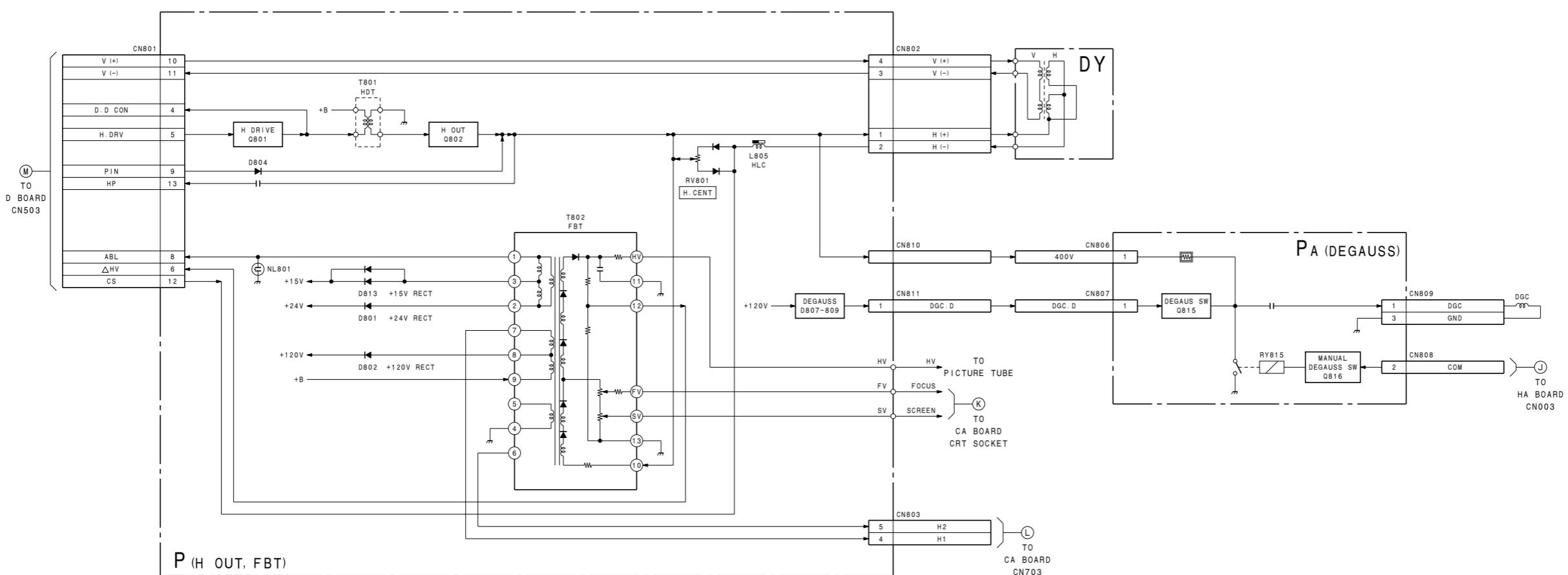
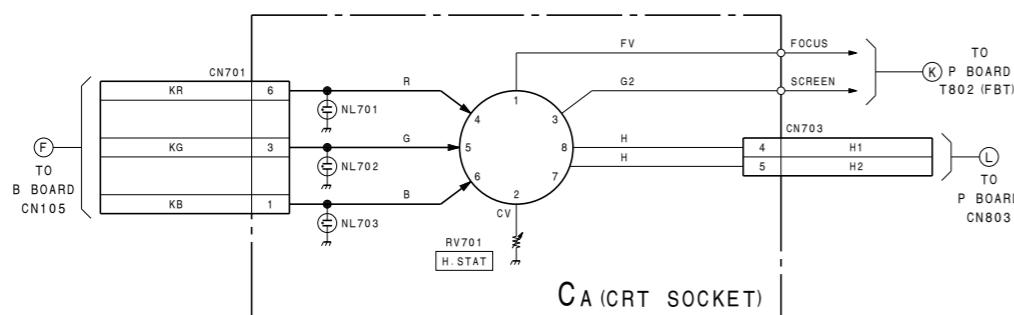










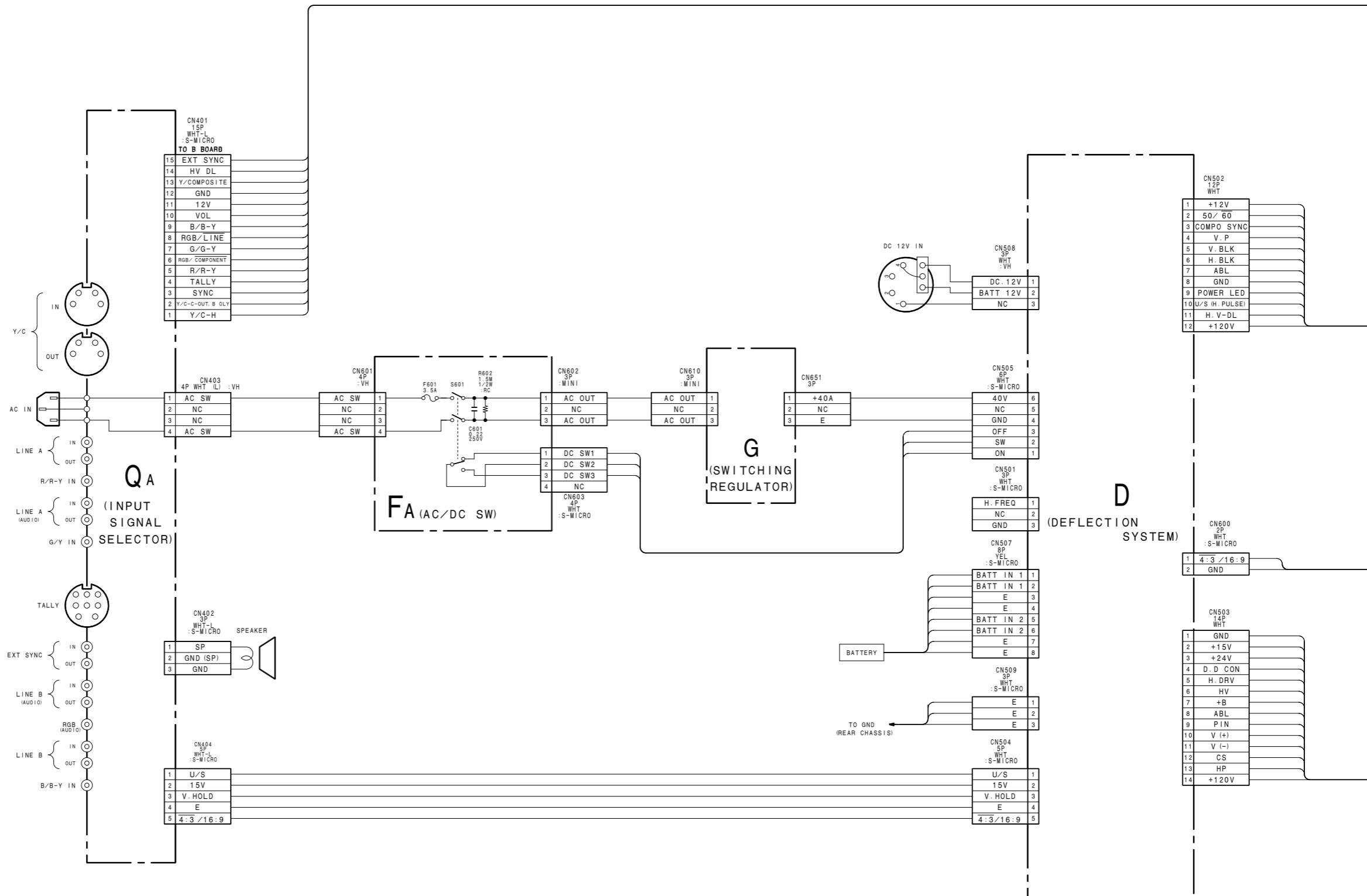


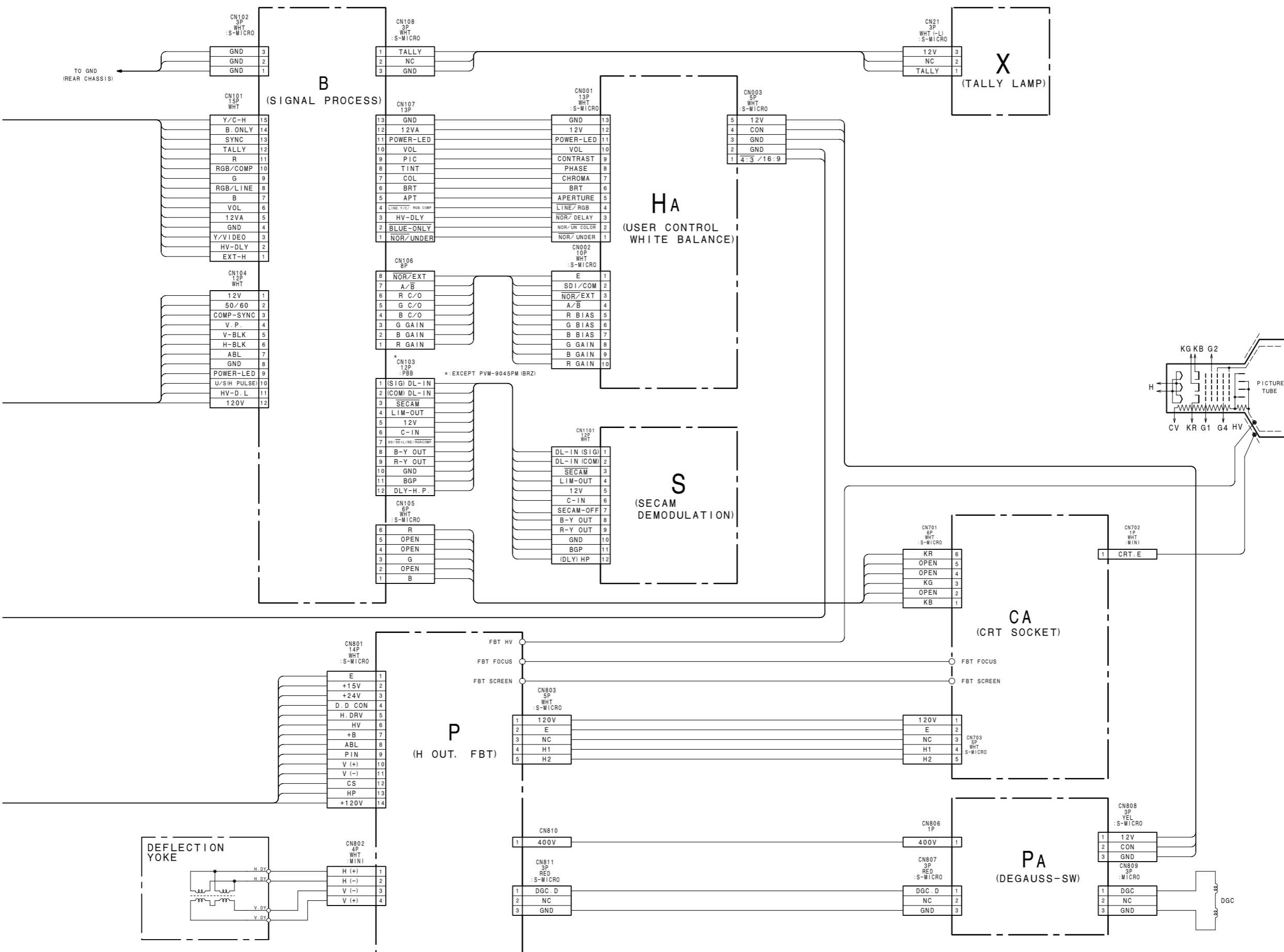
## **SECTION 10**

### **DIAGRAMS**

## 10-1. FRAME SCHEMATIC DIAGRAMS

1





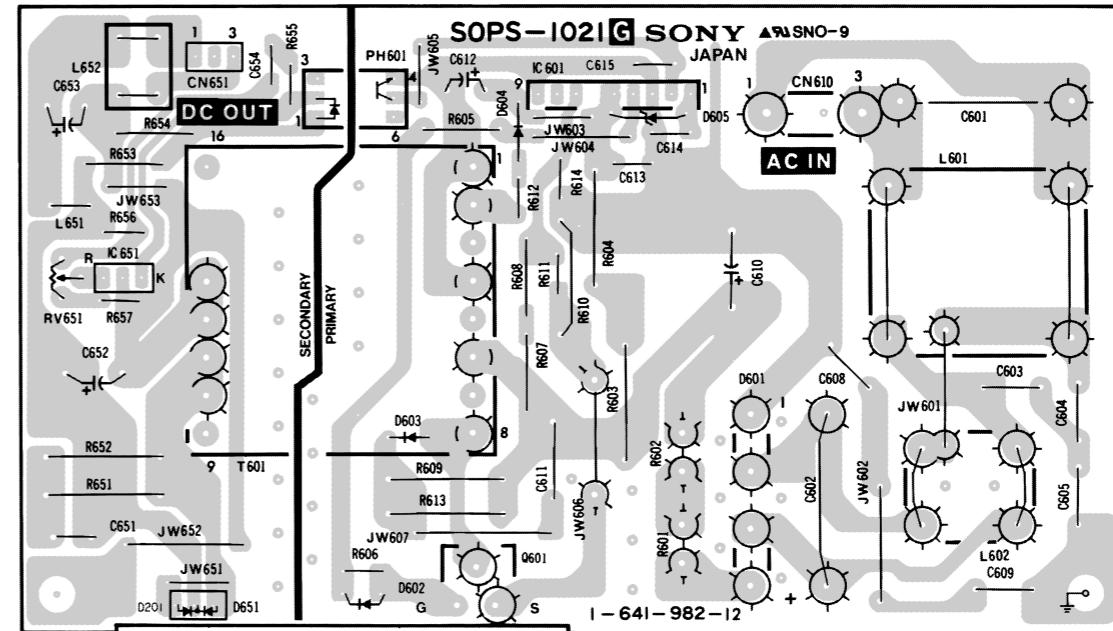
## 10-2. SCHEMATIC DIAGRAMS/PRINTED WIRING BOARDS

- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
  - PF: 50 WV or less are not indicated except for electrolytics.
  - All electrolytics are in 50 V unless otherwise specified.
  - All resistors are in ohms, 1/4 W in resistance, 1/10 W in chip resistance.  
 $k\Omega = 100$ ,  $M\Omega = 1000 k\Omega$
  - : nonflammable resistor.
  - : internal component.
  - : panel designation, or adjustment for repair.
  - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
  - The "4-1. +B Voltage Check" and "4-2. Protection Circuit (Hold-down circuit) Check" should always be performed when replacing the following components (marked on the schematic diagram).

Board	Parts	Parts
D	C519, C843, C844, C845, C846, C847, C848, C1601, C1602, D835, D836, D1601, D1603, IC502, Q833, Q834, Q835, Q836, Q1601, Q1602, Q1603, R523, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R1601, R1602, R1603, R1604, R1605, R1606, R1607, R1608, R1628, R1629, R1630, RV833, RV1601, RV1603	RV833, RV1603
G	C654, IC601, IC651, PH601, R653, R655, R656, R657, RV651	RV651
P	C814, NL801, T802 (FBT)	

- Readings are taken with a color-bar signal input.  
no mark : With PAL color-bar signal received or common voltage.  
( ) : With SECAM color-bar signal received.  
< > : With NTSC (3.58, 4.43) color-bar signal received.
- Readings are taken with a 10 M $\Omega$  digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circle numbers are waveform reference.
- : B+ bus.
- : B- bus.
- : signal path.
- \* : Measurement impossibility.

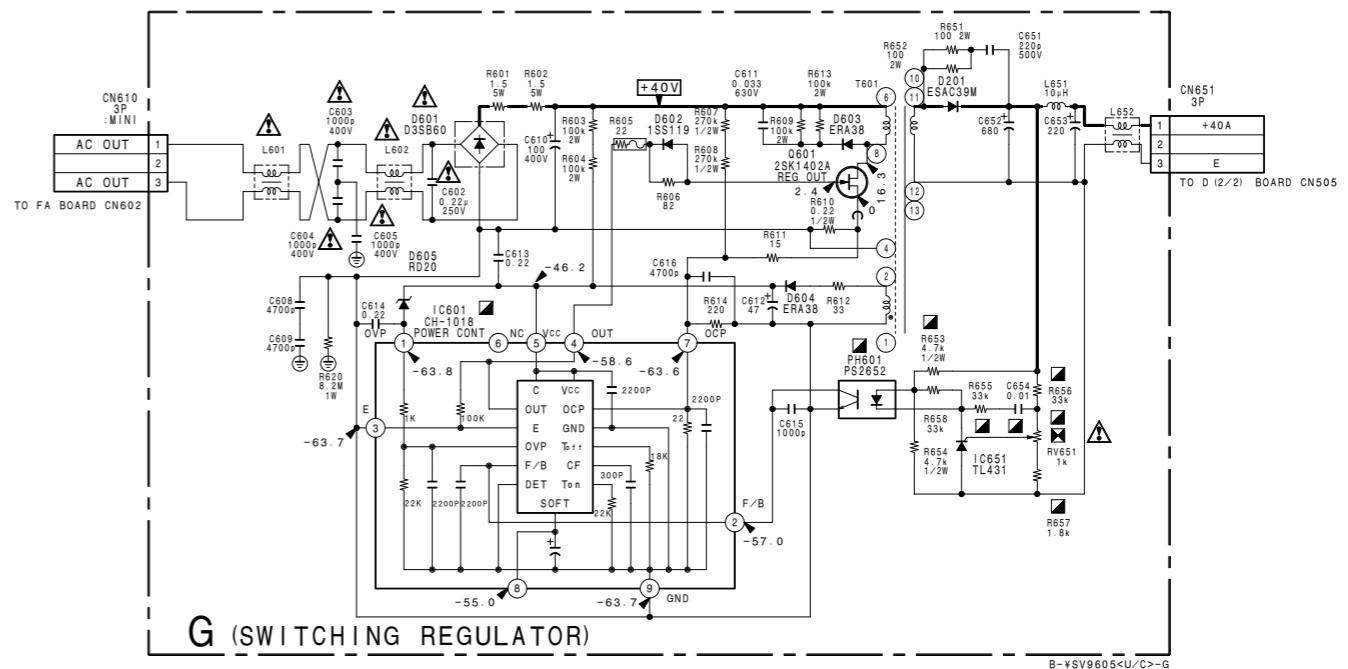
## G BOARD



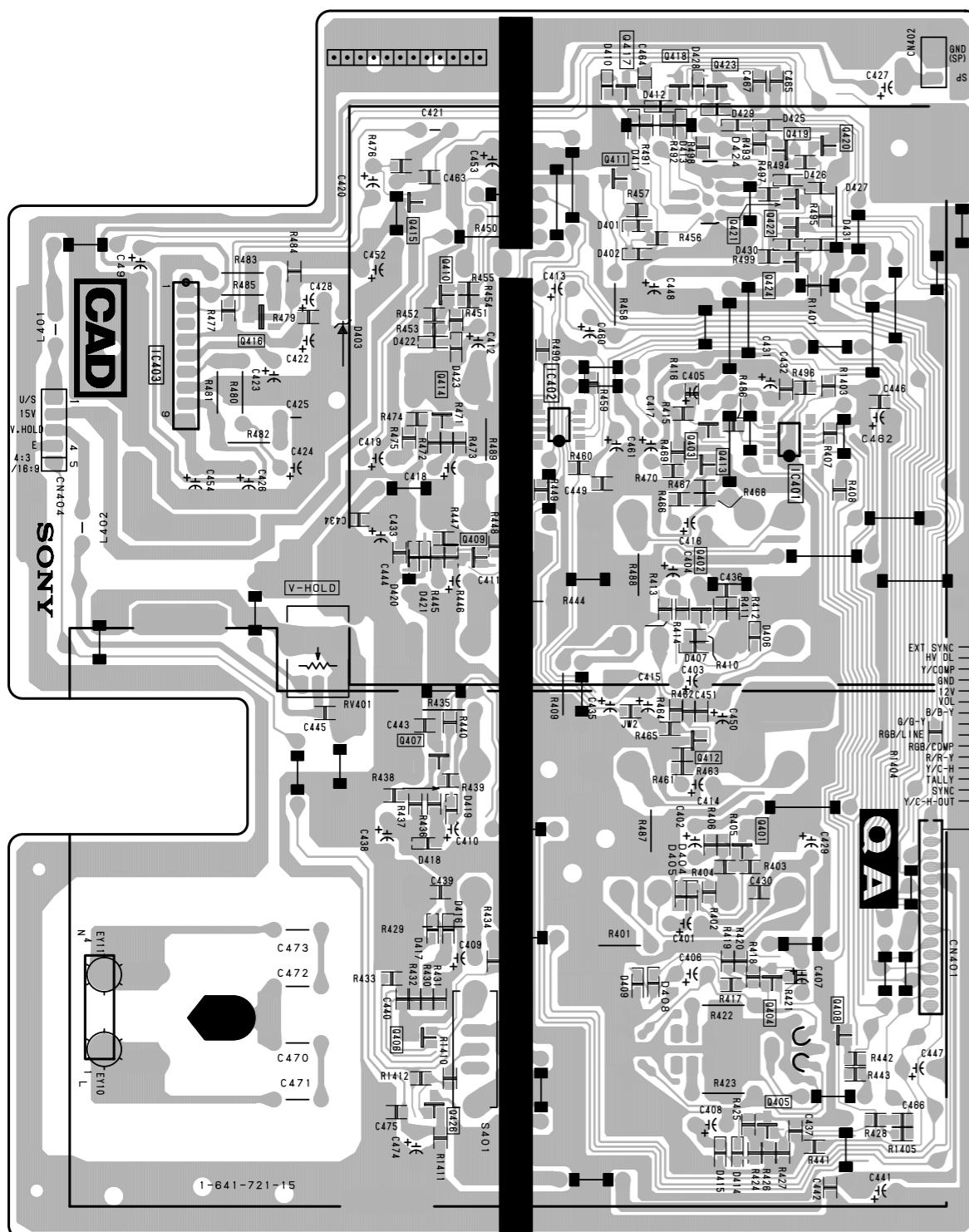
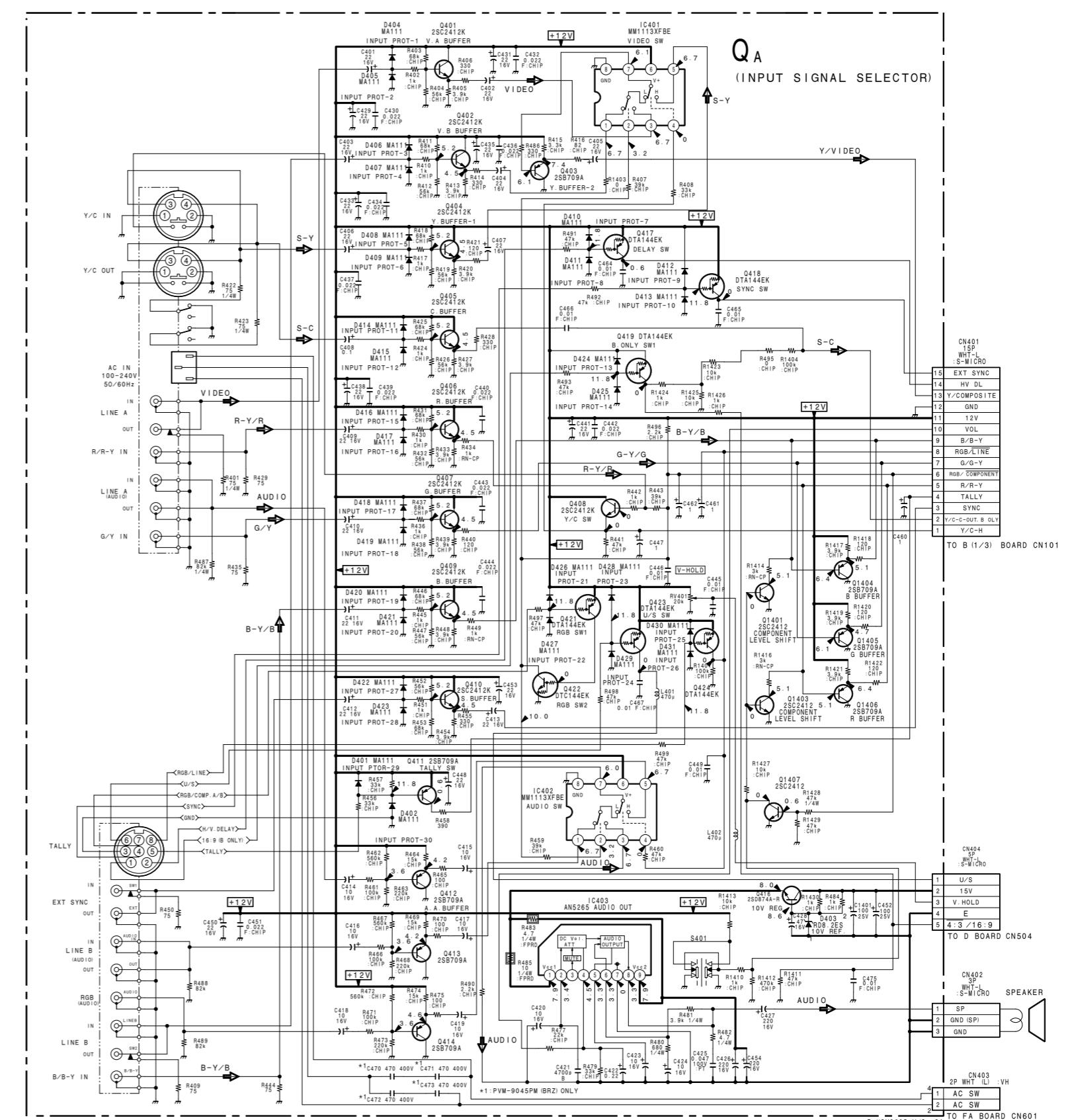
### Reference information

RESISTOR	: RN METAL FILM : RC SOLID : FPRD NONFLAMMABLE CARBON : FUSE NONFLAMMABLE FUSIBLE : RS NONFLAMMABLE METAL OXIDE : RB NONFLAMMABLE CEMENT : RW NONFLAMMABLE WIREWOUND
COIL	: LF-8L MICRO INDUCTOR
CAPACITOR	: TA TANTALUM : PS STYROL : PP POLYPROPYLENE : PT MYLAR : MPS METALIZED POLYESTER : MPP METALIZED POLYPROPYLENE : ALB BIPOLAR : ALT HIGH TEMPERATURE : ALR HIGH RIPPLE

**G -B SIDE-**  
SUFFIX: -12

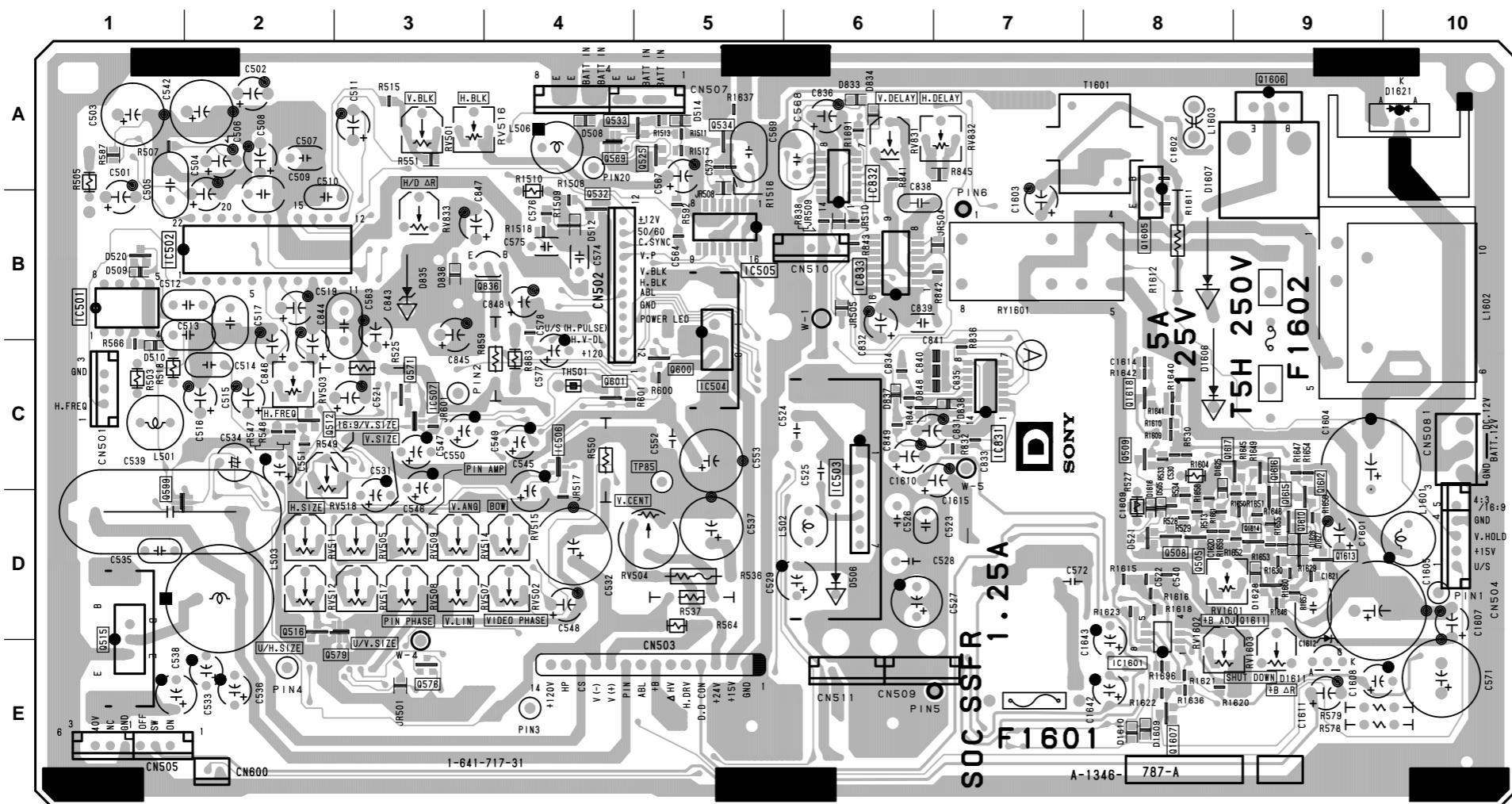


## QA BOARD

QA -B SIDE-  
SUFFIX: -15

D D

**D BOARD**



**D BOARD (A SIDE)**

IC501 B-1  
IC502 B-1  
IC503 C-6  
IC505 B-5  
IC506 C-4  
IC507 C-3  
IC831 C-7  
IC832 A-6  
IC833 B-6  
IC1601 E-8

Q505 D-8  
Q508 D-8  
Q509 C-8  
Q512 C-2  
Q515 D-1  
Q516 D-2  
Q532 B-4  
Q533 A-4  
Q534 A-5  
Q569 A-4  
Q571 C-3  
Q576 E-3  
Q579 E-3  
Q525 A-5  
Q599 D-1  
Q600 C-5  
Q601 C-4  
Q836 B-4  
Q1604 C-2  
Q1605 B-8  
Q1606 A-9  
Q1607 E-8  
Q1610 D-9  
Q1611 D-9  
Q1612 C-9  
Q1613 D-9  
Q1614 D-9  
Q1615 D-9  
Q1616 C-9  
Q1617 C-8  
Q1618 C-8

D506 D-5  
D508 A-4  
D509 B-1  
D510 C-1  
D514 A-5  
D520 B-1  
D521 D-8  
D833 A-6  
D834 A-6  
D835 B-3  
D836 B-3  
D837 C-6  
D838 C-7  
D1606 C-8  
D1607 A-8  
D1609 E-8  
D1611 E-9  
D1616 D-8  
D1621 A-10  
D1625 C-8  
D1626 D-9  
D1627 D-9  
D1628 D-9

RV501 A-3  
RV502 D-4  
RV503 C-2  
RV504 D-5  
RV505 D-3  
RV507 D-4  
RV508 D-3  
RV509 D-3  
RV511 D-2  
RV512 D-2  
RV514 D-4  
RV515 D-4  
RV516 A-4  
RV517 D-3  
RV518 C-2  
RV831 A-6  
RV832 A-7  
RV833 B-3  
RV1601 D-8  
RV1602 E-8  
RV1603 E-9

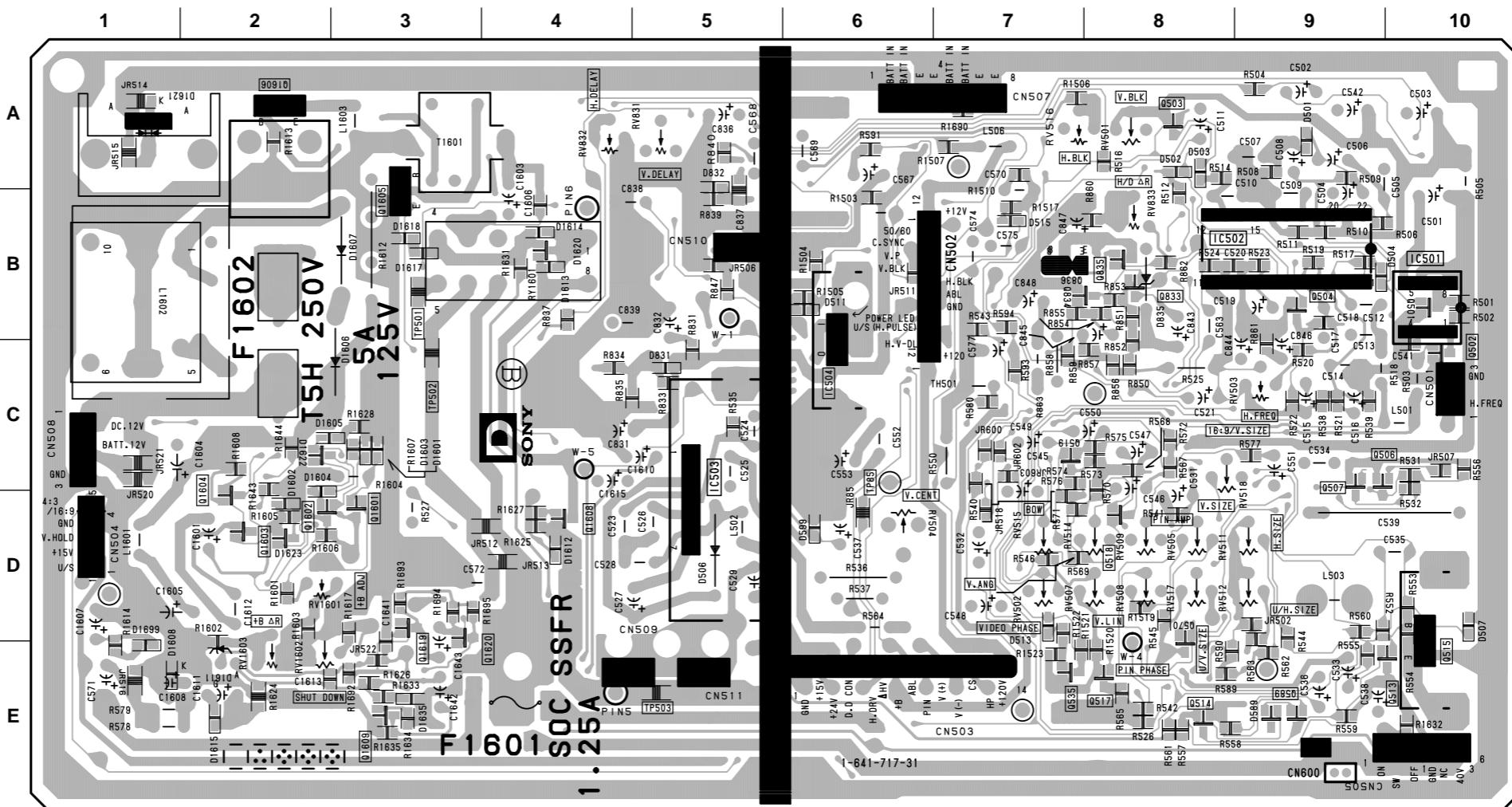
**D -A SIDE-**  
**SUFFIX: -31**

## D BOARD (B SIDE)

IC501 B-10  
 IC502 B-9  
 IC503 C-5  
 IC504 C-6  
 Q501 B-10  
 Q502 C-10  
 Q503 A-8  
 Q504 B-9  
 Q506 C-9  
 Q515 E-10  
 Q507 C-9  
 Q513 E-10  
 Q514 E-8  
 Q517 E-8  
 Q518 D-8  
 Q519 C-7  
 Q535 E-8  
 Q570 D-8  
 Q589 E-9  
 Q833 B-8  
 Q835 B-8  
 Q836 B-7  
 Q1601 D-3  
 Q1602 D-2  
 Q1603 D-2  
 Q1605 B-3  
 Q1606 A-2  
 Q1608 D-4  
 Q1609 E-3  
 Q1619 E-3  
 Q1620 E-4

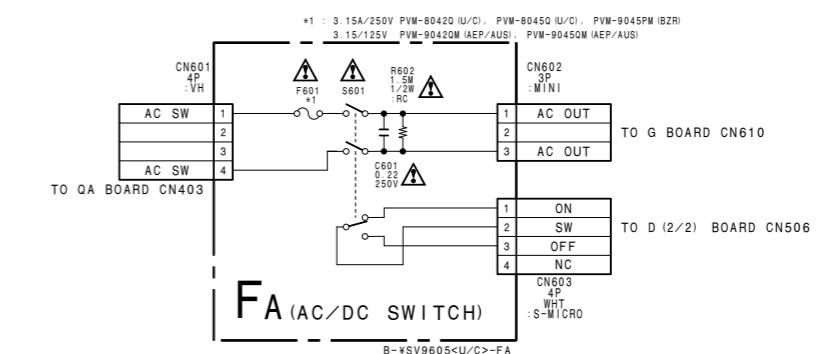
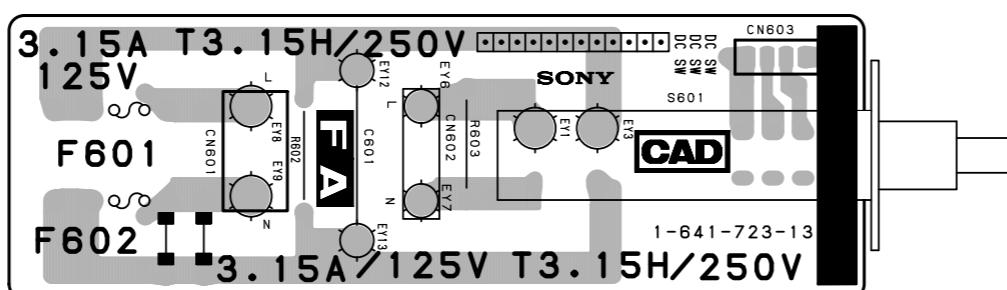
D501 A-9  
 D502 A-8  
 D503 A-8  
 D504 B-9  
 D505 D-8  
 D507 D-7  
 D511 B-6  
 D512 B-4  
 D513 D-7  
 D515 B-7  
 D589 E-9  
 D599 D-6  
 D831 C-5  
 D832 A-5  
 D835 B-8  
 D1601 C-3  
 D1602 D-2  
 D1603 C-3  
 D1604 C-2  
 D1605 C-2  
 D1608 E-1  
 D1610 E-8  
 D1611 E-2  
 D1612 D-4  
 D1613 B-4  
 D1614 B-4  
 D1615 E-2  
 D1617 B-3  
 D1618 B-3  
 D1620 B-4  
 D1621 A-2  
 D1622 C-2  
 D1623 D-2  
 D1635 E-3  
 D1699 E-1

## D BOARD



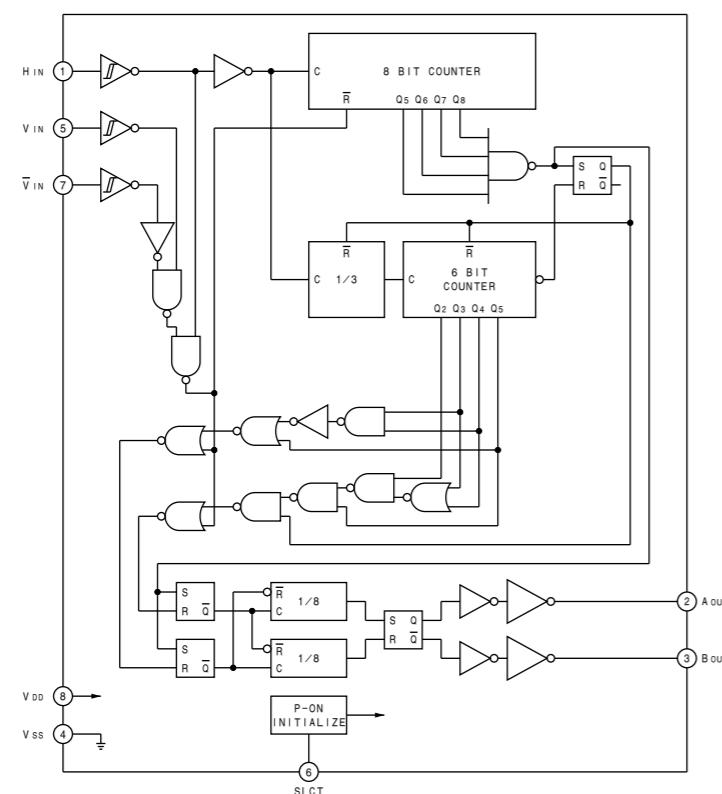
**D -B SIDE-**  
SUFFIX: -31

## FA BOARD



**FA -B SIDE-**  
SUFFIX: -13

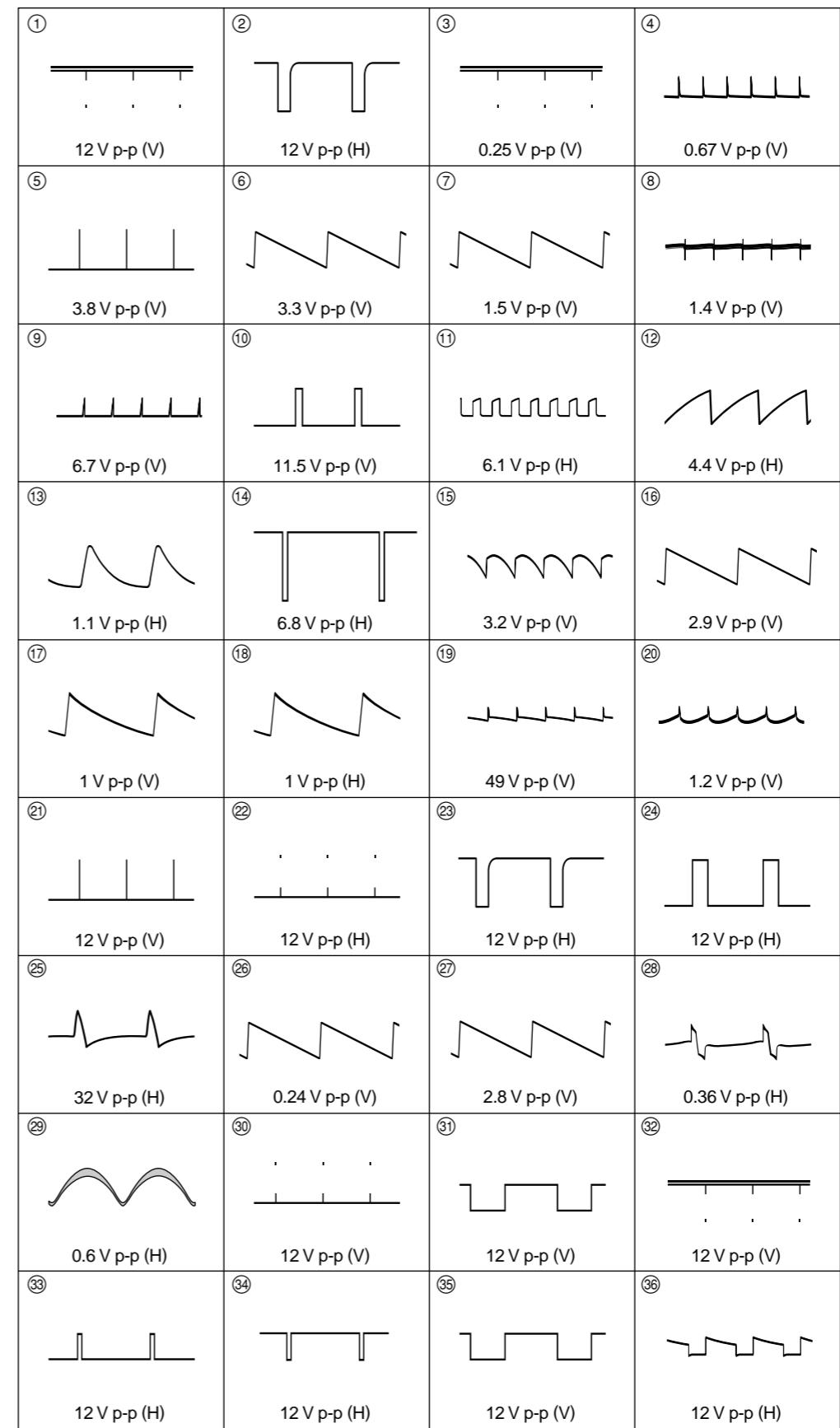
## D (1/2) BOARD IC501 CX23025



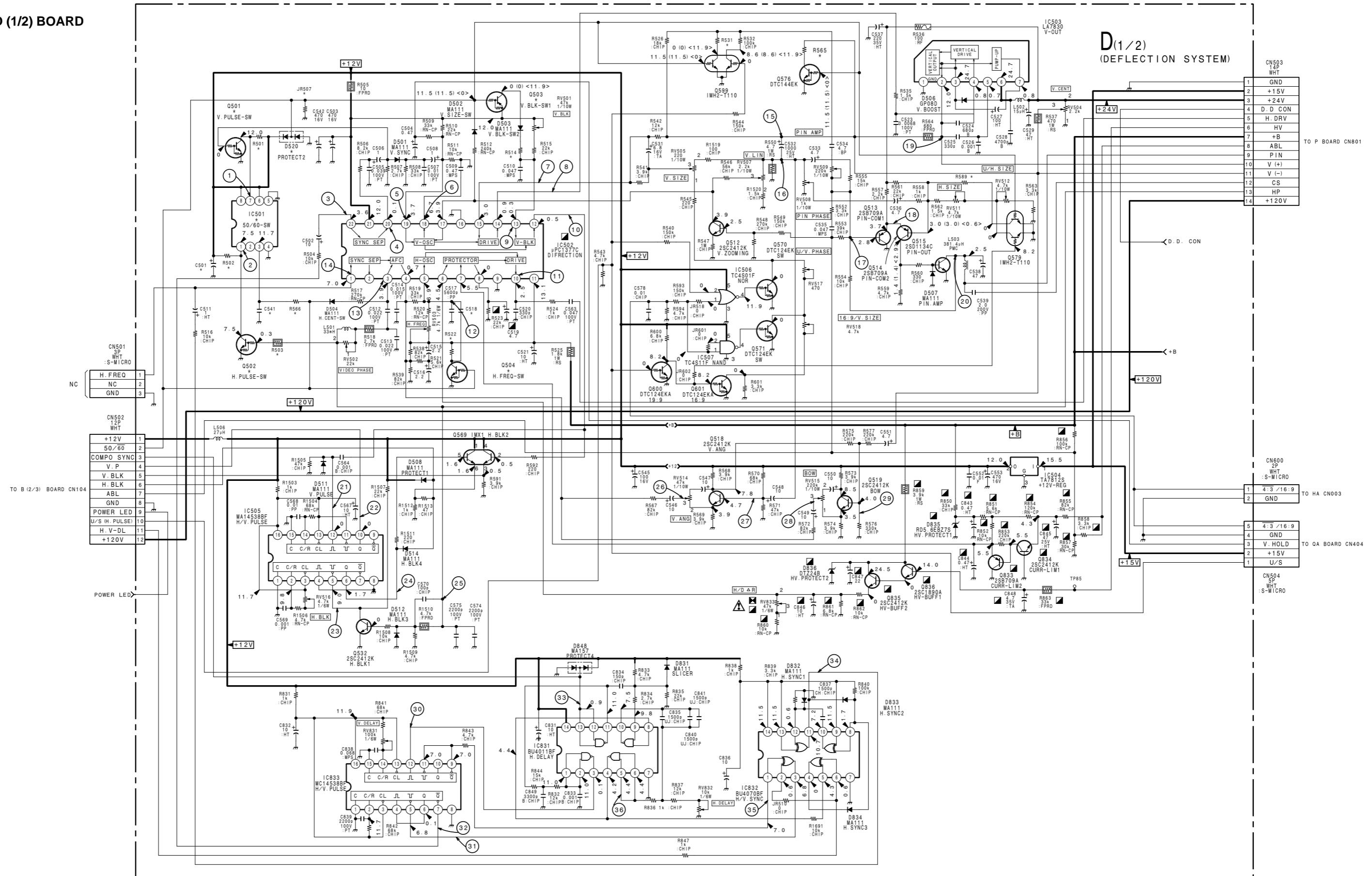
## D (1/2) BOARD \* MARK LIST

	PVM-8042Q (U/C)	PVM-9045PM (BRZ)
	PVM-8045Q (U/C)	
	PVM-9042QM (AEP/AUS)	
	PVM-9045QM (AEP/AUS)	
C501	47 16V	NOT USED
C518	56P B: CHIP	NOT USED
C541	0.047 B: CHIP	NOT USED
D520	MA157-TX	NOT USED
IC501	CX23025	NOT USED
JR507	NOT USED	SHORT 0
Q501	DTC144EKA-T146	NOT USED
Q502	DTC144EKA-T146	NOT USED
Q503	DTC144EKA-T147	NOT USED
Q504	DTC144EKA-T146	NOT USED
R501	47K :CHIP	NOT USED
R502	47K :CHIP	NOT USED
R503	47K	NOT USED
R514	120K :RN	NOT USED
R522	270K :CHIP	NOT USED
R531	47K :CHIP	NOT USED
R565	2.7K CHIP	NOT USED
R566	100 :CHIP	NOT USED
R589	150K :CHIP	NOT USED

## D (1/2) BOARD WAVEFORMS

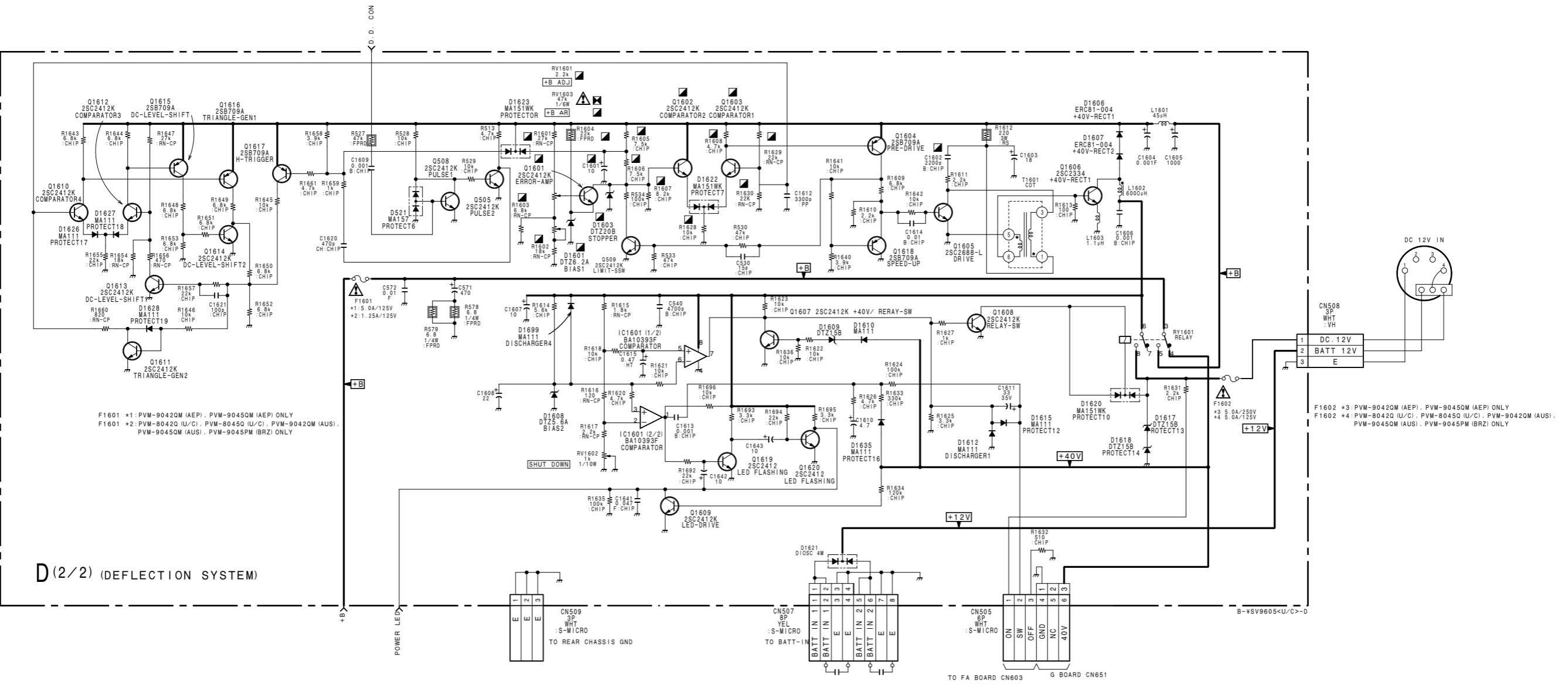


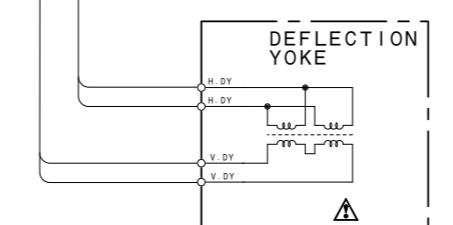
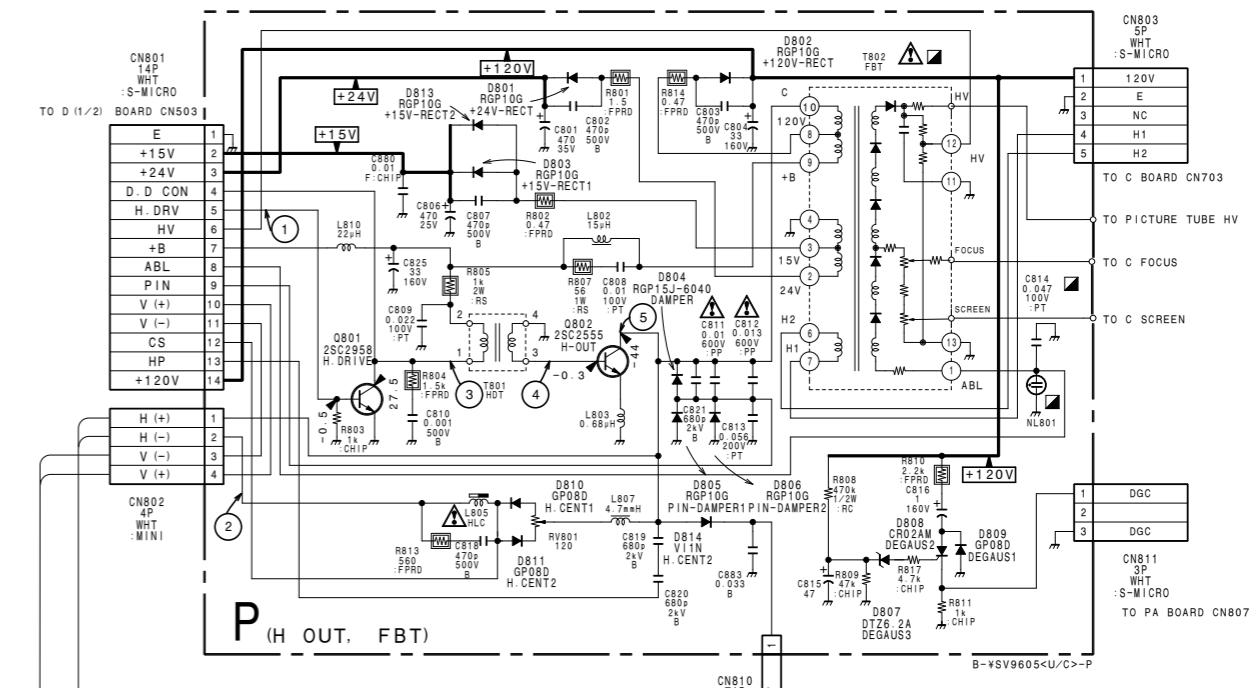
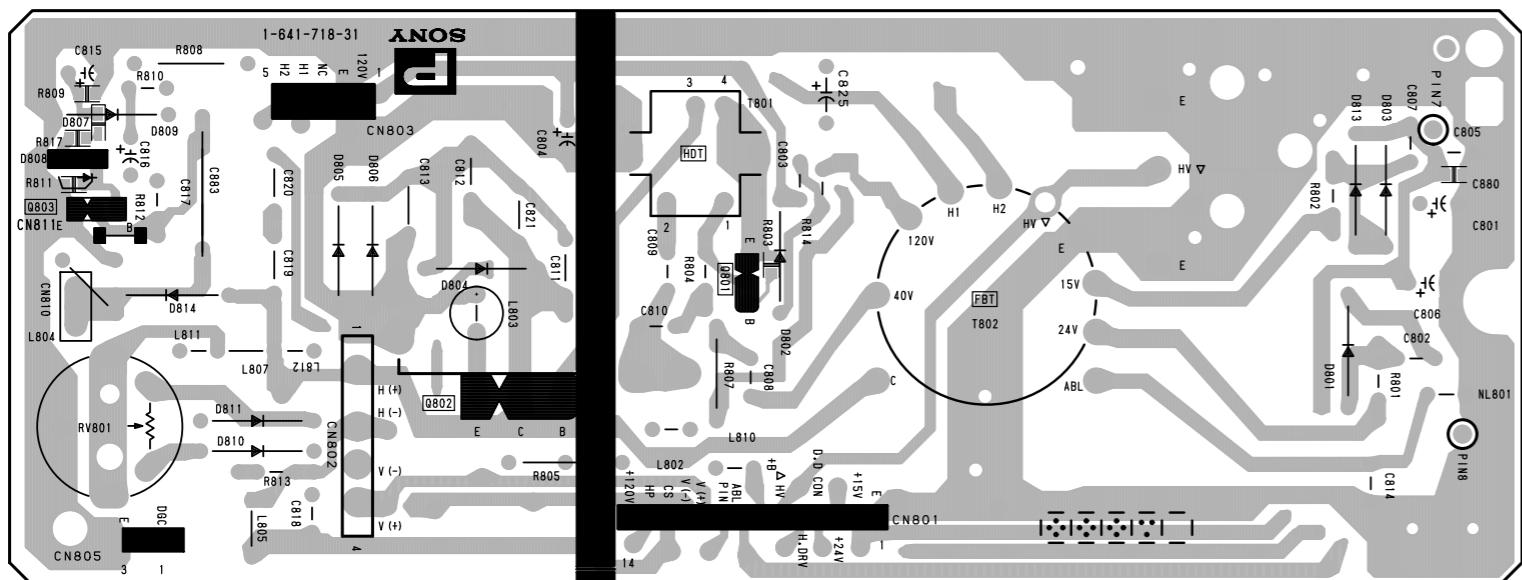
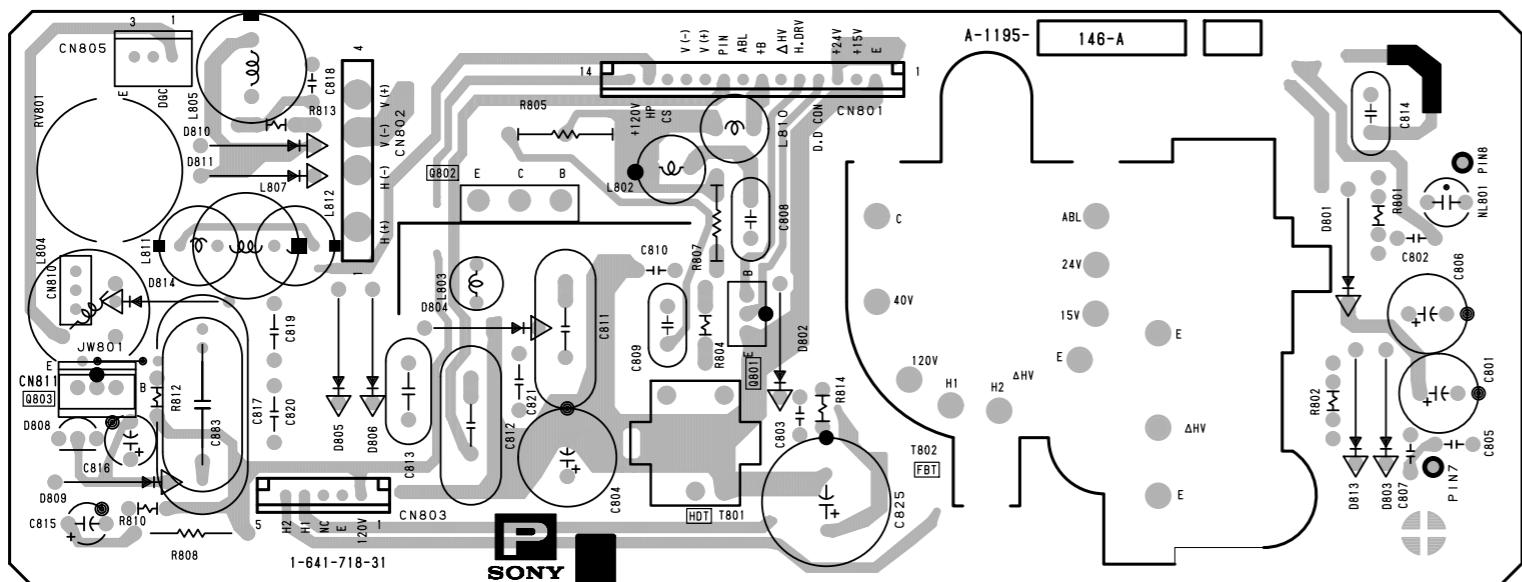
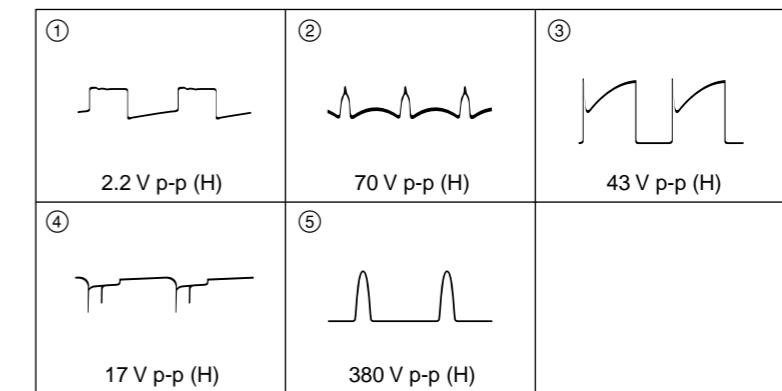
## D (1/2) BOARD

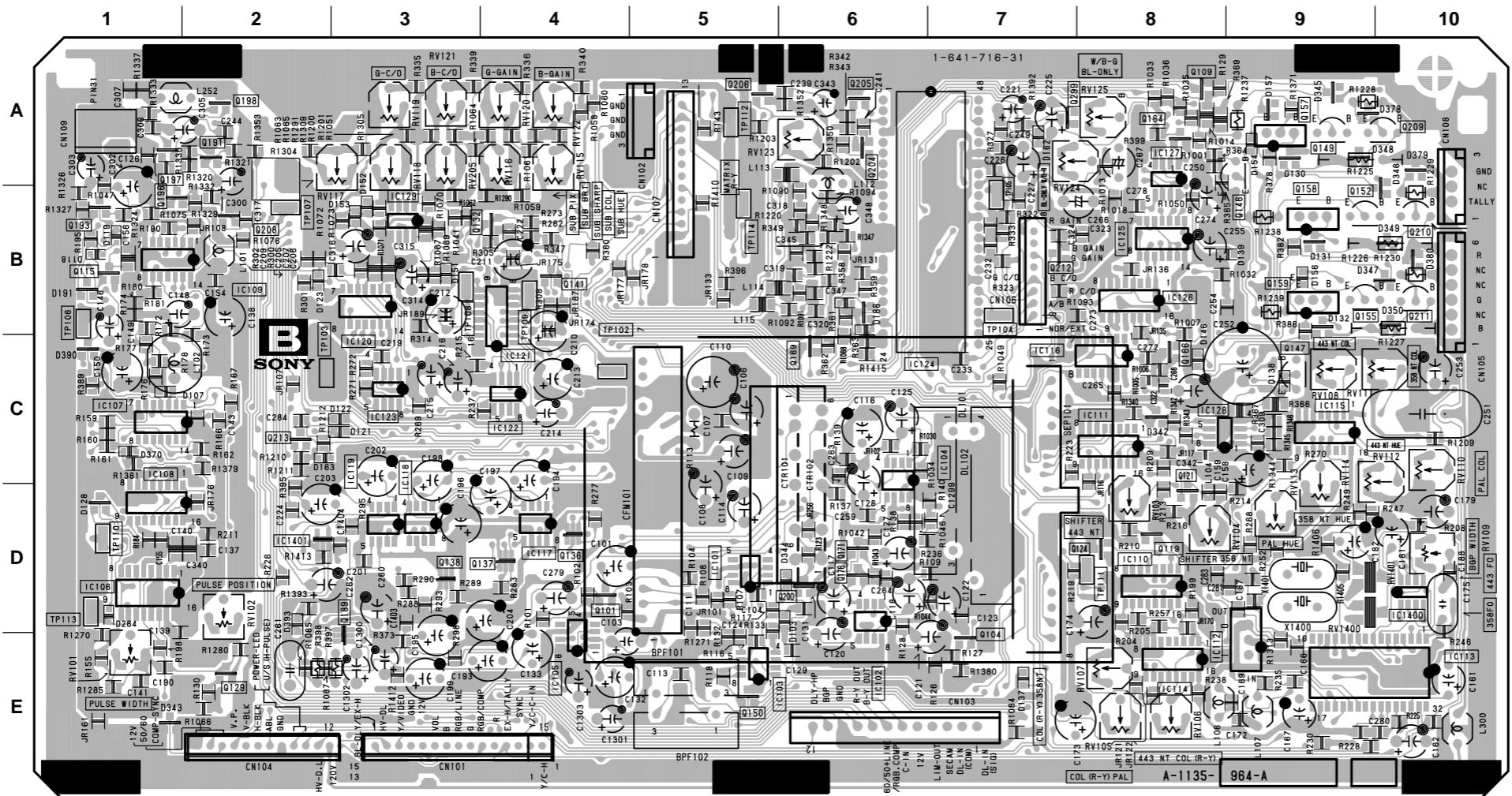


D (2/2) BOARD

1



**P BOARD****P BOARD WAVEFORMS**

**B BOARD**

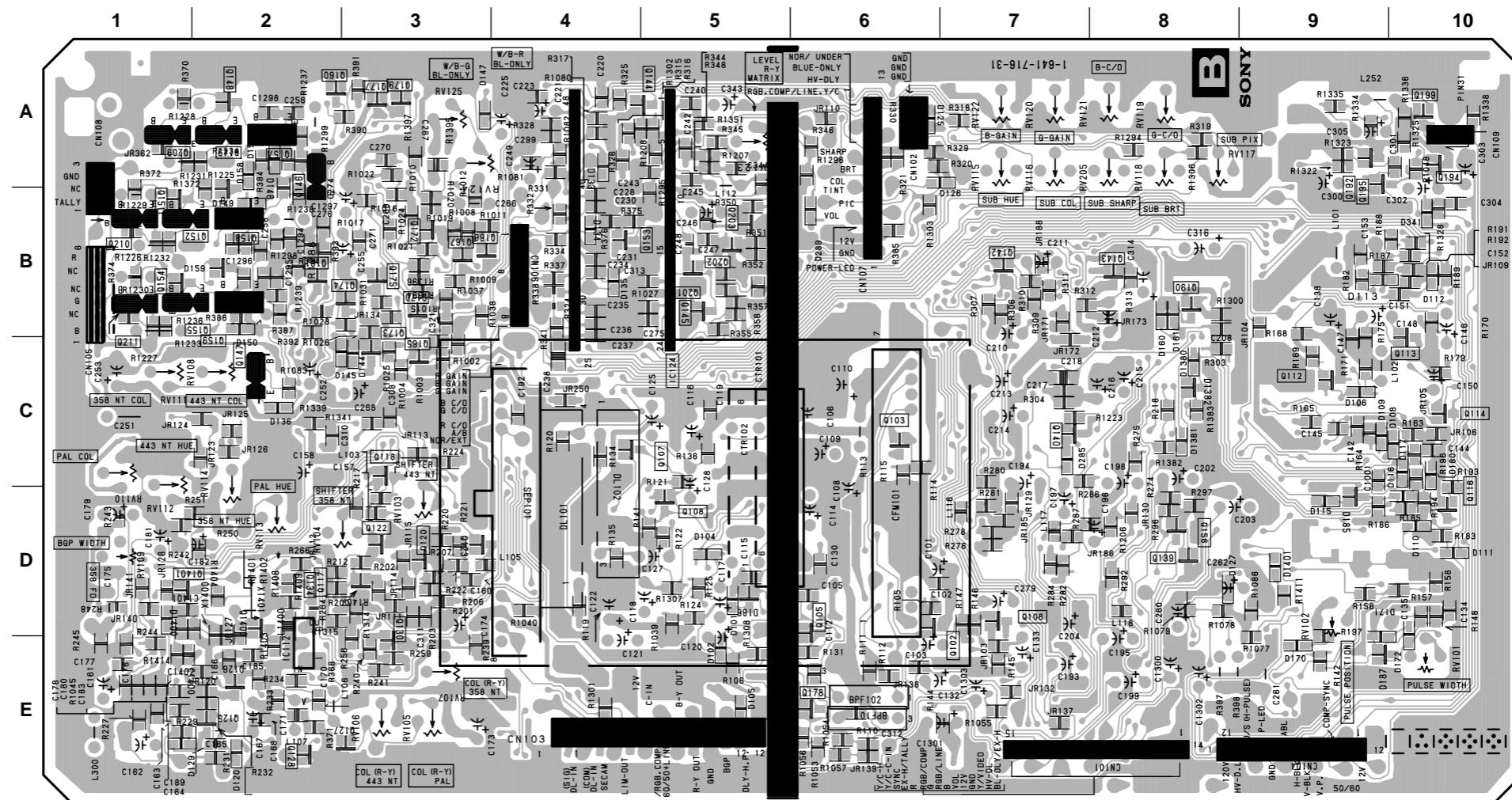
**B - A SIDE-**  
SUFFIX: -31

**B Board (A SIDE)**

IC501	B-1	D103	D-6
IC101	D-5	D107	C-2
IC102	E-6	D118	B-1
IC103	E-5	D119	B-1
IC104	C-7	D121	C-3
IC105	E-4	D122	C-3
IC106	D-1	D123	B-2
IC107	C-1	D128	D-1
IC108	C-1	D130	A-9
IC109	B-2	D131	B-9
IC110	D-8	D132	B-9
IC111	C-8	D137	E-7
IC112	E-8	D138	C-9
IC113	E-10	D139	B-9
IC114	E-8	D148	B-8
IC115	C-9	D151	B-3
IC117	D-4	D153	B-3
IC118	C-3	D154	A-9
IC119	C-3	D157	B-9
IC120	C-3	D162	A-7
IC121	C-4	D163	C-2
IC122	C-4	D188	B-6
IC123	C-3	D191	B-1
IC124	C-6	D264	D-1
IC125	B-8	D342	C-8
IC127	A-8	D343	E-1
IC128	B-8	D344	D-6
IC129	B-3	D345	A-9
IC1400	D-10	D346	A-10
IC1401	D-2	D347	B-9
		D348	A-10
		D349	B-10
Q101	D-4	D350	B-10
Q104	E-7	D370	C-1
Q109	A-8	D378	A-10
Q115	B-1	D379	A-10
Q119	D-8	D380	B-10
Q121	C-8	D390	C-1
Q124	D-8	D393	D-2
Q129	E-2		
Q132	B-3	RV101	E-1
Q136	D-4	RV102	D-2
Q137	D-4	RV103	D-8
Q138	D-3	RV104	D-9
Q141	B-4	RV105	E-8
Q147	C-9	RV106	E-8
Q148	B-9	RV107	E-8
Q149	A-9	RV108	C-9
Q150	A-5	RV109	D-10
Q152	B-9	RV110	C-10
Q155	B-9	RV111	C-9
Q157	A-9	RV112	C-10
Q158	B-9	RV113	C-9
Q159	B-9	RV114	C-9
Q164	A-8	RV115	A-4
Q166	C-8	RV116	A-4
Q169	C-6	RV117	B-2
Q171	D-6	RV118	A-3
Q176	D-6	RV119	A-3
Q180	D-3	RV120	A-4
Q191	A-2	RV121	A-3
Q193	B-1	RV122	A-4
Q196	B-1	RV123	A-5
Q197	A-1	RV124	B-7
Q198	A-2	RV125	A-8
Q200	D-6	RV205	A-3
Q204	A-6		
Q205	A-6	TP102	B-4
Q206	A-5	TP103	C-2
Q208	B-2	TP104	B-7
Q209	A-10	TP105	B-7
Q210	B-10	TP106	B-1
Q211	B-10	TP107	B-2
Q212	B-7	TP108	B-3
Q213	C-2	TP109	B-4
Q299	A-7	TP110	D-1
		TP111	D-8
		TP112	A-5
		TP113	D-1
		TP114	B-5

**B Board (B SIDE)**

IC112	E-2	D101	D-5
IC124	C-4	D102	E-5
		D104	D-5
Q101	B-2	D105	E-5
Q102	E-7	D106	C-9
Q103	C-6	D108	C-10
Q105	D-6	D109	C-9
Q107	C-5	D110	D-10
Q108	D-5	D111	D-10
Q109	D-7	D112	B-10
Q112	C-9	D113	B-9
Q113	C-10	D115	D-9
Q114	C-10	D116	C-10
Q116	D-10	D117	C-10
Q117	D-2	D120	E-2
Q118	C-3	D125	A-7
Q119	A-2	D126	B-7
Q120	D-3	D127	D-8
Q122	D-3	D129	E-1
Q123	D-3	D133	A-4
Q125	E-2	D134	B-4
Q126	E-2	D136	C-2
Q127	E-3	D144	C-3
Q128	E-2	D145	C-3
Q130	D-3	D147	A-3
Q134	D-2	D148	A-2
Q135	B-5	D149	B-2
Q139	D-8	D150	C-2
Q140	D-2	D158	A-2
Q141	C-7	D159	B-2
Q142	B-7	D160	C-8
Q143	B-8	D161	C-8
Q144	A-5	D170	E-9
Q145	B-5	D171	D-9
Q146	A-2	D172	E-10
Q147	C-2	D180	C-10
Q148	A-2	D185	D-9
Q151	B-1	D187	E-9
Q152	B-2	D188	D-5
Q153	B-2	D280	B-6
Q154	B-1	D285	C-7
Q155	B-2	D341	B-10
Q156	D-8	D1380	C-8
Q157	A-2	D1381	C-8
Q159	C-2	D1382	C-8
Q160	A-2	D1400	D-1
Q165	C-3	D1401	D-9
Q167	B-3		
Q168	B-3	RV101	E-10
Q170	B-3	RV102	D-9
Q172	B-3	RV103	D-3
Q173	B-3	RV104	D-2
Q174	B-3	RV105	E-3
Q175	B-3	RV106	E-3
Q177	A-3	RV107	E-3
Q178	E-6	RV108	C-1
Q179	A-3	RV109	D-1
Q190	B-8	RV110	D-1
Q192	B-9	RV111	C-1
Q194	A-10	RV112	D-1
Q195	B-9	RV113	D-2
Q199	A-10	RV114	C-2
Q201	B-5	RV115	A-7
Q202	B-5	RV116	A-7
Q203	B-5	RV117	A-9
Q208	A-1	RV118	A-8
Q210	B-1	RV119	A-8
Q211	C-1	RV120	A-7
Q1401	D-1	RV121	A-7
		RV122	A-7
		RV123	A-5
		RV124	A-3
		RV125	A-3
		RV205	A-7

**B BOARD**

**B -B SIDE-**  
SUFFIX: -31

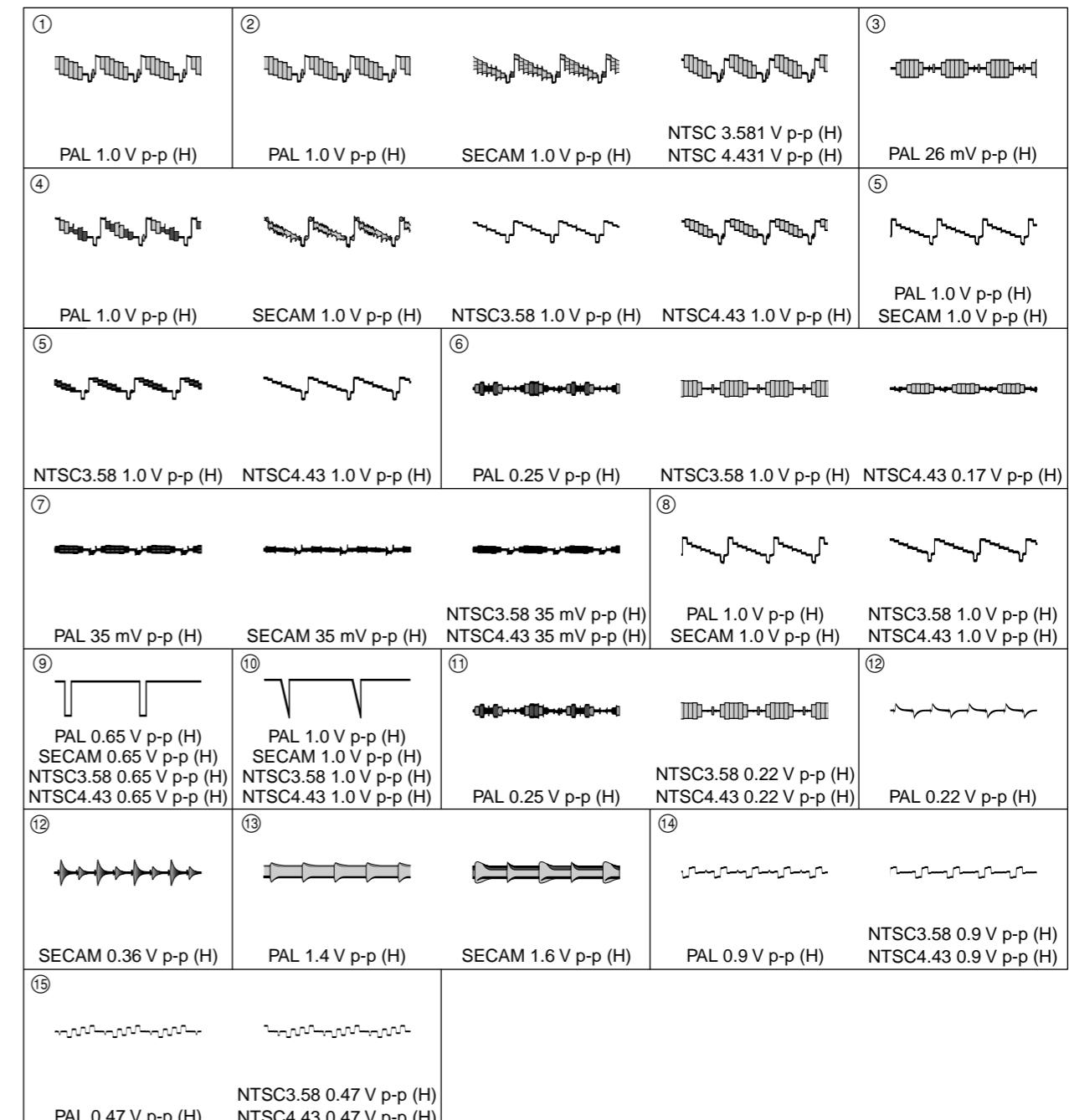
**B MOUNT (1/3) VOLTAGES**

	IC			
	PAL	SECAM	NTSC	
1	IC102	1 6.7 2 7.1 3 0 4 0 5 6.6 6 12VA 7 6 8 GND	6.7 0 0 0 6.6 12VA 6 GND	6.7 0 0 0 6.6 12VA 6 GND
2	IC111	1 NC 2 2.3 3 2.3 4 2.3 5 0 6 GND 7 GND 8 GND	NC 2.3 2.3 2.3 2.5 GND GND GND	NC 2.3 2.3 2.3 2.5 GND GND GND
3	IC110	9 9.4 10 11.5 11 9.9 12 11.5 13 11.5 14 11.5 15 0 16 GND	0 0 0 0 11.5 0 2.3 GND	0 0 0 0 11.5 0 2.3 GND
4	C113	1 0.6 2 2.3 3 2 4 2.2 5 0 6 GND 7 GND 8 GND	0 0 0 2.2 0 GND GND GND	0 0 0 2.2 0 GND GND GND
5		9 11.5 10 11.5 11 11.5 12 0.8 13 1.7 14 1.7 15 0.8 16 12VA	11.5 0 11.5 2.5 1.7 2.5 2.5 12VA	11.5 0 11.5 2.5 1.7 2.5 2.5 12VA
		TRANSISTOR		
	Q117	B 1.7 C GND E 2.3	2.5 GND 3.1	2.5
	Q119	B 0 C GND E 0.6	0 GND 0	0 GND
	Q121	B 0 C 11.9 E 3.1	2.3 10.9 2.5	2.3
	Q122	B 1.7 C 2.3 E GND	1.7 0 GND	1.7
	Q124	B 1.7 C GND E 0	0 GND 2.3	0 GND
	Q125	B 0 C 5 E GND	0 5 GND	0 5 GND
	Q126	B 9.6 C 0 E GND	0 0.8 GND	0 0.8 GND
	Q200	B 11.8 C 12VA	11.8 12VA	11.8 12VA
	Q1400	G 6.1 D 5.5 S 5.5	6.1 5.5 5.5	*
	Q1401	G 0 D 5.4 S 0.6	0 5.4 0.6	0 5.4 0.6
		• All voltages are in V (volt).		
		• NC: No connection.		
		• * mark: measurement impossible.		

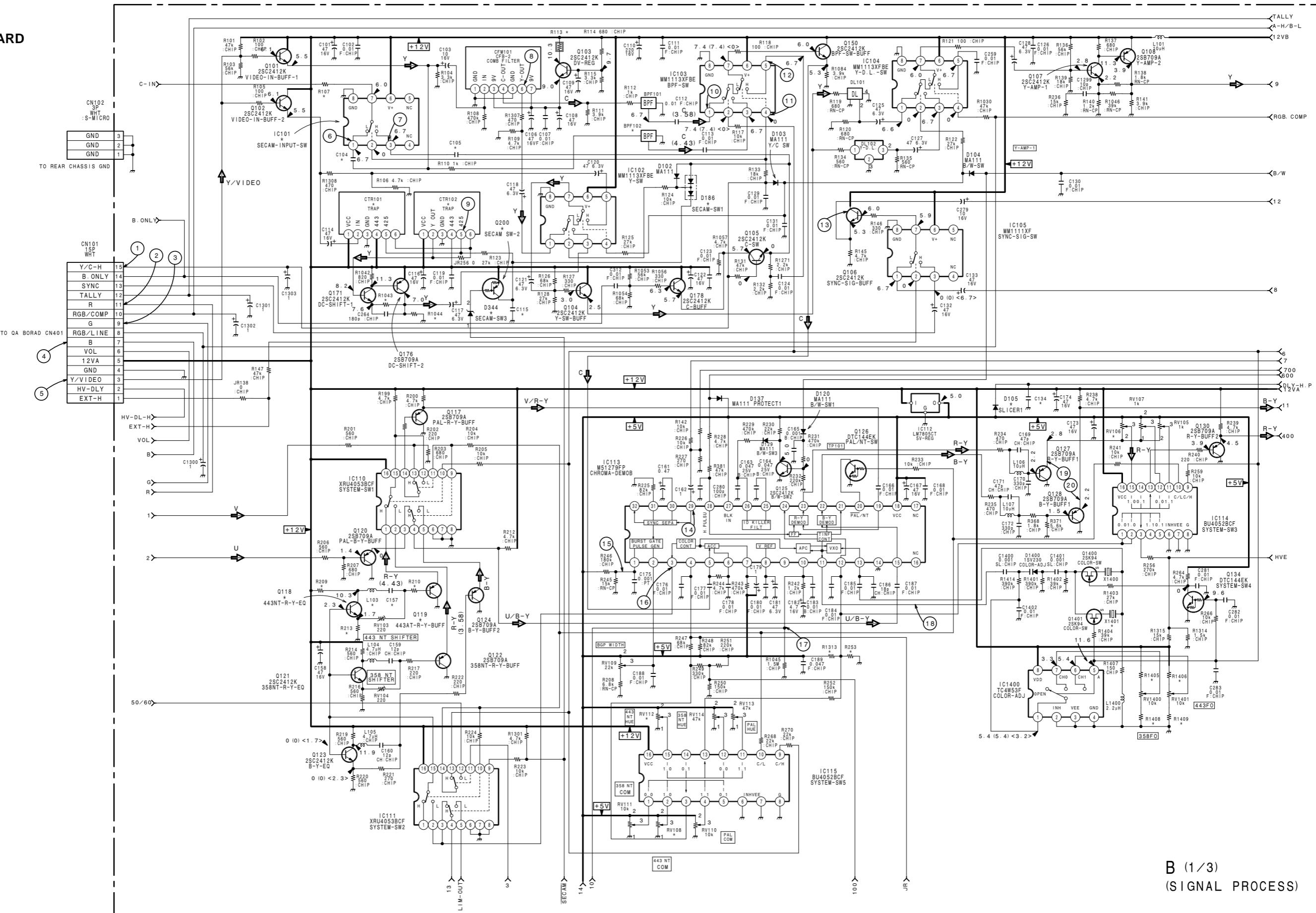
**CROSS-REFERENCE OF \* MARKS ON B (1/3) BOARD**

	PAL	SECAM	NTSC
IC114	1 0 2 0 3 2 4 NC 5 NC 6 GND 7 GND 8 GND	2.6 2.6 2.6 NC NC GND GND GND	2.6 2.6 2.6 NC NC GND GND GND
		PVM-8042Q (U/C) PVM-8045Q (U/C) PVM-9042QM (AEP) PVM-9042QM (AUS) PVM-9045QM (AEP) PVM-9045QM (AUS) PVM-9045PM(BRZ)	
BPF102	9 11.5 10 11.5 11 11.5 12 0.8 13 1.7 14 NC 15 0.8	0 0 3.7 3.9 3.9 NC 0.8	0 0 3.7 3.9 3.9 NC 0.8
C104	16 12VA	12VA	12VA
C105	D102	1-236-364-11 NOT USED	1-236-363-11 NOT USED
C115	D105	0.01 :CHIP	0.01 :CHIP
C134	D186	0.01 :CHIP	MA111
C157	D344	12P :CHIP	MA151WK
CTR101	IC101	1-236-366-11 NOT USED	MM1111XFBE NOT USED
CTR102	JR256	1-236-365-11 NOT USED	NOT USED SHORT 0
	L103	4.7µH	NOT USED
	Q118	2SC2412K	NOT USED
	Q119	2SB709A	NOT USED
	Q200	DTA114EK	NOT USED
	R107	27K :CHIP	NOT USED
	R123	100 :CHIP	NOT USED
	R209	560 :CHIP	NOT USED
	R210	220 :CHIP	NOT USED
	R213	560 :CHIP	NOT USED
	R253	150K :CHIP	NOT USED
	R1043	2.2K :CHIP	NOT USED
	R1044	3.3K :CHIP	NOT USED
	R1055	NOT USED	100K :CHIP
	R1313	150K :CHIP	120K :CHIP
	R1405	5.6K :CHIP	NOT USED
	R1406	5.6K :CHIP	NOT USED
	R1408	5.6K :CHIP	1K :CHIP
	R1409	5.6K :CHIP	1K :CHIP
	RV103	220	NOT USED
	RV106	1K	NOT USED
	RV108	10K	NOT USED
	RV112	47K	NOT USED
	X1401	1-577-259-11 OSCILLATOR, CRYSTAL	1-527-523-00 OSCILLATOR, CRYSTAL

**B (1/3) BOARD WAVEFORMS**



## B (1/3) BOARD



**B (2/3) BOARD WAVEFORMS****B MOUNT (2/3) VOLTAGES**

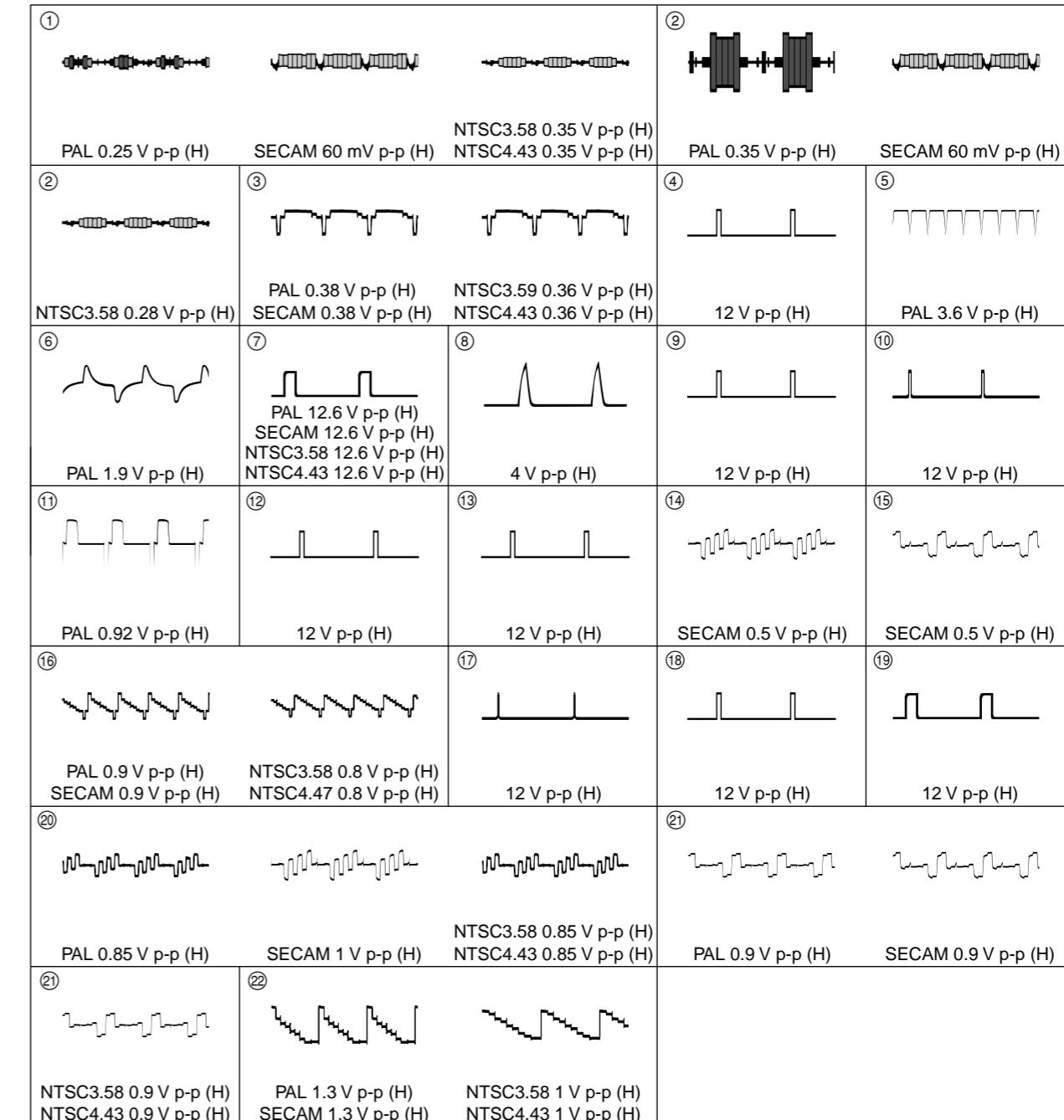
	IC		
	PAL	SECAM	NTSC
1	1 0 0	0	0
2	2 0.2 0.2	0.2	0.2
3	3 12VB 12VB	12VB	12VB
4	4 1.8 1.8	1.8	1.8
5	5 12VB 12VB	12VB	12VB
6	6 12 12	12	12
7	7 NC NC	NC	NC
8	8 GND GND	GND	GND
9	9 10.2 10.2	10.2	10.2
10	10 1.2 1.2	1.2	1.2
11	11 12 12	12	12
12	12 1.7 1.7	1.7	1.7
13	13 12VB 12VB	12VB	12VB
14	14 9.8 0	0	0
15	15 GND GND	GND	GND
16	16 12VB 12VB	12VB	12VB
17	1 0.3 0.3	0.3	0.3
18	2 GND GND	GND	GND
19	3 GND GND	GND	GND
20	4 0.4 0.4	0.4	0.4
21	5 0.4 0.4	0.4	0.4
22	6 GND GND	GND	GND
23	7 GND GND	GND	GND
24	8 GND GND	GND	GND
25	9 8.2 8.2	8.2	8.2
26	10 5.5 6	6	6
27	11 9.8 9.8	9.8	9.8
28	12 0.5 0.5	0.5	0.5
29	13 0.3 0.3	0.3	0.3
30	14 0.3 0.3	0.3	0.3
31	15 0.3 0.3	0.3	0.3
32	16 12VB 12VB	12VB	12VB
33	1 GND GND	GND	GND
34	2 11.2 11.2	11.2	11.2
35	3 11.6 11.6	11.6	11.6
36	4 11.9 11.9	11.9	11.9
37	5 11.3 11.3	11.3	11.3
38	6 0.6 0	0	0
39	7 0 0	0	0
40	8 GND GND	GND	GND
41	9 GND GND	GND	GND
42	10 0.7 0.7	0.7	0.7
43	11 0.4 0.4	0.4	0.4
44	12 10.5 10.5	10.5	10.5
45	13 9.1 9.1	9.1	9.1
46	14 12VB 12VB	12VB	12VB
47	1 5.4 0	0	0
48	2 2.8 0	2.8	2.8
49	3 0 5.4	5.4	5.4
50	4 0 0	0	0
51	5 5.4 0	0	0
52	6 12VB 12VB	12VB	12VB
53	7 5.7 5.7	5.7	5.7
54	8 GND GND	GND	GND
55	1 5.1 5.1	5.1	5.1
56	2 5.1 5.1	5.1	5.1
57	3 5.1 5.1	5.1	5.1
58	4 5.1 5.1	5.1	5.1
59	5 0.4 0.4	0.4	0.4
60	6 8.3 8.3	8.3	8.3
61	7 GND GND	GND	GND
62	8 12VB 2VB	2VB	2VB
63	9 12 12	12	12
64	10 4.8 4.8	4.8	4.8
65	11 5.1 5.1	5.1	5.1
66	12 0.5 0.5	0.5	0.5
67	13 0.4 0.4	0.4	0.4
68	14 12VB 12VB	12VB	12VB

	PAL			SECAM			NTSC		
IC106	1 0	0	0	2 5.1	5.1	5.1	3 0	0	0
IC108	4 5.1	0	0	5 5.1	0	0	6 GND	GND	GND
IC109	7 GND	GND	GND	8 4.8	4.8	4.8	9 4.8	4.8	4.8
IC122	10 2	2	2	11 2	2	2	12 5.1	5.1	5.1
IC123	13 0	4.8	4.8	14 5.1	5.1	5.1	15 5.1	5.1	5.1
IC128	16 12VB	12VB	12VB	1 0	0.6	0.6	2 2.5	2.5	2.5
Q136	3 1.7	1.7	1.7	4 GND	GND	GND	5 5.1	5.1	5.1
IC118	6 5.1	5.1	5.1	7 5.1	5.1	5.1	8 12VB	12VB	12VB
Q137	9 0	0	0	10 2.9	2.9	2.9	11 2.9	2.9	2.9
Q138	12 5.3	4.6	4.6	13 10.5	10.5	10.5	14 10.5	10.5	10.5
IC120	15 5.7	5.7	5.7	16 5.1	5.1	5.1	17 5.1	5.1	5.1
Q132	18 5.1	5.1	5.1	19 5.1	5.1	5.1	20 5.1	5.1	5.1

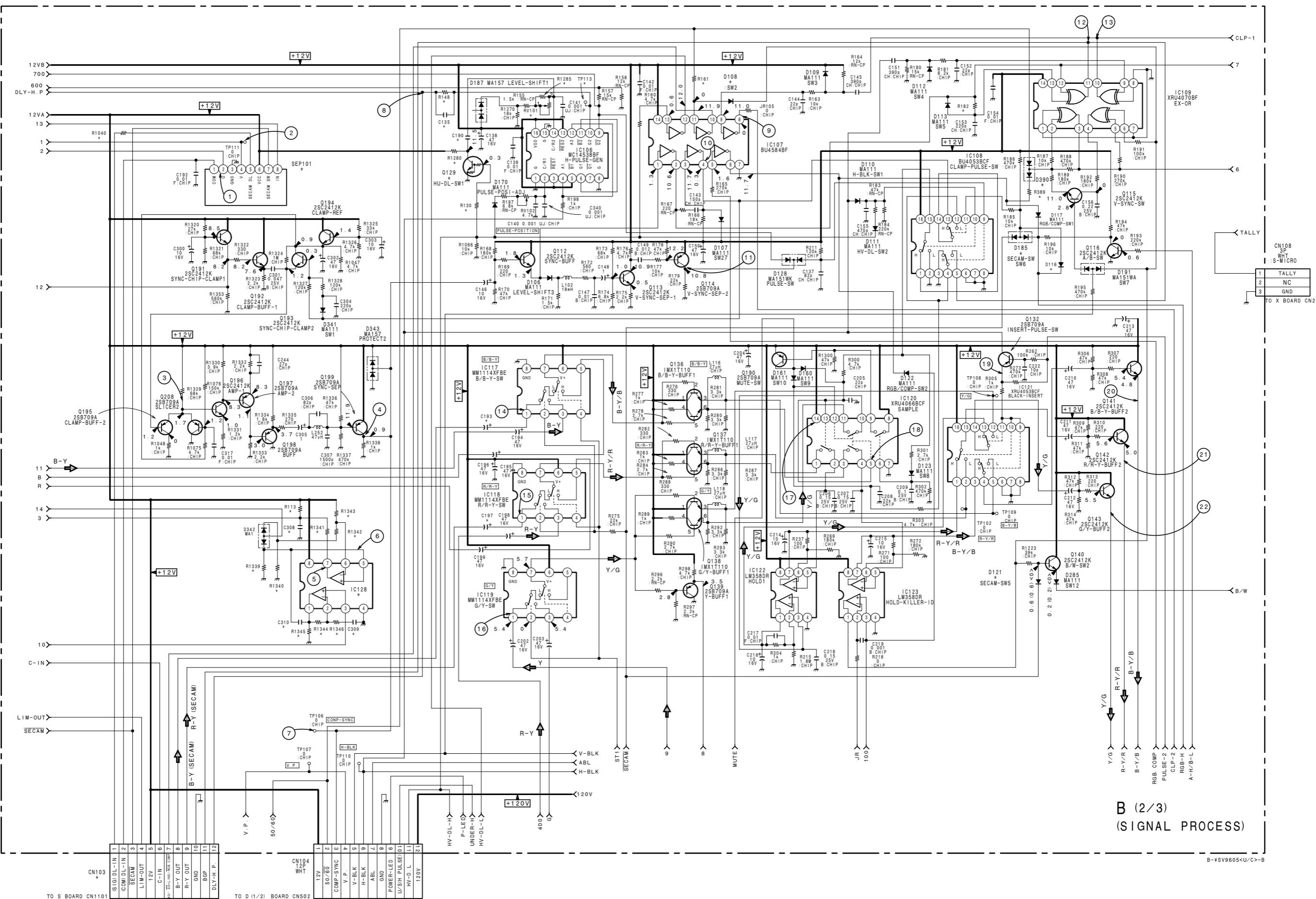
• All voltages are in V (volt).  
• NC: No connection.

**CROSS-REFERENCE OF \* MARKS ON B (2/3) BOARD**

IC121	1 0	5.1	5.1
IC122	1 4.8	4.8	4.8
IC123	1 0	0.6	0.6
IC128	1 3	3	3
Q136	1 12VB	12VB	12VB
Q137	1 12VB	12VB	12VB
Q138	1 12VB	12VB	12VB
Q132	B 6	6	6

**B (2/3) BOARD WAVEFORMS**

## B (2/3) BOARD



## B MOUNT (3/3) VOLTAGES

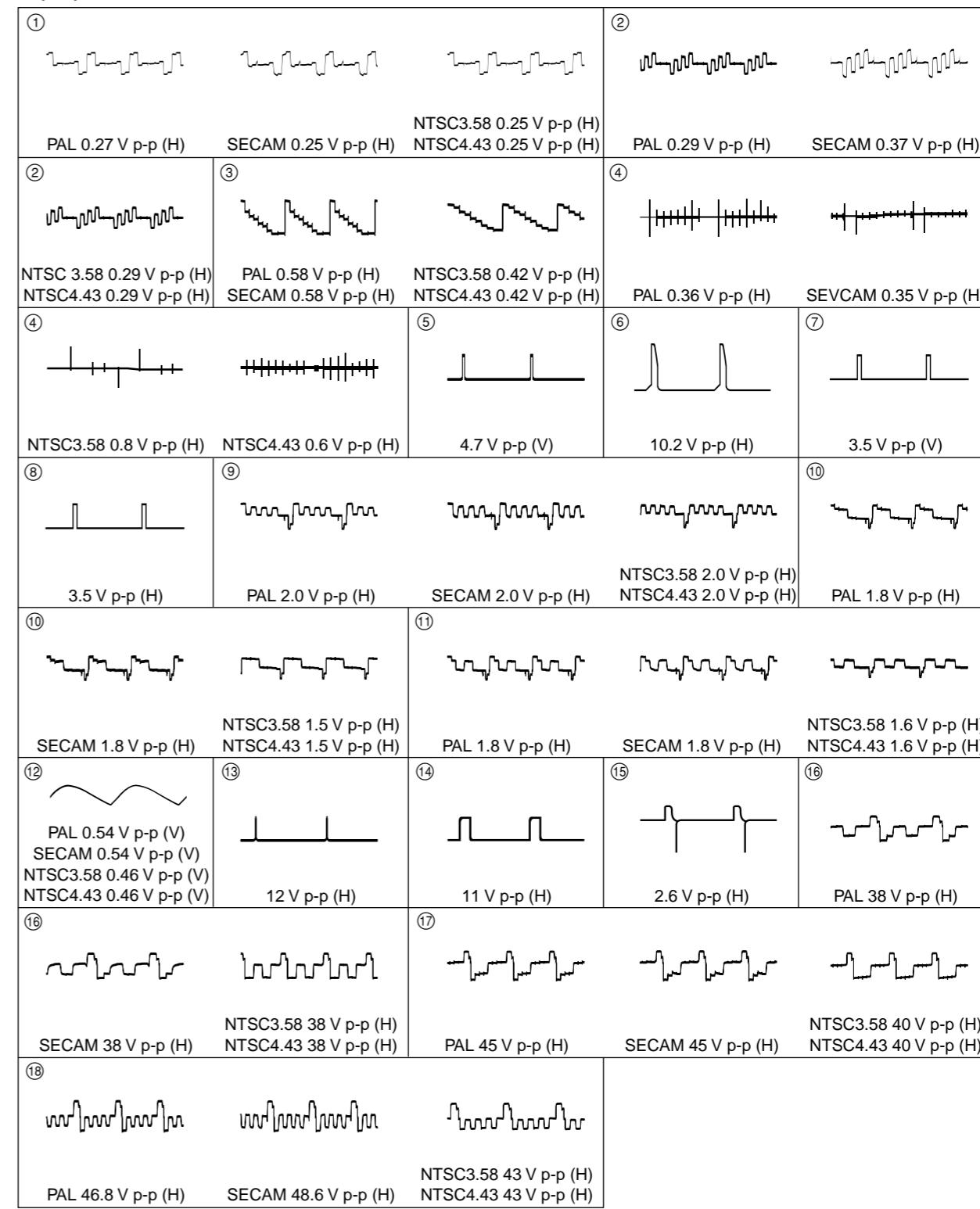
	IC		
	PAL	SECAM	NTSC
1	1 1.8	1.8	1.8
	2 1.1	1.1	1.1
	3 1.7	1.5	1.5
	4 1	0	0
	5 1.6	1.8	1.8
	6 GND	GND	GND
	7 GND	GND	GND
	8 NC	NC	NC
	9 NC	NC	NC
	10 1.8	1.8	1.8
	11 0.9	0.9	0.9
	12 1.6	1.8	1.8
	13 1.6	1.8	1.8
	14 12VA	12VA	12VA
	1 4.3	4.3	4.3
	2 4.3	4.3	4.3
	3 5.2	5.2	5.2
	4 GND	GND	GND
	5 8.7	8.7	8.7
	6 2.9	2.9	2.9
	7 4.8	7.1	7.1
	8 3.1	3.1	3.1
	9 GND	GND	GND
	10 5.6	5.6	5.6
	11 5.7	5.7	5.7
	12 5.6	5.6	5.6
	13 GND	GND	GND
	14 GND	GND	GND
	15 GND	GND	GND
	16 0	0	0
	17 0	0	0
	18 0	0	0
	19 GND	GND	GND
	20 1.3	1.3	1.3
	21 0	0	0
	22 0.4	0.6	0.6
	23 0.2	0.2	0.2
	24 0.2	0.2	0.2
	25 4.2	4.2	4.2
	26 4.7	4.7	4.7
	27 4.5	4.5	4.5
	28 6.1	6.8	6.8
	29 GND	GND	GND
	30 1.7	1.5	1.5
	31 12VA	12VA	12VA
	32 5.9	5.9	5.9
	33 4.4	4.4	4.4
	34 6	6.3	6.3
	35 GND	GND	GND
	36 1.8	1.5	1.5
	37 12VA	12VA	12VA
	38 6	6	6
	39 6.2	7.5	7.5
	40 GND	GND	GND
	41 1.7	1.5	1.5
	42 12VA	12VA	12VA
	43 12VA	12VA	12VA
	44 6.2	6.2	6.2
	45 0	0	0
	46 4.7	5.1	5.1
	47 6.4	6.4	6.4
	48 6.4	6.4	6.4
	<b>TRANSISTOR</b>		
2	Q109 B 2.5	2.5	2.5
	C 0.5	1.1	1.1
	E GND	GND	GND
	Q146 B 0.2	0.2	0.2
	C 112	112	112
	E GND	GND	GND
	Q147 B 118.3	116.9	116.9
	C 112.2	112.4	112.4
	E 2.6	2.6	2.6
	Q201 B 2	2	2
	C GND	GND	GND
	E 2.6	2.6	2.6
	Q202 B 2	2	2
	C GND	GND	GND
	E 2.6	2.6	2.6
	Q203 B 2	2	2
	C GND	GND	GND
	E 2.6	2.6	2.6
	Q204 B 2	2	2
	C GND	GND	GND
	E 2.6	2.6	2.6
	Q205 B 1.7	1.7	1.7
	C GND	GND	GND
	E 2.3	2.3	2.3
	Q206 B 1.2	1.2	1.2
	C GND	GND	GND
	E 1.9	1.9	1.9
	Q210 B 100	100.5	100.5
	C 116.2	116.7	116.7
	E 94.5	95.5	95.5
	Q211 B 100	100.5	100.5
	C 116.4	116.7	116.7
	E 96.5	95.5	95.5
	Q212 G 1.4	1.4	1.4
	D 1	1	1
	S 1	1	1

• All voltages are in V (volt).  
 • NC: No connection.

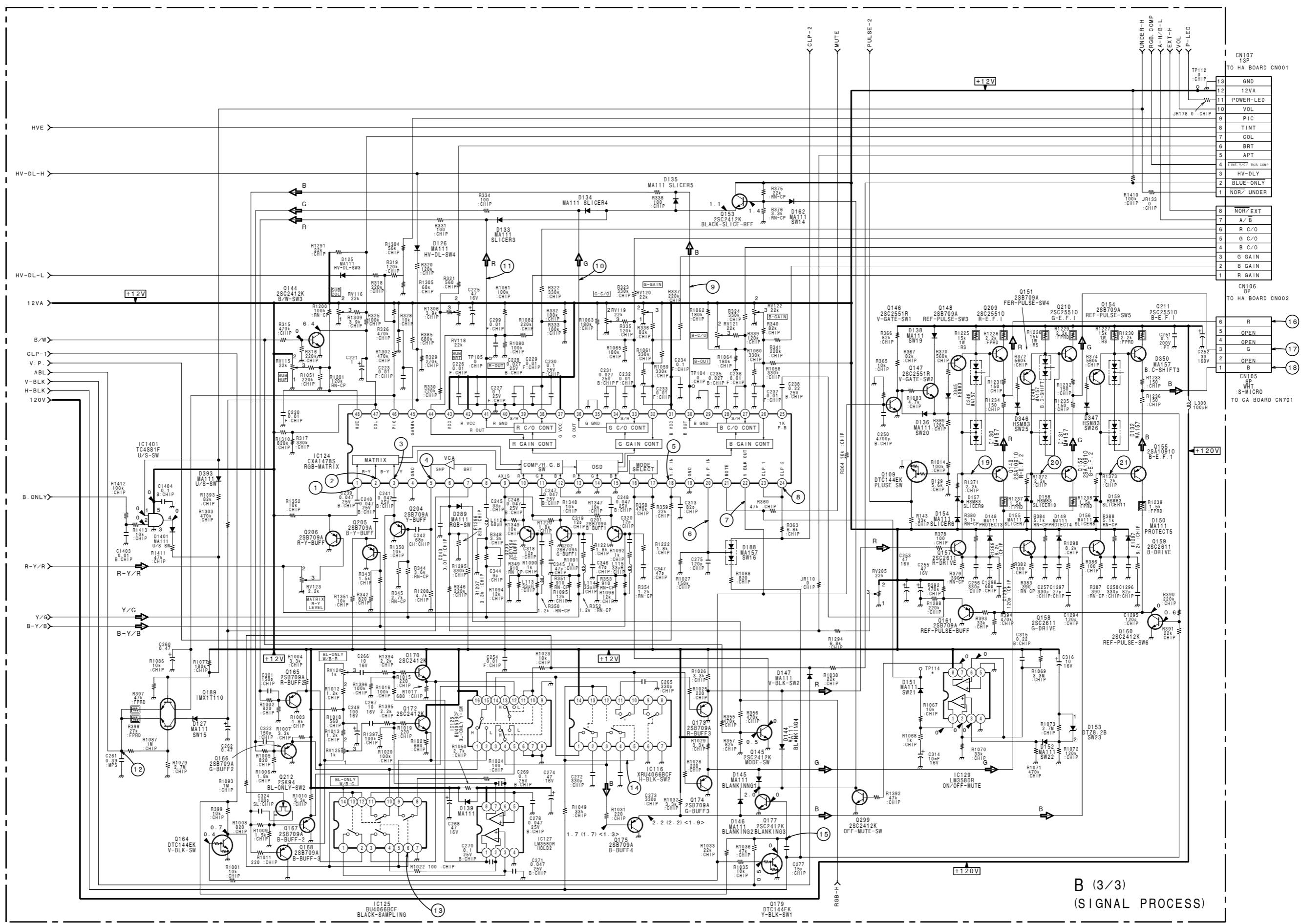
## CROSS-REFERENCE OF \* MARKS ON B (3/3) BOARD

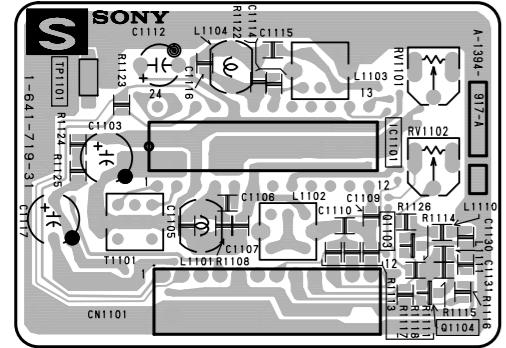
PVM-8042Q (U/C)	
PVM-8045Q (U/C)	
PVM-9042QM (AEP)	
PVM-9042QM (AUS)	
PVM-9045QM (AEP)	
PVM-9045QM (AUS)	PVM-9045PM(BRZ)
TP114	NOT USED 1-535-877-22 CHIP, CHEKER

## B (3/3) BOARD WAVEFORMS

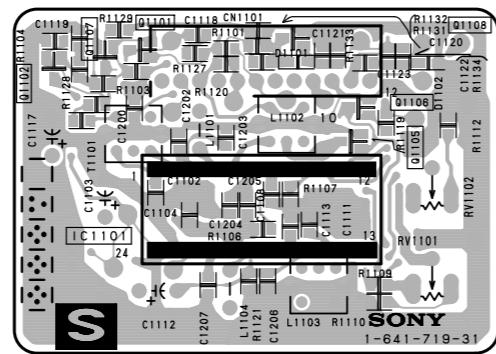


## B (3/3) BOARD

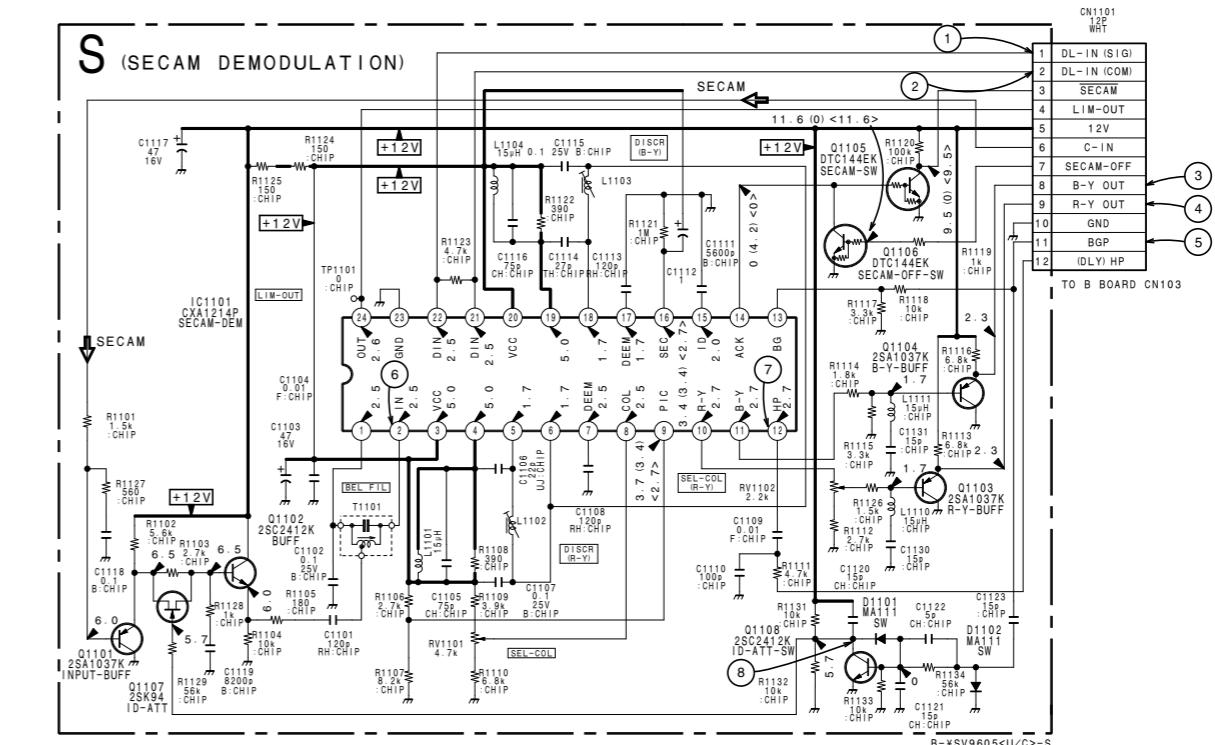
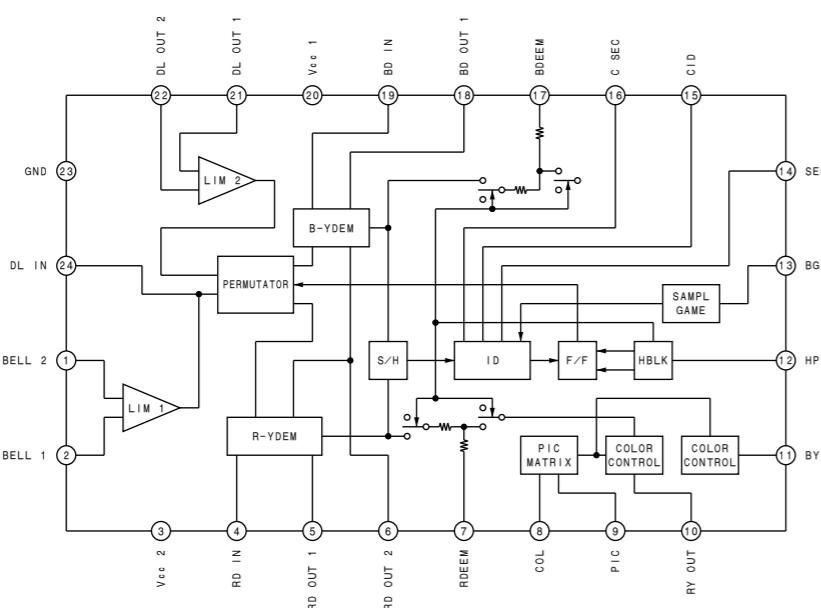
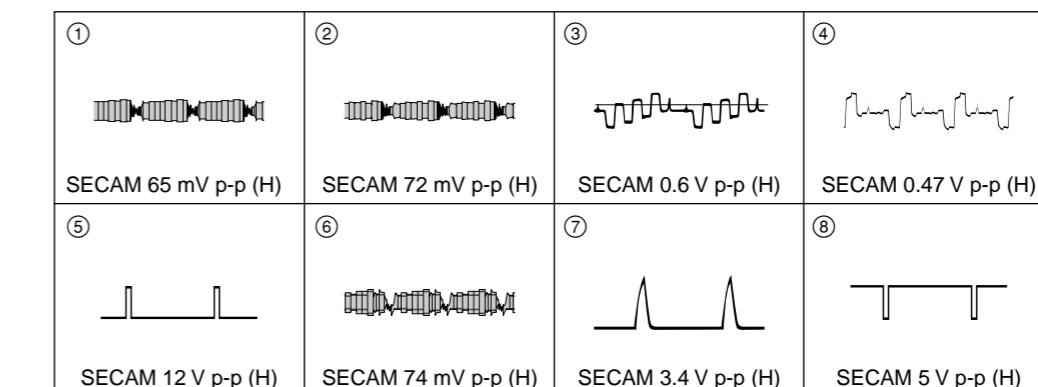


**S BOARD**

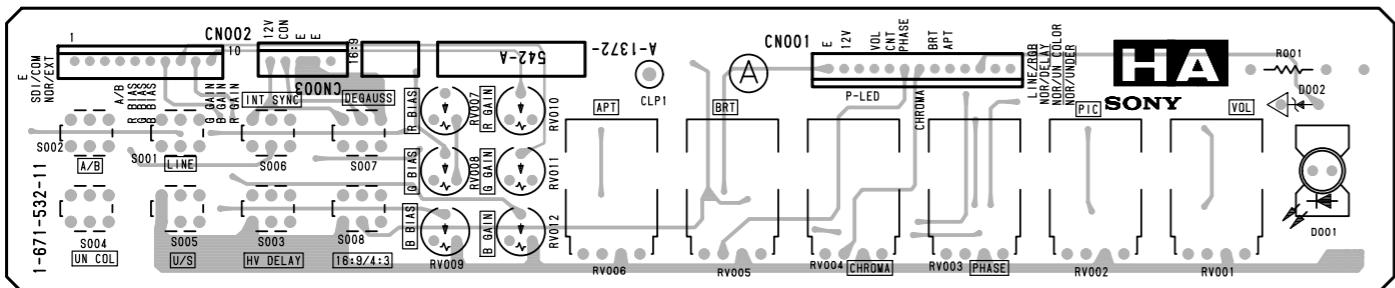
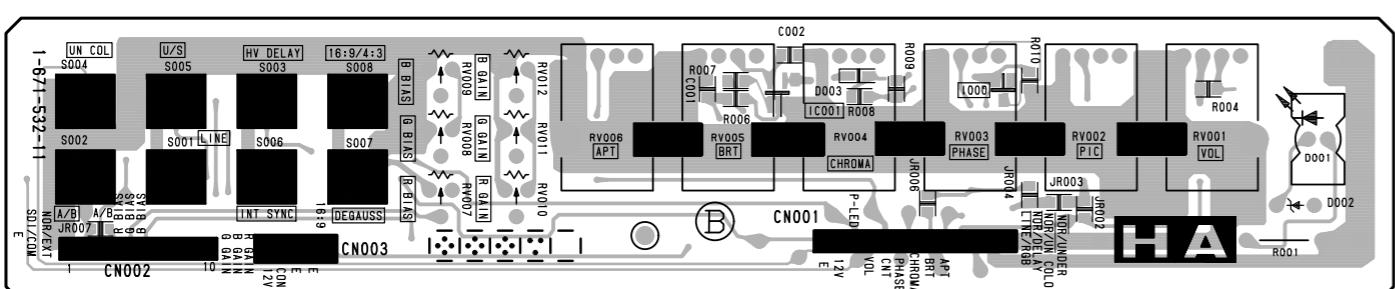
**S -A SIDE-**  
SUFFIX: -31



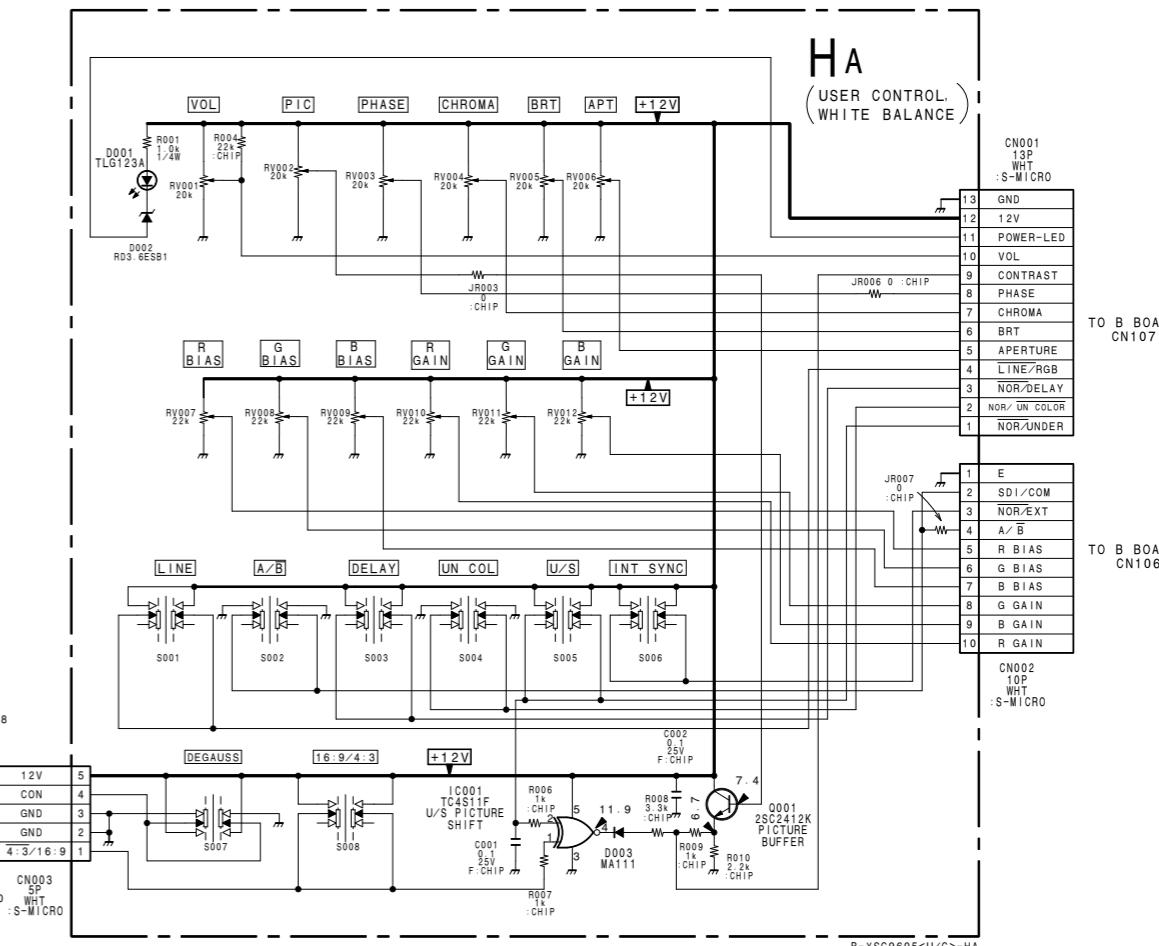
**S -B SIDE-**  
SUFFIX: -31

**S BOARD IC1101 CXA1214P****S BOARD WAVEFORMS**

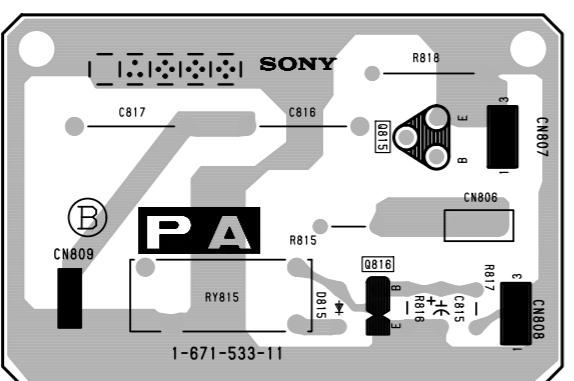
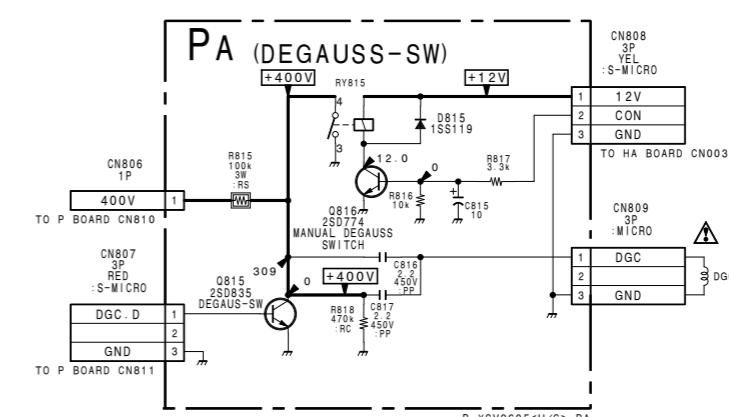
## HA BOARD

HA -A SIDE-  
SUFFIX: -11HA -B SIDE-  
SUFFIX: -11

## HA BOARD

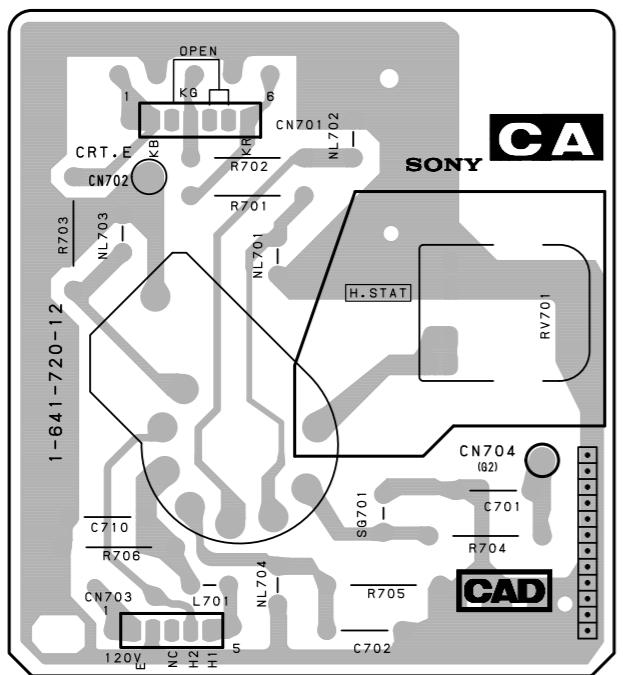


## PA BOARD

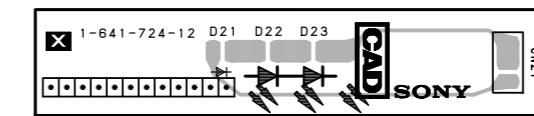
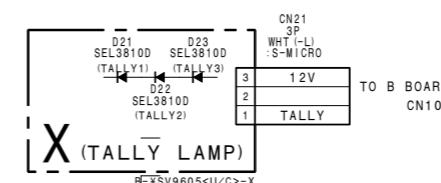
PA -B SIDE-  
SUFFIX: -11

## CA BOARD

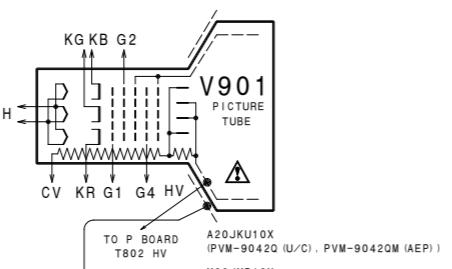
1



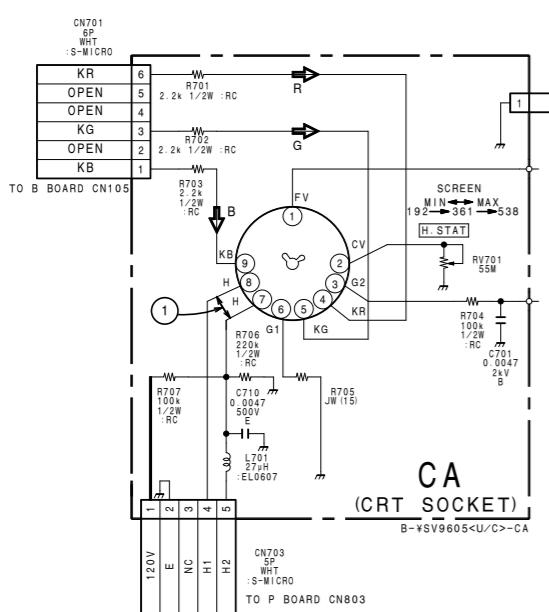
## X BOARD

X -B SIDE-  
SUFFIX: -12

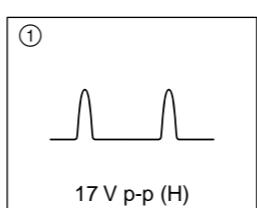
2

CA -B SIDE-  
SUFFIX: -12

3



## P BOARD WAVEFORMS



A

B

C

D

E

F

G

H

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