

SERVICE MANUAL

MODEL

DXF-51

DXF-51

DXF-51

DEST.

JPN **SMC-340-A**
Serial No. 30,001 and higher

US/CND **SMC-341-A**
Serial No. 10,001 and higher

AEP **SMC-342-A**
Serial No. 40,001 and higher

CHASSIS NO.

MODEL

DXF-51

DXF-51

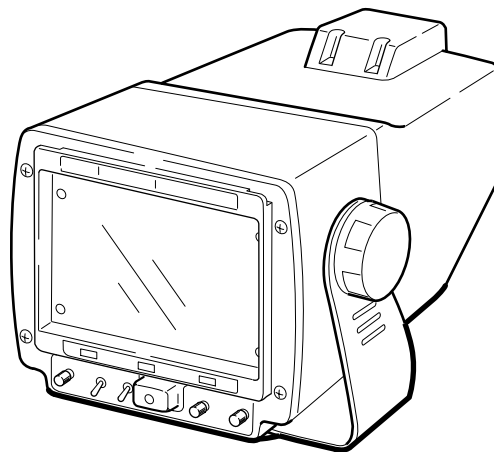
DEST.

US/CND/JPN
Serial No. 100,001 and higher

CE
Serial No. 400,001 and higher

CHASSIS NO.

REVISED-1



ELECTRONIC VIEWFINDER

SONY[®]

⚠ 警告

このマニュアルは、サービス専用です。
お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。
危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

⚠ 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.

⚠ WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

WARNING!!

AN INSULATED 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.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY A **⚠** MARK 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!!

AFIN D'ÉVITER TOUT RISQUE D'ÉLECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ÊTRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MAPQUE **⚠** 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 INDIQUÉ 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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Electronic Viewfinder

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使用说明书

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電気製品は、安全のための注意事項を守らないと、
火災や人身事故になることがあります。

この取扱説明書には、事故を防ぐための重要な注意事項と製品の取り扱いかたを示してあります。この取扱説明書をよく読みのうえ、製品を安全にお使いください。お読みになったあとは、いつでも見られるところに必ず保管してください。

DXF-51

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English

Owner's Record

The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

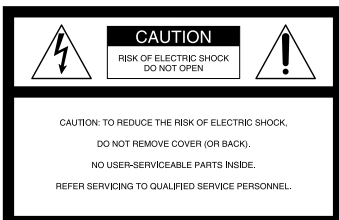
Model No. DXF-51

Serial No. _____

WARNING

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

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



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 U.S.A.

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.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For the customers in Europe

This product with the CE marking complies with the EMC Directive (89/336/EEC) issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European standards:

- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment(s):
E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors) and E4 (controlled EMC environment, ex. TV studio).

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English

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Section 1 Operating Instructions

Reprinted from the
operating instructions

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Features

The DXF-51 is a 5-inch monochrome electronic viewfinder, designed for use with Sony DXC series CCD color video cameras.

- High-resolution picture tube with a horizontal resolution of over 650 TV lines.
- H/V regulator ensures a stable picture under all conditions.
- Automatically responds to EIA standard (525/59.94) and CCIR standard (625/50) signals.

- Controls from a camera for the adjustment of image size transmitted via 16:9 (V compression) and 4:3 signals.
- Has three tally lamps at the front of the camera, and one main tally lamp at the back.
- While maintaining balance, camera tilts 40 degrees up and down, and pans 90 degrees to right and left.

Precautions

Operation

- Do not use the unit in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not use the viewfinder outside its operating temperature range of 0°C to +40°C (32°F to 104°F).
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Allow adequate air circulation to prevent internal heat build-up.
- Do not expose the unit to extremely high temperatures and humidity.

Cleaning

Clean the cabinet, panel and controls with a soft, dry cloth, or a soft cloth that has been lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene, as this may damage the finish.

Repacking

Do not discard the unit's original packaging. Use the packaging to afford maximum protection whenever the unit is transported.

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

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Location and Function of Parts and Controls

6 CONTRAST control¹⁾

Turn to adjust the contrast of the picture on the viewfinder screen.

7 BRIGHT control¹⁾

Turn to adjust the brightness of the picture on the viewfinder screen.

8 Viewfinder fixing ring

Fix the viewfinder to the camera.

9 TALLY ON/OFF switch

Enables and disables the external tally lamps 1 and 2.
ON: The external tally lamp turns on and off, as the camera mode changes.

OFF: The external tally lamp does not light, regardless of the camera mode.

10 PEAKING ON/OFF switch

Set this switch to on to use the PEAKING control.

11 PEAKING control¹⁾

Adjusts the outline intensity of the viewfinder image.

12 SHUTTER/GAIN indicator

Lights while the shutter, the gain control, or the AGC function is switched on.

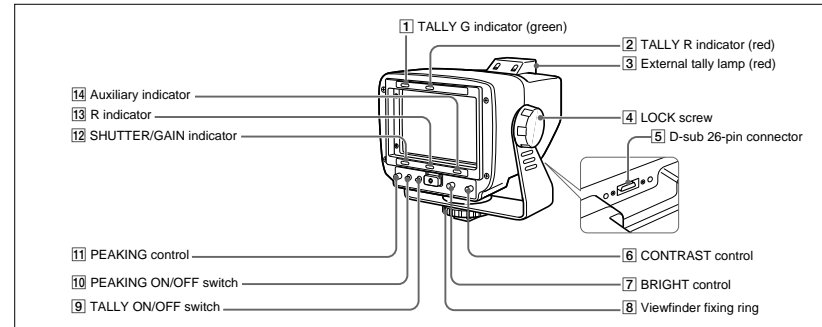
13 R indicator

Lights while the second tally is on in recording.

14 Auxiliary indicator

Signal warning indicator auxiliary lamp (excludes SHUTTER/GAIN).

Location and Function of Parts and Controls



1 TALLY G indicator (green)

Lights while the camera is monitoring.

2 TALLY R indicator (red)

Lights while the camera is recording.

3 External tally lamp (red)

Lights while the camera recording when TALLY switch set to on.

4 LOCK screw

Adjusts the angle of viewfinder in the vertical direction.

5 D-sub 26-pin connector

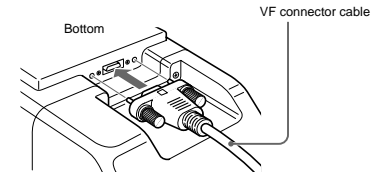
Connects 20-pin connector (supplied) to the VF (viewfinder) connector of the host camera. This connector carries the video signal, tally signal and power.

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How To Attach and Connect the Unit to the Camera

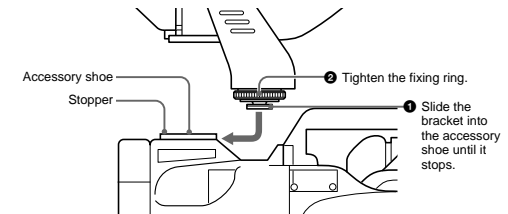
Turn off the power of the camera before attempting the installation.

- 1 Connect the VF connector cable (supplied) to the bottom of the viewfinder.



- 2 Attach the viewfinder to the accessory shoe of the camera and fix it.

The viewfinder can also be attached with its screen facing the subject, if desired.



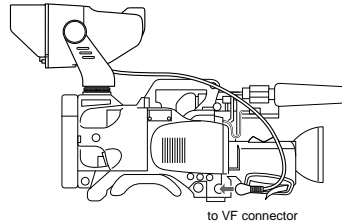
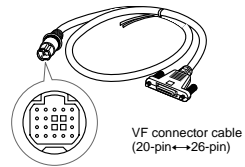
1) These controls affect only the viewfinder screen. They have no effect on the signal being output by the camera.

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How To Attach and Connect the Unit to the Camera

- 3 Connect the 20-pin connector to the camera's VF connector.



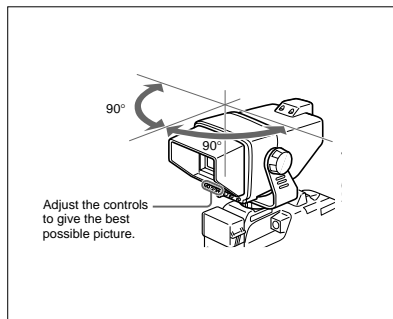
24

Operation

Turning on the camera or the camera control unit automatically supplies power to the viewfinder. The viewfinder image will appear within several seconds.

Adjust the viewfinder to the desired angle and height.

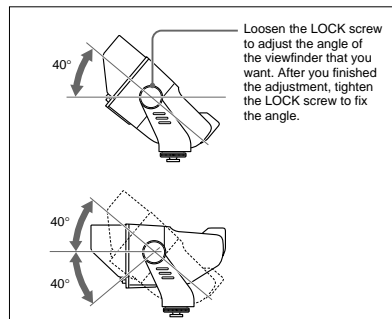
Panning



Note

When the BRIGHT control is turned fully counterclockwise, no picture will appear on the viewfinder screen.

Tilting

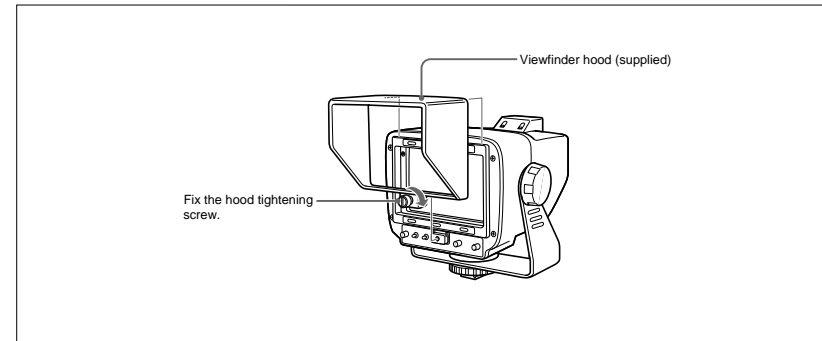


For details, refer to the instruction manual supplied with the camera or the CCU.

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How To Attach the Viewfinder Hood

When using the viewfinder outdoors, attach the supplied viewfinder hood to reduce glare.



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Specifications

Picture tube	5-inch monochrome 70-degree deflection
Video signal	EIA standard/CCIR standard
Scanning system	2 : 1 interlace 525 lines 2 : 1 interlace 625 lines
Scan	5 % underscan
High voltage	8.5 kV
Horizontal resolution	More than 650 lines (at center)
Frequency response	10 MHz at -3 dB
Connectors	Exclusive D-sub 26-pin connector Video input: 1 V(p-p), sync negative, 3 kΩ Power supply: 12 V DC
Power consumption	11 W
Operating temperature	0°C to +40°C (32°F to 104°F)
Dimensions	Approx. 203 × 199 × 289 mm (w/h/d) (8 × 7 7/8 × 11 1/2 inches) including viewfinder hood
Mass	Approx. 2.4 kg (4 lb 7 oz) including viewfinder hood

Accessories supplied
Viewfinder hood (1)
VF connector cable
(20-pin ↔ 26-pin) (1)
Number plate (1)
Operating Instructions (1)

Design and specifications are subject to change without notice.

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お問い合わせは
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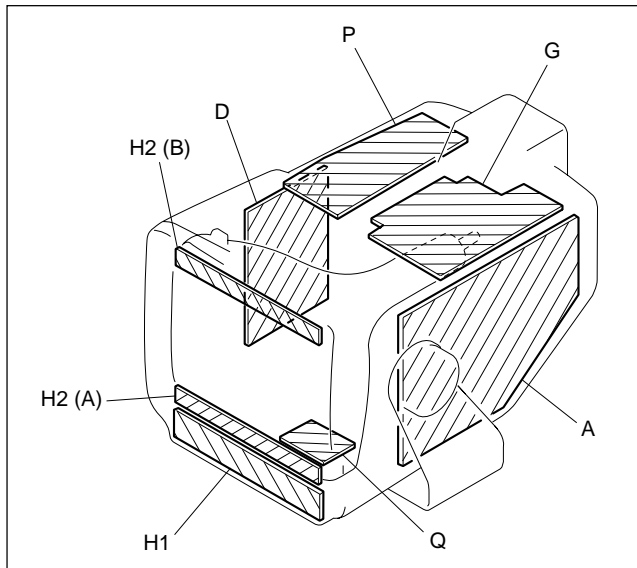
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Section 2

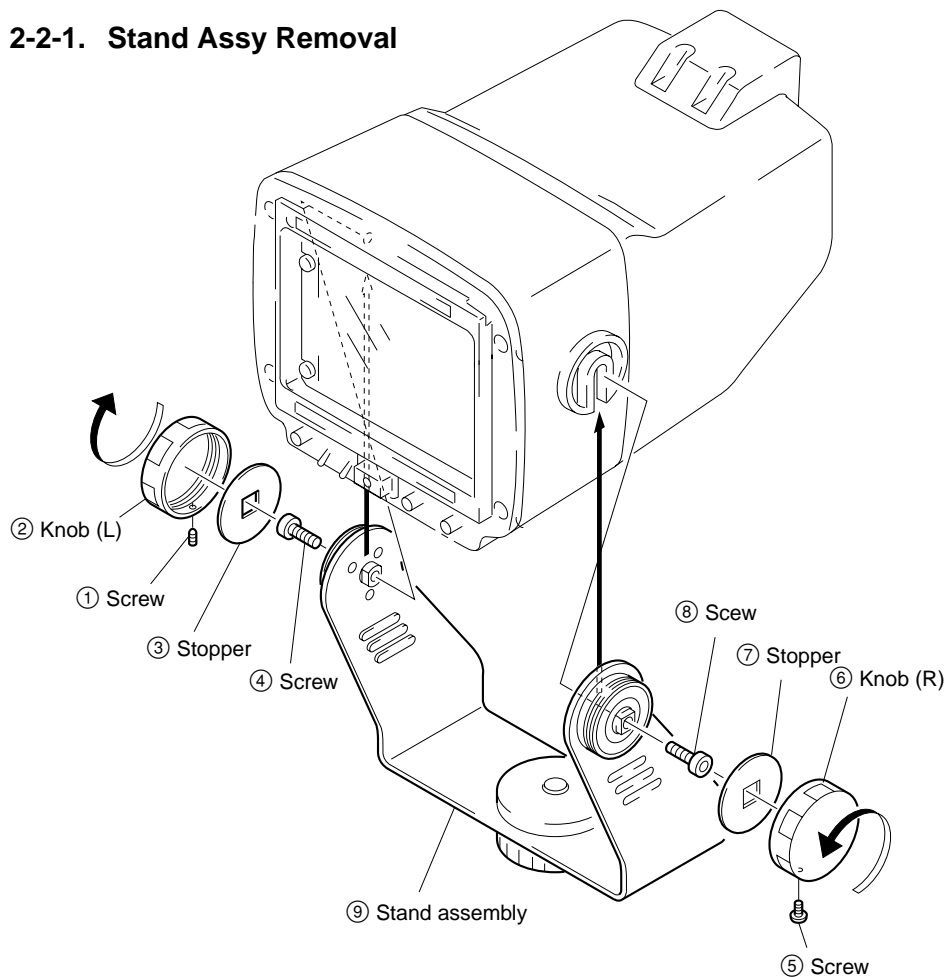
Service Informations

2-1. Board Layout

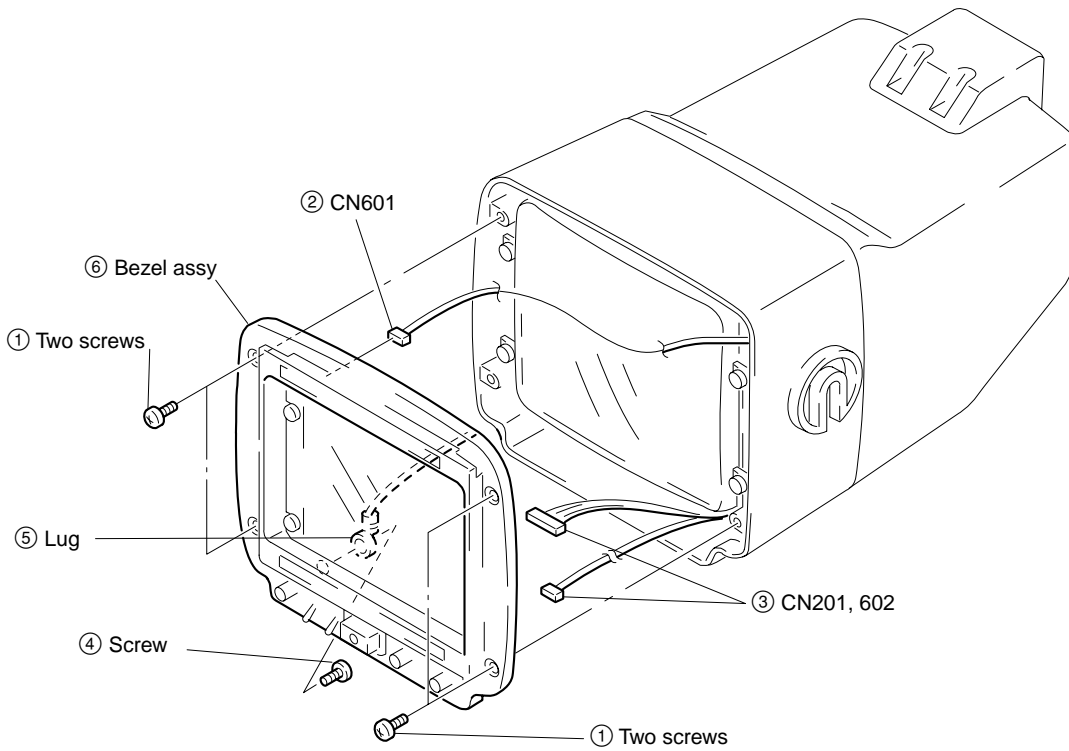


2-2. Disassembly

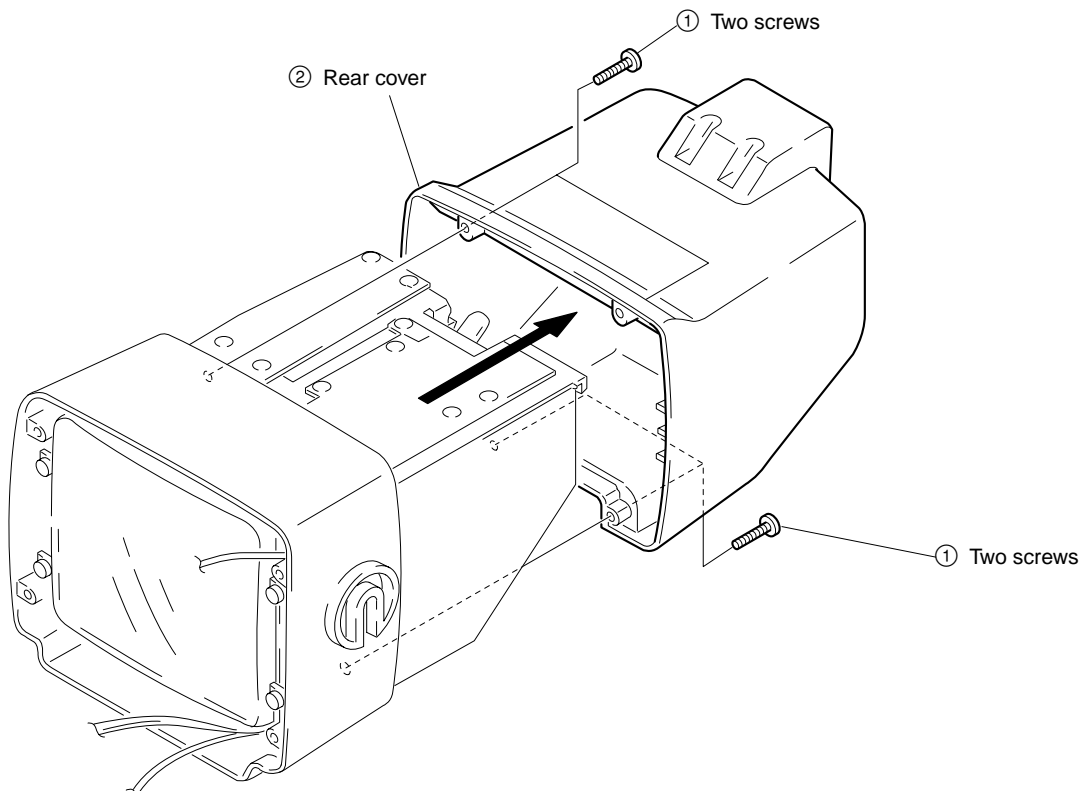
2-2-1. Stand Assy Removal



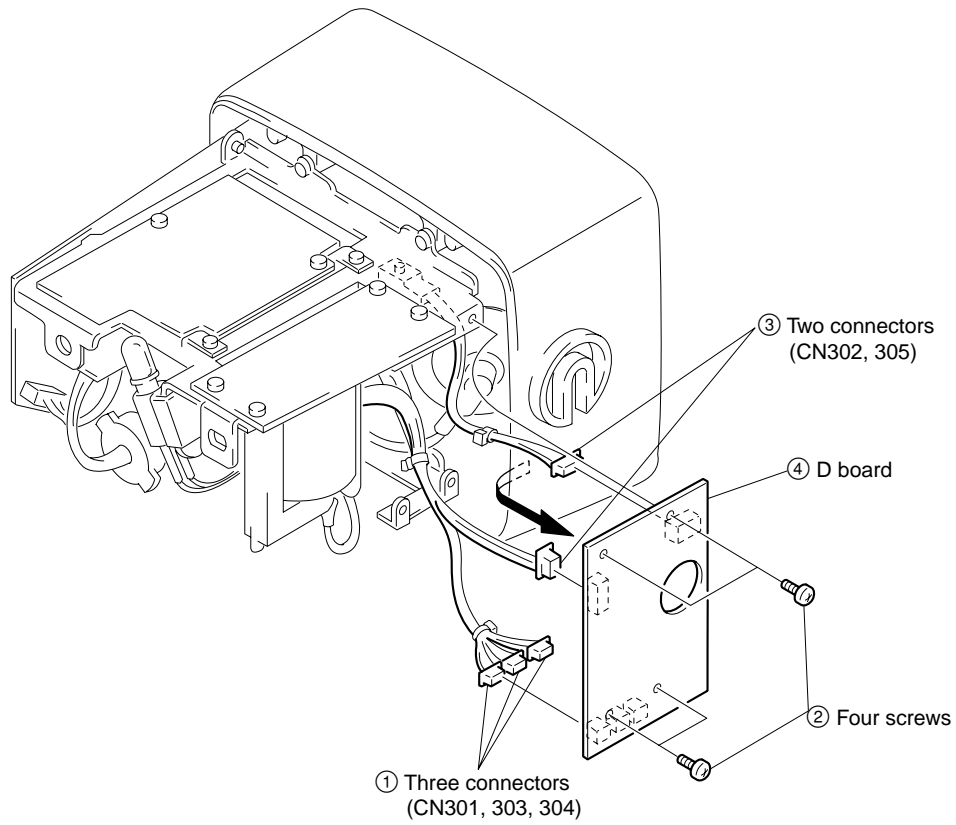
2-2-2. Bezel Assy Removal



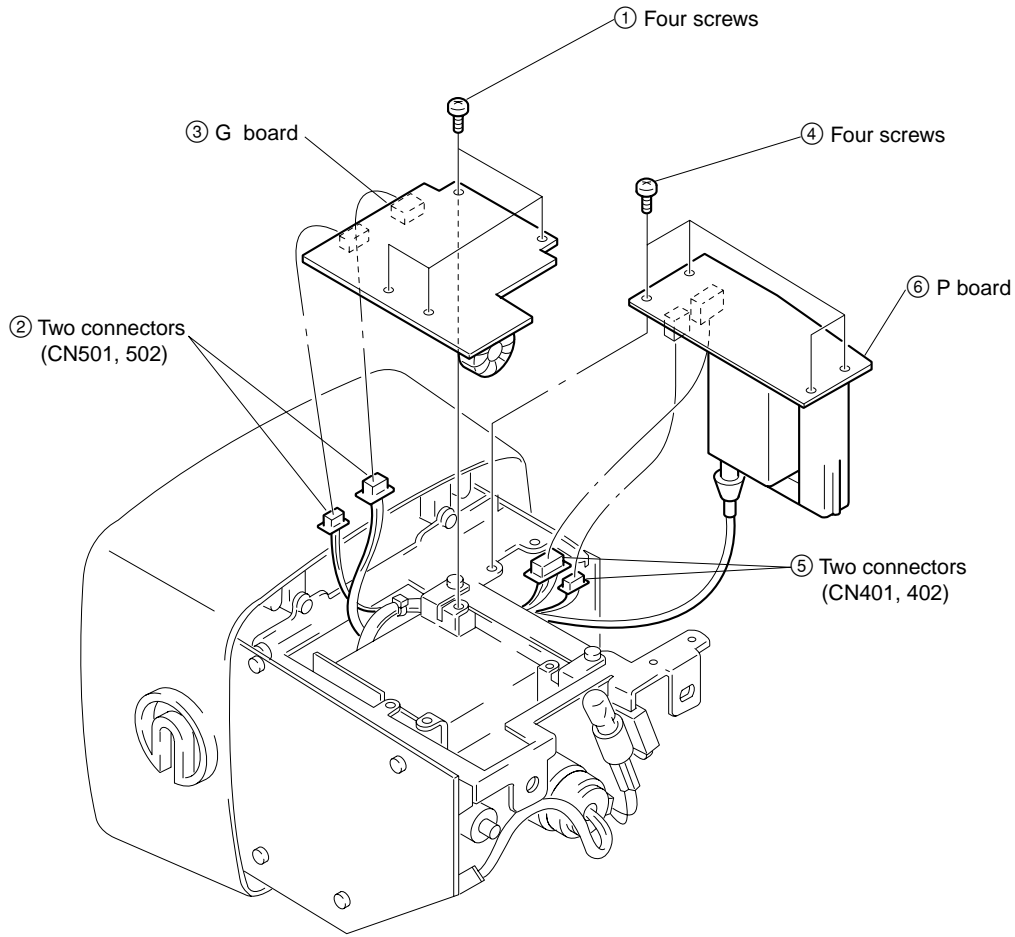
2-2-3. Back Cover Removal



2-2-4. D Board Removal



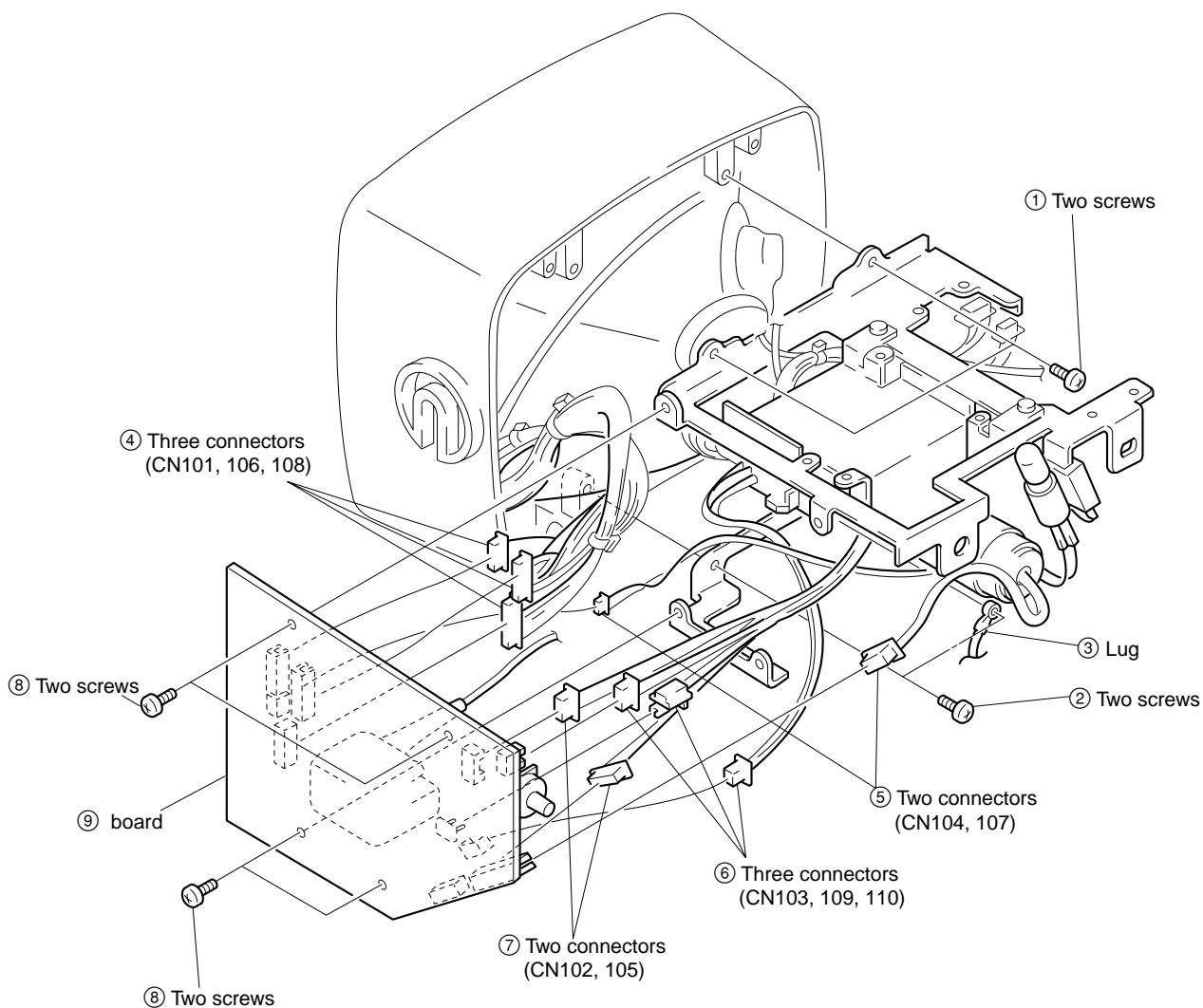
2-2-5. G and P Boards Removal



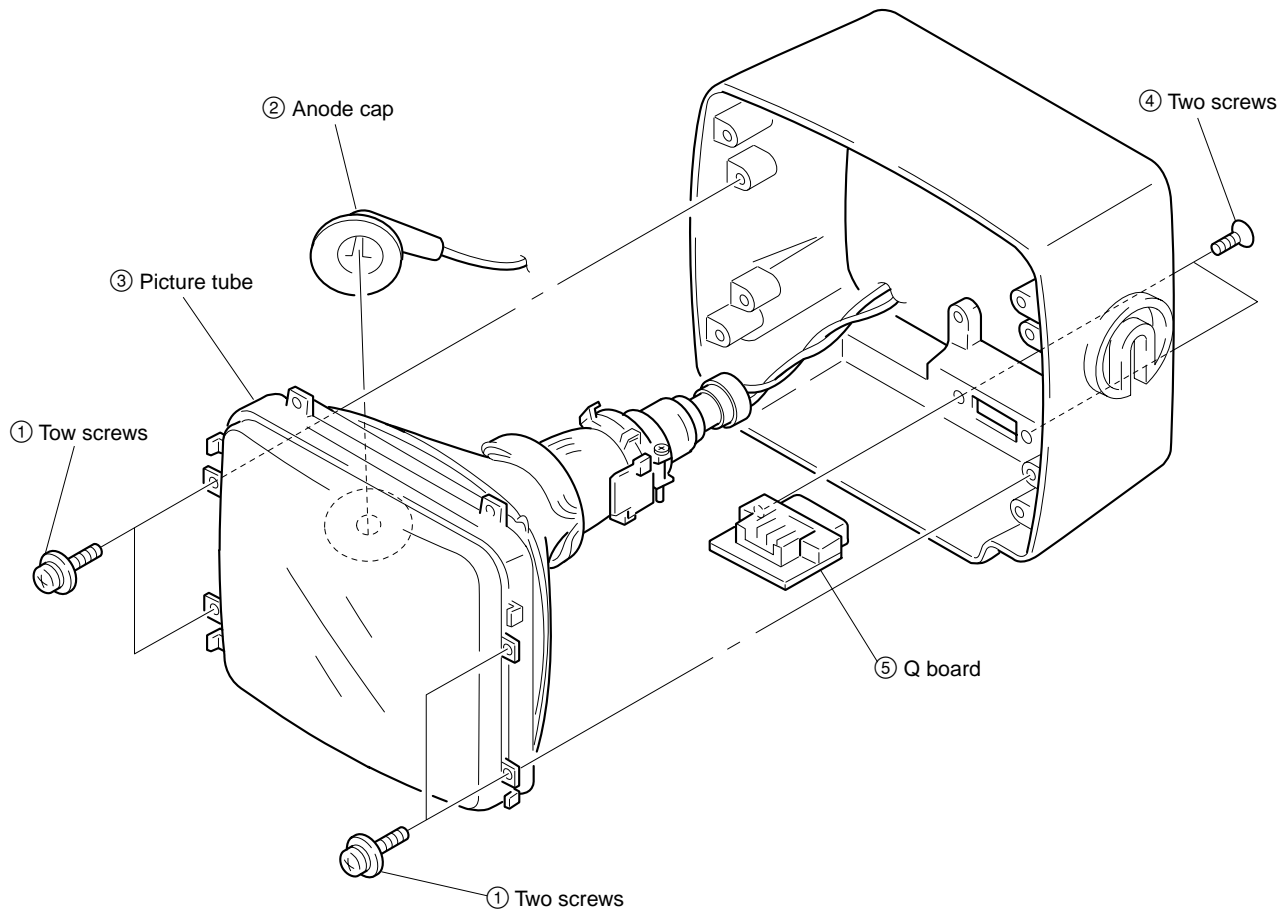
2-2-6. A Board Removal

Note

When the A board is going to be replaced in the monitor that have the serial No. 10001-30000 (UC), 40001-100000 (AEP) as shown, replace the A board together with the P board at the same time.



2-2-7. Picture Tube and Q Board Removal

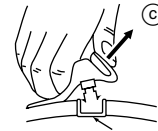
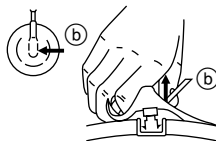
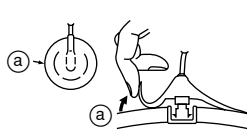


2-2-8 Removal of Anode Cap

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.

• Removal Procedure

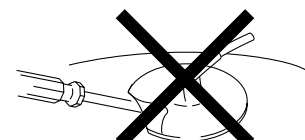
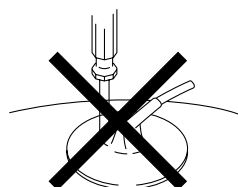


Anode button

- (1) Turn up one side of the rubber cap in the direction indicated by arrow (a).
- (2) Using a thumb, pull up the rubber cap firmly in the direction indicated by arrow (b).
- (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 (c).

• Handling Precautions

- (1) Do not scratch the surface of anode cap with a sharp object.
- (2) Do not press the rubber so hard that it damages the inside of anode caps. A shatter-hook terminal is built into the rubber.
- (3) Do not turn the foot of the rubber over.
The shatter-hook terminal will stick out or damage the rubber.



Section 3

Safety Related Adjustment

H.V. Regulation Confirmation

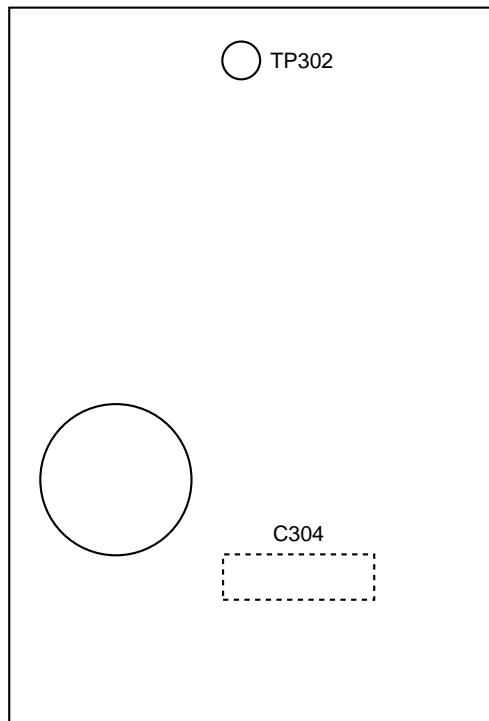
This confirmation must be made whenever the following parts (with \blacksquare marking in circuit diagram) were replaced.

FBT301, R311, R312, R401, RV302

1. Open C304 on the D board.
2. Enter full white signal to pin ⑥ (VF VIDEO (X)) of D-sub 26-pin connector (CN702).
3. Connect a high voltage meter to the HV pin of FBT301 on the P board.
4. Confirm that the voltage is below DC15 kV when both BRIGHT and CONTRAST are set to the minimum position.
5. Confirm that the voltage is below DC13.5 kV when both BRIGHT and CONTRAST are set to the maximum position.
6. Connect the C304 removed in step1.

+B Confirmation

1. Connect a digital voltmeter to the TP302.
2. Confirm that the voltage is $DC9.5 \pm 0.1$ V.
If out of the range, perform the switching power output adjustment (Section 4).



D board (Conductor side)

Section 4

Electrical Adjustments

4-1. Preparation

Make adjustment under the following conditions, unless otherwise specified:

- BRIGHT : Mechanical center
- CONTRAST : Marker points “3 o’clock” position
- PEAKING switch : OFF
- Input signal : Enter NTSC monoscope signal to pin ⑥ of D-sub 26-pin connector (CN702)

4-2. Switching Power Output (RV501) Adjustment

Note

All items of electrical adjustment must be checked, if this adjustment was made.

1. Connect a digital voltmeter to TP103.
2. Rotating RV501, adjust the power to $DC9.5 \pm 0.1$ V.

4-3. H.V. (RV302) High Voltage Adjustment

Note

The H-SIZE, V-SIZE, and Heater Voltage must be checked, if this adjustment was made.

1. Connect a high voltage meter too the HV pin of FBT301 on the P board.
2. Adjust RV302 to attain DC8 kV.

4-4. H-HOLD (RV104) Adjustment

Preparation : No signal input.

1. Connect a frequency counter to TP111.
2. Adjust RV104 to attain 15.734 ± 0.1 kHz.

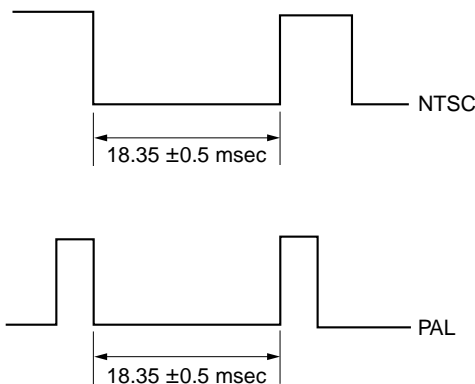
4-5. V-HOLD (RV103) Adjustment

Preparation : No signal input.

1. Connect a frequency counter to TP112.
2. Adjust RV103 to attain 42 ± 1 Hz.

4-6. V-DUTY (RV107) Adjustment

1. Enter PAL signal or NTSC signal to pin ⑥ of a D-sub 26-pin connector (CN702).
2. Connect an oscilloscope to TP114 and observe a waveform.
3. Adjust RV107 as follows.



4-7. H-LEN (L302) Adjustment

1. Adjust L302 so as to attain the best linearity (horizontal direction) of screen.

4-8. H-SIZE (RV301) Adjustment

Note

The Heater voltage must be checked, if this adjustment was made.

1. Adjust RV301 so that horizontal amplitude of screen becomes 98 ± 2 mm.

4-9. Heater Voltage Adjustment

1. Connect a digital voltmeter to TP118.
2. Confirm that the voltage is $DC11.7 \pm 0.3$ V.
3. If exceeding this specification. Break the solder of JP301 and JP302 in this order.

4-10. V-LIN (RV105) Adjustment

1. Adjust RV105 so as to attain the best linearity (vertical direction) of screen.

4-11. V-SIZE (RV109) Adjustment

Note

The V-SIZE (16 : 9) and V-SIZE (PAL) must be checked, if this adjustment was made.

1. Adjust RV109 so that vertical amplitude of screen becomes 73.5 ± 1.5 mm.

4-12. 16 : 9 V-SIZE (RV108) Adjustment

1. Enter 16 : 9 switching signal.
2. Adjust RV108 so that vertical amplitude of screen becomes 55 ± 1.5 mm.

4-13. V-SIZE PAL (RV110) Adjustment

1. Enter PAL signal to pin ⑥ of D-sub 26-pin connector (CN702).
2. Adjust RV110 so that vertical amplitude of screen becomes 73 ± 1.5 mm.

4-14. BRIGHT (RV102) Adjustment

1. Set both BRIGHT and CONTRAST to "9 o'clock" position respectively.
2. Adjust RV102 so as to attain the brightness on same level as black-out.

4-15. FOCUS (RV111) Adjustment

1. Adjust RV111 so as to attain the best focus of screen. (Specification : Center resolution 650 TV or more)

4-16. Deflecting Yoke Tilt Adjustment

Note

Do not adjust this, except when CRT is replaced.

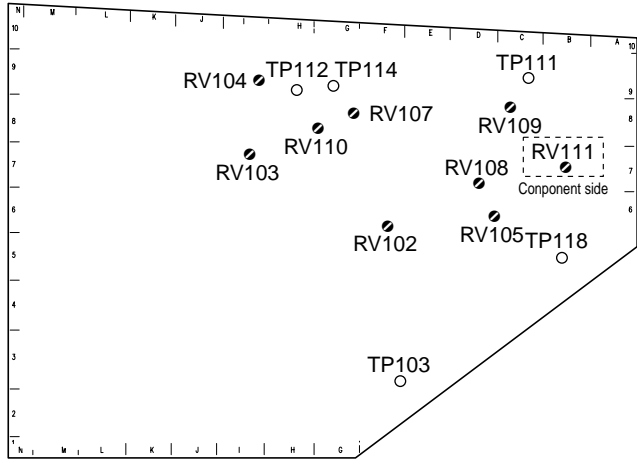
1. If an image tilts to the screen, loosen a clamp band screw and rotate the deflecting yoke to eliminate a tilt.
2. Tighten gently the clamp band screw, and apply locking paint to the clamp band screw.
Specification : H within $\pm 0.65^\circ$
V within $\pm 0.92^\circ$

4-17. Centering Adjustment

1. Rotating two centering magnets attaching to the deflecting yoke, adjust so that the image comes to the center of screen.
Then, apply locking paint to the centering magnets.

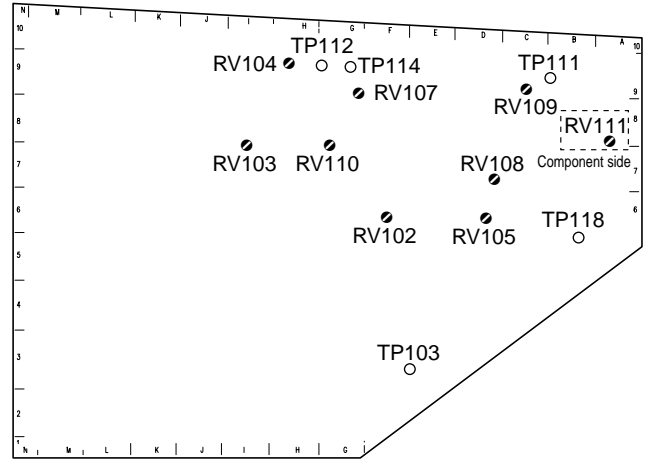
Specification : H Difference in frames between left and right within 0.13 frame.
V Difference in frames between top and bottom within 0.13 frame.

Serial No. 10001 – (UC)
 Serial No. 30001 – (J)
 Serial No. 40001 – (AEP)

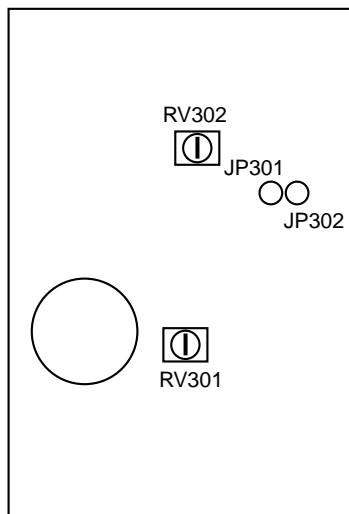


A board (Conductor side)

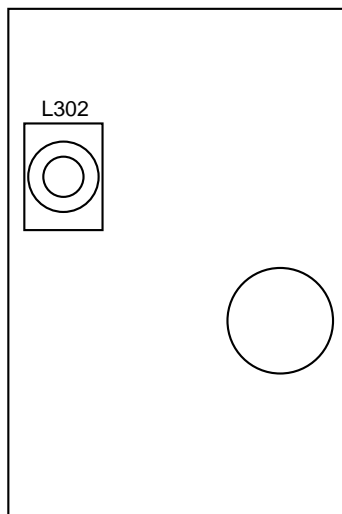
Serial No. 100001 – (UC, J)
 Serial No. 400001 – (CE)



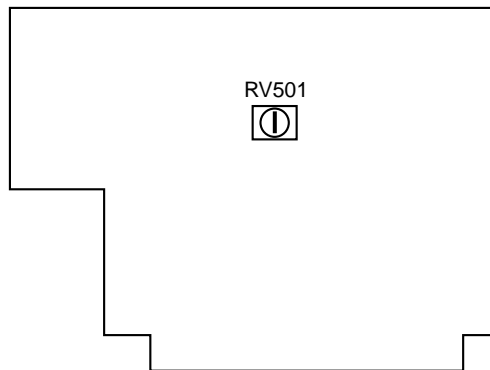
A board (Conductor side)



D board (Conductor side)



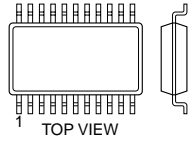
D board (Component side)



G board (Conductor side)

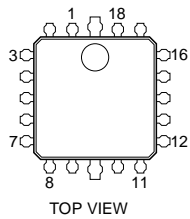
Section 5 Semiconductors

BA15218F-E2
TC4W66F(TE12R)
TC7W04F
TC7W08F
TC7W08F(TE12R)
UPC4062G2
UPC842G2-E2

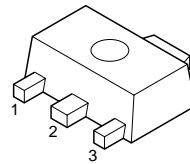


8pin SOP

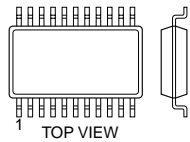
HA11423MP



M5237ML-TP1

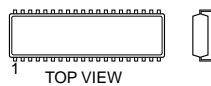


MC74HC4538AF
TC4538BF
TC74HC595AF(EL)
UPC494GS
UPC494GS-T1



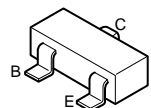
16pin SOP

TC74HC126AF(EL)



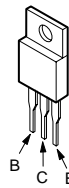
14pin DIP

2SA1576A-T106-Q
2SA1576A-T106-R
2SC3722K-R
2SC4081T106R
2SC4178-F14
2SC4178-T1F14
2SD1328-RST-TX

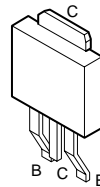


DXF-51

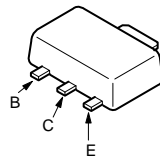
2SB1548
2SD2374



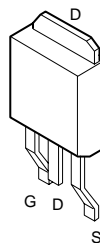
2SC3518-ZL-E2
2SC3518L



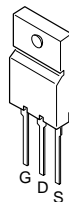
2SC4080



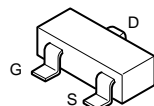
2SJ246S-TL



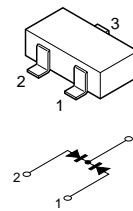
2SK2012



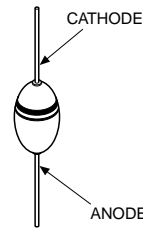
2SK664
2SK664-TX



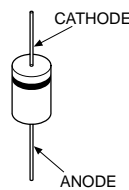
1SS184
MA152WK-TX



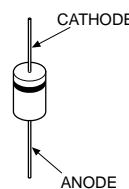
DSA3A2



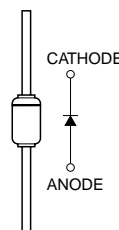
ERA22-06TP1
ERA22-08
RD2.0SB-T1



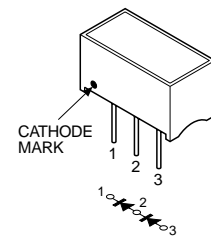
ERC25-04S
ERC81-004



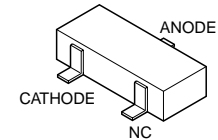
ESJA57-04AT



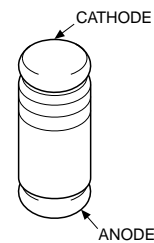
LD-001DU
LD-001VR



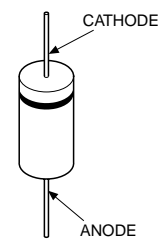
MA143A-(TX).SO



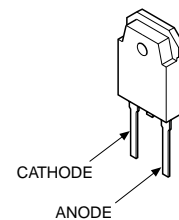
RLS245TE-11



RU3AM



YG911S2R



Section 6

Spare Parts

6-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked \triangle are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

WARNHINWEIS

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

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement. Parts List has the present standardized repair parts.

3. Stock of Parts

Parts marked with “o” at SP (Supply Code) column of the Spare Parts list may not be stocked. Therefore, the delivery date will be delayed. Items with no part number and no description are not stocked because they are seldom required for routine service.

4. Units for Capacitors, Inductors and Resistors

The following units are assumed in Schematic Diagrams, Electrical Parts List and Exploded Views unless otherwise specified.

Capacitors	: μF
Inductors	: μH
Resistors	: Ω

5. X-ray Radiation Safety Related Parts

The components marked \boxtimes in this Spare Parts List have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.

6-1. 補修部品注意事項

1. 安全重要部品

\triangle 警告

\triangle 印のついた部品は安全性を維持するために重要な部品です。したがって、交換する時は必ず指定の部品を使ってください。

2. 部品の共通化

ソニーから供給する補修用部品は、セットに使われているものと異なることがあります。これは部品の共通化、改良等によるものです。部品表には現時点での共通化された補修用部品が記載されています。

3. 部品の在庫

部品表のSP (Supply code) 欄に “o” で示される部品は在庫していないことがあり、納期が長くなることがあります。分解図中の構成部品で、Ref. No.のない部品は供給しません。

4. コンデンサ、インダクタ、抵抗の単位

回路図、分解図、電気部品表中、特に明記したものを除き、下記の単位は省略されています。

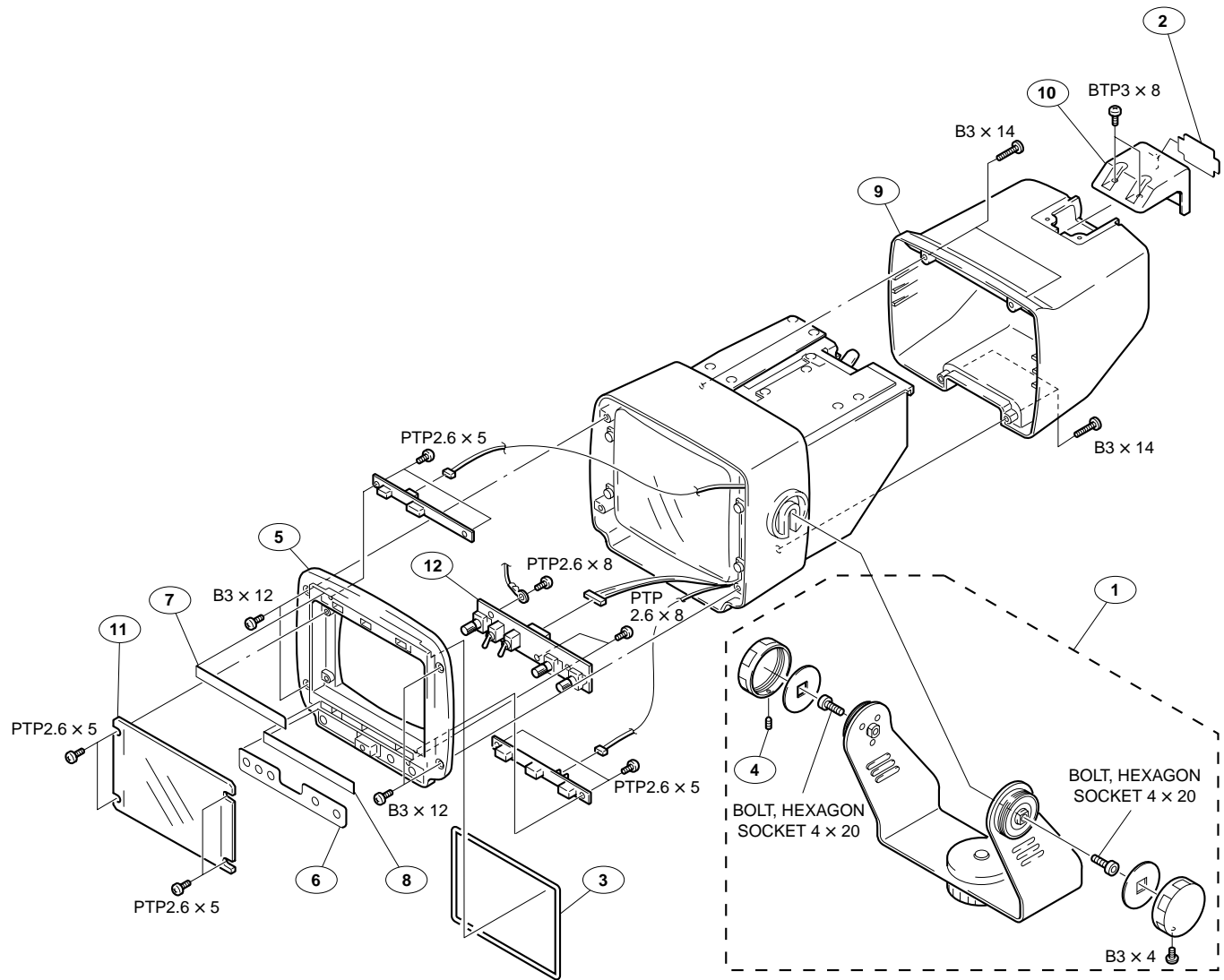
コンデンサ	: μF
インダクタ	: μH
抵抗	: Ω

5. X線関連部品

\boxtimes 印の部品の定数は、X線規制の規格を満足させる為、製造時セット毎に確認し決定したものです。この部品を交換する場合は、セットに付いている部品と同一のものをご使用ください。

Mask & Cover Assemblies

6-2. Exploded Views

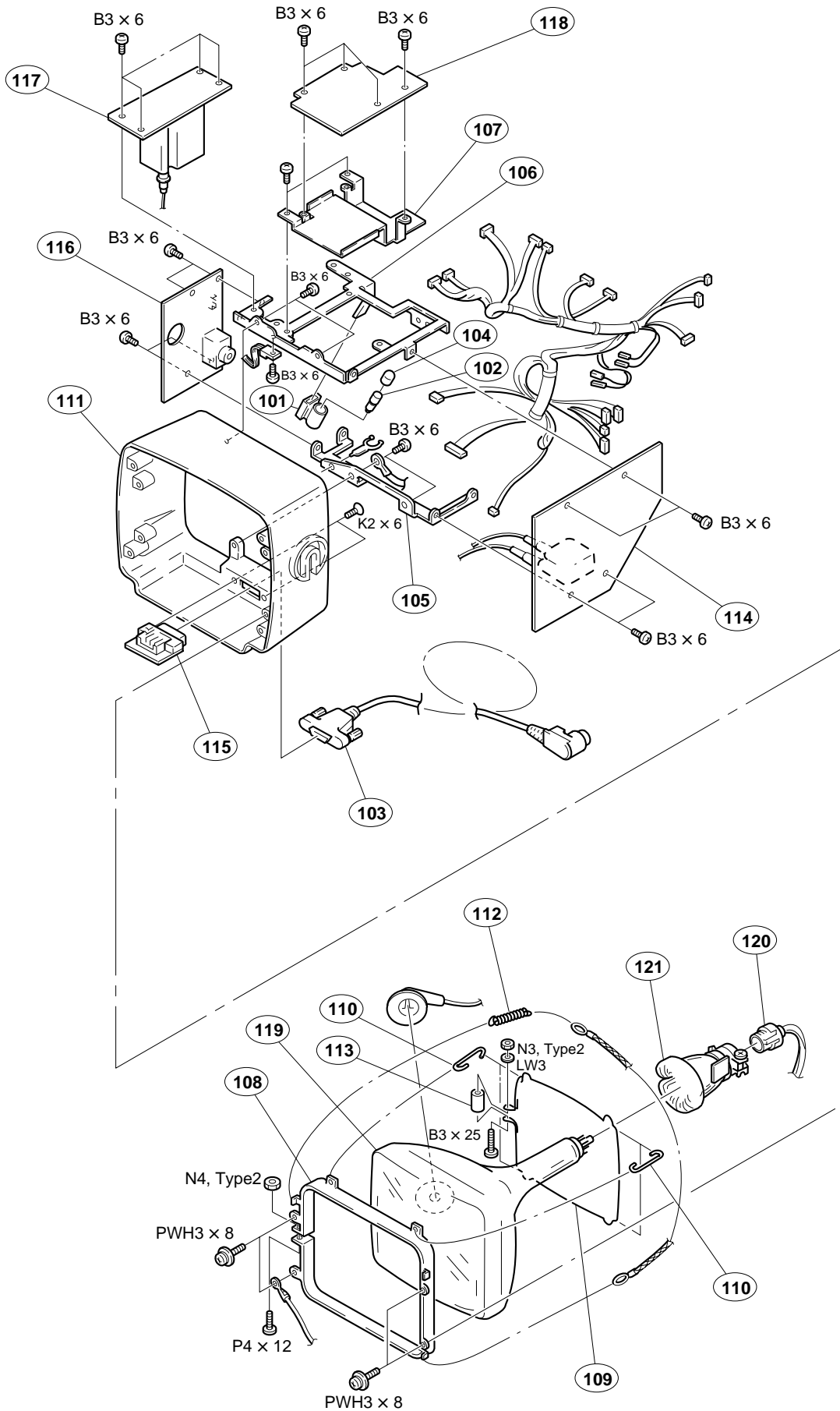


No.	Part No.	SP Description
1	X-3705-096-1	o STAND ASSY
2	3-167-517-01	s PLATE, NUNBER
3	3-617-628-01	o CRT CUSHION
4	3-701-506-01	s SET-SCREW HEX M3.4X4(WP)
5	3-709-224-01	s BEAEL
6	3-709-225-01	o NAME PLATE, SWITCH
7	3-709-226-01	o MASK(UPPER), LED
8	3-709-227-01	o MASK(LOWER), LED
9	3-709-228-01	o COVER, REAR
10	3-709-229-01	o COVER, LAMP
11	3-709-250-01	o MASK, CRT
12	9-939-875-02	o MOUNTED CIRCUIT BOARD, H1

Screws/Washers

7-682-545-09	s	SCREW	+B	3X4
7-682-550-09	s	SCREW	+B	3X12
7-682-551-09	s	SCREW	+B	3X14
7-683-425-04	s	BOLT, HEXAGON SOCKET		4X20
7-685-132-19	s	SCREW	+PTP	2.6X5
7-685-134-19	s	SCREW	+PTP	2.6X8
7-685-546-14	s	SCREW	+BTP	3X8

Chassis & CRT Assemblies



Note

- *1 Serial No. 10001-(UC)
 Serial No. 30001-(J)
 Serial No. 40001-(AEP)
 *2 Serial No. 100001-(UC, J)
 Serial No. 400001-(CE)

Serial No. *1に該当するセットで A基板を交換する場合は、P基板と共に交換してください。

When the A board is going to be replaced in the monitor that have the serial No. *1 as shown, replace the A board together with the P board at the same time.

No.	Part No.	SP Description
101	1-517-075-00	s SOCKET, LAMP
102	1-518-411-21	s LAMP
103	1-782-353-11	s CABLE B,VF(20P-26P)
104	3-173-323-01	s CAP, TALLY LAMP
105	3-709-231-01	o FRAME, BOARD(LOWER)
106	3-709-232-01	o FRAME, BOARD(UPPER)
107	3-709-233-01	o FRAME, POWER
108	3-709-234-01	o BAND, CRT
109	3-709-235-01	o RING, CRT RETAINING
110	3-709-236-01	o HOOK
111	3-709-237-01	o CHASSIS, MAIN
112	3-709-238-01	s SPRING
113	4-855-006-11	s SLEEVE, L14
114	*1 9-939-870-02	o MOUNTED CIRCUIT BOARD, A
115	9-939-878-02	o MOUNTED CIRCUIT BOARD, Q
116	9-939-887-02	o MOUNTED CIRCUIT BOARD, D
117	*1 9-939-889-02	o MOUNTED CIRCUIT BOARD, P (INCLUDING FBT)
118	9-939-894-02	o MOUNTED CIRCUIT BOARD, G
119	△ 9-939-895-01	s CRT (C-5D01B45)
120	9-939-896-01	s CRT SOCKET
121	△ 9-939-897-01	s DY(DDY-B5126)

Screws/Washers

7-621-555-40	s SCREW +K 2X6
7-623-422-07	s WASHER, LW3 (TYPE3)
7-682-154-01	s SCREW +B 3X25
7-682-163-01	s SCREW +P 4X12
7-682-547-04	s SCREW +B 3X6
7-682-903-21	s SCREW +PWH 3X8
7-684-023-04	s NUT, M3 TYPE2
7-684-024-04	s NUT, M4 TYPE2

6-3. Electrical Parts List

A BOARD

Note:

- *1 Serial No. 10001- (UC)
Serial No. 30001- (J)
Serial No. 40001- (AEP)
*2 Serial No. 100001- (UC, J)
Serial No. 400001- (CE)

Serial No. *1に該当するセットでA基板を交換する場合は、P基板と共に交換してください。

When the A board is going to be replaced in the monitor that have the serial No. *1 as shown, replace the A board together with the P board at the same time.

Ref. No.
or Q'ty Part No. SP Description

1pc	9-939-870-02	o	MOUNTED CIRCUIT BOARD, A
1pc	1-533-223-11	s	CLIP,FUSE
C101	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C102	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C103	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C104	1-104-823-11	s	CAPACITOR,TANTALUM 47MF/16V
C105	1-104-823-11	s	CAPACITOR,TANTALUM 47MF/16V
C106	1-163-105-00	s	CAPACITOR,CHIP CERAMIC 33PF/50
C107	1-163-113-00	s	CAPACITOR,CHIP CERAMIC 68PF/50
C108	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C109	1-164-346-11	s	CAPACITOR,CHIP CERAMIC 1MF/16V
C110	1-164-346-11	s	CAPACITOR,CHIP CERAMIC 1MF/16V
C111	1-163-125-00	s	CAPACITOR,CERAMIC 220PF/50V SL
C112	1-164-346-11	s	CAPACITOR,CHIP CERAMIC 1MF/16V
C113	1-163-117-00	s	CAPACITOR,CHIP CERAMIC 100PF
C114	1-163-832-00	s	CAPACITOR,CERAMIC 0.1MF/100V
C115	1-164-346-11	s	CAPACITOR,CHIP CERAMIC 1MF/16V
C117	9-885-015-33	s	CAPACITOR,ELECT 1000U/16V
C118	1-128-578-11	s	CAPACITOR,ELECT 1MF/100V
C119	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C120	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C121	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C122	1-164-346-11	s	CAPACITOR,CHIP CERAMIC 1MF/16V
C123	1-164-346-11	s	CAPACITOR,CHIP CERAMIC 1MF/16V
C124	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C125	1-104-823-11	s	CAPACITOR,TANTALUM 47MF/16V
C126	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C127	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C129	1-130-734-00	s	CAPACITOR,FILM 0.0068MF/100V
C130	9-939-858-01	s	CAPACITOR, ELECT 100UF/16V
C131	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C132	1-107-689-21	s	CAPACITOR,TANTALUM 1MF/35V
C133	1-130-994-11	s	CAPACITOR,ELECT 0.033MF/50V PP
C134	1-126-393-11	s	CAPACITOR,ELECT 33MF/10V(CHIP)
C135	9-939-858-01	s	CAPACITOR, ELECT 100UF/16V
C136	1-137-459-11	s	CAPACITOR,FILM 0.0056MF/100V
C137	1-130-734-00	s	CAPACITOR,FILM 0.0068MF/100V
C138	1-107-689-21	s	CAPACITOR,TANTALUM 1MF/35V
C139	1-107-689-21	s	CAPACITOR,TANTALUM 1MF/35V
C140	1-163-145-00	s	CAPACITOR,CHIP CERAMIC 1500PF
C141	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C142	1-164-004-11	s	CAPACITOR,CERAMIC 0.1MF/25V
C143	1-163-127-00	s	CAPACITOR,CHIP CERAMIC 270PF
C144	1-107-689-21	s	CAPACITOR,TANTALUM 1MF/35V
C145	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C146	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V
C147	1-104-919-11	s	CAPACITOR,TANTALUM 10MF/25V

(A BOARD)

Ref. No.

or Q'ty	Part No.	SP	Description
	C148	1-104-919-11	s CAPACITOR,TANTALUM 10MF/25V
	C149	9-939-858-01	s CAPACITOR, ELECT 100UF/16V
	C150	9-885-015-33	s CAPACITOR,ELECT 1000U/16V
	C151	1-163-127-00	s CAPACITOR,CHIP CERAMIC 270PF
	C152	1-104-919-11	s CAPACITOR,TANTALUM 10MF/25V
	C153	1-163-145-00	s CAPACITOR,CHIP CERAMIC 1500PF
	C154	1-136-165-00	s CAPACITOR,FILM 0.1MF/50V (PP)
	C155	1-163-125-00	s CAPACITOR,CERAMIC 220PF/50V SL
	C156	1-104-919-11	s CAPACITOR,TANTALUM 10MF/25V
	C157	1-163-117-00	s CAPACITOR,CHIP CERAMIC 100PF
	C158	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
	C159	1-130-338-11	s CAPACITOR FILM 0.01MF/630V(PP)
	C160	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
	CN101	1-695-904-11	o PIN, CONNECTOR (PC BOARD) 20P
	CN102	1-564-705-11	o PIN,CONNECTOR (3P)
	CN103	1-506-944-11	o PIN,CONNECTOR 2P
	CN104	1-506-611-11	o PIN,CONNECTOR 8P
	CN105	1-564-706-11	s PIN,CONNECTOR (4P)
	CN106	1-580-716-11	o PIN, CONNECTOR (PC BOARD) 13P
	CN107	1-566-757-11	s PIN, CONNECTOR (PC BOARD) 2P
	CN108	1-566-763-11	o PIN,CONNECTOR (PC BOARD) 8P
	CN109	1-564-505-11	s PLUG,CONNECTOR (2P)
	CN110	1-560-060-00	s PIN,CONNECTOR 2P
	D101	8-719-068-64	s DIODE MA143A-(TX).SO
	D103	8-719-068-64	s DIODE MA143A-(TX).SO
	D104	8-719-052-18	s DIODE RLS245TE-11
	D105	8-719-052-18	s DIODE RLS245TE-11
	D106	8-719-070-38	s DIODE ESJA57-04AT
	D108	8-719-801-78	s DIODE 1SS184
	D109	8-719-068-64	s DIODE MA143A-(TX).SO
	D110	8-719-068-64	s DIODE MA143A-(TX).SO
	D111	8-719-801-78	s DIODE 1SS184
	D112	8-719-052-18	s DIODE RLS245TE-11
	DL101	1-406-729-21	s DELAY LINE,LC (120NS)
	F101	△ 1-532-825-11	s FUSE,GLASS 2A/250V (20MM)
	IC102	8-759-366-35	s IC TC4W66F (TE12R)
	IC103	8-759-142-20	s IC UPC4062G2
	IC104	8-759-237-79	s IC TC74HC595AF (EL)
	IC105	8-759-242-76	s IC TC7W08F
	IC106	8-759-242-74	s IC TC7W04F
	IC107	8-759-235-91	s IC TC74HC126AF (EL)
	IC108	8-759-300-28	s IC HA11423MP
	IC109	*1 8-759-524-55	s IC TC4538BF
	IC109	*2 8-759-038-15	s IC MC74HC4538AF
	IC110	8-759-242-74	s IC TC7W04F
	IC111	8-759-242-74	s IC TC7W04F
	IC112	8-759-242-74	s IC TC7W04F
	IC113	8-759-237-79	s IC TC74HC595AF (EL)
	L101	9-939-863-01	s INDUCTOR, CHIP 82UH
	Q101	8-729-905-38	s TRANSISTOR 2SC4081T106R
	Q102	8-729-905-38	s TRANSISTOR 2SC4081T106R
	Q103	8-729-905-38	s TRANSISTOR 2SC4081T106R
	Q104	8-729-036-38	s TRANSISTOR 2SC4080
	Q105	8-729-036-38	s TRANSISTOR 2SC4080

(A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q106	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q107	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q108	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q109	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q110	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q111	8-729-036-38	s	TRANSISTOR 2SC4080
Q113	8-729-924-97	s	TRANSISTOR 2SC3722K-R
Q115	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q116	8-729-105-19	s	TRANSISTOR 2SC3518L
Q117	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q118	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q120	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q121	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q122	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q123	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q124	9-939-864-01	s	TRANSISTOR 2SD2374
Q125	9-939-865-01	s	TRANSISTOR 2SB1548
Q126	8-729-420-75	s	TRANSISTOR 2SD1328-RST-TX
Q127	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q128	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q129	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q130	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q131	8-729-422-12	s	FET 2SK664
Q132	8-729-026-52	s	TRANSISTOR 2SA1576A-T106-R
Q133	8-729-026-52	s	TRANSISTOR 2SA1576A-T106-R
Q134	8-729-905-38	s	TRANSISTOR 2SC4081T106R
Q135	8-729-036-38	s	TRANSISTOR 2SC4080
R101	1-216-069-11	s	RESISTOR,CHIP 6.8K 1/10W(2012)
R102	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R103	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R104	1-216-295-00	s	CONDUCTOR CHIP (2012)
R105	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R106	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R107	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R108	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R109	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R110	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R113	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R114	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R115	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R116	1-216-085-00	s	RESISTOR,CHIP 33K 1/10W(2012)
R117	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R118	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R119	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R120	1-247-842-11	s	RESISTOR,CARBON 3K 1/4W
R121	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R122	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R123	1-216-057-00	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R124	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R125	1-216-039-00	s	RESISTOR,CHIP 390 1/10W(2012)
R126	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R127	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R128	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R129	1-216-061-00	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R130	1-216-042-00	s	RESISTOR,CHIP 510 1/10W (2125)
R131	1-216-042-00	s	RESISTOR,CHIP 510 1/10W (2125)
R132	1-216-040-00	s	RESISTOR,CHIP 430 1/10W (2012)

(A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R133	1-216-055-00	s	RESISTOR,CHIP 1.8K 1/10W(2012)
R134	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R135	1-216-079-00	s	RESISTOR,CHIP 18K 1/10W(2012)
R136	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R137	1-216-042-00	s	RESISTOR,CHIP 510 1/10W (2125)
R139	1-216-057-00	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R140	1-208-771-11	s	RESISTOR,CHIP 360 1/10W (2012)
R141	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R142	1-216-057-00	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R143	1-216-069-11	s	RESISTOR,CHIP 6.8K 1/10W(2012)
R144	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R145	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R146	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R147	1-216-065-00	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R148	1-216-033-00	s	RESISTOR,CHIP 220 1/10W(2012)
R149	1-216-042-00	s	RESISTOR,CHIP 510 1/10W (2125)
R150	1-216-065-00	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R151	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R152	1-216-039-00	s	RESISTOR,CHIP 390 1/10W(2012)
R153	1-216-055-00	s	RESISTOR,CHIP 1.8K 1/10W(2012)
R154	1-216-001-00	s	RESISTOR,CHIP 10 1/10W(2012)
R155	1-216-461-00	s	RESISTOR,METAL FILM 5.6K/2W
R156	1-216-061-00	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R157	1-216-097-00	s	RESISTOR,CHIP 100K 1/10W(2012)
R158	1-216-097-00	s	RESISTOR,CHIP 100K 1/10W(2012)
R159	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R160	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R161	1-216-057-00	s	RESISTOR,CHIP 2.2K 1/10W(2012)
R162	1-216-104-00	s	RESISTOR,CHIP 200K 1/10W(2012)
R163	1-216-356-00	s	RESISTOR,METAL FILM 3.9/1W
R164	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R165	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R166	1-216-066-00	s	RESISTOR,CHIP 5.1K 1/10W(2012)
R167	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R168	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R169	1-249-385-11	s	RES,CARBON 2.2 1/4W
R170	1-216-060-00	s	RESISTOR,CHIP 3K 1/10W (2012)
R171	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R172	1-216-295-00	s	CONDUCTOR CHIP (2012)
R173	1-216-295-00	s	CONDUCTOR CHIP (2012)
R174	1-216-295-00	s	CONDUCTOR CHIP (2012)
R175	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R176	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R178	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R179	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R180	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R181	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R182	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R184	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R185	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R186	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R187	1-216-295-00	s	CONDUCTOR CHIP (2012)
R188	1-216-295-00	s	CONDUCTOR CHIP (2012)
R189	1-215-863-11	s	RESISTOR,METAL 100/1W
R190	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R191	1-216-075-00	s	RESISTOR,CHIP 12K 1/10W(2012)
R192	1-216-462-00	s	RESISTOR,METAL FILM 8.2K/2W
R193	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R194	1-216-075-00	s	RESISTOR,CHIP 12K 1/10W(2012)

(A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R195	1-216-046-00	s	RESISTOR,CHIP 750 1/10W (2012)
R196	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R197	1-216-060-00	s	RESISTOR,CHIP 3K 1/10W (2012)
R198	1-216-060-00	s	RESISTOR,CHIP 3K 1/10W (2012)
R199	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R200	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R201	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R202	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R203	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R204	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R205	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R206	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R208	1-216-295-00	s	CONDUCTOR CHIP (2012)
R209	1-216-061-00	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R210	1-216-071-00	s	RESISTOR,CHIP 8.2K 1/10W(2012)
R211	1-216-003-11	s	RESISTOR,CHIP 12 1/10W(2012)
R212	1-216-066-00	s	RESISTOR,CHIP 5.1K 1/10W(2012)
R213	1-216-065-00	s	RESISTOR,CHIP 4.7K 1/10W(2012)
R214	1-216-093-11	s	RESISTOR,CHIP 68K
R215	1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)
R216	1-216-074-00	s	RESISTOR,CHIP 11K 1/10W(2012)
R217	1-216-082-00	s	RESISTOR,CHIP 24K 1/10W(2012)
R218	1-216-070-00	s	RESISTOR,CHIP 7.5K 1/10W(2012)
R219	1-216-027-00	s	RESISTOR,CHIP 120 1/10W(2012)
R220	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R221	1-216-041-11	s	RESISTOR,CHIP 470 1/10W (2012)
R222	1-216-093-11	s	RESISTOR,CHIP 68K
R223	1-216-021-00	s	RESISTOR,CHIP 68 1/10W(2012)
R224	1-216-107-00	s	RESISTOR,CHIP 270K 1/10W(2012)
R225	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R226	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R227	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R228	1-216-035-00	s	RESISTOR,CHIP 270 1/10W(2012)
R229	1-216-035-00	s	RESISTOR,CHIP 270 1/10W(2012)
R230	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R231	1-216-061-00	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R232	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R233	1-216-356-00	s	RESISTOR,METAL FILM 3.9/1W
R234	1-216-037-00	s	RESISTOR,CHIP 330 1/10W(2012)
R235	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R236	1-216-077-00	s	RESISTOR,CHIP 15K 1/10W(2012)
R237	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R238	*1 1-216-085-00	s	RESISTOR,CHIP 33K 1/10W(2012)
R238	*2 1-216-689-11	s	RESISTOR,CHIP 39K 1/10W(2012)
R239	*1 1-216-101-00	s	RESISTOR,CHIP 150K 1/10W(2012)
R239	*2 1-216-104-00	s	RESISTOR,CHIP 200K 1/10W(2012)
R240	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R241	1-216-025-00	s	RESISTOR,CHIP 100 1/10W(2012)
R242	1-216-081-00	s	RESISTOR,CHIP 22K 1/10W(2012)
R243	1-216-142-00	s	RESISTOR,CHIP 4.7 1/8W(3216)
R244	1-216-142-00	s	RESISTOR,CHIP 4.7 1/8W(3216)
R245	1-216-097-00	s	RESISTOR,CHIP 100K 1/10W(2012)
R246	1-216-089-00	s	RESISTOR,CHIP 47K 1/10W(2012)
R247	1-216-093-11	s	RESISTOR,CHIP 68K
R248	1-216-061-00	s	RESISTOR,CHIP 3.3K 1/10W(2012)
R249	1-216-083-00	s	RESISTOR,CHIP 27K 1/10W(2012)
R250	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R251	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R252	1-216-035-00	s	RESISTOR,CHIP 270 1/10W(2012)
R253	1-216-104-00	s	RESISTOR,CHIP 200K 1/10W(2012)

(A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R254	1-216-121-00	s	RESISTOR,CHIP 1M 1/10W(2012)
R255	1-216-610-11	s	RESISTOR,CHIP 20 1/10W(2012)
R256	1-216-031-00	s	RESISTOR,CHIP 180 1/10W(2012)
R258	1-216-295-00	s	CONDUCTOR CHIP (2012)
R260	1-215-869-11	s	RESISTOR,METAL FILM 1K/1W
R261	1-216-133-00	s	RESISTOR,CHIP 3.3M 1/10W(2012)
R264	1-216-073-00	s	RESISTOR,CHIP 10K 1/10W(2012)
R265	1-216-049-11	s	RESISTOR,CHIP 1K 1/10W(2012)
R266	1-216-047-00	s	RESISTOR,CHIP 820 1/10W(2012)
RV102	*1 1-225-796-11	s	RESISTOR,ADJ,CERMET 100K
RV102	*2 1-237-039-11	s	RESISTOR,ADJ,CERMET 100K
RV103	*1 1-225-791-11	s	RESISTOR,ADJ,CERMET 5K
RV103	*2 1-237-035-11	s	RESISTOR,ADJ,CERMET 5K
RV104	*1 1-225-789-11	s	RESISTOR,ADJ,CERMET 2K
RV104	*2 1-237-034-11	s	RESISTOR,ADJ,CERMET 2K
RV105	*1 1-225-787-11	s	RESISTOR,ADJ,CERMET 500
RV105	*2 1-237-032-11	s	RESISTOR,ADJ,CERMET 500
RV107	*1 1-225-796-11	s	RESISTOR,ADJ,CERMET 100K
RV107	*2 1-237-039-11	s	RESISTOR,ADJ,CERMET 100K
RV108	*1 1-225-787-11	s	RESISTOR,ADJ,CERMET 500
RV108	*2 1-237-032-11	s	RESISTOR,ADJ,CERMET 500
RV109	*1 1-225-787-11	s	RESISTOR,ADJ,CERMET 500
RV109	*2 1-237-032-11	s	RESISTOR,ADJ,CERMET 500
RV110	*1 1-225-797-11	s	RESISTOR,ADJ,CERMET 200K
RV110	*2 1-237-040-11	s	RESISTOR,ADJ,CERMET 200K
RV111	*1 9-939-789-01	s	RESISTOR,ADJ, 1M
RV111	*2 1-237-524-21	s	RESISTOR,ADJ,CERMET 1M
SG101	1-519-422-11	s	GAP, SPARK
SG102	1-519-422-11	s	GAP, SPARK
TP103	*2 1-535-757-11	s	CHIP,CHECKER (CONNECTOR)
TP111	*2 1-535-757-11	s	CHIP,CHECKER (CONNECTOR)
TP112	*2 1-535-757-11	s	CHIP,CHECKER (CONNECTOR)
TP114	*2 1-535-757-11	s	CHIP,CHECKER (CONNECTOR)
TP118	*2 1-535-757-11	s	CHIP,CHECKER (CONNECTOR)

D BOARD

Note:

*1 Serial No. 10001- (UC)
Serial No. 30001- (J)
Serial No. 40001- (AEP)
*2 Serial No. 100001- (UC, J)
Serial No. 400001- (CE)

Ref. No.

or Q'ty	Part No.	SP Description
1pc	9-939-887-02	o MOUNTED CIRCUIT BOARD, D
C301	1-107-686-11	s CAPACITOR,TANTALUM 4.7MF/16V
C302	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C303	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C304	1-130-202-00	s CAPACITOR,FILM 0.022MF/400V PP
C305	1-104-913-11	s CAPACITOR,TANTALUM 10MF/16V
C306	1-130-202-00	s CAPACITOR,FILM 0.022MF/400V PP
C307	1-104-666-11	s CAPACITOR,ELECT 220MF/25V
C308	9-885-015-34	s CAPACITOR,ELECT 47MF/100V
C309	1-126-941-11	s CAPACITOR,ELECT 470MF/25V
C311	△ 1-163-145-00	s CAPACITOR,CHIP CERAMIC 1500PF
C312	△ 1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C313	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C314	1-164-346-11	s CAPACITOR,CHIP CERAMIC 1MF/16V
C315	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C316	1-104-913-11	s CAPACITOR,TANTALUM 10MF/16V
C317	9-939-783-01	s CAPACITOR,ELECT 6.8MF/50V
C318	1-164-346-11	s CAPACITOR,CHIP CERAMIC 1MF/16V
CN301	1-564-704-11	o PIN,CONNECTOR (2P)
CN302	1-564-708-11	o PIN,CONNECTOR (6P)
CN303	1-564-506-11	o PLUG,CONNECTOR (3P)
CN304	1-564-706-11	s PIN,CONNECTOR (4P)
CN305	1-506-945-11	o PIN,CONNECTOR 3P
D301	8-719-068-64	s DIODE MA143A-(TX).SO
D302	8-719-068-64	s DIODE MA143A-(TX).SO
D303	8-719-074-79	s DIODE YG911S2R
D304	8-719-948-45	s DIODE ERA22-08
D305	8-719-036-65	s DIODE RD2.0SB-T1
D306	8-719-068-64	s DIODE MA143A-(TX).SO
IC301	8-759-095-59	s IC M5237ML-TP1
IC302	8-759-824-98	s IC BA15218F-E2
L301 *1	9-939-883-01	s COIL, INDUCTOR 250uH
L301 *2	9-885-015-36	s COIL, INDUCTOR 250uH
L302 *1	9-939-884-01	s COIL (HLC)
L302 *2	9-885-015-38	s HLC VF-60
Q301	9-939-809-01	s TRANSISTOR 2SK2012
Q303	9-939-806-01	s TRANSISTOR 2SB1548
Q305	8-729-905-38	s TRANSISTOR 2SC4081T106R
Q306	8-729-026-52	s TRANSISTOR 2SA1576A-T106-R
R301	1-216-025-00	s RESISTOR,CHIP 100 1/10W(2012)
R302	1-216-073-00	s RESISTOR,CHIP 10K 1/10W(2012)
R303	1-216-298-00	s RESISTOR,CHIP 2.2 1/10(2012)
R304	1-216-065-00	s RESISTOR,CHIP 4.7K 1/10W(2012)
R305	1-216-065-00	s RESISTOR,CHIP 4.7K 1/10W(2012)
R306	1-216-297-11	s RESISTOR,CHIP 5.1
R307	1-216-070-00	s RESISTOR,CHIP 7.5K 1/10W(2012)
R308	1-216-025-00	s RESISTOR,CHIP 100 1/10W(2012)
R309	1-216-121-00	s RESISTOR,CHIP 1M 1/10W(2012)
R310	1-216-121-00	s RESISTOR,CHIP 1M 1/10W(2012)

(D BOARD)

Ref. No.

or Q'ty	Part No.	SP Description
R311	△ 1-216-068-00	s RESISTOR,CHIP 6.2K 1/10W(2012)
R312	△ 1-216-077-00	s RESISTOR,CHIP 15K 1/10W(2012)
R313	1-216-049-11	s RESISTOR,CHIP 1K 1/10W(2012)
R314	1-216-033-00	s RESISTOR,CHIP 220 1/10W(2012)
R315	1-216-084-00	s RESISTOR,CHIP 30K 1/10W(2012)
R316	1-216-065-00	s RESISTOR,CHIP 4.7K 1/10W(2012)
R317	1-216-049-11	s RESISTOR,CHIP 1K 1/10W(2012)
R318	1-216-295-00	s CONDUCTOR CHIP (2012)
R319	1-216-297-11	s RESISTOR,CHIP 5.1
R320	1-216-295-00	s CONDUCTOR CHIP (2012)
RV301 *1	1-225-789-11	s RESISTOR ADJ 2K (CERMET)
RV301 *2	1-237-034-11	s RESISTOR,ADJ,CERMET 2K
RV302 *1	△ 1-225-791-11	s RESISTOR,VARIABLE CHIP 5K
RV302 *2	△ 1-237-035-11	s RESISTOR,ADJ,CERMET 5K

G BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-939-894-02	o MOUNTED CIRCUIT BOARD, G
C501	1-104-666-11	s CAPACITOR,ELECT 220MF/25V
C502	1-104-666-11	s CAPACITOR,ELECT 220MF/25V
C503	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C504	1-163-275-11	s CAPACITOR,CERAMIC 1000PF/50V
C505	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C506	1-163-117-00	s CAPACITOR,CHIP CERAMIC 100PF
C507 *1	9-980-048-01	s CAPACITOR,ELECT 820MF/25V
C507 *2	9-885-015-35	s CAPACITOR,ELECT 820MF/25V
C508	1-104-666-11	s CAPACITOR,ELECT 220MF/25V
C509	1-104-666-11	s CAPACITOR,ELECT 220MF/25V
C510	1-164-004-11	s CAPACITOR,CERAMIC 0.1MF/25V
C511	1-104-823-11	s CAPACITOR,TANTALUM 47MF/16V
CN501	1-564-719-11	s PIN,CONNECTOR (3P)
CN502	1-564-718-11	s PIN,CONNECTOR (2P)
D501	9-980-049-01	s DIODE DSA3A2
D502	8-719-981-00	s DIODE ERC81-004
IC501	8-759-144-88	s IC UPC494GS
L501	9-885-015-37	s COIL, INDUCTOR 22uH
L502	9-939-839-01	s COIL, INDUCTOR 65uH
L503	9-885-015-37	s COIL, INDUCTOR 22uH
L504	9-885-015-37	s COIL, INDUCTOR 22uH
Q501	8-729-905-38	s TRANSISTOR 2SC4081T106R
Q502	8-729-026-51	s TRANSISTOR 2SA1576A-T106-Q
Q503	8-729-023-70	s TRANSISTOR 2SJ246S-TL
R501	1-216-679-11	s RESISTOR,CHIP 15K 1/10W(2012)
R502	1-216-079-00	s RESISTOR,CHIP 18K 1/10W(2012)
R503	1-216-001-00	s RESISTOR,CHIP 10 1/10W(2012)
R504	1-216-017-00	s RESISTOR,CHIP 47 1/10W(2012)
R505	1-216-679-11	s RESISTOR,CHIP 15K 1/10W(2012)
R506	1-216-672-11	s RESISTOR,CHIP 7.5K 1/10W(2012)
R507	1-216-672-11	s RESISTOR,CHIP 7.5K 1/10W(2012)
R508	1-216-661-11	s RESISTOR,CHIP 2.7K 1/10W(2012)
R509	1-216-101-00	s RESISTOR,CHIP 150K 1/10W(2012)
R510	1-216-073-00	s RESISTOR,CHIP 10K 1/10W(2012)
RV501 *1	1-225-789-11	s RESISTOR,ADJ,CERMET 500
RV501 *2	1-237-032-11	s RESISTOR,ADJ,CERMET 500

H1 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-939-875-02	o MOUNTED CIRCUIT BOARD, H1
CN201	1-580-716-11	s PIN, CONNECTOR (PC BOARD) 13P
RV201	9-939-873-01	s RESISTOR, VARIABLE 50K
RV202	9-939-871-01	s RESISTOR, VARIABLE 2K
RV203	9-939-872-01	s RESISTOR, VARIABLE 5K
SW201	9-939-874-01	s SWITCH (PEAKING SW)
SW202	9-939-874-01	s SWITCH (TALLY SW)

H2A BOARD

Ref. No. or Q'ty	Part No.	SP Description
CN601	1-566-760-11	s PIN,CONNECTOR (PC BOARD) 5P
D601	8-719-950-78	s LED LD-001DU
D602	8-719-946-55	s LED LD-001VR
D603	8-719-950-78	s LED LD-001DU

H2B BOARD

Ref. No. or Q'ty	Part No.	SP Description
CN602	1-566-759-11	s PIN,CONNECTOR 4P
D605	8-719-946-55	s LED LD-001VR
D606	8-719-032-46	s DIODE LD-001MGLM

P BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-939-889-02	o MOUNTED CIRCUIT BOARD, P (INCLUDED FLYBACK TRANS FBT301)
CN401	1-564-708-11	o PIN,CONNECTOR (6P)
CN402	1-506-944-11	o PIN,CONNECTOR 2P
D401	8-719-300-33	s DIODE RU3AM
R401	△ 1-247-887-00	s RESISTOR,CARBON 220K 1/4W

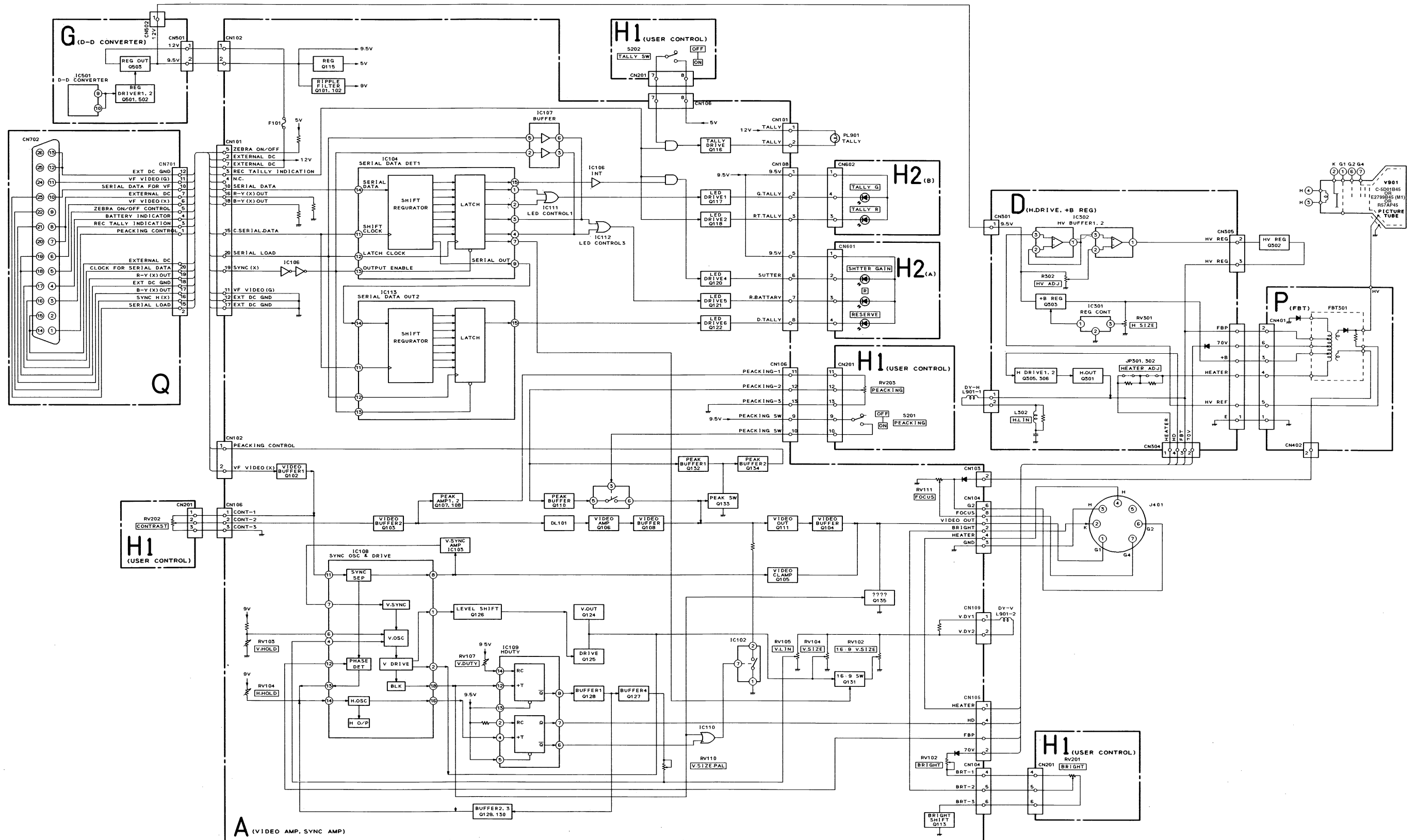
Q BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	9-939-878-02	o	MOUNTED CIRCUIT BOARD, Q
CN701	1-695-904-11	s	PIN, CONNECTOR (PC BOARD) 20P
CN702	9-939-877-01	s	CONNECTOR TX20A

ACCESSORIES




Ref. No. or Q'ty	Part No.	SP	Description
	1-782-352-11	s	CABLE B, VF (20P-26P)
	1-782-353-11	s	CABLE A, VF (8P-26P)
	3-167-517-01	s	PLATE, NUMBER
	3-167-525-02	o	HOOD, VF
	3-859-686-01	s	MANUAL, INSTRUCTION (JAPANESE, ITALIAN, CHINESE)
	4-058-477-01	o	INDIVIDUAL CARTON
	4-058-478-01	o	CUSHON (UPPER) ASSY
	4-058-481-01	o	CUSHON, LOWER
	X-3705-096-1	o	STAND ASSY

Section 7 Block Diagrams






Section 8 Diagrams

Note:



- Parts marked “*” differ according to the model/destination. Refer to the mount table for each function.
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics.
- All electrolytics are in 50 V unless otherwise specified.
-  : fusible resistor
-  : nonflammable resistor
- Δ : internal component
-  : panel designation and adjustment for repair
- Caution when replacing chip parts
New parts must be attached after removal of the chip.
Be careful not to heat the minus side of a tantalum capacitor, because it is easily damaged by the heat.

Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	※	: ADJUSTMENT RESISTOR
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

- The components marked  in this schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
- When replacing components marked , make the necessary adjustments indicated. If results do not meet the specified value, change the component marked  and repeat the adjustment until the specified value is achieved.
- When replacing a part shown in the table below, be sure to perform the related adjustment.




[Measuring conditions, voltage and waveform]

- A voltage value is the reference value between the measurement point and the earth, when the color bar signal is received from the color bar generator. (digital multi-meter used: 10 M ohms/V DC)
- Unit of voltage is V (volt).
(Voltage variations may occur due to normal production tolerances.)
-  : B line
- No mark : Color bar signal.
- Circled numbers indicate the reference waveform.
-  : Signal path.

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

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

【使用上の注意】

- *印のある部品は、機種などにより異なりますので機種別マウン ト一覧表を参照してください。
- 回路図中の#マークはマウントされていません。
- ケミコン、タンタルを除くコンデンサで耐圧 50V 以下のものは、その耐圧を省略。単位はすべて μF (p は pF)
- ケミコン、タンタルのコンデンサで耐圧 50V は省略。
-  印はヒューズ抵抗。
-  印は不燃性抵抗。
- Δ 印は内蔵部品。
-  印はパネル表示名称および調整名称。
- チップ部品交換時の注意
取り外した部品は再使用せず、未使用の部品をご使用ください。
タンタルコンデンサのマイナス側は熱に弱いため注意してください。




—部品特性省略表—

- 固定抵抗



RN	: 金属被膜
RC	: ソリッド
FPRD	: 不燃性カーボン
FUSE	: 不燃性ヒューズ
RS	: 不燃性酸化金属被膜
RB	: 不燃性セメント
RW	: 不燃性巻線
※	: 調整抵抗
- マイクロインダクタ

LF-8L	: マイクロインダクタ
-------	-------------
- コンデンサ

TA	: タンタル
PS	: スチロール
PP	: ポリプロピレン
PT	: マイラ
MPS	: メタライズドポリエステル
MPP	: メタライズドポリプロピレン
ALB	: バイポーラ
ALT	: 高温用
ALR	: ハイリップル

-  印の部品の定数は、X線量規制を満足させるため、製造時セット毎に確認し決定したものです。この部品を交換する場合は、セットに付いている部品と同一のものをご使用ください。
また、回路図上の  印の部品を交換した場合は、指定された調整、確認が必要です。確認の結果が指示した値と合致しない場合は、 印の部品を交換し、必ず指定した値と合致するように調整してください。

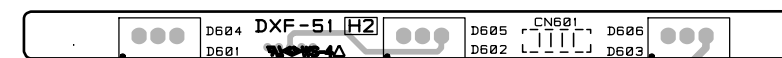
【電圧・波形測定条件注意】

- 電圧値は、カラーバーゼネレータよりカラーバー信号を受信したときの対アース間の参考値。
(使用デジタルマルチメーター 10 M Ω /V DC)
- 電圧値の単位は V (ボルト)
(実測値は異なる場合があります。)
-  : B+ライン
- 無印は カラーバー信号。
- 丸数字は波形表の番号。
-  は信号経路。

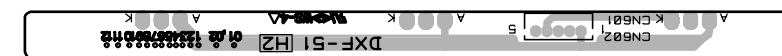
Δ 印の部品は、安全性を維持するために、重要な部品です。従って交換時は、必ず指定の部品を使用してください。

8-1. Schematic Diagrams and Printed Wiring Boards

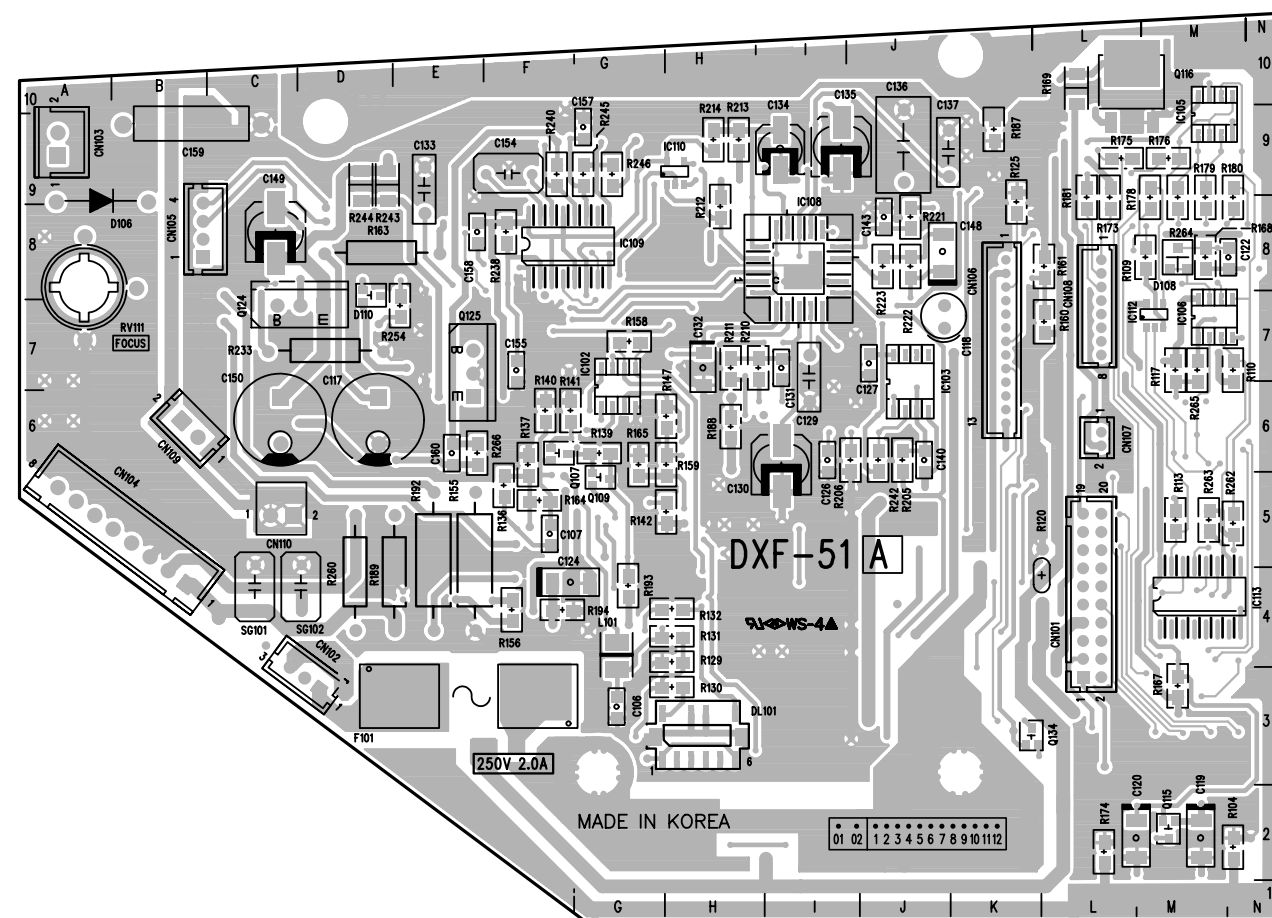
Serial No. 100001-(UC, J)
Serial No. 400001-(CE)



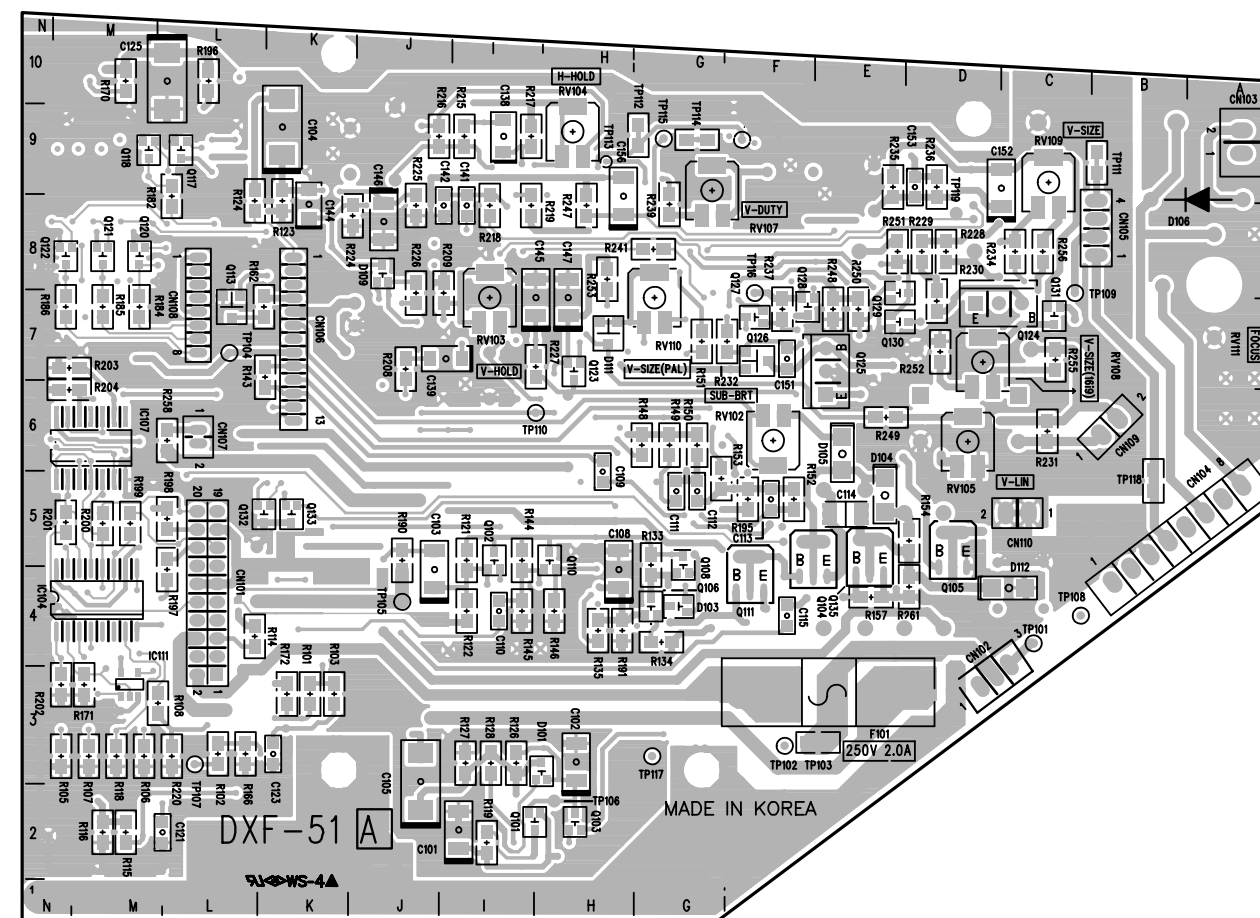
H2 (A)/H2 (B) -Component side-



H2 (A)/H2 (B) -Conductor side-



A -Component side-



A -Conductor side-

A BOARD

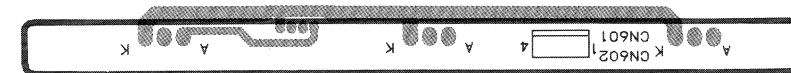
* : Conductor side

D101	* I-3	IC110	H-9	Q117	* L-9	Q135	* E-5	TP108	* C-4
D103	* G-4	IC111	* M-3	Q118	* M-9			TP109	* C-7
D104	* E-5	IC112	M-7	Q120	* M-8	RV102	* F-6	TP110	* I-6
D105	* E-6	IC113	M-4	Q121	* M-8	RV103	* I-7	TP111	* B-9
D106	A-9			Q122	* M-8	RV104	* H-9	TP112	* G-9
D108	M-8	Q101	* I-2	Q123	* H-7	RV105	* D-6	TP113	* H-9
D109	* J-8	Q102	* I-5	Q124	C-7	RV107	* F-8	TP114	* G-9
D110	D-8	Q103	* H-2	Q124	* C-7	RV108	* D-7	TP115	* G-9
D111	* H-7	Q104	* E-5	Q125	E-7	RV109	* C-9	TP116	* F-7
D112	* C-4	Q105	* D-4	Q125	* E-7	RV110	* G-7	TP117	* G-3
		Q106	* G-4	Q126	* F-7	RV111	A-8	TP118	* B-4
IC102	G-7	Q107	F-6	Q127	* F-7			TP119	* D-9
IC103	J-7	Q108	* G-4	Q128	* F-7	TP101	* C-4		
IC104	* M-4	Q109	G-5	Q129	* E-7	TP102	* F-3		
IC105	M-9	Q110	* H-5	Q130	* E-7	TP103	* F-3		
IC106	M-7	Q111	* F-5	Q131	* C-7	TP104	* L-7		
IC107	* M-6	Q113	* L-8	Q132	* L-5	TP105	* J-4		
IC108	I-8	Q115	M-2	Q133	* K-5	TP106	* H-2		
IC109	G-8	Q116	M-10	Q134	K-3	TP107	* L-3		

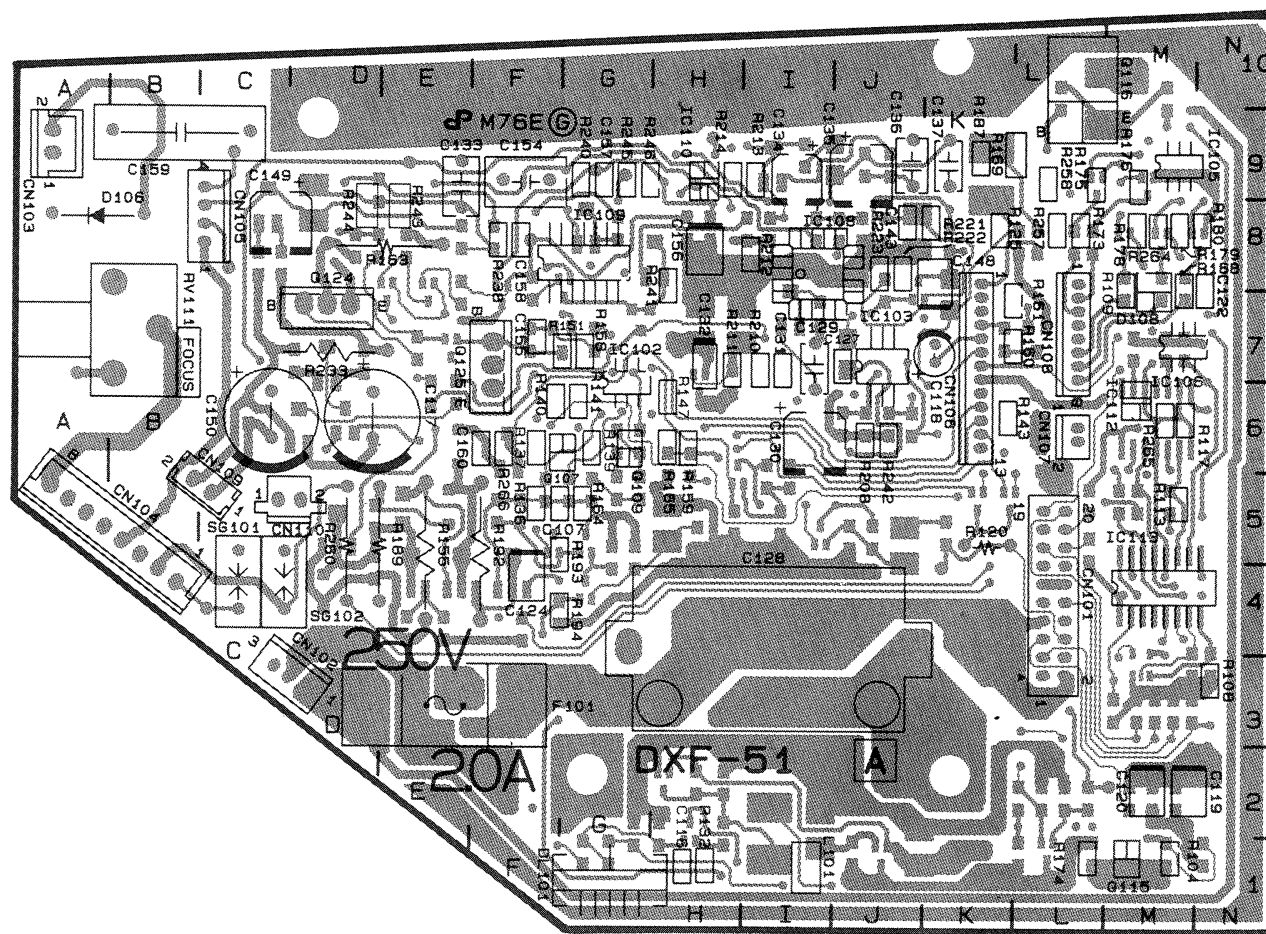
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 Serial No. 30001-(J)
 Serial No. 40001-(AEP)



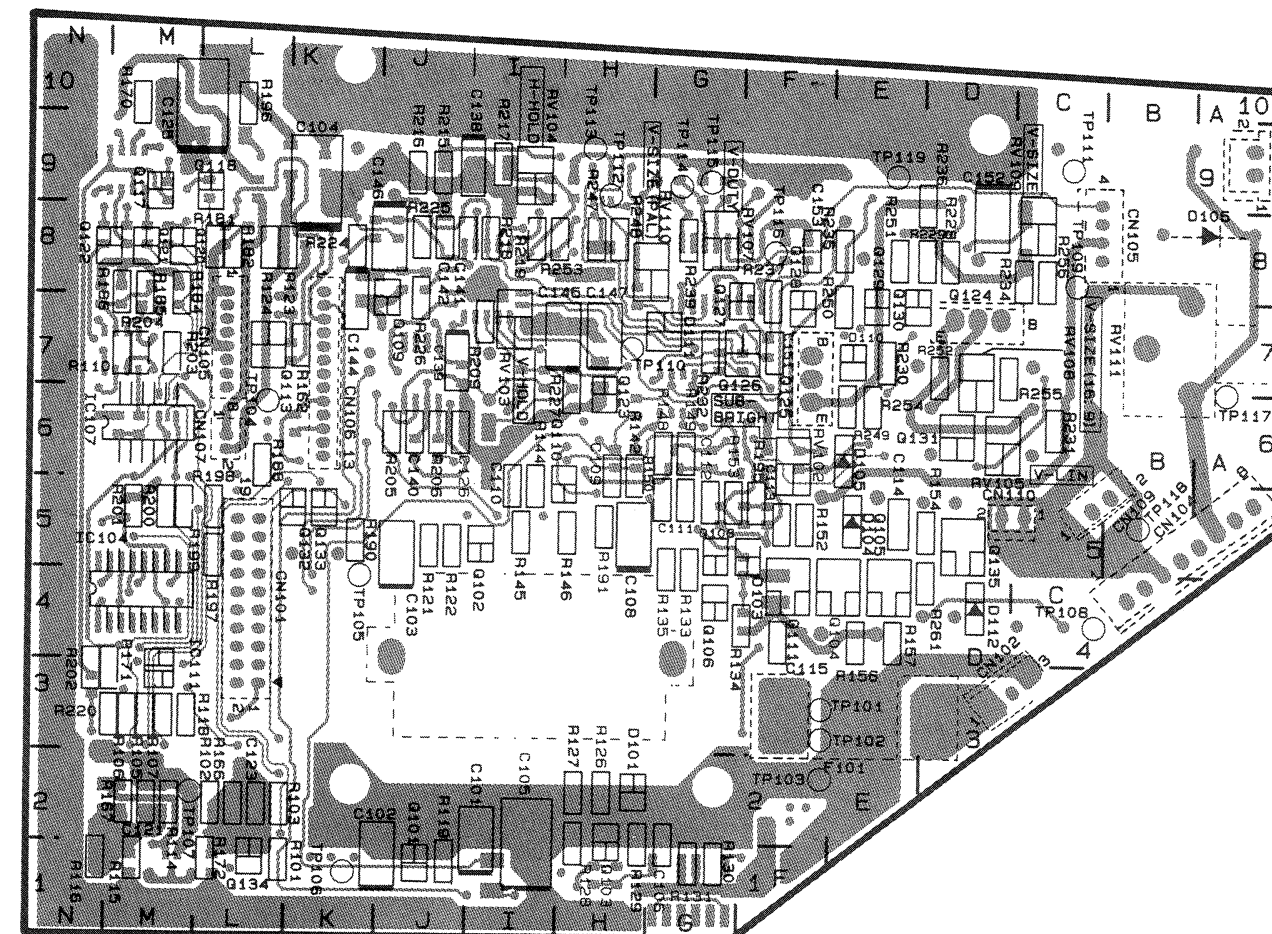
H2 (A)/H2 (B) -Component side-



H2 (A)/H2 (B) -Conductor side-



A -Component side-

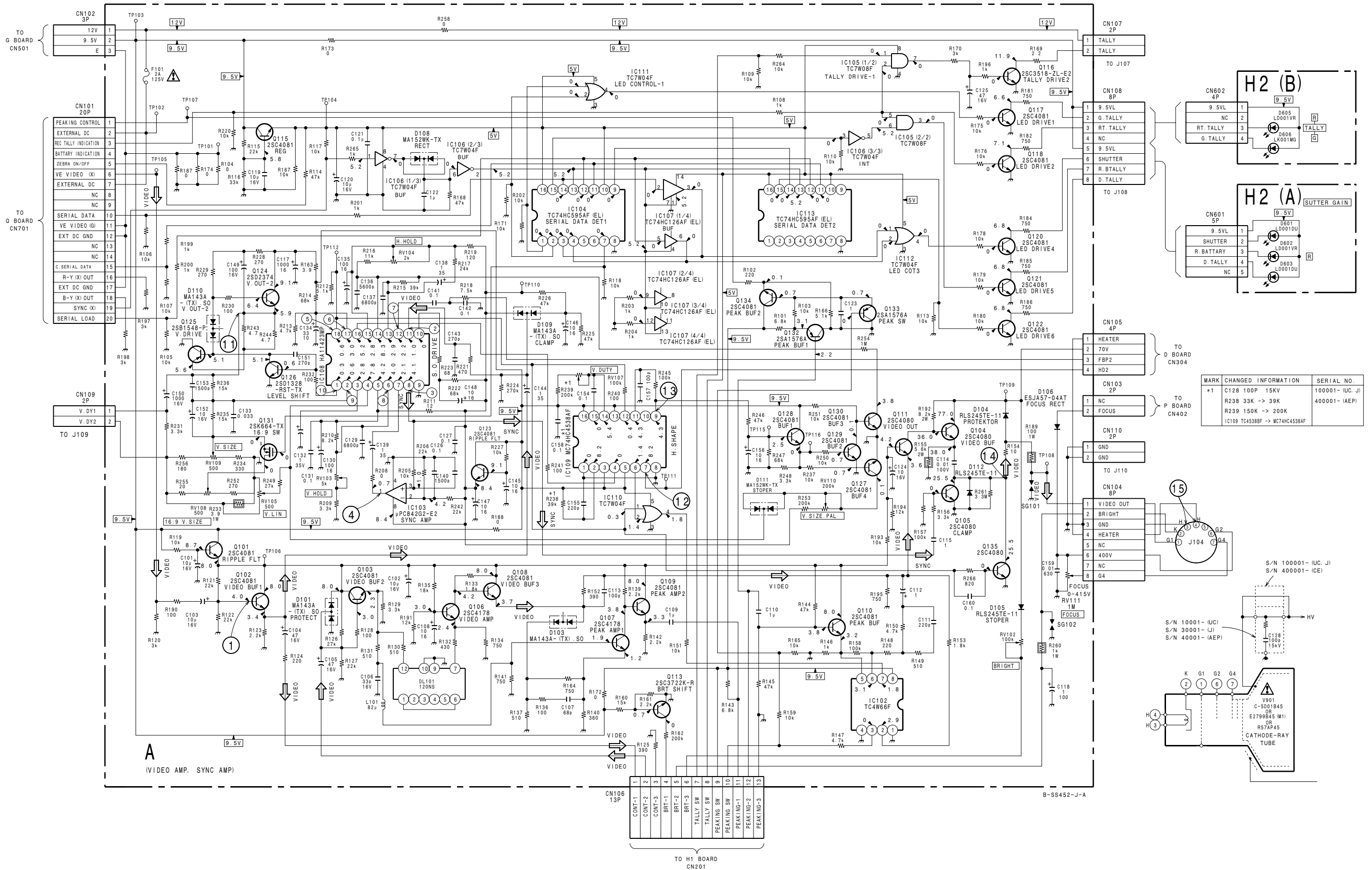


A -Conductor side-

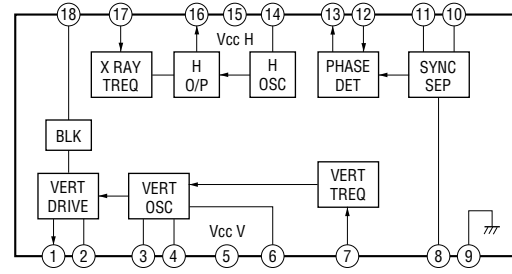
A BOARD

* : Conductor side

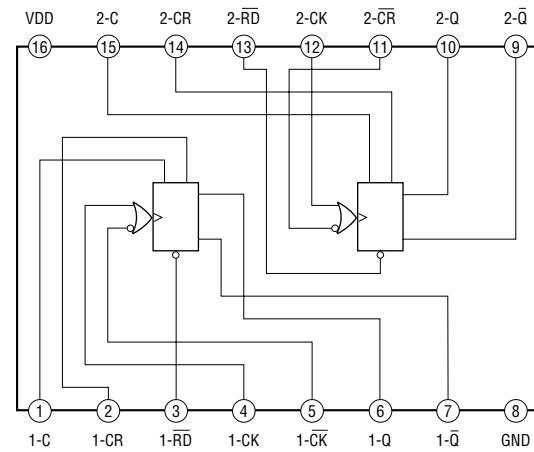
D101	* I-3	IC110	H-9	Q117	* L-9	Q135	* E-5	TP108	* C-4
D103	* G-4	IC111	* M-3	Q118	* M-9			TP109	* C-7
D104	* E-5	IC112	M-7	Q120	* M-8	RV102	* F-6	TP110	* I-6
D105	* E-6	IC113	M-4	Q121	* M-8	RV103	* I-7	TP111	* B-9
D106	A-9			Q122	* M-8	RV104	* H-9	TP112	* G-9
D108	M-8	Q101	* I-2	Q123	* H-7	RV105	* D-6	TP113	* H-9
D109	* J-8	Q102	* I-5	Q124	C-7	RV107	* F-8	TP114	* G-9
D110	D-8	Q103	* H-2	Q124	* C-7	RV108	* D-7	TP115	* G-9
D111	* H-7	Q104	* E-5	Q125	E-7	RV109	* C-9	TP116	* F-7
D112	* C-4	Q105	* D-4	Q125	* E-7	RV110	* G-7	TP117	* G-3
		Q106	* G-4	Q126	* F-7	RV111	A-8	TP118	* B-4
IC102	G-7	Q107	F-6	Q127	* F-7			TP119	* D-9
IC103	J-7	Q108	* G-4	Q128	* F-7	TP101	* C-4		
IC104	* M-4	Q109	G-5	Q129	* E-7	TP102	* F-3		
IC105	M-9	Q110	* H-5	Q130	* E-7	TP103	* F-3		
IC106	M-7	Q111	* F-5	Q131	* C-7	TP104	* L-7		
IC107	* M-6	Q113	* L-8	Q132	* L-5	TP105	* J-4		
IC108	I-8	Q115	M-2	Q133	* K-5	TP106	* H-2		
IC109	G-8	Q116	M-10	Q134	K-3	TP107	* L-3		



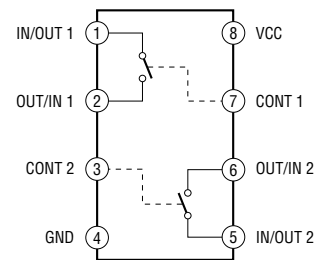
HA11423MP (IC108)



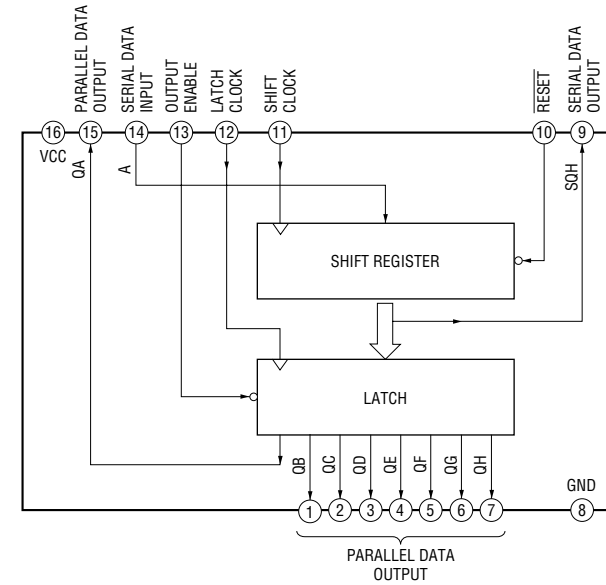
MC74HC4538AF (IC109)



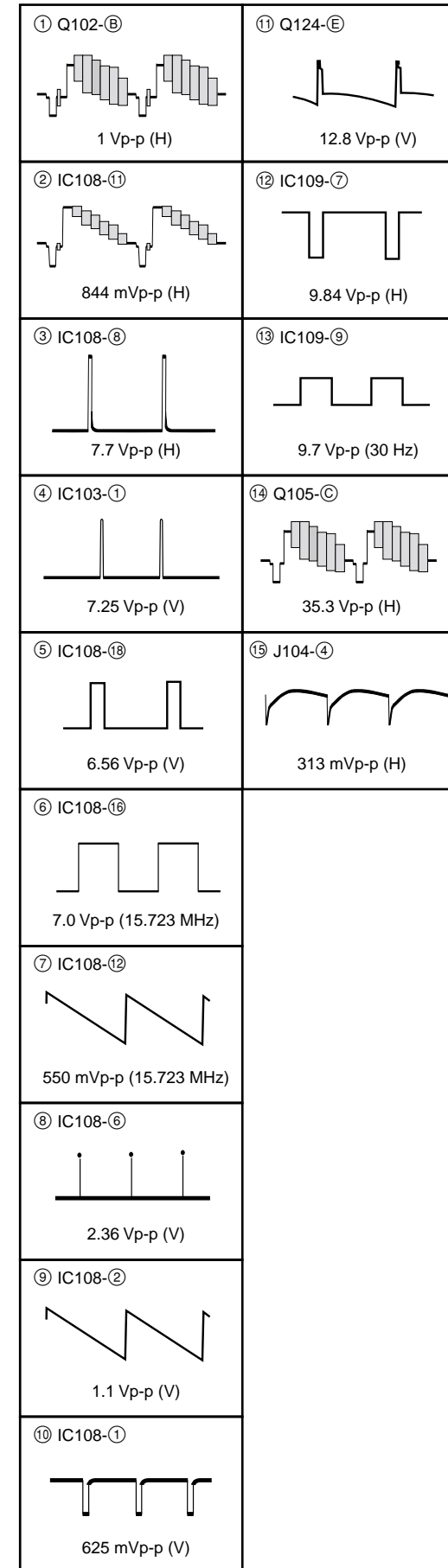
TC4W66F (IC102)



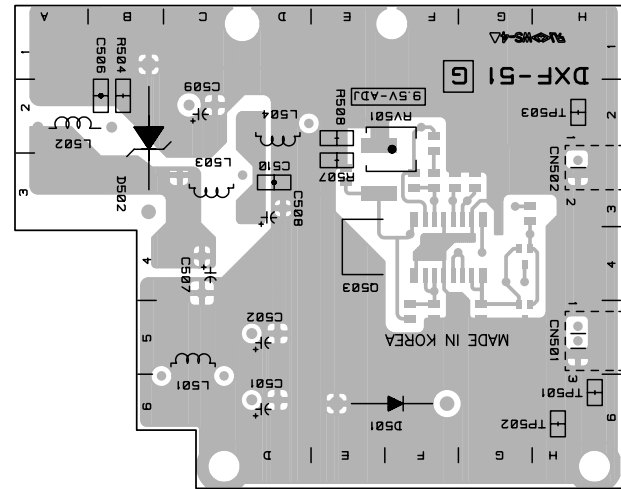
TC74HC595AF (EL) (IC104, IC113)



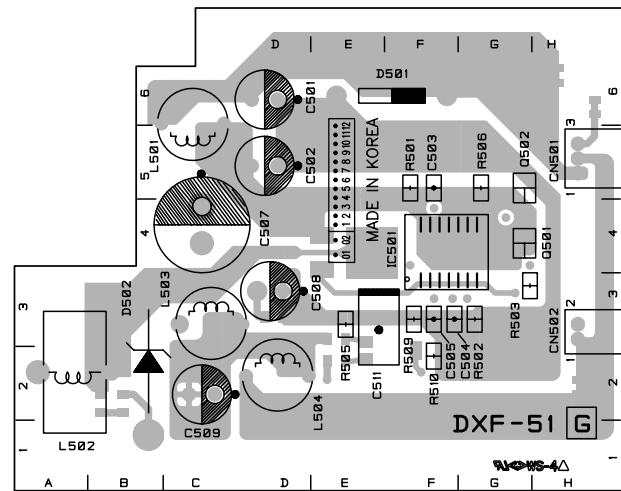
A Board Waveforms



Serial No. 100001-(UC, J)
Serial No. 400001-(CE)



G -Component side-

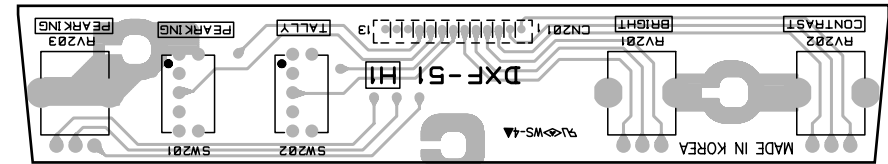


G -Conductor side-

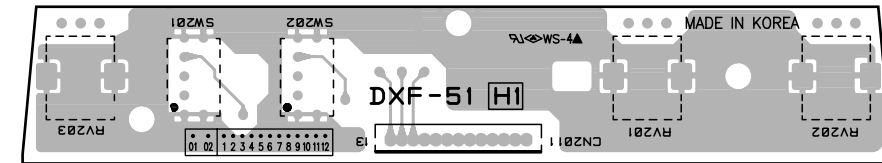
G BOARD

* : Conductor side

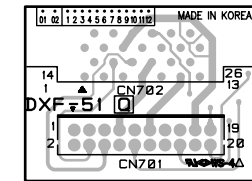
D501	F-6
D502	B-2
IC501	* F-4
Q501	* G-4
Q502	* G-5
Q503	E-4
RV501	E-2
TP501	H-6
TP502	H-6
TP503	H-2



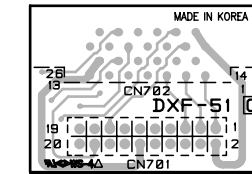
H1 -Component side-



H1 -Conductor side-

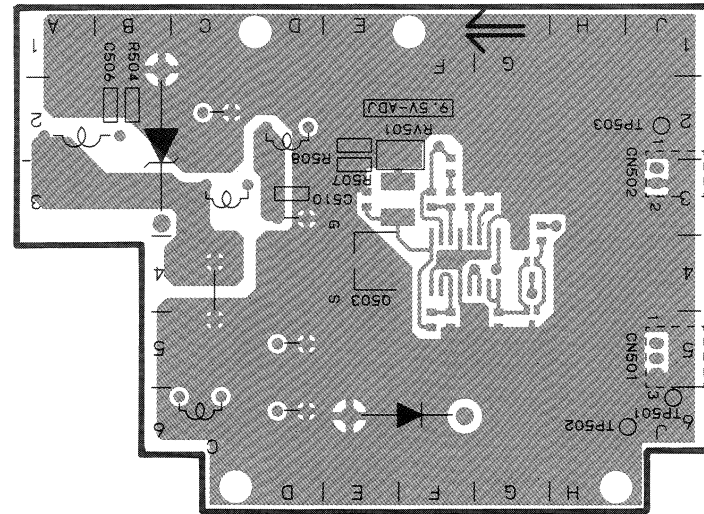


Q -Component side-

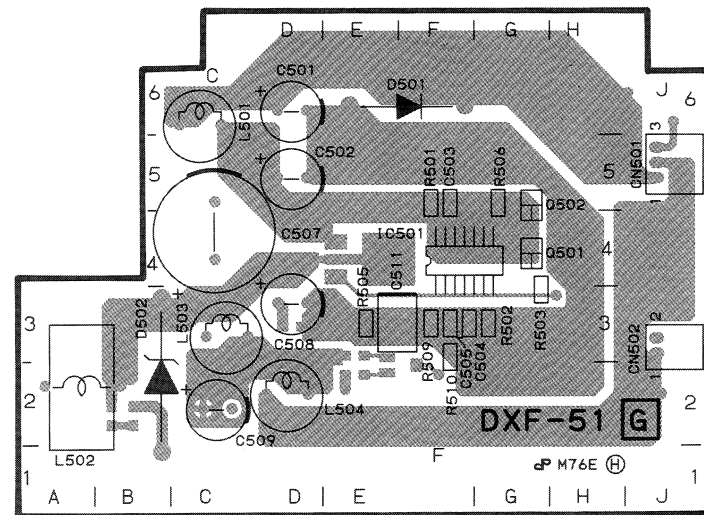


Q -Conductor side-

Serial No. 10001-(UC)
 Serial No. 30001-(J)
 Serial No. 40001-(AEP)



G -Component side-

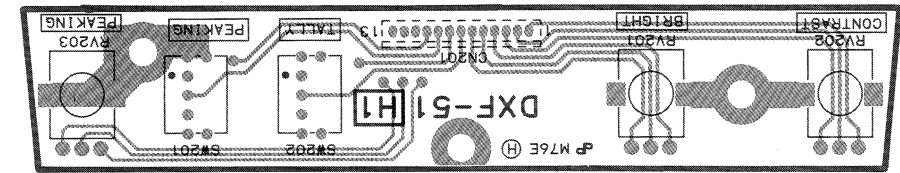


G -Conductor side-

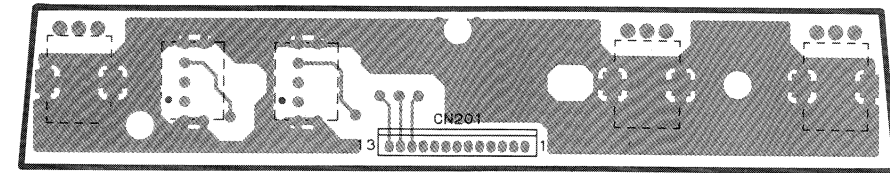
G BOARD

* : Conductor side

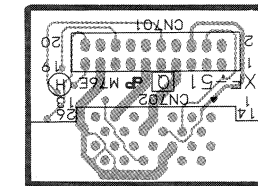
- D501 F-6
- D502 B-2
- IC501 * F-4
- Q501 * G-4
- Q502 * G-5
- Q503 E-4
- RV501 E-2
- TP501 H-6
- TP502 H-6
- TP503 H-2



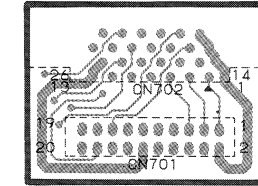
H1 -Component side-



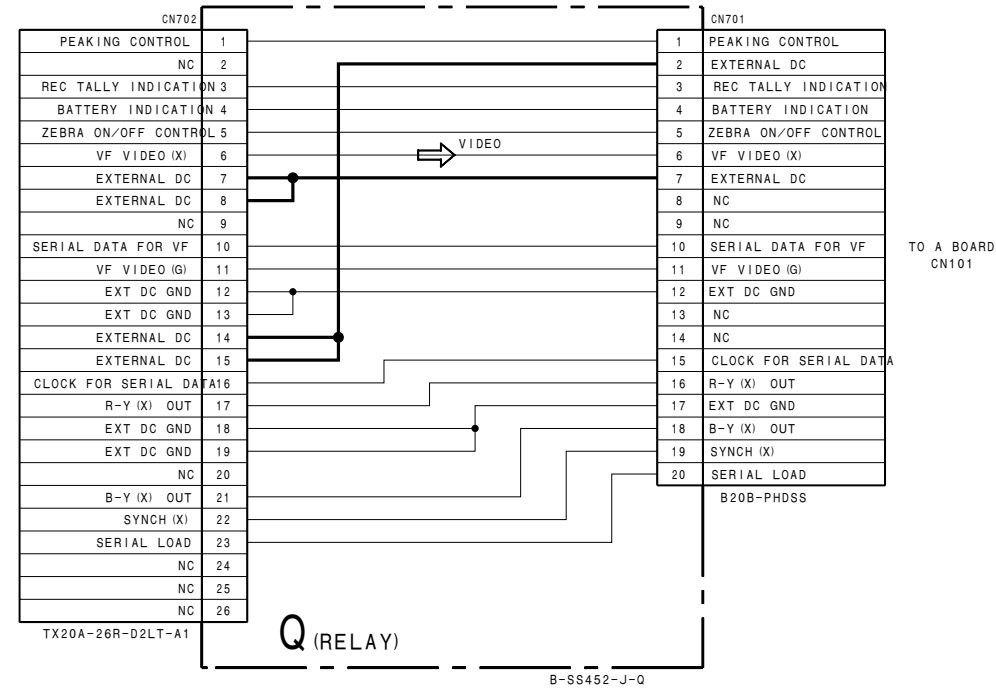
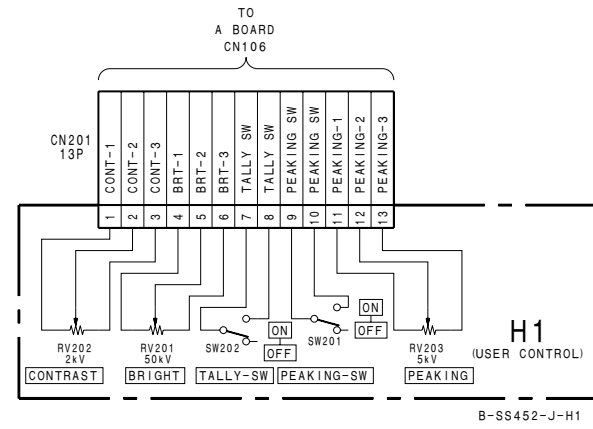
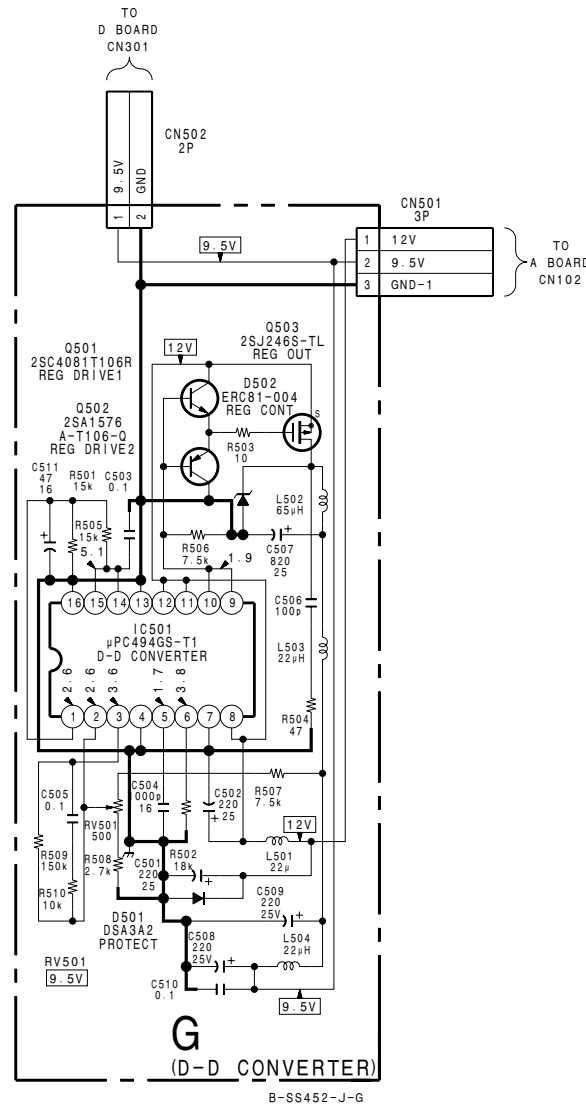
H1 -Conductor side-



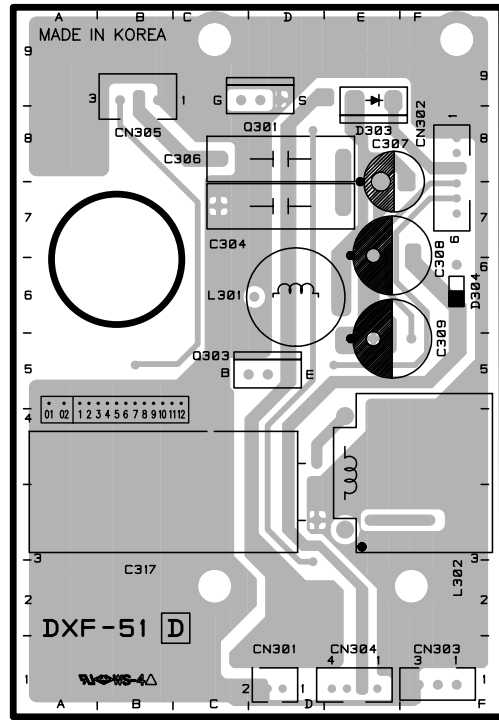
Q -Component side-



Q -Conductor side-



Serial No. 100001-(UC, J)
Serial No. 400001-(CE)



D -Component side-

D BOARD

* : Conductor side

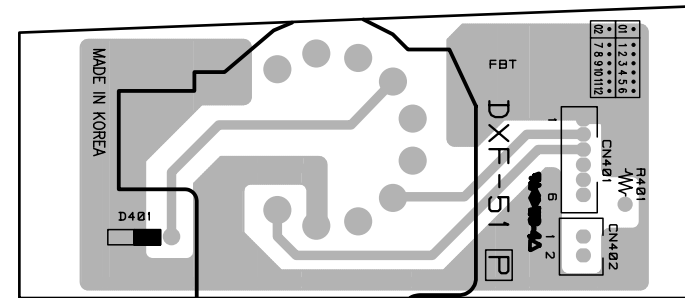
- D301 * D-9
- D303 * E-8
- D304 * F-6
- D305 * D-5
- D306 * D-4

- IC301 * C-5
- IC302 * C-4

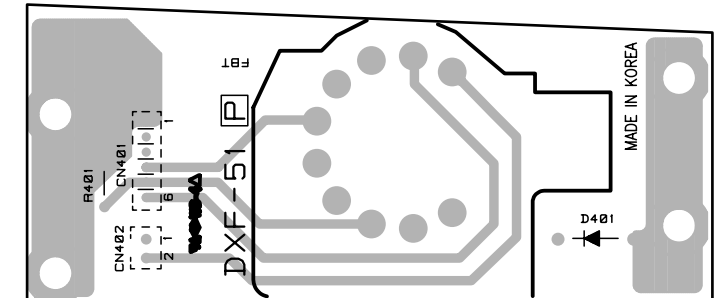
- Q301 D-8
- Q303 D-5
- Q305 * E-2
- Q306 * E-2

- RV301 * C-7
- RV302 * C-3

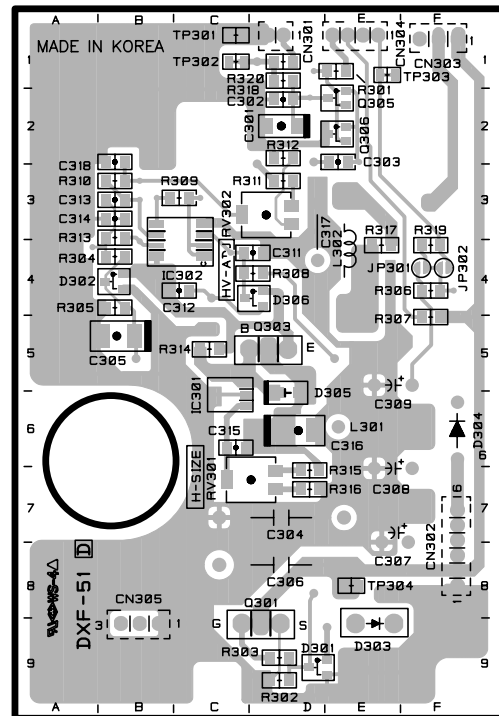
- TP301 * C-1
- TP302 * C-1
- TP303 * E-1
- TP304 * E-8



P -Component side-

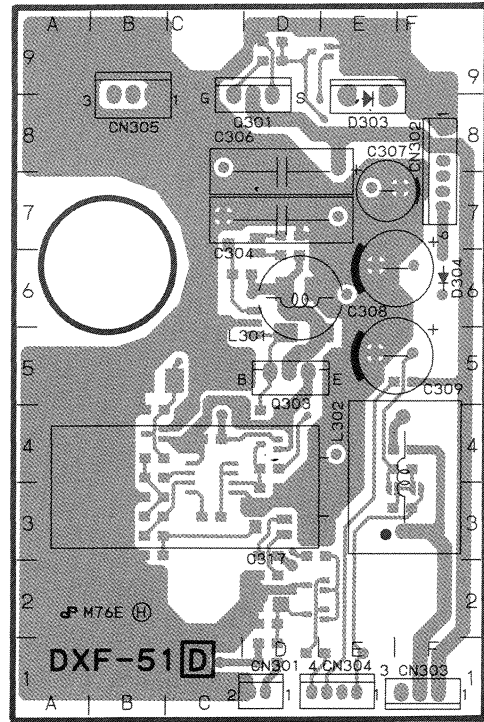


P -Conductor side-

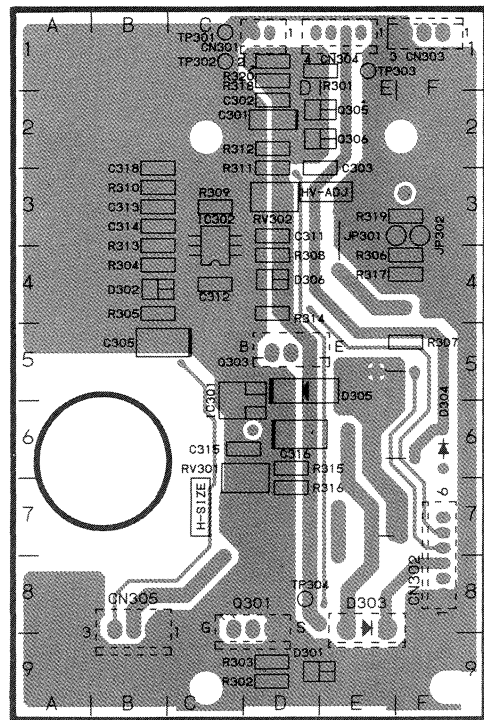


D -Conductor side-

Serial No. 10001-(UC)
 Serial No. 30001-(J)
 Serial No. 40001-(AEP)



D -Component side-



D -Conductor side-

D BOARD

* : Conductor side

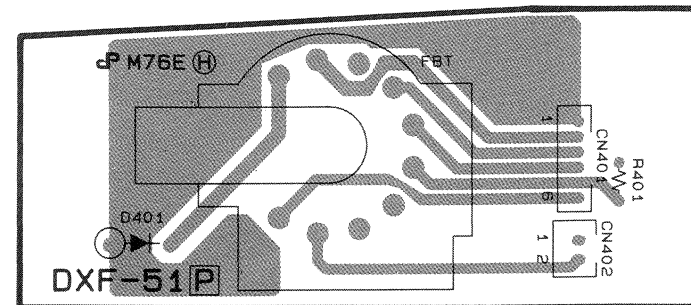
- D301 * D-9
- D303 * E-8
- D304 * F-6
- D305 * D-5
- D306 * D-4

- IC301 * C-5
- IC302 * C-4

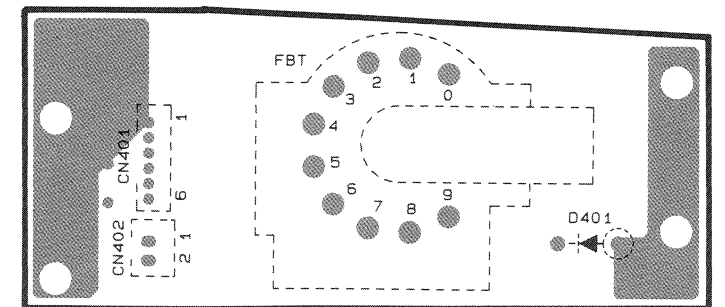
- Q301 D-8
- Q303 D-5
- Q305 * E-2
- Q306 * E-2

- RV301 * C-7
- RV302 * C-3

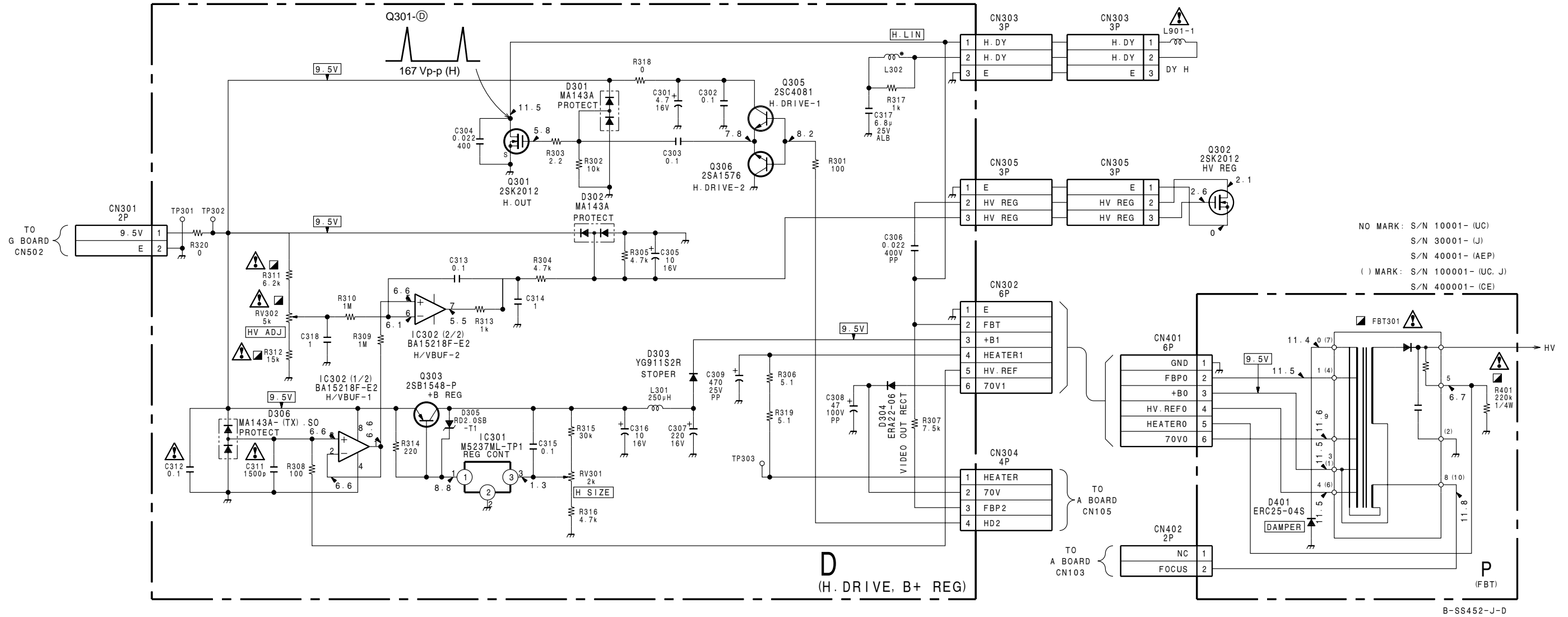
- TP301 * C-1
- TP302 * C-1
- TP303 * E-1
- TP304 * E-8



P -Component side-



P -Conductor side-



D
(H. DRIVE, B+ REG)

P
(FBT)

1

2

3

4

5

SAFETY CHECK-OUT

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

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

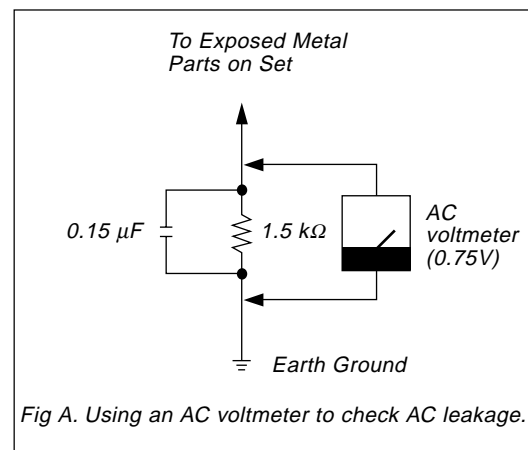


Fig A. Using an AC voltmeter to check AC leakage.

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