

# CPD-E220/E215E/E220E

## SERVICE MANUAL

[CPD-E220]

*Equator Model*

*S. Hemisphere Model*

*N. Hemisphere Model*

Chassis No. SCC-L35B-A

[CPD-E215E]

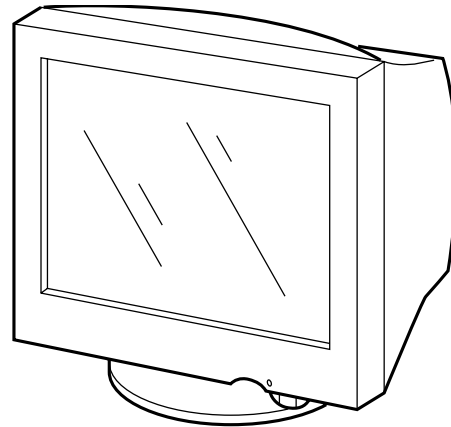
*AEP Model*

Chassis No. SCC-L35D-A

[CPD-E220E]

*AEP Model*

Chassis No. SCC-L35C-A



# H1 CHASSIS

### SPECIFICATIONS

CRT	0.24 mm aperture grille pitch (center) 17 inches measured diagonally 90-degree deflection FD Trinitron	* Recommended horizontal and vertical timing condition <ul style="list-style-type: none"><li>• Horizontal sync width should be more than 1.0 <math>\mu</math>sec.</li><li>• Horizontal blanking width should be more than 3.0 <math>\mu</math>sec.</li><li>• Vertical blanking width should be more than 500 <math>\mu</math>sec.</li></ul>
Viewable image size	Approx. 327 $\times$ 243 mm (w/h) (14 $\frac{3}{4}$ $\times$ 9 $\frac{5}{8}$ inches) 16.0" viewing image	Design and specifications are subject to change without notice.
Resolution		
Maximum	Horizontal: 1600 dots (E220/E220E) 1280 dots (E215E) Vertical: 1200 lines (E220/E220E) 1024 lines (E215E)	
Recommended	Horizontal: 1024 dots Vertical: 768 lines	
Standard image area	Approx. 312 $\times$ 234 mm (w/h) (12 $\frac{3}{8}$ $\times$ 9 $\frac{1}{4}$ inches)	
Deflection frequency*	Horizontal: 30 to 85 kHz (E220/E220E) 30 to 70 kHz (E215E) Vertical: 48 to 120 Hz	
AC input voltage/current	220 to 240 V, 50/60 Hz, 0.9 A	
Power consumption	120 W	
Dimensions	Approx. 404 $\times$ 413.5 $\times$ 419.5 mm (w/h/ d) (16 $\times$ 16 $\frac{3}{8}$ $\times$ 16 $\frac{5}{8}$ inches)	
Mass	Approx. 20 kg (44 lb 1 oz)	
Plug and Play	DDC1/DDC2B/DDC2Bi	

TRINITRON® COLOR COMPUTER DISPLAY  
**SONY**®

**SAFETY CHECK-OUT**

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

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

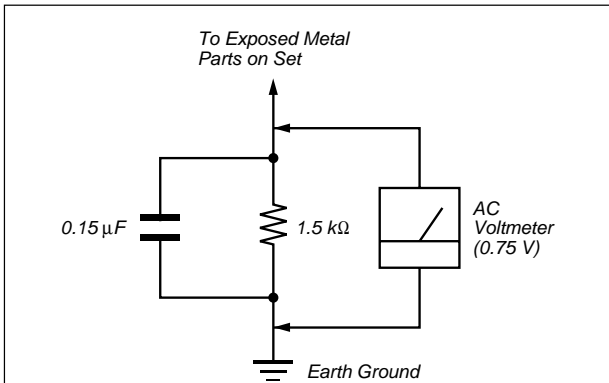


Fig. A. Using an AC voltmeter to check AC leakage.

**LEAKAGE TEST**

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes).

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

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

**WARNING!!**

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

**SAFETY-RELATED COMPONENT WARNING!!**

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

**AVERTISSEMENT!!**

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

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

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

**POWER SAVING FUNCTION**

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

\* “Sleep” and “deep sleep” are power saving modes defined by the Environmental Protection Agency.  
 \*\* When your computer is in a power saving mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor. After a few seconds, the monitor enters the power saving mode again.

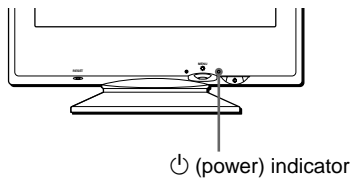
Power mode	Power consumption	⏻ (power) indicator
normal operation	≤ 120 W	green
1 standby	≤ 15 W	green and orange alternate
2 suspend (sleep)*	≤ 15 W	green and orange alternate
3 active off** (deep sleep)*	≤ 3 W	orange
power off	0 W	off

**DIAGNOSIS**

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

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

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



**If the ⏻ (power) indicator is flashing orange**

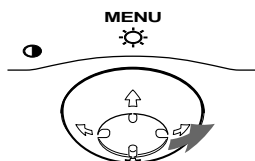
**Press the ⏻ (power) button twice to turn the monitor off and then on.**

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

**If the ⏻ (power) indicator is green**

- 1 Disconnect the video input cable or turn off the connected computer.**
- 2 Press the ⏻ (power) button twice to turn the monitor off and then on.**
- 3 Move the control button ➡ for 2 seconds before the monitor enters power saving mode.**

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



# CPD-E220/E215E/E220E

## TIMING SPECIFICATION

PRIMARY MODE MODE AT PRODUCTION	MODE 1	MODE 2	MODE 3	MODE 4	MODE 5	MODE 6	MODE 7	MODE 8
RESOLUTION	640 X 480	800 X 600	832 X 624	1024 X 768	1024 X 768	720 X 400	640 X 480	1280 X 1024
CLOCK	25.175 MHz	56.250 MHz	57.283 MHz	78.750 MHz	94.500 MHz	28.322 MHz	36.000 MHz	135.000 MHz
— HORIZONTAL —								
H-FREQ	31.469 kHz	53.674 kHz	49.725 kHz	60.024 kHz	68.677 kHz	31.469 kHz	43.269 kHz	79.976 kHz
	usec	usec	usec	usec	usec	usec	usec	usec
H. TOTAL	31.778	18.631	20.111	16.660	14.561	31.777	23.111	12.504
H. BLK	6.356	4.409	5.586	3.657	3.725	6.355	5.333	3.022
H. FP	0.636	0.569	0.559	0.203	0.508	0.636	1.556	0.119
H. SYNC	3.813	1.138	1.117	1.219	1.016	3.813	1.556	1.067
H. BP	1.907	2.702	3.910	2.235	2.201	1.907	2.222	1.837
H. ACTIV	25.422	14.222	14.524	13.003	10.836	25.422	17.778	9.481
— VERTICAL —								
V. FREQ(HZ)	59.940 Hz	85.061 Hz	74.550 Hz	75.030 Hz	84.997 Hz	70.087 Hz	85.008 Hz	75.025 Hz
	lines	lines	lines	lines	lines	lines	lines	lines
V. TOTAL	525	631	667	800	808	449	509	1066
V. BLK	45	31	43	32	40	49	29	42
V. FP	10	1	1	1	1	12	1	1
V. SYNC	2	3	3	3	3	2	3	3
V. BP	33	27	39	28	36	35	25	38
V. ACTIV	480	600	624	768	768	400	480	1024
— SYNC —								
INT(G)	NO	NO	NO	NO	NO	NO	NO	NO
EXT(H/V)/POLARITY	YES -/-	YES +/+	YES -/-	YES +/+	YES +/+	YES -/+	YES -/-	YES +/+
EXT(CS)/POLARITY	NO	NO	NO	NO	NO	NO	NO	NO
INT/NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

2000.8.28 VER.

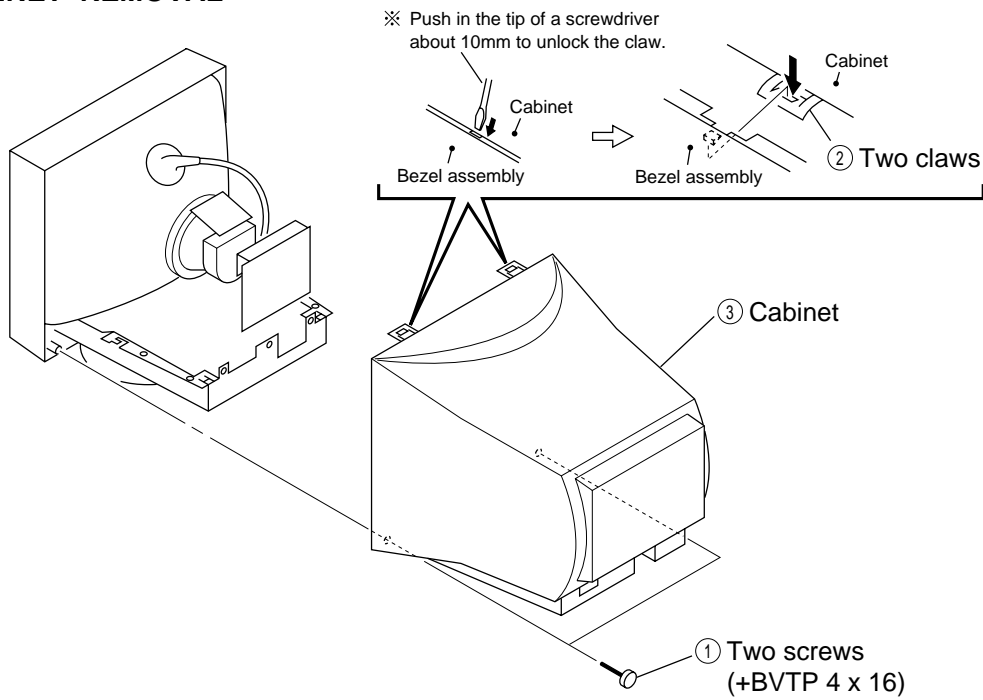
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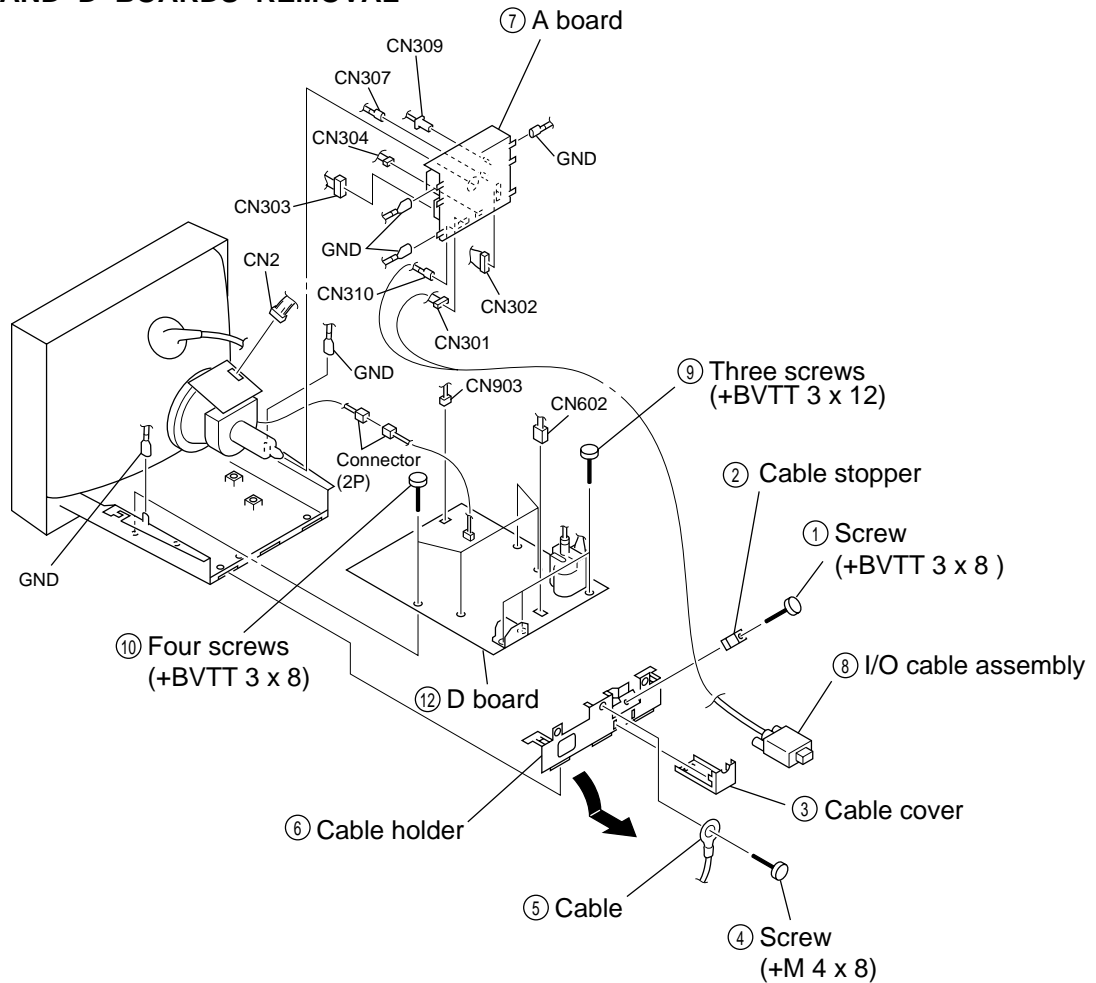
## SECTION 2 DISASSEMBLY

CPD-E220/E215E/E220E

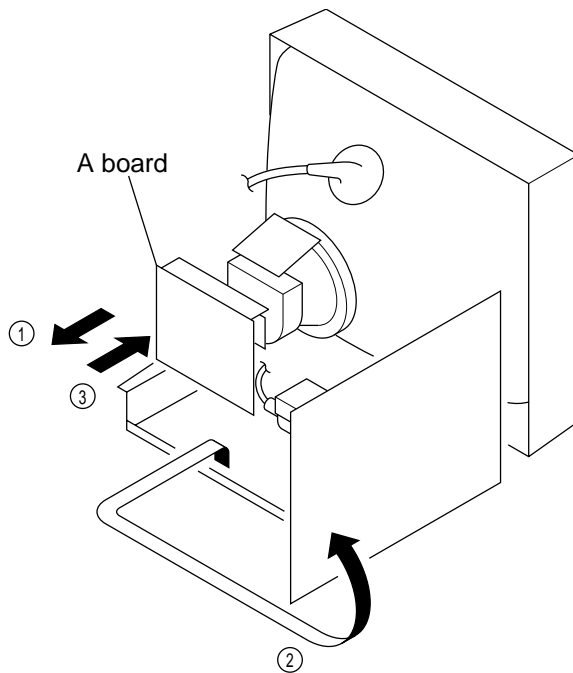
### 2-1. CABINET REMOVAL



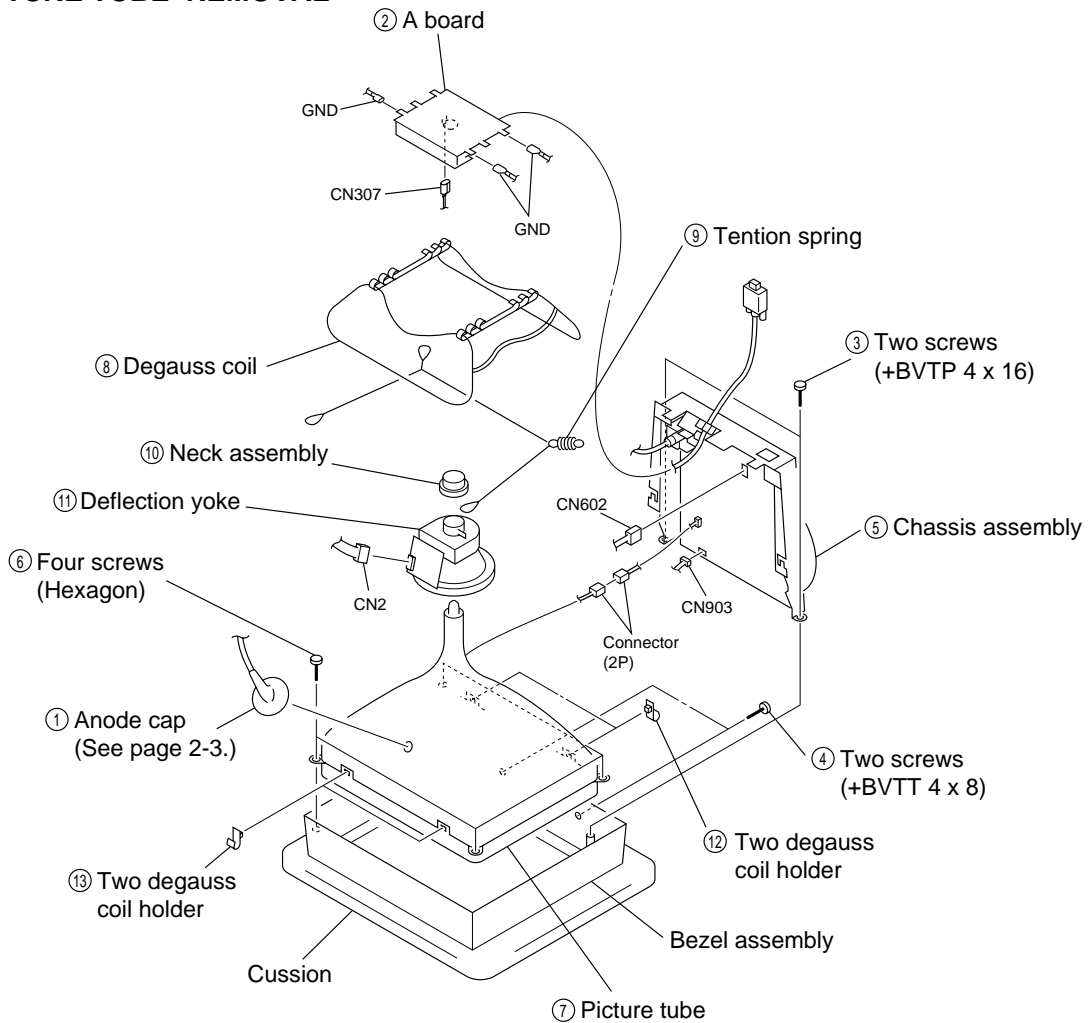
### 2-2. A AND D BOARDS REMOVAL



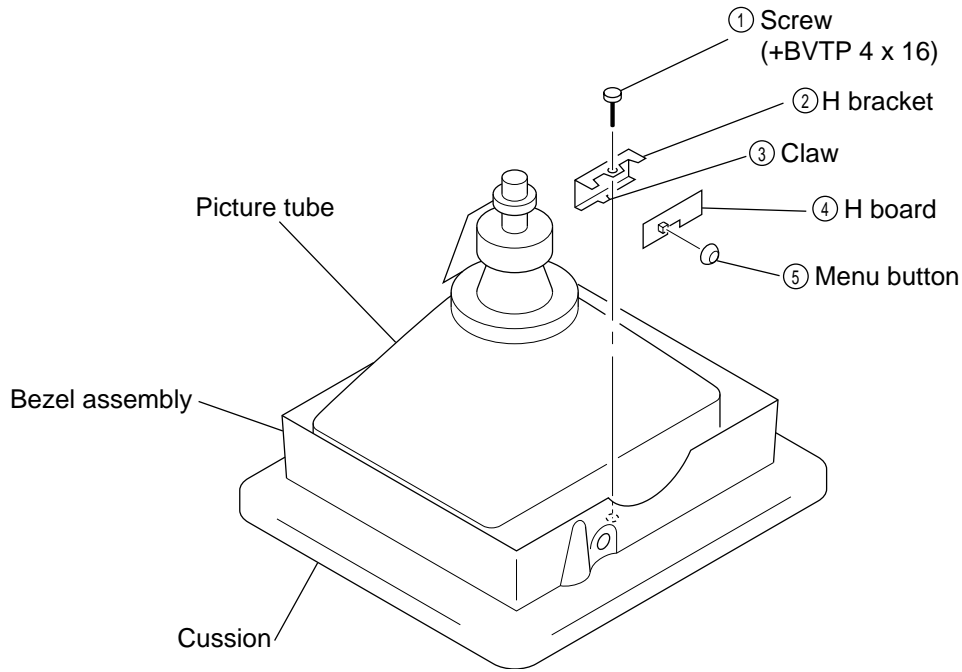
2-3. SERVICE POSITION



2-4. PICTURE TUBE REMOVAL



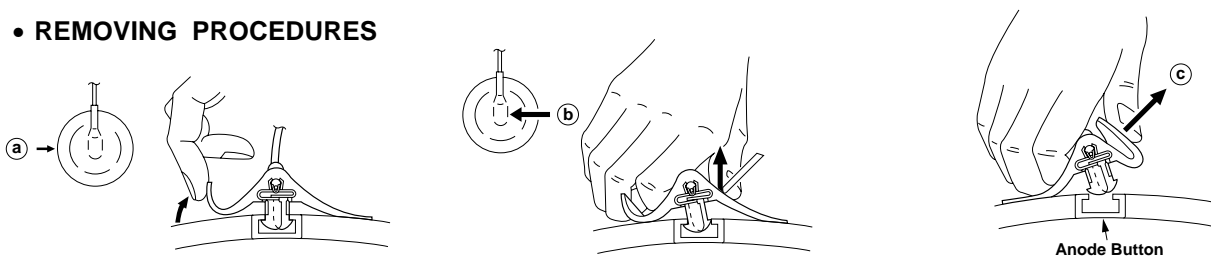
**2-5. H BOARD REMOVAL**



**• REMOVAL OF ANODE-CAP**

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

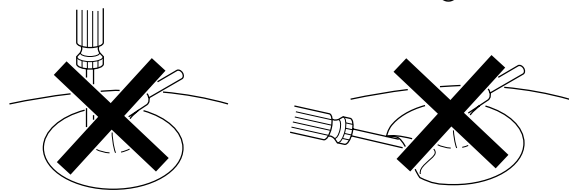
**• REMOVING PROCEDURES**



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

**• HOW TO HANDLE AN ANODE-CAP**

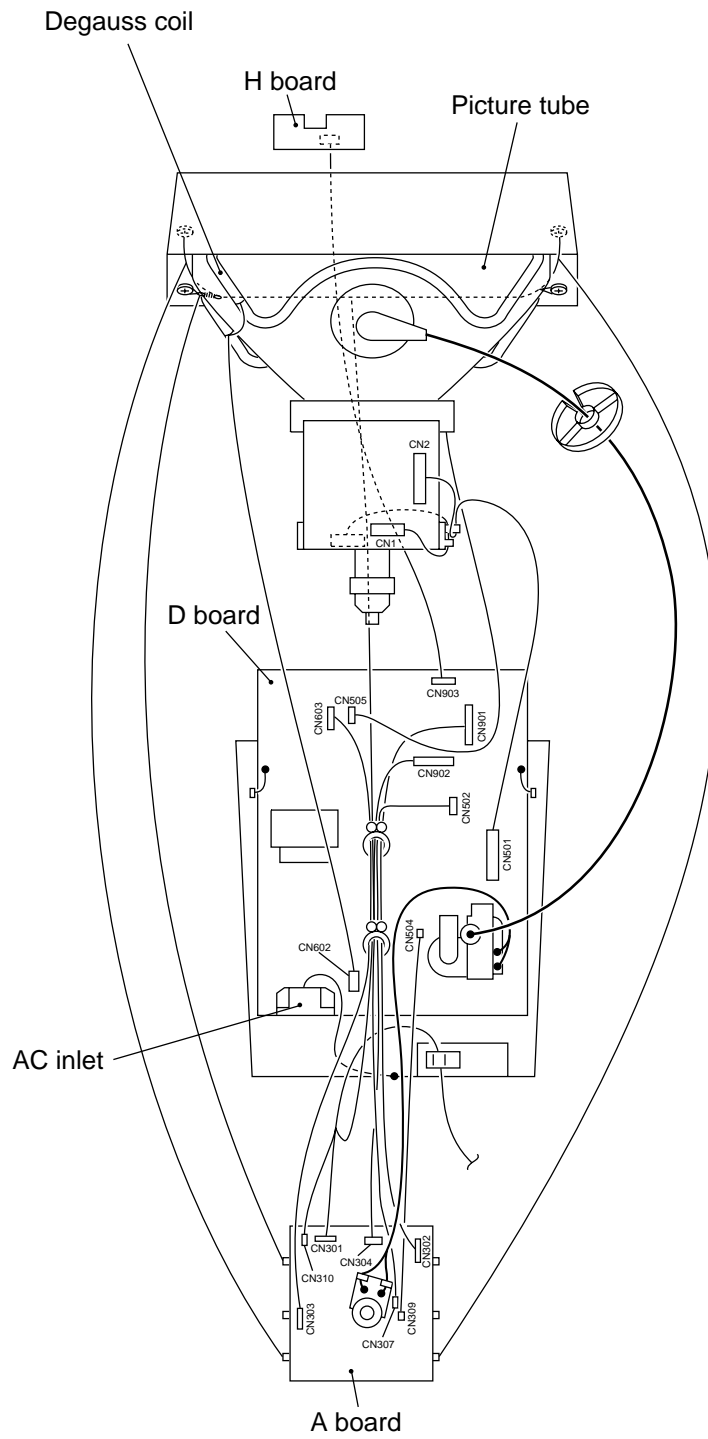
- ① Don't scratch the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to damage inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick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





# CPD-E220/E215E/E220E

## 2-6. HARNESS LOCATION



## SAFETY RELATED ADJUSTMENT

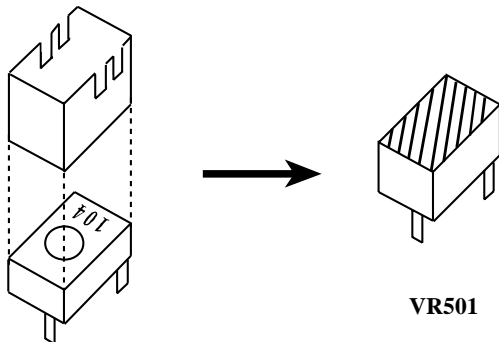
When replacing parts shown in the table below, the following operational checks must be performed as a safety precaution against X-ray emissions from the unit.

	Part Replaced ( <input checked="" type="checkbox"/> )	
HV Regulator Circuit	D board	IC502, T501 (FBT)
HV HOLD DOWN Circuit	D board	D538, R521, T501 (FBT)
Beam Current Protector Circuit	D board	IC901, R949, T501 (FBT)

※ Allow the unit to warm up for one minute prior to checking the following conditions:

**a) HV Regulator Check**

- 1) Input white cross hatch signal. (fH = 69 kHz)
- 2) CONT maximum and BRT center
- 3) Cut off Screen VR (G2).
- 4) Input voltage:  $120 \pm 2$  VAC
- 5) Confirm that the voltage is within the voltage range shown below.  
Standard voltage:  $26.9 \text{ KV} \pm 0.4 \text{ KV}$
- 6) When replacing components identified by , make sure to recheck the High Voltage.
- 7) Verify the High Voltage as shown above ( $26.9 \text{ KV} \pm 0.4 \text{ KV}$ ) is within specification. If not, set H. SIZE data at minimum (-127) and then adjust VR501 on "D" Board.



- 8) After adjusting the High Voltage within specification, put the VR cover on VR501 as shown below and apply sufficient amount of RTV around VR501.

**b) HV Protector Circuit Check**

- 1) Confirm that the voltage between cathode of D517 and GND is more than 27.5 VDC.
- 2) Using an external DC Power supply, apply the voltage shown below between cathode of D517 on "D" and GND, and confirm that the HV Hold-Down circuit works. (Raster disappears) Apply DC Voltage: Less than 35.8 VDC.

**Check Condition**

- Input voltage :  $120 \pm 2$  VAC
- Input signal : (fH = 69 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)
- B+ Voltage :  $179 \pm 3.0$  VDC

**c) Beam Protector Check (Software logic)**

- 1) Using an external current source, apply  $< 1.55 \text{ mA}$  between pin ① of FBT (T501) and GND, and confirm that the raster fades out.

**Check Condition**

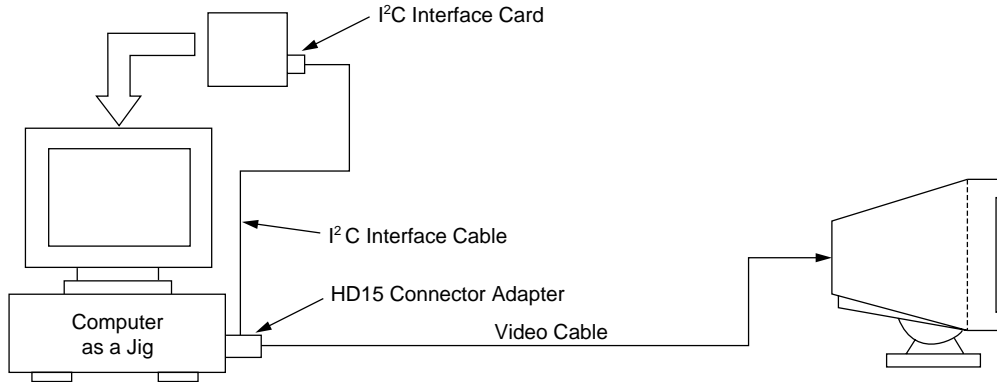
- Input voltage :  $120 \pm 2$  VAC
- Input signal : (fH = 69 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)

**d) B+ Voltage Check**

- 1) Input white cross hatch (fH = 69 kHz) signal.
- 2) CONT (max) & BRT (center)
- 3) Input voltage:  $120 \pm 2$  VAC  
**Note:** Use NF power supply or make sure that distortion factor is 3% or less.
- 4) Confirm that the voltage is within the voltage range shown below.  
Standard voltage:  $179 \pm 3.0$  VDC

## #2 SECTION 4 ADJUSTMENTS

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



### • Landing Fine Adjustment

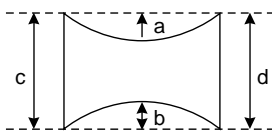
1. Put the set inside the Helmholtz coil.
  2. Set TLH plate to zero position.
  3. Input the single green signal.
  4. Demagnetize the CRT surface with the hand degausser, and perform auto degaussing.
  5. Attach the wobbling coil to the designated part of the CRT neck.
  6. Attach the sensor of the landing adjustment unit on the CRT surface.  
Purity magnet position
  7. Adjust the DY position and purity, and the DY tilt.
  8. Fasten DY with screw.
- Note: Torque 20  $\frac{1}{3}$ kgcm
9. Adjust top and bottom pins by pitching DY up and down with two wedges.  
Also leave the yaw of DY to physical center position with Another two wedes.

L/D control specification

$\pm 5$	$\pm 7$	$\pm 5$
$\pm 5$	$\pm 7$	$\pm 5$
$\pm 5$	$\pm 7$	$\pm 5$

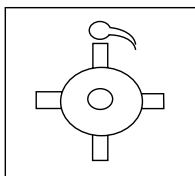
( $\mu\text{m}$ )

10. If the corner landing is out of specification, put a disk magnet for the landing correction.
11. Perform auto degauss in case disk magnets are used.
12. Remove the sensor and wobbling coil.
13. Fix purity magnet on DY with UL black tape.



"a" and "b" must be equal, and  
"c" and "d" must be equal.

<How to drive in wedges>

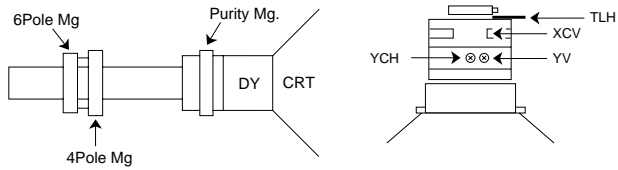


**• Convergence Rough Adjustment**

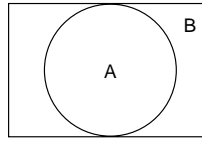
1. Enter the crosshatch signal.
2. Recheck focus and readjust when focus was worse.
3. Adjust roughly H. STAT and V. STAT convergence by 4 pole magnet.
4. Adjust roughly HMC and VMC by 6 pole magnet.

**• Convergence Adjustment**

1. Open H and V Stat by 4 pole magnet.
2. Adjust 6 pole magnet perform HMC and VMC.
3. Adjust 4 pole magnet close both Stat of R.G.B just overlap each other Horizontal and Vertical.
4. Adjust TLH for side MC by TLH magnet when R or B is in the opposite direction.
5. Adjust XCV to correct Vertical cross MC.
6. Adjust XBV to correct Vertical bow MC.
7. Adjust TLV to correct Vertical tilt MC.
8. Adjust YCH to correct top and bottom Horizontal cross MC.
9. Adjust YBH to correct top and bottom Horizontal bow MC.
10. Using permalloys to correct MC of the corners.
11. Check convergence for whole screen. If necessary, perform step from 3-9 and correct with permalloys.
12. Paint lock 4 pole magnet, 6 poles magnets, XBV reactor XCV corrector and TLH corrector handle.



**• Convergence Specification**

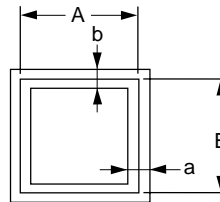


MODE	All mode
A	0.30 mm
B	0.35 mm

**• White Balance Adjustment Specification**

- |                  |                  |
|------------------|------------------|
| (1) 9300K        | (2) 6500K        |
| x = 0.283 ± 0.01 | x = 0.313 ± 0.01 |
| y = 0.298 ± 0.01 | y = 0.329 ± 0.01 |
| (2) 5000K        |                  |
| x = 0.346 ± 0.01 |                  |
| y = 0.359 ± 0.01 |                  |

**• Vertical and Horizontal Position and Size Specification**

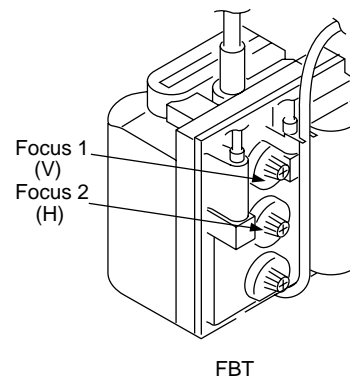
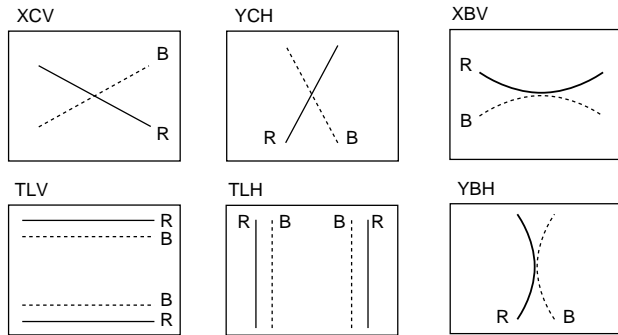


MODE	All mode
A	312 mm
B	234 mm

$a \leq 1.5 \text{ mm}$   
 $b \leq 1.5 \text{ mm}$

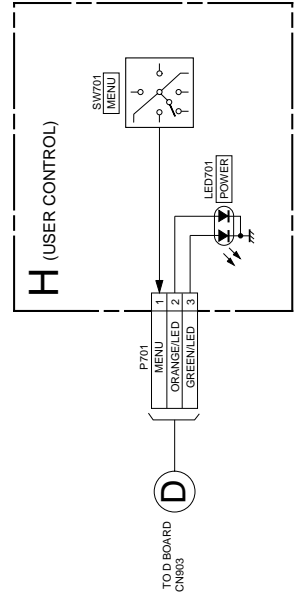
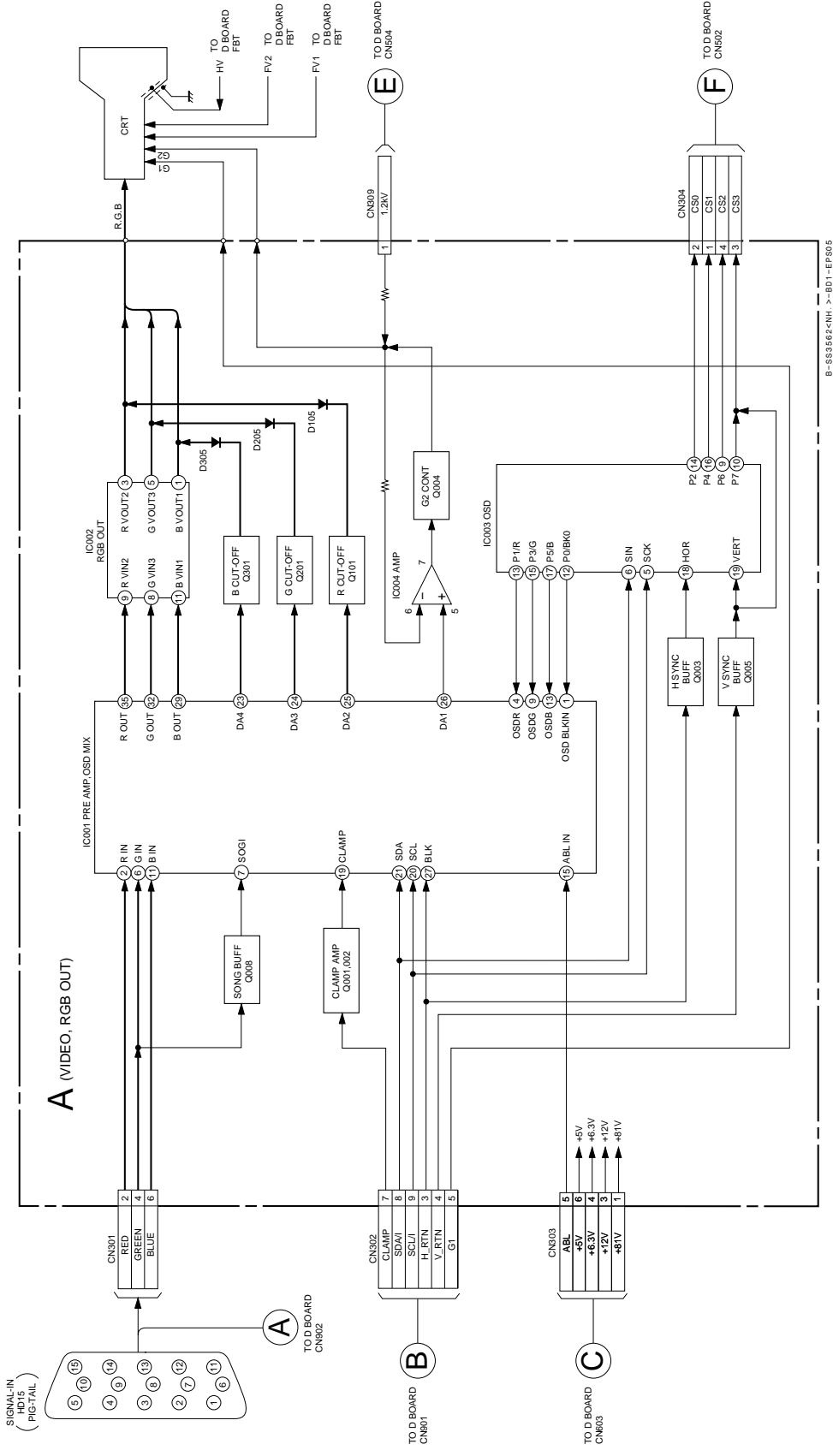
**• Focus adjustment**

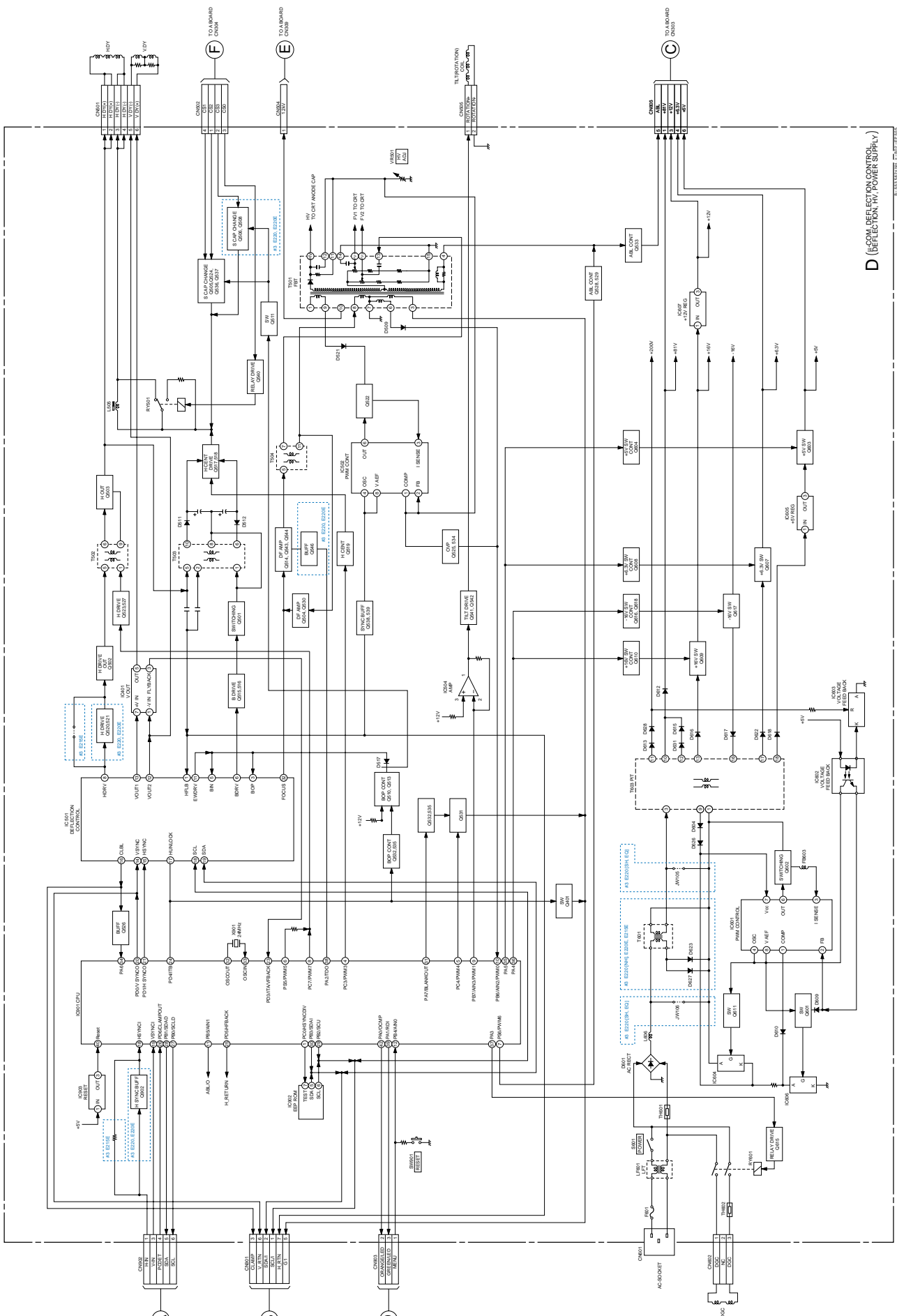
Adjust the focus volume 1 and 2 for the optimum focus.



SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAMS

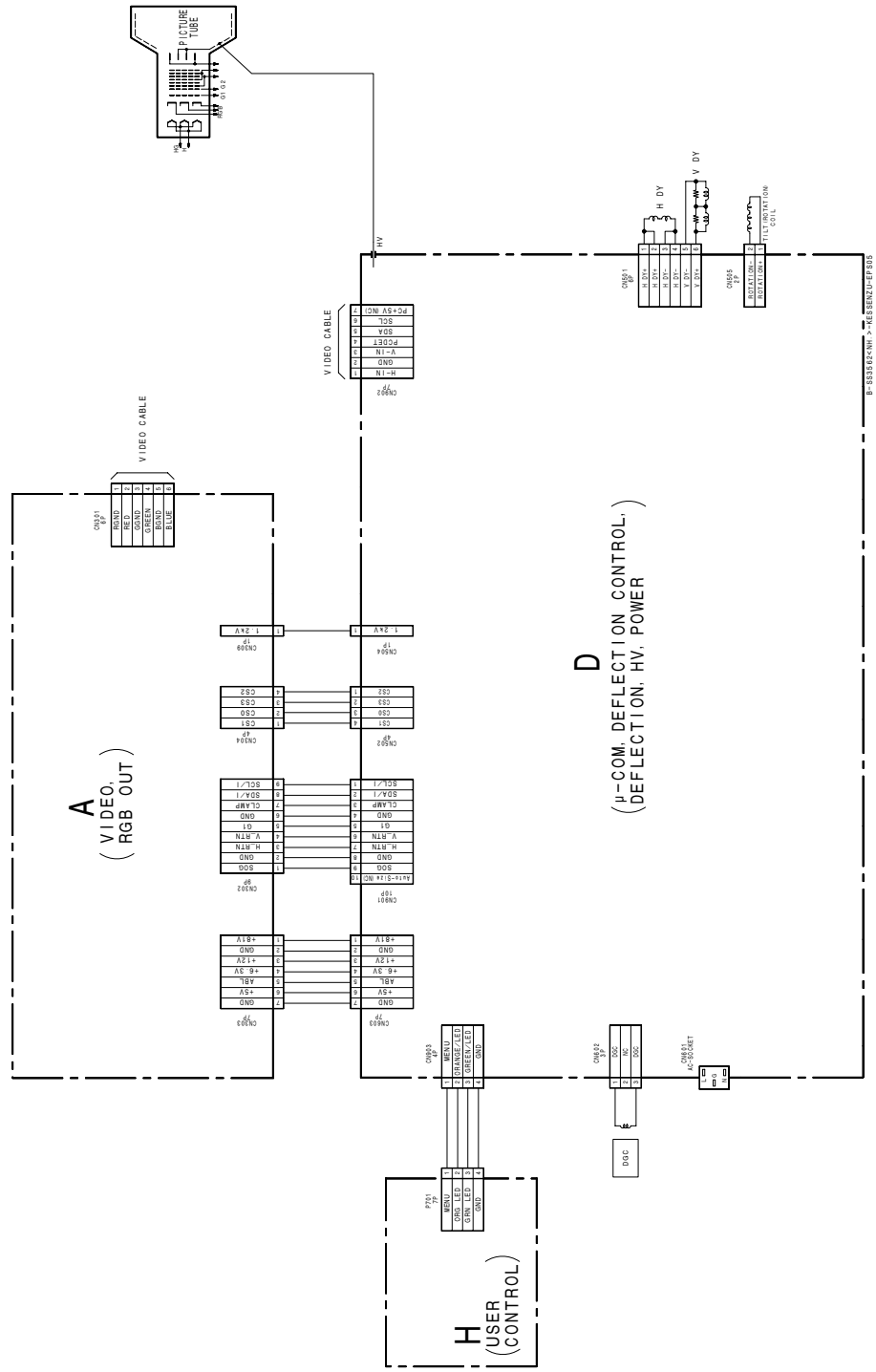




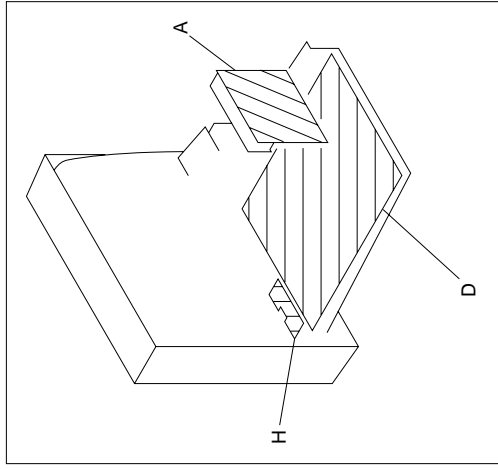
D (COM. DEFLECTION CONTROL (DEFLECTION, HV, POWER SUPPLY))

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5-2. FRAME SCHEMATIC DIAGRAM



5-3. CIRCUIT BOARDS LOCATION



## 5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### Note:

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

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

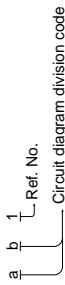
- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- $\Delta$  : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.

- \* : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B - bus.
- When replacing components identified by , make the necessary adjustments indicated. (See page 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

	Part Replaced ()
HV Regulator Circuit Check	D board IC502, T501 (FBT)
HV Hold-down Circuit Check	D board D538, R521, T501 (FBT)
Beam Current Protector Circuit Check	D board IC901, R949, T501 (FBT)

- Divided circuit diagram

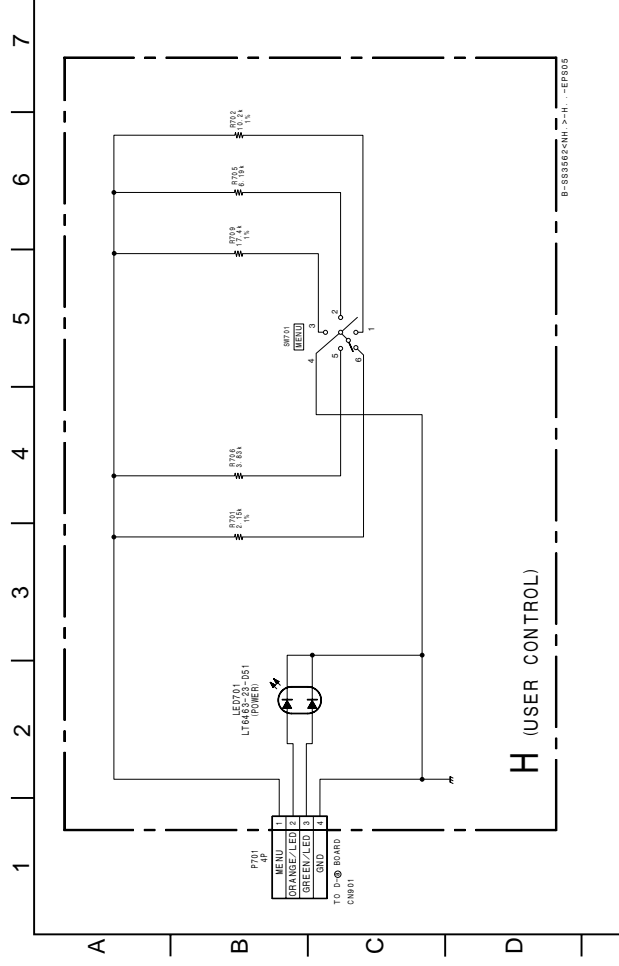
One sheet of D board circuit diagram is divided into four sheets, each having the code D-③ to D-⑥. For example, the destination (a**b**) on the D-⑤ sheet is connected to (a**b**) on the D-④ sheet.



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

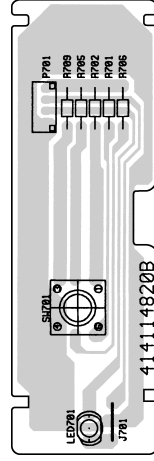
**Note: Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.**

(1) Schematic Diagram of H Board



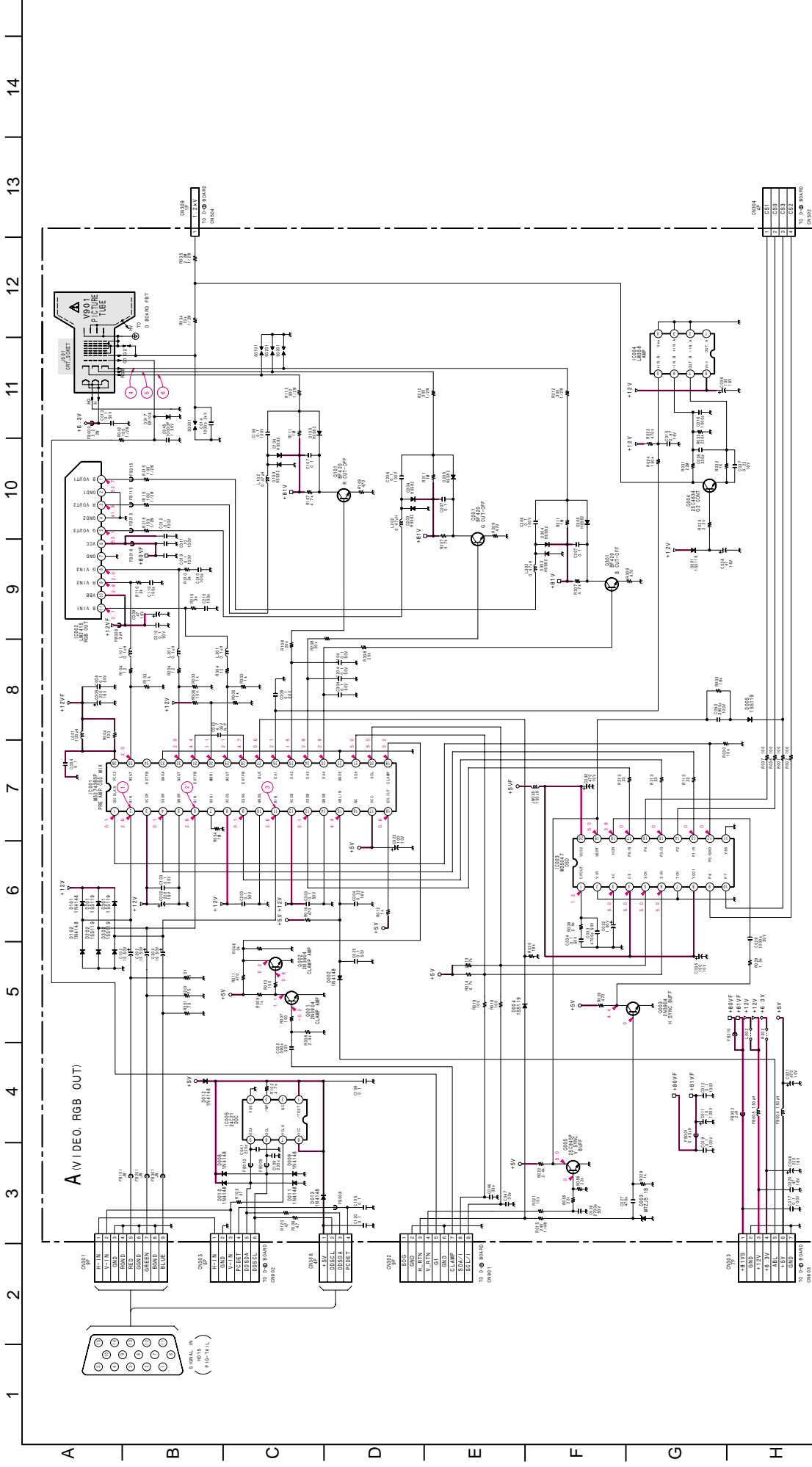
**H**

[ USER CONTROL ]

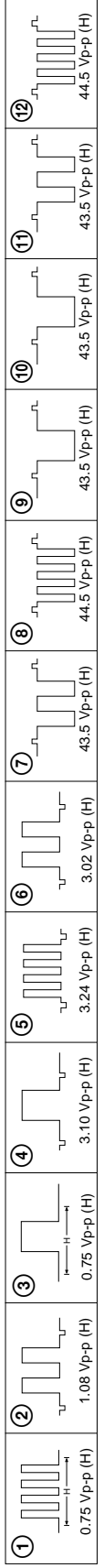




(2) Schematic Diagram of A Board



• A BOARD WAVEFORMS



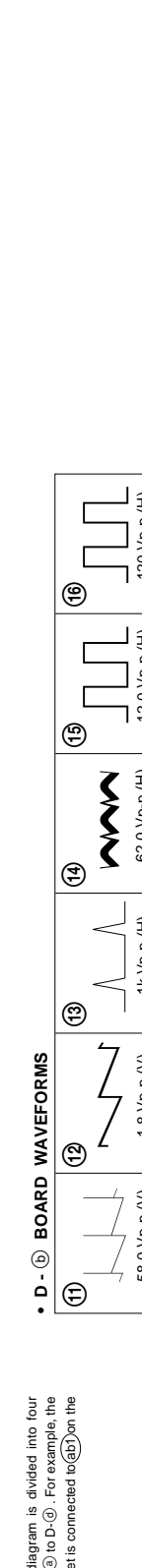
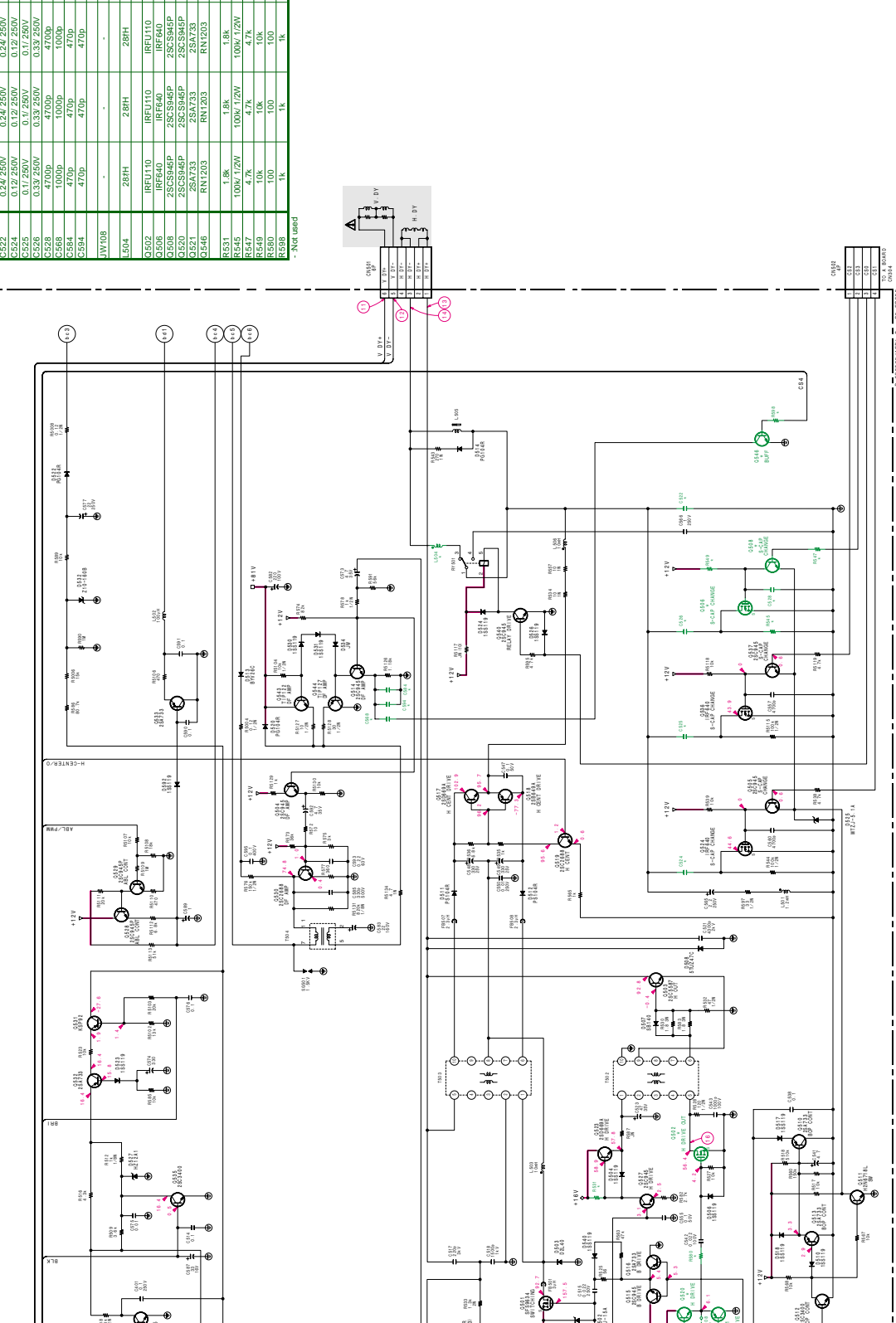


1 2 3 4 5 6 7 8 9 10 11 12 13

**#3 D-5 BOARD MARKS LIST**

Ref No.	E220 (N)	E220 (SH, ED)	E220E	E214E
C322	0.24 250V	0.24 250V	0.24 250V	0.33 250V
C323	0.1 250V	0.1 250V	0.1 250V	0.24 250V
C324	0.1 250V	0.1 250V	0.1 250V	0.24 250V
C325	0.1 250V	0.1 250V	0.1 250V	0.24 250V
C326	0.33 250V	0.33 250V	0.33 250V	-
C328	4700p	4700p	4700p	-
C368	1000p	1000p	1000p	680p
C384	470p	470p	470p	680p
C394	470p	470p	470p	680p
JW108	-	-	-	JW
L504	28FH	28FH	28FH	25.5FH
C302	IREU110	IREU110	IREU110	2SC265-Y
C408	2SC5946P	2SC5946P	2SC5946P	-
C420	2SC5946P	2SC5946P	2SC5946P	-
C321	2SA733	2SA733	2SA733	-
C346	RN1203	RN1203	RN1203	-
C351	4.7k	4.7k	4.7k	1k
C345	100k 1/2W	100k 1/2W	100k 1/2W	-
R347	4.7k	4.7k	4.7k	-
R349	10k	10k	10k	-
R350	10k	10k	10k	470
R358	1k	1k	1k	-

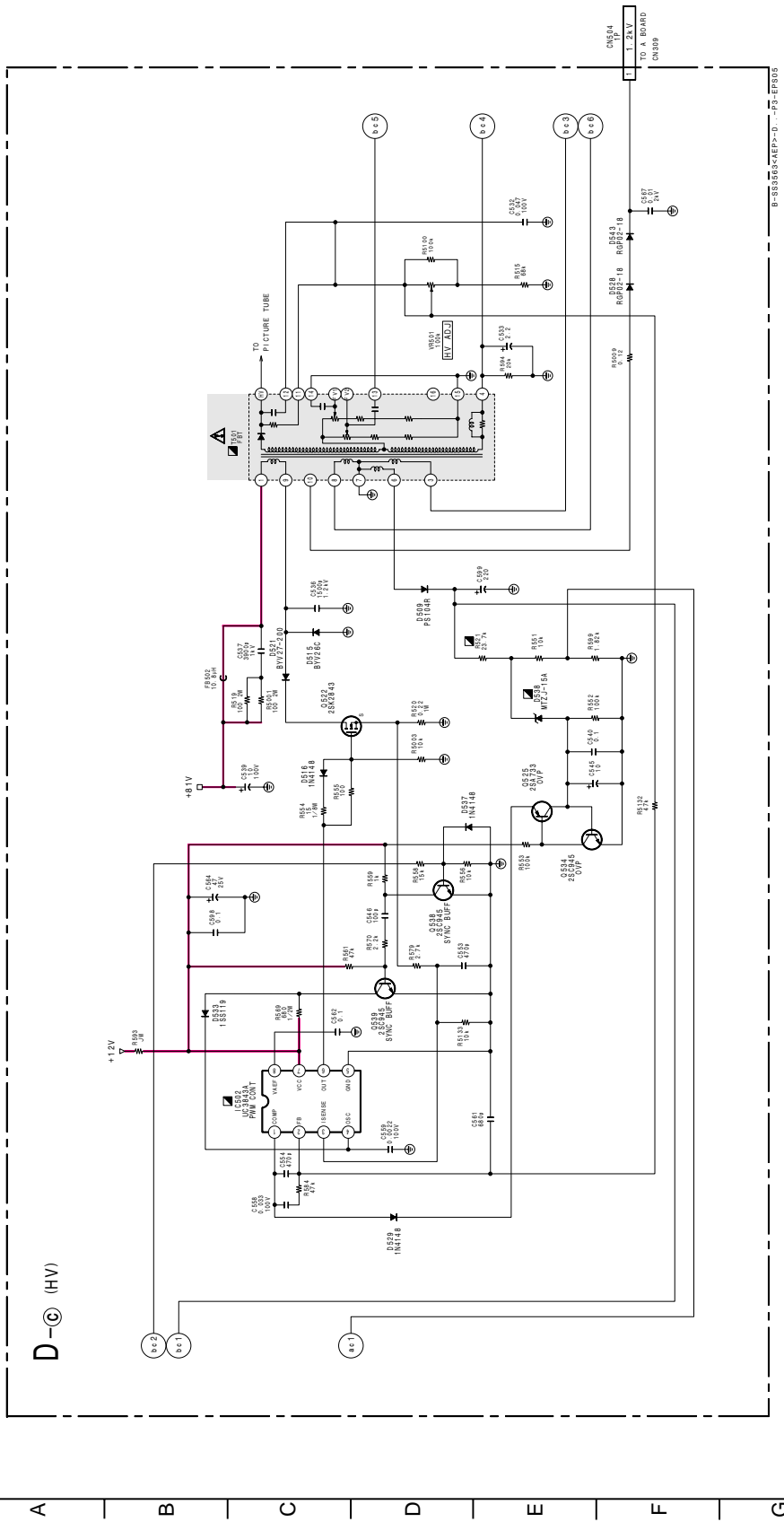
- Not used



• Divided circuit diagram  
 One sheet of D board circuit diagram is divided into four sheets, each having the code D-10 to D-13. For example, the destination (D-10) on the D-10 sheet is connected to (D-10) on the D-10 sheet.

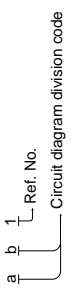
a b 1 Ref. No.  
 Circuit diagram division code

1 2 3 4 5 6 7 8 9 10 11 12 13 14



B=SSB8R<AEP>D-P2-EF95

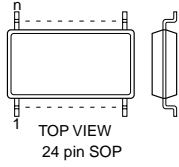
- Divided circuit diagram  
One sheet of D board circuit diagram is divided into four sheets, each having the code D-ⓐ to D-ⓓ. For example, the destination ⓐ on the D-ⓐ sheet is connected to ⓐ on the D-ⓓ sheet.



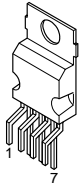


# 5-5. SEMICONDUCTORS

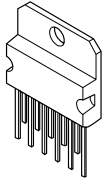
**BH3863F**  
**BH3863F-E2**



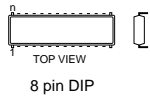
**LA78040**



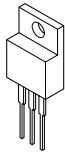
**LM2415T**



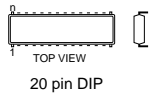
**LM358N**  
**M24C16BN6**  
**UC3842A**  
**C3843A**  
**24LC21/P**



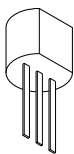
**MCT7812CT**  
**TA7805S**



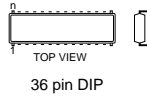
**M35047**



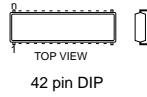
**M51951BSL**



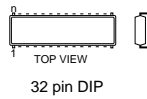
**M52743BSP**



**ST72774**



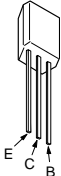
**TDA4841**



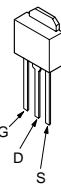
**BF420**



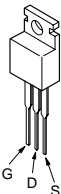
**DTC124ESA**  
**2SC3400**



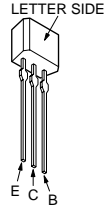
**IRFU110**  
**IRFU110A**



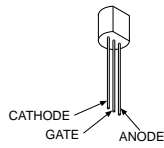
**IRF640**



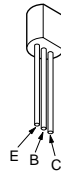
**RN1203**



**MCR100**  
**MCR100-8RL**



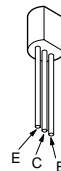
**2N3904**



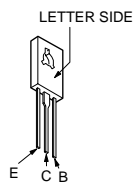
**2SA1221-L**



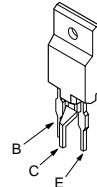
**2SA733-Q**  
**2SA733TP-QP**  
**2SA966-Y**  
**2SB647A-C**  
**2SC2655**  
**2SC2655-Y**  
**2SC945-P**



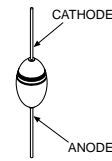
**2SB649-C**  
**2SB649A-B**  
**2SC2688-LK**  
**2SD669AVC**



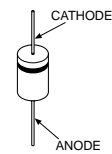
**2SC4632LS-CB7**



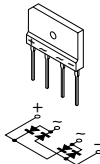
**BYV26C**  
**UF05G**



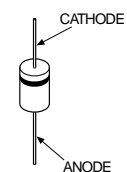
**D2L40-TA**  
**ER106**  
**HSS82**  
**HZ12**  
**HZ18-2**  
**HZ5C1**  
**HZ5C2**  
**MTZJ-T-73-15A**  
**PS104R**  
**RD27EB4**  
**RGP02-18**  
**SB140-6339**  
**UF4007G23**  
**UF5402G**  
**UF5404G**  
**UF5406**  
**10E2**  
**IN4002**  
**IN4004**  
**IN4148**



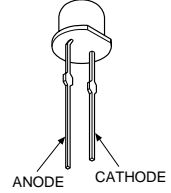
**D4SB60L**  
**D4SB60L-F**



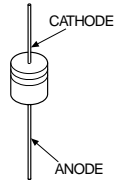
**EGP10D**



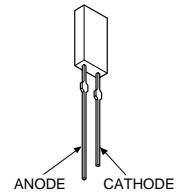
**MAA3371X**



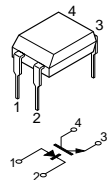
**MTZJ-15A**  
**MTZJ-5.1A**  
**MTZJ-5.1B**  
**RD15ES-B1**  
**RD5.1ESB2**  
**1SS119-25**  
**1SS119-25TD**



**SEL4225R-D**



**TLP621D4-Y-LF2**



## SECTION 6 EXPLODED VIEWS

**NOTE:**

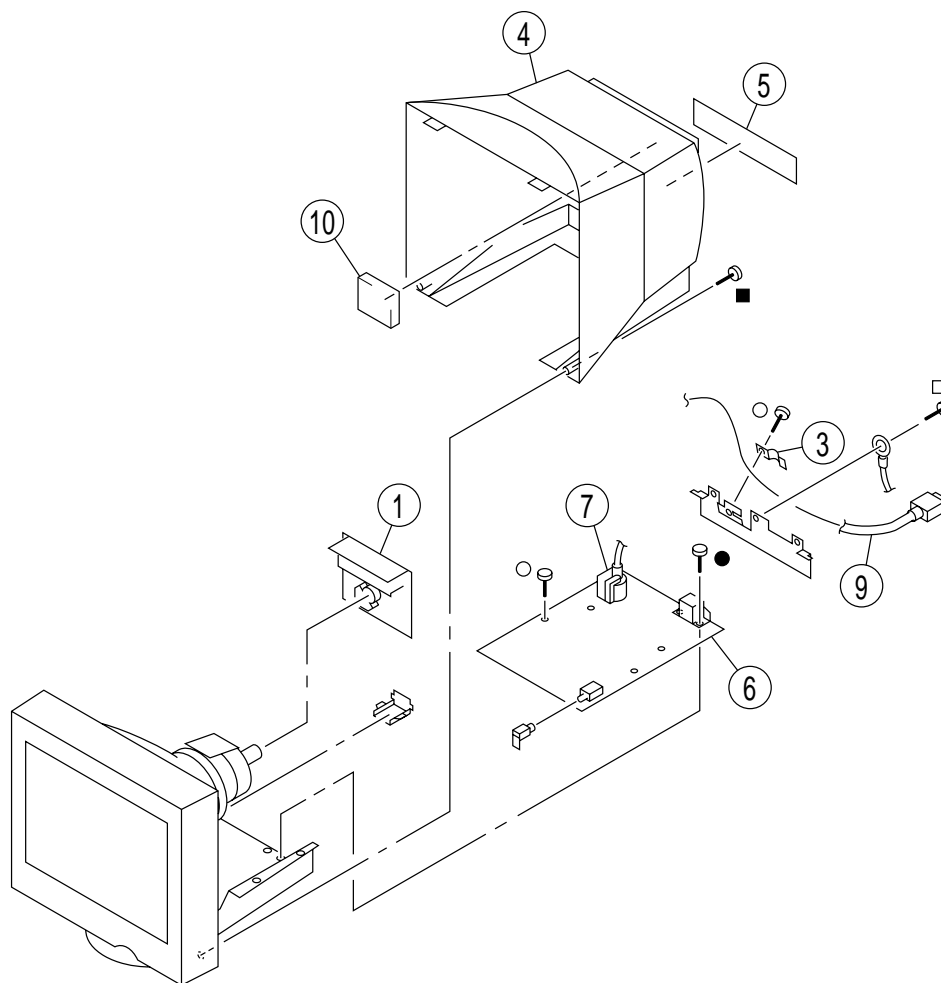
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine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

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

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

**6-1. CHASSIS**

- 7-685-648-79 +BVTP 3X12 8418113010
- 7-685-872-09 +BVTT 3X8
- 7-685-663-71 +BVTP 4X16 8026114012
- 7-685-881-09 +BVTT 4X8

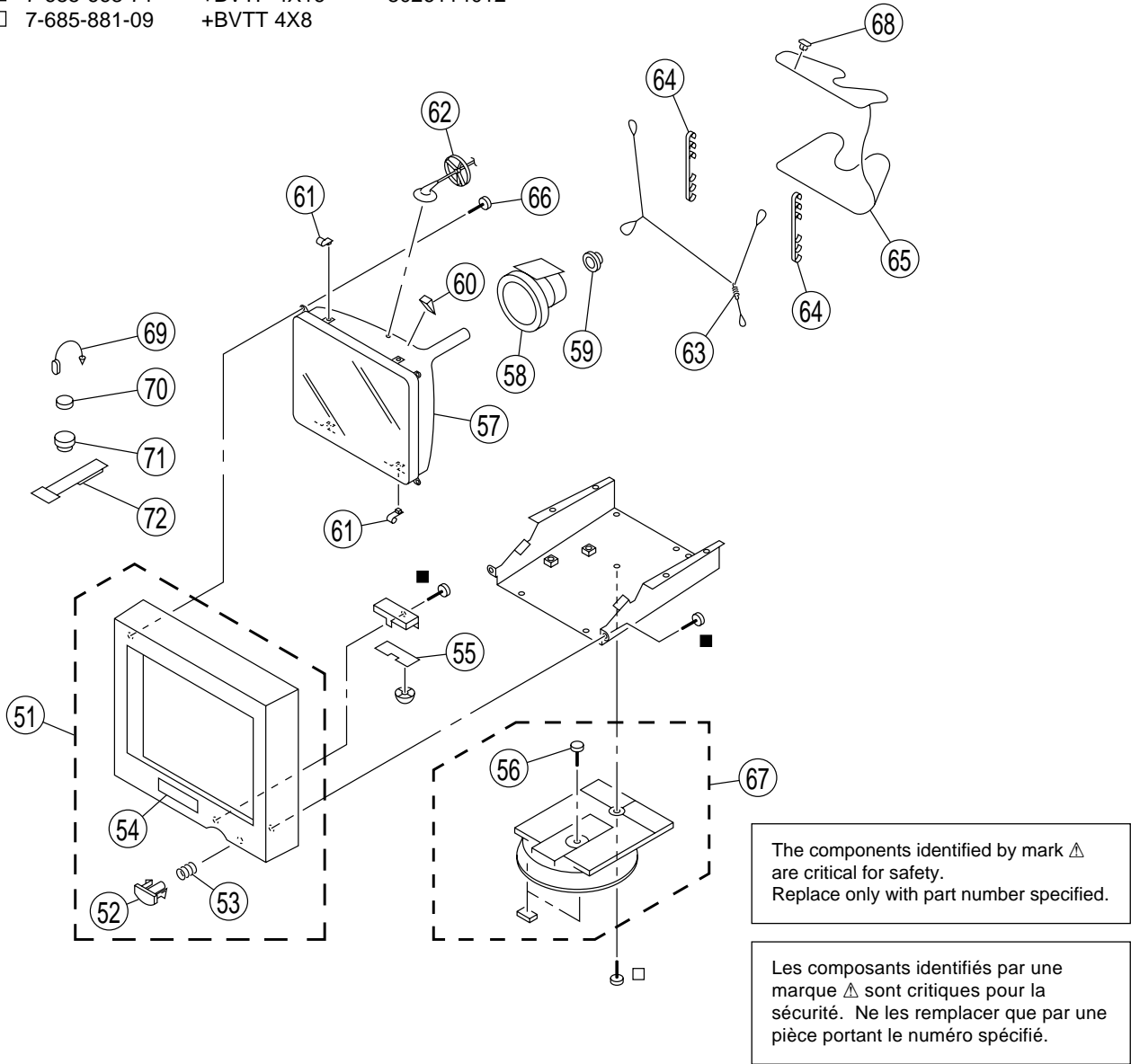


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	1	* A-1272-229-A A BOARD, COMPLETE [E220, E220E]		6	* A-1348-021-A D BOARD, COMPLETE [E220E]		
			S07C2U0242				C07C2U0144
#1	1	* A-1272-279-A A BOARD, COMPLETE [E215E]		#1	6	* A-1348-026-A D BOARD, COMPLETE [E220 for NH]	
			SOE2150244				SM7C1J5144
	3	* 4-060-151-01 STOPPER, CABLE		#1	6	* A-1348-036-A D BOARD, COMPLETE [E220 for EQ, SH]	
#1	4	* 4-072-384-01 CABINET [E220E, E215E]		#1	6	* A-1348-037-A D BOARD, COMPLETE [E215E]	
							SOE2155144
#1	4	* 4-072-384-11 CABINET [E220]		7	$\triangle$ 1-453-358-11 TRANSFORMER, FLYBACK		7050307C2U
	5	* 4-079-241-01 LABEL, INFORMATION [E220E]		9	1-757-540-11 I/O CABLE ASSY		C7107C2U11
#1	5	* 4-079-241-11 LABEL, INFORMATION [E220]		10	4-073-622-01 SPONGE		
			9011097C2V				
#1	5	* 4-079-241-21 LABEL, INFORMATION [E215E]					
			9011097C1N				

# CPD-E220/E220E/E215E

## 6-2. PICTURE TUBE

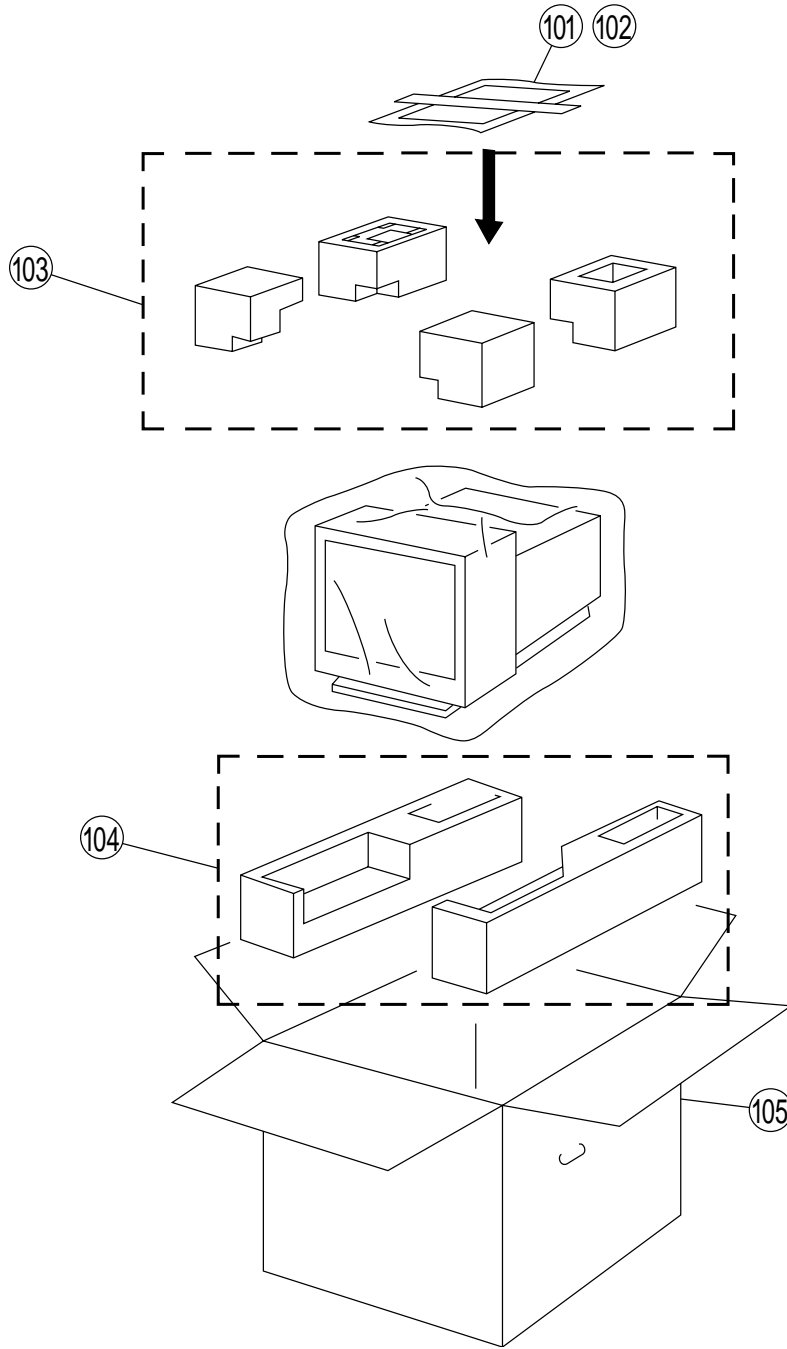
- 7-685-663-71 +BVTP 4X16 8026114012
- 7-685-881-09 +BVTT 4X8



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4038-291-1	BEZEL ASSY [E220E]	52-54 GP7C2V7001	58	△ 8-451-435-12	DEFLECTION YOKE (Y17TKJ-M)	
#1 51	X-4038-292-1	BEZEL ASSY [E220]	52-54 1Q010T7C1N	59	△ 1-452-923-41	NECK ASSY	
#1 51	X-4038-570-1	BEZEL ASSY [E215E]	52-54 IR011TE215	60	4-060-166-01	SPACER, DEFLECTION YOKE	
52	4-072-387-01	BUTTON, POWER		61	4-045-123-21	HOLDER, DEGAUSS COIL	
53	3-653-339-01	SPRING, COMPRESSION		62	4-060-155-01	HOLDER, HV CABLE	
54	4-042-353-11	EMBLEM (NO.7), SONY		63	4-060-603-01	SPRING, TENSION	
55	* A-1304-219-A	H BOARD, COMPLETE	S07C2U0342	64	4-072-413-01	BAND, DG COIL	
56	4-384-096-01	SCREW (4X16), TAPPING, +P	8433144020	65	△ 1-419-255-11	DEGAUSS COIL	
#1 57	△ 8-738-549-05	PICTURE TUBE (17TKB) (FILM INTENSITY SOUTH) [E220 for EQ, SH]		66	4-365-808-01	SCREW (5), TAPPING	
57	△ 8-738-558-05	PICTURE TUBE (17TKB) (FILM INTENSITY UP) [E220 for NH, E220E, E215E]		67	X-4037-104-1	STAND ASSY	56
				68	4-072-411-01	HOLDER, DGC	
				69	4-308-870-00	CLIP, LEAD WIRE	
				70	1-452-032-00	MAGNET, DISK; 10mmφ	
				71	1-452-094-00	MAGNET, ROTATABLE DISK; 15mmφ	
				72	4-051-736-21	PIECE A (90), CONV. CORRECT	



6-3. PACKING MATERIALS



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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
#1	101 $\Delta$	1-776-027-11 CORD SET, POWER [E220E, E215E]		104	* 4-072-418-01	CUSHION (LOWER)	
	102	4-079-242-11 MANUAL, INSTRUCTION [E220E]		105	* 4-079-271-01	INDIVIDUAL CARTON [E220E]	
			9012097C2V				9001097C2V
#1	102	4-079-242-21 MANUAL, INSTRUCTION [E220]		#1	105	* 4-079-570-01	INDIVIDUAL CARTON [E220]
			9012097C1N				9001097C1N
#1	102	4-080-479-11 MANUAL, INSTRUCTION [E215E]		#1	105	* 4-080-496-01	INDIVIDUAL CARTON [E215E]
			901209E215				900109E215
	103	* 4-072-417-01 CUSHION (UPPER)					

## SECTION 7 ELECTRICAL PARTS LIST



**NOTE:**

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

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

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

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

**RESISTORS**

• All resistors are in ohms  
• F : nonflammable

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		A BOARD, COMPLETE *****					
	4-382-854-11	SCREW (M3X10), P, SW (+) (IC002)					
		<CAPACITOR>					
	C001	1-126-964-11 ELECT	10µF 50V		5156100T50		
	C002	1-126-934-11 ELECT	220µF 16V		5156221S16		
#4	C004	1-115-340-11 CERAMIC	0.22µF 16V		7144224106		
	C005	1-135-397-11 ELECT	47µF 16V		515X470T16		
#4	C006	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
#4	C008	1-136-165-11 METALIZED FILM	0.1µF 50V		5134104452		
#4	C009	1-126-947-11 ELECT	47µF 16V		5156470T16		
#4	C010	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
	C011	1-128-582-11 ELECT	10µF 100V		5156100T01		
#4	C012	1-130-777-11 PETP FILM	0.1µF 100V		5116104111		
#4	C013	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
#4	C014	1-137-877-11 CERAMIC	1000pF 2KV		51011021C3		
	C015	1-107-823-11 CERAMIC	0.47µF 16V		7144474106		
	C016	1-163-009-11 CERAMIC	0.001µF 50V		7144102256		
#4	C017	1-130-777-11 PETP FILM	0.1µF 100V		5116104111		
#4	C019	1-130-777-11 PETP FILM	0.1µF 100V		5116104111		
	C022	1-163-131-00 CERAMIC	390pF 50V		7183391556		
	C023	1-135-393-11 ELECT	100µF 10V		5156101T10		
#4	C025	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
#4	C026	1-164-161-91 CERAMIC	2200pF 50V		7144222156		
	C028	1-163-263-11 CERAMIC	330pF 50V		7183331556		
	C029	1-102-074-21 CERAMIC	0.001µF 50V		5101102152		
	C030	1-135-393-11 ELECT	100µF 10V		5156101T10		
	C032	1-135-398-11 ELECT	1µF 50V		5156109T50		
#4	C033	1-163-017-11 CERAMIC	4700pF 50V		7144472156		
#4	C034	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
	C035	1-135-393-11 ELECT	100µF 10V		5156101T10		
#4	C037	1-115-340-11 CERAMIC	0.22µF 16V		7144224106		
#4	C038	1-126-947-11 ELECT	47µF 16V		5156470T16		
#4	C039	1-104-665-91 ELECT	100µF 16V		5156101T16		
#4	C040	1-137-150-11 PETP FILM	0.01µF 100V		5116103511		
	C042	Pending CERAMIC	33pF 50V		5121330552		
	C043	1-135-404-11 ELECT	4.7µF 35V		5162479T35		
#4	C044	1-130-777-11 PETP FILM	0.1µF 100V		5116104111		
	C045	Pending CERAMIC	0.01µF 1.5KV		5104103463		
#4	C101	1-135-791-11	33pF 50V		7183330556		
	C102	1-126-964-11 ELECT	10µF 50V		5156100T50		
#4	C103	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
#4	C104	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
	C106	1-135-383-11 METALIZED FILM	0.1µF 100V		5075104501		
#4	C107	1-136-165-11 METALIZED FILM	0.1µF 50V		5134104452		
#4	C201	1-135-791-11	33pF 50V		7183330556		
	C202	1-126-964-11 ELECT	10µF 50V		5156100T50		
#4	C203	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
#4	C204	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
	C206	1-135-383-11 METALIZED FILM	0.1µF 100V		5075104501		
#4	C207	1-136-165-11 METALIZED FILM	0.1µF 50V		5134104452		
#4	C301	1-135-791-11	33pF 50V		7183330556		
	C302	1-126-964-11 ELECT	10µF 50V		5156100T50		
#4	C303	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
#4	C304	1-163-189-11 CERAMIC	0.1µF 50V		7146104456		
	C306	1-135-383-11 METALIZED FILM	0.1µF 100V		5075104501		
#4	C307	1-136-165-11 METALIZED FILM	0.1µF 50V		5134104452		
		<CONNECTOR>					
	CN301	1-564-510-81 PLUG, CONNECTOR	6P 4490600330				
	CN302	1-564-510-81 PLUG, CONNECTOR	9P 4490900330				
	CN303*	1-564-510-81 PLUG, CONNECTOR	7P 4490700330				
	CN304*	1-564-507-11 PLUG, CONNECTOR	4P 4490400330				
	CN307	1-695-915-11 TAB (CONTACT)	1P				
	CN309	1-506-108-41 PIN, CONNECTOR (TERMINAL PIN)	3340236016				
	CN310	1-695-915-11 TAB (CONTACT)	1P				
	CN311	Pending	1P				
	CN312	Pending	1P				
		<DIODE>					
	D001	8-719-911-19 DIODE 1SS119-25	4120511900				
	D002	8-719-070-90 DIODE 1N4148	412014148T				
	D003	8-719-109-85 ZENER DIODE RD5.1ESB2	41205005C2				
	D004	8-719-911-19 DIODE 1SS119-25	4120511900				
	D017	8-719-074-13 DIODE BYV26C	413010426C				
	D101	8-719-070-90 DIODE 1N4148	412014148T				
	D102	8-719-070-90 DIODE 1N4148	412014148T				
	D103	8-719-970-82 DIODE HSS82	4130190820				
	D104	8-719-970-82 DIODE HSS82	4130190820				
	D105	8-719-970-82 DIODE HSS82	4130190820				
	D201	8-719-911-19 DIODE 1SS119-25	4120511900				
	D202	8-719-911-19 DIODE 1SS119-25	4120511900				

# CPD-E220/E220E/E215E



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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D203	8-719-970-82	DIODE HSS82	4130190820	<RESISTOR>			
D204	8-719-970-82	DIODE HSS82	4130190820	R001	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155
D205	8-719-970-82	DIODE HSS82	4130190820	R002	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155
D301	8-719-911-19	DIODE 1SS119-25	4120511900	R004	1-216-025-11	RES-CHIP 100	1/10W 4010110152
D302	8-719-911-19	DIODE 1SS119-25	4120511900	#4 R005	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
D303	8-719-970-82	DIODE HSS82	4130190820	R006	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
D304	8-719-970-82	DIODE HSS82	4130190820	R007	1-216-025-11	RES-CHIP 100	1/10W 4010110152
D305	8-719-970-82	DIODE HSS82	4130190820	#4 R008	1-216-660-11	RES, CHIP 2.4K	1/10W 4010124252
<FERRITE BEAD>				#4 R009	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 FB001	1-414-793-21	BEAD, FERRITE 0.45 $\mu$ H	7099458250	R010	1-216-025-11	RES-CHIP 100	1/10W 4010110152
FB002	1-469-611-11	INDUCTOR, FERRITE BEAD 2 $\mu$ H	4322209005	#4 R011	1-216-041-11	RES-CHIP 470	1/10W 4010147152
#4 FB003	1-535-303-31	JUMP WIRE	5406100000	#4 R012	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 FB004	1-535-303-31	JUMP WIRE	5406100000	R013	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252
#4 FB005	1-535-303-31	JUMP WIRE	5406100000	R014	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252
FB006	1-469-402-11	BEAD, FERRITE 3 $\mu$ H	4322309006	R015	1-247-816-11	CARBON (SMALL) 240	1/4W 4050524155
#4 FB101	1-535-303-31	JUMP WIRE	5406100000	#4 R016	1-216-041-11	RES-CHIP 470	1/10W 4010147152
#4 FB201	1-535-303-31	JUMP WIRE	5406100000	R017	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155
#4 FB301	1-535-303-31	JUMP WIRE	5406100000	R018	1-216-025-11	RES-CHIP 100	1/10W 4010110152
<IC>				R019	1-216-025-11	RES-CHIP 100	1/10W 4010110152
IC001	8-759-582-06	IC M52743BSP	4159527432	R020	Pending	METAL FILM 4.42K	1/4W 4257044421
IC002	8-759-569-64	IC BH3863F	4159350470	#4 R021	1-244-297-11	RES-CHIP 32.4K	1/10W 419A132422
IC003	Pending	IC M35047-XXX	4159350470	#4 R022	1-216-660-11	RES, CHIP 2.4K	1/10W 4010124252
IC004	8-759-991-16	IC LM358N	4159358000	#4 R023	1-216-121-11	RES-CHIP 1M	1/10W 4010110552
<SOCKET, PICTURE TUBE>				#4 R024	1-247-883-11	CARBON (SMALL) 150K	1/4W 4050515455
J001 $\Delta$	1-251-598-11	SOCKET, PICTURE TUBE	4570307Y11	#4 R025	1-249-421-11	CARBON (SMALL) 2.2K	1/4W 4050522255
<COIL>				#4 R026	1-216-041-11	RES-CHIP 470	1/10W 4010147152
L001	1-469-400-11	INDUCTOR, MICRO 100 $\mu$ H	432B101006	#4 R027	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 L002	1-535-303-31	JUMP WIRE	5406100000	#4 R028	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
L101	1-469-398-11	INDUCTOR, MICRO 0.1 $\mu$ H	432B108006	R029	1-216-053-11	RES-CHIP 1.5K	1/10W 4010115252
#4 L102	1-419-618-11	INDUCTOR, MICRO 0.47 $\mu$ H	432B478006	R030	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
L201	1-469-398-11	INDUCTOR, MICRO 0.1 $\mu$ H	432B108006	#4 R031	1-244-274-11	METAL FILM 22M	1/4W 4160422655
#4 L202	1-419-618-11	INDUCTOR, MICRO 0.47 $\mu$ H	432B478006	#4 R032	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
L301	1-469-398-11	INDUCTOR, MICRO 0.1 $\mu$ H	432B108006	#4 R033	1-216-105-11	RES-CHIP 220K	1/10W 4010122452
#4 L302	1-419-618-11	INDUCTOR, MICRO 0.47 $\mu$ H	432B478006	R034	Pending	10K	1/2W 4050210355
<TRANSISTOR>				#4 R035	1-244-273-11	METAL FILM 2.2M	1/2W 4160222555
Q001	8-729-139-04	TRANSISTOR 2N3904	4111139040	#4 R036	1-216-025-11	RES-CHIP 100	1/10W 4010110152
Q002	8-729-139-04	TRANSISTOR 2N3904	4111139040	#4 R037	1-216-025-11	RES-CHIP 100	1/10W 4010110152
Q003	8-729-139-04	TRANSISTOR 2N3904	4111139040	#4 R039	1-216-660-11	RES, CHIP 2.4K	1/10W 4010124252
Q004	8-729-823-81	TRANSISTOR 2SC4632LS-CB7	4100246340	R042	Pending	100	1/2W 4050210155
#4 Q005	8-729-029-86	TRANSISTOR DTC124ESA	4116612030	#4 R046	1-216-662-11	RES-CHIP 3K	1/10W 4010130252
Q008	8-729-139-04	TRANSISTOR 2N3904	4111139040	R049	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 Q101	8-729-048-20	TRANSISTOR BF420	4114804200	R050	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252
#4 Q201	8-729-048-20	TRANSISTOR BF420	4114804200	R051	1-216-053-11	RES-CHIP 1.5K	1/10W 4010115252
#4 Q301	8-729-048-20	TRANSISTOR BF420	4114804200	#4 R054	1-216-121-11	RES-CHIP 1M	1/10W 4010110552
				R101	1-216-022-11	RES-CHIP 75	1/10W 4010175002
				#4 R103	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
				#4 R104	1-249-393-11	CARBON (SMALL) 12	1/4W 4050512055
				#4 R107	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255
				#4 R108	1-247-862-11	CARBON (SMALL) 20K	1/4W 4050520355
				#4 R109	1-216-041-11	RES-CHIP 470	1/10W 4010147152
				R111	1-247-903-81	CARBON (SMALL) 1M	1/4W 4050510555
				R112	Pending	300	1/2W 4050230155
				R113	1-216-013-11	RES-CHIP 33	1/10W 4010133052
				R115	Pending	62	1/2W 4050262055
				R201	1-216-022-11	RES-CHIP 75	1/10W 4010175002
				#4 R203	1-215-049-91	RES-CHIP 1K	1/10W 4010110252



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
#4 R204	1-249-393-11	CARBON (SMALL) 12	1/4W 4050512055	#4 C507	1-136-287-11	PETP FILM 0.0047μF	100V 5116472511
#4 R207	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255	C508	1-163-251-11	CERAMIC 100pF	50V 7183101556
#4 R208	1-247-862-11	CARBON (SMALL) 20K	1/4W 4050520355	C509	Pending	0.0033μF	50V 5144332550
#4 R209	1-249-413-11	CARBON (SMALL) 470	1/4W 4050547155	#4 C510	1-107-914-11	ELECT 1000μF	16V 5153102S25
R211	1-247-903-81	CARBON (SMALL) 1M	1/4W 4050510555	C512	1-163-251-11	CERAMIC 100pF	50V 7183101556
R212	Pending	300	1/2W 4050230155	C513	1-163-251-11	CERAMIC 100pF	50V 7183101556
R213	1-216-013-11	RES-CHIP 33	1/10W 4010133052	#4 C514	1-163-189-11	CERAMIC 0.1μF	50V 7146104456
R215	Pending	100	1/2W 4050210155	C515	1-136-195-11	METALIZED FILM 0.022μF	250V 5074223102
R301	1-216-022-11	RES-CHIP 75	1/10W 4010175002	C517	1-128-981-11	CERAMIC 220pF	3KV 510H221193
#4 R302	1-535-303-31	JUMP WIRE	5406100000	#4 C518	1-137-876-11	CERAMIC 1500pF	1KV 5101152132
#4 R303	1-215-049-91	RES-CHIP 1K	1/10W 4010110252	C521	Pending	4300pF	2KV 51904323A3
#4 R304	1-249-393-11	CARBON (SMALL) 12	1/4W 4050512055	#4 C522	Pending	FILM 0.24μF	250V 5199244583 [E220/E220E]
#4 R307	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255	#4 C522	Pending	FILM 0.33μF	250V 5199334583 [E215E]
#4 R308	1-247-862-11	CARBON (SMALL) 20K	1/4W 4050520355	C523	1-126-964-11	ELECT 10μF	50V 5156100T50
#4 R309	1-249-413-11	CARBON (SMALL) 470	1/4W 4050547155	#4 C524	1-117-660-21	PETP FILM 0.12μF	250V 5198124583 [E220/E220E]
R311	1-247-903-81	CARBON (SMALL) 1M	1/4W 4050510555	#4 C524	Pending	PETP FILM 0.18μF	250V 5198184583 [E215E]
R312	Pending	300	1/2W 4050230155	#4 C525	1-117-659-21	PETP FILM 0.1μF	250V 5198104583 [E220/E220E]
R313	1-216-013-11	RES-CHIP 33	1/10W 4010133052	#4 C525	Pending	PETP FILM 0.24μF	250V 5198244583 [E215E]
R315	Pending	62	1/2W 4050262055	#4 C526	Pending	PETP FILM 0.33μF	250V 5190334583 [E220/E220E]
<SPARK GAP>				#4 C528	1-163-017-11	CERAMIC 4700pF	50V 7144472156 [E220/E220E]
#4 SG001	1-135-791-11	SPARK GAP	7183330556	#4 C529	1-136-165-11	METALIZED FILM 0.1μF	50V 5134104452
SG101	Pending	SPARK GAP	4700000003	#4 C531	1-137-150-11	PETP FILM 0.01μF	100V 5116103511
SG201	Pending	SPARK GAP	4700000003	#4 C532	1-137-962-11	METALIZED FILM 0.047μF	100V 5074473101
SG301	Pending	SPARK GAP	4700000003	C533	1-126-961-11	ELECT 2.2μF	50V 5156229T50
*****				#4 C534	1-163-189-11	CERAMIC 0.1μF	50V 7146104456
D BOARD, COMPLETE				#4 C535	1-104-665-91	ELECT 100μF	16V 5156101T16
*****				C536	Pending	1500pF	1.6KV 5192152573
1-500-644-11	INDUCTOR (D521, D623, D627)			#4 C537	1-137-878-11	CERAMIC 3900pF	1KV 5101392132
1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)			C539	1-128-563-11	ELECT 68μF	100V 5156680T01
	(CN503, R530, R603, R614, R653)			#4 C540	1-163-189-11	CERAMIC 0.1μF	50V 7146104456
1-533-223-11	HOLDER, FUSE (F601)		46905Y1101	C541	1-135-395-11	ELECT 4.7μF	50V 5156479T50
1-785-907-11	PLUG, CONNECTOR 1P			C542	1-137-395-91	PETP FILM 0.022μF	100V 5116223111
	(R576, R583, R605, R653)		3340101525	#4 C543	1-137-873-11	CERAMIC 1000pF	100V 5101102112
4-382-854-01	SCREW (M3X8), P, SW (+)			C545	1-126-964-11	ELECT 10μF	50V 5156100T50
	(C409, IC605, IC607, Q503, Q506, Q508, Q517, Q518, Q519, Q534, Q544, Q602)			C546	Pending	CERAMIC 100pF	50V 5101101152
<CAPACITOR>				C547	Pending	METALIZED FILM 0.1μF	50V 5077104505
C401	1-137-395-91	METALIZED FILM 0.1μF	250V 5074104102	C548	Pending	ELECT 330μF	25V 5156331T25
C402	1-128-528-51	ELECT 470μF	25V 5156471S25	C549	Pending	ELECT 330μF	25V 5156331T25
C403	1-137-395-91	PETP FILM 0.022μF	100V 5116223111	C550	1-135-352-11	METALIZED FILM 0.01μF	250V 5074103102
#4 C404	1-107-914-11	ELECT 1000μF	25V 5153102S25	#4 C553	1-163-133-21	470pF	50V 7183471556
#4 C405	1-130-499-11	PETP FILM 0.22μF	50V 5110224550	C554	Pending	CERAMIC 470pF	50V 5128471552
#4 C406	1-136-298-11	PETP FILM 0.0033μF	100V 5116332111	#4 C555	1-136-165-11	METALIZED FILM 0.1μF	50V 5134104452
C408	1-126-951-11	ELECT 470μF	35V 5156471S35	#4 C556	1-163-189-11	CERAMIC 0.1μF	50V 7146104456
#4 C409	1-104-987-11	PE TEREPHTHALATE 0.001μF	100V 5116102111	#4 C558	1-137-352-11	PETP FILM 0.0033μF	100V 5116333111
C502	Pending	METALIZED FILM 0.1μF	50V 5077104505	C559	1-136-684-51	PETP FILM 0.0022μF	100V 5116222111
C503	Pending	METALIZED FILM 0.1μF	50V 5077104505	#4 C560	1-163-189-11	CERAMIC 0.1μF	50V 7146104456
#4 C504	1-137-150-11	PETP FILM 0.01μF	100V 5116472511	#4 C561	1-163-007-11	680pF	50V 7144681156
C505	Pending	METALIZED FILM 0.1μF	50V 5077104505	#4 C562	1-163-189-11	CERAMIC 0.1μF	50V 7146104456
#4 C506	1-137-150-11	PETP FILM 0.01μF	100V 5116103511	#4 C563	1-104-661-91	ELECT 330μF	16V 5156331T16





# CPD-E220/E220E/E215E



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<IC>							
IC401	8-759-593-28	IC LA78040	4159817200	#4 Q512	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
IC501	Pending	IC TDA4841	4159484100	Q513	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
IC502	Pending	IC UC3843A	4159384300	#4 Q514	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
IC504	8-759-991-16	IC LM358N	4159358000	#4 Q515	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
IC601	8-759-582-09	IC UC3842A	4159384200	Q516	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
IC602	8-749-016-36	IC TLP621D4-Y-LF2		Q517	8-729-306-92	TRANSISTOR 2SD669AVC	410030669A
IC603	8-759-466-12	IC TL431ACL	415943100A	#4 Q518	8-729-304-92	TRANSISTOR 2SB649-C	410010649A
IC604	8-729-051-32	TRANSISTOR MCR100-8RL	4114510080	Q519	8-729-119-80	TRANSISTOR 2SC2688-LK	4100226880
IC605	8-759-231-53	IC TA7805S	4159780501	#4 Q520	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
IC606	8-729-048-22	TRANSISTOR MCR100	4114501006				[E220/E220E]
#4 IC607	8-759-088-08	IC MCT7812CT	4159781201	#4 Q521	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
IC901	Pending	IC ST72774	4159727750				[E220/E220E]
IC902	8-759-650-44	IC M24C16BN6	415924C160	Q522	8-729-048-61	TRANSISTOR 2SK2843LB2SONY	4101528430
IC903	8-759-605-05	IC M51951BSL	4159519510	Q523	8-729-306-92	TRANSISTOR 2SD669AVC	410030669A
				Q524	8-729-906-93	TRANSISTOR IRF640	4105906400
				Q525	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
				#4 Q526	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
<COIL>							
#4 L501	1-412-550-11	INDUCTOR, MICRO 1.2mH	4323122003	#4 Q527	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L502	1-469-994-11	COIL, PEAKING 100μH	4321101006	#4 Q528	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L503	1-459-104-11	COIL, CHOKE 10mH	4323103003	#4 Q529	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L504	1-419-986-11	COIL, CHOKE 28μH	4323280003	Q530	8-729-119-80	TRANSISTOR 2SC2688-LK	4100226880
			[E220/E220E]	Q531	8-729-051-31	TRANSISTOR KSP92	4112409200
#4 L504	Pending	COIL, CHOKE 25.5μH	4323255903	Q532	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
			[E215E]	Q533	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
#4 L505	1-419-568-11	COIL, LINEARITY	708S205R50	#4 Q534	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L506	1-459-104-11	COIL, CHOKE 10mH	4323103003	Q535	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
#4 L509	1-469-995-11	COIL, PEAKING 150μH	4321151006	Q536	8-729-906-93	TRANSISTOR IRF640	4105906400
#4 L601	1-412-537-31	COIL, CHOKE 100μH	4323101303	#4 Q537	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L602	1-412-537-31	COIL, CHOKE 100μH	4323101303	#4 Q538	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L603	1-412-537-31	COIL, CHOKE 100μH	4323101303	#4 Q539	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L604	1-412-537-31	COIL, CHOKE 100μH	4323101303	#4 Q540	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 L605	1-412-537-31	COIL, CHOKE 100μH	4323101303	Q541	Pending	TRANSISTOR H2N6718L	4111167180
#4 L606	Pending	COIL, CHOKE 15μH	7067C2U150	Q542	8-729-122-12	TRANSISTOR 2SA1221-L	411010647A
			[E220 [NH]/E220E/E215E]	#4 Q543	8-729-055-78	TRANSISTOR TIP122	4103200122
#4 L607	1-410-645-31	INDUCTOR, MICRO 100μH	4326101005	#4 Q544	8-729-055-77	TRANSISTOR TIP127	4103200127
				#4 Q546	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
							[E220/E220E]
<FILTER>							
LF601△	1-433-798-11	TRANSFORMER, LINE FILTER	7065Y11133	Q601	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
<TRANSISTOR>							
Q401	8-729-194-57	TRANSISTOR 2SC945-P	411020945P	Q602	8-729-040-92	TRANSISTOR 2SK2607	4102207800
Q501	Pending	TRANSISTOR SFS9634	4107496340	#4 Q603	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 Q502	8-729-042-34	TRANSISTOR IRFU110	4103801100	#4 Q604	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
			[E220/E220E]	Q607	8-729-200-36	TRANSISTOR 2SA966-Y	4110009660
#4 Q502	Pending	TRANSISTOR 2SC2655-Y	411022655Y	Q608	8-729-206-21	TRANSISTOR RN1203	4116612030
			[E215E]	Q609	Pending	TRANSISTOR 2SB1065	4100110650
Q503	8-729-052-42	TRANSISTOR 2SC5587	4100255870	#4 Q610	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
Q504	8-729-194-57	TRANSISTOR 2SC945-P	411020945P	#4 Q611	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
Q505	8-729-194-57	TRANSISTOR 2SC945-P	411020945P	#4 Q615	8-729-194-57	TRANSISTOR 2SC945-P	411020945P
#4 Q506	8-729-906-93	TRANSISTOR IRF640	4105906400	Q616	8-729-029-86	TRANSISTOR DTC124ESA	4116612030
			[E220/E220E]	Q617	8-729-265-52	TRANSISTOR 2SC2655	4100226550
#4 Q508	8-729-194-57	TRANSISTOR 2SC945-P	411020945P	Q618	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330
			[E220/E220E]	Q901	8-729-139-04	TRANSISTOR 2N3904	4111139040
				#4 Q902	8-729-139-04	TRANSISTOR 2N3904	4111139040
							[E220/E220E]
Q510	8-729-141-03	TRANSISTOR 2SA733-QP	4110007330				
Q511	Pending	TRANSISTOR H2N6718L	4111167180				

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

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



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		<RESISTOR>		#4 R540	1-260-364-51	CARBON (SMALL) 1M	1/2W 4050110555
#4 R401	1-227-370-11	RES-CHIP 1.82K	1/10W 419A118212	#4 R543	1-242-979-11	METAL OXIDE 270	1W 4177127153
#4 R402	1-227-370-11	RES-CHIP 1.82K	1/10W 419A118212	#4 R544	1-260-352-51	CARBON (SMALL) 100K	1/2W 4050110455
#4 R403	1-260-298-51	CARBON (SMALL) 3.3	1/2W 4050133955	#4 R545	1-260-352-51	CARBON (SMALL) 100K	1/2W 4050110455
R404	Pending	METAL OXIDE FILM 0.75	1W 4171075856	#4 R547	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255
R406	1-243-478-11	CARBON (SMALL) 1.5	1/4W 4050515955				[E220/E220E]
#4 R407	1-260-322-51	CARBON (SMALL) 330	1/2W 4050133155	#4 R549	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
R408	Pending	CARBON (SMALL) 3.3K	1/2W 4050133254				[E220/E220E]
R409	Pending	RES-CHIP 10K	1/10W 4010110202	R551	Pending	RES-CHIP 10K	1/10W 4010110202
R411	1-242-988-11	METAL FILM 6.81K	1/4W 4257046811	R552	Pending	RES-CHIP 100K	1/10W 4010110402
R412	1-242-988-11	METAL FILM 6.81K	1/4W 4257046811	R553	Pending	RES-CHIP 100K	1/10W 4010110402
#4 R500	1-247-798-11	CARBON (SMALL) 43	1/4W 4050543055	#4 R554	1-216-154-11	RES-CHIP 15	1/8W 4010815052
#4 R501	1-216-083-11	RES-CHIP 27K	1/10W 4010127352	#4 R555	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155
#4 R502	1-227-372-11	RES-CHIP 22.1K	1/10W 419A122122	#4 R556	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R503	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252	R557	Pending	METAL OXIDE 10	1W 4171010053
#4 R504	1-227-379-11	RES-CHIP 732	1/10W 419A173202	#4 R558	1-249-431-11	CARBON (SMALL) 15K	1/4W 4050515355
R505	Pending	RES-CHIP 2.8K	1/10W 4010128202	#4 R559	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255
#4 R506	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R560	1-216-101-11	RES-CHIP 150K	1/10W 4010115452
#4 R507	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R561	1-249-437-11	CARBON (SMALL) 47K	1/4W 4050547355
#4 R508	1-249-430-11	CARBON (SMALL) 12K	1/4W 4050512355	#4 R562	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R509	1-247-844-11	CARBON (SMALL) 3.6K	1/4W 4050536255	#4 R563	1-249-437-11	CARBON (SMALL) 47K	1/4W 4050547355
#4 R510	1-216-025-11	RES-CHIP 100	1/10W 4010110152	#4 R565	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 R511	1-216-025-11	RES-CHIP 100	1/10W 4010110152	#4 R566	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355
#4 R512	1-216-198-11	RES-CHIP 1K	1/8W 4010810252	#4 R567	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R513	1-216-025-11	RES-CHIP 100	1/10W 4010110152	#4 R568	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355
R515	Pending	RES-CHIP 68K	1/10W 4010168302	#4 R569	1-260-326-51	CARBON (SMALL) 680	1/2W 4050168155
#4 R516	1-247-846-11	CARBON (SMALL) 4.3K	1/4W 4050543255	#4 R570	1-216-057-91	RES-CHIP 2.2K	1/10W 4010122252
#4 R517	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R571	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255
#4 R518	1-218-769-11	RES-CHIP 510K	1/10W 4010151452	#4 R572	1-249-393-11	CARBON (SMALL) 10	1/4W 4050510055
#4 R519	1-244-194-11	METAL OXIDE 100	2W 4172010156	#4 R573	1-247-868-91	CARBON (SMALL) 36K	1/4W 4050536355
R520	Pending	METAL OXIDE FILM 0.22	1W 4171022856	#4 R574	1-216-095-11	RES-CHIP 82K	1/10W 4010182352
R521	Pending	METAL FILM 22.6K	1/4W 4257042262	#4 R575	1-216-662-11	RES-CHIP 3K	1/10W 4010130252
#4 R522	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252	R576	1-242-973-11	METAL OXIDE 30K	3W 4177330355
			[E220/E220E]	R577	Pending	CARBON (SMALL) 68	1/4W 4050568055
#4 R522	1-216-041-11	RES-CHIP 470	1/10W 4010147152	#4 R578	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255
			[E215E]	#4 R579	1-216-059-11	RES-CHIP 2.7K	1/10W 4010127252
#4 R523	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R580	1-216-025-11	RES-CHIP 100	1/10W 4010110152
#4 R524	1-216-071-11	RES-CHIP 8.2K	1/10W 4010182252				[E220/E220E]
#4 R525	1-243-482-11	CARBON (SMALL) 56	1/4W 4050556055	#4 R580	1-216-041-11	RES-CHIP 470	1/10W 4010147152
							[E215E]
#4 R526	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252	R581	Pending	CARBON (SMALL) 33K	1/4W 4050533355
#4 R527	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R582	1-249-422-11	CARBON (SMALL) 2.7K	1/4W 4050527255
R528	Pending	METAL FILM 120	1/2W 4077B12155	#4 R583	1-244-277-11	METAL OXIDE 1.8	3W 417731895A
#4 R529	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R584	1-249-089-11	RES-CHIP 47K	1/10W 4010147352
#4 R530	1-244-277-11	METAL OXIDE 1.8	3W 417731895A	#4 R585	1-249-401-11	CARBON (SMALL) 47	1/4W 4050547055
#4 R531	1-216-055-11	RES-CHIP 1.8K	1/10W 4010118252	R586	Pending	METAL FILM 110K	1/4W 4257041103
			[E220/E220E]	R589	Pending	METAL FILM 10K	1/4W 4257041002
#4 R531	1-215-049-91	RES-CHIP 1K	1/10W 4010110252	#4 R590	1-247-903-81	CARBON (SMALL) 1M	1/4W 4050510555
			[E215E]	#4 R591	1-216-091-11	RES-CHIP 56K	1/10W 4010156352
#4 R532	1-260-312-51	CARBON (SMALL) 47	1/2W 4050147055	#4 R592	1-216-089-11	RES-CHIP 47K	1/10W 4010147352
R533	Pending	METAL OXIDE 1.3K	1W 4177113253	R594	Pending	RES-CHIP 120K	1/10W 4010112452
R534	Pending	METAL OXIDE 10	1W 4171010053	#4 R595	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252
#4 R535	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	R596	Pending	82K	1/10W 4010182302
#4 R536	1-216-069-11	RES-CHIP 6.8K	1/10W 4010168252	R597	Pending	CARBON (SMALL) 82	1/2W 4050182055
R537	Pending	CARBON (SMALL) 15K	1/4W 4050115355	#4 R598	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 R538	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252				[E220/E220E]
#4 R539	1-216-073-91	RES-CHIP 10K	1/10W 4010110352				



# CPD-E220/E220E/E215E



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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
#4 R599	1-227-370-11	RES-CHIP 1.82K	1/10W 419A118212	#4 R907	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255
R601 $\Delta$	1-260-132-11	CARBON (SMALL) 560K	1/2W 4050156455	#4 R908	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
R603	Pending	METAL OXIDE 30K	2W 4172030353	#4 R909	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255
R605	Pending	METAL OXIDE FILM 150K	1W 4171015456	#4 R910	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R609	1-249-422-11	CARBON (SMALL) 2.7K	1/4W 4050527255	#4 R911	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255
#4 R610	1-216-001-11	RES-CHIP 10	1/10W 4010110052	#4 R912	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
#4 R611	1-249-396-11	CARBON (SMALL) 18	1/4W 4050518055	#4 R913	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255
#4 R612	1-227-377-11	RES-CHIP 4.99K	1/10W 419A149912	#4 R914	1-244-247-11	METAL FILM 33.2	1/4W 425704329
#4 R614	1-216-361-11	METAL OXIDE 0.22	1/4W 4172022855	#4 R915	1-240-907-11	METAL FILM 30.1K	1/4W 4257043012
#4 R615	1-244-176-11	METAL FILM 1.82K	1/4W 4257041821	#4 R918	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R616	1-244-179-11	METAL FILM 3.92K	1/4W 4257043921	#4 R919	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255
#4 R618	1-216-073-91	RES-CHIP 10K	1/10W 4010110352				[E220/E220E]
#4 R619	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R920	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R620	1-215-049-91	RES-CHIP 1K	1/10W 4010110252				[E220/E220E]
#4 R621	1-216-182-11	RES-CHIP 220	1/8W 4010822152	#4 R921	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 R622	1-216-182-11	RES-CHIP 220	1/8W 4010822152	#4 R922	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R623	1-216-025-11	RES-CHIP 100	1/10W 4010110152	#4 R923	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R624	1-216-072-11	RES-CHIP 1.9K	1/10W 4010191252	#4 R924	1-215-049-91	RES-CHIP 1K	1/10W 4010110252
#4 R625	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R925	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355
#4 R626	1-216-077-11	RES-CHIP 15K	1/10W 4010115352	#4 R926	1-216-025-11	RES-CHIP 100	1/10W 4010110152
R627	Pending	RES-CHIP 4.12K	1/10W 419A141212	#4 R927	1-216-065-11	RES-CHIP 4.7K	1/10W 4010147252
#4 R628	1-247-802-11	CARBON (SMALL) 62	1/4W 4050562055	#4 R928	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
#4 R629	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R929	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
R630	Pending	RES-CHIP 3.9K	1/10W 4010139252	#4 R930	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
R631	Pending	RES-CHIP 10K	1/10W 4010110202	#4 R931	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
R632	Pending	RES-CHIP 10K	1/10W 4010110202	#4 R932	1-249-397-11	CARBON (SMALL) 22	1/4W 4050522055
#4 R640	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355	#4 R933	1-249-397-11	CARBON (SMALL) 22	1/4W 4050522055
#4 R641	1-249-413-11	CARBON (SMALL) 470	1/4W 4050547155	#4 R934	1-249-401-11	CARBON (SMALL) 47	1/4W 4050547055
#4 R642	1-249-409-11	CARBON (SMALL) 220	1/4W 4050522155	#4 R935	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
R643	Pending	RES-CHIP 115K	1/10W 419A111532	#4 R936	1-216-121-11	RES-CHIP 1M	1/10W 4010110552
R644	Pending	RES-CHIP 2.8K	1/10W 4010128202	#4 R937	1-216-017-11	RES-CHIP 47	1/10W 4010147052
#4 R648	1-260-089-11	CARBON (SMALL) 150	1/2W 4050115155	#4 R938	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
#4 R651	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	#4 R939	1-216-222-91	RES-CHIP 10K	1/8W 4010810352
R652	1-243-480-11	CARBON (SMALL) 300	1/4W 4050530155	#4 R940	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
R653	1-215-888-11	METAL OXIDE 220	2W 4172022155	#4 R941	1-216-174-11	RES-CHIP 100	1/8W 4010810152
R655	Pending	RES-CHIP 1.6K	1/10W 4010116252	#4 R942	1-216-174-11	RES-CHIP 100	1/8W 4010810152
#4 R656	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355	#4 R943	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155
#4 R658	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355	R944	Pending	RES-CHIP 470	1/8W 4010847152
#4 R659	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R945	1-216-017-11	RES-CHIP 47	1/10W 4010147052
#4 R660	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355	#4 R946	1-216-174-11	RES-CHIP 100	1/8W 4010810152
#4 R661	1-249-419-11	CARBON (SMALL) 1.5K	1/4W 4050515255	R948	Pending	RES-CHIP 1.4	1/10W 4010114202
#4 R665	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	R949	Pending	RES-CHIP 51K	1/10W 4010151352
#4 R666	1-249-419-11	CARBON (SMALL) 1.5K	1/4W 4050515255	#4 R950	1-218-769-11	RES-CHIP 510K	1/10W 4010151452
R669	Pending	CARBON (SMALL) 1	1/2W 4050110955	R951	Pending	RES-CHIP 28K	1/10W 4010128302
R670	Pending	CARBON (SMALL) 1.5M	1/4W 4050515555	#4 R952	1-216-017-11	RES-CHIP 47	1/10W 4010147052
#4 R672	1-216-128-11	RES-CHIP 2M	1/10W 4010120552	R954	Pending	RES-CHIP 10K	1/10W 4010110202
#4 R673	1-216-089-11	RES-CHIP 47K	1/10W 4010147352	#4 R955	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355
#4 R675	1-244-185-11	METAL FILM 107K	1/4W 4257041073	#4 R959		RES-CHIP 0	1/10W 4010100052
R676	Pending	RES-CHIP 0	1/8W 4010800052				[E215E]
#4 R677	1-216-121-11	RES-CHIP 1M	1/10W 4010110552	#4 R5001	1-244-194-11	METAL OXIDE 100	2W 4172010156
R678	Pending	CARBON (SMALL) 2M	1/4W 4050520555	#4 R5003	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355
#4 R902	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R5102	1-216-075-11	RES-CHIP 120K	1/10W 4010113352
#4 R903	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R5103	1-216-073-91	RES-CHIP 10K	1/10W 4010110352
R904	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155	#4 R5104	1-260-340-51	CARBON (SMALL) 10K	1/2W 4050110355
#4 R905	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R5106	1-249-413-11	CARBON (SMALL) 470	1/4W 4050547155
#4 R906	1-249-417-11	CARBON (SMALL) 1K	1/4W 4050510255	#4 R5107	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R5108	Pending	RES-CHIP 18K	1/10W 4010118302	<VARIABLE RESISTOR>			
#4 R5109	1-216-121-11	RES-CHIP 1M	1/10W 4010110552	VR501△	Pending	RES, ADJ. CERMET 50K (HV ADJ)	5.22E+11
#4 R5110	1-216-041-11	RES-CHIP 470	1/10W 4010147152	<CRYSTAL>			
#4 R5111	1-216-684-11	RES-CHIP 20K	1/10W 4010120352	X901	1-781-719-11	VIBRATOR, CRYSTAL (24MHz)	7152400010
#4 R5112	1-216-069-11	RES-CHIP 6.8K	1/10W 4010168252	*****			
R5113	Pending	RES-CHIP 51K	1/10W 4010151352	H BOARD, COMPLETE *****			
R5114	Pending	RES-CHIP 120K	1/10W 4010112452				
#4 R5115	1-216-352-51	CARBON (SMALL) 100K	1/2W 4050110455	<CAPACITOR>			
#4 R5116	1-216-352-51	CARBON (SMALL) 100K	1/2W 4050110455	C701	1-135-360-11	CERAMIC 1000pF	7181102552
R5117	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155	C702	1-135-360-11	CERAMIC 1000pF	7181102552
#4 R5118	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	<LED>			
#4 R5119	1-249-425-11	CARBON (SMALL) 4.7K	1/4W 4050547255	#4 LED701	1-517-965-11	DIODE LT5J62-23-D63 (POWER)	412065J620
#4 R5120	1-244-295-11	RES-CHIP 26.7K	1/10W 419A126722	<RESISTOR>			
#4 R5121	1-249-429-11	CARBON (SMALL) 10K	1/4W 4050510355	#4 R701	1-244-177-11	METAL FILM 2.15K	4257042151
#4 R5122	1-244-299-11	RES-CHIP 60.4K	1/10W 419A160422	R702	Pending	METAL FILM 10.2K	4257041022
R5123	Pending	RES-CHIP 10K	1/10W 4010110202	#4 R705	1-244-180-11	METAL FILM 6.19K	4257046191
R5124	1-247-807-31	CARBON (SMALL) 100	1/4W 4050510155	#4 R706	1-244-178-11	METAL FILM 3.83K	4257043831
R5125	Pending	CARBON (SMALL) 430	1/4W 4050543155	#4 R709	1-244-181-11	METAL FILM 17.4K	4257041742
R5126	Pending	RES-CHIP 1.47K	1/10W 419A114712	<SWITCH>			
R5127	Pending	CARBON (SMALL) 20	1/2W 4050120055	SW701	1-771-734-11	SWITCH, TACTILE (MENU)	4410606000
R5128	Pending	CARBON (SMALL) 36	1/2W 4050136055	*****			
#4 R5129	1-215-049-91	RES-CHIP 1K	1/10W 4010110252	<RELAY>			
#4 R5130	1-216-073-91	RES-CHIP 10K	1/10W 4010110352	RY501	1-755-423-11	RELAY	4420412016
#4 R5131	1-216-268-11	RES-CHIP 820K	1/8W 4010882452	#4 RY601△	1-775-031-11	RELAY	4420612014
#4 R5132	1-216-089-11	RES-CHIP 47K	1/10W 4010147352	<SPARK GAP>			
R5134	Pending	METAL OXIDE FILM 4.7	1W 4171247956	SG501	1-519-422-21	GAP, SPARK	5106152204
<TRANSFORMER>				<SWITCH>			
T501 △	1-453-358-11	TRANSFORMER, FLYBACK	7050307C2U	<THERMISTOR>			
#4 T502	1-435-846-11	TRANSFORMER, DRIVER	7050207C2U	TH601△	1-803-533-11	THERMISTOR	710501003B
#4 T503	1-435-845-11		7050907C2U	TH602△	1-803-963-11	THERMISTOR	7106070027
T504	1-435-844-11	TRANSFORMER, FOCUS	7050507C2U	*****			
#4 T601 △	1-435-853-11	PFC X'FORMER	7051309R00	[E220 (NH)/E220E/E215E]			
#4 T603 △	1-435-843-11	TRANSFORMER, POWER	7050107C2U	<THERMISTOR>			