

SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-43HT20	RM-Y908	US	SCC-P65C-A
KP-43HT20	RM-Y908	CAN	SCC-P65C-A
KP-53HS20	RM-Y908	US	SCC-P65D-A
KP-53HS20	RM-Y908	CAN	SCC-P65D-A
KP-53HS30	RM-Y908	US	SCC-P65A-A
KP-53HS30	RM-Y908	CAN	SCC-P65A-A
KP-61HS20	RM-Y908	US	SCC-P65E-A
KP-61HS20	RM-Y908	CAN	SCC-P65E-A
KP-61HS30	RM-Y908	US	SCC-P65B-A
KP-61HS30	RM-Y908	CAN	SCC-P65B-A

ORIGINAL MANUAL ISSUE DATE: 7/2/01

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

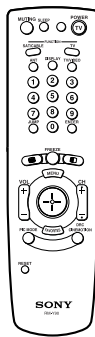
REVISION DATE	REVISION TYPE	SUBJECT
7/2/01	No revisions or updates are applicable at this time.	

TRINITRON® COLOR TELEVISION
SONY®

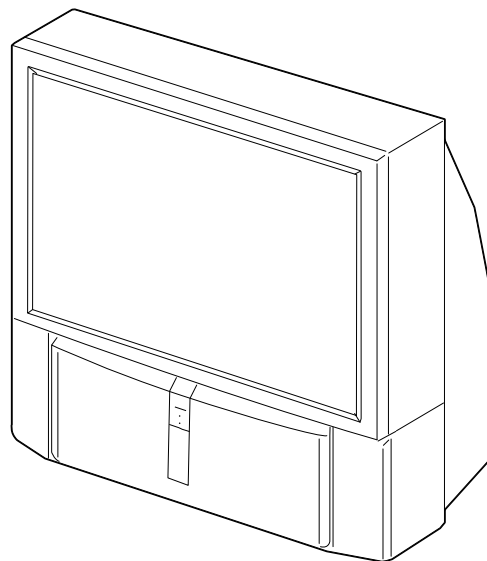
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<i>KP-43HT20</i>	<i>RM-Y908</i>	<i>US</i>	<i>SCC-P65C-A</i>	<i>KP-53HS30</i>	<i>RM-Y908</i>	<i>US</i>	<i>SCC-P65A-A</i>
<i>KP-43HT20</i>	<i>RM-Y908</i>	<i>Canadian</i>	<i>SCC-P65C-A</i>	<i>KP-53HS30</i>	<i>RM-Y908</i>	<i>Canadian</i>	<i>SCC-P65A-A</i>
<i>KP-53HS20</i>	<i>RM-Y908</i>	<i>US</i>	<i>SCC-P65D-A</i>	<i>KP-61HS20</i>	<i>RM-Y908</i>	<i>US</i>	<i>SCC-P65E-A</i>
<i>KP-53HS20</i>	<i>RM-Y908</i>	<i>Canadian</i>	<i>SCC-P65D-A</i>	<i>KP-61HS20</i>	<i>RM-Y908</i>	<i>Canadian</i>	<i>SCC-P65E-A</i>
				<i>KP-61HS30</i>	<i>RM-Y908</i>	<i>US</i>	<i>SCC-P65B-A</i>
				<i>KP-61HS30</i>	<i>RM-Y908</i>	<i>Canadian</i>	<i>SCC-P65B-A</i>



RM-Y908



KP-43HT20/53HS20/53HS30/61HS20/61HS30

COLOR REAR VIDEO PROJECTOR
SONY®

SAFETY CHECK-OUT (US model only)

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, through 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 condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna’s replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

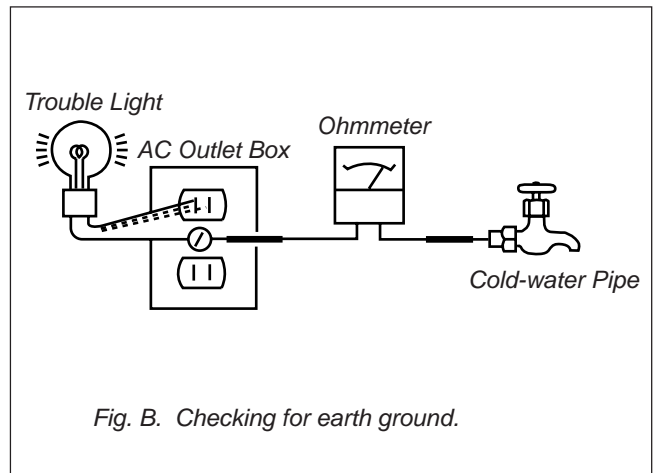
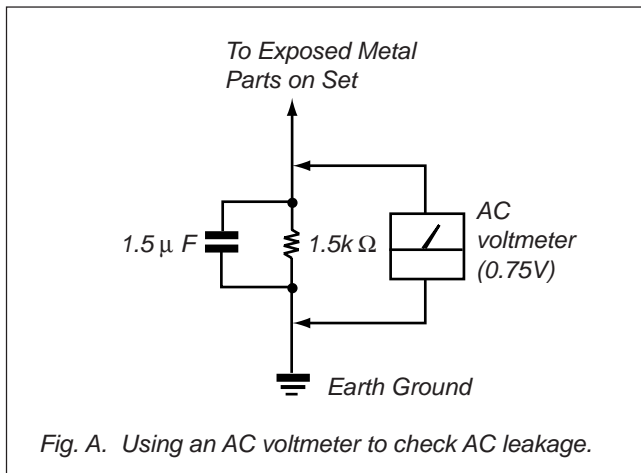
LEAKAGE TEST

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 0.5mA (500 microampers) . Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75V, 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 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)



(CAUTION)

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.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle 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)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE DELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DEPANNAGE. LE CHÂSSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE \triangle SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES CONT 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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SECTION 1

SELF DIAGNOSIS FUNCTION

1. Summary of Self-Diagnosis Function

- This device includes a self-diagnosis function.
- In case of abnormalities, the TIMER/STAND BY indicator automatically blinks. It is possible to predict the abnormality location by the number of blinks. The Instruction Manual describes blinking of the TIMER/STAND BY indicator.
- If the symptom is not reproduced sometimes in case of a malfunction, there is recording of whether a malfunction was generated or not. Operate the remote command to confirm the matter on the screen and to predict the location of the abnormality.

2. Diagnosis Items and Prediction of Malfunction Location

- When a malfunction occurs the TIMER/STAND BY indicator only blinks for one of the following diagnosis items. In case of two or more malfunctions, the item which first occurred blinks. If the malfunctions occurred simultaneously, the item with the lower blink count blinks first.
- The screen display displays the results regarding all the diagnosis items listed below. The display “ 0 ” means that no malfunctions occurred.

Diagnosis Item	No. of times TIMER/STANDBY indicator blinks	Probable Cause Location	Detected symptoms
Power does not turn on	0	• Power cord is not plugged in. • Fuse is burned out (F6001) (G board)	• Power does not come on. • No power is supplied to the unit. • AC power supply is faulty.
+B overcurrent (OCP) (See Note 1)	2 times	• H. OUT (Q8024) is shorted. (D board) • +B PWM (Q8035, 8038) is shorted. (D board)	• Power does not come on. • Load on power line is shorted.
+B overvoltage (OVP)	3 times	• IC501 is faulty (G board) • IC5002 is faulty (G board)	• Has entered standby mode.
Vertical deflection stopped	4 times	• +- 15V is not supplied. (D board) • IC8003 is faulty. (A board)	• Has entered standby state after horizontal raster. • Vertical deflection pulse is stopped. • Power line is shorted or power supply is stopped.
White balance failure (Not balanced)	5 times	• Video out (IC7101, 7201, 7301) is faulty. (CR, CG, CB board) • CRT drive (IC309) is faulty. (A board) • G2 is improperly adjusted. (See Note 2)	• No raster is generated. • CRT cathode current detection reference pulse output is small.
LOW B OCP/OVP (Overcurrent/over voltage) (See Note 3)	6 times	• +5 line is overloaded. (A, B boards) • +5 line is shorted. (A, B boards)	• No picture • No picture
Horizontal deflection stopped	7 times	• Q8035, 8038 is shorted. (D board)	
High voltage error	8 times	• T8005 is faulty. (D board)	
Audio error	9 times	• +- 19V line is shorted. (A, B boards) • IC708 is faulty. (A board) • PS701 or PS702 is opened. (A board)	• No sound

Note1: If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously. The symptom that is diagnosed first by the microcontroller is displayed on screen.

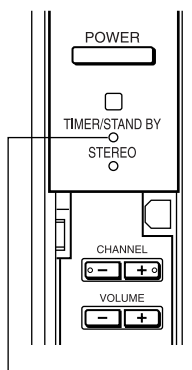
Note 2: Refer to Screen (G2) Adjustment in Section 3-1, 2 of this manual.

Note 3: If TIMER/STANDBY indicator blinks six (6) times, unplug the unit and wait 10 minutes before performing the adjustment.

3. Blinking count display of TIMER/STAND BY indicator

* One blink is not used for self-diagnosis.

< FRONT PANEL >



TIMER/STAND BY indicator

•EXAMPLE

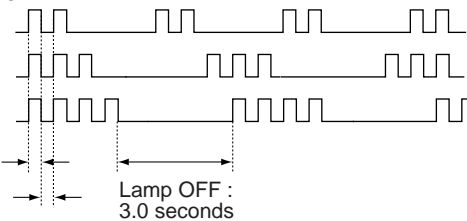
<Diagnosis Items> <Number of Blinks>

- +B overcurrent 2 times
- +B overvoltage 3 times
- Vertical deflection stop 4 times

Lamp ON : 0.3 seconds

Lamp OFF : 0.3 seconds

Lamp OFF :
3.0 seconds



Release of TIMER/STAND BY indicator blinking.

- The TIMER/STAND BY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.

4. Self-diagnosis screen displays

- In cases of malfunctions where it is not possible to determine the symptom such as when the power goes off occasionally or when the screen disappears occasionally, there is a screen display on whether the malfunction occurred or not in the past (and whether the detection circuit operated or not) in order to allow confirmation.

<Screen Display Method>

- Quickly press the remote command button in the following order from the standby state.



Be aware that this differs from the method of entering the service mode (volume +).

Self-diagnosis screen display

SELF DIAGNOSIS		
2 : +B OCP	N/A	Numeral "0" means that no fault was detected.
3 : +B OVP	N/A	
4 : V STOP	0	Numeral "1" means a fault was detected one time or more
5 : AKB	1	
10 : WDT	24	

5. Self-Diagnosis Screen Display

- The results display is not automatically cleared. In case of repairs and after repairs, check the self-diagnosis screen and be sure to return the results display to "0".
- If the results display is not returned to "0" it will not be possible to judge a new malfunction after completing repairs.

<Method of Clearing Results Display>

1. Power off (Set to the standby mode)
2. DISPLAY → Channel 5 → VOL + → POWER (Service Mode)
3. Channel 8 → ENTER (Test reset = Factory preset condition)

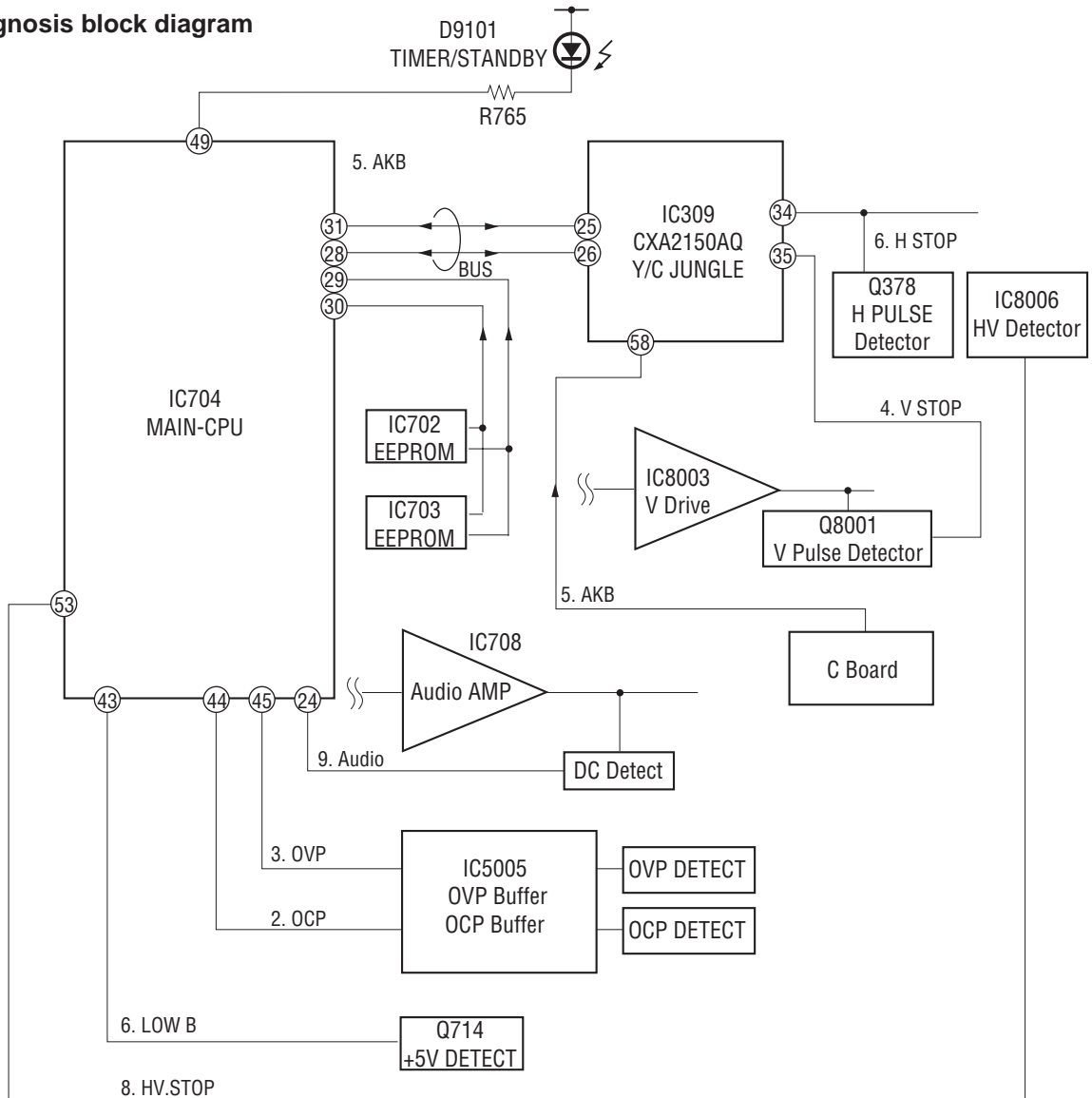
<Method of Ending Self Diagnosis Screen>

- When ending the self-diagnosis screen completely, turn the power switch OFF on the remote commander or the main unit.

6. Self-diagnosis function operation

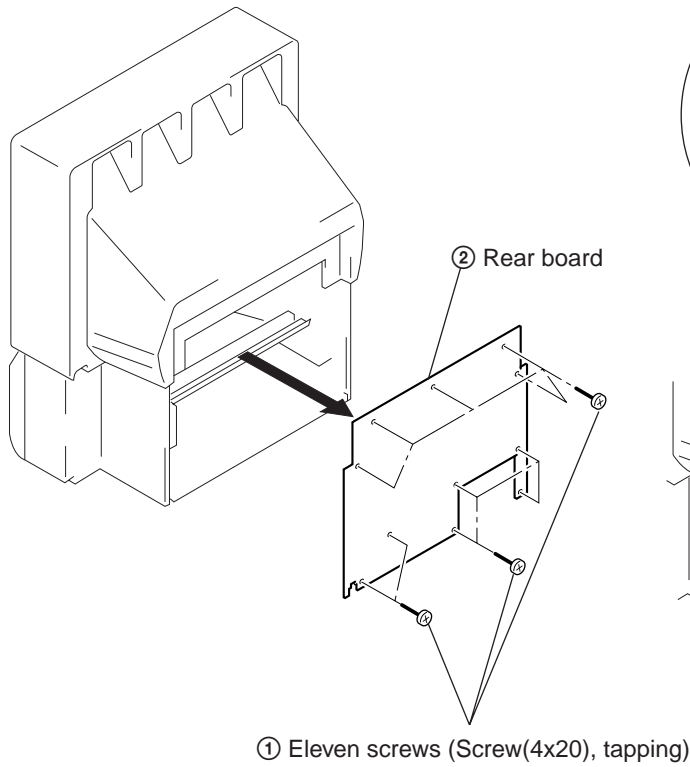
- OCF** Low B and +B line detect DET SHORT, and shut-down POWER ON RELAY.
 Reset by turning power on/off.
 In case of +B is loaded approx. 1.5A or more, microcomputer detects it via IC5005
- OVP** In case of +B becomes approx. 150V or more, POWER ON RELAY shuts down and microcomputer detects it via IC5005.
 Reset by turning power on/off just the same as OCP.
- Low B** Occurs when set +5V is out
- V Stop** In case of V Drive disappeared, Q8001 detects it and shut-down POWER ON RELAY. Microcomputer detects it and makes LED blinking.
- AKB** IK detection. Makes LED blinking in case of microcomputer doesn't detect IK returns of IC309 (CXA2150AQ) 20 seconds or more.
- H Stop** In case of H DRIVE is disappeared, Q378 detects it and shut-down POWER ON RELAY shuts down.
 Microcomputer receives H Stop data from Q378 and makes LED blinking.
- HV Stop** In case of HV becomes 33KV or more. IC8006 detects it and shut-down POWER ON RELAY. Microcomputer makes LED blinking.
- Audio** In case of DC component overlaps the output of Audio Amp., POWER ON RELAY shuts down.
 Microcomputer detects it and makes LED blinking.

Self-diagnosis block diagram

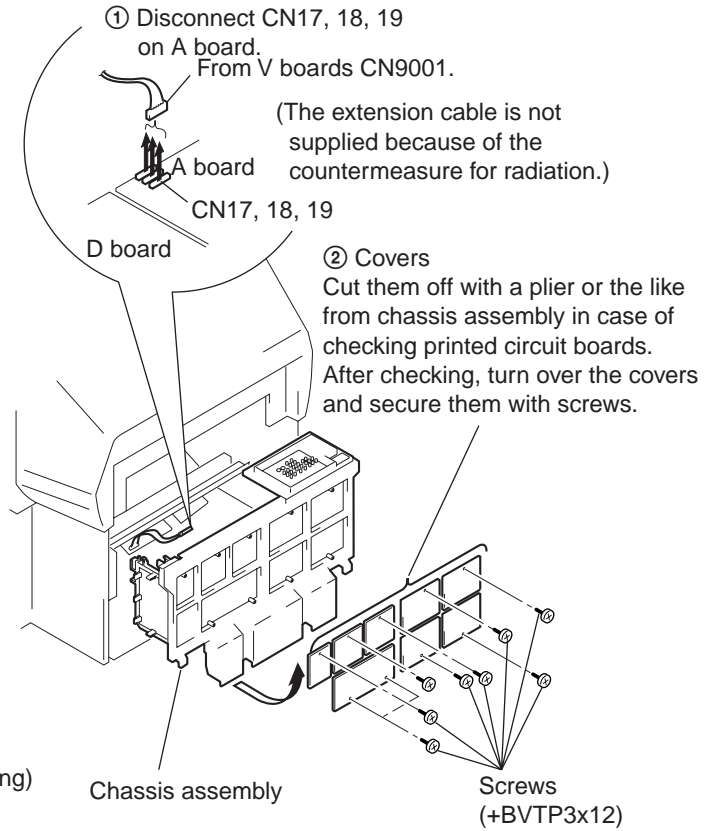


SECTION 2 DISASSEMBLY

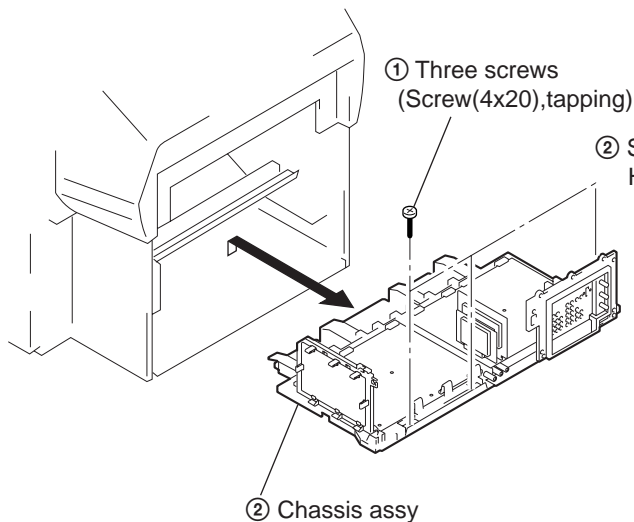
2-1. REAR BOARD REMOVAL



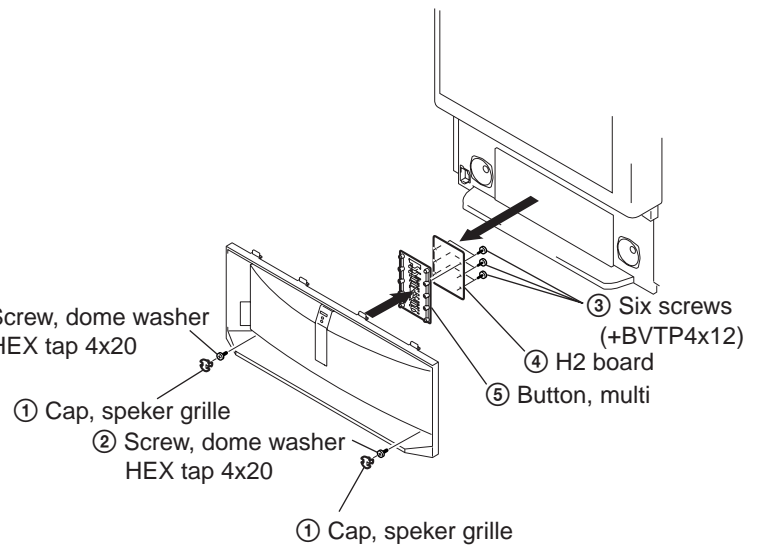
2-3. SERVICE POSITION



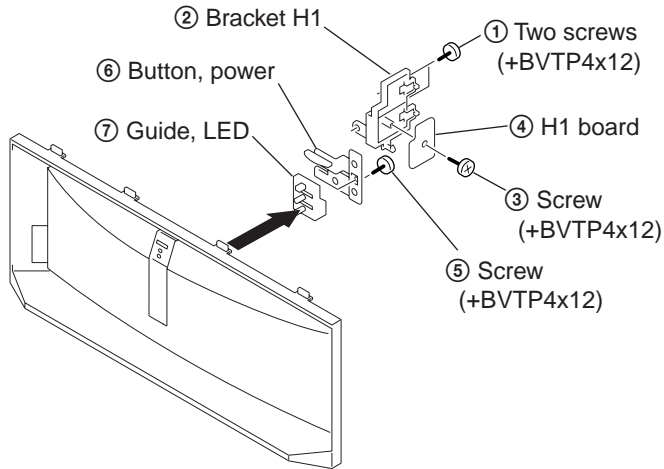
2-2. CHASSIS ASSY REMOVAL



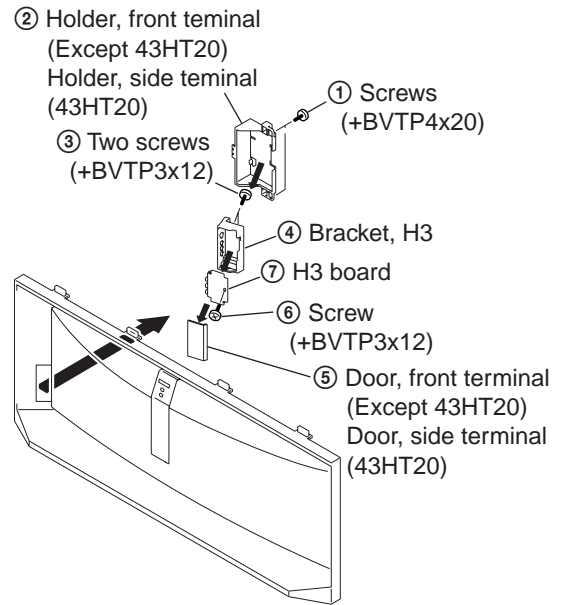
2-4. H2 BOARD REMOVAL



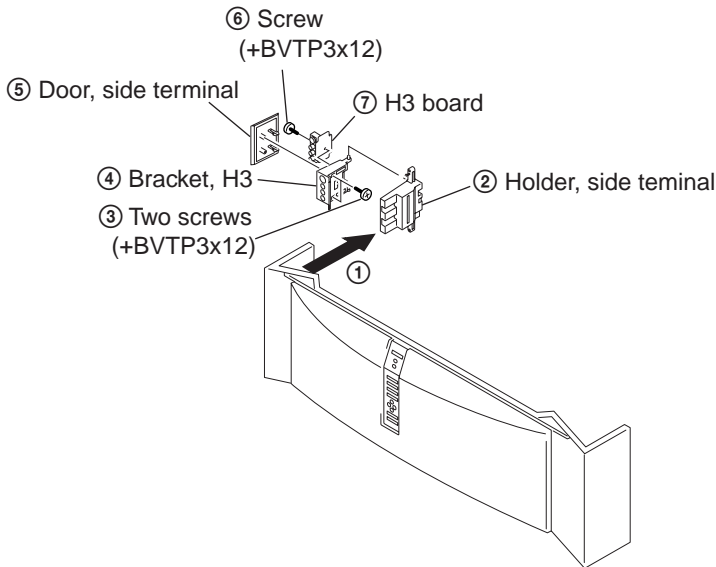
2-5. H1 BOARD REMOVAL



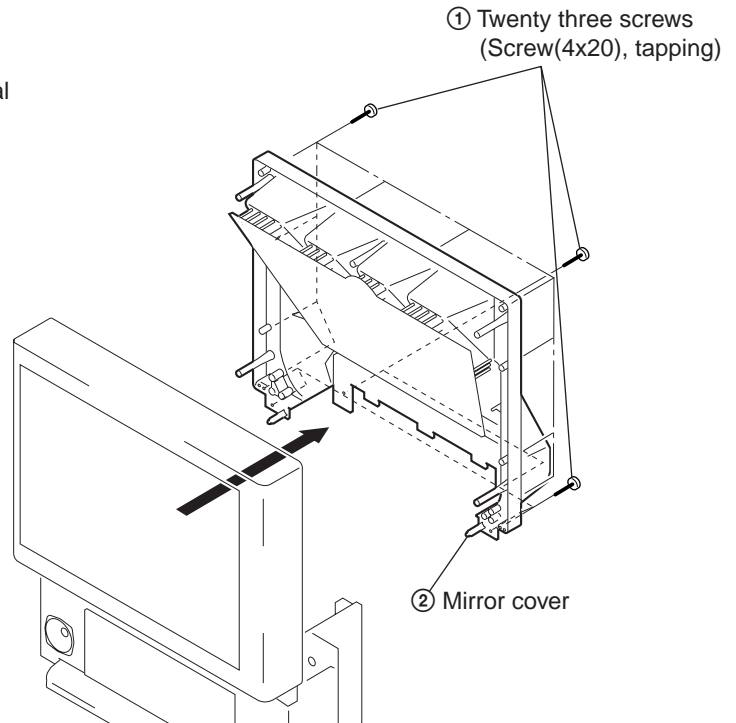
**2-7. H3 BOARD REMOVAL
 (KP-53HS20/53HS30/61HS20/61HS30)**



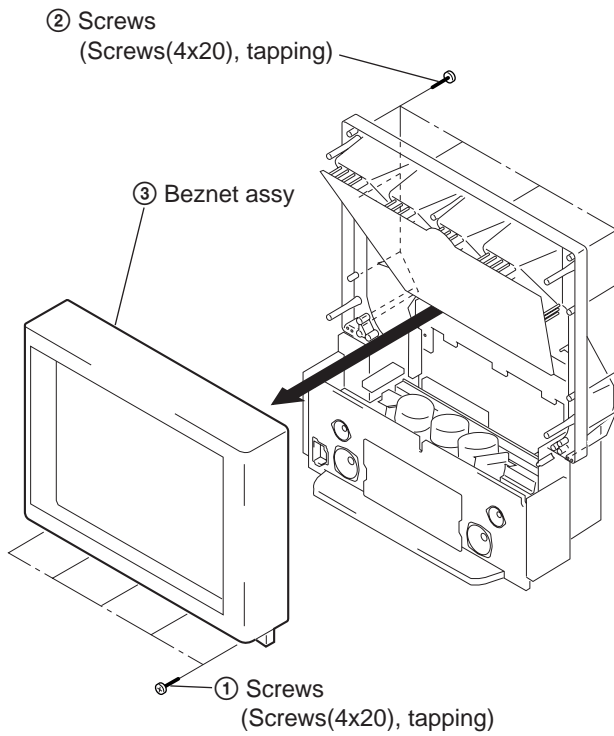
2-6. H3 BOARD REMOVAL (KP-43HT20)



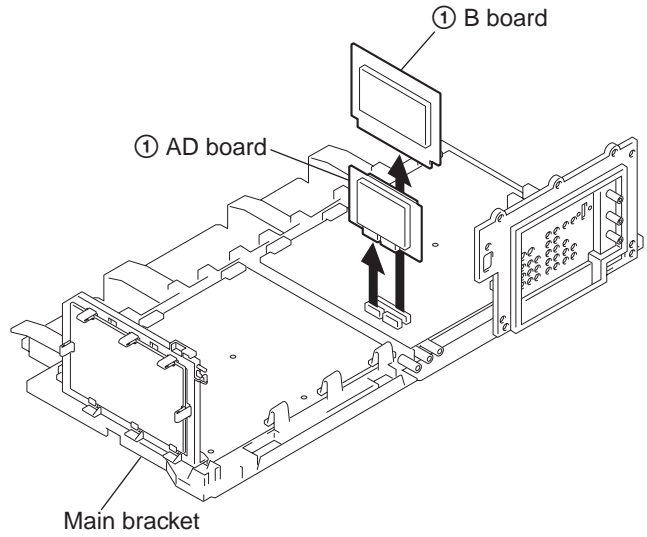
2-8. MIRROR COVER REMOVAL



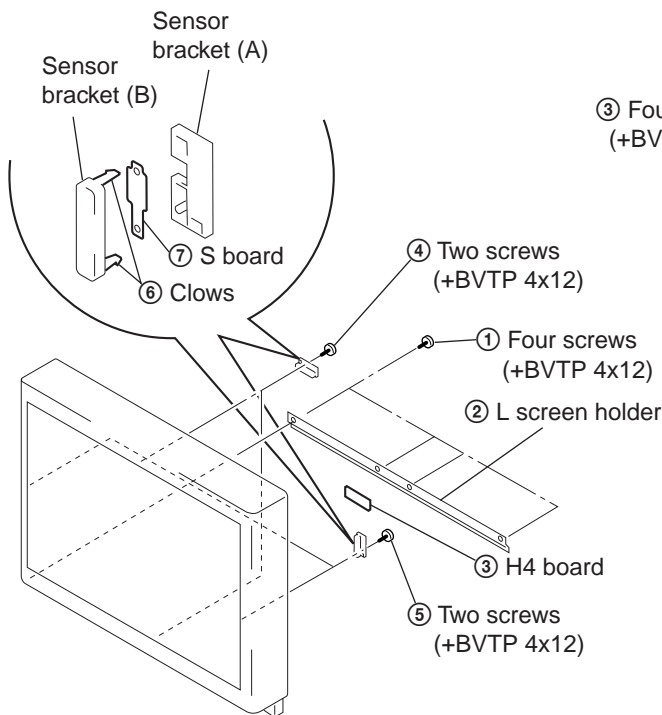
2-9. BEZNET ASSY REMOVAL



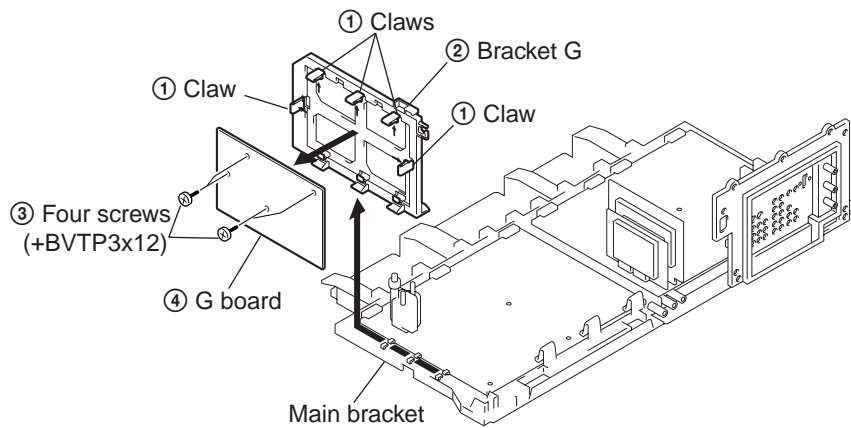
2-11. AD BOARD AND B BOARD REMOVAL



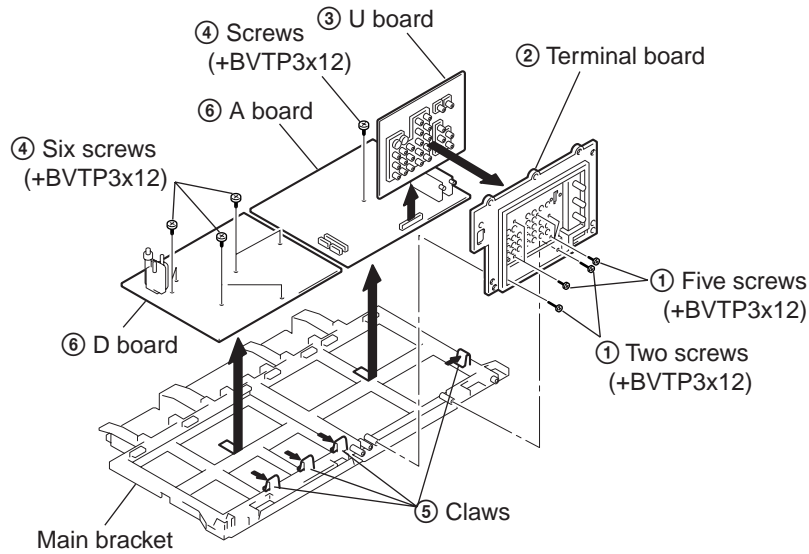
2-10. H4 BOARD AND S BOARD REMOVAL



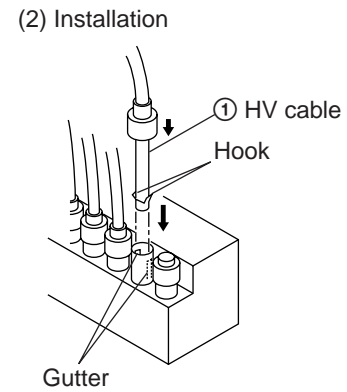
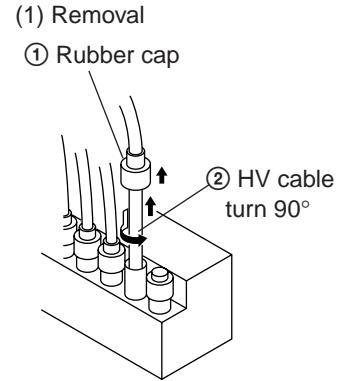
2-12. G BOARD REMOVAL



2-13. A BOARD, D BOARD AND U BOARD REMOVAL

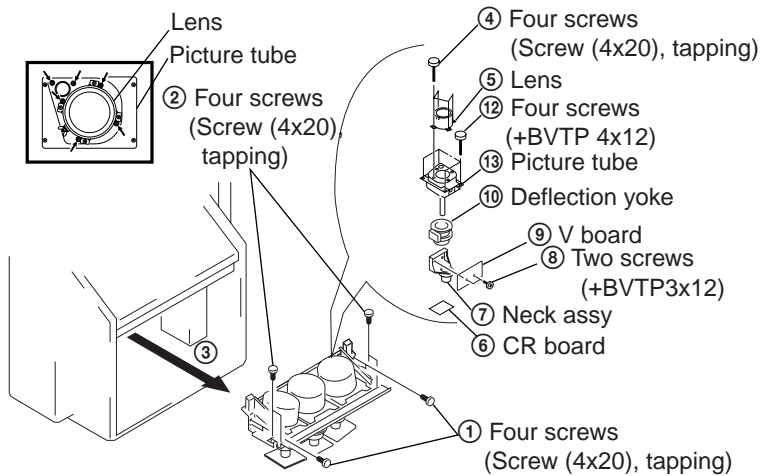


2-15-. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL



2-14. PICTURE TUBE REMOVAL

CAUTION: Removing the arrow-marked screws is strictly prohibited. If removed, it may cause liquid spill.

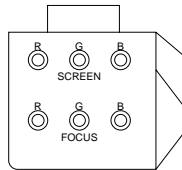


SECTION 3

SET-UP ADJUSTMENTS

3-1. SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)

1. Receive the Monoscope signal.
2. Set 50% BRIGHTNESS and minimum PICTURE.
3. Turn the red VR on the FOCUS block all the way to the left and then gradually turn it to the right until the point where you can see the retrace line.
4. Next gradually turn it to the left to the position where the retrace line disappears.



FOCUS block

Fig. 3-1

3-2. SCREEN (G2) ADJUSTMENT (FINE ADJUSTMENT)

Fine Mode is recommended to set screen controls to their optimal condition. It is necessary to build the simple jig, illustrated below, using 3-watt resistors. Please note, that if the proper voltage is not obtained with their listed values, resistors, then please increase or decrease one of the values in the resistor network to obtain the correct voltage.

1. Select VIDEO1 mode without signals.
2. Connect G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP7101(KR), TP7202(KG) and TP7301(KB) of CR board, CG board and CB board.
5. Adjust R, G and B screen voltage to $170 \pm 0.5V$ with screen VR on the Focus block.

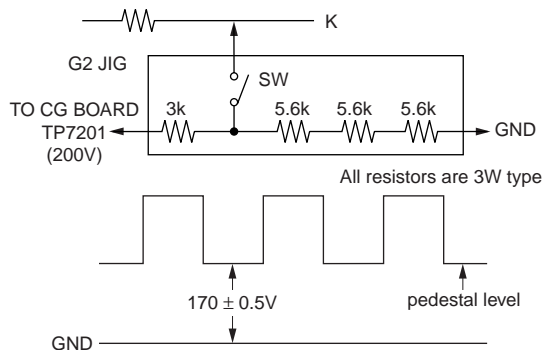


Fig. 3-2

3-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope pattern to Video 1 input.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Loosen the deflection yoke set screw and align the tilt of the Deflection Yoke so that the bars at the center of the monoscope pattern are horizontal.
4. After aligning the deflection yoke, fasten it securely to the funnel-shaped portion (neck) of the CRT.
5. The tilt of the deflection yoke for red is aligned in the mode Cover the both green and blue picture lenses with the lens caps and the tilt of the deflection yoke for blue is aligned with in

the mode Cover the both green and red picture lenses with the lens caps is aligned the same as was done for green.

Note: Instead of items 2 and 5, you can cut off the unnecessary color beams by controlling the service mode CXA2150P-2 0 RGBS.

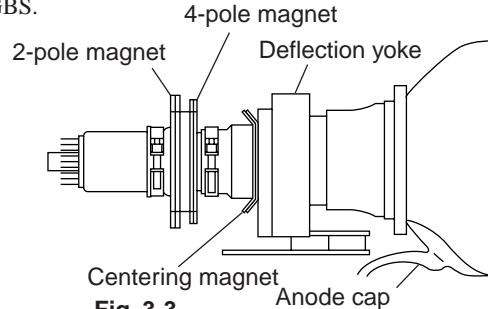


Fig. 3-3

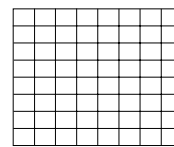
3-4. FOCUS LENS ADJUSTMENT

In this adjustment, use the remote commander in the service mode.

For details of the usage of the service mode and the remote commander, please refer the item 3-9. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER.

1. Loosen the lens screw.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
4. Tighten the lens screw.
5. Cover the both green and blue picture lenses with the lens caps to show only the red color.
6. Adjust red CRT lens just the same as green.
7. Cover the both green and red picture lenses with the lens caps to show only the blue color.
8. Adjust blue CRT lens just the same as green.
9. After adjusting the items 3-5. Focus VR Adjustment, 3-6. 2-Pole Magnet Adjustment and 3-7. 4-Pole Magnet Adjustment, adjust again to the optimum focus point.

*: Every time you press 6, the test signal changes to "crosshatch+video signal" - "crosshatch+borderline(black)" - "crosshatch(black)" - "dots(black)" - off.



Test signal

Fig. 3-4

Note: Instead of items 2, 5 and 7, you can cut off the unnecessary color beams by controlling the service mode CXA2150P-2 0 RGBS.

3-5. FOCUS VR ADJUSTMENT

1. Set generator to crosshatch.
2. Cover the both red and blue picture lenses with the lens caps to show only the green color.
3. Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
4. Cover the both green and blue picture lenses with the lens caps to show only the red color.
5. Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
6. Cover the both green and red picture lenses with the lens caps to show only the blue color.
7. Turn the blue focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
8. After adjusting the items 3-4. Focus Lens Adjustment, 3-6. 2-Pole Magnet Adjustment and 3-7. 4-Pole Magnet Adjustment, adjust again to the optimum focus point.

Note: Instead of items 2, 4 and 6, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

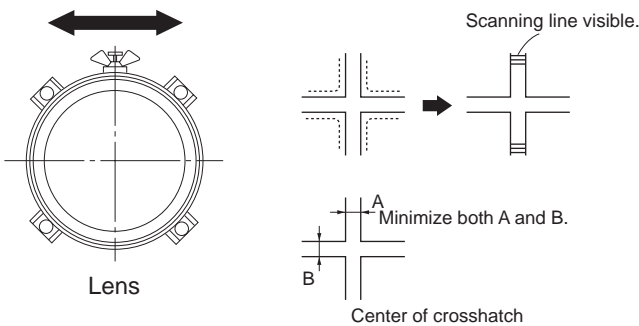


Fig. 3-5

Fig. 3-6

3-6. 2-POLE MAGNET ADJUSTMENT

1. Set the picture mode to "Pro" and picture to MAX.
2. Receive the Dot signal.
3. Cover the both red and blue picture lenses with the lens caps to show only the green color.
4. Turn the green focus VR on the focus block to the left and set to overfocus to enlarge the spot.
5. Adjust 2-pole magnet so that the bright spot should be centered.
6. Align the green focus VR and set for just (precise) focus.
7. Perform the same alignment for red and blue.

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

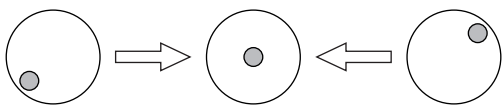


Fig. 3-7

3-7. CENTERING MAGNET ADJUSTMENT

1. Set the picture mode to "Pro".
2. Receive the monoscope signal.
3. Cover the both red and blue picture lenses with the lens caps to show only the green color.
4. Adjust the green centering magnet to put the center of the monoscope signal to the center of the screen.
5. Adjust the red centering magnet in the same way.
6. Adjust the blue centering magnet in the same way.

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3-8. 4-POLE MAGNET ADJUSTMENT

1. Set the picture mode to "Pro" and picture to MAX.
2. Receive the Dot signal.
3. Cover the both red and blue picture lenses with the lens caps to show only the green color.
4. Turn the green focus VR on the focus block to the right and set the spot will become smaller.
5. Adjust the 4-Pole Magnet so that the spot becomes round for green and red.
6. Adjust blue spot to an oval shape X:Y=1:1.4 ~ 1.5.

Note: Instead of item 2 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

Use the center dot

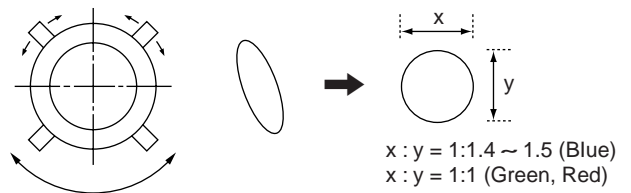


Fig. 3-8

3-9. DEFOCUS ADJUSTMENT (BLUE)

Note: Please adjust the blue dot to be slightly larger than red and green dots. This adjustment provides a more pleasing picture to the customer.

1. Select the picture mode to "Pro".
2. Receive the Dot signal.
3. Cover the both red and green picture lenses with the lens caps to show only the blue color.
4. Turn the blue focus VR on the focus block to right to make the round dot elipical.
5. Check flare with high luminance signal, make sure flare is minimal while dot shape is elipical.
6. Set generator to all white signal and check uniformity.

Note: Instead of item 3 you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3-10.ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

By using Remote Commander (RM-Y908),all circuit adjustments can be made.

NOTE : Test Equipment Required.

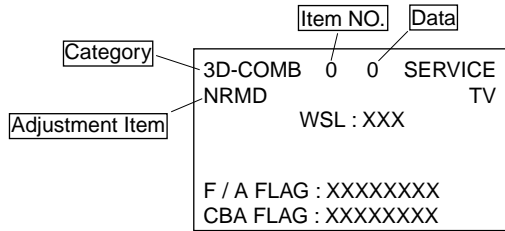
1. Pattern Generator (with component outputs)
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

1. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

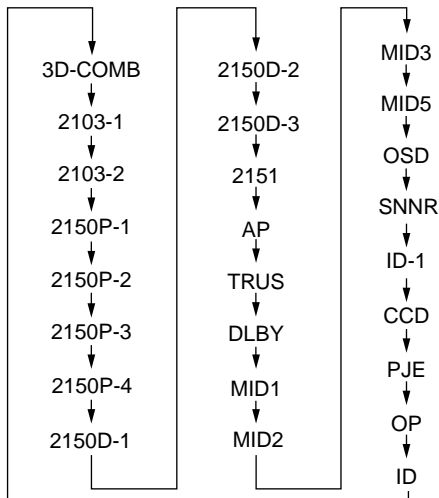
1. Standby mode. (Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **TV POWER** on the Remote Commander.
 (Press each button within a second.)

SERVICE MODE ADJUSTMENT



3. The SCREEN displays the item being adjusted.
4. Press **1** or **4** on the Remote Commander to select the adjustment item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **2** or **5** on the Remote Commander to select the category.

Every time you press 2(Category up), Service mode changes in the order as shown below.

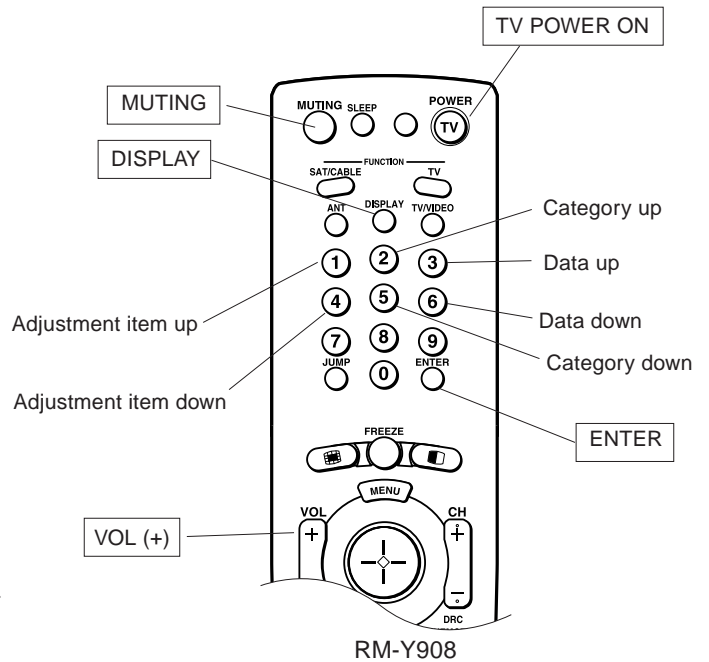


7. If you want to recover the latest values press **0** then **ENTER** to read the memory.
 8. Press **MUTING** then **ENTER** to write into memory.
 9. Turn power off.
- Note: Press **8** then **ENTER** on the Remote Commander to initialize or turn set off and on to exit.

2. MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn power off with the remote commander.
2. Turn power on and set to Service Mode.
3. Call the adjusted items again and confirm they were adjusted.

3. ADJUSTING BUTTONS AND INDICATOR



Note : When the PJE mode is activated, which displays an internally generated signal, several buttons on the remote commander will have different functions than listed above. Therefore, when in the PJE mode, refer to page 26 for button functions.

4. SERVICE MODE LIST

Note: • [shaded] items are fixed. There is no need to change data. Others are different a little in the sets individually. Basically, there is no need to change data, too.

3D-COMB upD64082

Reg.No & Name	FUNCTION	UHF/VHF & Video		SVideo	
		Standard	Non-standard	Standard	Non-standard
0	NRMD	0	1	3	3
1	YAFPS	3	*		
2	CLKS	1	*		
3	NSDS	0	*		
4	MSS	0	*		
5	KLS	1	*		
6	CDL	3	3		
7	DYCO	NRMD=0	NRMD=1	NRMD=2	NRMD=3
8	DYGA	2	2	2	2
9	DYCO	10	10	10	10
10	DCGA	5	5	5	5
11	YNRL	5	5	5	5
12	CNRL	1	*		
13	VTRH	UHF/VHF	Video L-4	Video5&6	
14	VTRR	1	1	1	
15	LDSR	1	1	1	
16	VAPG	VM=off	VM=Low	VM=Mid	VM=High
17	VAPI	0	0	0	0
18	YPET	0	0	0	0
19	YPFG	3	SNNR=0	SNNR=1	SNNR=2
20	YHCO	9	0	1	2
21	YHCG	0	SNNR=0	SNNR=1	SNNR=2
22	HSSL	1	1	1	1
23	VSSL	12	*		
24	ADCL	3	*		
25	D2GA	NRMD=0	NRMD=1	NRMD=2	NRMD=3
26	KLR	4	4	4	4
	KLR	3	*		

Note: * shows common data.

Note: YHCO & YHCG are defined directly by SNNR data.

3D-COMB upD64082

Reg.No & Name	FUNCTION	UHF/VHF		SVideo		CVideo		CVideo	
		Standard	Non-standard	Standard	Non-standard	Standard	Non-standard	Standard	Non-standard
27	OP	1	*						
28	NR1	UHF/VHF	CVideo	SVideo1	CVideo1	SVideo2	CVideo2	SVideo3	CVideo3
29	NR2	0	0	1	1	0	1	0	0
30	WSI	0	*						
31	HPLL	0-255	Recd Data						
32	BPPL	1	*						
33	FSCF	0	*						
34	PLLF	1	*						
35	CC3N	UHF/VHF	Video L-4	Video5&6					
36	HDP	5	0	0	0				
37	BGPS	4	*						
38	BGPW	10	*						
39	TEST	0	*						
40	WSC	1	*						
41	LIND	UHF/VHF & Video L-4	Video L-4	Video5&6					
42	PFGO	3	0	2					
#16	VAPG	SNNR=0	SNNR=1	SNNR=2	SNNR=3				

NTSC-YCT (Chroma Decoder) CXA2103-1 (Main)

Reg.No & Name	FUNCTION	UV & Video		YCBCr-480i		SVideo		YCBCr-480i		SNNR=0		SNNR=1		SNNR=2		SNNR=3	
		P&P Left (M)-DRC	YCKG-480i (M)-DRC	P&P Left (M)-DRC	P&P Left (M)-DRC	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video
0	YLEV	34	40	34	40	34	40	34	40	34	40	34	40	34	40	34	40
1	CLEV	27	31	27	31	27	31	27	31	27	31	27	31	27	31	27	31
2	SCON	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)
3	SCOL	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)
4	SHUE	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)
5	YDLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	SHAP	6	4	6	4	6	4	6	4	6	4	6	4	6	4	6	4
7	SHFO	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
8	PREO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	BPFO	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0
10	BPFO	0	3	0	3	0	3	0	3	0	3	0	3	0	3	0	3
11	BPSW	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
12	TRAP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	LPF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
14	AFCG	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video
15	CDMD	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
16	SSMD	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
17	HMSK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	HALI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
19	PPHA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	CBOF	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i
21	CROF	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
22	ATPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	DCTR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NTSC-YCT (Chroma Decoder) CXA2103-2 (Sub)

Reg.No & Name	FUNCTION	UV & Video		P&P & Favorite		P&P & Favorite		P&P & Favorite		P&P & Favorite		P&P & Favorite		P&P & Favorite		P&P & Favorite	
		P&P Right (S)-DRC	P&P Right (S)-DRC	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video
0	YLEV	34	38	34	38	34	38	34	38	34	38	34	38	34	38	34	38
1	CLEV	27	31	27	31	27	31	27	31	27	31	27	31	27	31	27	31
2	SCON	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)
3	SCOL	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)
4	SHUE	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)	ADI (7)
5	YDLY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	SHAP	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
7	SHFO	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
8	PREO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	BPFO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	BPFO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	BPSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	TRAP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	LPF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	AFCG	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video	UHF/VHF	Video
15	CDMD	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
16	SSMD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	HMSK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
18	HALI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	PPHA	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
20	CBOF	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i	UHF/VHF	YCKG-480i
21	CROF	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
22	ATPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	DCTR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Reg.No 14 to 19 are the same data as CXA2103-1. (the same NVM address)

Note: Reg.No 22 and 23 are the same data as CXA2103-1. (the same NVM address)

CRT Driver CXA2150P-1 (Picture Controls:P1)

Reg.No & Name	FUNCTION	UHF/VHF	CV	SV	YCrCb480i	YCrCb480P	YCrCb1080i	P&P
0	SBOF Offset for SBRT	0	0	0	7	7	7	7
1	YOFF Y OFFSET: DC-offset for Y signal	0	0	0	0	0	0	0
2	CB OFF CB OFFSET:DC-offset for Cb signal	35	35	35	37	40	31	35
3	CR OFF CR OFFSET:DC-offset for Cr signal	36	36	36	39	41	31	36
4	SBRT SUB_BRT: Sub Bright	ADJ (24)	*	*	*	*	*	*
5	RDRV R_DRIVE: R output drive	ADJ (31)	*	*	*	*	*	*
6	GDRV G_DRIVE: G output drive	41	*	*	*	*	*	*
7	BDRV B_DRIVE: B output drive	ADJ (31)	*	*	*	*	*	*
8	RCUT R_CUTOFF: R output cutoff	ADJ (31)	*	*	*	*	*	*
9	GCUT G_CUTOFF: G output cutoff	31	*	*	*	*	*	*
10	BCUT B_CUTOFF: B output cutoff	ADJ (31)	*	*	*	*	*	*
11	WBSW WB SW	Vivid (Cool) 0 (no memory)	Std (Neutral) 0 (no memory)	Movie (Warm) 0 (no memory)	Pro 0 (no memory)	0 (no memory)	0 (no memory)	0 (no memory)
12	SBOF Offset for SBRT	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63 (no memory)
13	RDOF Offset for RDRV	63	63 (no memory)	66	63 (no memory)	66	63 (no memory)	63 (no memory)
14	GDOF Offset for GDRV	63	63 (no memory)	66	63 (no memory)	66	63 (no memory)	63 (no memory)
15	BDOF Offset for BDRV	68	63 (no memory)	56	63 (no memory)	63	63 (no memory)	63 (no memory)
16	RCOF Offset for RCUT	63	63 (no memory)	64	63 (no memory)	64	63 (no memory)	63 (no memory)
17	GCOF Offset for GCUT	63	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63 (no memory)
18	BCOF Offset for BCUT	64	63 (no memory)	63	63 (no memory)	63	63 (no memory)	63 (no memory)

CRT Driver CXA2150P-2 (Picture Controls:P2)

Reg.No & Name	FUNCTION	UHF/VHF	CV	SV	YCrCb480i	YCrCb480P	YCrCb1080i	P&P
0	ALBK PIC_ON	1	*	*	*	*	*	*
1	RGBB R_ON/G_ON/B_ON: R/G/B outputs on/off	7	*	*	*	*	*	*
2	BLKB BLK_BFM: RGB output bottom limit level (Black level)	3	*	*	*	*	*	*
3	LIML PLIMIT_LEV: Threshold level for excessively high inputs	0	*	*	*	*	*	*
4	PABL P_ABL: DC-level in RGB output detection for PEAK ABL	15	*	*	*	*	*	*
5	SABL S_ABL: S ABL gain	0	*	*	*	*	*	*
6	AGING AGING_W/AGING_B: AGING W/AGING B modes on/off	0	*	*	*	*	*	*
7	AKROF AKROFF: Automatic/Manual = Cut off setting	UHF/VHF_V1_4	YCrCb480i	YCrCb480P	YCrCb1080i	YCrCb480P	YCrCb1080i	P&P
8	SYPH SYNG PHASE: Hsync delay with respect to Video (100% H-period)	0	0	0	0	0	0	0
9	CLPH CLP PHASE: Internal clamp pulse phase (100% H-period)	3	3	3	3	3	3	3
10	CLGA CLP GATE: Switch for the gated internal clamp pulse with Hsync	0	0	0	0	0	0	0
11	JAXS JAXIS: color axis switch	0	*	*	*	*	*	*
12	BLKO BLKO: Blanking switch	0	*	*	*	*	*	*

CRT Driver CXA2150P-3 (Picture Controls:P3) (Part1)

Reg.No & Name	FUNCTION	Vivid	UHF/VHF	CV	SV	YCrCb480i	YCrCb480P	YCrCb1080i	P&P
0	SYSM SYSTEM: Signal bandwidth setting	1	1	1	1	1	1	1	2
1	UVML VM_LEV: VM OUT level	3	3	3	3	2	2	3	3
2	VMMO System Micro pin#40	1	1	1	1	1	1	1	0
3	VMCR VM_COR: VM OUT coring level	0	0	0	0	1	1	3	3
4	VMLM VM_LMT: VM OUT limit level	3	3	3	3	3	3	3	3
5	VMFO VM_F0: VM F0	2	2	2	2	2	2	2	2
6	VMDI VM_DLYVM_OUT: phase defined by phase difference from R_OUT	2	2	2	2	2	2	2	1
7	SHOF Offset for USHP-SHOF x 4	0	0	0	0	0	0	0	3
8	SHFO SHF_F0: Sharpness circuit f0	1	1	1	1	1	1	1	1
9	PROV PREOVER: Y signal pre-over-shoot ratio	1	0	0	0	0	0	0	0
10	FLV SHF_F1: Sharpness for higher f0 (42.5.6MHz @ NORMAL mode)	3	3	3	3	3	3	3	3
11	CDSP SHF_CD: Sharpness in part of high color saturation	3	3	3	3	3	3	3	3
12	LTLV LTI_LEV: Luminance transient improvement (LTI)	3	3	3	3	3	3	3	3
13	LTM0 LTI_MODE: LTI mode setting	0	0	0	0	0	0	0	1
14	CTLV CTI_LEV: Chrominance transient improvement (CTI)	0	0	0	0	0	0	0	0
15	CTMD CTI_MODE: CTI mode setting	0	0	0	0	0	0	0	0
16	UBOF Offset for UBERT (Picture clarity adjustment)	0	0	0	0	0	0	0	0
17	UCOF Offset for UCOL=UCOF x 2 (Picture clarity adjustment)	3	3	3	3	3	3	3	2
18	UHOF Offset for UHUE (Picture clarity adjustment)	0	0	0	0	0	0	0	0
19	MIDE MID enhancement setting	3	1.5	1.5	1.5	7	11	7	0

CRT Driver CXA2150P-3 (Picture Controls:P3) (Part2)

Reg.No & Name	FUNCTION				Standard				Movie				Pro									
	UHF VHF	CV	SV	YCBCr 480P	YCBCr 480P	YCBCr 1080i	P&P	UHF VHF	CV	SV	YCBCr 480i	YCBCr 480P	YCBCr 1080i	P&P	UHF VHF	CV	SV	YCBCr 480i	YCBCr 480P	YCBCr 1080i	P&P	
#0	SYSTEM	1	1	1	1	1	2	1	1	1	1	1	2	2	1	1	1	1	1	1	2	2
#1	UVABL	2	2	2	2	3	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
#2	VMMALO	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#3	VMCR	0	0	0	0	1	1	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
#4	VMLM	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
#5	VMFO	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
#6	VMDL	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
#7	SHOF	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
#8	SHFO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
#9	PROV	1	0	0	0	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
#10	FLV	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
#11	CDSP	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#12	LTLV	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#13	LTMID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
#14	CTLV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#15	CTMD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#16	UBOF	15	15	15	15	12	12	4	4	4	4	4	4	4	7	7	7	7	7	7	7	7
#17	UCOF	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#18	UHOF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
#19	MIDE	2	14	14	6	10	-	-	1	13	13	5	9	-	0	12	12	4	8	-	-	-

CRT Driver CXA2150P-3 (Picture Controls:P3) (Part3)

Reg.No & Name	FUNCTION	SNNR=0	SNNR=1	SNNR=2	SNNR=3
#1	UVABL	0	0	0	0
#3	VMCR	0	+1	+2	+3
#10	FLV	0	-1	-2	-3
#11	CDSP	0	0	0	0
#12	LTLV	0	0	0	0
#14	CTLV	0	0	0	0
#19	MIDE	0	0	0	0

CRT Driver CXA2150P-4 (Picture Controls:P4)

Reg.No & Name	FUNCTION	Vivid	Standard	Movie	Pro
0	UPIC	63	44	31	31
1	UBRT	26	31	31	31
2	UCOL	31	31	31	31
3	UHUE	31	31	31	31
4	USHP	32	40	31	31
5	UTMP	2	1	0	1
6	UDCL	2	2	0	0
7	COL AXIS: color matrix setting	UHF/VHF V1-4	YCBCr480i	YCBCr480P	YCBCr1080i
		0	0	0	0
8	GAMMA GAMMA L: RGB output GAMMA connection setting	UHF/VHF V1-4	YCBCr480i	YCBCr480P	YCBCr1080i
9	GAMMA GAMMA L (AV Pro user control) - Void Data	5	4	4	5
10	GSRO	UGAM40	UGAM-1	UGAM-2	UGAM-3
11	GCOC	0	0	0	0
12	GHFO	0	0	0	0
13	UBLK	UHF/VHF V1-4	YCBCr480i	YCBCr480P	YCBCr1080i
14	ABLK	7	6	6	6
15	DCTR	UBLK0	UBLK1	UBLK2	UBLK3
16	DPIC	1	1	1	2
17	DSRO	0	1	2	1
18	ABLAM	7	7	7	7
19	ABLT	0	0	0	0
20	EPOF	Full	Vcomp 1 & 2		
21	SPOF	0	15		
22	SCON	UBLK0	UBLK1	UBLK2	UBLK3
23	CLOF	1	1	1	2
24	HUOF	0	1	2	1
25	UDSW	7	7	7	7
26	DATA	Full	Vcomp 1	Vcomp 2	

Note: Full: 4:3
 Vcomp1 : 480p-960i, 16:9
 Vcomp2 : 1080i, 16:9

CRT Driver CXA2150P-4 (Picture Controls:P4)

Reg.No & Name	FUNCTION	SNMR	SNMR	SNMR	SNMR	Picture Mode : Standard				Picture Mode : Movie				Picture Mode : Pro							
		=0	=1	=2	=3	UHF	YCBCr	YCBCr	YCBCr	P&P	UHF	YCBCr	YCBCr	YCBCr	P&P	UHF	YCBCr	YCBCr	YCBCr	P&P	
#4	USHP	0	1	3	4	V1_4	480i	480P	1080i		V1_4	480i	480P	1080i		V1_4	480i	480P	1080i		
#8	UGAM	2	2	2	1	1					0	0	0	0	0	0	0	0	0	0	0
#13	UBLK	5	3	3	3	3					2	2	0	0	0	2	2	0	0	0	0

CRT Driver CXA2150D-1 (Deflection Controls:D1)

Reg.No & Name	FUNCTION	Full	Vcomp1	Vcomp2
0	V POSITON: Vertical position (V DRV signal DC bias)		ADI (31)	
1	V SIZE: Vertical size (V DRV signal gain)		ADI (50)	
2	V SIZE OFFSET		0	
3	V LINEARITY: Vertical linearity		5	
4	V CORRECTION: Vertical S-correction		8	
5	V CORRECTION: Vertical center adjustment		31	
6	V PIN: Vertical PIN adjustment	15	15	
7	NSCO		7	
8	HITZ		15	
9	ZOOM	0	0	
10	ASP SW: Aspect switch	0	1	0
11	ASPT	44	32	28
12	SCRLL	29	29	29
13	UVLIN	0	0	0
14	LVLIN	0	0	0

CRT Driver CXA2150D-2 (Deflection Controls:D2)

Reg.No & Name	FUNCTION	Full	Vcomp1	Vcomp2
0	HC PARA DC: Horizontal center	19		19
1	H POSIT		25	
2	HSZ		ADI (30)	
3	SLIN		3	
4	MP PARA DC: Horizontal S-correction		7	
5	MP PARA AMP: Horizontal middle pin		10	
6	PIN0		7	
7	UCP		31	
8	LCP		31	
9	UXCG		0	
10	LXCG		0	
11	UXCP		2	
12	LXCP		2	
13	XCPP		0	
14	PPHA		31	
15	VANG		31	
16	L'ANG	31		33
17	V'BOW		31	
18	L'BOW	39		63
19	CPV1		0	

CRT Driver CXA2150D-3 (Deflection Controls:D3)

Reg.No & Name	FUNCTION	Full	Vcomp1	Vcomp2
0 HBLK	HBLK SW: Horizontal blanking switch	1	1	1
1 LBLK	LBLK SW: Left blanking	56	56	56
2 RBLK	RBLK SW: Right blanking	25	25	25
3 VBLK	VBLK SW: Vertical blanking switch	1	1	1
4 TBLK	TBLK SW: Top blanking	15	14	12
5 BBLK	LO BLK: Bottom blanking	15	15	13
6 VCOMP	V COMP: Vertical compensation	0	3	3
7 HCOMP	H COMP: Horizontal compensation	0	0	0
8 ACMP	AFC COMP: AFC compensation	0	0	0
9 PCMP	PIN COMP: Pin compensation	0	0	0
10 AFCM	AFC MODE: AFC compensation	3	0	2
11 VFREQ	V FREQ: Vertical frequency	0	1	0
12 VON	V ON: Vertical drive on	0	1	0
13 JUMP	JMP SW: Reference pulse jump switch	1	1	1
14 VDRY	VDRY SW: Vertical drive switch	0	0	0
15 VDSST	RST SW: Vertical drive start switch	0	0	0
16 EWDC	EW DC: Pin DC level shift	0	0	0
17 AKBT	AKBTM: AKB timing	9	9	9

Component I/F & Sync Separation CXA2151

Reg.No & Name	FUNCTION	480i	480P	720P
0 MTRX	MAT OUT	15.75kHz	31.50kHz	1080i
1 GAIN	GAIN SEL	0	0	33.75kHz
2 CBGN	CBGAIN	9	0	45kHz
3 VTC	V TC	1	0	1
4 HWID	HWIDTH	1	0	0
5 HSEP	HSEPP SEL	0	Video5	Sub
6 TEST	TEST	0	0	0
7 PRGB	PRGB	0	0	0
8 HMSK	Hsync masking in vertical retrace	Full	Vcomp1	Vcomp2

Audio Processor (AP) BH3868FS

Reg.No & Name	FUNCTION	43", 53"	61"
0 VVOL	Volume Offset for Volume	0	0
1 SPAL	Balance Offset for Balance	7	7
2 SPAS	Bass Offset for Bass	7	11
3 STRE	Treble Offset for Treble	7	6
4 BBLP	BBE low pass filter	0	0
5 BBHP	BBE high pass filter	2	2
6 SREF	Surround effect	11	11
7 AGC	Auto gain control	0	0
8 BBE	BBE on/off	0	0

TruSurround (TRUS) NJM2180

Reg.No & Name	FUNCTION	
1 TRSMID	Trusurround effect selection	2
0 ATT	ATT	0

MID-1 (Display Data : Output)

Reg.No & Name	FUNCTION	(for 4:3)
0	(A) Display Data (Only One)	110
1	DHPH H active display area phase	20
2	DVPH V active display area phase	240
3	DHAR H active display area size	135
4	DVAR V active display area size	55
5	DHPW display H pulse width	5
22	DPSW display V pulse width	1 (fsec)
23	MDL model select (16/9/4:3)	1
	(B) Misc. Common Data	Data
6	DYCD display output Y-C delay correction	2
7	DYSD display output YS signal delay select	1
	(C) Favorite / Other	Favorite Others
8	MDHP main display picture H position	9
10	MDHS main display picture H size	160 240
9	(D) Single (Input Signal Format) / Favorite	Single 480i/480P
11	MDVP main display picture V position	30
11	MDVS main display picture V size	120 120
	(E) Index / Others	Index Others
12	MLHP multi picture mode H position	32
13	MLVP multi picture mode V position	47 31
	(F) Favorite	Favorite
14	SDHS sub display picture H position	171
15	SDVS sub display picture V position	27
	(G) Favorite	Favorite
16	SDHS sub display picture H size	59
17	SDVS sub display picture V size	29
	(H) PinP Position (Not Used)	--
18	PDPH (PinP Large mode H position)	--
19	PDVS (PinP Large mode V position)	--
	(I) PinP Size (Not Used)	--
20	PDHS (PinP Large mode H size)	--
21	PDVS (PinP Large mode V size)	--
	(J) Single / Others	Single Others
24	BCOL background Y level	0 5

MID-2 (Active Data for DRC : INPUT)

Reg.No & Name	FUNCTION	Single	Memo
	(A) MID Mode, Wide mode, Input Signal Format	RF, Video, YC	Y/PbPr
0	DRHP DRC H active area position	111	110
1	DRHS DRC H active area size	178	178
2	DRVP DRC V active area position	37	37
3	DRVS DRC V active area size	120	120
		Twin, Favorite	
		RF, Video, YC	RF, Video, YC
0	DRHP DRC H active area position	132	131
1	DRHS DRC H active area size	166	166
2	DRVP DRC V active area position	54	54
3	DRVS DRC V active area size	112	112
		Index	
		RF, Video, YC	RF, Video, YC
0	DRHP DRC H active area position	139	138
1	DRHS DRC H active area size	164	164
2	DRVP DRC V active area position	50	50
3	DRVS DRC V active area size	114	114
		Index	
		RF, Video, YC	RF, Video, YC
0	DRHP DRC H active area position	141	141
1	DRHS DRC H active area size	162	162
2	DRVP DRC V active area position	58	58
3	DRVS DRC V active area size	110	110
		Index-Small	
		RF, Video, YC	RF, Video, YC
0	DRHP DRC H active area position	143	143
1	DRHS DRC H active area size	166	166
2	DRVP DRC V active area position	54	54
3	DRVS DRC V active area size	112	112

MID-3 (Active Data for A/D (VDO) : INPUT)

Reg.No. & Name	FUNCTION			
	(A) MID mode, Wide mode, Input Signal Format			
	480P	Single	720P	Y/PbPr No Signal
0 VDHP	109	95	111	205
1 VDHS	166	108	199	226
2 VDVE	37	24	50	37
3 VDVS	120	180	168	56
	Twin, Favorite			
	480P	1080i	720P	Y/PbPr No Signal
0 VDDH	128	94	111	179
1 VDDH	155	150	99	199
2 VDVE	53	37	50	24
3 VDVS	112	126	168	56
	Memo			
	480P	1080i	720P	Y/PbPr No Signal
0 VDDP	136	102	115	179
1 VDDH	152	147	98	199
2 VDVE	57	44	58	24
3 VDVS	110	123	164	56
	Index			
	480P	1080i	720P	Y/PbPr No Signal
0 VDHP	132	99	112	166
1 VDHS	154	149	99	187
2 VDVE	51	34	48	24
3 VDVS	113	128	169	56
	(B) Input Signal Format			
	480P	1080i	720P	Index-Small
4 VDVO	0	0	0	RF
5 VCPO	95	70	40	204
6 VCWD	3	3	3	211
7 VYCD	0	0	0	26
8 VSTP	-	119	160	56
9 VSTT	-	4	0	0
10 VHSC	130	-	-	-

MID-5 (Picture Data) (A) Enhance Table Data Setting

Reg.No.	Function	0	1	2	3	4	5	6	7
0	Table select	0	1	2	3	4	5	6	7
1	MHL Y Coefficient select	1	1	1	1	1	1	1	1
2	MHL C Coefficient select	3	3	3	3	3	3	3	3
3	MVL Y Coefficient select	0	0	0	0	0	0	0	0
4	MVL C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR Y Coefficient select	0	0	0	0	0	0	0	0
6	MHYL Y Coefficient select	1	1	1	1	1	1	1	1
7	MHYE Y Coefficient select	7	7	3	3	7	7	3	5
8	MHYO Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR Y Coefficient select	0	0	0	0	0	0	0	0
10	MHCL Y Coefficient select	1	1	1	1	1	1	1	1
11	MHCE Y Coefficient select	0	0	0	0	0	0	0	0
12	MHCO Y Coefficient select	1	1	1	1	1	1	1	1
13	MVYR Y Coefficient select	0	0	2	2	0	0	2	2
14	MVYL Y Coefficient select	1	1	1	1	1	1	1	1
15	MVYE Y Coefficient select	0	0	2	5	0	0	2	5
16	MVCR Y Coefficient select	0	0	0	0	0	0	0	0
17	MVCL Y Coefficient select	1	1	1	1	1	1	1	1
18	MVCE Y Coefficient select	0	0	0	0	0	0	0	0
0	Table select	8	9	10	11	12	13	14	15
1	MHL Y Coefficient select	0	0	0	0	1	1	1	1
2	MHL C Coefficient select	3	3	3	3	3	3	3	3
3	MVL Y Coefficient select	0	0	0	0	0	0	0	0
4	MVL C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR Y Coefficient select	0	0	0	0	0	0	0	0
6	MHYL Y Coefficient select	1	1	1	1	1	1	1	1
7	MHYE Y Coefficient select	7	7	3	3	7	7	3	3
8	MHYO Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR Y Coefficient select	0	0	0	0	0	0	0	0
10	MHCL Y Coefficient select	1	1	1	1	1	1	1	1
11	MHCE Y Coefficient select	0	0	0	0	0	0	0	0
12	MHCO Y Coefficient select	1	1	1	1	1	1	1	1
13	MVYR Y Coefficient select	0	0	2	2	0	0	2	2
14	MVYL Y Coefficient select	1	1	1	1	1	1	1	1
15	MVYE Y Coefficient select	0	0	2	5	0	0	2	5
16	MVCR Y Coefficient select	0	0	0	0	0	0	0	0
17	MVCL Y Coefficient select	1	1	1	1	1	1	1	1
18	MVCE Y Coefficient select	0	0	0	0	0	0	0	0

* No. 19 - No.36 data is all "0" not to use.

On-Screen Display (OSD)

Reg.No. & Name	FUNCTION		
0 HPOS	OSD horizontal position		14
1 HPOF	Horizontal position for Favorite mode		37
2 VPOS	OSD vertical position		4
3 VPOT	Vertical position for P&P (Twin) mode		40

SNNR

Reg.No. & Name	FUNCTION				
0 SNNR	SNNR data setting		0	1	2
1 SNFX	Selection of SNNR data setting		0		
2 WSLT	Noise level detection data thresholds for SNNR data (read data)		0-50	31-62	63-126
					127-255
	SNNR Settings based on WSL Data				
SNNR=0/1/2/3			0	1	2
3 CPTG	Related to 3D-COMB (upD64802) / #19 YPRG settings		0	1	2
4 CPTT	Related to 3D-COMB (upD64802) / #18 YPFT settings		0	0	0
5 CCCR	Related to 3D-COMB (upD64802) / #20 VHCO settings		0	1	1
6 CHCG	Related to 3D-COMB (upD64802) / #21 VHCC settings		1	1	1
7 CARG	Related to 3D-COMB (upD64802) / #16 VAFG settings		0	0	0
8 SHP	Related to CXA2103 / #6 SHAP settings		0	1	2
9 MIDD	Related to CXA2150P-3 / #19 MIDE settings		0	0	0
10 SSHP	Related to CXA2150P-4 / #4 LSHP settings		0	1	3
11 SYFI	Related to CXA2150P-3 / #10 FILY settings		0	1	2
12 SCDS	Related to CXA2150P-3 / #11 CDSP settings		0	0	0
13 SLTI	Related to CXA2150P-3 / #12 LTLV settings		0	0	0
14 SUTI	Related to CXA2150P-3 / #14 CTVL settings		0	0	0
15 SVML	Related to CXA2150P-3 / #1 UVML settings		0	0	0
16 SVMC	Related to CXA2150P-3 / #3 VMCR settings		0	1	2

SNNR data is used for the () offset setting.

SNNR data is used for the direct setting.

SNNR data is used for the () offset setting.

SNNR data is used for the () offset setting.

ID-1 Detection

Reg.No. & Name	FUNCTION		
0 XGKL	XGKL: Setting for memorizing or not the ID-1 detection status		0
1 LINT	LINT: Setting for the multi/single-line ID-1 detection		0

Closed Caption Display & Parental Control (CCD&VCHIP)

Reg.No. & Name	FUNCTION		
0 HPRM	Horizontal position of CCD (Main)		49
1 HPRS	Horizontal position of CCD (Sub)		49
2 RND	OSD rounding control		1
3 CCDI	Interrupt control		3
4 CRIP	CRI count & parity count		4
5 CRIT	Charge/Discharge timing control for slice voltage level		0
6 CHMK	Horizontal mask width		42
7 FPOL	Field polarity selection		1
8 LANG			0
9 DATA	Switch for CCD service/test data		0
10 VCHIP	Selection of Vchip controls		1

OPTIONS

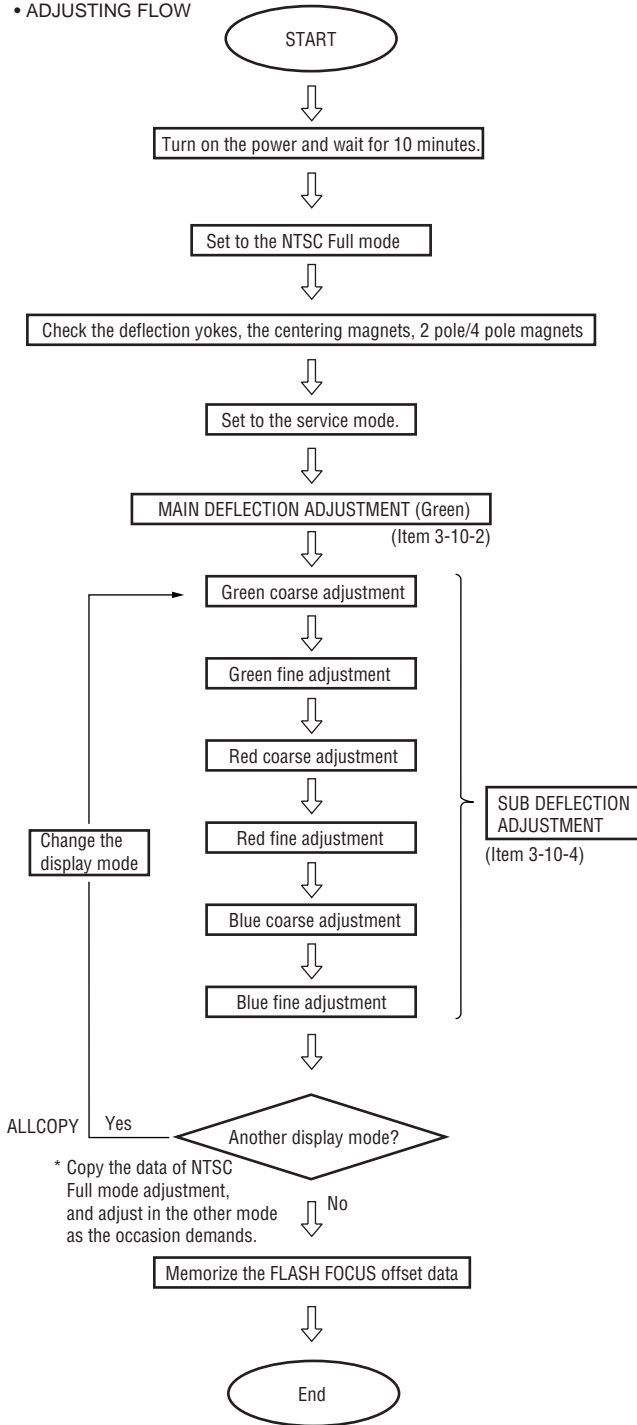
Reg.No. & Name	FUNCTION		
0 DLY1	Power-On to RLY timing = DLY1 x 50ms		2
1 DLY2	Power-On Mute timing = DLY2 x 50ms		12
2 DLY3	Relay-On to start Bus communication		12
3 AGC			255
4 PCMX			63
5 BRMX			63
6 RAMW			0

ID

Reg.No. & Name	FUNCTION		
0 ID0	Selection of OSD languages & color system		89
1 ID1	Selection of composite & s-video inputs		127
2 ID2	Selection of audio-related controls		239
3 ID3	Selection of basic system settings		98
4 ID4	Selection of basic system settings		203
5 ID5	Selection of advanced system settings		177
6 ID6	Selection of sub picture related settings		54
7 ID7	Selection of some reserved settings		24

3-11. REGISTRATION ADJUSTMENT

• ADJUSTING FLOW

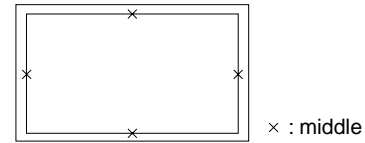


3-11-1. Setup for Adjustment

1. Marking

1) At the 4 insides of the screen, locate the middle. Use a tape measure to identify the middle.

2. Data Setting



- 1) Set NTSC Full mode.
- 2) Enter the Service mode, and select "PJE".

Note : When you replaced printed circuit boards or devices or CRTs, and when correction is drastically necessary, press "Ⓞ" + "ENTER" buttons to initialize the data in the Projector Engine mode.

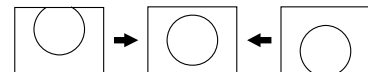
Press "MUTING" + "ENTER" buttons on the commander to write the data.

3-11-2. Main Deflection Adjustment

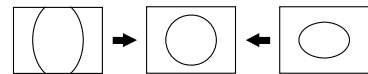
Note : Before this adjustment, input the data of PJE item No. 78-85, (See page 24).

1. Place the caps on the red and blue lenses so that only the green color is displayed.
2. Enter the monoscope signal and set to NTSC Full mode .
3. Enter the Service mode, and select "2150D-1" .
4. Adjust "0 VPOS" and "1 VSIZ" so that the picture is displayed in the center of screen.

0 VPOS



1 V-Size



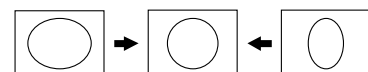
5. Select "2150D-2" and adjust "2 H-Size" so that the picture size is within the specification.

SPEC

Overscan Spec. = 9%

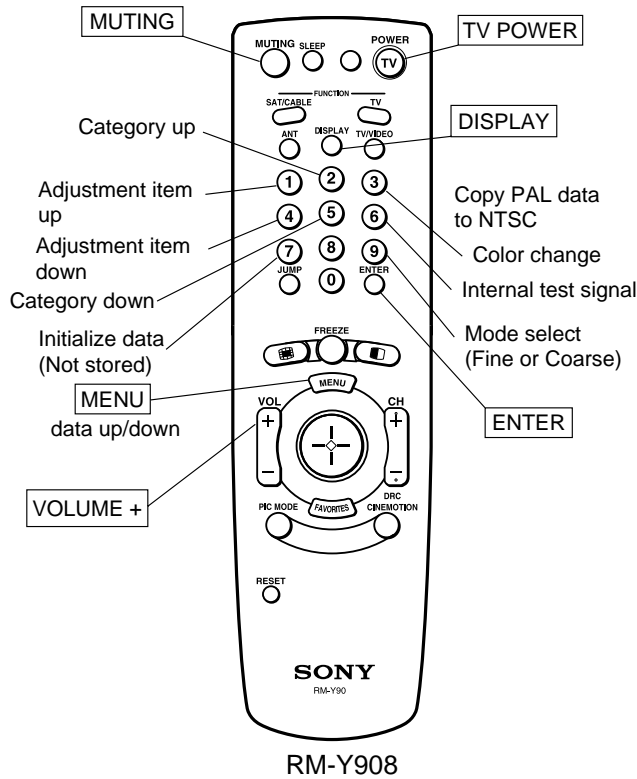
Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.

2 H-Size



6. Copy the data of NTSC Full mode to the other display mode and adjust in the other mode as the occasion demands.

3-11-3. Operation Method for Projector Engine Mode



1. Functions of Keys on Commander

- ① : Changes adjustment item. (item No. moves up)
: Marker moves clockwise from center to outside. (in fine adjustment mode)
- ④ : Changes adjustment item. (item No. moves down)
: Marker moves counterclockwise from outside to center. (in fine adjustment mode)
- ② : Changes adjustment category. (category No. moves up)
- ⑤ : Changes adjustment category. (category No. moves down)
- Joystick : Changes data value. (up or down)
: Marker moves up, down, or to the left or right. (in fine adjustment mode)
- ③ : Changes adjustment color.
GRN → BLU → RED
- ⑥ : Displays or changes internal test signals.
: crosshatch + external signal → crosshatch + borderline → crosshatch only → dot only → off
- ⑨ : Switches adjustment mode.
Coarse adjustment mode → fine adjustment mode

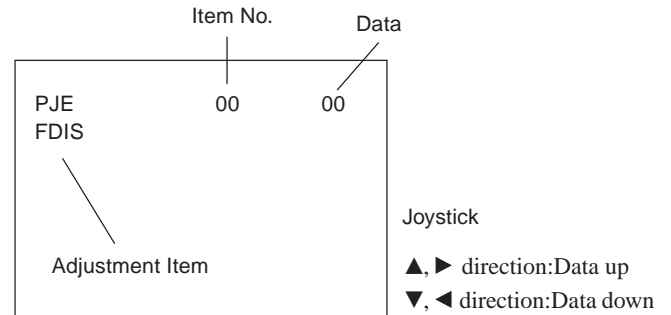
- Press joy stick : Switches marker moving method.
stick (in fine adjustment mode)
joystick (▲, ▼, ◀, ▶) keys → ① and ④ buttons

Commander Function

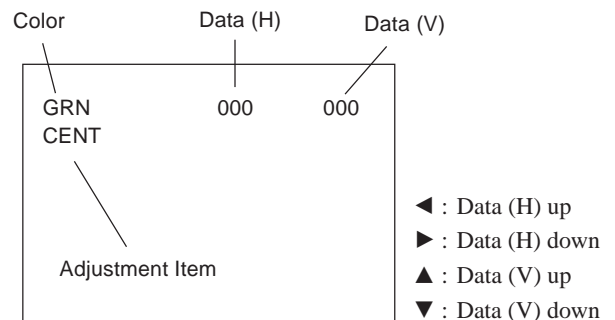
Buttons	Mode	Description
① + ENTER	READ	Writes data to NVM.
MUTING+ENTER	WRITE	Reads data from NVM.
⑦ + ENTER	PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)

2. Operation Method for Coarse Adjustment

- 1) Enter the Service mode, and select "PJE".
- 2) Press "①" or "④" button on the commander to select the item, and use the joystick to change the data.



- 3) Select "GRN CENT". When BLU or RED is displayed, press "③" button on the commander to change the adjustment color in the order of GRN → BLU → RED.
- 4) In the GRN, BLU, or RED mode, move ▲, ▼ direction the joystick can change the data in vertical direction, or ◀, ▶ direction in horizontal direction.

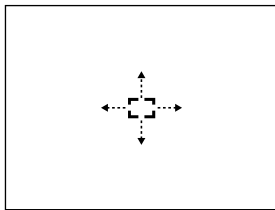


- 5) Before returning to the Service mode, press "MUTING" + "ENTER" buttons on the commander to write the data. (Omission of this operation causes the set data to be returned to the data before adjustment)

3. Operation Method for Fine Adjustment

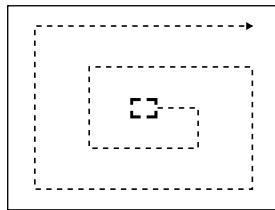
- 1) Select the PJE mode.
- 2) Select FDIS so that the data at each position can be displayed in the fine adjustment mode, and set the data to "01".
- 3) Press "⑨" button on the commander, and the fine adjustment mode will be active where a green marker appears in the center of screen (in the case of GRN mode).
- 4) Press joystick, and the marker color will be switched between green (GRN mode) and white alternately.
- 5) Use "①" or "④" button on the commander, or the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.

- When marker color is white.
(in this case, fine adjustment is disabled)



Operating the joystick can move the marker up, down, or to the left or right freely.

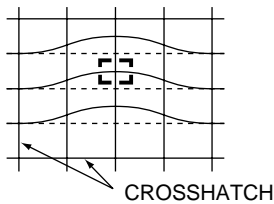
- When marker color is green. (GRN mode)



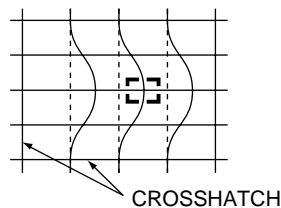
- ① : moves the marker clockwise from center to outside.
- ④ : moves the marker counterclockwise from outside to center.

- Fine adjustment can be made on the basis of marker position using ▲, ▼, ◀, ▶ direction of the joystick.

Move joystick ▲ direction



Move joystick ▶ direction



- 6) Press "⑨" button on the commander to return to the coarse adjustment mode.

3-11-4. PJE Adjustment (Sub Deflection Adjustment)

Adjustment ○ : Yes - : No

Adjustment Item	Adjustment Type		
	GRN	RED	BLU
	H / V	H / V	H / V
CENT	○ / ○	○ / ○	○ / ○
SKEW	○ / ○	○ / ○	○ / ○
SIZE	○ / ○	○ / ○	○ / ○
LIN	○ / ○	○ / ○	○ / ○
KEY	- / ○	- / ○	- / ○
PIN	○ / ○	○ / ○	○ / ○
MLIN	○ / -	○ / -	○ / -
MSIZ	○ / -	○ / -	○ / -

Note: If the value of over the limit value, adjust these in the fine adjustment .

Coarse Data Limit Valune.

Cent H 35±170 V 20±170, Size H-75max, Lin H Blu -425min, H Red 425max.

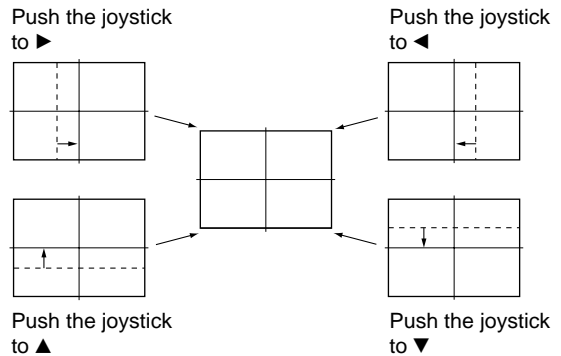
<Adjustment for NTSC Full Mode>

- The adjustment should be done in the numerical order given.

1. Green Adjustment

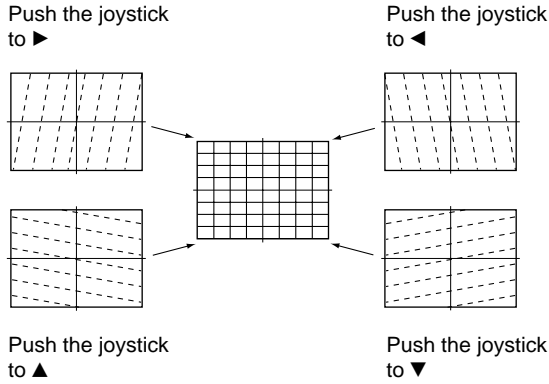
- 1) Place the caps on the red and blue lenses so that only the green color is displayed.
- 2) Enter the monoscope signal to set.
- 3) Select the PJE mode.
- 4) Press "⑥" button on the commander to display internal test signal (crosshatch).
- 5) Select "GRN CENT", and adjust so that the picture coincide in the center of screen.

- GRN CENT (horizontally/vertically)



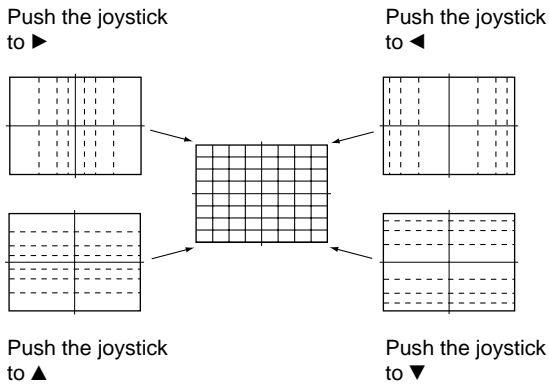
7) Select "GRN SKEW", and correct the tilt of horizontal lines and vertical lines.

• GRN SKEW (horizontally/vertically)



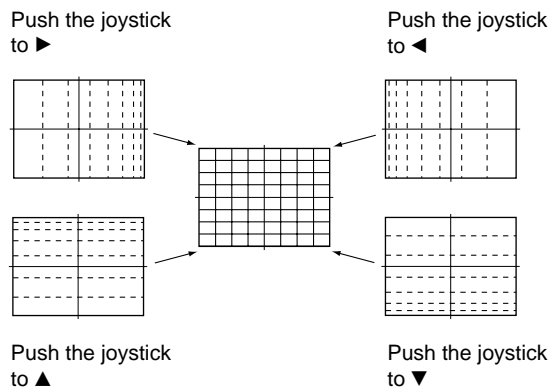
8) Select "GRN SIZE", and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

• GRN SIZE (horizontally/vertically)



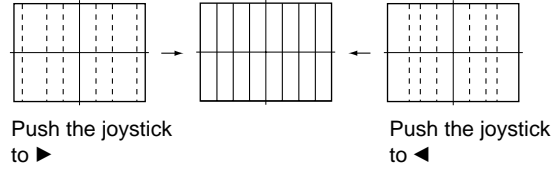
9) Select "GRN LIN", and adjust so that each space at the right end and at the left end of screen is equal. Adjust so that each space at the top and at the bottom of screen is equal.

• GRN LIN (horizontally/vertically)



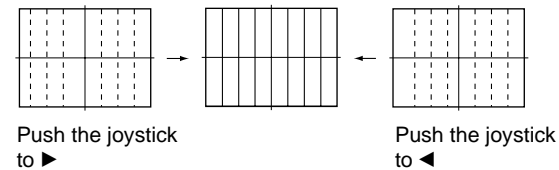
10) Select "GRN MSIZ", and correct the space intervals for the horizontal section of the screen are equal.

• GRN MSIZ (horizontally)



11) Select "GRN MLIN", and correct the sizes of the horizontal line at the center of the screen are symmetrical left and right.

• GRN MLIN (horizontally)

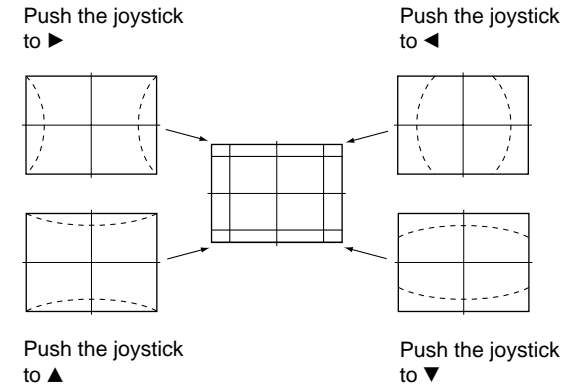


Note: The SIZE and LIN, MSIZ and MLIN adjustments are affected each other.

So adjust these mutually if necessary.

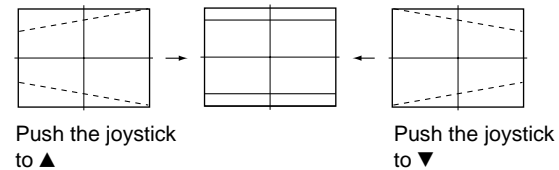
12) Select "GRN PIN", and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

• GRN PIN (horizontally/vertically)



13) Select "GRN KEY", and adjust so that upper and lower horizontal lines on the screen become parallel.

• GRN KEY (vertically)



Note: The VPIN and KEY adjustments are affected each other. So adjust these mutually if necessary.

- 14) Press “⑨” button on the commander to enter the fine adjustment mode.
- 15) Make fine adjustment so that horizontal lines and vertical lines become straight.
- 16) Press “⑨” button on the commander to return to the coarse adjustment mode.

2. Red Adjustment

- 1) Place a cap on the blue lens so that green and red colors are displayed.
- 2) Press “③” button on the commander to select RED mode.
- 3) Adjust the following items so that red lines overlap with green lines.

- RED CENT (horizontally/vertically)
- RED SKEW (horizontally/vertically)
- RED SIZE (horizontally/vertically)
- RED LIN (horizontally/vertically)
- RED MSIZ (horizontally)
- RED MLIN (horizontally)
- RED PIN (horizontally/vertically)
- RED KEY (vertically)

- 4) Press “⑨” button on the commander to enter the fine adjustment mode.
- 5) Make fine adjustment so that horizontal lines and vertical lines overlap with green lines.
- 6) Press “⑨” button on the commander to return to the coarse adjustment mode.

3. Blue Adjustment

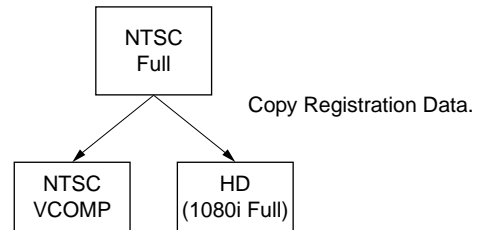
- 1) All colors are displayed.
- 2) Press “③” button on the commander to select BLU mode.
- 3) Hereinafter, use same manner as that of red adjustment to adjust so that the blue lines overlap with green and red lines.

4. Registration Data Writing

- 1) After each adjustment of green, blue, and red for the NTSC Full mode finished, press “MUTING”+ “ENTER” buttons on the commander to write registration data to the NVM.

<Copy All Registration Data to Other modes>

1. Make sure that the adjustment for NTSC Full mode finished and the data have already been written.
2. Select the PJE mode.
3. Select ALCP and set the data to “01”, and press “MUTING”+“ENTER” buttons on the commander.
4. The data of NTSC Full mode are copied to all other modes.



5. Check in the other mode and adjust as the occasion demands. Be sure to write data in each mode.

3-12. AUTO CONVERGENCE OFFSET

This adjustment must be performed after the registration adjustment was made or after readjustment was made by any reason.

1. Darken the periphery of this set.
2. Enter the monoscope signal to set the NTSC Full mode.
3. Select the PJE mode.
4. Press “FLASH FOCUS” button on the front panel of the set. (The offset value is now automatically stored)
5. Select “ ERR” of PJE mode. Confirm ERR is “00”. If ERR is not “00”, recheck. (Refer to 3-12.)
6. Exit the service mode.

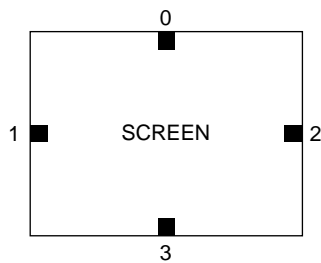
3-13. AUTO REGISTRATION ERROR CODE LIST

If an error code is displayed after the set has been fully adjusted, correctly, please check the following items : position, tilt and sizing. If either of these adjustments are off, even slightly, the auto registration pattern will not hit the four sensors properly. This occurs when the internal generator patterns is being flashed on the screen for the sensor to read. Therefore, auto registration (called auto convergence) cannot operate properly causing an error code to be displayed. In order for this function to operate properly, correct position, tilt and size must be adjusted properly.

ERROR CODE LIST

ERROR CODE	DESCRIPTION	REMEDY
00	No Error	
10	Sensor 0 low output	Check sensor 0, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "64 VUP" if necessary.
11	Sensor 1 low output	Check sensor 1, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "69 HLB" if necessary.
12	Sensor 2 low output	Check sensor 2, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "73 HRIV" if necessary.
13	Sensor 3 low output	Check sensor 3, connection/wiring, circuit, and pattern position (Is pattern over sensor ?) Adjust "68 VLOW" if necessary.
20	Sensor 0 high output	Check sensor 0 and circuit.
21	Sensor 1 high output	Check sensor 1 and circuit.
22	Sensor 2 high output	Check sensor 2 and circuit.
23	Sensor 3 high output	Check sensor 3 and circuit.
30	V CENT or SKEW adjustment loop overflow	Check "66 VMID" data and check registration condition.
31	H CENT or SKEW adjustment loop overflow	Check "71 HMID" data and check registration condition.
32	H LIN or SIZE adjustment loop overflow	Check "71 HMID" data and check registration condition.
40	V CENT regi data overflow	Check "66 VMID" data and confirm V CENT data (all mode) is not near 511.
41	H CENT regi data overflow	Check "71 HMID" data and confirm H CENT data (all mode) is not near 511.
42	V SKEW regi data overflow	Check "66 VMID" data and confirm V SKEW data (all mode) is not near 511.
43	H SKEW regi data overflow	Check "71 HMID" data and confirm H SKEW data (all mode) is not near 511.
44	H LIN regi data overflow	Check "71 HMID" data and confirm H CENT data (all mode) is not near 511.
45	H SIZE regi data overflow	Check "71 HMID" data and confirm H CENT data (all mode) is not near 511.
50	V CENT regi data overdraw	Check "66 VMID" data and confirm V CENT data (all mode) is not near -512.
51	H CENT regi data overdraw	Check "71 HMID" data and confirm H CENT data (all mode) is not near -512.
52	V SKEW regi data overdraw	Check "66 VMID" data and confirm V SKEW data (all mode) is not near -512.
53	H SKEW regi data overdraw	Check "71 HMID" data and confirm H SKEW data (all mode) is not near -512.
54	H LIN regi data overdraw	Check "71 HMID" data and confirm H CENT data (all mode) is not near -512.
55	H SIZE regi data overdraw	Check "71 HMID" data and confirm H CENT data (all mode) is not near -512.
60	H or V CENT offset overflow	Check "71 HMID" data and check "66 VMID" data.
61	H or V SKEW offset overflow	Check SKEW adjustment.
62	H SIZE or LIN offset overflow	Check "71 HMID" data, check "66 VMID" data and check SIZE and LIN adjustment.
70	H or V CENT offset overdraw	Check "71 HMID" data and check "66 VMID" data.
71	H or V SKEW offset overdraw	Check SKEW adjustment.
72	H SIZE or LIN offset overdraw	Check "69 HLB" data, check "73 HRIV" data and check SIZE and LIN adjustment.
80	SIZE limit error	Check that H SIZE is negative and not near zero.

[SENSOR POSITION]

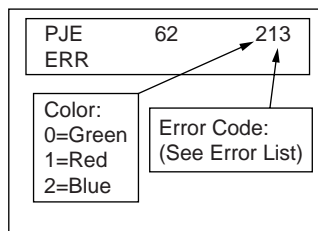


- 0 : UPPER SENSOR
- 1 : LEFT SENSOR
- 2 : RIGHT SENSOR
- 3 : LOWER SENSOR

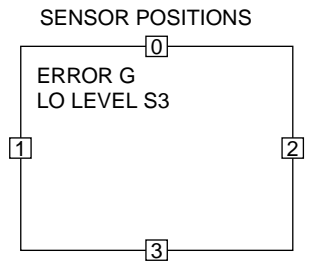
Error codes in normal (customer) mode are not displayed. You must enter PJED service mode to see to the error code.

When executing flash focus in service mode, the error will be displayed in text format (see below).

**AUTO REGI ERROR CODE FORMAT
 ERROR EXAMPLE**



Example: Blue low Level Sensor 3
 0-Green
 1-Red
 2-Blue



SECTION 4

CIRCUIT ADJUSTMENTS

4-1. P & P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)

1. Receive the signal.
 TV terminal (sub) : no signal
 VIDEO terminal (main) : color-bar signal
2. VIDEO MODE : Pro
 PICTURE : maximum
 COLOR : minimum
 RGB Signal : off
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ③ of CN703 (A board) and ground.
5. Select “ 2103-1-02 ”, and adjust so that the waveform level of VR is $2.00 \pm 0.05V_{p-p}$.
6. Select “ 2103-2-02 ”, and adjust so that the waveform level of VR is $2.00 \pm 0.05V_{p-p}$.
7. Write the data into memory.

MUTING → **ENTER**

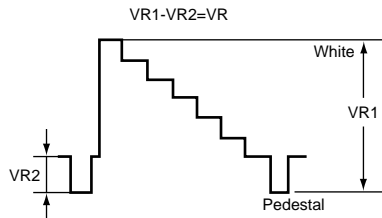


Fig. 4-1

4-2. P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)

1. Receive the signal.
 TV terminal (main) : color-bar signal
 VIDEO terminal (sub) : no signal
2. VIDEO MODE : Pro
 PICTURE : Max imum
 COLOR : Min imum
 RGB Signal : off
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ③ of CN703 (A board) and ground.
5. Select “ 2103-1-02 ”, and adjust so that the waveform level of VR is $2.00 \pm 0.05V_{p-p}$.
6. Select “ 2103-2-02 ”, and adjust so that the waveform level of VR is $2.00 \pm 0.05V_{p-p}$.
7. Write the data into memory.

MUTING → **ENTER**

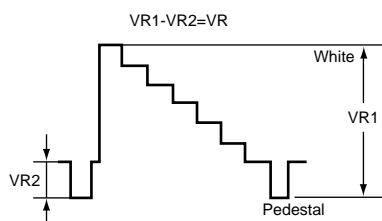


Fig. 4-1

4-3. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)

1. Receive the signal.
 TV terminal (sub) : no signal
 VIDEO terminal (main) : color-bar signal
2. VIDEO MODE : Pro
 PICTURE : maximum
 COLOR : center
 HUE : +4 steps
 Signal : off
3. Set to P & P mode, set to service mode.
4. Connect an oscilloscope between pin ③ of CN702 (A board) connector and ground.
5. Select “ 2103-1-03 SCOL, -04 SHUE ”, and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
6. Select “ 2103-2-03 SCOL, -04 SHUE ”, and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
7. Write the data into memory.

MUTING → **ENTER**

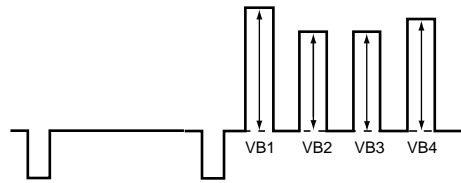


Fig. 4-3

4-4. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (SHUE, SCOL)

1. Receive the signal.
 TV terminal (main) : color-bar signal
 VIDEO terminal (sub) : no signal
2. VIDEO MODE : Pro
 PICTURE : maximum
 COLOR : center
 HUE : +4 steps
 Signal : off
3. Set to P & P mode, set to service mode.
4. Connect an oscilloscope between pin ③ of CN702 (A board) connector and ground.
5. Select “ 2103-1-03 SCOL, -04 SHUE ”, and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
6. Select “ 2103-2-03 SCOL, -04 SHUE ”, and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
7. Write the data into memory.

MUTING → **ENTER**

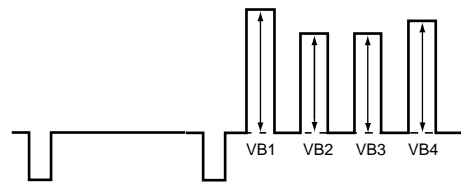


Fig. 4-4

SAFETY RELATED ADJUSTMENTS

[D BOARD]

5-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with \blacksquare on the schematic diagram always check HV regulation, and if necessary re-adjust.

- \blacksquare : VR8001
- \blacksquare : C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV block, D board

OPERATION CHECK

1. Receive the all white signal.
2. Set PIC MAX/BRT CENT.
3. Confirm that the voltage between CN8015 ① PIN and GND is less than 7.80VDC.

HV REGULATION ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Repeat steps 1 and 2 as above.
4. Confirm that the static voltmeter reading is $31.0 \pm 0.4V$.
5. If not, adjust with VR8001 to the specified value.
6. After adjustment, put the VR cover on VR8001 as shown below and apply sufficient amount of epoxy resin around VR8001.

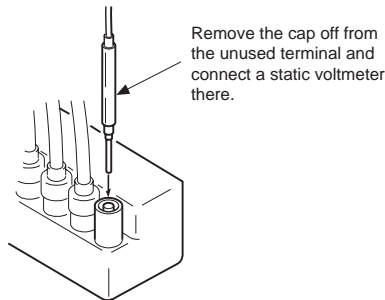


Fig. 4-1

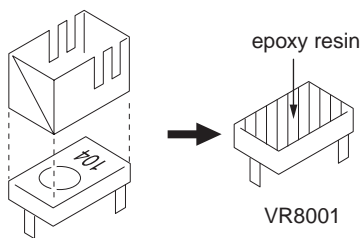


Fig. 4-2

5-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with \blacksquare on the schematic diagram always check hold-down voltage and if necessary re-adjust.

- \blacksquare : VR8002
- \blacksquare : C8054, C8086, C8088, C8100, C8104, C8118, C8123, C8124, D8019, D8020, D8022, D8028, D8036, FB8001, IC8008, Q8035, Q8038, R8035, R8043, R8159, R8166, R8171, R8196, R8201, T8004 (LOT), T8005 (FBT), HV block, D board

OPERATION CHECK

1. Receive the dot signal.
2. Set PIC MIN/BRT MIN.
3. Confirm that the voltage between cathode of D8038(JW171) and GND is more than 23.0V DC.
4. Using an external DC Power supply, apply the voltage shown below between cathode of D8038(JW171) on "D" and GND, then confirm that the HV-Prot circuit works.(Raster disappears.)
Apply DC voltage: Less than 29.05V DC.

HV HOLD-DOWN ADJUSTMENT

1. Connect a HV static voltmeter to the unconnected plug of the high-voltage block.
2. Power on the set.
3. Connet an external 10k Ω VR at CN8015 and adjust this VR so that the high voltage is 34.50kV.
4. Adjust VR8002 to the point that the HV-Prot circuit works (Raster disappears) at $34.50 \pm 0.50kV$ reading on the static voltmeter.
5. After adjustment, put the VR cover on VR8002 and apply sufficient amount of epoxy resin around VR8002 as the same manner for VR8001.

[G BOARD]

5-3. +B MAX VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC501, R5032.

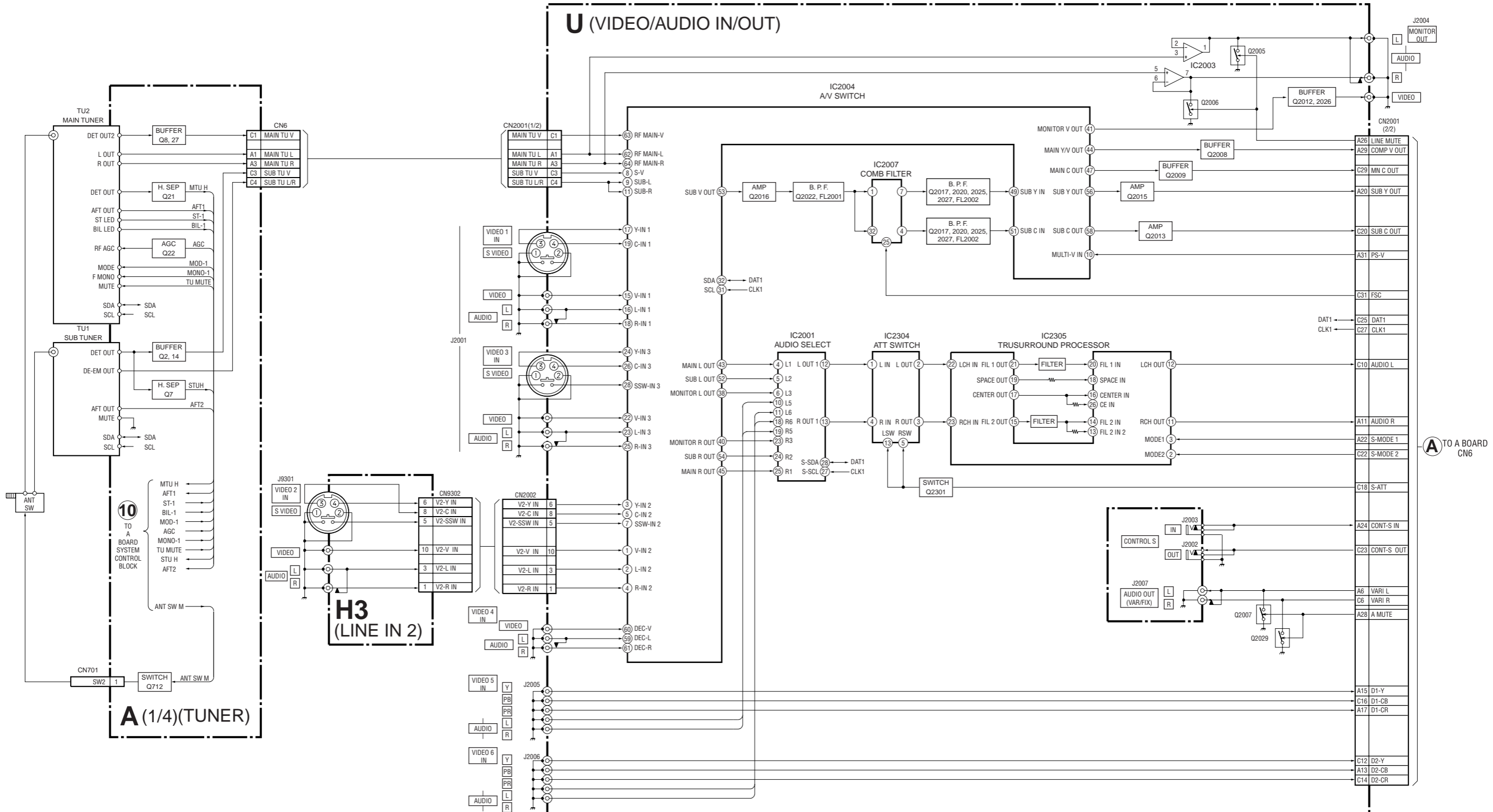
1. Supply 130VAC to variable autotransformer.
2. Receive dot signal pattern and set the PICTURE and BRIGHTNESS settings to their minimum.
3. Confirm the voltage of TP +B 135V is less than 137.0Vdc.
4. If step 4 not satisfied , replace IC501 and repeat above steps.

5-4. +B OVP CONFIRMATION

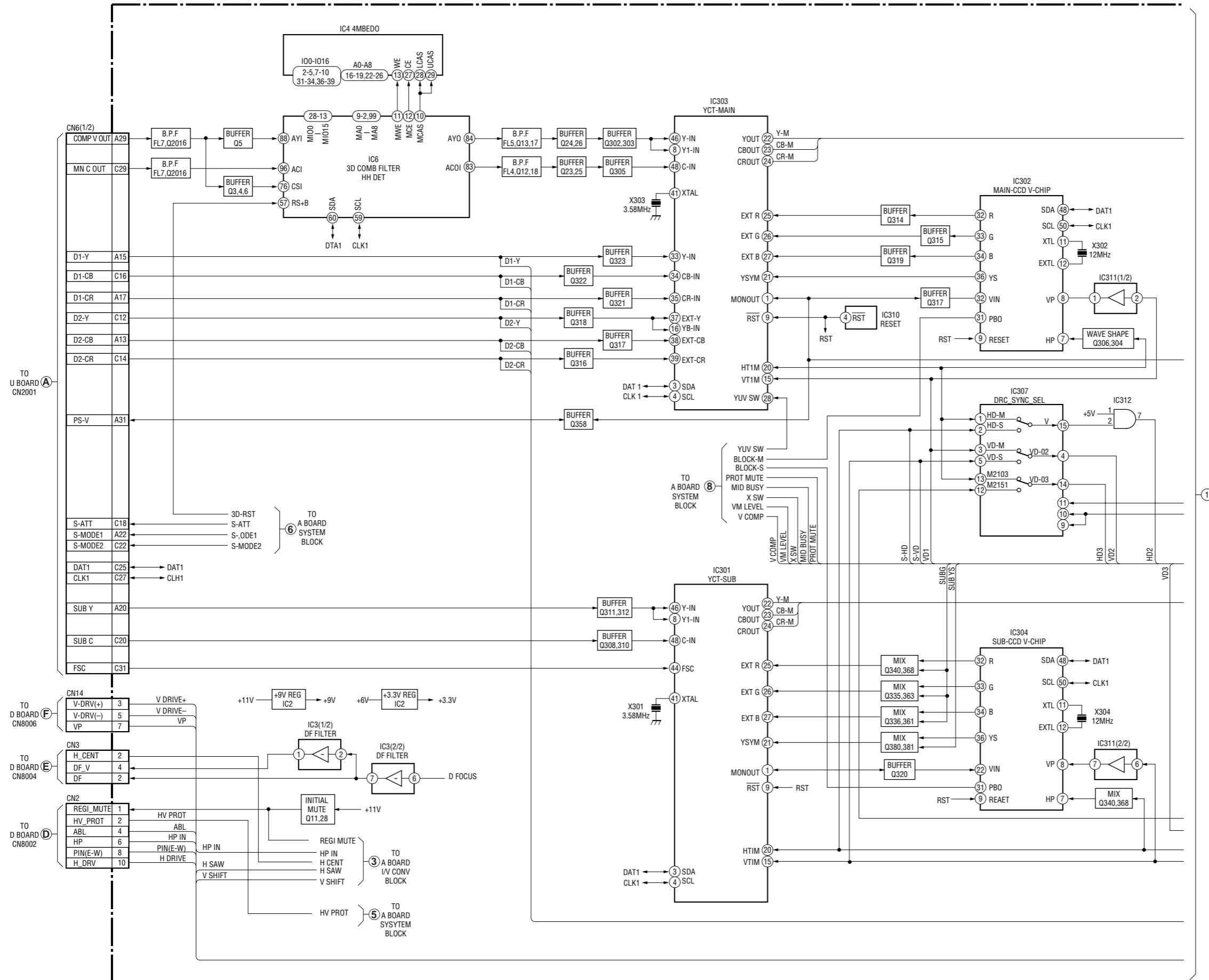
1. Add to low voltage power supply between to TP. 5001 and ground.
2. Supply 120VAC to variable autotransformer.
3. Power on the Set and receive dot signal pattern.
4. Set the PICTURE and BRIGHTNESS settings.
5. Check the OVP is activated.
Operate :less than 2.50V

SECTION 6
DIAGRAMS

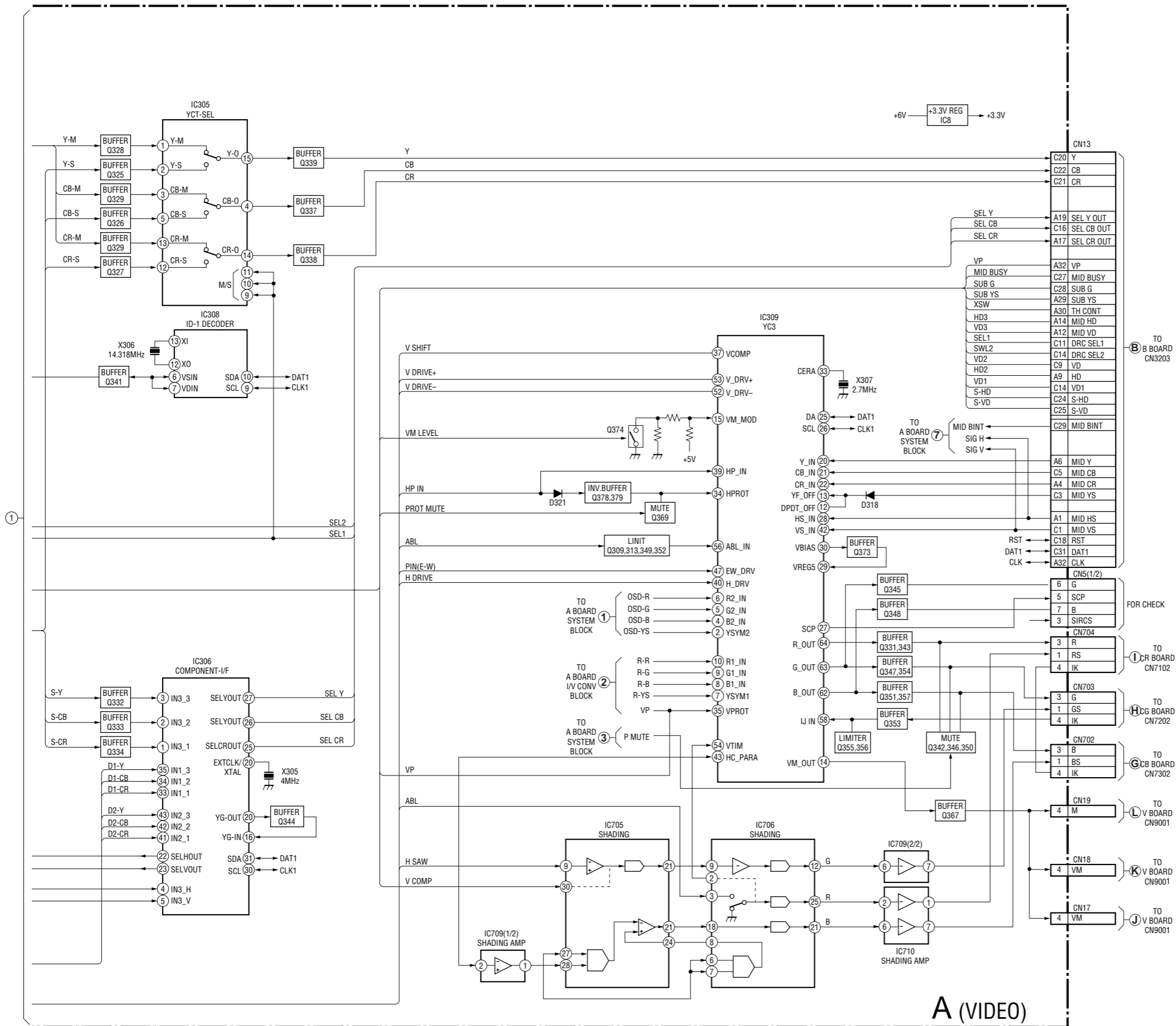
6-1. BLOCK DIAGRAM (1)



BLOCK DIAGRAM (2)

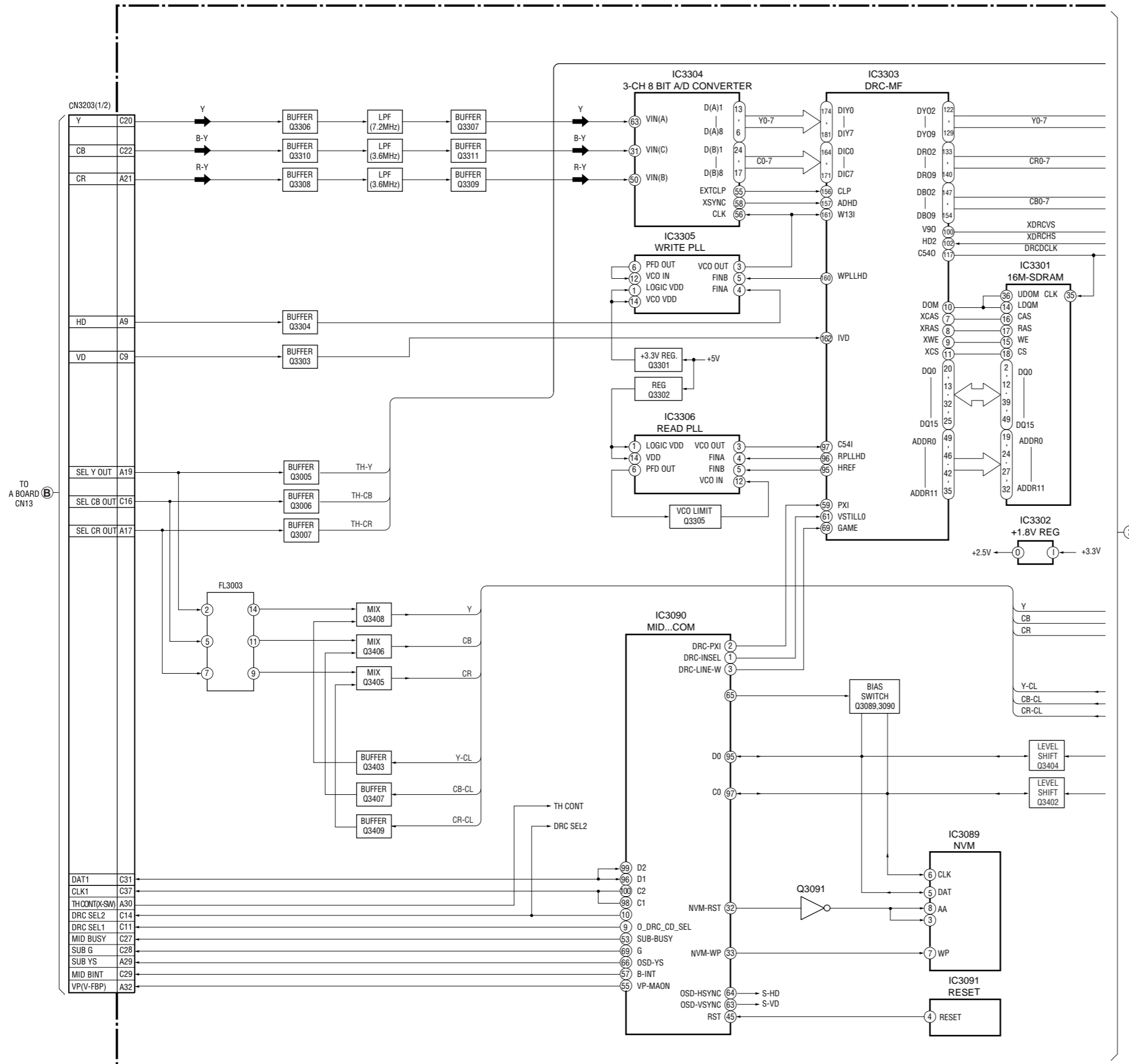


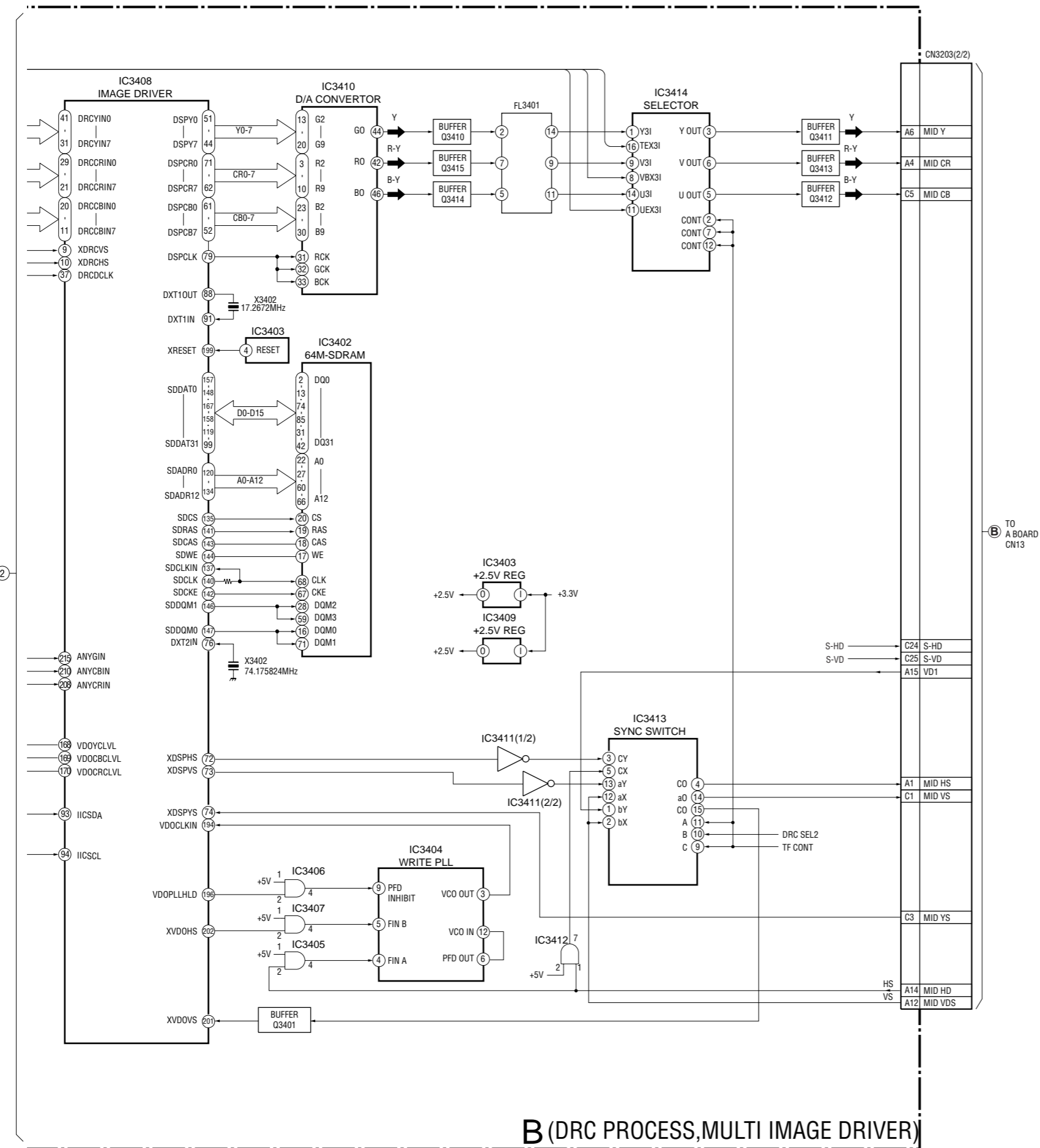
BLOCK DIAGRAM (3)



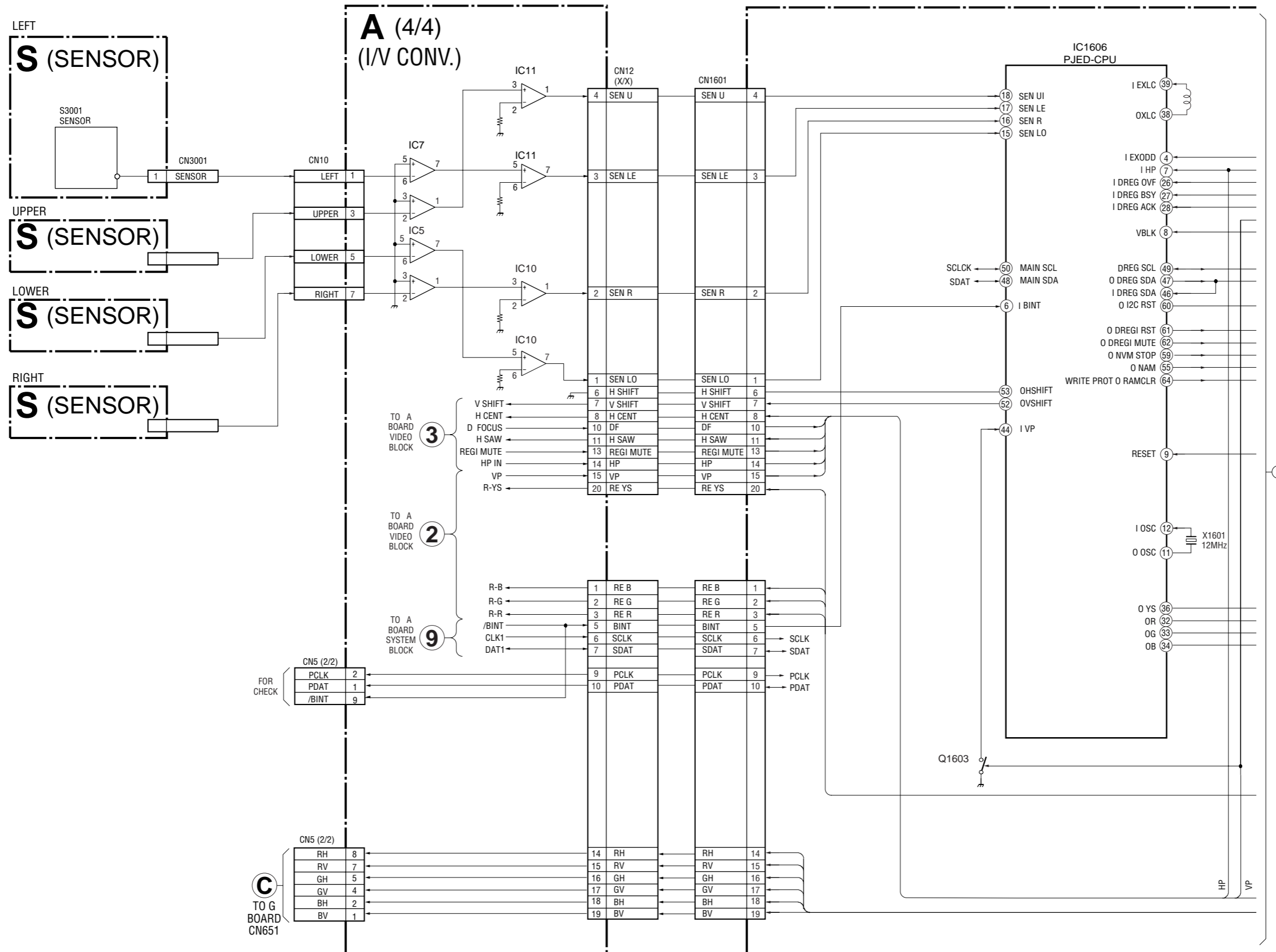
A (VIDEO)

BLOCK DIAGRAM (4)

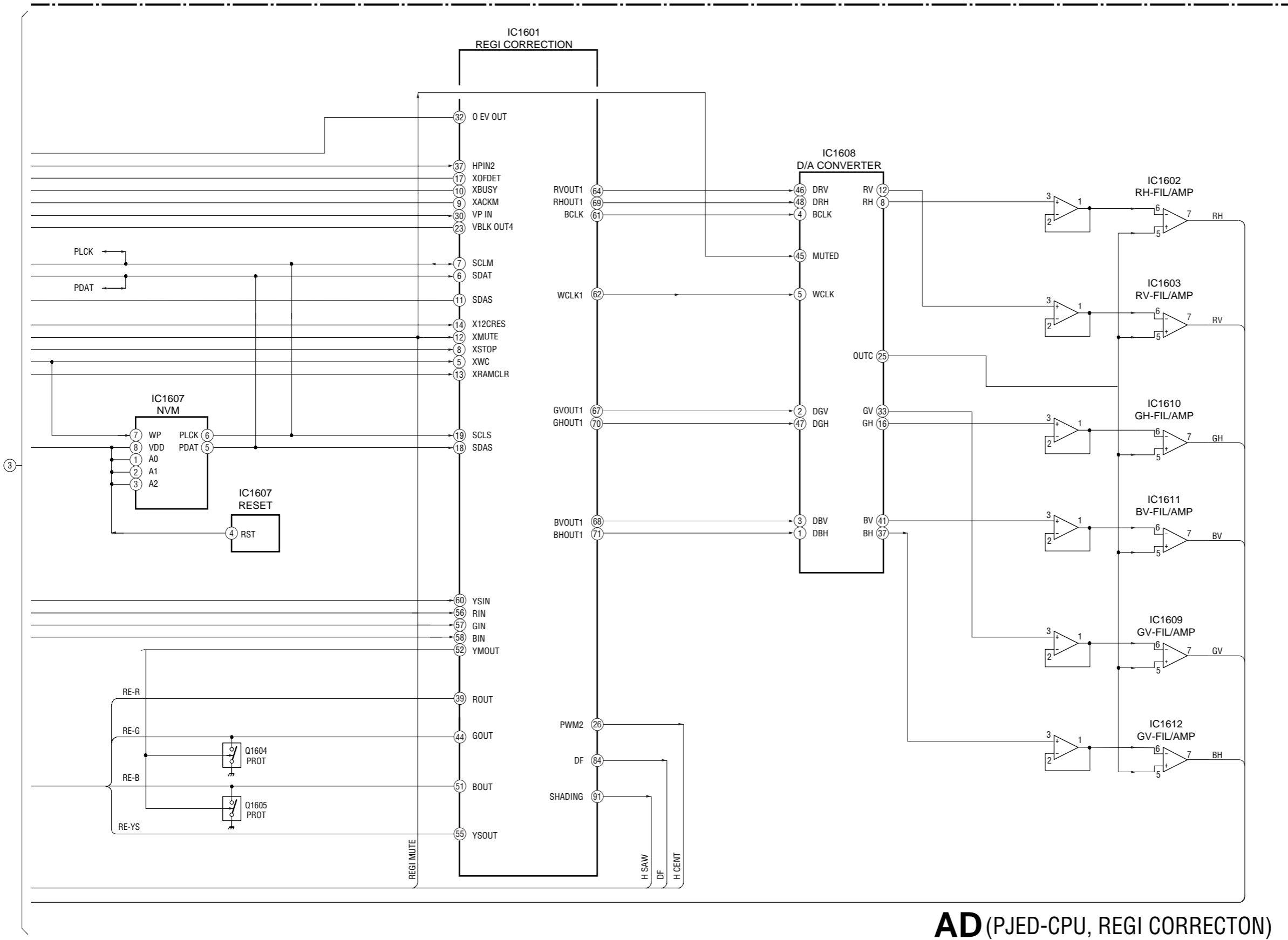




BLOCK DIAGRAM (6)

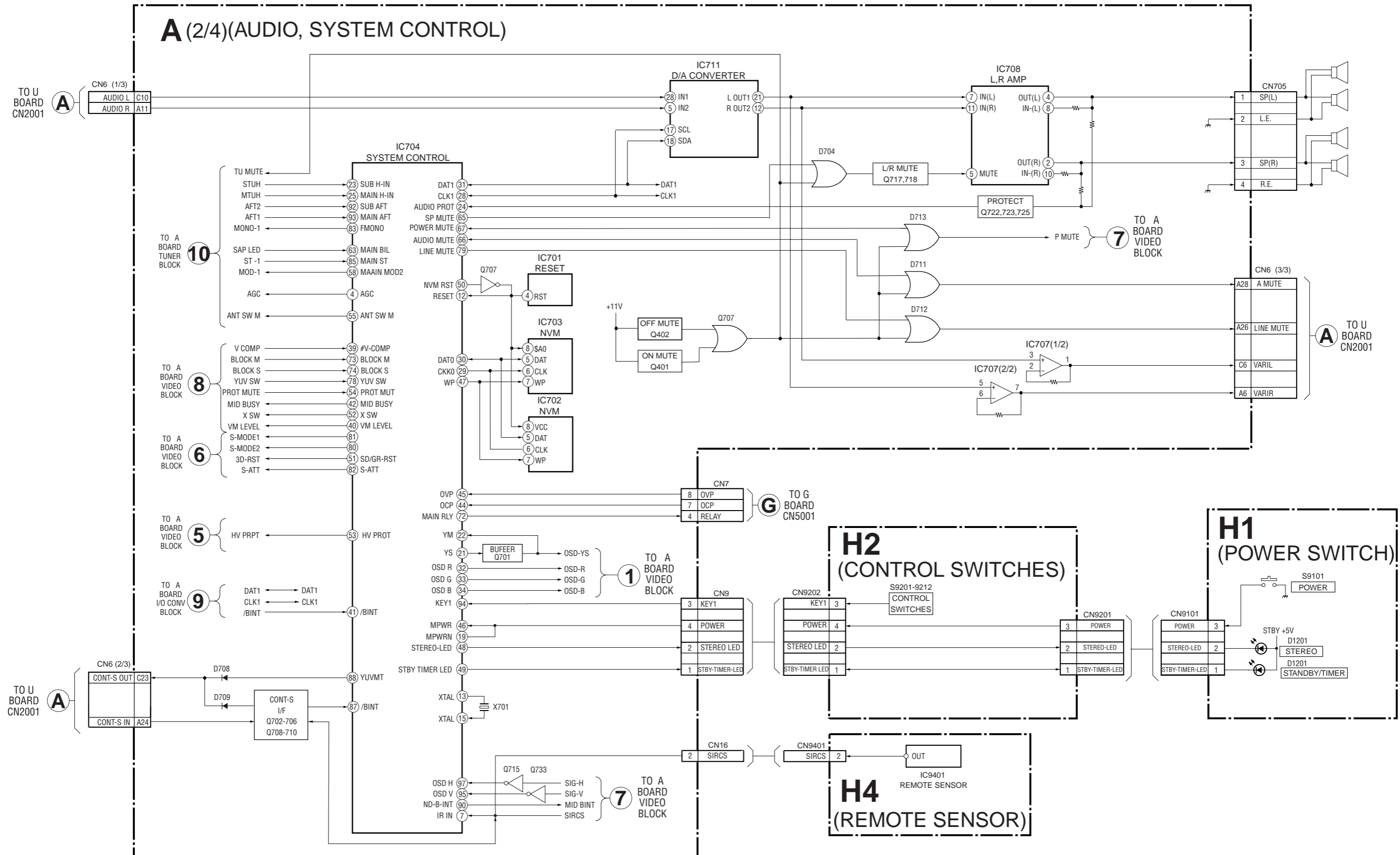


BLOCK DIAGRAM (7)

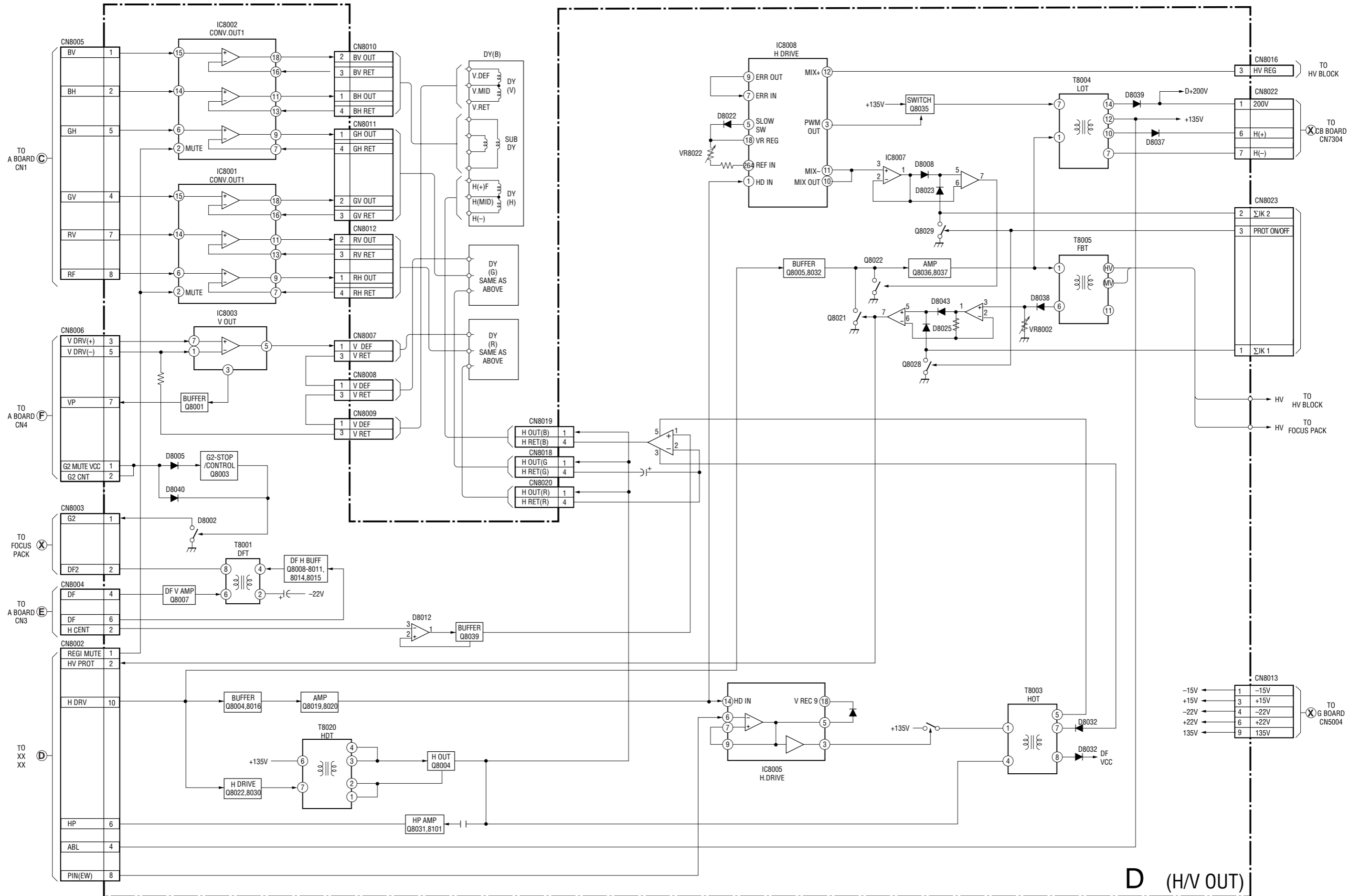


AD (PJED-CPU, REGI CORRECTON)

BLOCK DIAGRAM (8)

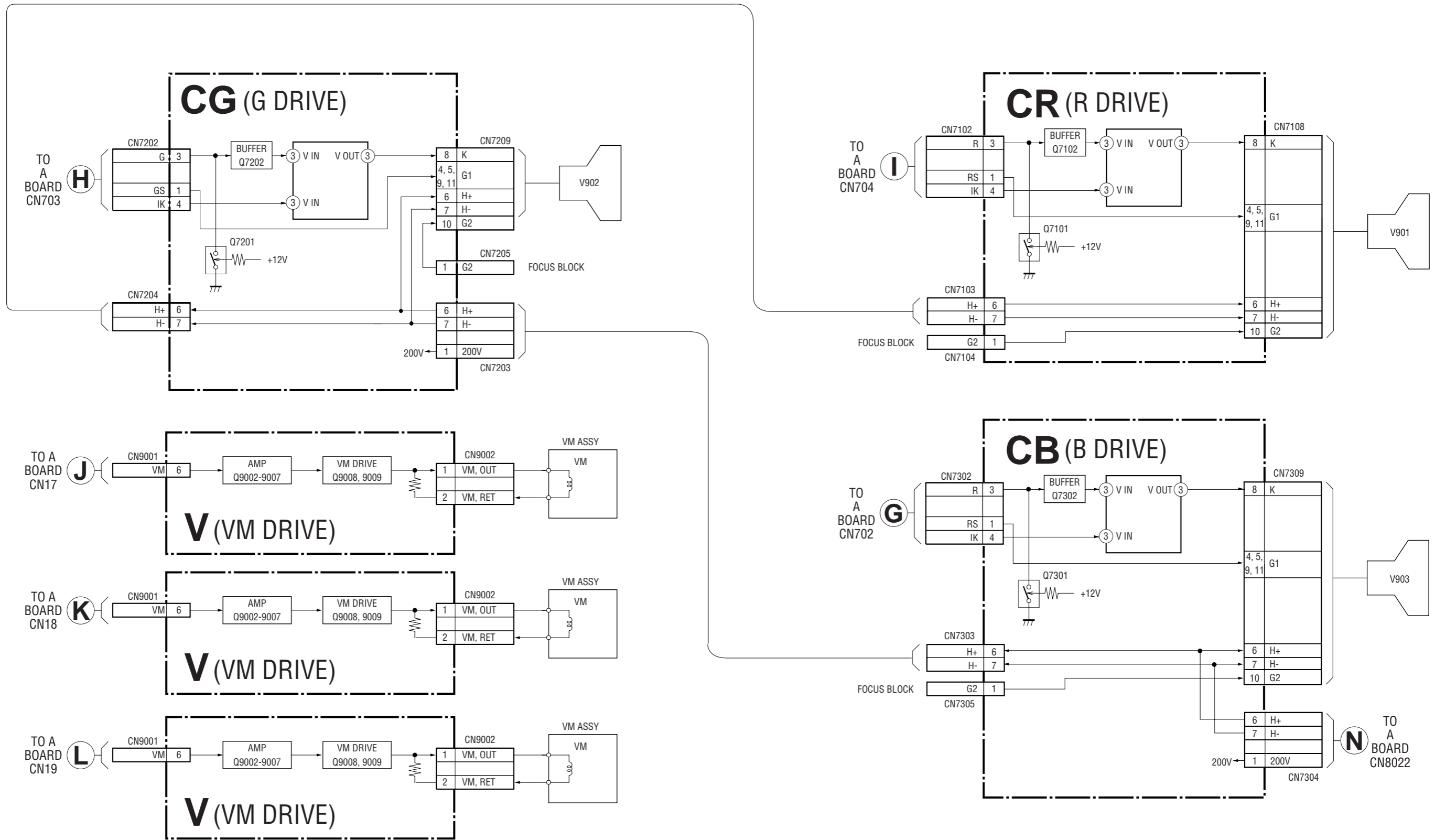


BLOCK DIAGRAM (9)

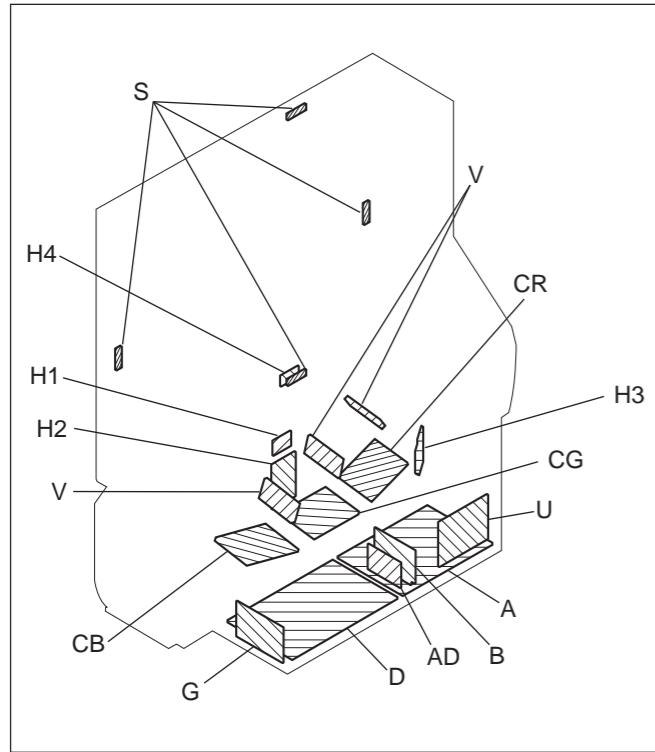


D (HV OUT)

BLOCK DIAGRAM (10)



6-2. CIRCUIT BOARDS LOCATION



Note: The symbol display is on the component side.

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

The symbol indicate fast operating fuse. Replace only with fuse of same rating as made.

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

Le symbole indique une fusible a action rapide. Doit être remplacée par une fusible de même valeur, comme maque.

6-3. SCHEMATIC DIAGRAMS

Note:

- Capacitors without voltage indication are all 50V.
- All resistors are in ohms.
kΩ=1000Ω, MΩ=1000kΩ
- Indication of resistance, which dose not have one for rating electrical power, is as follows.
Pitch : 5mm
Rating electrical power : 1/4 W
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-chassis.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.

Should replacement be required, replace only with the value originally used.

- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to VR8001 and VR8002 adjustment on Page 30.)

- Readings are taken with a NTSC color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.

* : Measurement impossibility.

• Circled numbers are waveform references.

• : B+ bus.

• : B- bus.

• : signal path.(RF)

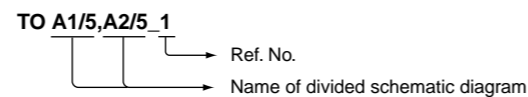
Reference information

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

• Divided schematic diagram

Schematic diagrams of A, AD, B, D, G, and U boards are divided into several pieces. Information to where the line is to be connected is printed at the end of each.

For example, [TO A1/5,A2/5_1] means the line is connected to Ref. No. 1 of A(1/5) and A(2/5) schematic diagrams.

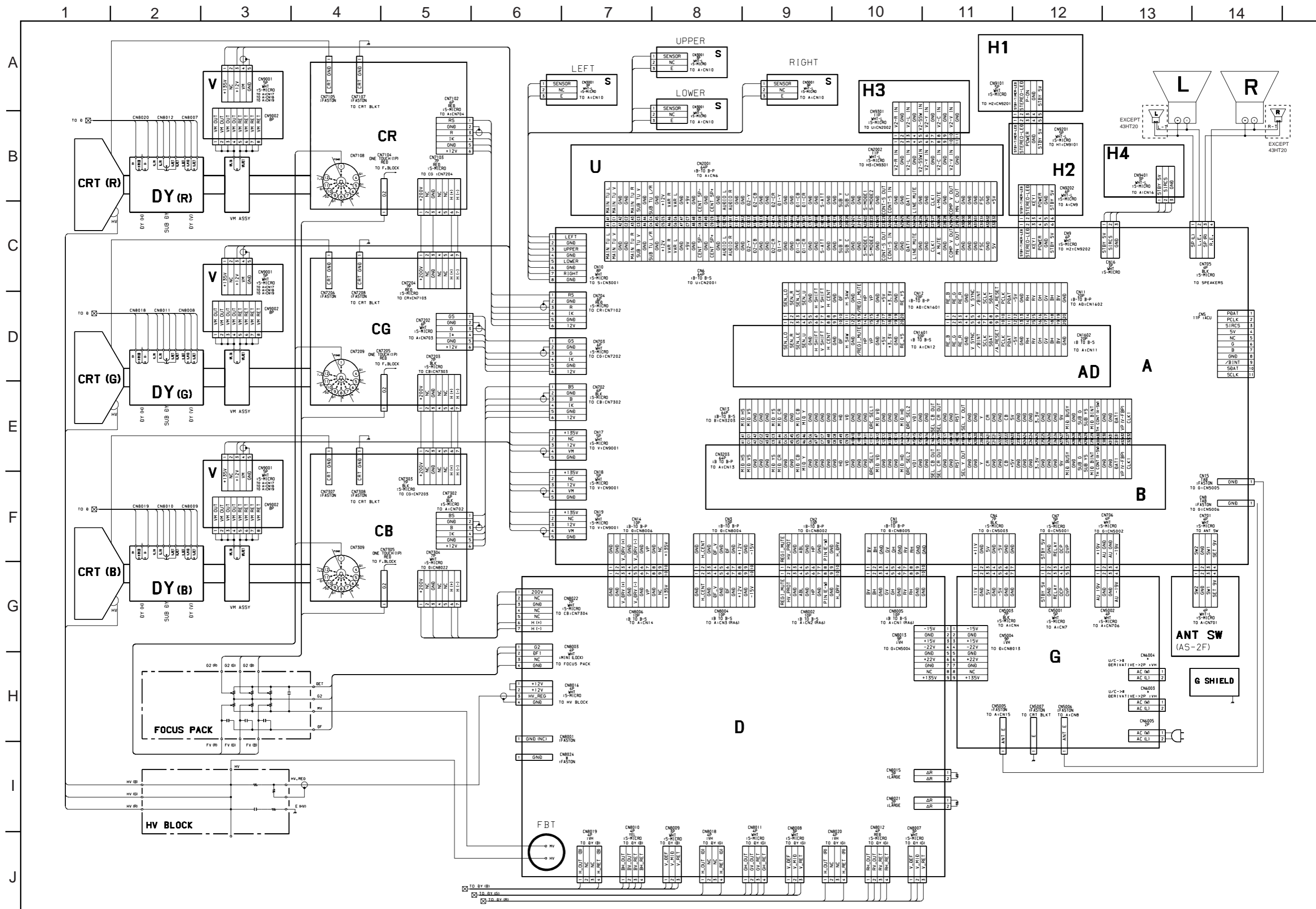


Terminal name of semiconductors in silk screen printed circuit (*)

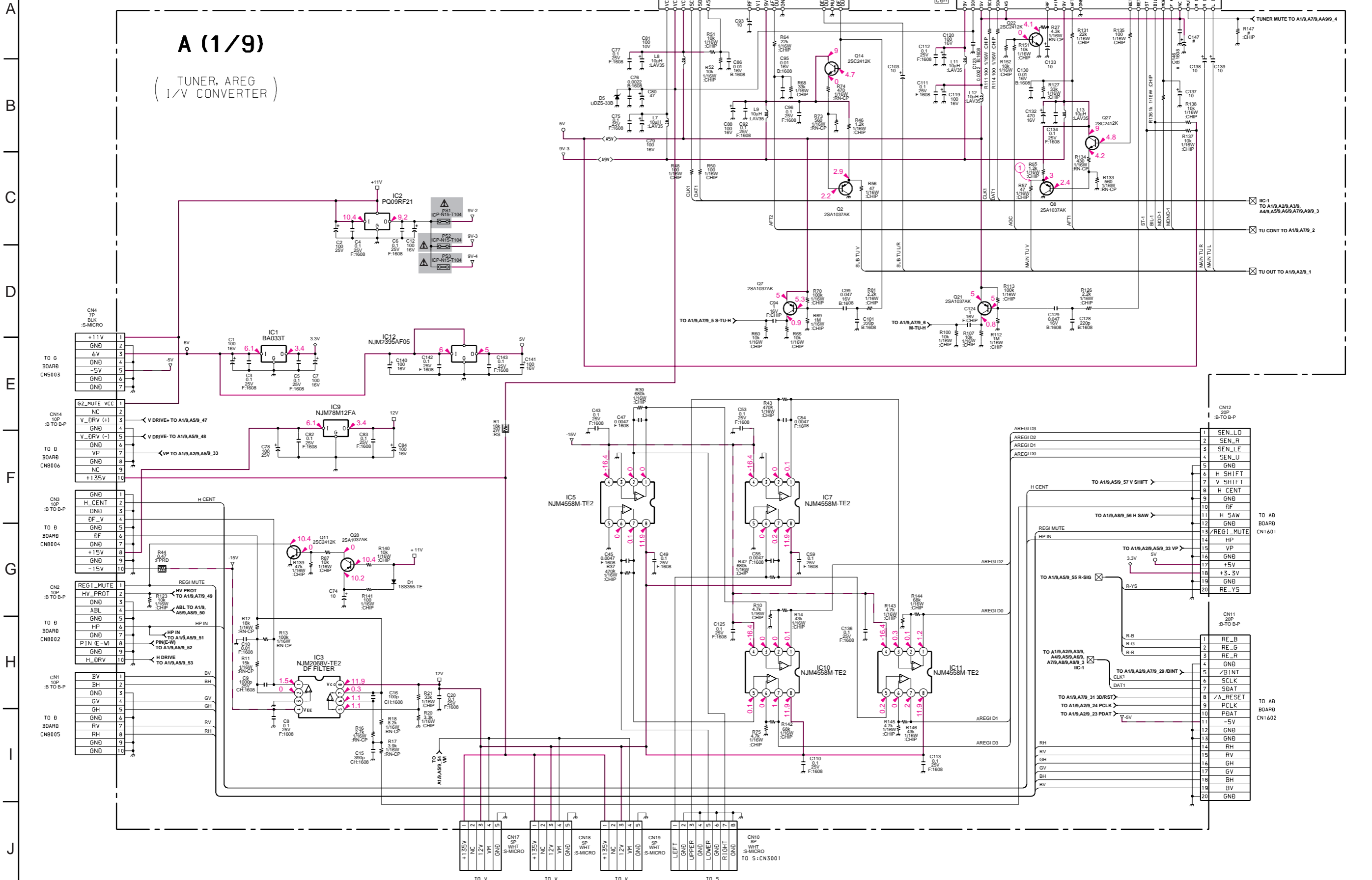
Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode Anode	
④ Diode		Cathode Anode (NC)	
⑤ Diode		Cathode Anode (NC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode		Common Anode Anode	
⑩ Diode		Common Cathode Cathode	
⑪ Diode		Common Cathode Cathode	
⑫ Diode		Anode Anode Cathode Cathode	
⑬ Transistor (FET)		Drain Source Gate	
⑭ Transistor (FET)		Drain Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
⑯ Transistor		Emitter Collector Base	
⑰ Transistor		C2/B1/E1 E2/B2/C1	
⑱ Transistor		C1/B2/E2 E1/B1/C2	
⑲ Transistor		C1 B2 E2 E1 B1 C2	
⑳ Transistor		C1 B2 E2 E1 B1 C2	
㉑ Transistor		E2 B1 E1 C2 C1(B2)	
㉒ Transistor		(B2) B1 E1 E2 C1 C2	
㉓ Transistor		(B2) E2 E1 B1 C2 C1	
-	-	Discrete semiconductor	

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

Ver.1.5



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15



A (1/9)
 (TUNER, AREG
 I/V CONVERTER)

A
 B
 C
 D
 E
 F
 G
 H
 I
 J

CN4 7P BLK S-MICRO

1	+11V
2	GND
3	6V
4	GND
5	-5V
6	GND
7	GND

CN14 10P B TO B-P

1	G2_MUTE VCC
2	NC
3	V_DRV (+)
4	GND
5	V_DRV (-)
6	GND
7	VP
8	GND
9	NC
10	+135V

CN3 10P B TO B-P

1	GND
2	H_CENT
3	GND
4	BF_V
5	GND
6	BF
7	GND
8	+15V
9	GND
10	-15V

CN2 10P B TO B-P

1	REG1_MUTE
2	HV_PROT
3	GND
4	ABL
5	GND
6	HP IN
7	GND
8	PIN(E-W)
9	GND
10	H_DRV

CN1 10P B TO B-P

1	BY
2	BH
3	GND
4	GV
5	GH
6	GND
7	RV
8	RH
9	GND
10	GND

TO V BOARD CN9001

1	+135V
2	NC
3	12V
4	VM
5	GND

TO V BOARD CN9001

1	+135V
2	NC
3	12V
4	VM
5	GND

TO V BOARD CN9001

1	+135V
2	NC
3	12V
4	VM
5	GND

TO S BOARD CN3001

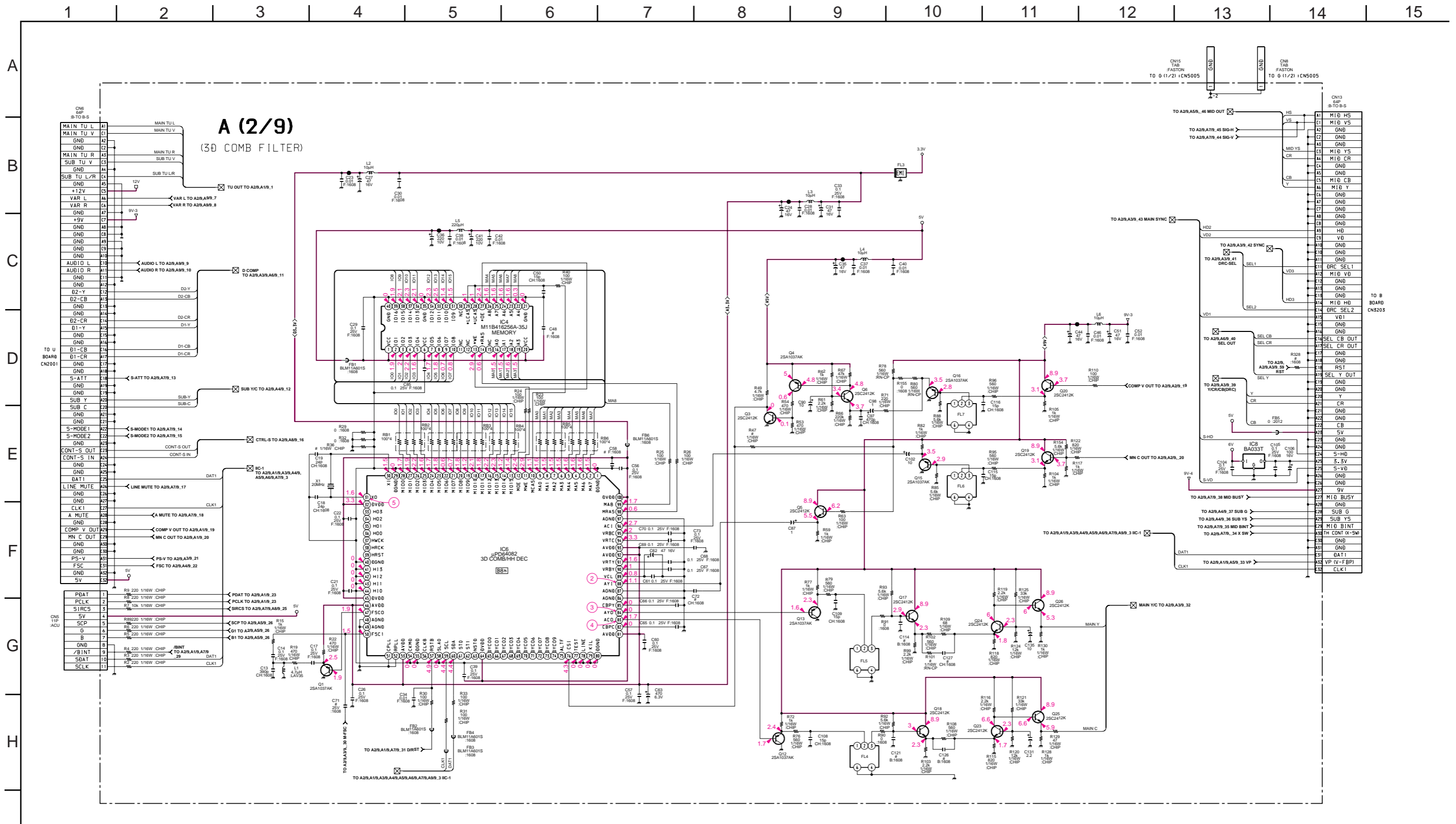
1	LEFT
2	GND
3	UPPER
4	GND
5	LOWER
6	GND
7	RIGHT
8	GND

CN12 20P B-TO B-P

1	SEN_LD
2	SEN_LR
3	SEN_LE
4	SEN_U
5	GND
6	H_SHIFT
7	V_SHIFT
8	H_CENT
9	GND
10	DF
11	H_SAW
12	GND
13	REG1_MUTE
14	HP IN
15	VP
16	GND
17	+5V
18	+3.3V
19	GND
20	RE_YS

CN11 20P B-TO B-P

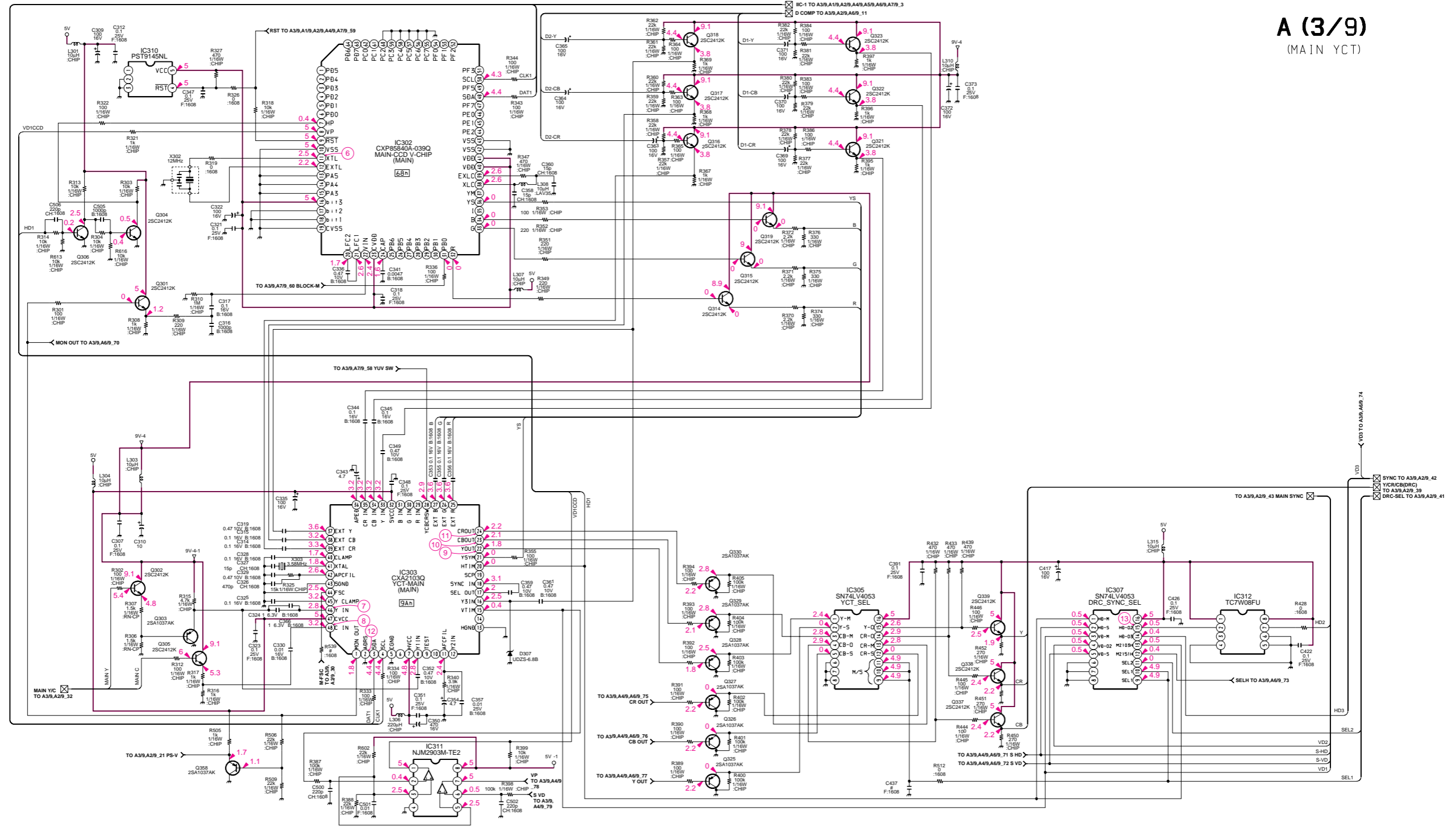
1	RE_B
2	RE_G
3	RE_R
4	GND
5	/BINT
6	SCLK
7	SDAT
8	/A_RESET
9	PCLK
10	PDAT
11	-5V
12	GND
13	GND
14	RH
15	RV
16	GH
17	GV
18	BH
19	BV
20	GND

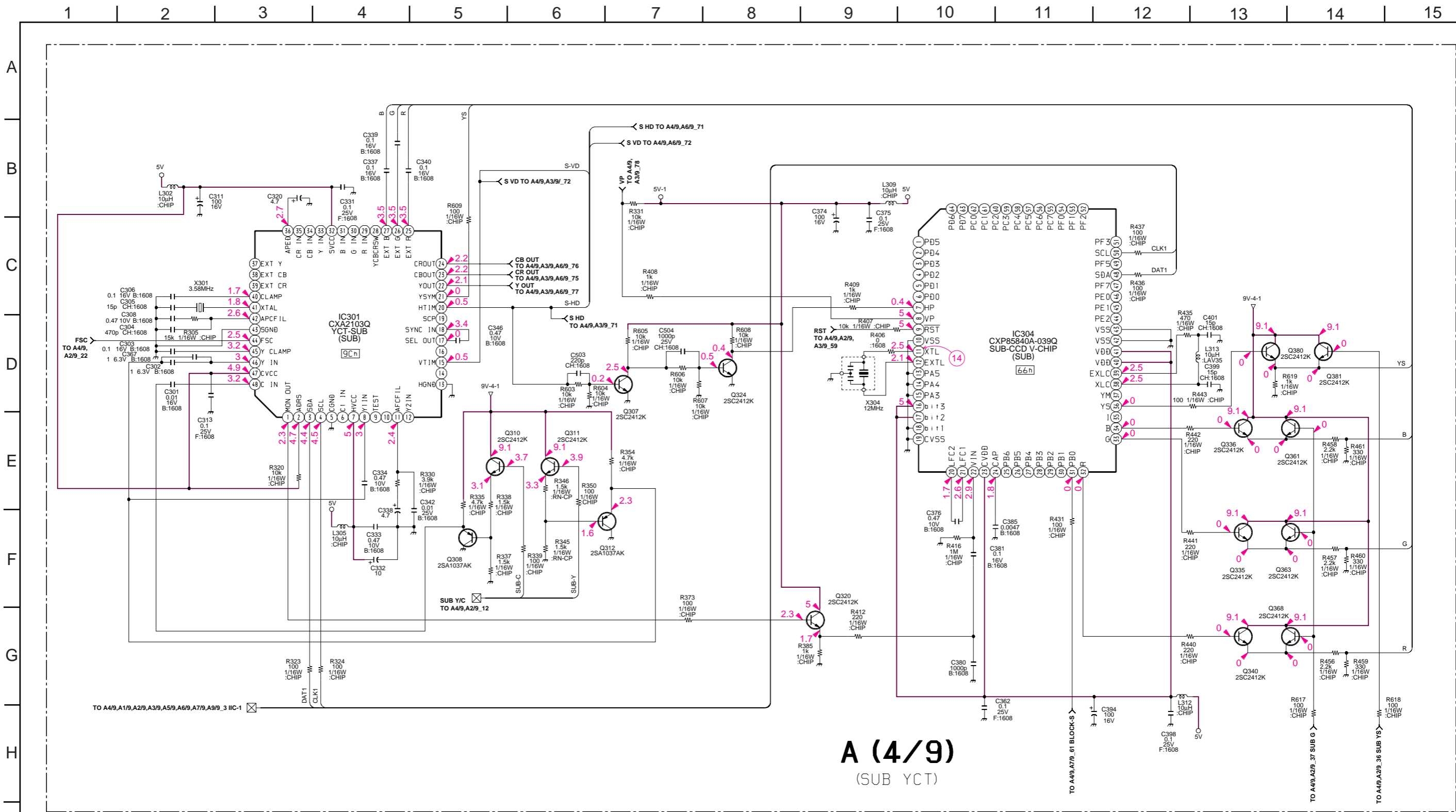


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A
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A (3/9)
 (MAIN YCT)

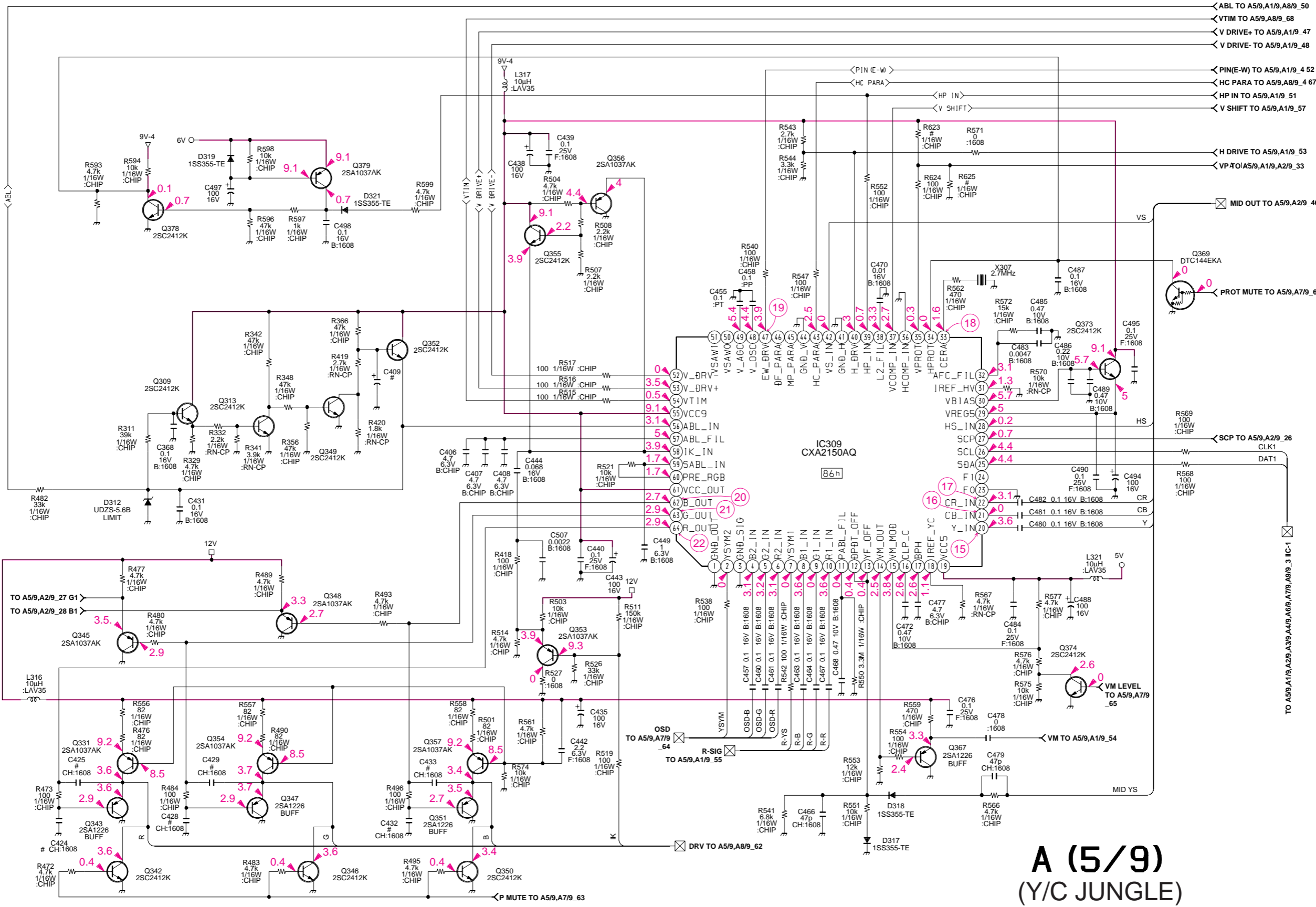




A (4/9)
 (SUB YCT)

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

A
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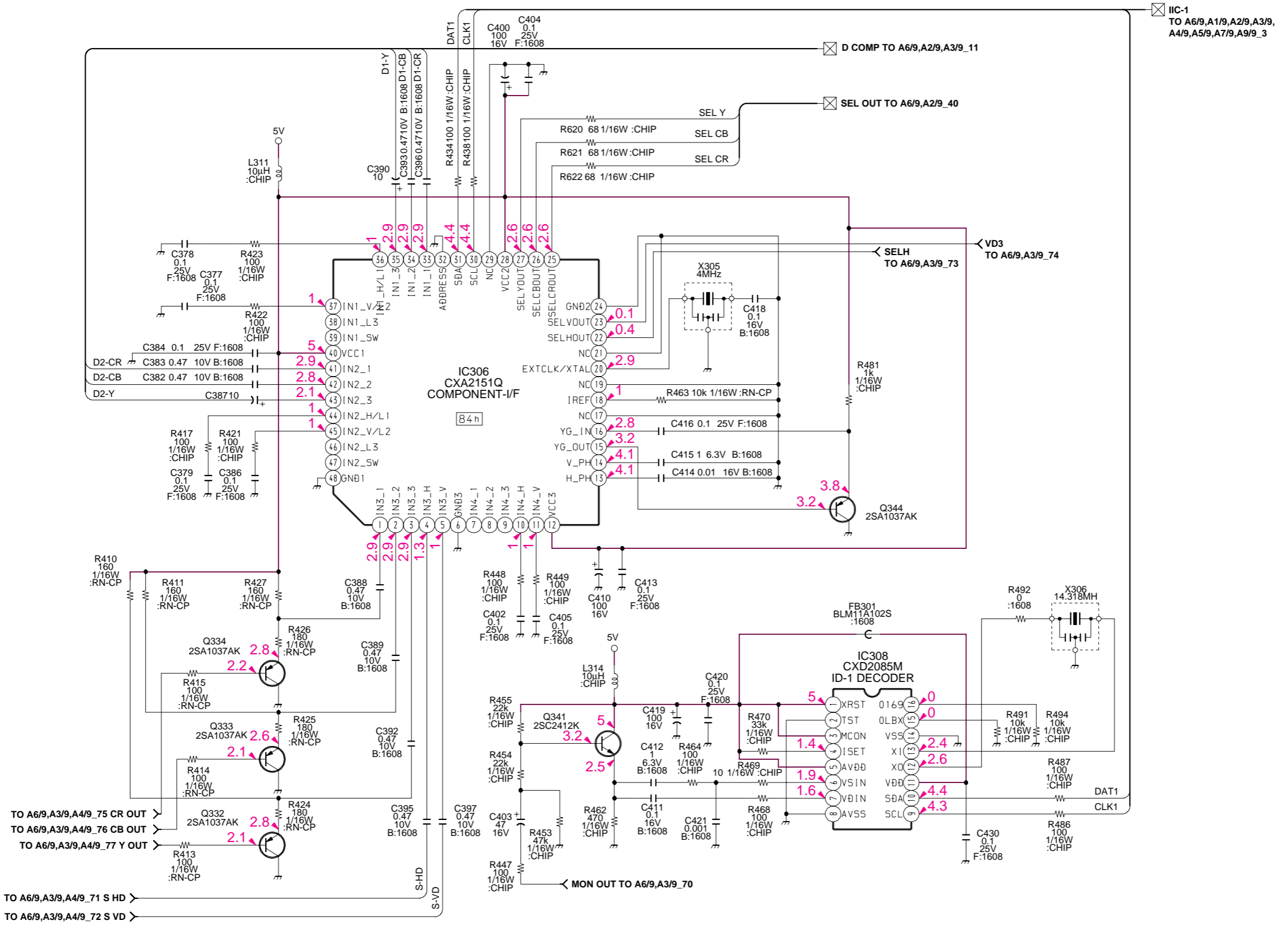


A (5/9)
(Y/C JUNGLE)

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

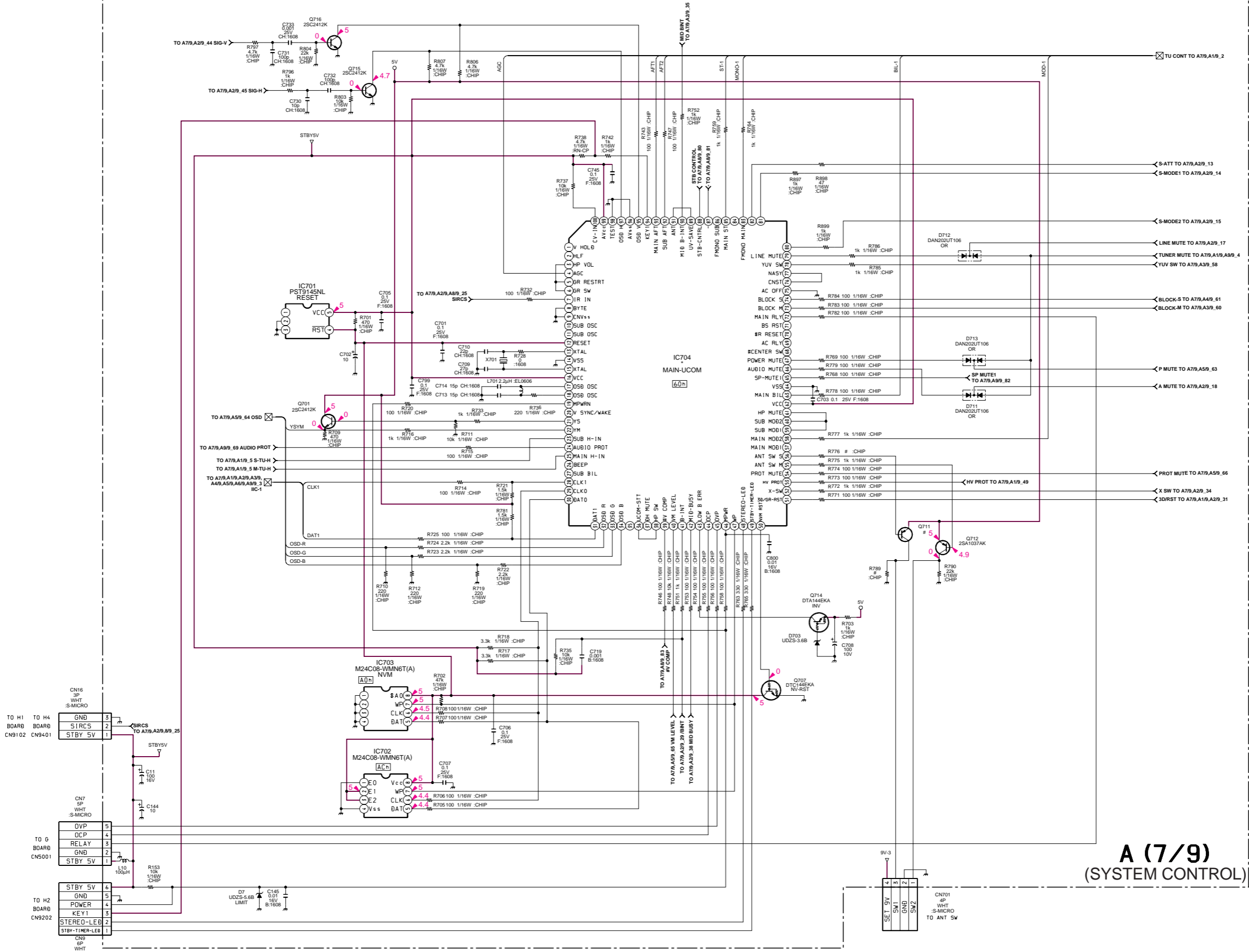
A
B
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G
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I
J

A (6/9) (COMPONENT I/F, ID-1 DECODER)



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

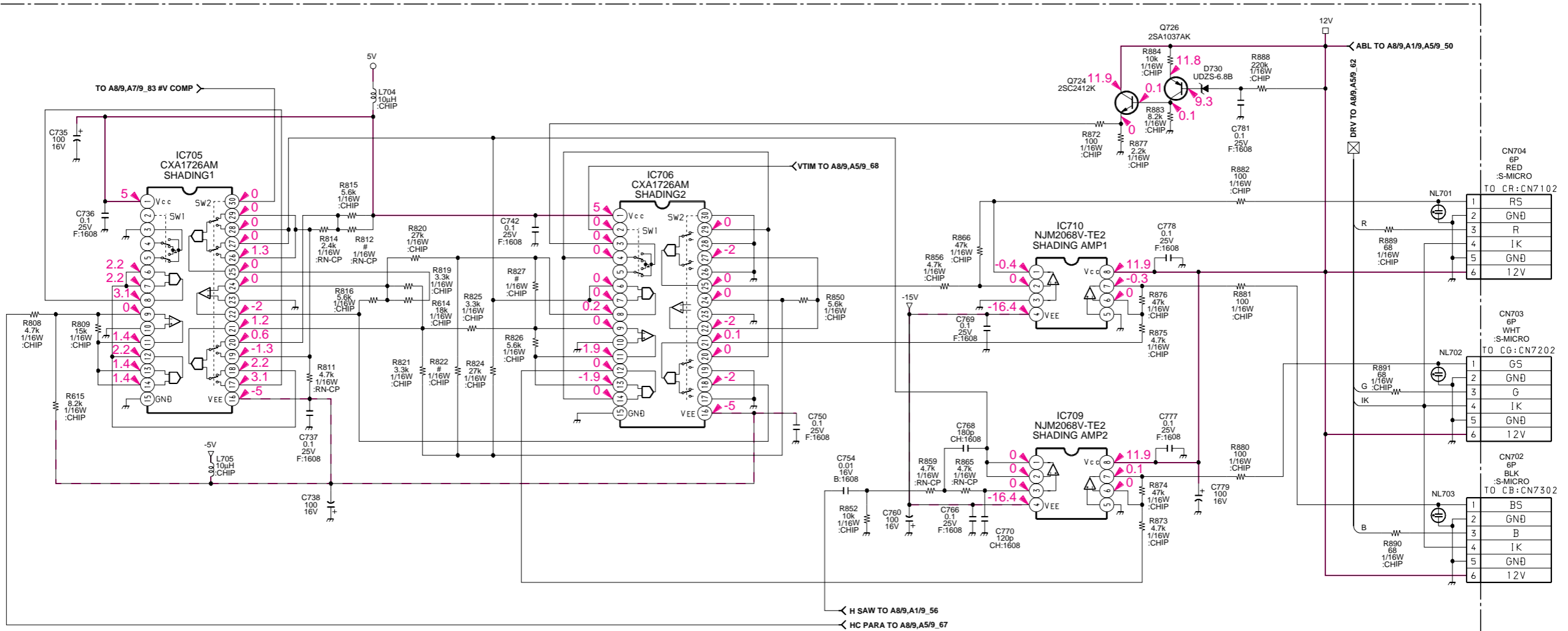
A
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A (7/9)
 (SYSTEM CONTROL)

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

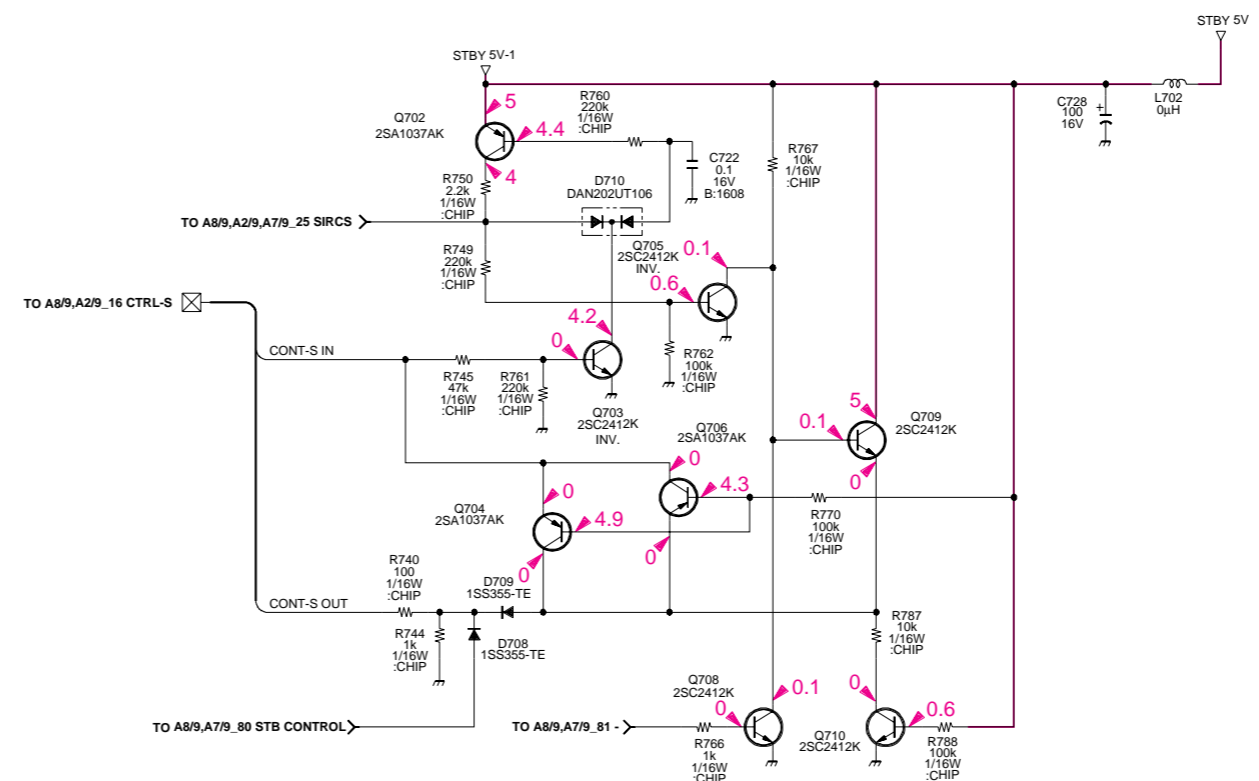
A
B
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CN704	6P	RED	:S-MICRO
TO CR:CN7102			
1	RS		
2	GND		
3	R		
4	IK		
5	GND		
6	12V		

CN703	6P	WHT	:S-MICRO
TO CG:CN7202			
1	GS		
2	GND		
3	G		
4	IK		
5	GND		
6	12V		

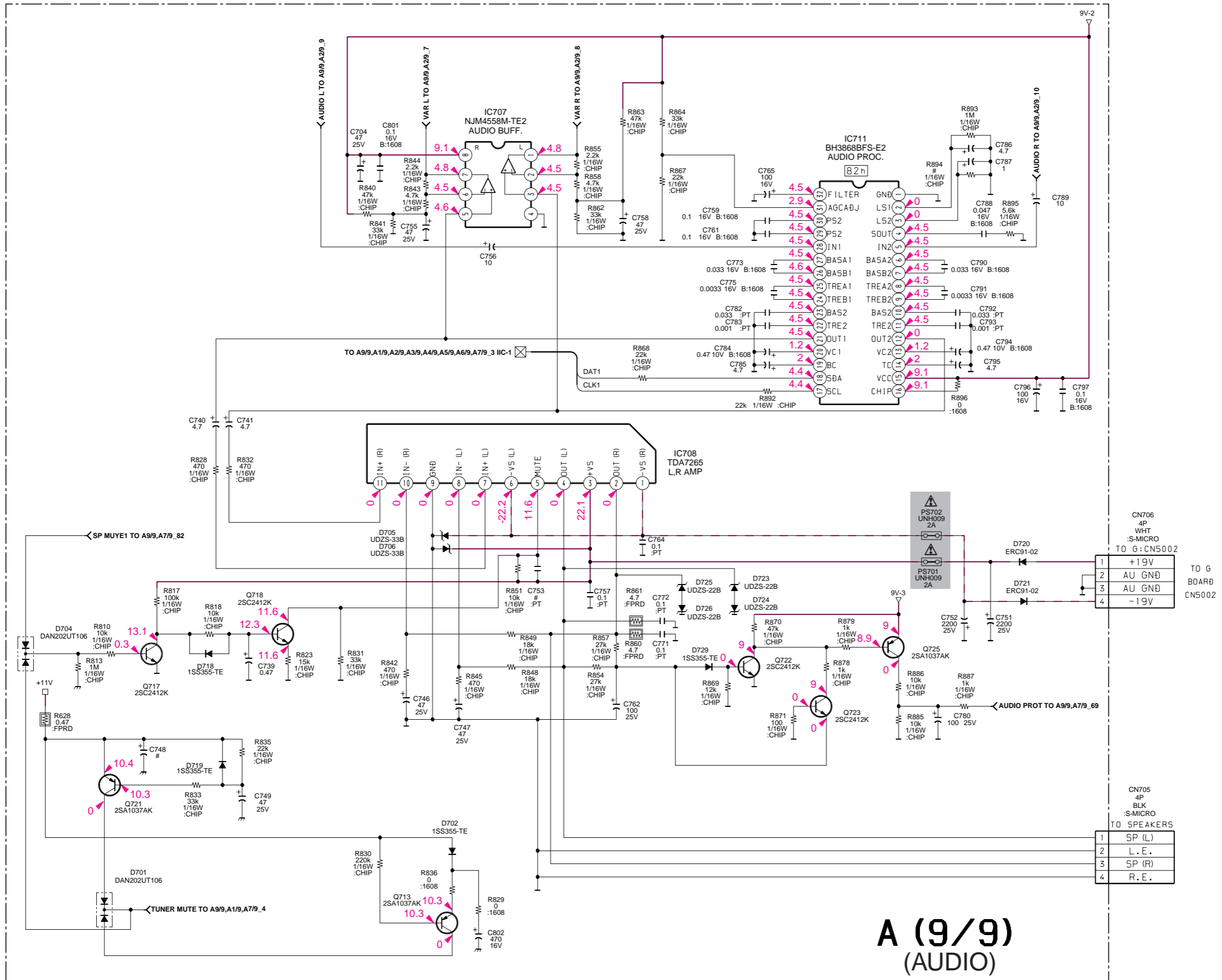
CN702	6P	BLK	:S-MICRO
TO CB:CN7302			
1	BS		
2	GND		
3	B		
4	IK		
5	GND		
6	12V		



A (8/9)
(SHADING)

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

A
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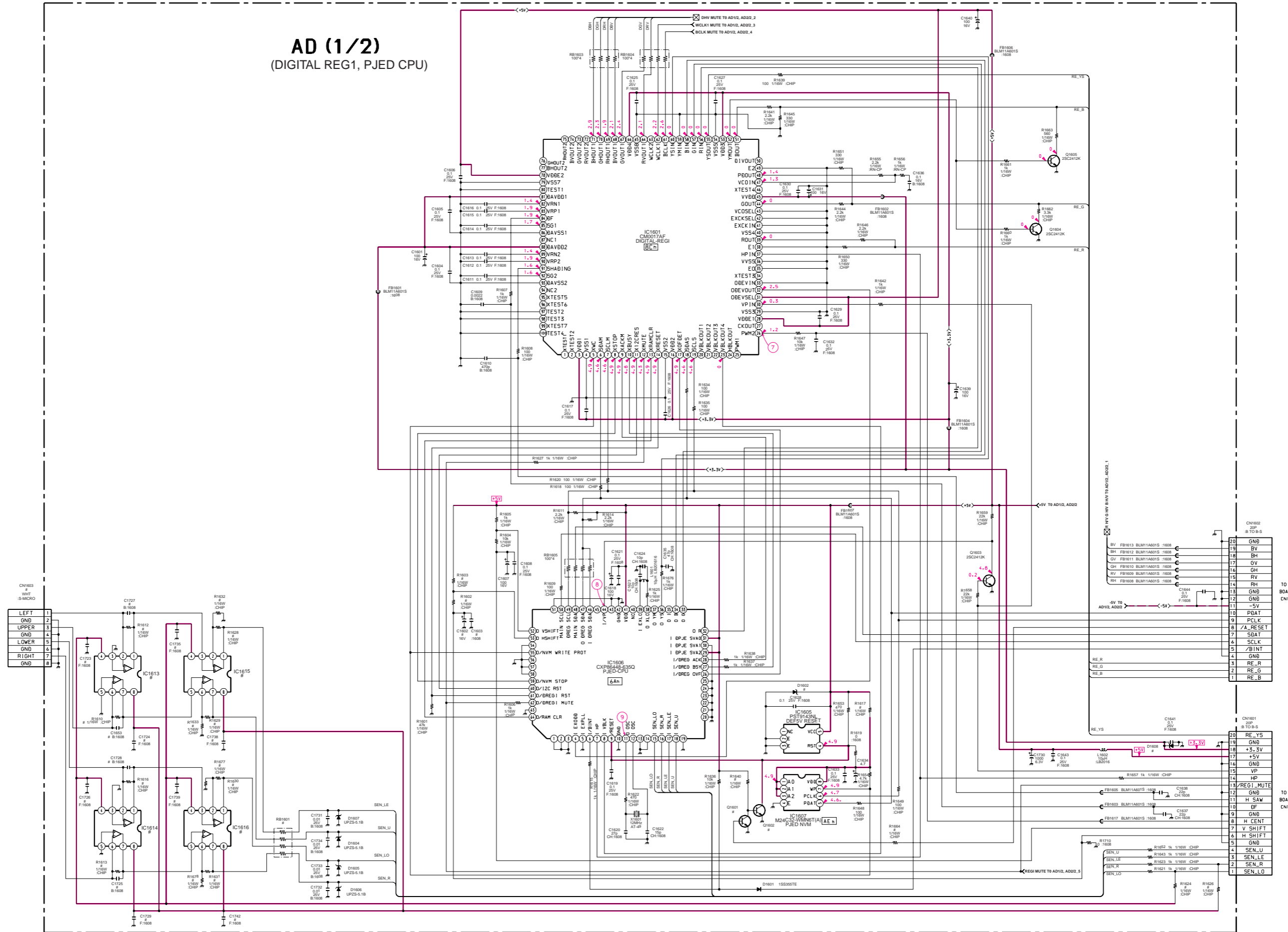


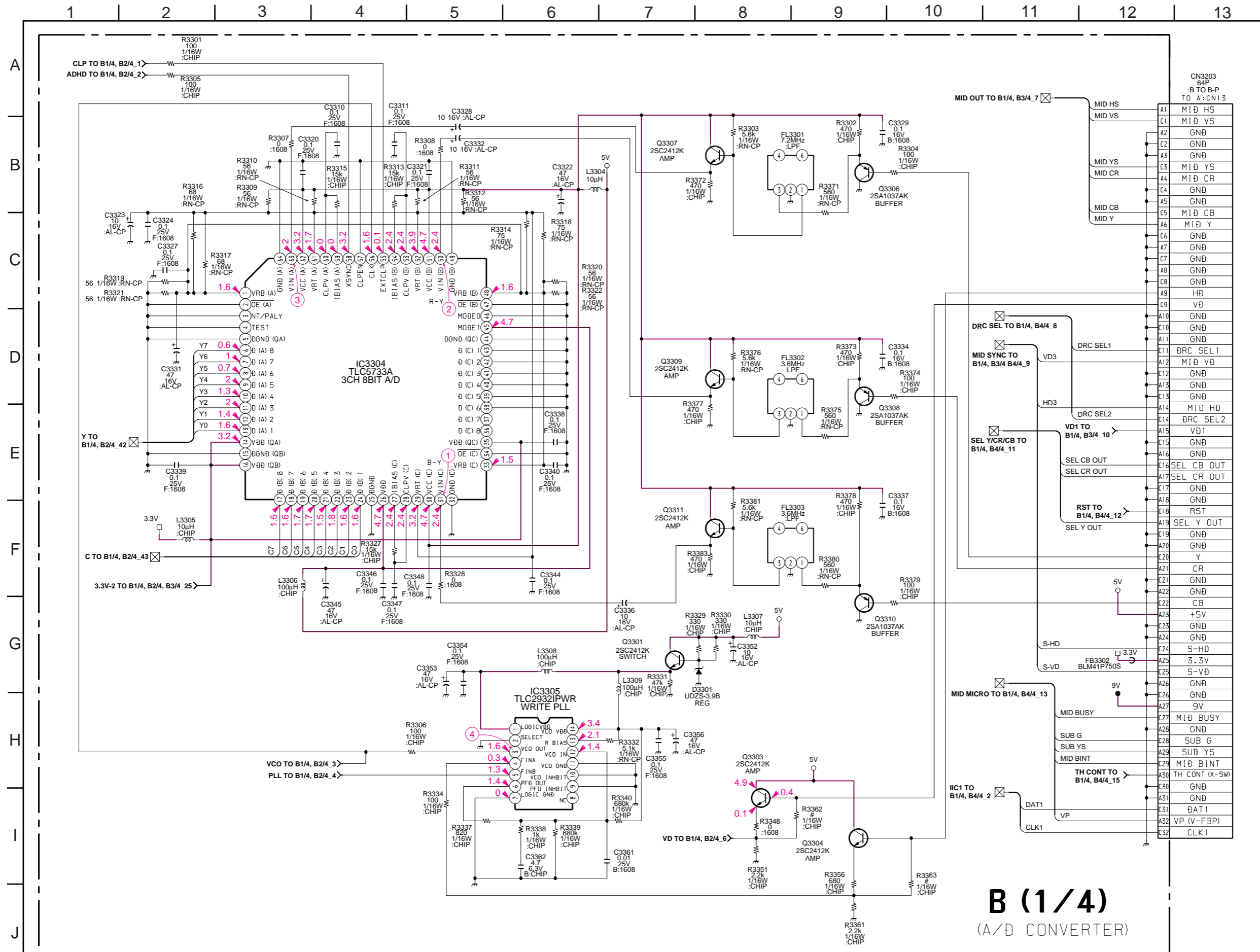
A (9/9)
(AUDIO)

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

A
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F
G
H
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J

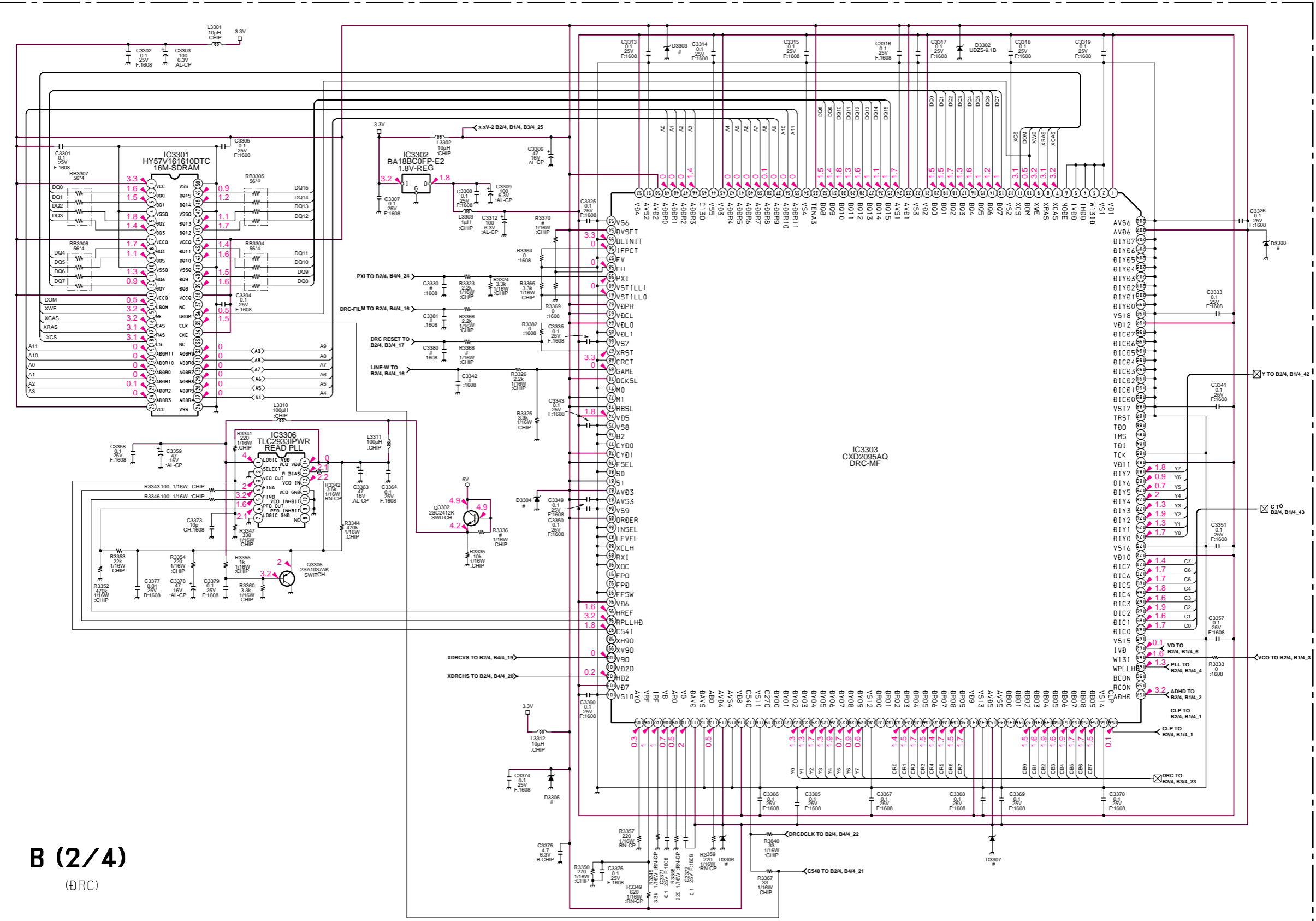
AD (1/2)
 (DIGITAL REG1, PJED CPU)





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

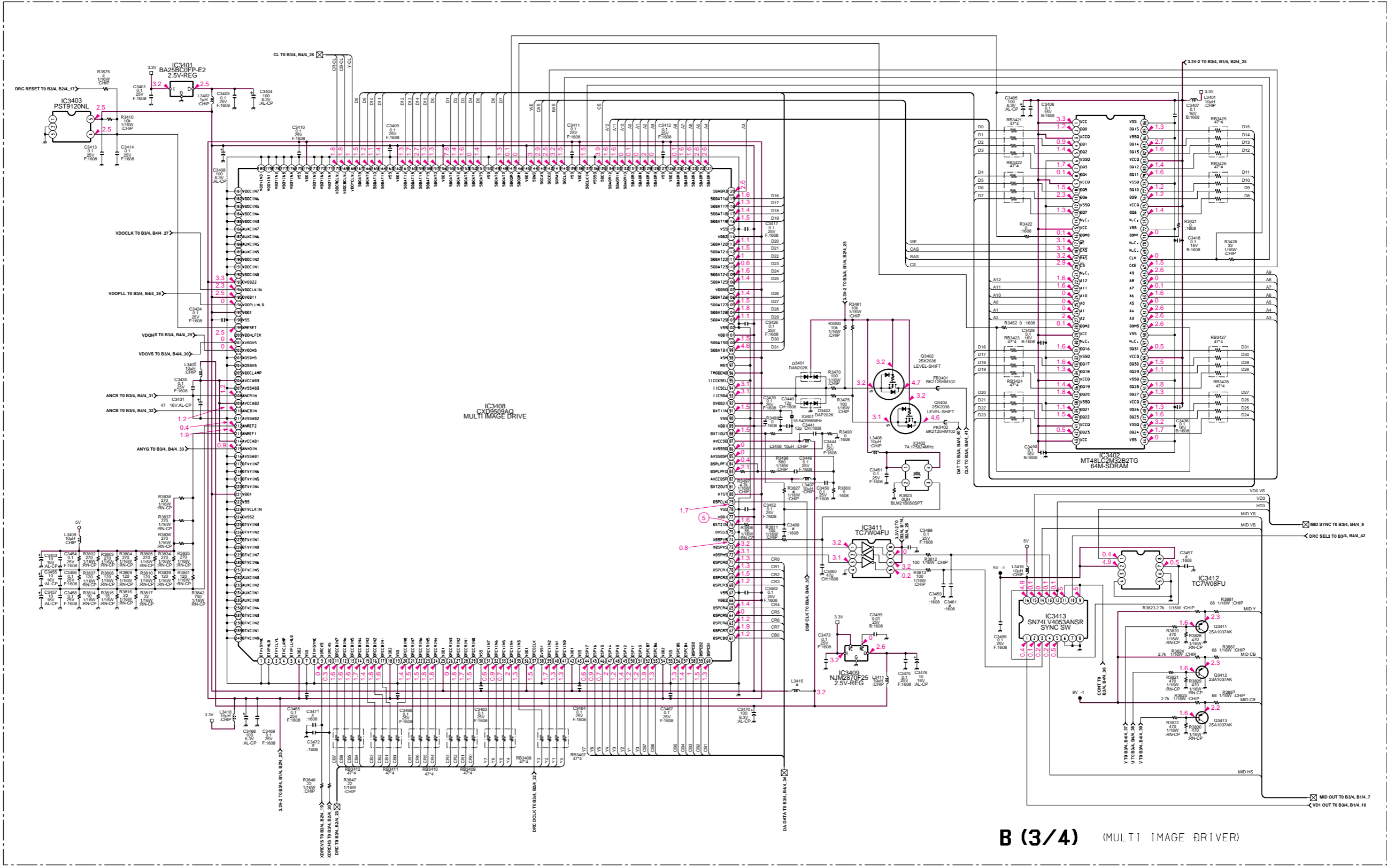
A
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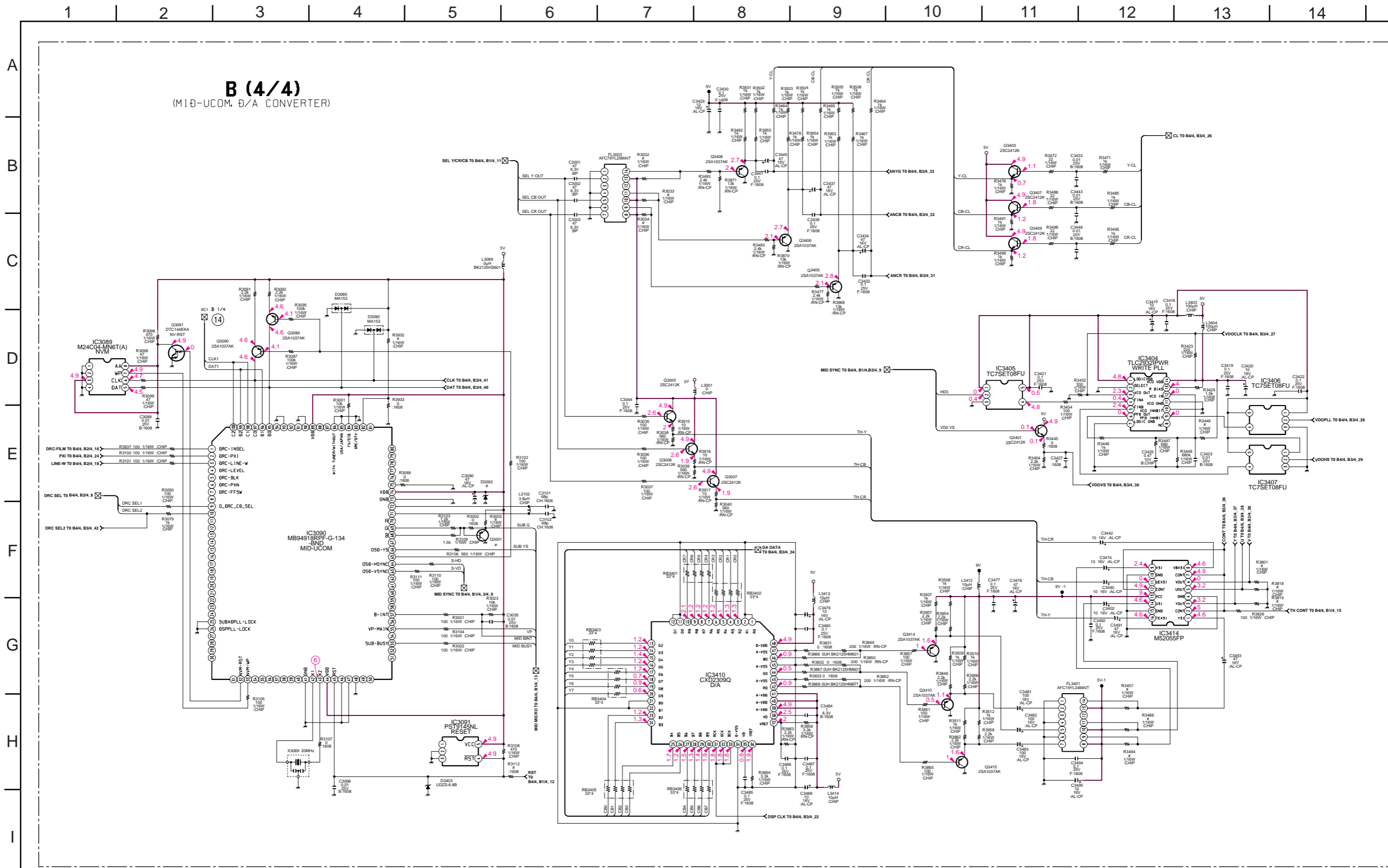
B (2/4)
(DRC)

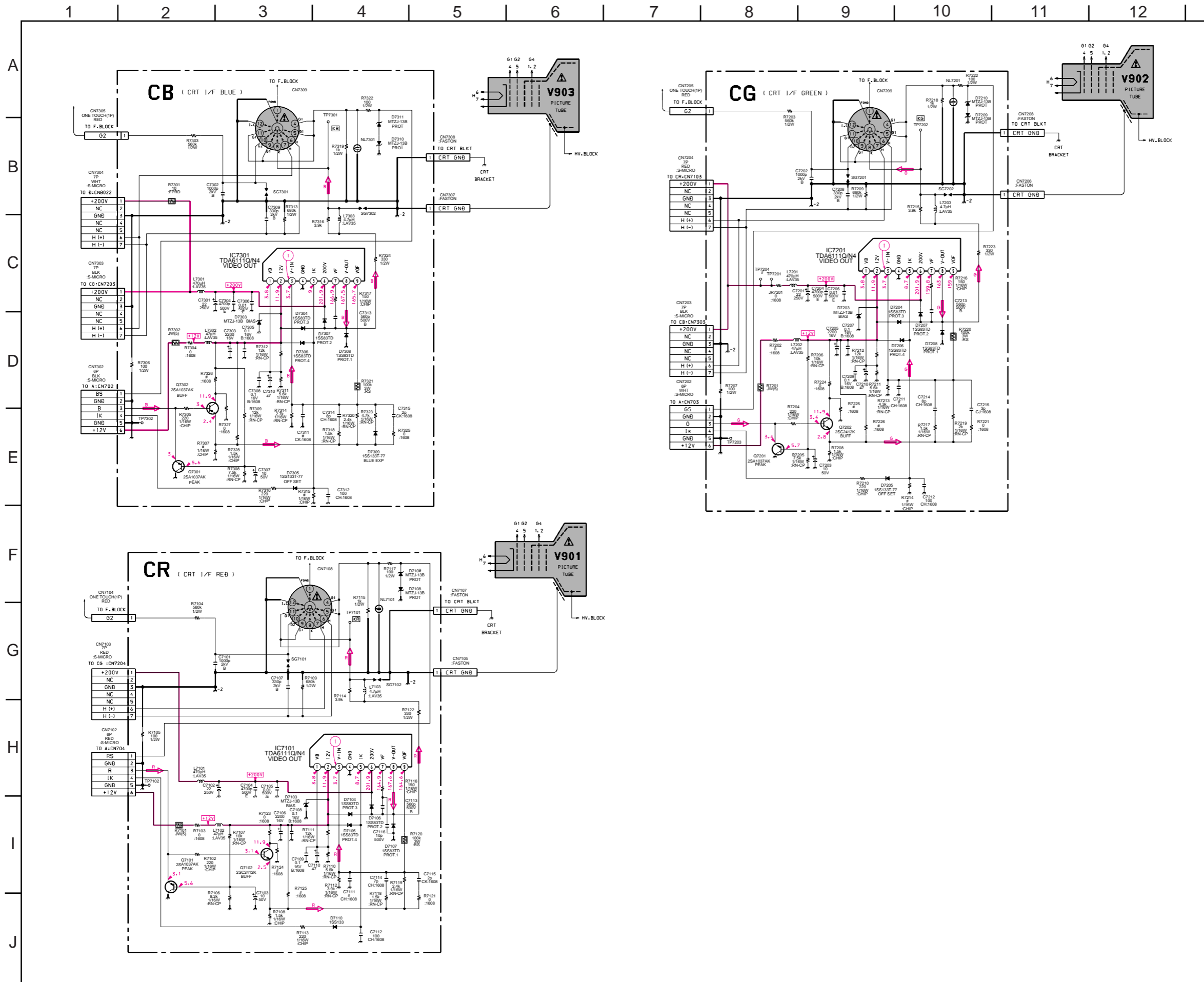
1 2 3 4 5 6 7 8 9 10 11 12 13 14

A
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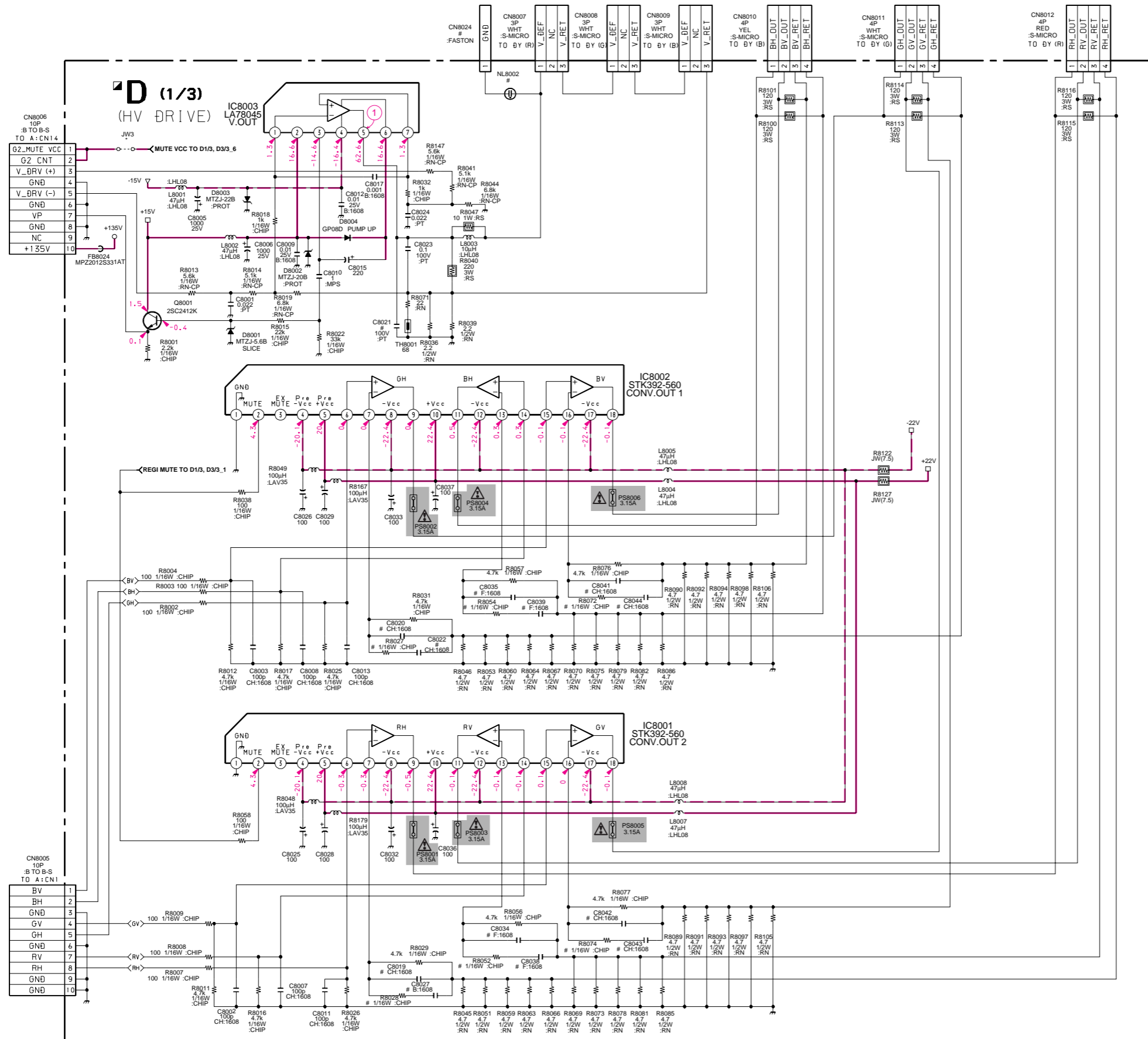
B (3/4) (MULTI IMAGE DRIVER)





1 2 3 4 5 6 7 8 9 10 11

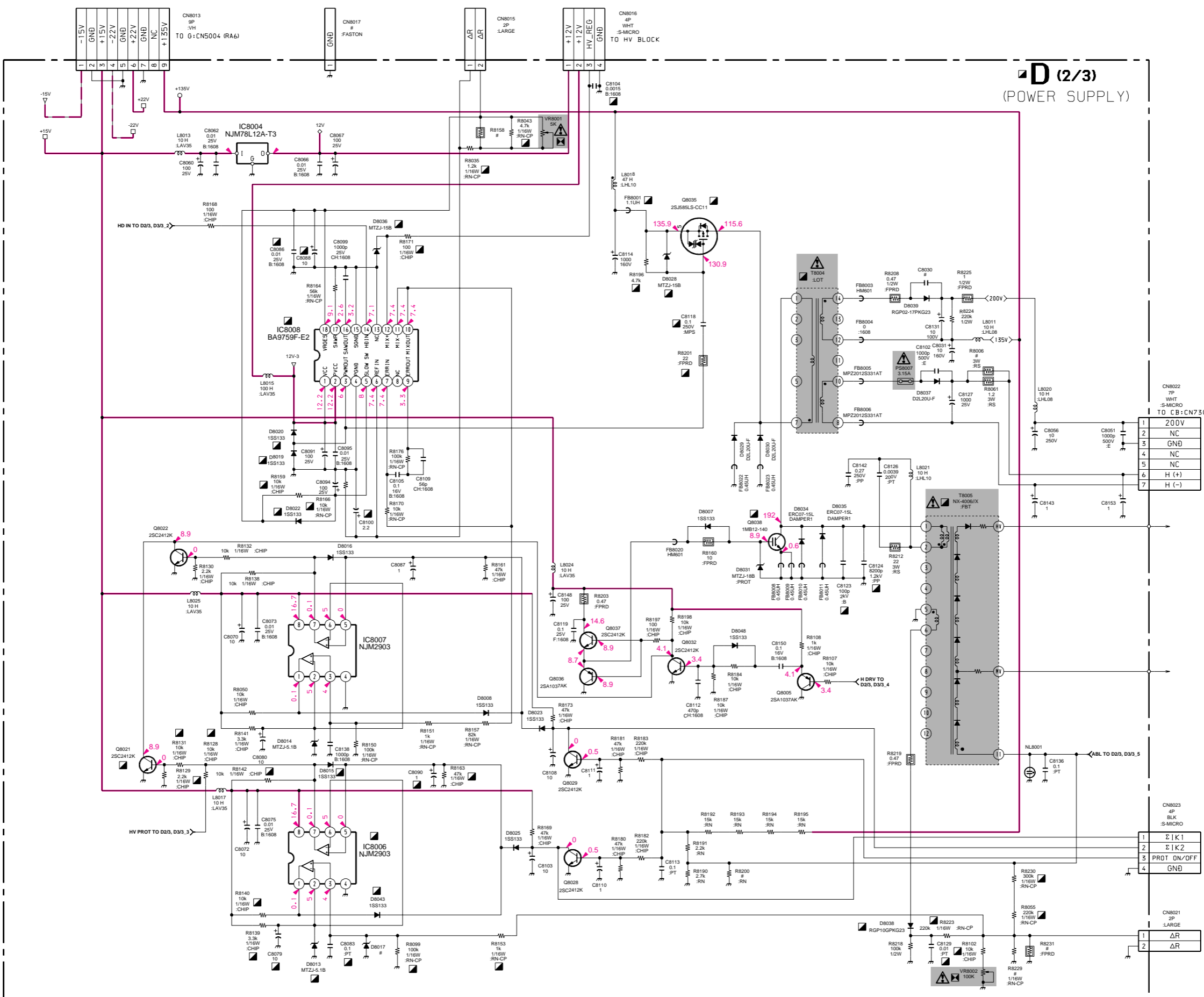
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1 2 3 4 5 6 7 8 9 10 11 12 13

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D (2/3)
(POWER SUPPLY)



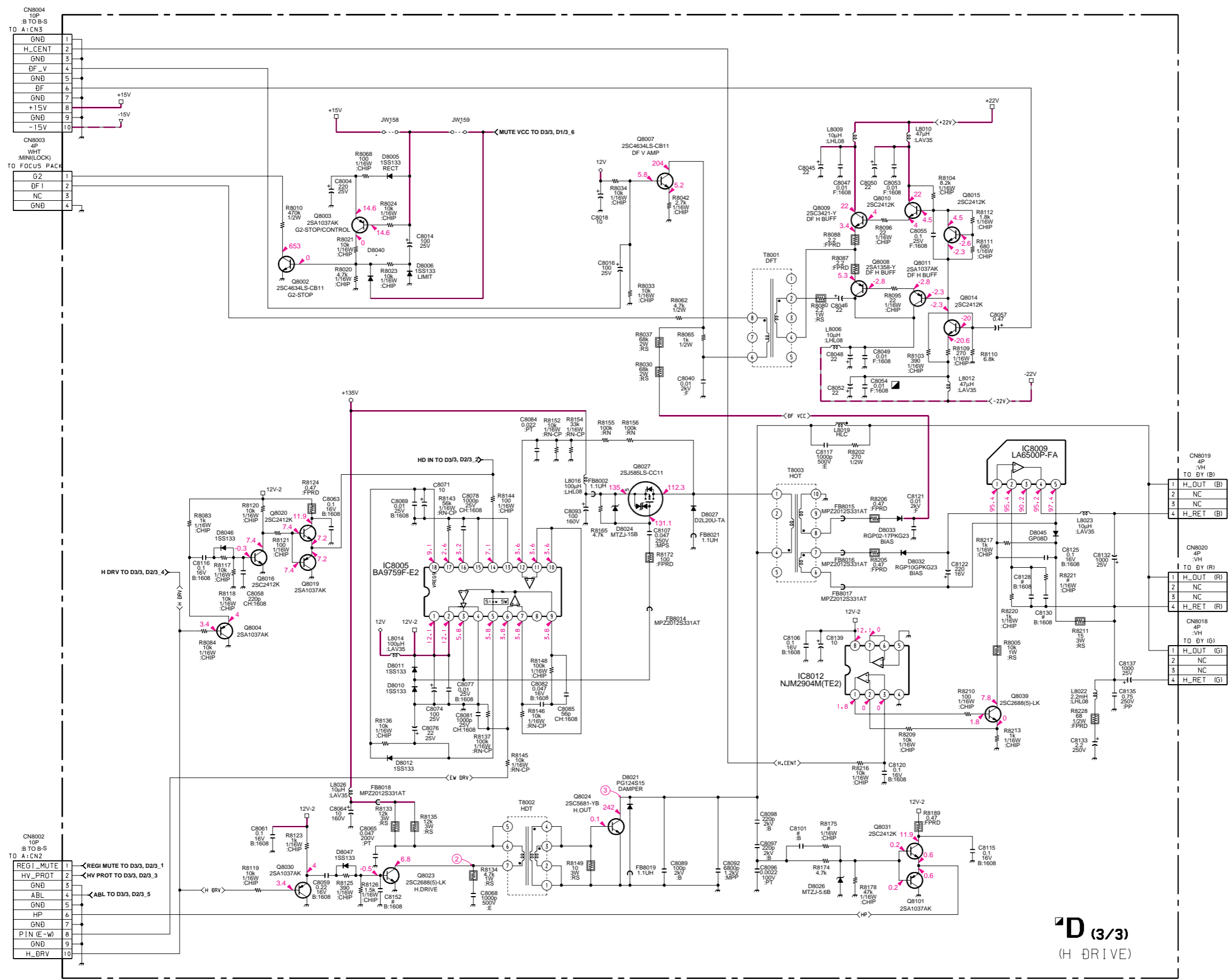
1	200V
2	NC
3	GND
4	NC
5	NC
6	H (+)
7	H (-)

1	ΣIK1
2	ΣIK2
3	PROT ON/OFF
4	GND

1	ΔR
2	ΔR

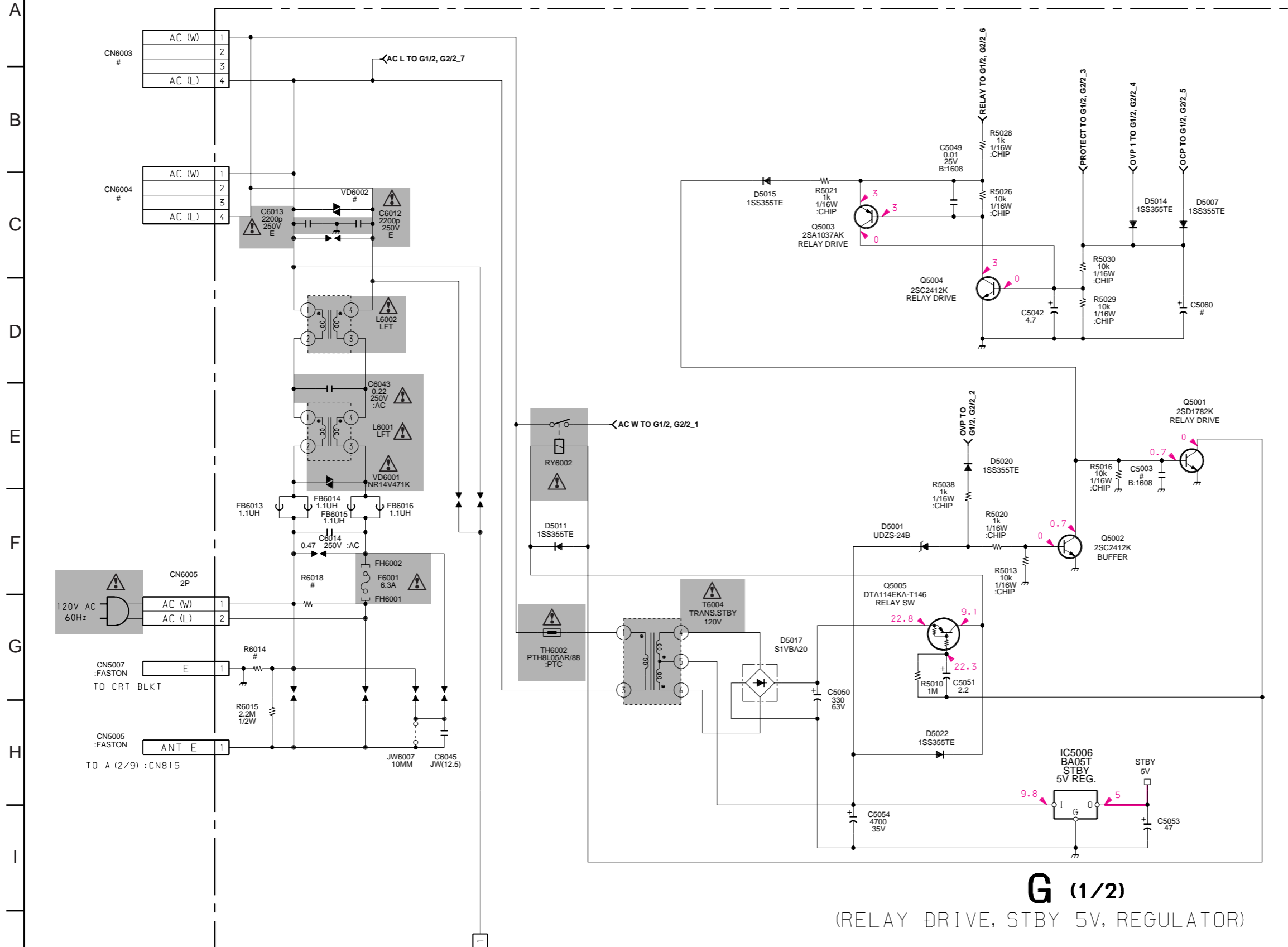
1 2 3 4 5 6 7 8 9 10 11 12 13

A
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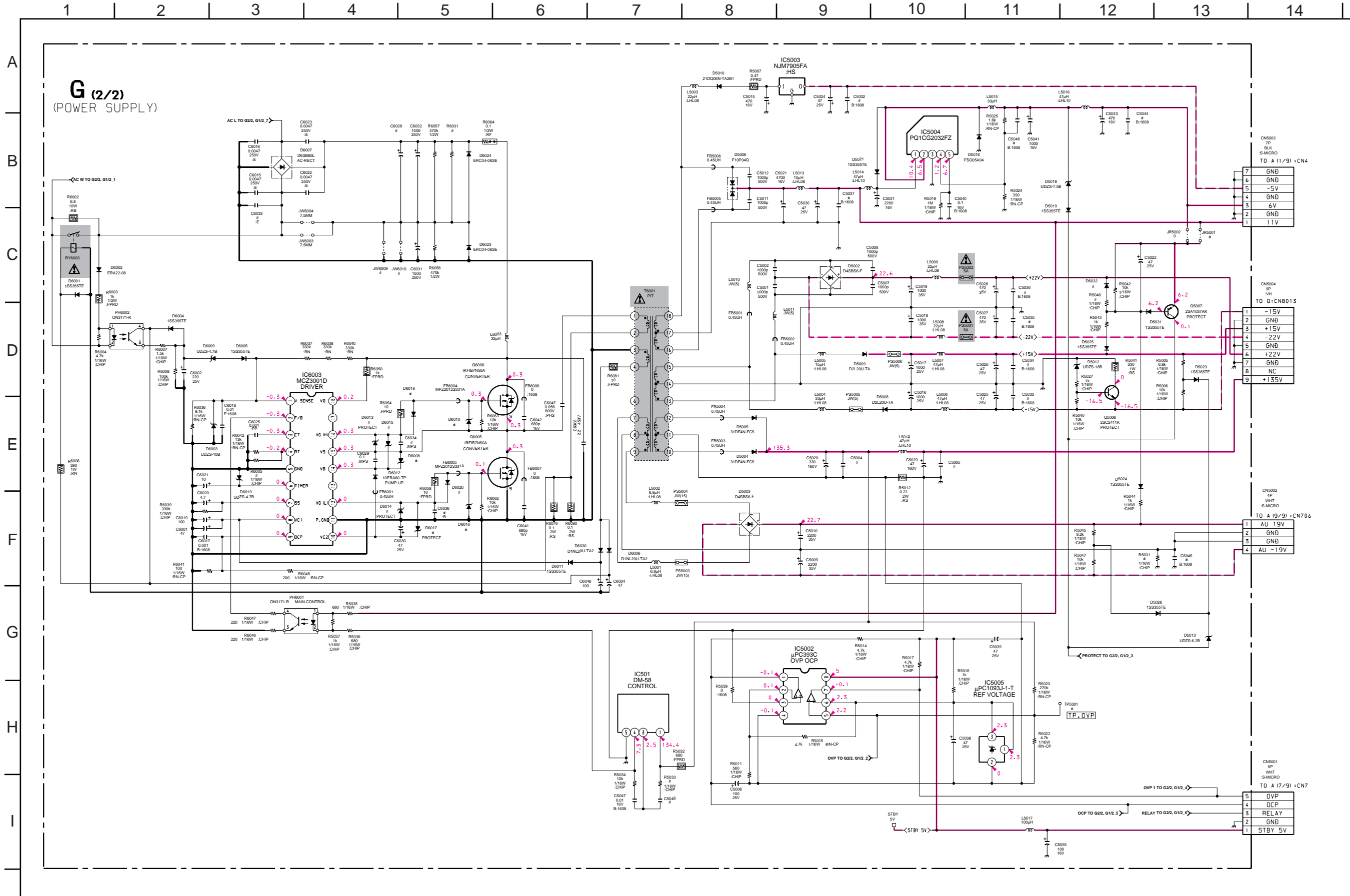
D (3/3)
(H DRIVE)

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

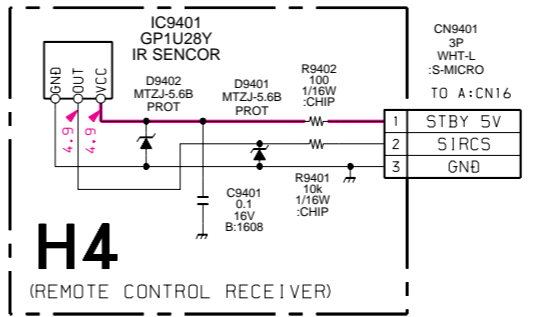
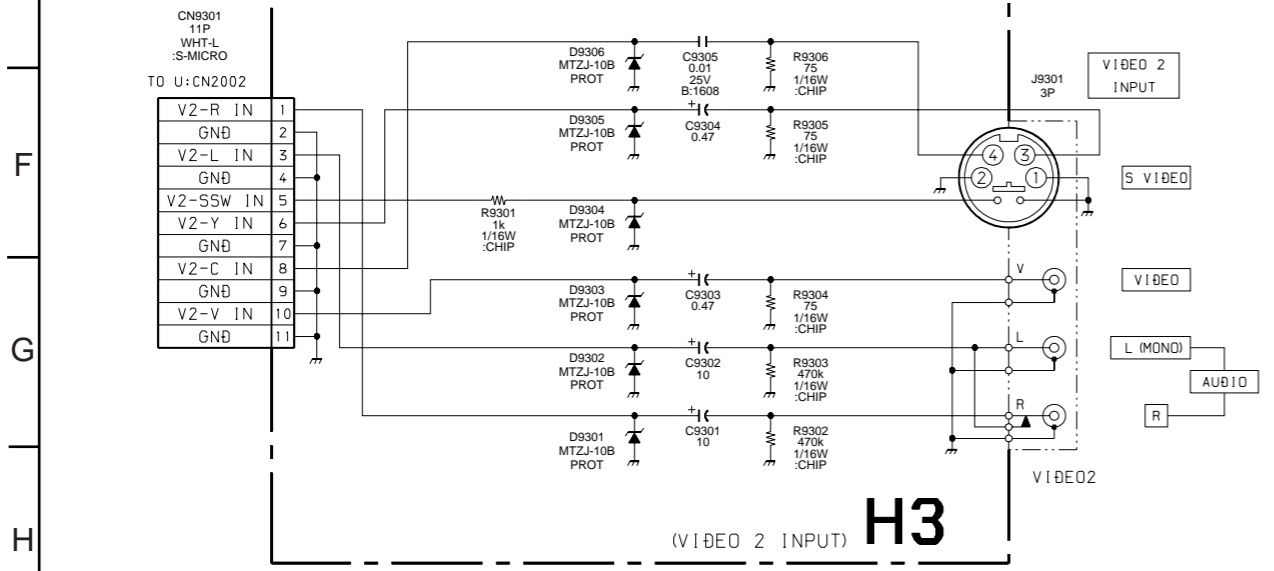
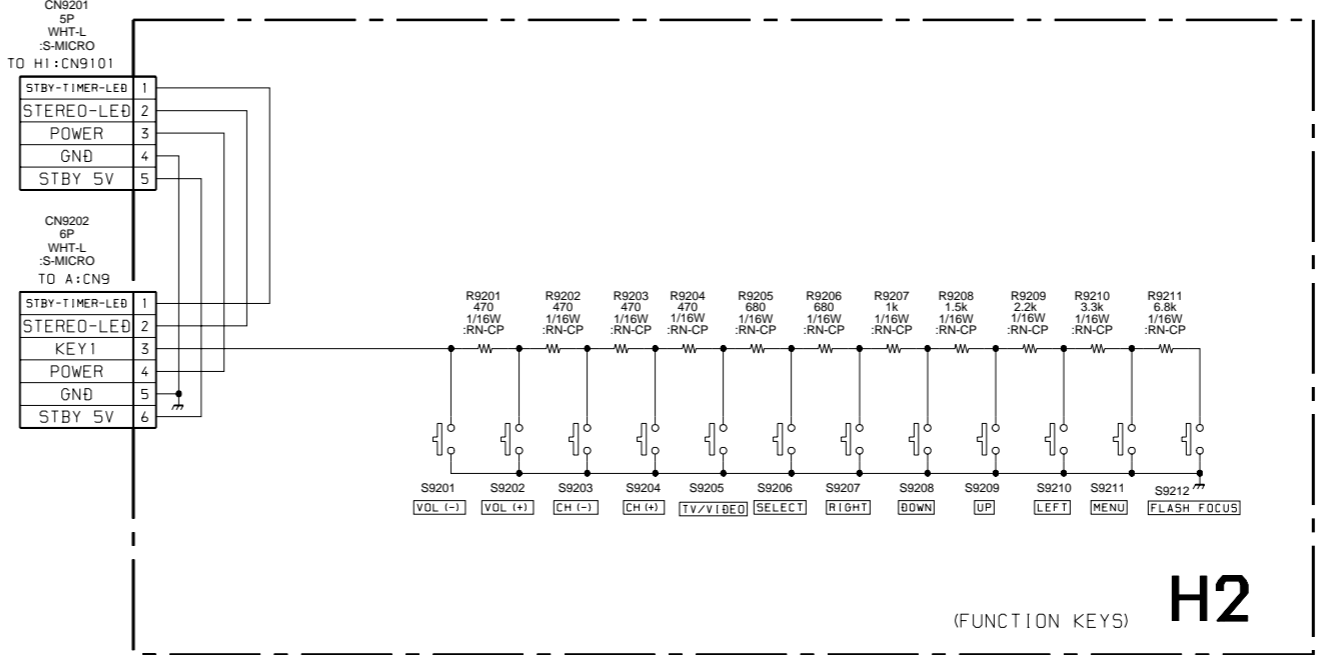
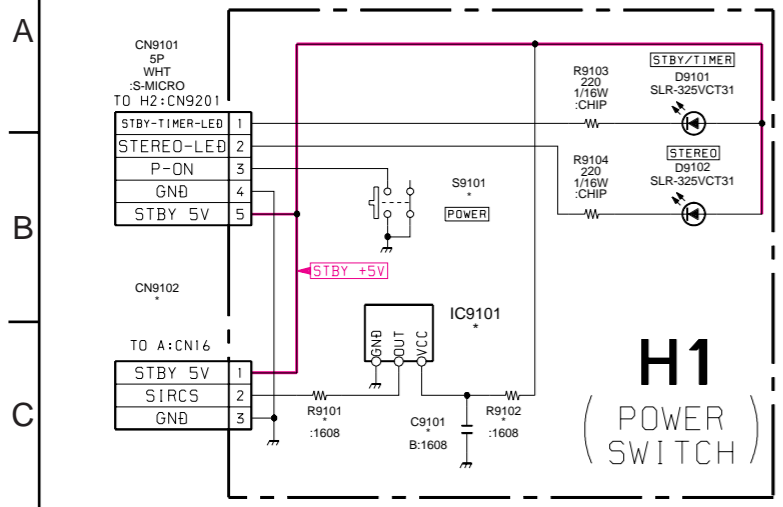


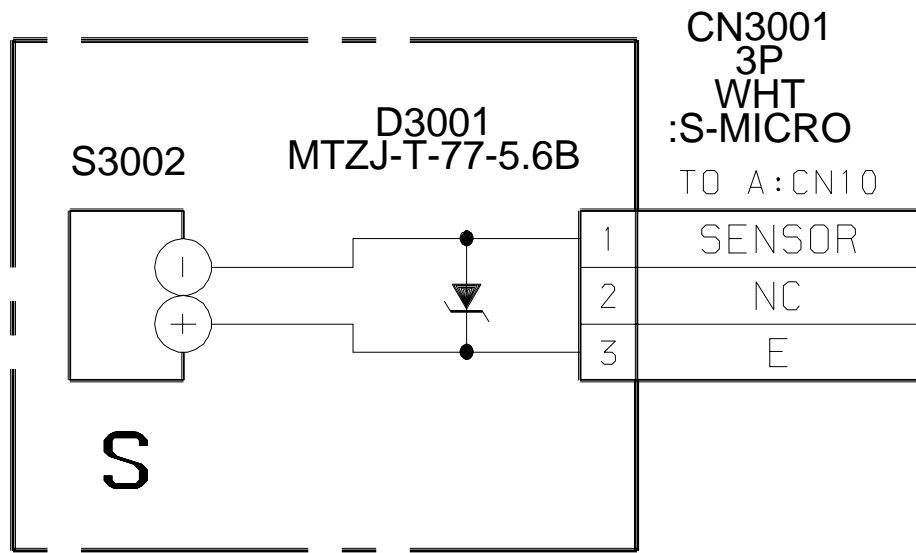
G (1/2)
 (RELAY DRIVE, STBY 5V, REGULATOR)

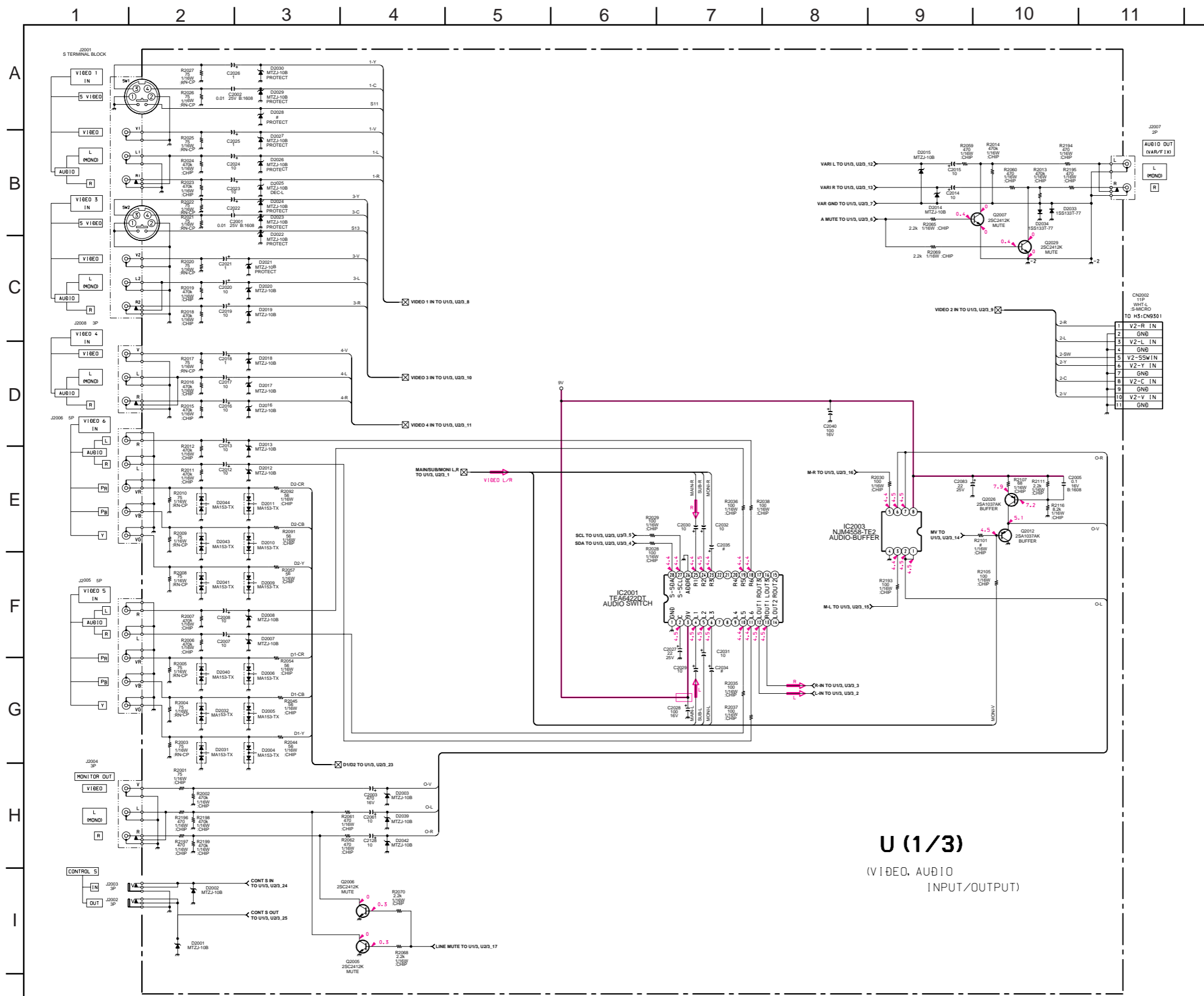
CN5006 :FASTON

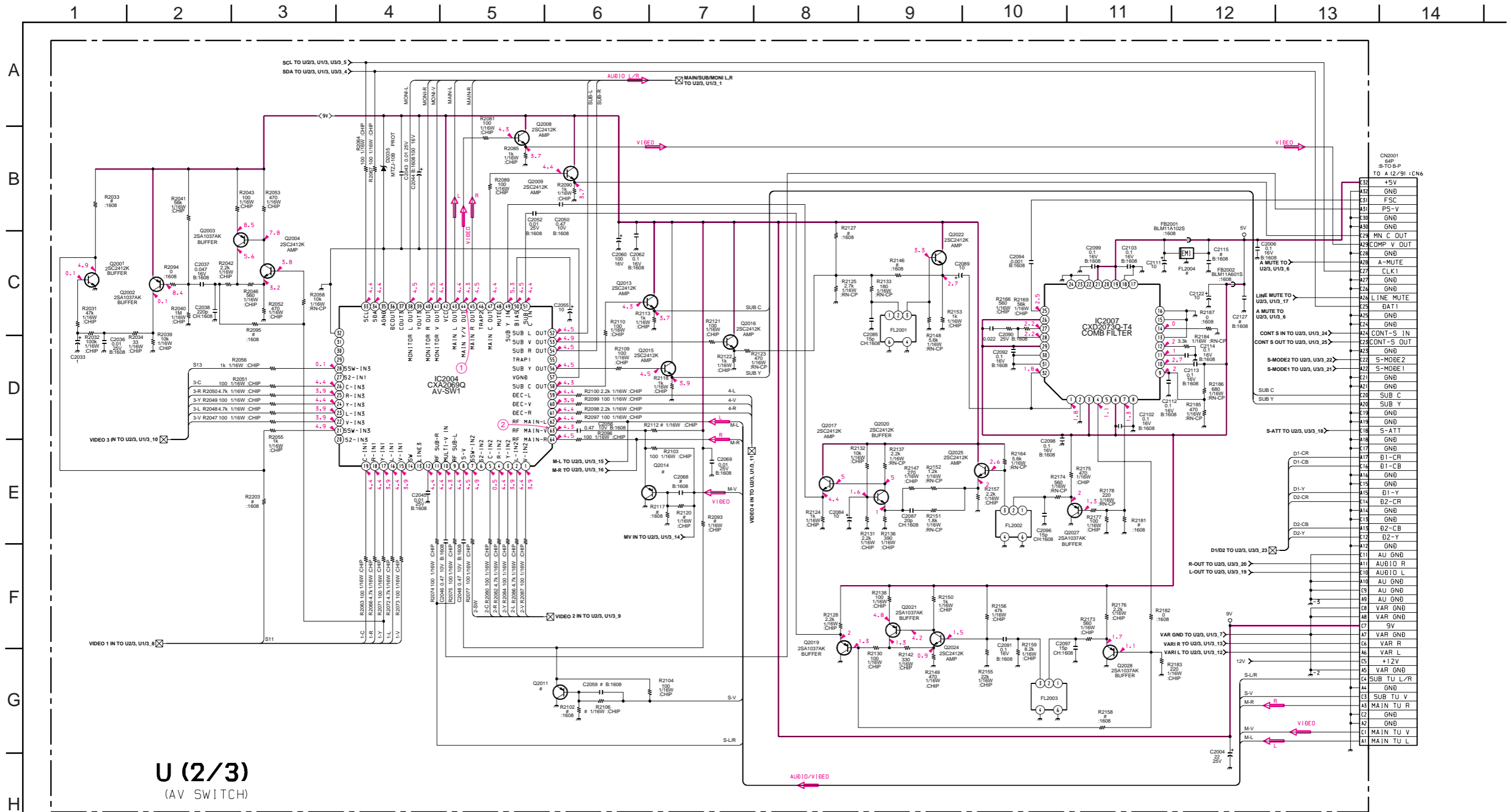


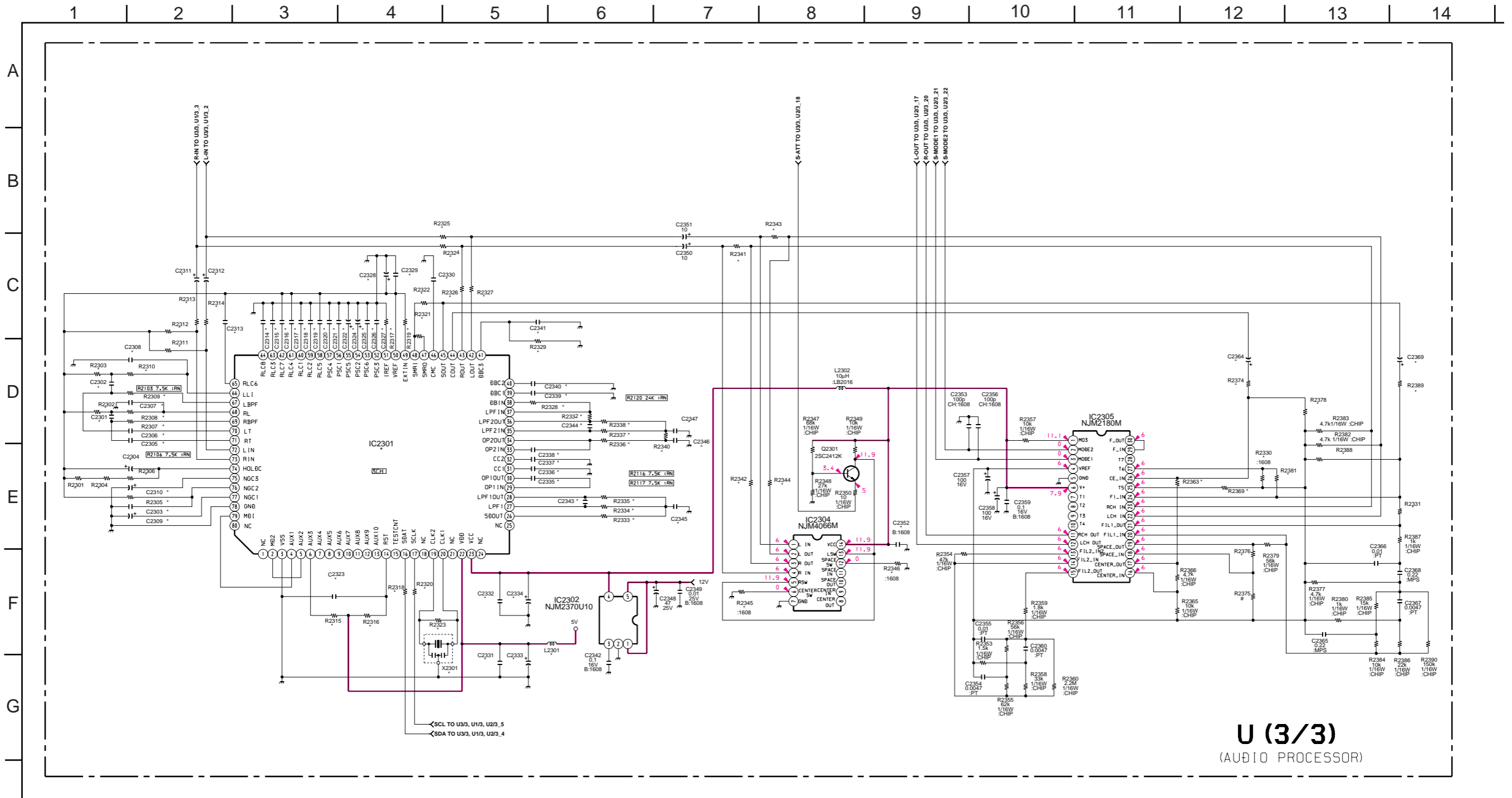
1 2 3 4 5 6 7 8 9 10 11 12



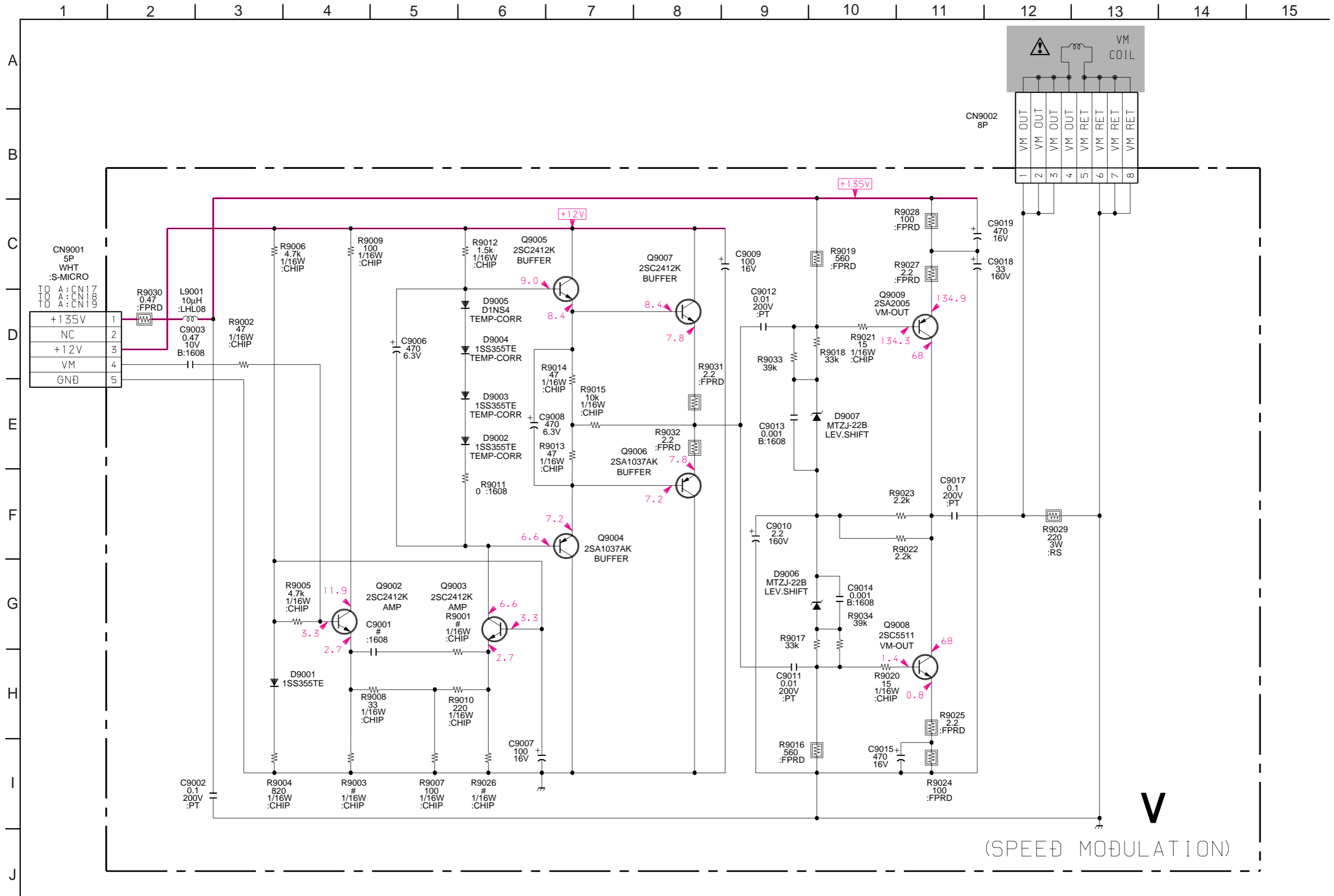








U (3/3)
 (AUDIO PROCESSOR)



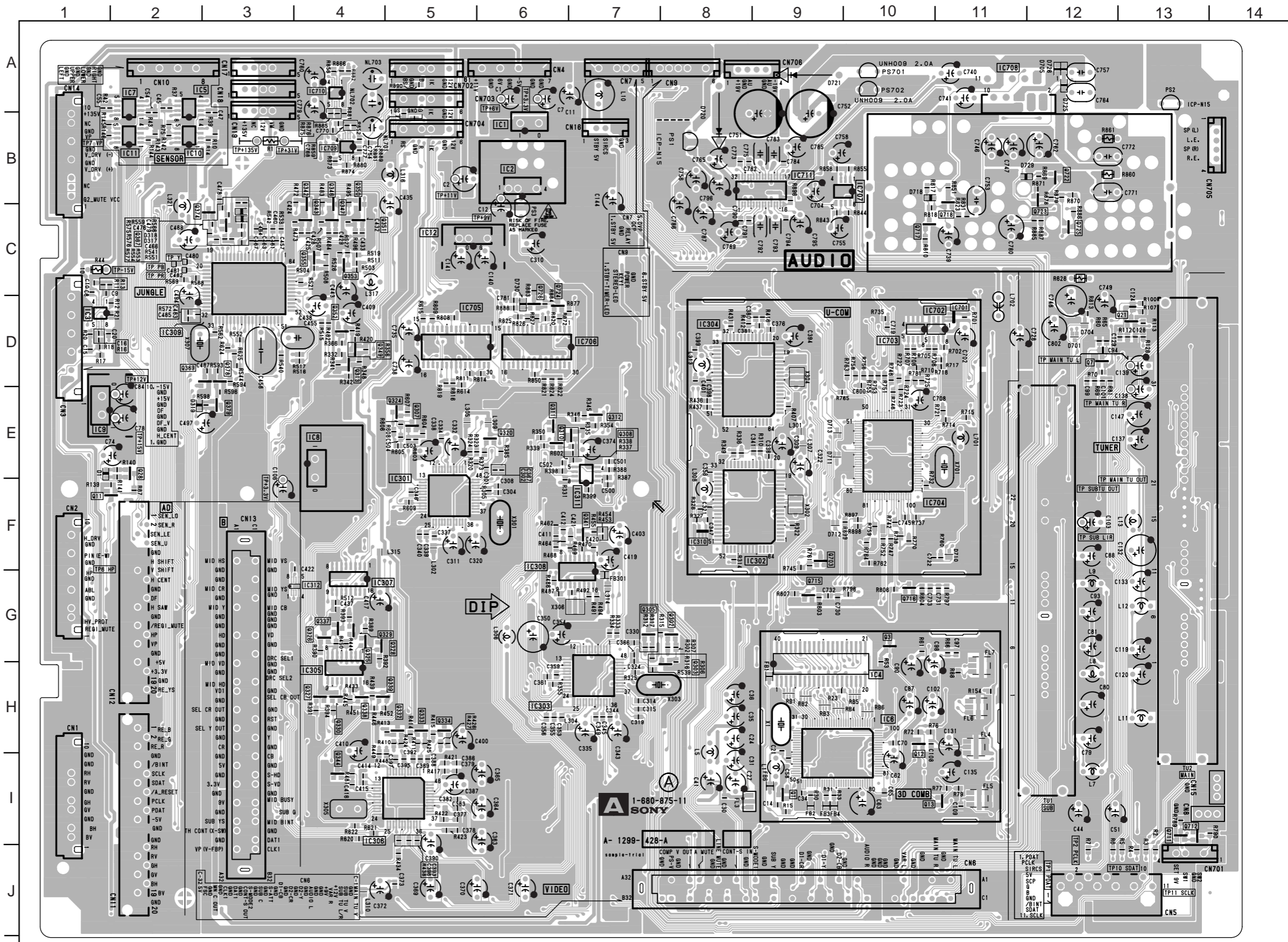
(SPEED MODULATION)

A [TUNER, VIDEO, AUDIO, SYSTEM CONTROL]

- A Board -

A BOARD

DIODE *		TRANSISTOR *	
D1	E-2	Q1	I-9
D317	C-3	Q3	G-10
D318	C-3	Q7	D-12
D319	E-2	Q11	F-1
D701	D-12	Q12	H-10
D704	D-12	Q13	I-11
D705	A-12	Q21	D-13
D710	F-11	Q302	G-8
D711	E-9	Q303	H-8
D712	F-9	Q305	G-7
D713	E-9	Q307	E-5
D718	B-10	Q308	E-7
D720	B-8	Q310	E-6
D721	A-9	Q311	E-6
D725	A-12	Q312	E-7
D726	A-12	Q313	D-4
D729	B-11	Q320	E-6
D730	D-6	Q324	E-5
IC		Q325	G-4
IC1	B-6	Q326	G-4
IC2	B-6	Q327	H-4
IC3	D-1	Q328	G-4
IC4	H-9	Q329	G-4
IC5	A-2	Q330	H-4
IC6	H-9	Q332	H-5
IC7	A-2	Q333	H-5
IC8	E-4	Q334	H-5
IC9	E-1	Q337	G-4
IC10	B-2	Q338	H-4
IC11	B-2	Q339	H-4
IC12	C-5	Q341	F-7
IC301	F-5	Q342	B-4
IC302	F-8	Q343	C-4
IC303	H-7	Q344	I-4
IC304	D-8	Q346	B-4
IC305	H-4	Q347	C-4
IC306	I-5	Q349	D-4
IC307	G-4	Q350	B-4
IC308	D-3	Q351	C-4
IC309	C-3	Q352	D-4
IC310	F-8	Q353	C-4
IC311	F-7	Q355	C-4
IC312	G-4	Q367	C-3
IC701	D-11	Q369	D-2
IC702	D-10	Q374	C-3
IC703	D-10	Q378	D-2
IC704	F-10	Q379	E-3
IC705	D-5	Q703	F-9
IC706	D-6	Q712	I-13
IC707	B-10	Q713	I-13
IC708	A-11	Q715	G-9
IC709	B-4	Q716	G-10
IC710	A-4	Q717	C-10
IC711	B-9	Q718	B-11
		Q722	B-12
		Q723	B-12
		Q724	D-6
		Q725	C-12
		Q726	D-6

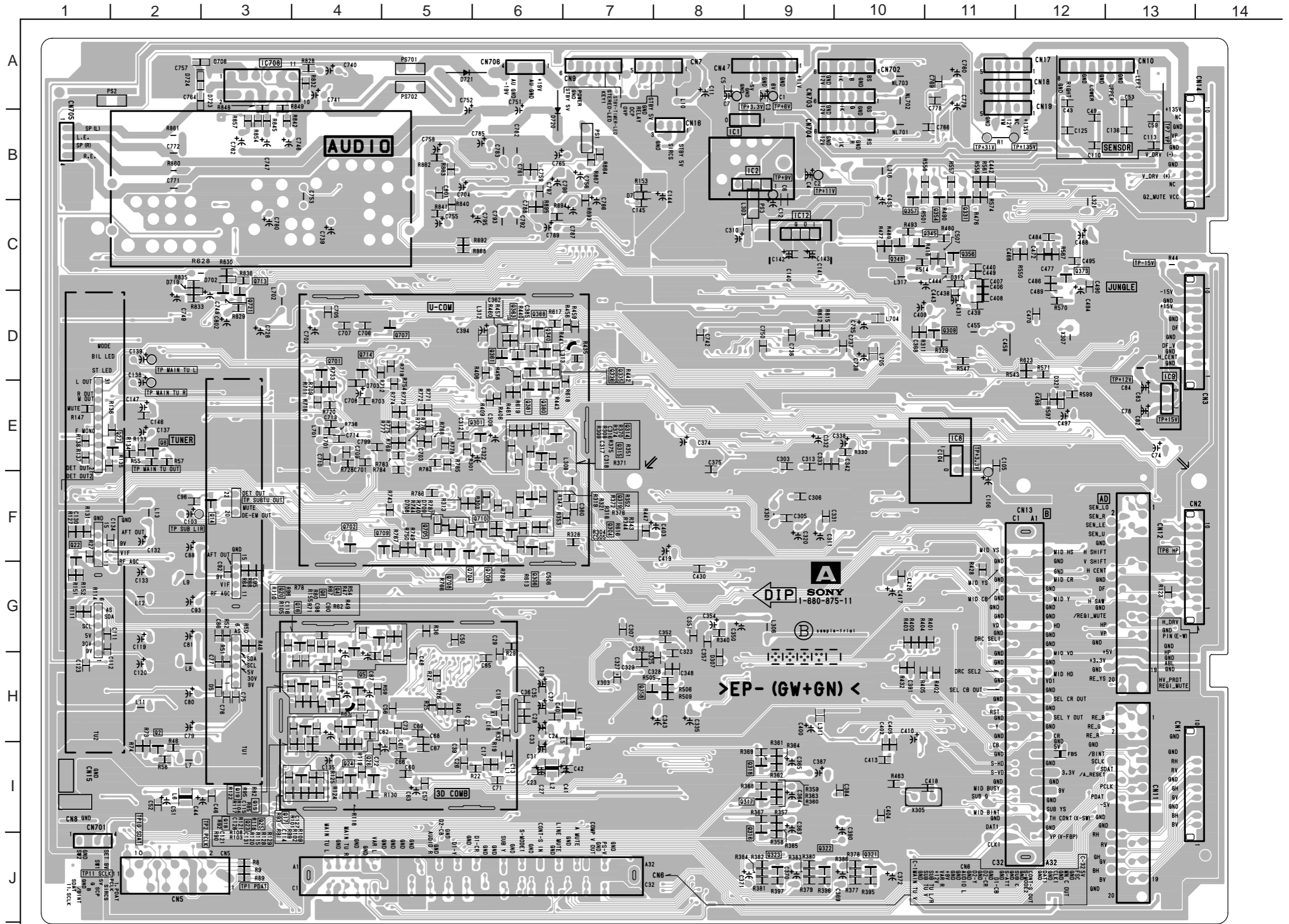


< Component Side >

A [TUNER, VIDEO, AUDIO, SYSTEM CONTROL]

- A Board -

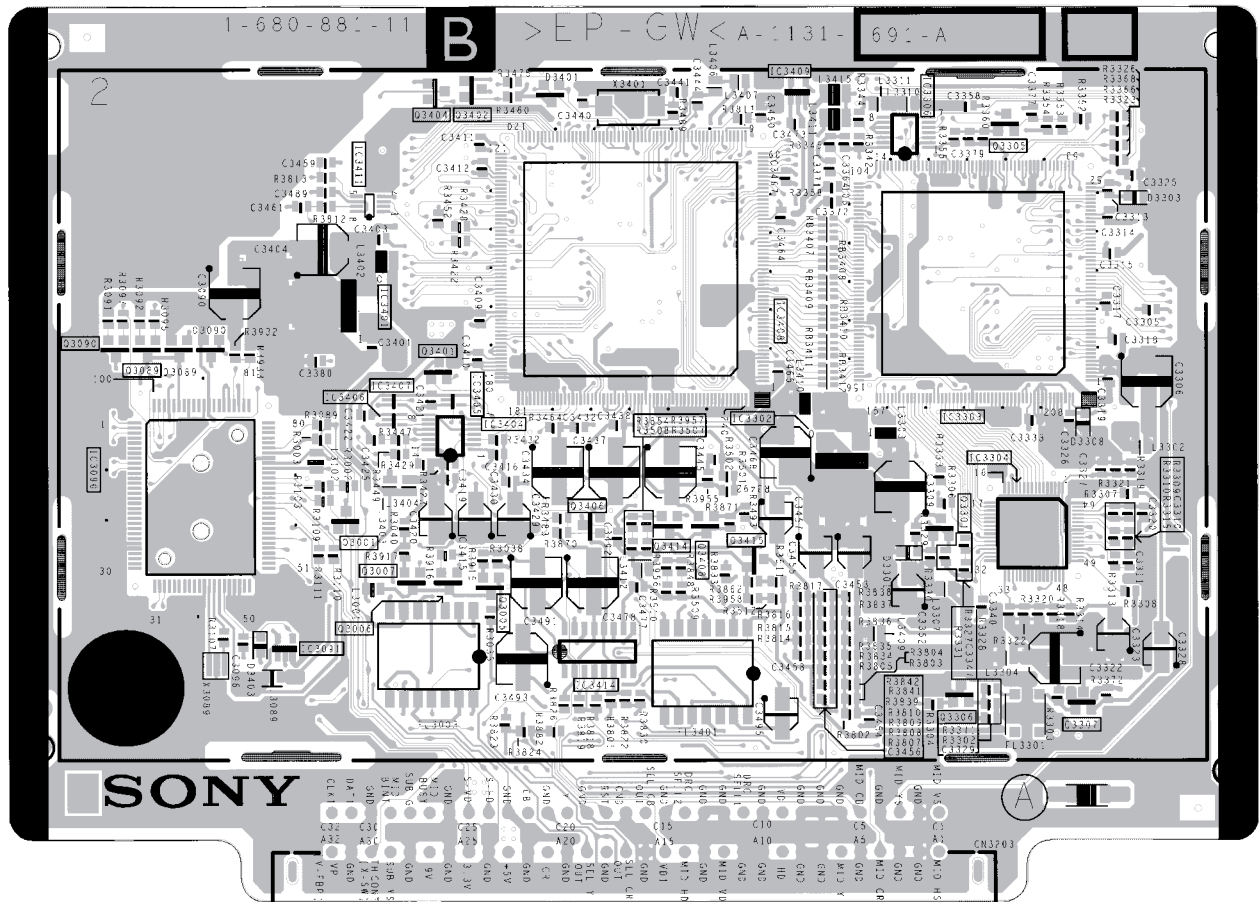
DIODE		*	Q27		E-1	①
D5	H-3	③	Q28	I-4		①
D7	C-7	③	Q301	E-6		①
D307	H-8	③	Q304	F-6		①
D312	C-11	③	Q306	F-6		①
D702	C-3	③	Q309	D-11		①
D703	E-4	③	Q314	E-6		①
D706	A-3	③	Q315	E-6		①
D708	F-5	③	Q316	J-9		①
D709	F-5	③	Q317	I-9		①
D719	D-2	③	Q318	I-9		①
D720	B-6	③	Q319	F-6		①
D721	A-5	③	Q321	J-10		①
D723	A-3	③	Q322	J-10		①
D724	A-3	③	Q323	J-9		①
			Q331	C-11		①
			Q335	D-6		①
IC			Q336	D-6		①
IC1	B-8		Q340	D-6		①
IC2	B-9		Q345	C-11		①
IC8	E-11		Q348	C-10		①
IC9	E-13		Q354	C-11		①
IC12	C-9		Q356	C-11		①
IC708	A-3		Q357	C-10		①
TRANSISTOR *			Q358	H-8		①
Q2	I-2	①	Q361	D-6		①
Q4	G-4	①	Q363	D-6		①
Q5	H-4	①	Q368	D-6		①
Q6	G-4	①	Q373	C-12		①
Q8	E-2	①	Q380	E-6		①
Q14	F-3	①	Q381	E-6		①
Q15	H-4	①	Q701	D-4		①
Q16	H-4	①	Q702	F-4		①
Q17	I-4	①	Q704	F-5		①
Q18	H-4	①	Q705	F-5		①
Q19	H-4	①	Q706	F-6		①
Q20	G-4	①	Q707	D-5		①
Q22	F-1	①	Q708	F-5		①
Q23	H-4	①	Q709	F-5		①
Q24	I-4	①	Q710	F-6		①
Q25	H-4	①	Q714	D-4		①
Q26	I-4	①	Q721	D-3		①



< Conductor Side >

B [A/D CONVERTER, DRC, MULTI IMAGA DRIVER, MID-U CON, D/A CONVERTER]

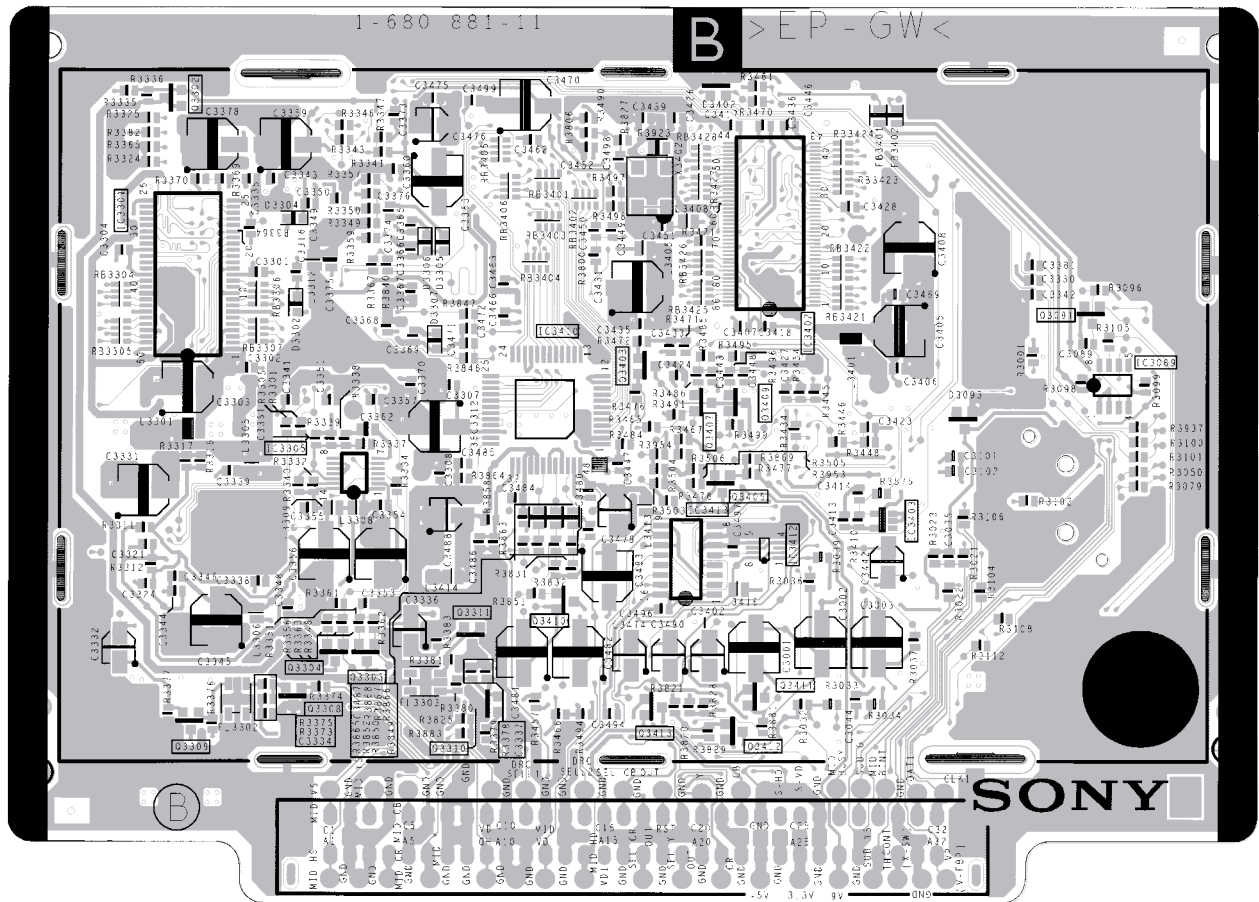
- B Board -



< Component Side >

B [I/A/D CONVERTER, DRC, MULTI IMAGA DRIVER, MID-U CON, D/A CONVERTER]

- B Board -



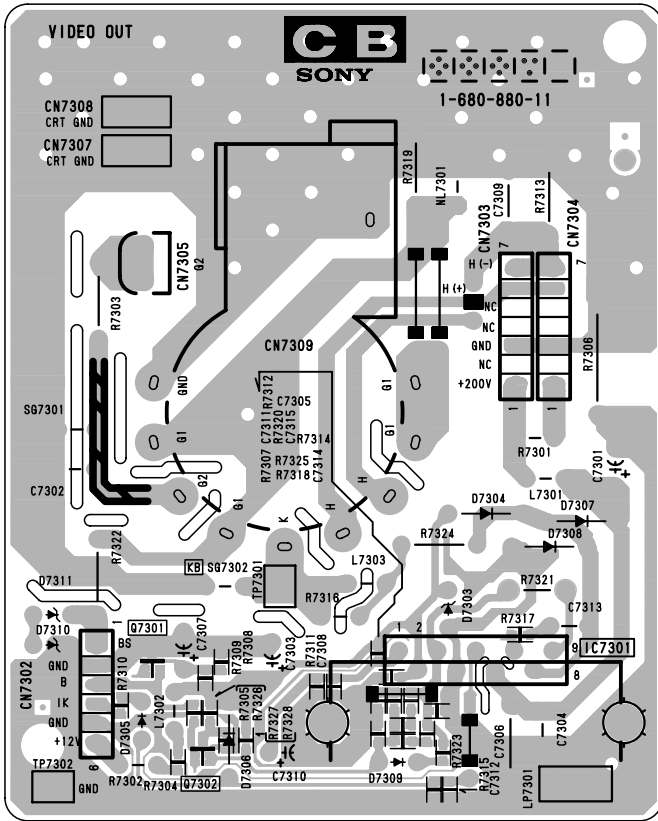
< Conductor Side >

CB [CRT I/F BLUE]

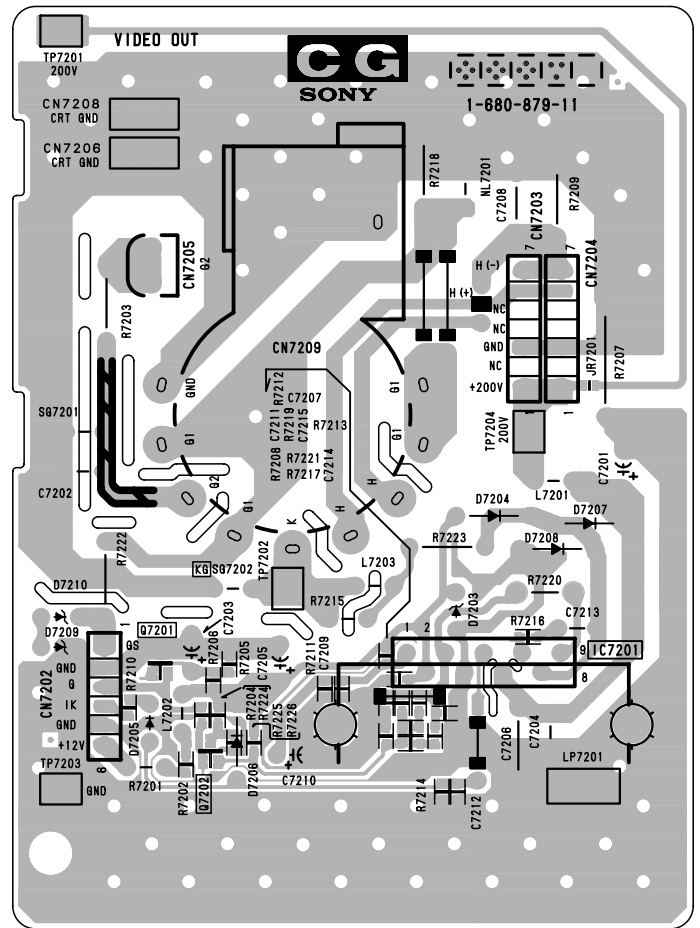
CG [CRT I/F GREEN]

CR [CRT I/F RED]

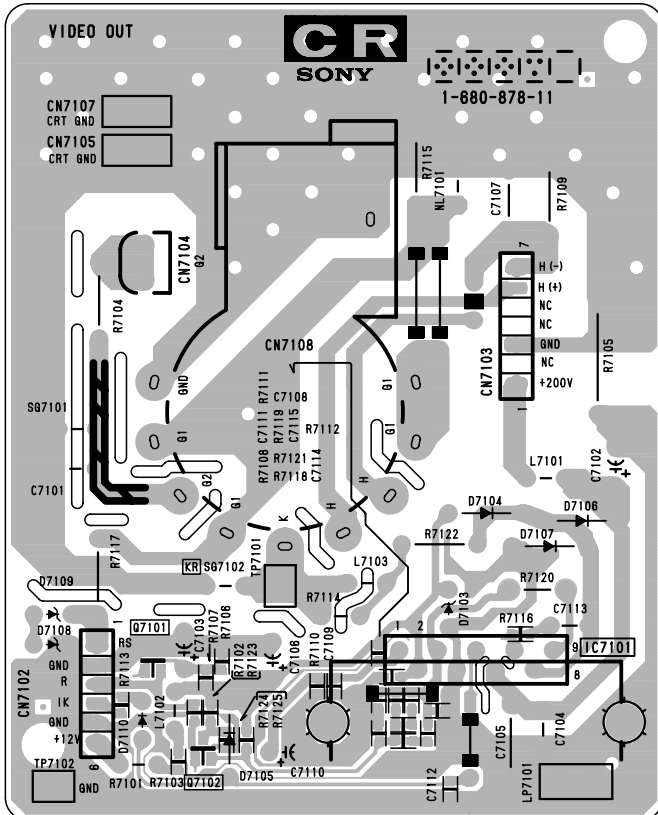
- CB Board -



- CG Board -



- CR Board -



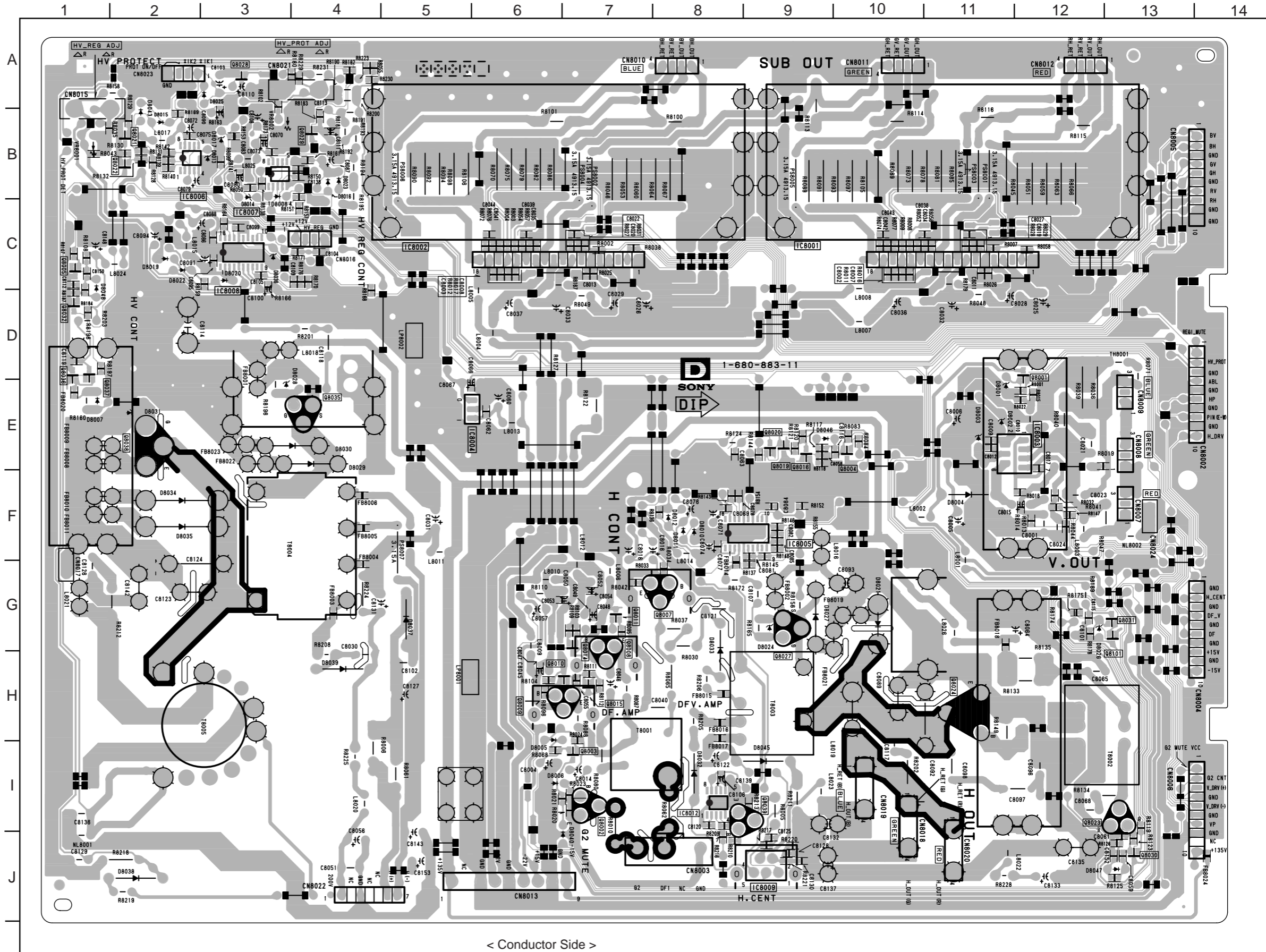
D [HV DRIVE, POWER SUPPLY, H DRIVE]

- D Board -

D BOARD

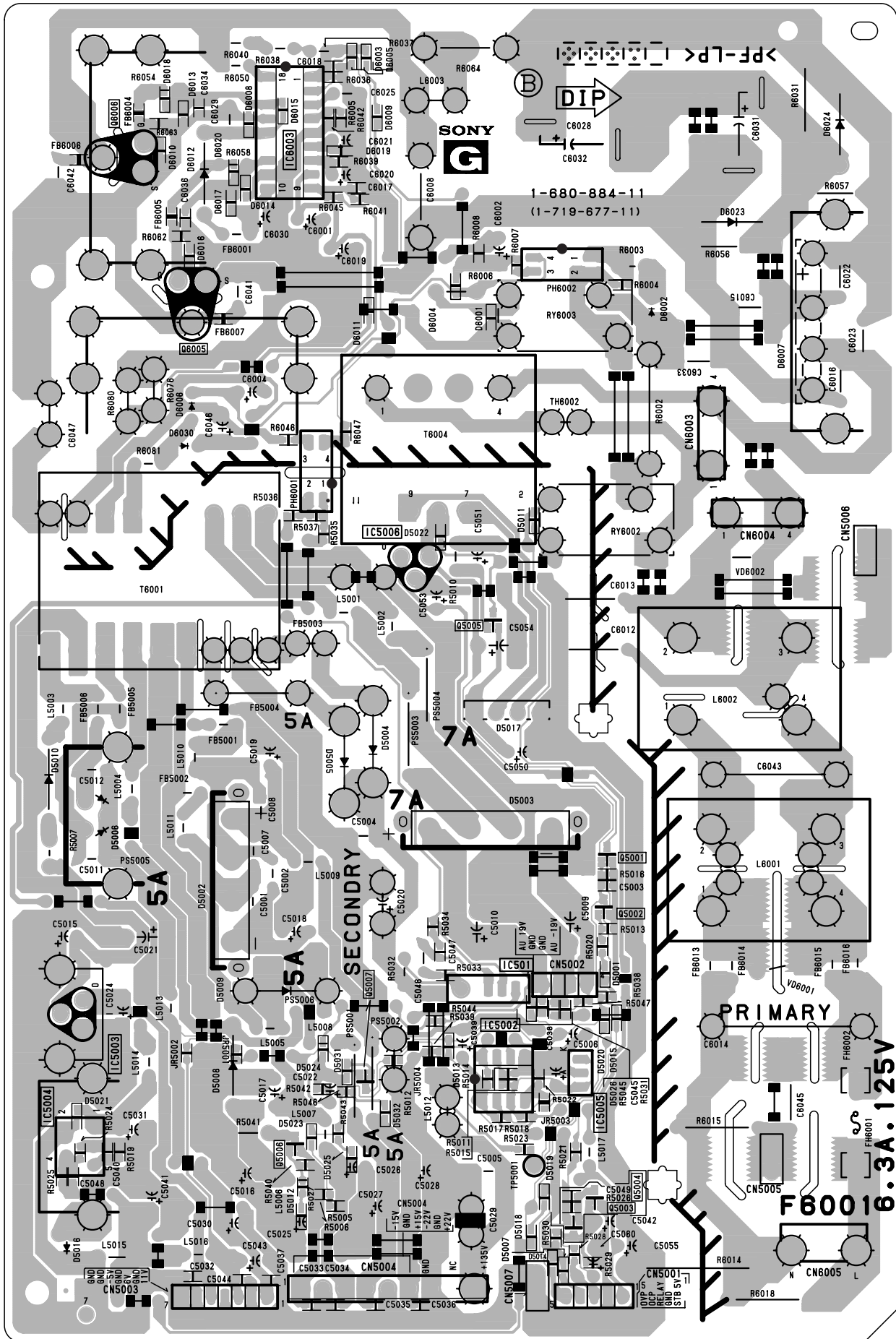
DIODE *	TRANSISTOR *
D8001 E-11	Q8001 E-12 ①
D8002 E-11	Q8002 I-7
D8003 E-11	Q8003 I-7
D8004 F-11	Q8004 E-10 ①
D8005 H-6	Q8005 C-1 ①
D8006 I-6	Q8007 G-7
D8007 E-1	Q8008 H-7
D8008 C-3	Q8009 H-6
D8009 E-11	Q8010 H-7 ①
D8010 F-8	Q8011 G-7 ①
D8011 F-8	Q8014 G-7 ①
D8012 F-8	Q8015 H-7 ①
D8013 B-3	Q8016 E-9 ①
D8014 C-3	Q8019 E-9 ①
D8015 B-2	Q8020 E-9 ①
D8016 B-4	Q8021 B-2 ①
D8019 C-2	Q8022 B-2 ①
D8020 C-3	Q8023 I-13 ①
D8021 G-10	Q8024 H-11 ①
D8022 C-2	Q8027 G-9 ①
D8023 B-4	Q8028 A-3 ①
D8024 G-9	Q8029 B-4 ①
D8025 A-3	Q8030 J-13 ①
D8026 G-12	Q8031 G-13 ①
D8027 G-9	Q8032 D-1 ①
D8028 E-3	Q8035 I-4 ①
D8029 E-4	Q8036 E-1 ①
D8030 E-4	Q8037 E-1 ①
D8031 E-2	Q8038 E-2 ①
D8032 I-8	Q8039 I-9 ①
D8033 H-8	Q8101 G-13 ①
D8034 F-2	
D8035 F-2	
D8036 C-3	
D8037 G-5	
D8038 J-2	
D8039 H-4	
D8043 B-2	
D8045 I-9	
D8046 E-9	
D8047 J-13	

IC	
IC8001 C-11	
IC8002 C-6	
IC8003 E-12	
IC8004 E-5	
IC8005 F-9	
IC8006 B-2	
IC8007 B-3	
IC8008 C-3	
IC8009 J-9	
IC8012 I-8	



< Conductor Side >

- G Board -



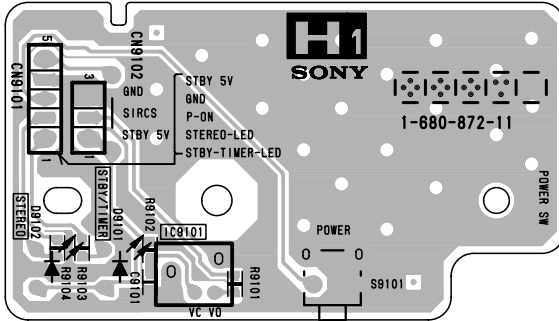
H1 [POWER SWITCH]

H2 [FUNCTION KEK]

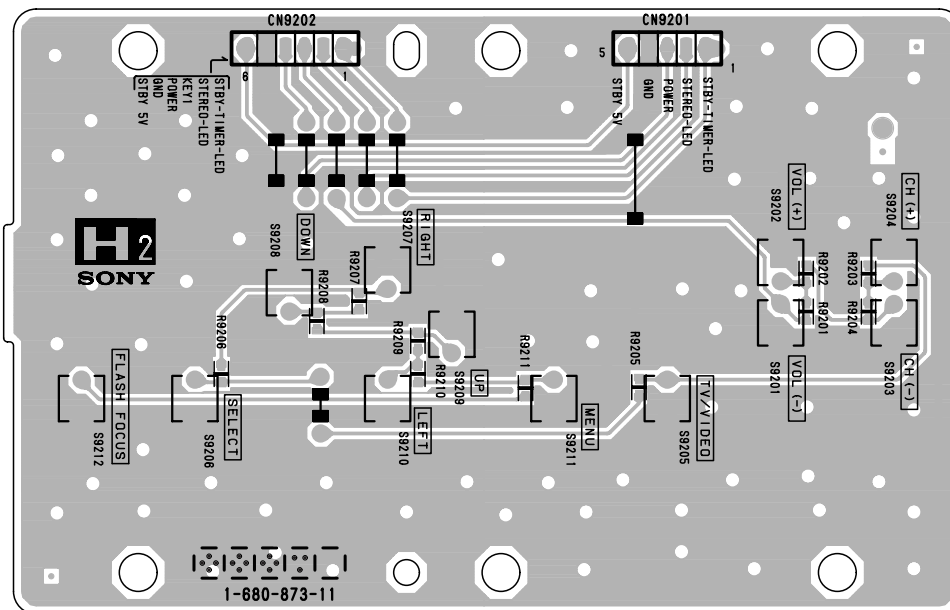
H3 [VIDEO 2 INPUT]

H4 [REMOTE CONTROL RECEIVER]

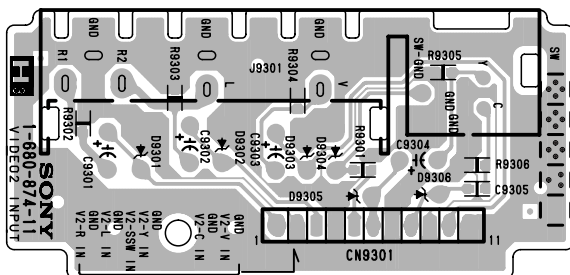
- H1 Board -



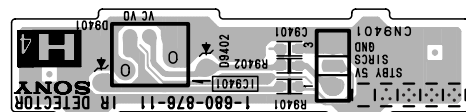
- H2 Board -



- H3 Board -

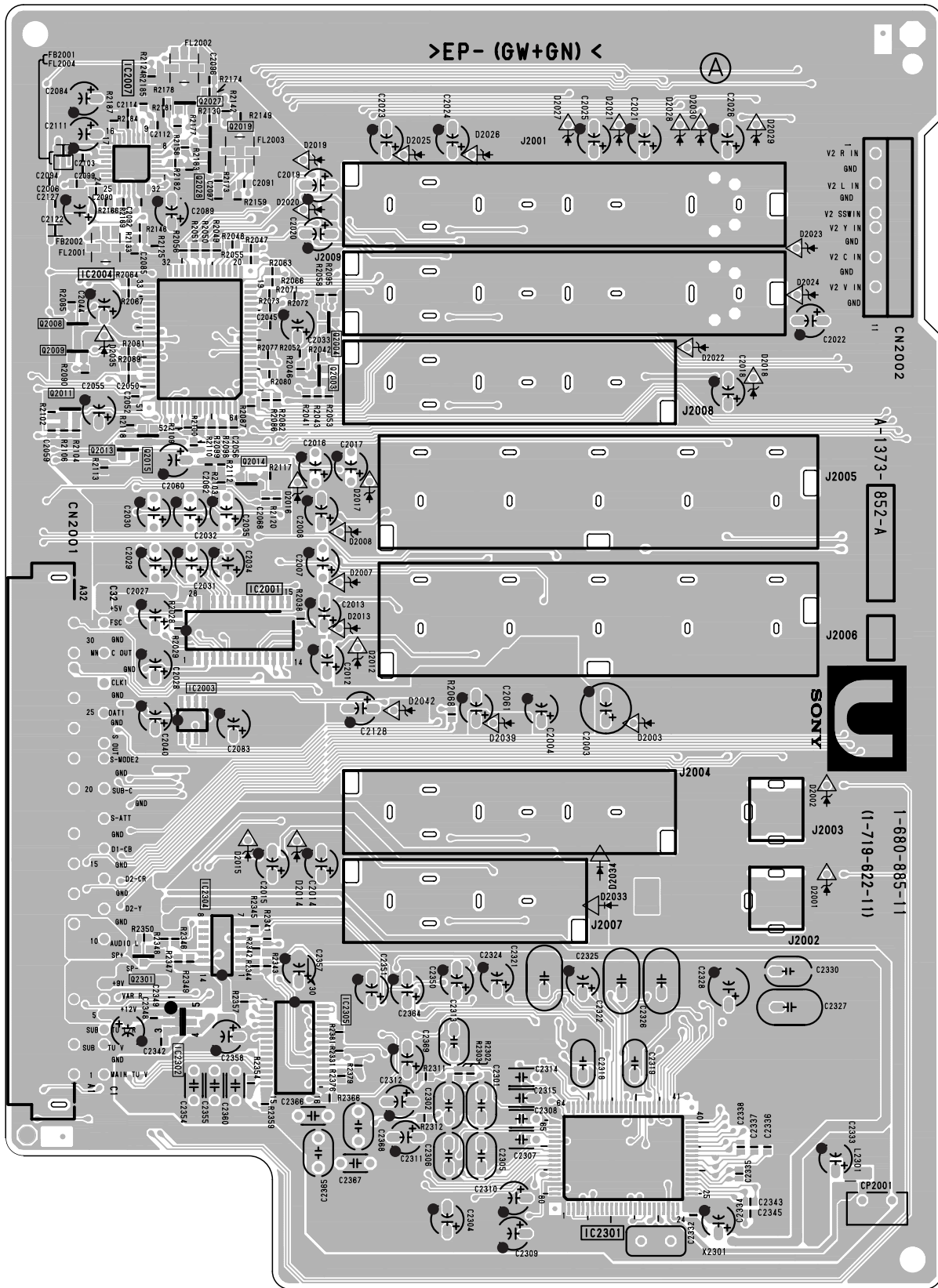


- H4 Board -



U [VIDEO, AUDIO INPUT/OUTPUT, AV SWITCH, AUDIO PROCESSOR]

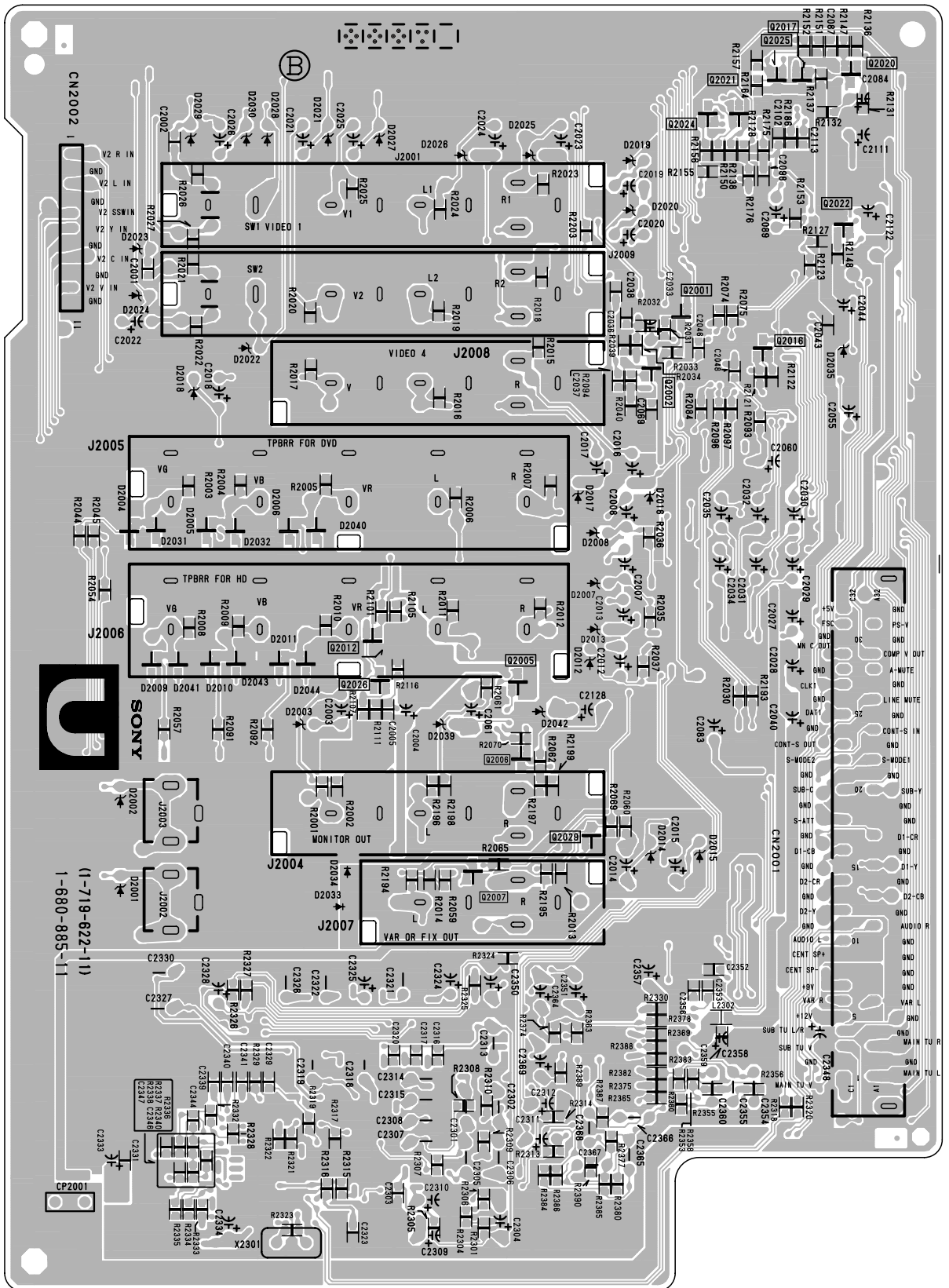
- U Board -



< Component Side >

U [VIDEO, AUDIO INPUT/OUTPUT, AV SWITCH, AUDIO PROCESSOR]

- U Board -

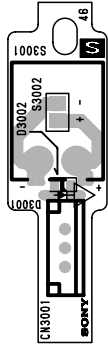


< Conductor Side >

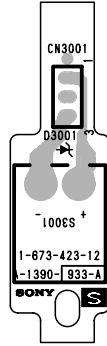
S [SENSOR]

V [SPEED MODULATION]

- S Board -

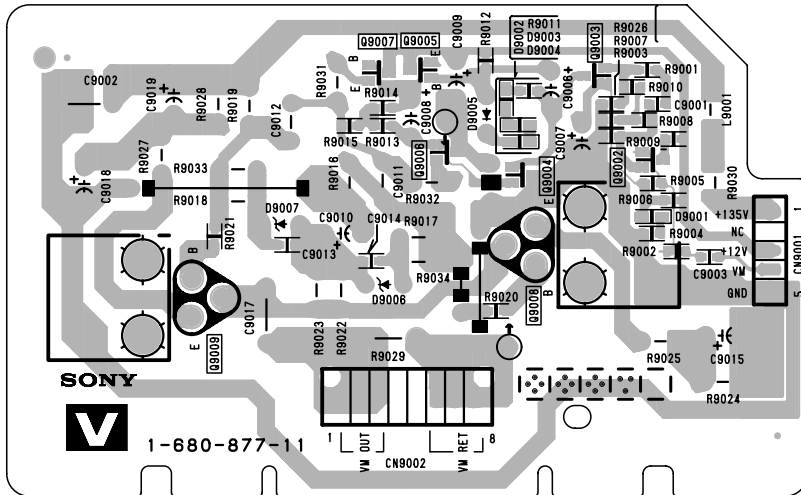


< Component Side >



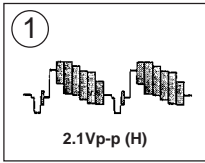
< Conductor Side >

- V Board -

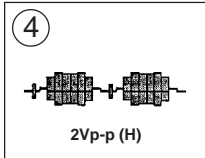
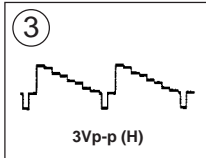
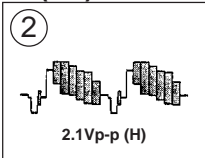


6-5. WAVEFORMS

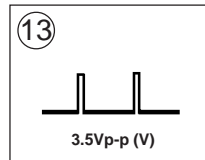
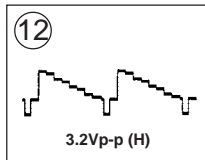
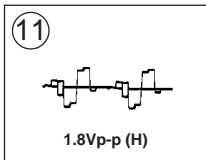
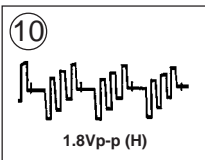
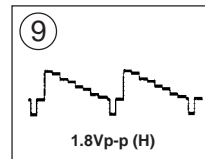
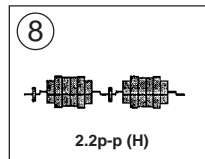
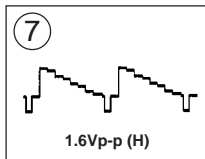
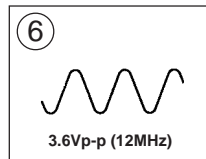
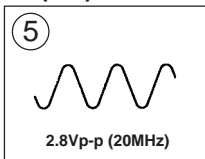
• A(1/9) BOARD WAVEFORMS



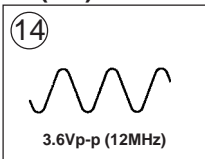
• A(2/9) BOARD WAVEFORMS



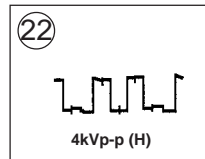
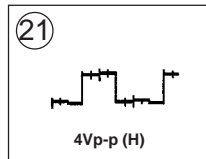
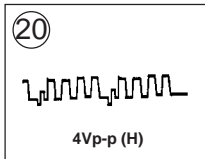
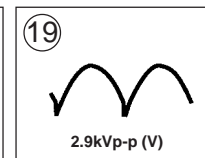
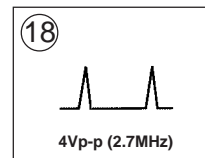
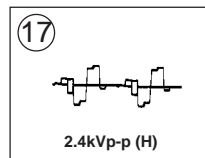
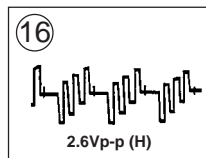
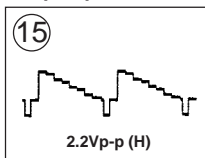
• A(3/9) BOARD WAVEFORMS



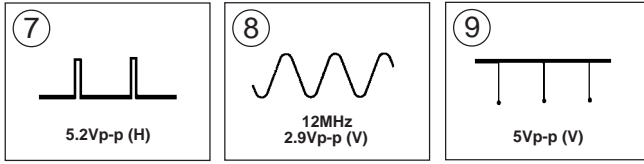
• A(4/9) BOARD WAVEFORMS



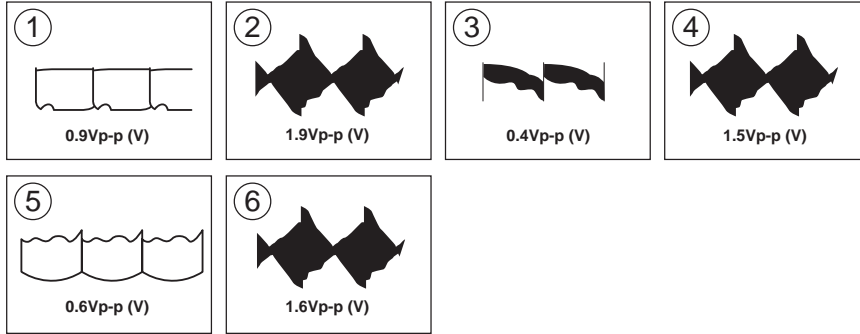
• A(5/9) BOARD WAVEFORMS



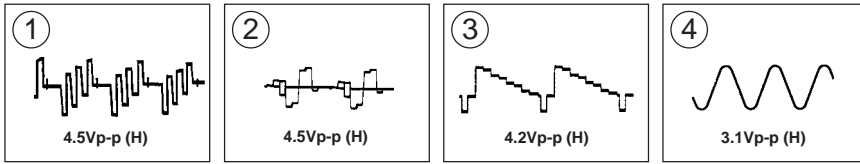
• AD(1/2) BOARD WAVEFORMS



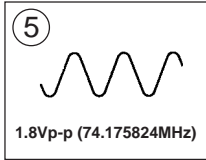
• AD(2/2) BOARD WAVEFORMS



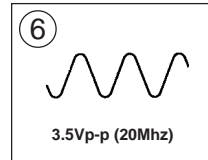
• B(1/4) BOARD WAVEFORMS



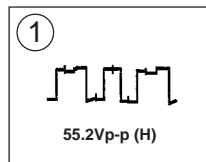
• B(3/4) BOARD WAVEFORMS



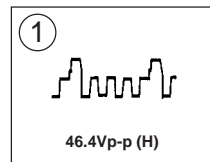
• B(4/4) BOARD WAVEFORMS



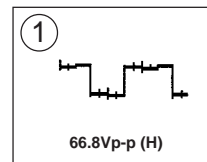
• CR BOARD WAVEFORM



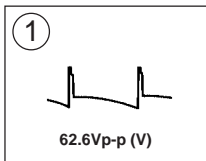
• CB BOARD WAVEFORM



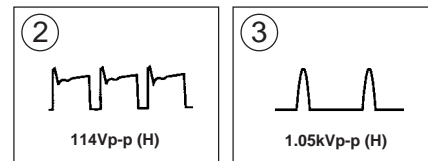
• CG BOARD WAVEFORMS



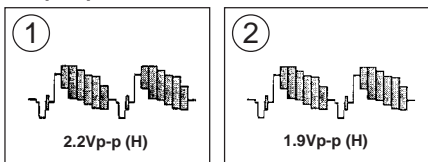
• D(1/3) BOARD WAVEFORMS



• D(3/3) BOARD WAVEFORMS

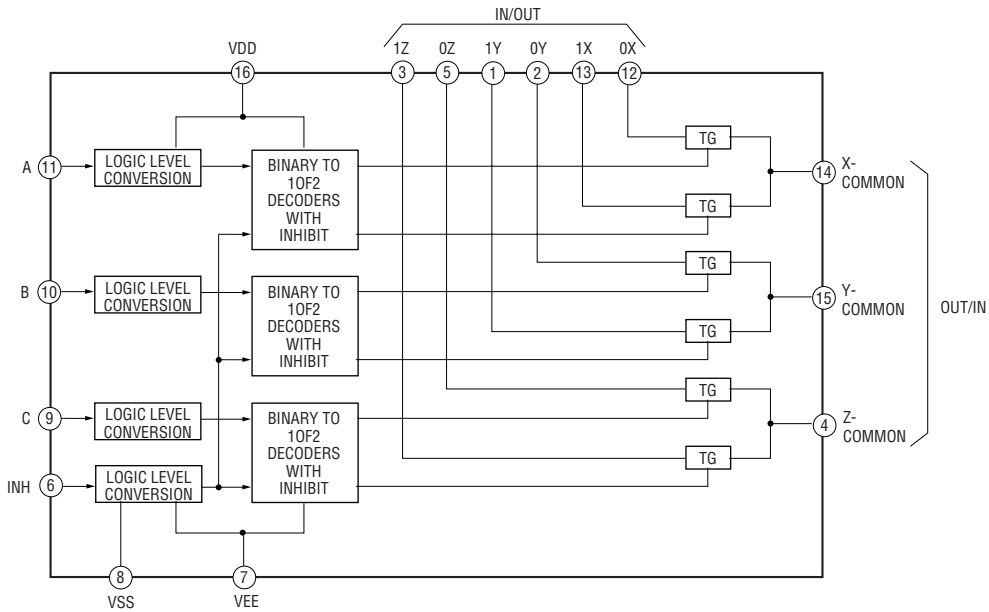


• U(2/3) BOARD WAVEFORMS

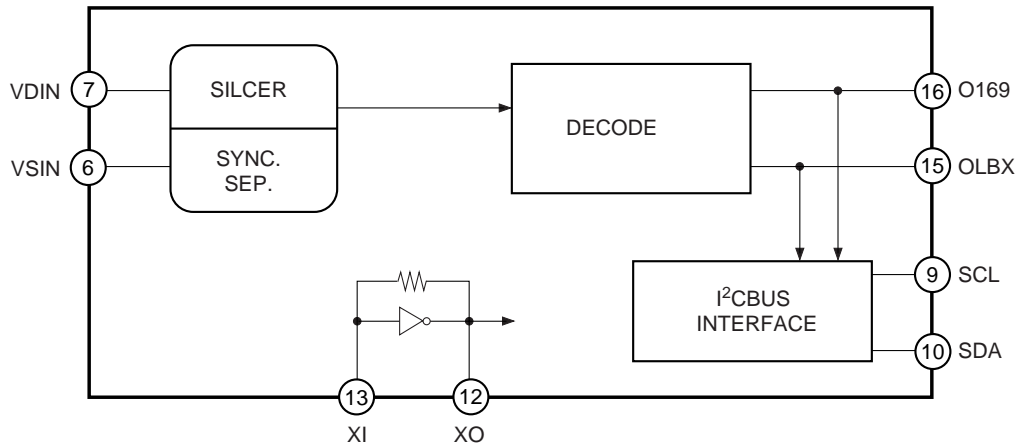


6-6. IC BLOCK DIAGRAMS

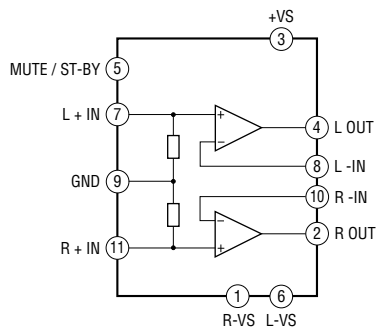
A BOARD : IC305, 307 SN74LV4053ANSR



A BOARD : IC308 CXD2085M

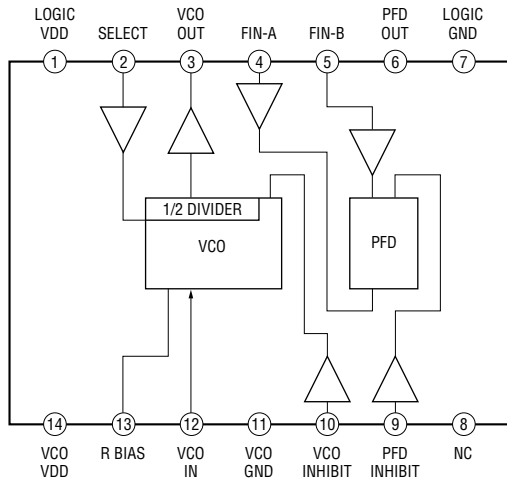


A BOARD : IC708 TDA7265

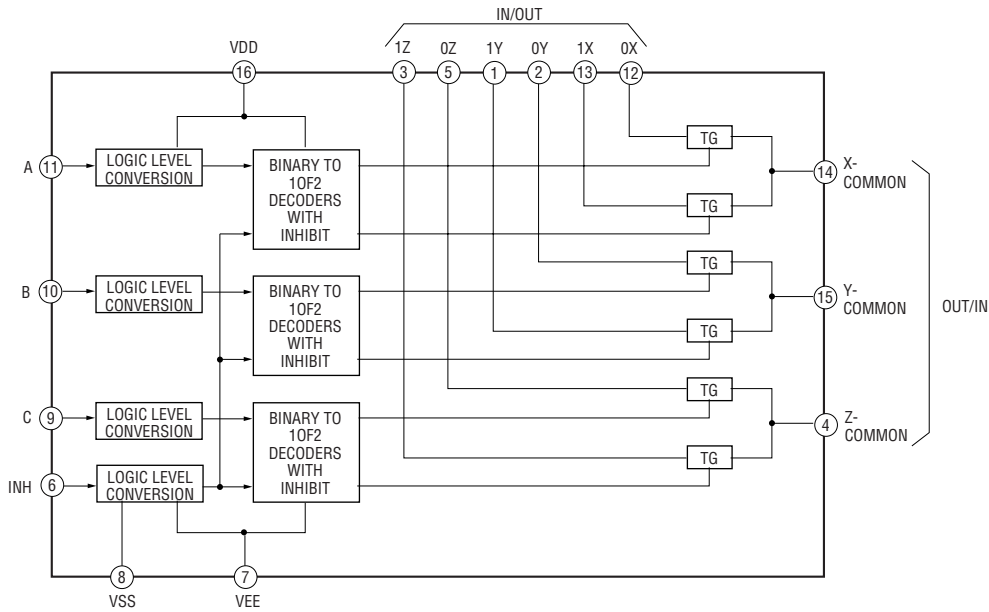


B BOARD : IC3305, 3404 TLC2932IPWR

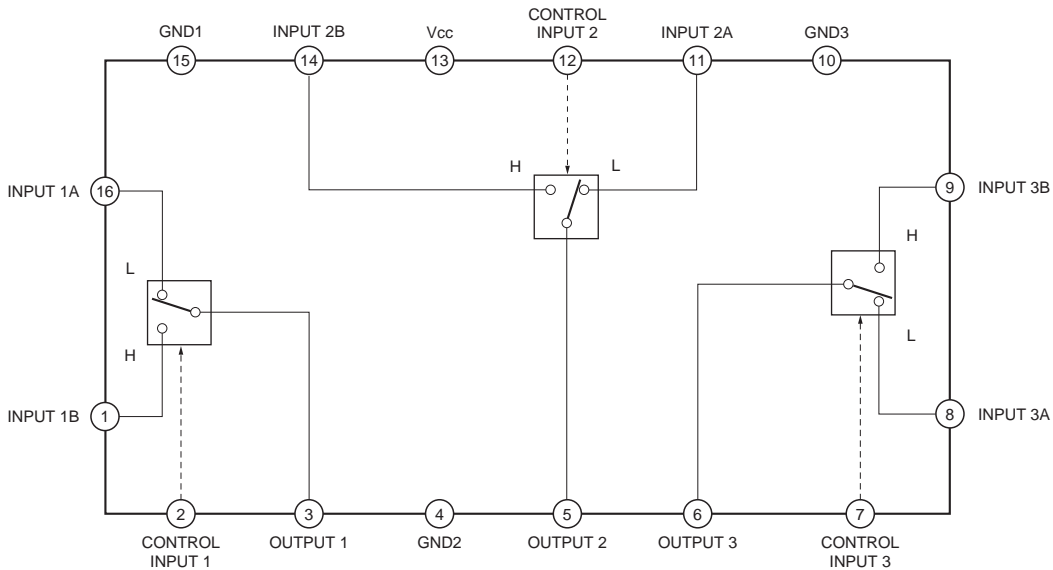
KP-43HT20/53HS20/53HS30/61HS20/61HS30
 RM-Y908 RM-Y908 RM-Y908 RM-Y908 RM-Y908



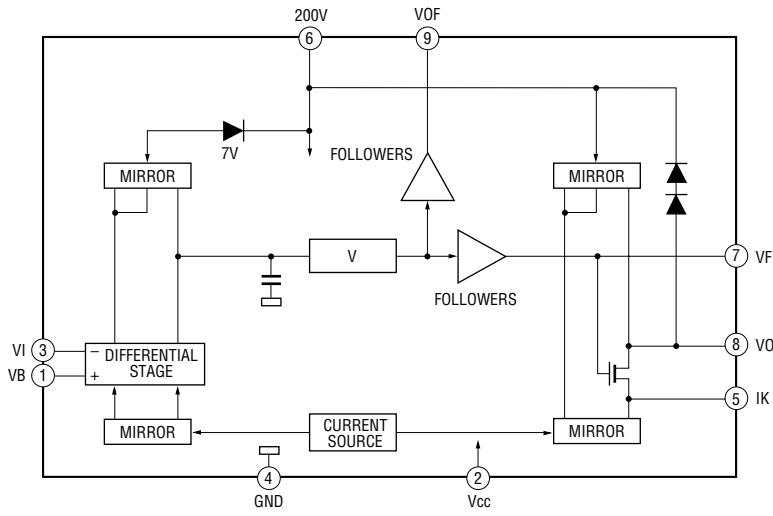
B BOARD : IC3413 SN74LV4053ANSR



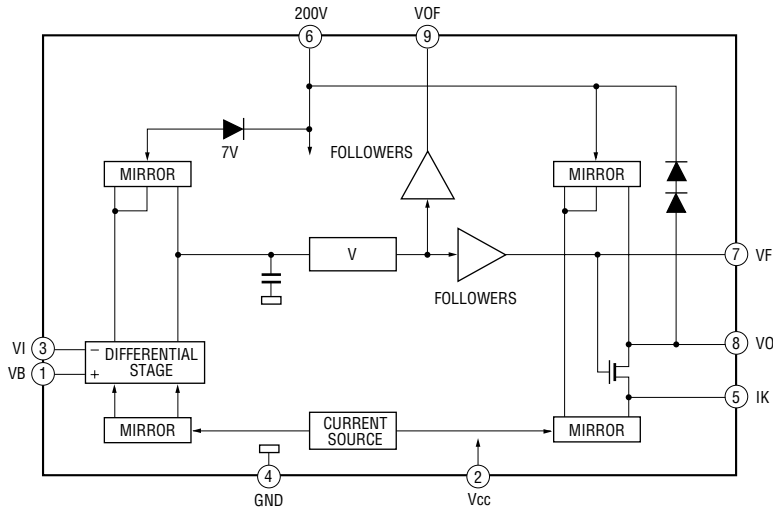
B BOARD : IC3414 M52055P



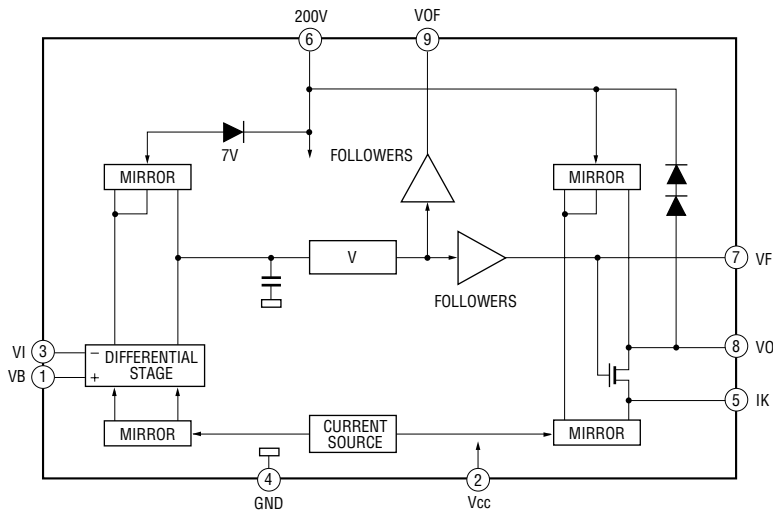
CR BOARD : IC7101 TDA611Q/N4



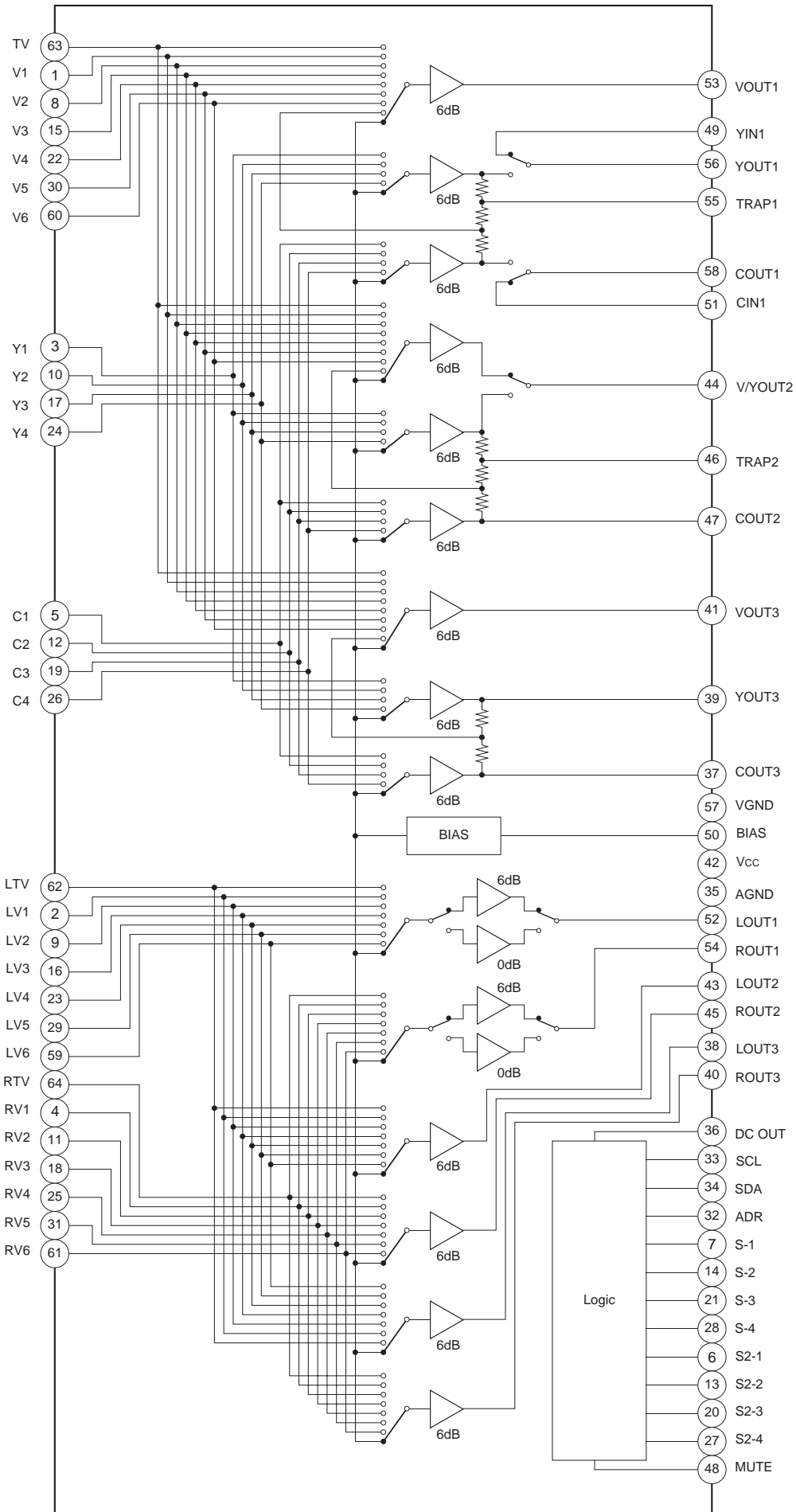
CG BOARD : IC7201 TDA611Q/N4



CB BOARD : IC7301 TDA611Q/N4

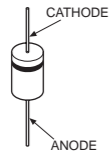


U BOARD : IC2004 CXA2069Q

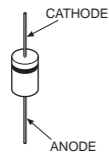


6-7. SEMICONDUCTORS

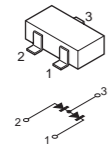
1SS83TD
 21DP05
 D1NL40-TR2
 D1NS4
 D2L20U
 EL1Z
 GP08DPKG23
 RD10ES-B2
 RD15ES-B2
 RD18ES-B2
 RD20ES-B2
 RD5.6ES-B2
 RGP02-17EL-6433
 UF4005PKG23



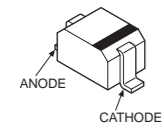
1SS133T-77
 30DF4N-FC5
 ERC04-06SE
 ERC91-02



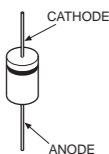
1SS226



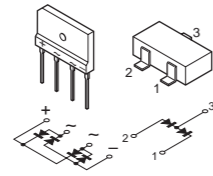
1S355TE-17
 DTZ-10B
 DTZ-TT11-6.8B
 UDZS-TE-17-7.5B
 UDZ-TE-17-10B
 UDZS-TE-17-18B
 UDZS-TE-17-22B
 UDZS-TE-17-24B
 UDZS-TE-17-3.9B
 UDZS-TE-17-33B
 UDZS-TE-17-4.7B
 UDZS-TE-17-5.1B
 UDZS-TE-17-5.6B
 UDZS-TE-17-6.2B
 UDZS-TE-17-9.1B



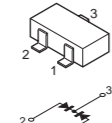
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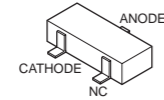
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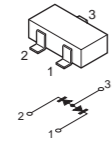
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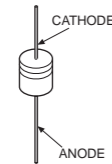
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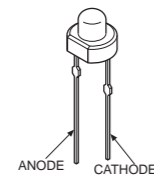
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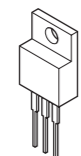
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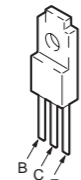
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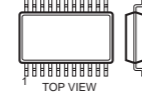
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BA05T

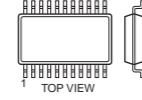


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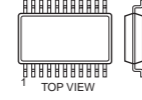
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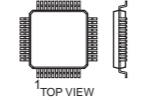
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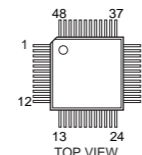
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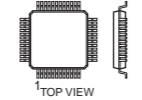


120pin QFP

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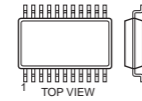


CXD2073Q-T4



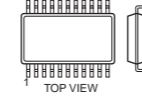
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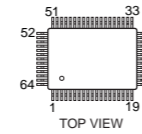
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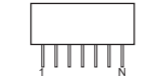


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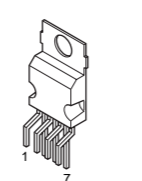
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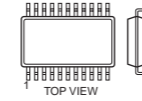
MARKING SIDE VIEW
 • pin 1 ~ N
 • Mt (one side, both side)

14pin DIP

LA78045

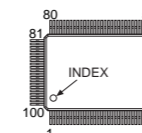


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 M24C32-WMN6T
 NJM2068V
 NJM2904M
 UPC4558G2



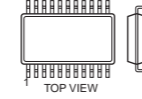
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 UPD64082GF-3BA



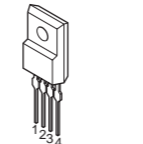
40pin SOP

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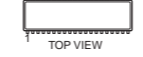


40pin SOP

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 PQ09RF21

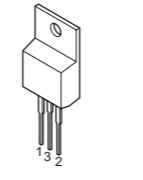


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 UPC393C

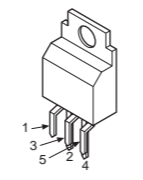


8pin DIP

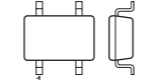
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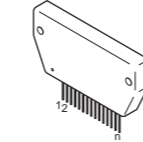


PST9143NL
 PST9145NL



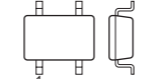
5pin CHIP

STK392-560



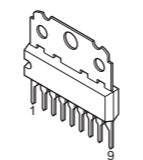
MARKING SIDE VIEW

TC7W08FU(TE12R)

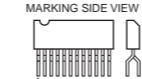


8pin CHIP

TDA6111Q / N4

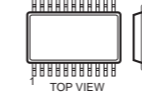


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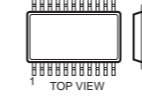
11pin ZIP

TEA6422DT



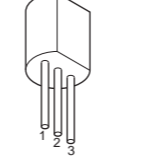
28pin SOP

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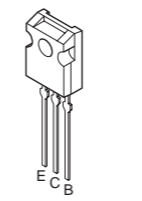


14pin SOP

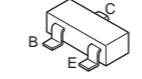
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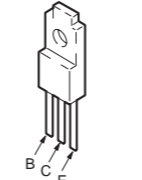
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 2SA3421-Y



2SA1037AK-T146R
 2SA1226-T1E3E4
 2SC1623-L516
 2SD601A-QRS-TX
 DTC114EKA-T146
 DTC144EKA-T146



2SA2005
 2SC5511



SECTION 7 EXPLODED VIEWS

NOTE:

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

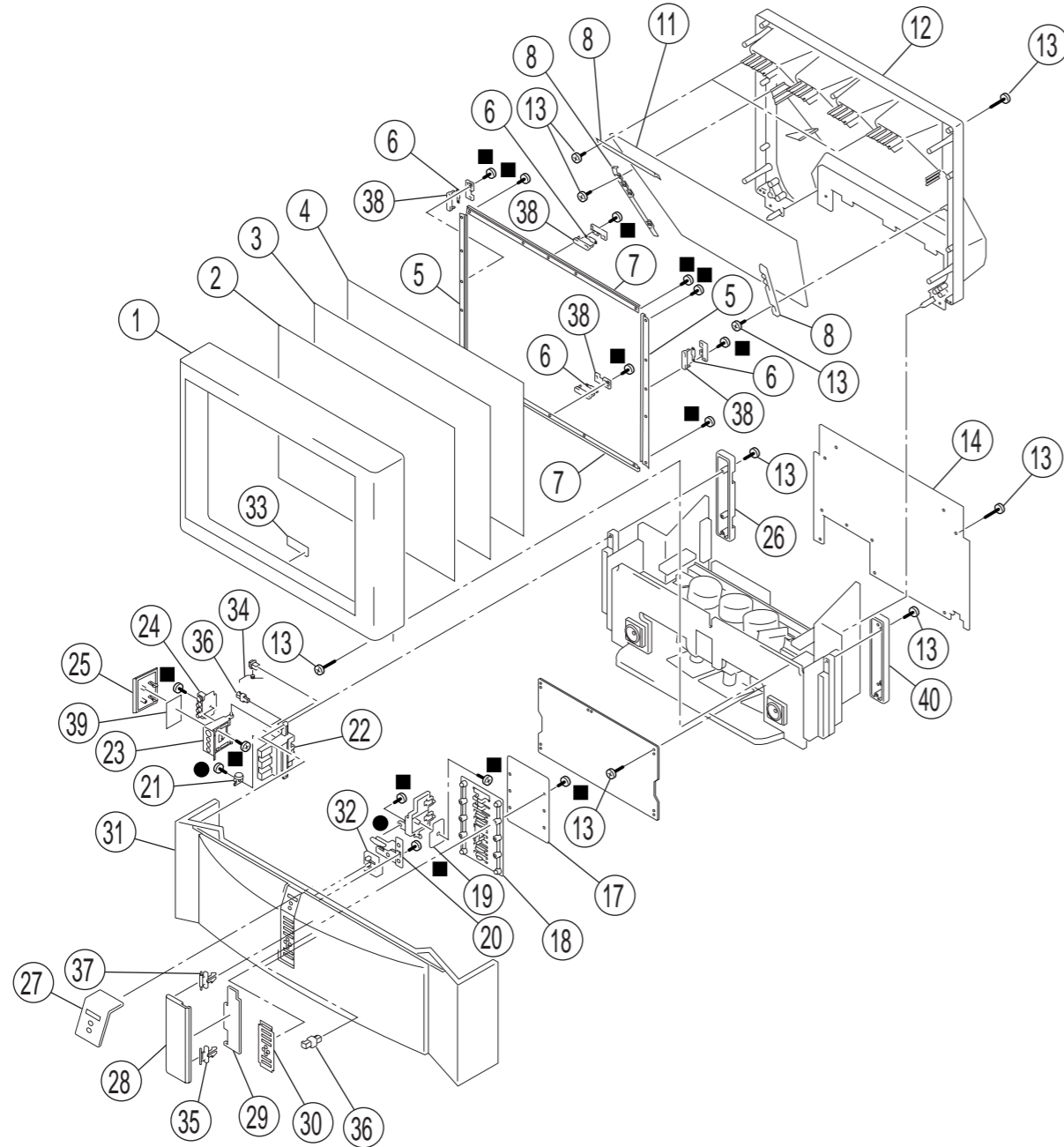
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

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 spécifié.

7-1. COVER (KP-43HT20)

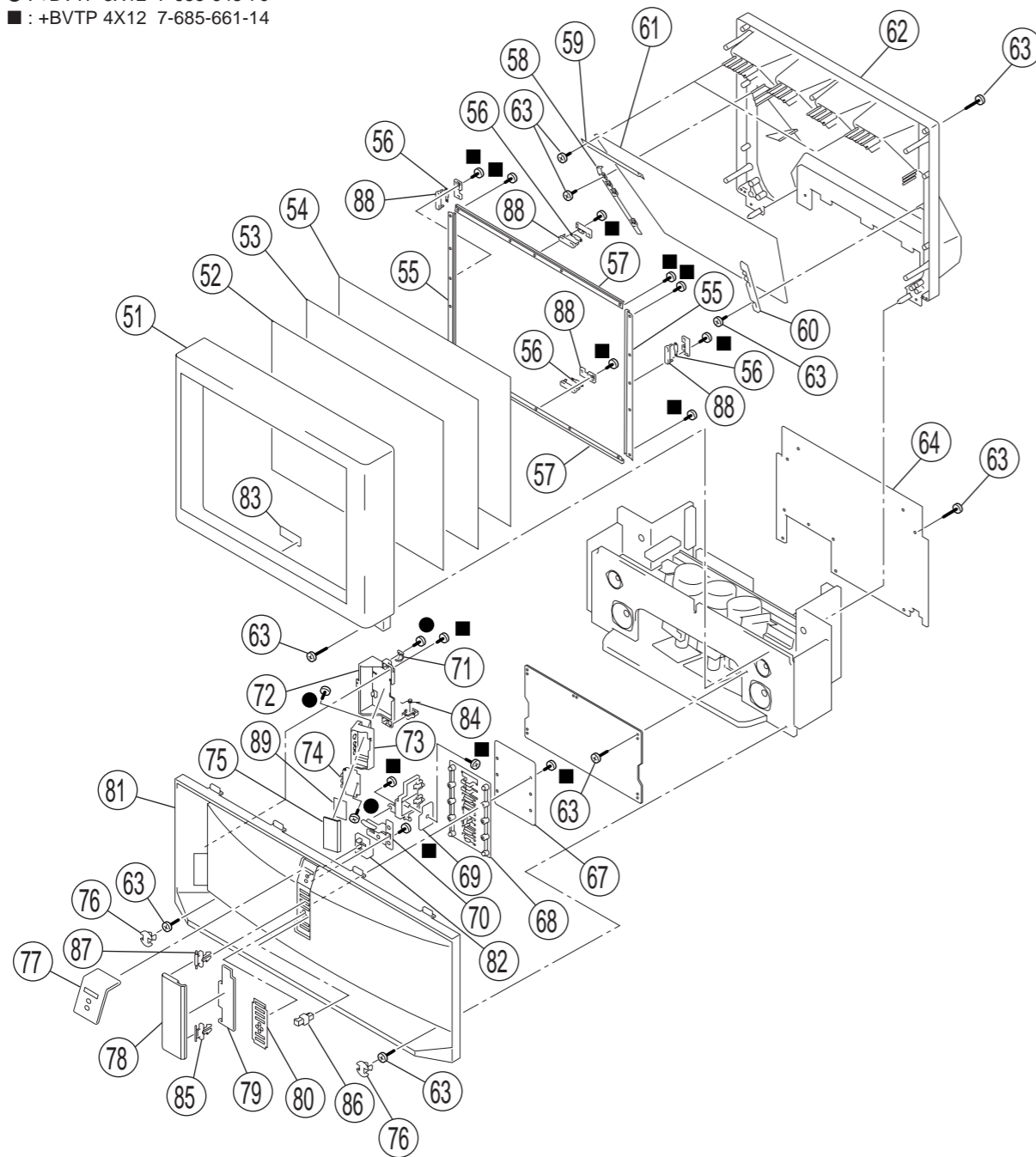
- : +BVTP 3X12 7-685-648-79
- : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4038-924-1	BEZNET (43) ASSY		25	4-082-300-11	DOOR, SIDE TERMINAL	
2	4-081-064-11	SCREEN (43), CONTRAST		26	4-082-298-01	CAP (L), SPEAKER GRILLE	
3	4-070-284-11	PLATE (L), DIFFUSION		27	4-082-280-11	PANEL, FRONT	
4	4-070-285-11	PLATE (43F), DIFFUSION		28	4-082-281-11	DOOR, CONTROL	
5	* 4-070-333-21	HOLDER (S), SCREEN NC		29	4-082-282-01	COVER, CONTROL DOOR	
6	* A-1391-148-A	S BOARD, COMPLETE		30	4-082-291-01	LABEL, CONTROL	
7	* 4-070-332-31	HOLDER (L), SCREEN NC		31	X-4039-087-1	GRILLE ASSY, SPEAKER	
8	* 4-081-501-01	HOLDER, MIRROR		32	4-082-286-01	GUIDE, LED	
11	4-082-889-01	MIRROR (43)		33	* A-1372-934-A	H4 BOARD, COMPLETE	
12	* 4-081-500-01	COVER (43), MIRROR		34	4-083-694-01	SPRING, DOOR	
13	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20		35	3-703-035-11	SHAFT, LID	
14	* 4-083-696-01	BOARD, REAR		36	4-042-192-01	CATCHER, PUSH	
17	* A-1372-932-A	H2 BOARD, COMPLETE		37	4-045-250-01	DAMPER	
18	4-082-284-01	BUTTON, MULTI		38	* 4-069-680-01	BRACKET (B), SENSOR	
19	* A-1377-001-A	H1 BOARD, COMPLETE		39	4-082-290-01	LABEL, FRONT TERMINAL	
20	4-082-283-01	BUTTON, POWER		40	4-082-299-01	CAP (R), SPEAKER GRILLE	
21	4-919-393-01	DAMPER					
22	4-082-302-01	HOLDER, SIDE TERMINAL					
23	4-082-301-01	BRACKET, H3					
24	* A-1372-933-A	H3 BOARD, COMPLETE					

7-2. COVER
(KP-53HS20/HS30/61HS20/HS30)

● : +BVTP 3X12 7-685-648-79
 ■ : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	X-4038-910-3	BEZNET ASSY (61) (61HS20,61HS30)		67	* A-1372-932-A	H2 BOARD, COMPLETE	
	X-4038-921-1	BEZNET (53) ASSY (53HS30)		68	4-082-284-01	BUTTON, MULTI	
	X-4039-160-1	BEZNET (53) ASSY (53HS20)		69	* A-1377-001-A	H1 BOARD, COMPLETE	
52	4-081-065-11	SCREEN (53), CONTRAST (53HS20,53HS30)		70	4-082-283-01	BUTTON, POWER	
	4-081-067-11	SCREEN (61), CONTRAST (61HS20,61HS30)		71	4-919-393-01	DAMPER	
53	4-070-283-11	PLATE (L), DIFFUSION (61HS20,61HS30)		72	4-082-289-01	HOLDER, FRONT TERMINAL	
	4-070-525-01	PLATE (L), DIFFUSION (53HS20,53HS30)		73	4-082-288-01	BRACKET, H3	
54	4-084-702-11	PLATE (F), DIFFUSION (53HS20,53HS30)		74	* A-1372-933-A	H3 BOARD, COMPLETE	
	4-084-704-11	PLATE (61FV), DIFFUSION (61HS20,61HS30)		75	4-082-287-11	DOOR, FRONT TERMINAL(53HS30,61HS30)	
55	* 4-070-330-02	HOLDER (S), SCREEN YC (53HS30)			4-082-287-21	DOOR, FRONT TERMINAL(53HS20,61HS20)	
	* 4-070-333-01	HOLDER (S), SCREEN NC (53HS20)		76	4-083-503-01	SCREW CAP, GRILLE	
	* 4-070-334-02	HOLDER (S), SCREEN YC (61HS30)		77	4-082-280-01	PANEL, FRONT	
	* 4-070-335-01	HOLDER (S), SCREEN NC (61HS20)		78	4-082-281-01	DOOR, CONTROL	
56	* A-1391-148-A	S BOARD, COMPLETE		79	4-082-282-01	COVER, CONTROL DOOR	
57	* 4-070-328-12	HOLDER (L), SCREEN YC (53HS30)		80	4-082-291-01	LABEL, CONTROL	
	* 4-070-329-03	HOLDER (L), SCREEN YC (61HS30)		81	X-0540-033-1	GRILLE ASSY, SPEAKER (61HS20)	
	* 4-070-331-11	HOLDER (L), SCREEN NC (53HS20)			X-4039-048-1	GRILLE ASSY, SPEAKER (53HS30)	
	* 4-070-332-02	HOLDER (L), SCREEN NC (61HS20)			X-4039-085-1	GRILLE ASSY, SPEAKER (61HS30)	
58	* 4-069-689-01	HOLDER (L), MIRROR (61HS20,61HS30)			X-4039-148-1	GRILLE ASSY, SPEAKER (53HS20)	
	* 4-081-504-01	HOLDER (SL), MIRROR (53HS20,53HS30)		82	4-082-286-01	GUIDE, LED	
59	* 4-070-345-01	HOLDER (TOP), MIRROR (61HS20,61HS30)		83	* A-1372-934-A	H4 BOARD, COMPLETE	
	* 4-070-345-11	HOLDER (TOP), MIRROR (53HS20,53HS30)		84	4-083-694-01	SPRING, DOOR	
60	* 4-069-690-01	HOLDER (R), MIRROR (61HS20,61HS30)		85	3-703-035-11	SHAFT, LID	
	* 4-081-505-01	HOLDER (SR), MIRROR (53HS20,53HS30)		86	4-042-192-01	CATCHER, PUSH	
61	4-070-344-01	MIRROR, REFLECTION (53HS20,53HS30)		87	4-045-250-01	DAMPER	
	4-070-922-01	MIRROR, REFLECTION (61HS20,61HS30)		88	* 4-069-680-01	BRACKET (B), SENSOR	
62	* 4-069-695-01	COVER, MIRROR (61HS20,61HS30)		89	4-082-290-01	LABEL, FRONT TERMINAL	
	* 4-081-503-01	COVER, MIRROR (53HS20,53HS30)					
63	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20					
64	* 4-083-511-01	BOARD, REAR (53HS20,53HS30)					
	* 4-083-686-01	BOARD, REAR (61HS20,61HS30)					

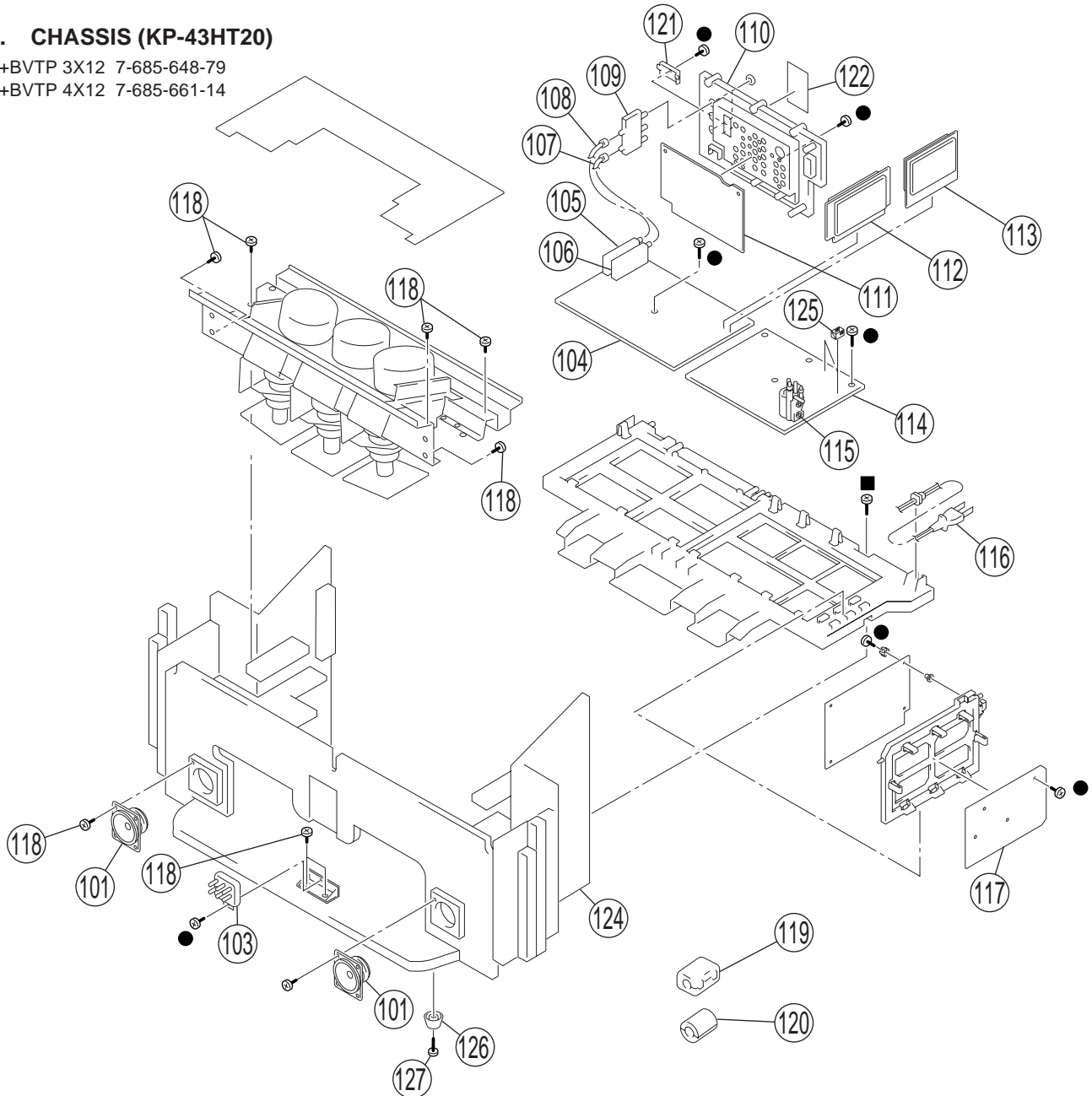
Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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

7-3. CHASSIS (KP-43HT20)

● : +BVTP 3X12 7-685-648-79

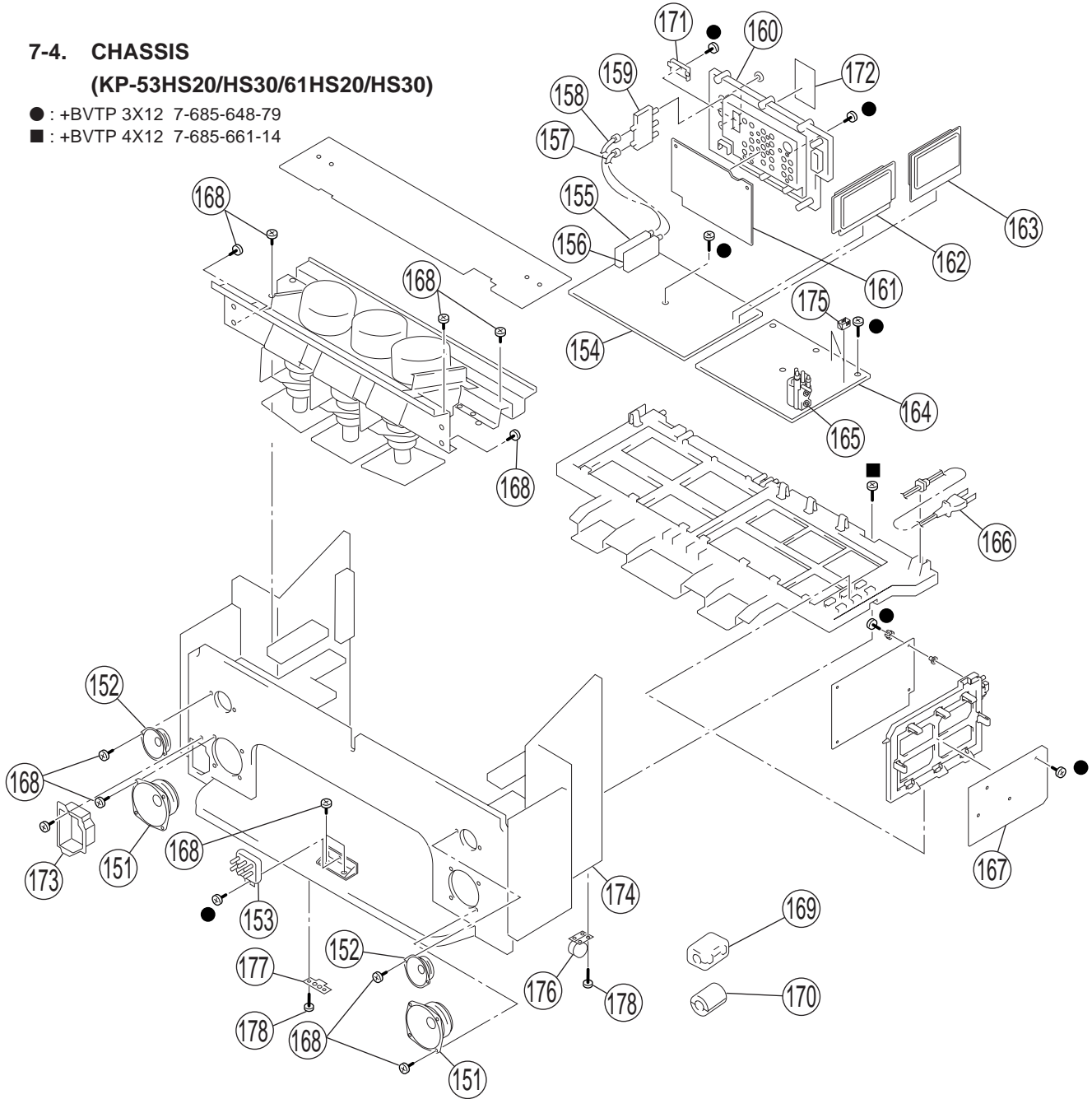
■ : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
101	1-544-893-11	SPEAKER (10CM)		114	* A-1348-038-A	D BOARD, COMPLETE	
103	Δ 1-223-925-11	RESISTOR ASSY (FOCUS PACK)		115	Δ 1-453-285-21	FBT ASSY, NX-4006//X4P4 (T8005)	
104	* A-1299-428-A	A BOARD, COMPLETE		116	Δ 1-790-130-11	CORD, AC POWER(WITH CONNECTOR)	
105	8-598-542-20	TUNER, FSS BTF-WA412 (TU2)		117	* A-1316-566-A	G BOARD, COMPLETE	
106	8-598-430-50	TUNER, FSS BTF-FA401 (TU1)		118	4-378-522-31	SCREW (4X20), TAPPING	
107	* 1-557-056-31	CABLE, P-P		119	1-500-021-11	CLAMP, SLEEVE FERRITE	
108	* 1-556-945-21	CABLE, P-P		120	1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)	
109	1-771-787-11	SWITCH, RF ANTENNA		121	4-069-675-01	CAP, TERMINAL BOARD	
110	4-081-961-01	BOARD, TERMINAL		122	4-081-576-01	LABEL, TERMINAL	
111	* A-1373-851-A	U BOARD, COMPLETE		124	* X-4039-086-1	CABINET (43) ASSY, BOTTOM	126
112	* A-1136-218-A	B BOARD, COMPLETE		125	3-710-578-01	COVER VOLUME 6 HULD	
113	* A-1299-523-A	AD BOARD, COMPLETE		126	4-057-611-01	FOOT	
				127	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20	

7-4. CHASSIS
 (KP-53HS20/HS30/61HS20/HS30)

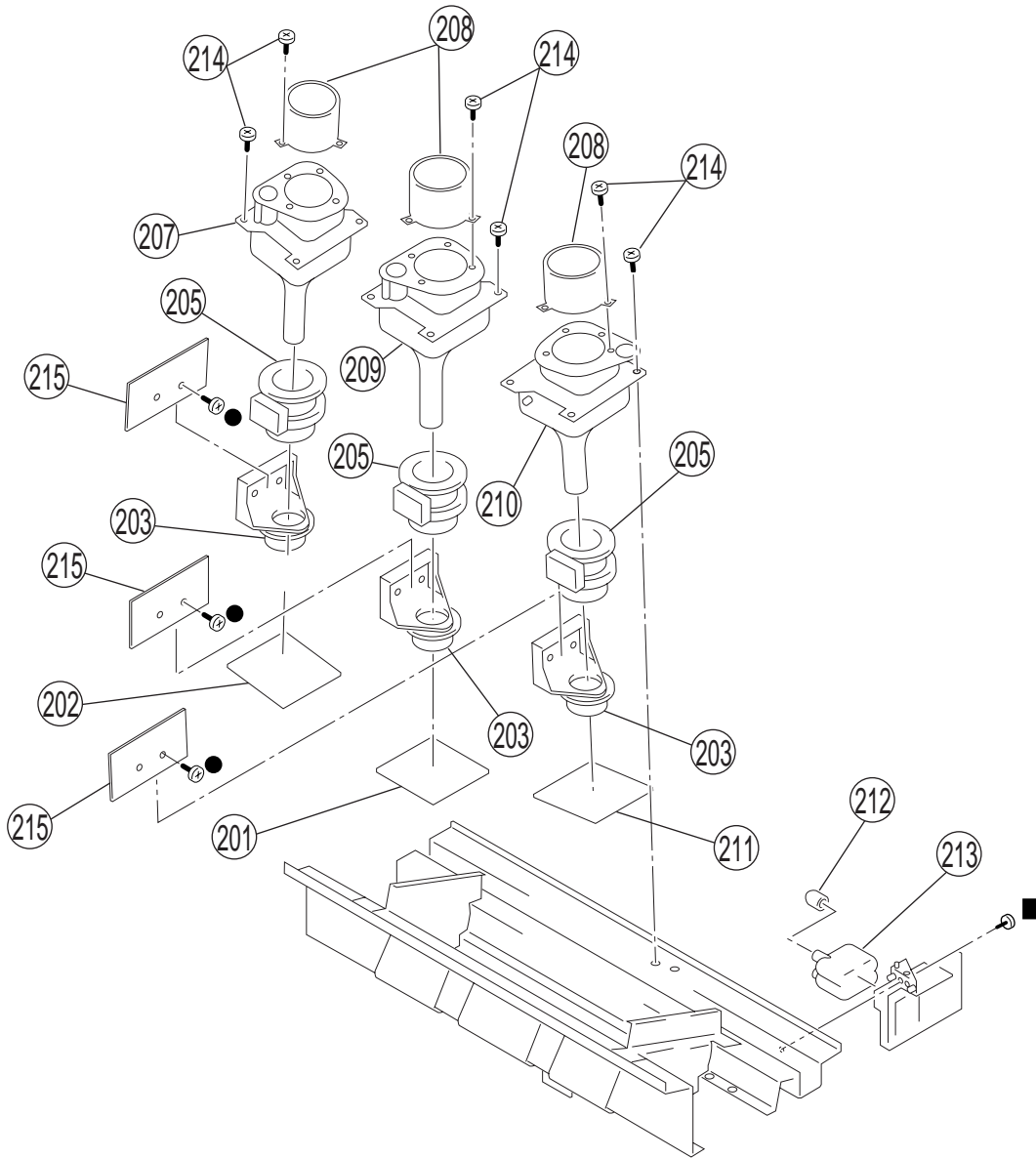
- : +BVTP 3X12 7-685-648-79
- : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
151	1-544-849-11	SPEAKER (13CM)		166	△ 1-790-130-11	CORD, AC POWER(WITH CONNECTOR)	
152	1-529-403-11	SPEAKER (6.6CM)		167	* A-1316-566-A	G BOARD, COMPLETE	
153	△ 1-223-925-11	RESISTOR ASSY (FOCUS PACK)		168	4-378-522-31	SCREW (4X20), TAPPING	
154	* A-1299-428-A	A BOARD, COMPLETE		169	1-500-021-11	CLAMP, SLEEVE FERRITE	
155	8-598-542-20	TUNER, FSS BTF-WA412 (TU2)		170	1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)	
156	8-598-430-50	TUNER, FSS BTF-FA401 (TU1)		171	4-069-675-01	CAP, TERMINAL BOARD	
157	* 1-557-056-31	CABLE, P-P		172	4-081-576-01	LABEL, TERMINAL	
158	* 1-556-945-21	CABLE, P-P		173	* 4-083-506-01	COVER, CABINET (HS)	
159	1-771-787-11	SWITCH, RF ANTENNA		174	* X-4039-049-1	CABINET (53) ASSY, BOTTOM	(53HS20,53HS30) 176, 177
160	4-081-961-01	BOARD, TERMINAL			* X-4039-084-1	CABINET ASSY, BOTTOM	(61HS20,61HS30) 176, 177
161	* A-1373-851-A	U BOARD, COMPLETE		175	3-710-578-01	COVER VOLUME 6 HULD	
162	* A-1136-218-A	B BOARD, COMPLETE		176	4-040-755-01	CASTER (DIA. 30)	
163	* A-1299-523-A	AD BOARD, COMPLETE		177	4-075-020-01	FOOT, PLASTIC	
164	* A-1348-038-A	D BOARD, COMPLETE		178	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20	
165	△ 1-453-285-21	FBT ASSY, NX-4006//X4P4 (T8005)					

7-5. PICTURE TUBE

- : +BVTP 3X12 7-685-648-79
- : +BVTP 4X12 7-685-661-14



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
201	* A-1332-159-A	CG BOARD, COMPLETE					
202	* A-1332-158-A	CR BOARD, COMPLETE					
203	△ 1-451-535-11	COIL ASSY, VM		209	△ A-1501-976-A	COUPLER (G) ASSY, CRT	
205	△ 1-451-537-11	DEFLECTION YOKE		210	△ A-1501-977-A	COUPLER (B) ASSY, CRT	
							(53HS20,53HS30)
207	△ A-1501-975-A	COUPLER (R) ASSY, CRT			△ A-1501-979-A	COUPLER (B) ASSY CRT	
			(53HS20,53HS30)				(61HS20,61HS30)
	△ A-1501-978-A	COUPLER (R) ASSY CRT			△ A-1501-981-A	COUPLER (B) ASSY, CRT (43HT20)	
			(61HS20,61HS30)	211	* A-1332-160-A	CB BOARD, COMPLETE	
	△ A-1501-980-A	COUPLER (R) ASSY, CRT (43HT20)		212	4-373-137-01	CAP (Z), RUBBER	
208	4-040-131-21	LENS (LINNIT POINT 6) (61HS20,61HS30)		213	△ 8-598-955-31	BLOCK ASSY, HV HVB-1031	
	4-056-258-11	LENS (DELTA 78) (43HT20,53HS20,53HS30)		214	4-052-894-01	SCREW (4X20), HEAD TAPPING	
				215	* A-1342-598-A	V BOARD, COMPLETE	



SECTION 8 ELECTRICAL PARTS LIST

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

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

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

- The components identified by in \square this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- CAPACITORS
PF : $\mu\mu$ F
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

- RESISTORS
- All resistors are in ohms
 - F : nonflammable

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1332-158-A CR BOARD, COMPLETE *****				< COIL >			
	4-382-854-11	SCREW (M3X10), P, SW (+)		L7101	1-414-223-11	INDUCTOR	470UH
		< CAPACITOR >		L7102	1-414-187-11	INDUCTOR	47UH
C7101	1-104-570-11	CERAMIC	0.001UF 10% 2KV	L7103	1-414-181-11	INDUCTOR	4.7UH
C7102	1-107-662-11	ELECT	22UF 20% 250V	< NEON LAMP >			
C7103	1-126-964-11	ELECT	10UF 20% 50V	NL7101	1-517-778-21	LAMP, NEON	
C7104	1-161-830-00	CERAMIC	0.0047UF 500V	< TRANSISTOR >			
C7105	1-102-050-00	CERAMIC	0.01UF 99% 500V	Q7101	8-729-026-49	2SA1037AK-T146-R	
C7106	1-126-768-11	ELECT	2200UF 20% 16V	Q7102	8-729-422-27	2SD601A-Q	
C7107	1-162-115-00	CERAMIC	330PF 10% 2KV	< RESISTOR >			
C7108	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	R7102	1-216-813-11	RES-CHIP	220 5% 1/16W
C7109	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	R7103	1-216-864-11	SHORT	0
C7110	1-126-967-11	ELECT	47UF 20% 50V	R7104	1-260-132-11	CARBON	560K 5% 1/2W
C7112	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	R7105	1-219-743-11	CARBON	100 5% 1/2W
C7113	1-102-157-00	CERAMIC	560PF 10% 500V	R7106	1-218-714-11	METAL CHIP	8.2K 0.5% 1/16W
C7114	1-162-912-11	CERAMIC CHIP	7PF 0.50PF50V	R7107	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
C7115	1-162-907-11	CERAMIC CHIP	2PF 0.25PF50V	R7108	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
C7116	1-107-504-11	CERAMIC	10PF 500V	R7109	1-260-133-11	CARBON	680K 5% 1/2W
< CONNECTOR >				R7110	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W
CN7102*	1-564-509-11	PLUG, CONNECTOR 6P		R7111	1-218-718-11	METAL CHIP	12K 0.5% 1/16W
CN7103*	1-564-510-11	PLUG, CONNECTOR 7P		R7112	1-218-706-11	METAL CHIP	3.9K 0.5% 1/16W
CN7104	1-785-879-11	CONNECTOR, ONE TOUCH		R7113	1-216-813-11	RES-CHIP	220 5% 1/16W
CN7105	1-695-915-11	TAB (CONTACT)		R7114	1-249-424-11	CARBON	3.9K 5% 1/4W
CN7108 Δ	1-251-182-11	SOCKET, CRT		R7115	1-260-328-11	CARBON	1K 5% 1/2W
< DIODE >				R7116	1-216-811-11	RES-CHIP	150 5% 1/16W
D7103	8-719-921-88	MTZJ-13B		R7117	1-260-087-11	CARBON	100 5% 1/2W
D7104	8-719-901-83	ISS83		R7118	1-218-696-11	METAL CHIP	1.5K 0.5% 1/16W
D7105	8-719-901-83	ISS83		R7119	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W
D7106	8-719-901-83	ISS83		R7120	1-215-929-11	METAL OXIDE	100K 5% 3W
D7107	8-719-901-83	ISS83		R7121	1-216-864-11	SHORT	0
D7108	8-719-921-88	MTZJ-13B		R7122	1-260-093-11	CARBON	330 5% 1/2W
D7109	8-719-921-88	MTZJ-13B		R7123	1-216-864-11	SHORT	0
D7110	8-719-991-33	ISS133T-77		< SPARK GAP >			
< IC >				SG7101	1-519-422-11	GAP, SPARK	
IC7101	8-759-360-83	TDA6111Q/N4		SG7102	1-517-729-31	GAP, SPARK	

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

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



REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1332-159-A CG BOARD, COMPLETE *****			
4-382-854-11	SCREW (M3X10), P, SW (+)		
< CAPACITOR >			
C7201	1-107-662-11	ELECT 22UF 20% 250V	
C7202	1-104-570-11	CERAMIC 0.001UF 10% 2KV	
C7203	1-126-964-11	ELECT 10UF 20% 50V	
C7204	1-161-830-00	CERAMIC 0.0047UF 500V	
C7205	1-126-768-11	ELECT 2200UF 20% 16V	
C7206	1-102-050-00	CERAMIC 0.01UF 99% 500V	
C7207	1-107-826-11	CERAMIC CHIP 0.1UF 10% 16V	
C7208	1-162-115-00	CERAMIC 330PF 10% 2KV	
C7209	1-107-826-11	CERAMIC CHIP 0.1UF 10% 16V	
C7210	1-126-967-11	ELECT 47UF 20% 50V	
C7212	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C7213	1-102-157-00	CERAMIC 560PF 10% 500V	
C7214	1-162-913-11	CERAMIC CHIP 8PF 0.50PF50V	
C7215	1-162-908-11	CERAMIC CHIP 3PF 0.25PF50V	
< CONNECTOR >			
CN7202*	1-564-509-11	PLUG, CONNECTOR 6P	
CN7203*	1-564-510-11	PLUG, CONNECTOR 7P	
CN7204*	1-564-510-11	PLUG, CONNECTOR 7P	
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH	
CN7206	1-695-915-11	TAB (CONTACT)	
CN7208	1-695-915-11	TAB (CONTACT)	
CN7209 Δ	1-251-182-11	SOCKET, CRT	
< DIODE >			
D7203	8-719-921-88	MTZJ-13B	
D7204	8-719-901-83	ISS83	
D7205	8-719-991-33	ISS133T-77	
D7206	8-719-901-83	ISS83	
D7207	8-719-901-83	ISS83	
D7208	8-719-901-83	ISS83	
D7209	8-719-921-88	MTZJ-13B	
D7210	8-719-921-88	MTZJ-13B	
< IC >			
IC7201	8-759-360-83	TDA6111Q/N4	
< JUMPER RESISTOR >			
JR7201	1-216-864-11	SHORT 0	
< COIL >			
L7201	1-414-223-11	INDUCTOR 470UH	
L7202	1-414-187-11	INDUCTOR 47UH	
L7203	1-414-181-11	INDUCTOR 4.7UH	
< NEON LAMP >			
NL7201	1-517-778-21	LAMP, NEON	

REF. NO.	PART NO.	DESCRIPTION	REMARK
< TRANSISTOR >			
Q7201	8-729-026-49	2SA1037AK-T146-R	
Q7202	8-729-422-27	2SD601A-Q	
< RESISTOR >			
R7202	1-216-864-11	SHORT 0	
R7203	1-260-132-11	CARBON 560K 5% 1/2W	
R7204	1-216-813-11	RES-CHIP 220 5% 1/16W	
R7205	1-218-713-11	METAL CHIP 7.5K 0.5% 1/16W	
R7206	1-218-716-11	METAL CHIP 10K 0.5% 1/16W	
R7207	1-219-743-11	CARBON 100 5% 1/2W	
R7208	1-216-823-11	RES-CHIP 1.5K 5% 1/16W	
R7209	1-260-133-11	CARBON 680K 5% 1/2W	
R7210	1-216-813-11	RES-CHIP 220 5% 1/16W	
R7211	1-218-710-11	METAL CHIP 5.6K 0.5% 1/16W	
R7212	1-218-718-11	METAL CHIP 12K 0.5% 1/16W	
R7213	1-218-707-11	METAL CHIP 4.3K 0.5% 1/16W	
R7215	1-249-424-11	CARBON 3.9K 5% 1/4W	
R7216	1-216-811-11	RES-CHIP 150 5% 1/16W	
R7217	1-218-696-11	METAL CHIP 1.5K 0.5% 1/16W	
R7218	1-260-328-11	CARBON 1K 5% 1/2W	
R7219	1-218-699-11	METAL CHIP 2K 0.5% 1/16W	
R7220	1-215-929-11	METAL OXIDE 100K 5% 3W	
R7221	1-216-864-11	SHORT 0	
R7222	1-260-087-11	CARBON 100 5% 1/2W	
R7223	1-260-093-11	CARBON 330 5% 1/2W	
R7224	1-216-864-11	SHORT 0	
< SPARK GAP >			
SG7201	1-519-422-11	GAP, SPARK	
SG7202	1-517-729-31	GAP, SPARK	

* A-1332-160-A CB BOARD, COMPLETE *****			
4-382-854-11	SCREW (M3X10), P, SW (+)		
< CAPACITOR >			
C7301	1-107-662-11	ELECT 22UF 20% 250V	
C7302	1-104-570-11	CERAMIC 0.001UF 10% 2KV	
C7303	1-126-768-11	ELECT 2200UF 20% 16V	
C7304	1-161-830-00	CERAMIC 0.0047UF 500V	
C7305	1-107-826-11	CERAMIC CHIP 0.1UF 10% 16V	
C7306	1-102-050-00	CERAMIC 0.01UF 99% 500V	
C7307	1-126-964-11	ELECT 10UF 20% 50V	
C7308	1-107-826-11	CERAMIC CHIP 0.1UF 10% 16V	
C7309	1-162-115-00	CERAMIC 330PF 10% 2KV	
C7310	1-126-967-11	ELECT 47UF 20% 50V	
C7312	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C7313	1-102-157-00	CERAMIC 560PF 10% 500V	
C7314	1-162-913-11	CERAMIC CHIP 8PF 0.50PF50V	
C7315	1-162-907-11	CERAMIC CHIP 2PF 0.25PF50V	

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



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		< CONNECTOR >		R7324	1-260-093-11	CARBON	330 5% 1/2W
CN7302*	1-564-509-11	PLUG, CONNECTOR 6P		R7325	1-216-864-11	SHORT	0
CN7303*	1-564-510-11	PLUG, CONNECTOR 7P		R7327	1-216-864-11	SHORT	0
CN7304*	1-564-510-11	PLUG, CONNECTOR 7P		R7328	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
CN7305	1-785-879-11	CONNECTOR, ONE TOUCH				< SPARK GAP >	
CN7307	1-695-915-11	TAB (CONTACT)		SG7301	1-519-422-11	GAP, SPARK	
CN7308	1-695-915-11	TAB (CONTACT)		SG7302	1-517-729-31	GAP, SPARK	
CN7309 Δ 1	251-182-11	SOCKET, CRT		*****			
		< DIODE >				* A-1342-598-A V BOARD, COMPLETE	
D7303	8-719-921-88	MTZJ-13B				*****	
D7304	8-719-901-83	ISS83				4-382-854-11	SCREW (M3X10), P, SW (+)
D7305	8-719-991-33	ISS133T-77				< CAPACITOR >	
D7306	8-719-901-83	ISS83		C9002	1-104-999-11	MYLAR	0.1UF 10% 200V
D7307	8-719-901-83	ISS83		C9003	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
D7308	8-719-901-83	ISS83		C9006	1-126-935-11	ELECT	470UF 20% 6.3V
D7309	8-719-991-33	ISS133T-77		C9007	1-126-933-11	ELECT	100UF 20% 16V
D7310	8-719-921-88	MTZJ-13B		C9008	1-126-935-11	ELECT	470UF 20% 6.3V
D7311	8-719-921-88	MTZJ-13B		C9009	1-126-933-11	ELECT	100UF 20% 16V
		< IC >		C9010	1-107-667-11	ELECT	2.2UF 20% 160V
IC7301	8-759-360-83	TDA6111Q/N4		C9011	1-107-364-11	MYLAR	0.01UF 10% 200V
		< COIL >		C9012	1-107-364-11	MYLAR	0.01UF 10% 200V
L7301	1-414-223-11	INDUCTOR	470UH	C9013	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
L7302	1-414-187-11	INDUCTOR	47UH	C9014	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
L7303	1-414-181-11	INDUCTOR	4.7UH	C9015	1-126-935-11	ELECT	470UF 20% 16V
		< NEON LAMP >		C9017	1-104-999-11	MYLAR	0.1UF 10% 200V
NL7301	1-517-778-21	LAMP, NEON		C9018	1-107-638-11	ELECT	33UF 20% 160V
		< TRANSISTOR >		C9019	1-126-935-11	ELECT	470UF 20% 16V
Q7301	8-729-026-49	2SA1037AK-T146-R				< CONNECTOR >	
Q7302	8-729-026-49	2SA1037AK-T146-R		CN9001*	1-564-508-11	PLUG, CONNECTOR 5P	
		< RESISTOR >		CN9002*	1-770-723-11	CONNECTOR, BOARD TO BOARD 8P	
R7301	1-249-393-11	CARBON	10 5% 1/4W			< DIODE >	
R7303	1-260-132-11	CARBON	560K 5% 1/2W	D9001	8-719-404-50	MA111-TX	
R7304	1-216-864-11	SHORT	0	D9002	8-719-404-50	MA111-TX	
R7305	1-216-813-11	RES-CHIP	220 5% 1/16W	D9003	8-719-988-61	1SS355TE-17	
R7306	1-219-743-11	CARBON	100 5% 1/2W	D9004	8-719-404-50	MA111-TX	
R7308	1-218-713-11	METAL CHIP	7.5K 0.5% 1/16W	D9005	8-719-510-02	D1NS4	
R7309	1-218-718-11	METAL CHIP	12K 0.5% 1/16W	D9006	8-719-924-13	MTZJ-T-77-22B	
R7310	1-216-813-11	RES-CHIP	220 5% 1/16W	D9007	8-719-924-13	MTZJ-T-77-22B	
R7311	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W			< COIL >	
R7312	1-218-718-11	METAL CHIP	12K 0.5% 1/16W	L9001	1-412-525-31	INDUCTOR	10UH
R7313	1-260-133-11	CARBON	680K 5% 1/2W			< TRANSISTOR >	
R7314	1-218-702-11	METAL CHIP	2.7K 0.5% 1/16W	Q9002	8-729-422-27	2SD601A-Q	
R7316	1-249-424-11	CARBON	3.9K 5% 1/4W	Q9003	8-729-422-27	2SD601A-Q	
R7317	1-216-811-11	RES-CHIP	150 5% 1/16W	Q9004	8-729-026-49	2SA1037AK-T146-R	
R7318	1-218-696-11	METAL CHIP	1.5K 0.5% 1/16W	Q9005	8-729-422-27	2SD601A-Q	
R7319	1-260-328-11	CARBON	1K 5% 1/2W	Q9006	8-729-026-49	2SA1037AK-T146-R	
R7320	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W	Q9007	8-729-422-27	2SD601A-Q	
R7321	1-215-929-11	METAL OXIDE	100K 5% 3W				
R7322	1-260-087-11	CARBON	100 5% 1/2W				
R7323	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q9008	8-729-045-04	2SC5511		C3306	1-126-204-11	ELECT CHIP 47UF	20% 16V
Q9009	8-729-045-05	2SA2005		C3307	1-164-156-11	CERAMIC CHIP 0.1UF	25V
		< RESISTOR >		C3308	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9002	1-216-805-11	RES-CHIP 47	5% 1/16W	C3309	1-126-206-11	ELECT CHIP 100UF	20% 6.3V
R9004	1-216-820-11	RES-CHIP 820	5% 1/16W	C3310	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9005	1-216-829-11	RES-CHIP 4.7K	5% 1/16W	C3311	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9006	1-216-829-11	RES-CHIP 4.7K	5% 1/16W	C3312	1-126-206-11	ELECT CHIP 100UF	20% 6.3V
R9007	1-216-809-11	RES-CHIP 100	5% 1/16W	C3313	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9008	1-216-803-11	RES-CHIP 33	5% 1/16W	C3314	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9009	1-216-809-11	RES-CHIP 100	5% 1/16W	C3315	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9010	1-216-813-11	RES-CHIP 220	5% 1/16W	C3316	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9011	1-216-864-11	SHORT 0		C3317	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9012	1-216-823-11	RES-CHIP 1.5K	5% 1/16W	C3318	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9013	1-216-805-11	RES-CHIP 47	5% 1/16W	C3319	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9014	1-216-805-11	RES-CHIP 47	5% 1/16W	C3320	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9015	1-216-833-11	RES-CHIP 10K	5% 1/16W	C3321	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9016	1-249-414-11	CARBON 560	5% 1/4W	C3322	1-126-204-11	ELECT CHIP 47UF	20% 16V
R9017	1-249-435-11	CARBON 33K	5% 1/4W	C3323	1-124-779-00	ELECT CHIP 10UF	20% 16V
R9018	1-249-435-11	CARBON 33K	5% 1/4W	C3324	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9019	1-249-414-11	CARBON 560	5% 1/4W	C3325	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9020	1-216-799-11	RES-CHIP 15	5% 1/16W	C3326	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9021	1-216-799-11	RES-CHIP 15	5% 1/16W	C3327	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9022	1-249-421-11	CARBON 2.2K	5% 1/4W	C3328	1-124-779-00	ELECT CHIP 10UF	20% 16V
R9023	1-249-421-11	CARBON 2.2K	5% 1/4W	C3329	1-107-826-11	CERAMIC CHIP 0.1UF	10% 16V
R9024	1-249-405-11	CARBON 100	5% 1/4W	C3331	1-126-204-11	ELECT CHIP 47UF	20% 16V
R9025	1-249-385-11	CARBON 2.2	5% 1/4W	C3332	1-124-779-00	ELECT CHIP 10UF	20% 16V
R9027	1-249-385-11	CARBON 2.2	5% 1/4W	C3333	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9028	1-249-405-11	CARBON 100	5% 1/4W	C3334	1-107-826-11	CERAMIC CHIP 0.1UF	10% 16V
R9029	1-215-913-11	METAL OXIDE 220	5% 3W	C3335	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9030	1-249-377-11	CARBON 0.47	5% 1/4W	C3336	1-124-779-00	ELECT CHIP 10UF	20% 16V
R9031	1-249-385-11	CARBON 2.2	5% 1/4W	C3337	1-107-826-11	CERAMIC CHIP 0.1UF	10% 16V
R9032	1-249-385-11	CARBON 2.2	5% 1/4W	C3338	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9033	1-249-436-11	CARBON 39K	5% 1/4W	C3339	1-164-156-11	CERAMIC CHIP 0.1UF	25V
R9034	1-249-436-11	CARBON 39K	5% 1/4W	C3340	1-164-156-11	CERAMIC CHIP 0.1UF	25V

* A-1136-218-A B BOARD, COMPLETE							

		< CAPACITOR >		C3341	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3001	1-128-453-21	ELECT CHIP 47UF	20% 6.3V	C3342	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3002	1-128-453-21	ELECT CHIP 47UF	20% 6.3V	C3343	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3003	1-128-453-21	ELECT CHIP 47UF	20% 6.3V	C3344	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3035	1-162-970-11	CERAMIC CHIP 0.01UF	10% 25V	C3345	1-126-204-11	ELECT CHIP 47UF	20% 16V
C3044	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C3346	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3089	1-162-970-11	CERAMIC CHIP 0.01UF	10% 25V	C3347	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3090	1-126-204-11	ELECT CHIP 47UF	20% 16V	C3348	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3096	1-162-970-11	CERAMIC CHIP 0.01UF	10% 25V	C3349	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3101	1-162-925-11	CERAMIC CHIP 68PF	5% 50V	C3350	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3102	1-162-925-11	CERAMIC CHIP 68PF	5% 50V	C3351	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3301	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C3352	1-124-779-00	ELECT CHIP 10UF	20% 16V
C3302	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C3353	1-126-204-11	ELECT CHIP 47UF	20% 16V
C3303	1-126-206-11	ELECT CHIP 100UF	20% 6.3V	C3354	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3304	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C3355	1-164-156-11	CERAMIC CHIP 0.1UF	25V
C3305	1-164-156-11	CERAMIC CHIP 0.1UF	25V	C3356	1-126-204-11	ELECT CHIP 47UF	20% 16V
				C3357	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C3358	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C3359	1-126-204-11	ELECT CHIP 47UF	20% 16V
				C3360	1-164-156-11	CERAMIC CHIP 0.1UF	25V
				C3361	1-162-970-11	CERAMIC CHIP 0.01UF	10% 25V
				C3362	1-127-760-11	CERAMIC CHIP 4.7UF	10% 6.3V
				C3363	1-126-204-11	ELECT CHIP 47UF	20% 16V
				C3364	1-164-156-11	CERAMIC CHIP 0.1UF	25V

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C3365	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3445	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3366	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3446	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C3367	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3447	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3368	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3448	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C3369	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3449	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3370	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3450	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3371	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3451	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3372	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3452	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3373	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V	C3453	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3374	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3454	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3375	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V	C3455	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3376	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3456	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3377	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C3457	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3378	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3458	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3379	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3460	1-162-923-11	CERAMIC CHIP	47PF 5% 50V
C3401	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3462	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3402	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3463	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3403	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3464	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3404	1-126-206-11	ELECT CHIP	100UF 20% 6.3V	C3465	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3405	1-126-206-11	ELECT CHIP	100UF 20% 6.3V	C3466	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3406	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3467	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3407	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3468	1-126-206-11	ELECT CHIP	100UF 20% 6.3V
C3408	1-126-206-11	ELECT CHIP	100UF 20% 6.3V	C3469	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3409	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3470	1-126-206-11	ELECT CHIP	100UF 20% 6.3V
C3410	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3473	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3411	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3474	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3412	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3475	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3413	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3476	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3414	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3477	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3415	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3478	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3416	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3479	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3417	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3480	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3418	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3481	1-117-681-11	ELECT CHIP	100UF 20% 16V
C3419	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3482	1-117-681-11	ELECT CHIP	100UF 20% 16V
C3420	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3483	1-117-681-11	ELECT CHIP	100UF 20% 16V
C3421	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3484	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V
C3422	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3485	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3423	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C3486	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3424	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3487	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3425	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C3488	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3426	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3489	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3428	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C3490	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3429	1-124-779-00	ELECT CHIP	10UF 20% 16V	C3491	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3430	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3492	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3431	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3493	1-126-204-11	ELECT CHIP	47UF 20% 16V
C3432	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3494	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3433	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C3495	1-124-779-00	ELECT CHIP	10UF 20% 16V
C3434	1-126-204-11	ELECT CHIP	47UF 20% 16V	C3496	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3435	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C3499	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C3436	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V			< CONNECTOR >	
C3437	1-126-204-11	ELECT CHIP	47UF 20% 16V				
C3438	1-164-156-11	CERAMIC CHIP	0.1UF 25V	CN3203*	1-793-923-11	CONNECTOR, DIN (PLUG) 64P	
C3439	1-164-156-11	CERAMIC CHIP	0.1UF 25V			< DIODE >	
C3440	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	D3089	8-719-800-76	1SS226	
C3441	1-162-916-11	CERAMIC CHIP	12PF 5% 50V	D3090	8-719-800-76	1SS226	
C3442	1-124-779-00	ELECT CHIP	10UF 20% 16V	D3301	8-719-083-58	UDZSTE-173.9B	
C3443	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V				
C3444	1-164-156-11	CERAMIC CHIP	0.1UF 25V				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D3302	8-719-069-60	UDZSTE-179.1B		L3311	1-469-561-21	INDUCTOR	100UH
D3401	8-719-914-43	DAN202K		L3312	1-469-555-21	INDUCTOR	10UH
D3402	8-719-914-45	DAP202K		L3401	1-412-058-11	INDUCTOR	10UH
D3403	8-719-069-33	DTZ-TT11-6.8B		L3402	1-412-052-21	INDUCTOR	1UH
		< FERRITE BEAD >		L3403	1-469-561-21	INDUCTOR	100UH
FB3302	1-500-451-11	FERRITE	0UH	L3404	1-469-561-21	INDUCTOR	100UH
FB3401	1-414-235-22	FERRITE	0UH	L3405	1-469-555-21	INDUCTOR	10UH
FB3402	1-414-235-22	FERRITE	0UH	L3406	1-469-555-21	INDUCTOR	10UH
		< FILTER >		L3407	1-469-555-21	INDUCTOR	10UH
FL3003	1-781-924-11	FILTER, LOW PASS (SMD)		L3408	1-469-555-21	INDUCTOR	10UH
FL3301	1-234-558-21	FILTER, LOW PASS		L3409	1-469-555-21	INDUCTOR	10UH
FL3302	1-234-557-21	FILTER, LOW PASS		L3410	1-412-058-11	INDUCTOR	10UH
FL3303	1-234-557-21	FILTER, LOW PASS		L3411	1-412-058-11	INDUCTOR	10UH
FL3401	1-781-923-11	FILTER, LOW PASS (SMD)		L3412	1-469-555-21	INDUCTOR	10UH
		< IC >		L3413	1-469-555-21	INDUCTOR	10UH
IC3089	6-700-149-01	IC M24C04-MN6T(A)		L3414	1-469-555-21	INDUCTOR	10UH
IC3090	8-759-832-08	IC MB94918RPF-G-134-BND		L3416	1-469-555-21	INDUCTOR	10UH
IC3091	8-759-349-11	PST9145NL				< TRANSISTOR >	
IC3301	8-759-832-53	W981616AH-7-EL1		Q3005	8-729-422-27	2SD601A-Q	
IC3302	8-759-832-05	IC BA18BC0FP-E2		Q3006	8-729-422-27	2SD601A-Q	
IC3303	8-752-409-78	IC CXD2095AQ		Q3007	8-729-422-27	2SD601A-Q	
IC3304	8-759-447-90	TLC5733AIPM		Q3089	8-729-026-49	2SA1037AK-T146-R	
IC3305	8-759-669-75	TLC2932IPWR		Q3090	8-729-026-49	2SA1037AK-T146-R	
IC3306	8-759-669-78	TLC2933IPWR-12		Q3091	1-801-806-11	TR DTC144EKA	
IC3401	6-700-394-01	IC BA25BC0FP-E2		Q3401	8-729-422-27	2SD601A-Q	
IC3402	8-759-677-39	MB81F643242B-D		Q3301	8-729-422-27	2SD601A-Q	
IC3403	8-759-460-29	PST9120NL		Q3302	8-729-422-27	2SD601A-Q	
IC3404	8-759-669-75	TLC2932IPWR		Q3303	8-729-422-27	2SD601A-Q	
IC3405	8-759-453-97	TC7SET08FU(TE85L)		Q3304	8-729-422-27	2SD601A-Q	
IC3406	8-759-453-97	TC7SET08FU(TE85L)		Q3305	8-729-026-49	2SA1037AK-T146-R	
IC3407	8-759-453-97	TC7SET08FU(TE85L)		Q3306	8-729-026-49	2SA1037AK-T146-R	
IC3408	8-759-672-57	CXD9509AQ		Q3307	8-729-422-27	2SD601A-Q	
IC3409	8-759-833-72	IC NJM2870F25-TE2		Q3308	8-729-026-49	2SA1037AK-T146-R	
IC3410	8-752-367-59	CXD2309Q		Q3309	8-729-422-27	2SD601A-Q	
IC3411	8-759-082-57	TC7W04FU		Q3310	8-729-026-49	2SA1037AK-T146-R	
IC3412	8-759-082-58	TC7W08FU		Q3311	8-729-422-27	2SD601A-Q	
IC3413	8-759-595-97	SN74LV4053ANSR		Q3402	8-729-028-28	2SK2036(TE85L)	
IC3414	8-759-548-56	M52055FP		Q3403	8-729-422-27	2SD601A-Q	
		< COIL >		Q3404	8-729-028-28	2SK2036(TE85L)	
L3001	1-216-295-91	SHORT	0	Q3405	8-729-026-49	2SA1037AK-T146-R	
L3089	1-414-233-22	FERRITE	0UH	Q3406	8-729-026-49	2SA1037AK-T146-R	
L3102	1-412-946-11	INDUCTOR	3.9UH	Q3407	8-729-422-27	2SD601A-Q	
L3301	1-412-058-11	INDUCTOR	10UH	Q3408	8-729-026-49	2SA1037AK-T146-R	
L3302	1-469-555-21	INDUCTOR	10UH	Q3409	8-729-422-27	2SD601A-Q	
L3303	1-412-052-21	INDUCTOR	1UH	Q3410	8-729-026-49	2SA1037AK-T146-R	
L3304	1-469-555-21	INDUCTOR	10UH	Q3411	8-729-026-49	2SA1037AK-T146-R	
L3305	1-469-555-21	INDUCTOR	10UH	Q3412	8-729-026-49	2SA1037AK-T146-R	
L3306	1-469-561-21	INDUCTOR	100UH	Q3413	8-729-026-49	2SA1037AK-T146-R	
L3307	1-469-555-21	INDUCTOR	10UH	Q3414	8-729-026-49	2SA1037AK-T146-R	
L3308	1-469-561-21	INDUCTOR	100UH	Q3415	8-729-026-49	2SA1037AK-T146-R	
L3309	1-469-561-21	INDUCTOR	100UH			< RESISTOR >	
L3310	1-469-561-21	INDUCTOR	100UH	R3001	1-216-833-11	RES-CHIP	10K 5% 1/16W
				R3002	1-216-864-11	SHORT	0
				R3021	1-216-809-11	RES-CHIP	100 5% 1/16W
				R3022	1-216-809-11	RES-CHIP	100 5% 1/16W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R3023	1-216-833-11	RES-CHIP	10K 5% 1/16W	R3329	1-216-815-11	RES-CHIP	330 5% 1/16W
R3035	1-216-809-11	RES-CHIP	100 5% 1/16W	R3330	1-216-815-11	RES-CHIP	330 5% 1/16W
R3036	1-216-809-11	RES-CHIP	100 5% 1/16W	R3331	1-216-841-11	RES-CHIP	47K 5% 1/16W
R3037	1-216-809-11	RES-CHIP	100 5% 1/16W	R3332	1-218-709-11	METAL CHIP	5.1K 0.5% 1/16W
R3038	1-218-686-11	METAL CHIP	560 0.5% 1/16W	R3333	1-216-864-11	SHORT	0
R3039	1-218-686-11	METAL CHIP	560 0.5% 1/16W	R3334	1-216-809-11	RES-CHIP	100 5% 1/16W
R3040	1-218-686-11	METAL CHIP	560 0.5% 1/16W	R3335	1-216-833-11	RES-CHIP	10K 5% 1/16W
R3050	1-216-809-11	RES-CHIP	100 5% 1/16W	R3337	1-216-820-11	RES-CHIP	820 5% 1/16W
R3079	1-216-821-11	RES-CHIP	1K 5% 1/16W	R3338	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3089	1-216-864-11	SHORT	0	R3339	1-216-855-11	RES-CHIP	680K 5% 1/16W
R3091	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3340	1-216-855-11	RES-CHIP	680K 5% 1/16W
R3092	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3341	1-216-813-11	RES-CHIP	220 5% 1/16W
R3095	1-216-845-11	RES-CHIP	100K 5% 1/16W	R3342	1-218-705-11	METAL CHIP	3.6K 0.5% 1/16W
R3096	1-216-817-11	RES-CHIP	470 5% 1/16W	R3343	1-216-809-11	RES-CHIP	100 5% 1/16W
R3097	1-216-845-11	RES-CHIP	100K 5% 1/16W	R3344	1-216-853-11	RES-CHIP	470K 5% 1/16W
R3098	1-216-805-11	RES-CHIP	47 5% 1/16W	R3345	1-218-704-11	METAL CHIP	3.3K 0.5% 1/16W
R3099	1-216-805-11	RES-CHIP	47 5% 1/16W	R3346	1-216-809-11	RES-CHIP	100 5% 1/16W
R3100	1-216-809-11	RES-CHIP	100 5% 1/16W	R3347	1-216-815-11	RES-CHIP	330 5% 1/16W
R3101	1-216-809-11	RES-CHIP	100 5% 1/16W	R3348	1-216-864-11	SHORT	0
R3102	1-216-809-11	RES-CHIP	100 5% 1/16W	R3349	1-218-687-11	METAL CHIP	620 0.5% 1/16W
R3103	1-216-822-11	RES-CHIP	1.2K 5% 1/16W	R3350	1-216-814-11	RES-CHIP	270 5% 1/16W
R3104	1-216-809-11	RES-CHIP	100 5% 1/16W	R3351	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3105	1-216-809-11	RES-CHIP	100 5% 1/16W	R3352	1-216-853-11	RES-CHIP	470K 5% 1/16W
R3106	1-216-818-11	RES-CHIP	560 5% 1/16W	R3353	1-216-837-11	RES-CHIP	22K 5% 1/16W
R3107	1-216-864-11	SHORT	0	R3354	1-216-813-11	RES-CHIP	220 5% 1/16W
R3108	1-216-817-11	RES-CHIP	470 5% 1/16W	R3355	1-216-821-11	RES-CHIP	1K 5% 1/16W
R3109	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	R3356	1-216-819-11	RES-CHIP	680 5% 1/16W
R3110	1-216-809-11	RES-CHIP	100 5% 1/16W	R3357	1-218-676-11	METAL CHIP	220 0.5% 1/16W
R3111	1-216-809-11	RES-CHIP	100 5% 1/16W	R3358	1-218-676-11	METAL CHIP	220 0.5% 1/16W
R3301	1-216-809-11	RES-CHIP	100 5% 1/16W	R3359	1-218-676-11	METAL CHIP	220 0.5% 1/16W
R3302	1-216-817-11	RES-CHIP	470 5% 1/16W	R3360	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R3303	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W	R3361	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3304	1-216-809-11	RES-CHIP	100 5% 1/16W	R3364	1-216-864-11	SHORT	0
R3305	1-216-809-11	RES-CHIP	100 5% 1/16W	R3365	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R3306	1-216-809-11	RES-CHIP	100 5% 1/16W	R3366	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R3307	1-216-864-11	SHORT	0	R3367	1-216-803-11	RES-CHIP	33 5% 1/16W
R3308	1-216-864-11	SHORT	0	R3369	1-216-864-11	SHORT	0
R3309	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3371	1-218-686-11	METAL CHIP	560 0.5% 1/16W
R3310	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3372	1-216-817-11	RES-CHIP	470 5% 1/16W
R3311	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3373	1-216-817-11	RES-CHIP	470 5% 1/16W
R3312	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3374	1-216-809-11	RES-CHIP	100 5% 1/16W
R3313	1-216-835-11	RES-CHIP	15K 5% 1/16W	R3375	1-218-686-11	METAL CHIP	560 0.5% 1/16W
R3314	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R3376	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W
R3315	1-216-835-11	RES-CHIP	15K 5% 1/16W	R3377	1-216-817-11	RES-CHIP	470 5% 1/16W
R3316	1-218-664-11	METAL CHIP	68 0.5% 1/16W	R3378	1-216-817-11	RES-CHIP	470 5% 1/16W
R3317	1-218-664-11	METAL CHIP	68 0.5% 1/16W	R3379	1-216-809-11	RES-CHIP	100 5% 1/16W
R3318	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R3380	1-218-686-11	METAL CHIP	560 0.5% 1/16W
R3319	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3381	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W
R3320	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3382	1-216-864-11	SHORT	0
R3321	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3383	1-216-817-11	RES-CHIP	470 5% 1/16W
R3322	1-218-662-11	METAL CHIP	56 0.5% 1/16W	R3410	1-216-833-11	RES-CHIP	10K 5% 1/16W
R3323	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3421	1-216-864-11	SHORT	0
R3324	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R3422	1-216-864-11	SHORT	0
R3325	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R3423	1-216-813-11	RES-CHIP	220 5% 1/16W
R3326	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R3428	1-216-803-11	RES-CHIP	33 5% 1/16W
R3327	1-216-835-11	RES-CHIP	15K 5% 1/16W	R3429	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
R3328	1-216-864-11	SHORT	0	R3432	1-216-815-11	RES-CHIP	330 5% 1/16W

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REF. NO.	PART NO.	DESCRIPTION			REMARK	REF. NO.	PART NO.	DESCRIPTION			REMARK
R3434	1-216-809-11	RES-CHIP	100	5%	1/16W	R3812	1-216-809-11	RES-CHIP	100	5%	1/16W
R3445	1-216-864-11	SHORT	0			R3813	1-216-809-11	RES-CHIP	100	5%	1/16W
R3446	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3814	1-218-644-11	METAL CHIP	10	0.5%	1/16W
R3447	1-216-819-11	RES-CHIP	680	5%	1/16W	R3815	1-218-648-11	METAL CHIP	15	0.5%	1/16W
R3448	1-216-855-11	RES-CHIP	680K	5%	1/16W	R3816	1-218-652-11	METAL CHIP	22	0.5%	1/16W
R3452	1-216-864-11	SHORT	0			R3817	1-218-652-11	METAL CHIP	22	0.5%	1/16W
R3454	1-216-825-11	RES-CHIP	2.2K	5%	1/16W	R3820	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R3460	1-216-833-11	RES-CHIP	10K	5%	1/16W	R3821	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R3461	1-216-833-11	RES-CHIP	10K	5%	1/16W	R3822	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R3464	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3823	1-216-826-11	RES-CHIP	2.7K	5%	1/16W
R3465	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3824	1-216-826-11	RES-CHIP	2.7K	5%	1/16W
R3467	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3825	1-216-826-11	RES-CHIP	2.7K	5%	1/16W
R3470	1-216-809-11	RES-CHIP	100	5%	1/16W	R3826	1-216-809-11	RES-CHIP	100	5%	1/16W
R3471	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3828	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R3472	1-216-801-11	RES-CHIP	22	5%	1/16W	R3829	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R3475	1-216-809-11	RES-CHIP	100	5%	1/16W	R3830	1-218-684-11	METAL CHIP	470	0.5%	1/16W
R3476	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3831	1-216-864-11	SHORT	0		
R3477	1-218-701-11	METAL CHIP	2.4K	0.5%	1/16W	R3832	1-216-864-11	SHORT	0		
R3478	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3833	1-216-864-11	SHORT	0		
R3483	1-218-701-11	METAL CHIP	2.4K	0.5%	1/16W	R3834	1-218-678-11	METAL CHIP	270	0.5%	1/16W
R3484	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3835	1-218-678-11	METAL CHIP	270	0.5%	1/16W
R3485	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3836	1-218-678-11	METAL CHIP	270	0.5%	1/16W
R3486	1-216-801-11	RES-CHIP	22	5%	1/16W	R3837	1-218-678-11	METAL CHIP	270	0.5%	1/16W
R3489	1-216-864-11	SHORT	0			R3838	1-218-678-11	METAL CHIP	270	0.5%	1/16W
R3490	1-216-864-11	SHORT	0			R3839	1-218-670-11	METAL CHIP	120	0.5%	1/16W
R3491	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3840	1-216-803-11	RES-CHIP	33	5%	1/16W
R3492	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3841	1-218-670-11	METAL CHIP	120	0.5%	1/16W
R3493	1-218-701-11	METAL CHIP	2.4K	0.5%	1/16W	R3842	1-218-689-11	METAL CHIP	750	0.5%	1/16W
R3495	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3846	1-216-801-11	RES-CHIP	22	5%	1/16W
R3496	1-216-801-11	RES-CHIP	22	5%	1/16W	R3847	1-216-801-11	RES-CHIP	22	5%	1/16W
R3497	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R3848	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R3498	1-216-818-11	RES-CHIP	560	5%	1/16W	R3849	1-218-675-11	METAL CHIP	200	0.5%	1/16W
R3499	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3850	1-218-675-11	METAL CHIP	200	0.5%	1/16W
R3501	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3851	1-216-809-11	RES-CHIP	100	5%	1/16W
R3502	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3852	1-218-675-11	METAL CHIP	200	0.5%	1/16W
R3503	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3854	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R3504	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3857	1-216-809-11	RES-CHIP	100	5%	1/16W
R3505	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3858	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W
R3506	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3862	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R3507	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3863	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W
R3508	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3864	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R3509	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3865	1-216-809-11	RES-CHIP	100	5%	1/16W
R3510	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3866	1-414-234-22	FERRITE	0UH		
R3511	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3867	1-414-234-22	FERRITE	0UH		
R3512	1-216-821-11	RES-CHIP	1K	5%	1/16W	R3868	1-414-234-22	FERRITE	0UH		
R3800	1-216-864-11	SHORT	0			R3869	1-218-719-11	METAL CHIP	13K	0.5%	1/16W
R3802	1-218-678-11	METAL CHIP	270	0.5%	1/16W	R3870	1-218-719-11	METAL CHIP	13K	0.5%	1/16W
R3803	1-218-678-11	METAL CHIP	270	0.5%	1/16W	R3871	1-218-719-11	METAL CHIP	13K	0.5%	1/16W
R3804	1-218-678-11	METAL CHIP	270	0.5%	1/16W	R3881	1-216-807-11	RES-CHIP	68	5%	1/16W
R3805	1-218-678-11	METAL CHIP	270	0.5%	1/16W	R3882	1-216-807-11	RES-CHIP	68	5%	1/16W
R3806	1-218-662-11	METAL CHIP	56	0.5%	1/16W	R3883	1-216-807-11	RES-CHIP	68	5%	1/16W
R3807	1-218-670-11	METAL CHIP	120	0.5%	1/16W	R3915	1-218-644-11	METAL CHIP	10	0.5%	1/16W
R3808	1-218-670-11	METAL CHIP	120	0.5%	1/16W	R3916	1-218-644-11	METAL CHIP	10	0.5%	1/16W
R3809	1-218-670-11	METAL CHIP	120	0.5%	1/16W	R3917	1-218-644-11	METAL CHIP	10	0.5%	1/16W
R3810	1-218-670-11	METAL CHIP	120	0.5%	1/16W	R3923	1-412-363-21	FERRITE	0UH		
R3811	1-216-809-11	RES-CHIP	100	5%	1/16W	R3933	1-216-864-11	SHORT	0		
						R3937	1-216-809-11	RES-CHIP	100	5%	1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R3953	1-216-821-11	RES-CHIP	1K 5% 1/16W	C2019	1-126-964-11	ELECT	10UF 20% 50V
R3954	1-216-821-11	RES-CHIP	1K 5% 1/16W	C2020	1-126-964-11	ELECT	10UF 20% 50V
R3955	1-216-821-11	RES-CHIP	1K 5% 1/16W	C2021	1-126-960-11	ELECT	1UF 20% 50V
R3956	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	C2022	1-126-960-11	ELECT	1UF 20% 50V
R3957	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	C2023	1-126-964-11	ELECT	10UF 20% 50V
R3958	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	C2024	1-126-964-11	ELECT	10UF 20% 50V
< NETWORK RESISTOR >				C2025	1-126-960-11	ELECT	1UF 20% 50V
RB3304	1-234-525-21	RES, CHIP NETWORK	56	C2026	1-126-960-11	ELECT	1UF 20% 50V
RB3305	1-234-525-21	RES, CHIP NETWORK	56	C2027	1-128-551-11	ELECT	22UF 20% 25V
RB3306	1-234-525-21	RES, CHIP NETWORK	56	C2028	1-126-933-11	ELECT	100UF 20% 16V
RB3307	1-234-525-21	RES, CHIP NETWORK	56	C2029	1-126-964-11	ELECT	10UF 20% 50V
RB3401	1-234-524-21	RES, CHIP NETWORK	33	C2030	1-126-964-11	ELECT	10UF 20% 50V
RB3402	1-234-524-21	RES, CHIP NETWORK	33	C2031	1-126-964-11	ELECT	10UF 20% 50V
RB3403	1-234-524-21	RES, CHIP NETWORK	33	C2032	1-126-964-11	ELECT	10UF 20% 50V
RB3404	1-234-524-21	RES, CHIP NETWORK	33	C2033	1-126-960-11	ELECT	1UF 20% 50V
RB3405	1-234-524-21	RES, CHIP NETWORK	33	C2036	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3406	1-234-524-21	RES, CHIP NETWORK	33	C2037	1-165-176-11	CERAMIC CHIP	0.047UF 10% 16V
RB3407	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2038	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
RB3408	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2040	1-126-933-11	ELECT	100UF 20% 16V
RB3409	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2043	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3410	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2044	1-126-933-11	ELECT	100UF 20% 16
RB3411	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2045	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3412	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2046	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3421	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2048	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3422	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2050	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3423	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2052	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
RB3424	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2055	1-126-964-11	ELECT	10UF 20% 50V
RB3425	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2056	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
RB3426	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2060	1-126-933-11	ELECT	100UF 20% 16V
RB3427	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2061	1-126-964-11	ELECT	10UF 20% 50V
RB3428	1-239-409-11	RES, CHIP NETWORK	47 (3216)	C2062	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
< VIBRATOR >				C2069	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
X3089	1-781-945-21	VIBRATOR, CERAMIC		C2083	1-128-551-11	ELECT	22UF 20% 25V
X3401	1-781-887-21	VIBRATOR, CRYSTAL		C2084	1-126-964-11	ELECT	10UF 20% 50V
X3402	1-781-579-21	OSCILLATOR, CRYSTAL		C2085	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
*****				C2087	1-164-160-11	CERAMIC CHIP	20PF 5% 50V
* A-1373-851-A U BOARD, COMPLETE				C2089	1-126-964-11	ELECT	10UF 20% 50V
*****				C2090	1-164-227-11	CERAMIC CHIP	0.022UF 10% 25V
< CAPACITOR >				C2091	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2001	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C2092	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2002	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C2094	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
C2003	1-126-935-11	ELECT	470UF 20% 16V	C2096	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C2004	1-128-551-11	ELECT	22UF 20% 25V	C2097	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C2005	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C2098	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2006	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C2099	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2007	1-126-964-11	ELECT	10UF 20% 50V	C2102	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2008	1-126-964-11	ELECT	10UF 20% 50V	C2103	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2012	1-126-964-11	ELECT	10UF 20% 50V	C2111	1-126-964-11	ELECT	10UF 20% 50V
C2013	1-126-964-11	ELECT	10UF 20% 50V	C2112	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2014	1-126-964-11	ELECT	10UF 20% 50V	C2113	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2015	1-126-964-11	ELECT	10UF 20% 50V	C2114	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2016	1-126-964-11	ELECT	10UF 20% 50V	C2122	1-126-964-11	ELECT	10UF 20% 50V
C2017	1-126-964-11	ELECT	10UF 20% 50V	C2128	1-126-964-11	ELECT	10UF 20% 50V
C2018	1-126-960-11	ELECT	1UF 20% 50V	C2342	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C2020	1-126-964-11	ELECT	10UF 20% 50V	C2348	1-126-947-11	ELECT	47UF 20% 25V
C2021	1-126-960-11	ELECT	1UF 20% 50V	C2349	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C2022	1-126-960-11	ELECT	1UF 20% 50V	C2350	1-126-964-11	ELECT	10UF 20% 50V
C2023	1-126-964-11	ELECT	10UF 20% 50V				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C2351	1-126-964-11	ELECT	10UF 20% 50V	D2040	8-719-800-76	1SS226	
C2352	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	D2041	8-719-800-76	1SS226	
C2353	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	D2042	8-719-110-53	RD10ESB2	
C2354	1-137-368-11	MYLAR	0.0047UF 5% 50V	D2043	8-719-800-76	1SS226	
C2355	1-137-150-11	MYLAR	0.01UF 5% 50V	D2044	8-719-800-76	1SS226	
C2356	1-162-927-11	CERAMIC CHIP	100PF 5% 50V			< FERRITE BEAD >	
C2357	1-126-933-11	ELECT	100UF 20% 16V	FB2001	1-414-760-21	FERRITE	0UH
C2358	1-126-933-11	ELECT	100UF 20% 16V	FB2002	1-414-445-11	FERRITE	0UH
C2359	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V			< FILTER >	
C2360	1-137-368-11	MYLAR	0.0047UF 5% 50V	FL2001	1-239-848-11	FILTER, LOW PASS	
C2365	1-136-169-00	FILM	0.22UF 5% 50V	FL2002	1-239-848-11	FILTER, LOW PASS	
C2366	1-137-150-11	MYLAR	0.01UF 5% 50V	FL2003	1-239-848-11	FILTER, LOW PASS	
C2367	1-137-368-11	MYLAR	0.0047UF 5% 50V			< IC >	
C2368	1-136-169-00	FILM	0.22UF 5% 50V	IC2001	8-759-351-01	TEA6422DT	
		< CONNECTOR >		IC2003	8-759-100-96	UPC4558G2	
CN2001*	1-793-923-11	CONNECTOR, DIN (PLUG) 64P		IC2004	8-752-080-04	CXA2069Q	
CN2002*	1-564-526-11	PLUG, CONNECTOR 11P		IC2007	8-752-394-69	CXD2073Q-T4	
		< DIODE >		IC2302	8-759-578-49	NJM2370U10-TE2	
D2001	8-719-110-53	RD10ESB2		IC2304	8-759-711-10	NJU4066BM	
D2002	8-719-110-53	RD10ESB2		IC2305	8-759-686-15	NJM2180M	
D2003	8-719-110-53	RD10ESB2				< JACK >	
D2004	8-719-800-76	1SS226		J2001	1-573-967-12	BLOCK, (S) TERMINAL	
D2005	8-719-800-76	1SS226		J2002	1-764-143-11	JACK	
D2006	8-719-800-76	1SS226		J2003	1-764-143-11	JACK	
D2007	8-719-110-53	RD10ESB2		J2004	1-750-517-21	JACK BLOCK, PIN 3P	
D2008	8-719-110-53	RD10ESB2		J2005	1-815-015-11	JACK BLOCK, PIN	
D2009	8-719-800-76	1SS226		J2006	1-815-015-11	JACK BLOCK, PIN	
D2010	8-719-800-76	1SS226		J2007	1-750-516-21	JACK BLOCK, PIN 2P	
D2011	8-719-800-76	1SS226		J2008	1-750-517-21	JACK BLOCK, PIN 3P	
D2012	8-719-110-53	RD10ESB2				< COIL >	
D2013	8-719-110-53	RD10ESB2		L2302	1-469-555-21	INDUCTOR	10UH
D2014	8-719-110-53	RD10ESB2				< TRANSISTOR >	
D2015	8-719-110-53	RD10ESB2		Q2001	8-729-422-27	2SD601A-Q	
D2016	8-719-110-53	RD10ESB2		Q2002	8-729-026-49	2SA1037AK-T146-R	
D2017	8-719-110-53	RD10ESB2		Q2003	8-729-026-49	2SA1037AK-T146-R	
D2018	8-719-110-53	RD10ESB2		Q2004	8-729-422-27	2SD601A-Q	
D2019	8-719-110-53	RD10ESB2		Q2005	8-729-422-27	2SD601A-Q	
D2020	8-719-110-53	RD10ESB2		Q2006	8-729-422-27	2SD601A-Q	
D2021	8-719-110-53	RD10ESB2		Q2007	8-729-422-27	2SD601A-Q	
D2022	8-719-110-53	RD10ESB2		Q2008	8-729-422-27	2SD601A-Q	
D2023	8-719-110-53	RD10ESB2		Q2009	8-729-422-27	2SD601A-Q	
D2024	8-719-110-53	RD10ESB2		Q2012	8-729-026-49	2SA1037AK-T146-R	
D2025	8-719-110-53	RD10ESB2		Q2013	8-729-422-27	2SD601A-Q	
D2026	8-719-110-53	RD10ESB2		Q2015	8-729-422-27	2SD601A-Q	
D2027	8-719-110-53	RD10ESB2		Q2016	8-729-422-27	2SD601A-Q	
D2029	8-719-110-53	RD10ESB2		Q2017	8-729-422-27	2SD601A-Q	
D2030	8-719-110-53	RD10ESB2		Q2019	8-729-026-49	2SA1037AK-T146-R	
D2031	8-719-800-76	1SS226		Q2020	8-729-422-27	2SD601A-Q	
D2032	8-719-800-76	1SS226		Q2021	8-729-026-49	2SA1037AK-T146-R	
D2033	8-719-991-33	ISS133T-77		Q2022	8-729-422-27	2SD601A-Q	
D2034	8-719-991-33	ISS133T-77		Q2024	8-729-422-27	2SD601A-Q	
D2035	8-719-110-53	RD10ESB2		Q2025	8-729-422-27	2SD601A-Q	
D2039	8-719-110-53	RD10ESB2					



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q2026	8-729-026-49	2SA1037AK-T146-R		R2052	1-216-817-11	RES-CHIP	470 5% 1/16W
Q2027	8-729-026-49	2SA1037AK-T146-R		R2053	1-216-817-11	RES-CHIP	470 5% 1/16W
Q2028	8-729-026-49	2SA1037AK-T146-R		R2054	1-216-806-11	RES-CHIP	56 5% 1/16W
Q2029	8-729-120-28	2SC1623-L5L6		R2055	1-216-821-11	RES-CHIP	1K 5% 1/16W
Q2301	8-729-422-27	2SD601A-Q		R2056	1-216-821-11	RES-CHIP	1K 5% 1/16W
< RESISTOR >				R2057	1-216-806-11	RES-CHIP	56 5% 1/16W
R2001	1-218-285-11	RES-CHIP	75 5% 1/16W	R2058	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R2002	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2059	1-216-817-11	RES-CHIP	470 5% 1/16W
R2003	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2060	1-216-817-11	RES-CHIP	470 5% 1/16W
R2004	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2061	1-216-817-11	RES-CHIP	470 5% 1/16W
R2005	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2062	1-216-817-11	RES-CHIP	470 5% 1/16W
R2006	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2063	1-216-809-11	RES-CHIP	100 5% 1/16W
R2007	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2064	1-216-809-11	RES-CHIP	100 5% 1/16W
R2008	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2065	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2009	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2066	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2010	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2067	1-216-809-11	RES-CHIP	100 5% 1/16W
R2011	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2068	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2012	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2069	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2013	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2070	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2014	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2071	1-216-809-11	RES-CHIP	100 5% 1/16W
R2015	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2072	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2016	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2073	1-216-809-11	RES-CHIP	100 5% 1/16W
R2017	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2074	1-216-809-11	RES-CHIP	100 5% 1/16W
R2018	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2075	1-216-809-11	RES-CHIP	100 5% 1/16W
R2019	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2077	1-216-809-11	RES-CHIP	100 5% 1/16W
R2020	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2080	1-216-809-11	RES-CHIP	100 5% 1/16W
R2021	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2081	1-216-809-11	RES-CHIP	100 5% 1/16W
R2022	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2082	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2023	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2084	1-216-809-11	RES-CHIP	100 5% 1/16W
R2024	1-216-853-11	RES-CHIP	470K 5% 1/16W	R2085	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2025	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2086	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2026	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2087	1-216-809-11	RES-CHIP	100 5% 1/16W
R2027	1-218-665-11	METAL CHIP	75 0.5% 1/16W	R2089	1-216-809-11	RES-CHIP	100 5% 1/16W
R2028	1-216-809-11	RES-CHIP	100 5% 1/16W	R2090	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2029	1-216-809-11	RES-CHIP	100 5% 1/16W	R2091	1-216-806-11	RES-CHIP	56 5% 1/16W
R2030	1-216-809-11	RES-CHIP	100 5% 1/16W	R2092	1-216-806-11	RES-CHIP	56 5% 1/16W
R2031	1-216-841-11	RES-CHIP	47K 5% 1/16W	R2094	1-216-864-11	SHORT	0
R2032	1-216-845-11	RES-CHIP	100K 5% 1/16W	R2096	1-216-809-11	RES-CHIP	100 5% 1/16W
R2034	1-216-803-11	RES-CHIP	33 5% 1/16W	R2097	1-216-809-11	RES-CHIP	100 5% 1/16W
R2035	1-216-809-11	RES-CHIP	100 5% 1/16W	R2098	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2036	1-216-809-11	RES-CHIP	100 5% 1/16W	R2099	1-216-809-11	RES-CHIP	100 5% 1/16W
R2037	1-216-809-11	RES-CHIP	100 5% 1/16W	R2100	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2038	1-216-809-11	RES-CHIP	100 5% 1/16W	R2103	1-216-809-11	RES-CHIP	100 5% 1/16W
R2039	1-216-833-11	RES-CHIP	10K 5% 1/16W	R2104	1-216-809-11	RES-CHIP	100 5% 1/16W
R2040	1-216-857-11	RES-CHIP	1M 5% 1/16W	R2105	1-216-809-11	RES-CHIP	100 5% 1/16W
R2041	1-216-842-11	RES-CHIP	56K 5% 1/16W	R2107	1-216-807-11	RES-CHIP	68 5% 1/16W
R2042	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R2109	1-216-809-11	RES-CHIP	100 5% 1/16W
R2043	1-216-809-11	RES-CHIP	100 5% 1/16W	R2110	1-216-809-11	RES-CHIP	100 5% 1/16W
R2044	1-216-806-11	RES-CHIP	56 5% 1/16W	R2111	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R2045	1-216-806-11	RES-CHIP	56 5% 1/16W	R2113	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2046	1-216-818-11	RES-CHIP	560 5% 1/16W	R2116	1-216-832-11	RES-CHIP	8.2K 5% 1/16W
R2047	1-216-809-11	RES-CHIP	100 5% 1/16W	R2118	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2048	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R2121	1-216-809-11	RES-CHIP	100 5% 1/16W
R2049	1-216-809-11	RES-CHIP	100 5% 1/16W	R2122	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2050	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R2123	1-218-684-11	METAL CHIP	470 0.5% 1/16W
R2051	1-216-809-11	RES-CHIP	100 5% 1/16W	R2124	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R2125	1-218-702-11	METAL CHIP	2.7K 0.5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R2128	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R2354	1-216-841-11	RES-CHIP	47K 5% 1/16W
R2130	1-216-809-11	RES-CHIP	100 5% 1/16W	R2355	1-218-890-11	RES-CHIP	62K 5% 1/16W
R2131	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R2356	1-216-842-11	RES-CHIP	56K 5% 1/16W
R2132	1-216-833-11	RES-CHIP	10K 5% 1/16W	R2357	1-216-833-11	RES-CHIP	10K 5% 1/16W
R2133	1-218-674-11	METAL CHIP	180 0.5% 1/16W	R2358	1-216-839-11	RES-CHIP	33K 5% 1/16W
R2136	1-216-816-11	RES-CHIP	390 5% 1/16W	R2359	1-216-824-11	RES-CHIP	1.8K 5% 1/16W
R2137	1-218-700-11	METAL CHIP	2.2K 0.5% 1/16W	R2360	1-216-861-11	RES-CHIP	2.2M 5% 1/16W
R2138	1-216-809-11	RES-CHIP	100 5% 1/16W	R2363	1-216-864-11	SHORT	0
R2142	1-216-815-11	RES-CHIP	330 5% 1/16W	R2365	1-216-833-11	RES-CHIP	10K 5% 1/16W
R2147	1-216-814-11	RES-CHIP	270 5% 1/16W	R2366	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2148	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W	R2369	1-216-864-11	SHORT	0
R2149	1-216-817-11	RES-CHIP	470 5% 1/16W	R2376	1-216-833-11	RES-CHIP	10K 5% 1/16W
R2150	1-216-821-11	RES-CHIP	1K 5% 1/16W	R2377	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2151	1-218-698-11	METAL CHIP	1.8K 0.5% 1/16W	R2379	1-216-842-11	RES-CHIP	56K 5% 1/16W
R2152	1-218-694-11	METAL CHIP	1.2K 0.5% 1/16W	R2380	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2153	1-216-821-11	RES-CHIP	1K 5% 1/16W	R2381	1-216-831-11	RES-CHIP	6.8K 5% 1/16W
R2155	1-216-837-11	RES-CHIP	22K 5% 1/16W	R2382	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2156	1-216-841-11	RES-CHIP	47K 5% 1/16W	R2383	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R2157	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R2384	1-216-833-11	RES-CHIP	10K 5% 1/16W
R2159	1-216-832-11	RES-CHIP	8.2K 5% 1/16W	R2385	1-216-835-11	RES-CHIP	15K 5% 1/16W
R2164	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W	R2386	1-216-837-11	RES-CHIP	22K 5% 1/16W
R2166	1-216-818-11	RES-CHIP	560 5% 1/16W	R2387	1-216-821-11	RES-CHIP	1K 5% 1/16W
R2169	1-216-842-11	RES-CHIP	56K 5% 1/16W	R2390	1-216-847-11	RES-CHIP	150K 5% 1/16W
R2173	1-216-818-11	RES-CHIP	560 5% 1/16W	*****			
R2174	1-218-686-11	METAL CHIP	560 0.5% 1/16W	* A-1299-523-A AD BOARD, COMPLETE			
R2175	1-216-817-11	RES-CHIP	470 5% 1/16W	*****			
R2176	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	< CAPACITOR >			
R2177	1-216-809-11	RES-CHIP	100 5% 1/16W	C1601	1-126-933-11	ELECT	100UF 20% 16V
R2178	1-218-676-11	METAL CHIP	220 0.5% 1/16W	C1604	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2182	1-216-864-11	SHORT	0	C1605	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2183	1-216-813-11	RES-CHIP	220 5% 1/16W	C1606	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2184	1-218-704-11	METAL CHIP	3.3K 0.5% 1/16W	C1607	1-126-933-11	ELECT	100UF 20% 16V
R2185	1-218-684-11	METAL CHIP	470 0.5% 1/16W	C1608	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2186	1-218-688-11	METAL CHIP	680 0.5% 1/16W	C1609	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
R2187	1-216-864-11	SHORT	0	C1610	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
R2193	1-216-809-11	RES-CHIP	100 5% 1/16W	C1611	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2194	1-216-817-11	RES-CHIP	470 5% 1/16W	C1612	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2195	1-216-817-11	RES-CHIP	470 5% 1/16W	C1613	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2196	1-216-817-11	RES-CHIP	470 5% 1/16W	C1614	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2197	1-216-817-11	RES-CHIP	470 5% 1/16W	C1615	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2198	1-216-853-11	RES-CHIP	470K 5% 1/16W	C1616	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2199	1-216-853-11	RES-CHIP	470K 5% 1/16W	C1617	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2324	1-216-864-11	SHORT	0	C1618	1-126-933-11	ELECT	100UF 20% 16V
R2325	1-216-864-11	SHORT	0	C1619	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2330	1-216-864-11	SHORT	0	C1620	1-162-920-11	CERAMIC CHIP	27PF 5% 50V
R2331	1-216-833-11	RES-CHIP	10K 5% 1/16W	C1621	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2341	1-216-832-11	RES-CHIP	8.2K 5% 1/16W	C1622	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
R2342	1-216-824-11	RES-CHIP	1.8K 5% 1/16W	C1623	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V
R2343	1-216-832-11	RES-CHIP	8.2K 5% 1/16W	C1624	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V
R2344	1-216-824-11	RES-CHIP	1.8K 5% 1/16W	C1625	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2345	1-216-864-11	SHORT	0	C1626	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2346	1-216-864-11	SHORT	0	C1627	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2347	1-216-843-11	RES-CHIP	68K 5% 1/16W	C1628	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2348	1-216-838-11	RES-CHIP	27K 5% 1/16W	C1629	1-164-156-11	CERAMIC CHIP	0.1UF 25V
R2349	1-216-833-11	RES-CHIP	10K 5% 1/16W				
R2350	1-216-797-11	RES-CHIP	10 5% 1/16W				
R2353	1-216-823-11	RES-CHIP	1.5K 5% 1/16W				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C1630	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1698	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1631	1-126-933-11	ELECT	100UF 20% 16V	C1699	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1632	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1700	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1633	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1701	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
C1634	1-126-963-11	ELECT	4.7UF 20% 50V	C1704	1-126-933-11	ELECT	100UF 20% 16V
C1635	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	C1707	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C1636	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C1708	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
C1637	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C1709	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C1638	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C1711	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
C1639	1-126-933-11	ELECT	100UF 20% 16V	C1712	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1640	1-126-933-11	ELECT	100UF 20% 16V	C1714	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1641	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1715	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1643	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1717	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1644	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1718	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C1645	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	C1720	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V
C1646	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	C1721	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C1647	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	C1722	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V
C1649	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	C1730	1-126-916-11	ELECT	1000UF 20% 6.3V
C1651	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1731	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C1652	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1732	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C1656	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1733	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C1657	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C1734	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C1658	1-164-156-11	CERAMIC CHIP	0.1UF 25V			< CONNECTOR >	
C1659	1-164-156-11	CERAMIC CHIP	0.1UF 25V	CN1601	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P	
C1661	1-164-156-11	CERAMIC CHIP	0.1UF 25V	CN1602	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P	
C1663	1-126-933-11	ELECT	100UF 20% 16V			< DIODE >	
C1664	1-126-933-11	ELECT	100UF 20% 16V	D1601	8-719-404-50	MA111-TX	
C1665	1-126-933-11	ELECT	100UF 20% 16V	D1603	8-719-404-50	MA111-TX	
C1666	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	D1604	8-719-069-54	UDZSTE-175.1B	
C1668	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	D1605	8-719-069-54	UDZSTE-175.1B	
C1669	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V	D1606	8-719-069-54	UDZSTE-175.1B	
C1670	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D1607	8-719-069-54	UDZSTE-175.1B	
C1671	1-164-156-11	CERAMIC CHIP	0.1UF 25V			< FERRITE BEAD >	
C1672	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1601	1-414-445-11	FERRITE	0UH
C1673	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V	FB1602	1-414-445-11	FERRITE	0UH
C1674	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	FB1603	1-414-445-11	FERRITE	0UH
C1675	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	FB1604	1-414-445-11	FERRITE	0UH
C1676	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	FB1605	1-414-445-11	FERRITE	0UH
C1677	1-126-933-11	ELECT	100UF 20% 16V	FB1606	1-414-445-11	FERRITE	0UH
C1678	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	FB1607	1-414-445-11	FERRITE	0UH
C1680	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1608	1-414-445-11	FERRITE	0UH
C1681	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1609	1-414-445-11	FERRITE	0UH
C1682	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1610	1-414-445-11	FERRITE	0UH
C1683	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1611	1-414-445-11	FERRITE	0UH
C1684	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1612	1-414-445-11	FERRITE	0UH
C1685	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1613	1-414-445-11	FERRITE	0UH
C1688	1-164-156-11	CERAMIC CHIP	0.1UF 25V	FB1614	1-414-445-11	FERRITE	0UH
C1690	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	FB1615	1-414-445-11	FERRITE	0UH
C1691	1-126-933-11	ELECT	100UF 20% 16V	FB1616	1-414-445-11	FERRITE	0UH
C1692	1-126-933-11	ELECT	100UF 20% 16V	FB1617	1-414-445-11	FERRITE	0UH
C1693	1-126-933-11	ELECT	100UF 20% 16V			< IC >	
C1694	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	IC1601	8-759-683-55	IC CM0017AF	
C1695	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V				
C1696	1-162-910-11	CERAMIC CHIP	5PF 0.25PF 50V				
C1697	1-164-156-11	CERAMIC CHIP	0.1UF 25V				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC1602	8-759-830-08	IC NJM2068V-TE2		R1651	1-216-815-11	RES-CHIP	330 5% 1/16W
IC1603	8-759-830-08	IC NJM2068V-TE2		R1652	1-216-821-11	RES-CHIP	1K 5% 1/16W
IC1605	8-759-352-91	PST9143NL		R1653	1-216-817-11	RES-CHIP	470 5% 1/16W
IC1606	8-752-925-71	IC CXP86448-635Q		R1654	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
				R1655	1-218-700-11	METAL CHIP	2.2K 0.5% 1/16W
IC1607	8-759-682-41	M24C32-WMN6T(A)		R1656	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
IC1608	8-759-829-87	IC CD0031AM		R1657	1-216-821-11	RES-CHIP	1K 5% 1/16W
IC1609	8-759-830-08	IC NJM2068V-TE2		R1658	1-216-837-11	RES-CHIP	22K 5% 1/16W
IC1610	8-759-830-08	IC NJM2068V-TE2		R1659	1-216-837-11	RES-CHIP	22K 5% 1/16W
IC1611	8-759-830-08	IC NJM2068V-TE2		R1660	1-216-821-11	RES-CHIP	1K 5% 1/16W
IC1612	8-759-830-08	IC NJM2068V-TE2		R1661	1-216-821-11	RES-CHIP	1K 5% 1/16W
		< COIL >		R1662	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
L1601	1-469-555-21	INDUCTOR	10UH	R1663	1-216-818-11	RES-CHIP	560 5% 1/16W
L1602	1-469-555-21	INDUCTOR	10UH	R1665	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
		< TRANSISTOR >		R1666	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
Q1603	8-729-422-27	2SD601A-Q		R1667	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
Q1604	8-729-422-27	2SD601A-Q		R1668	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
Q1605	8-729-422-27	2SD601A-Q		R1669	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
Q1606	8-729-422-27	2SD601A-Q		R1670	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
		< RESISTOR >		R1671	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1601	1-216-841-11	RES-CHIP	47K 5% 1/16W	R1672	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1604	1-216-833-11	RES-CHIP	10K 5% 1/16W	R1673	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1605	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1674	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1606	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1675	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1607	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1676	1-216-821-11	RES-CHIP	1K 5% 1/16W
R1608	1-216-809-11	RES-CHIP	100 5% 1/16W	R1681	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1609	1-216-809-11	RES-CHIP	100 5% 1/16W	R1682	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1611	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R1683	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1614	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R1684	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1615	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1685	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1618	1-216-809-11	RES-CHIP	100 5% 1/16W	R1690	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1619	1-216-864-11	SHORT	0	R1691	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1620	1-216-809-11	RES-CHIP	100 5% 1/16W	R1692	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1621	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1693	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1622	1-216-817-11	RES-CHIP	470 5% 1/16W	R1694	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1623	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1695	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1625	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1696	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1627	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1697	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1634	1-216-809-11	RES-CHIP	100 5% 1/16W	R1698	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1635	1-216-809-11	RES-CHIP	100 5% 1/16W	R1699	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1636	1-216-833-11	RES-CHIP	10K 5% 1/16W	R1700	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1637	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1701	1-218-692-11	METAL CHIP	1K 0.5% 1/16W
R1638	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1702	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1639	1-216-809-11	RES-CHIP	100 5% 1/16W	R1703	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1640	1-216-837-11	RES-CHIP	22K 5% 1/16W	R1704	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1641	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R1705	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1642	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1706	1-218-724-11	METAL CHIP	22K 0.5% 1/16W
R1643	1-216-821-11	RES-CHIP	1K 5% 1/16W	R1707	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1644	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R1708	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1645	1-216-815-11	RES-CHIP	330 5% 1/16W	R1709	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R1646	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R1710	1-216-864-11	SHORT	0
R1647	1-216-833-11	RES-CHIP	10K 5% 1/16W	R1711	1-216-833-11	RES-CHIP	10K 5% 1/16W
R1648	1-216-809-11	RES-CHIP	100 5% 1/16W	R1712	1-216-833-11	RES-CHIP	10K 5% 1/16W
R1649	1-216-809-11	RES-CHIP	100 5% 1/16W	R1713	1-216-833-11	RES-CHIP	10K 5% 1/16W
R1650	1-216-815-11	RES-CHIP	330 5% 1/16W	R1714	1-216-833-11	RES-CHIP	10K 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
< NETWORK RESISTOR >				C44	1-126-947-11	ELECT	47UF 20% 16V
RB1603	1-233-576-11	RES, CHIP NETWORK 100		C45	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
RB1604	1-233-576-11	RES, CHIP NETWORK 100		C46	1-162-974-11	CERAMIC CHIP	0.01UF 50V
RB1605	1-233-576-11	RES, CHIP NETWORK 100		C47	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
< VIBRATOR >				C49	1-164-156-11	CERAMIC CHIP	0.1UF 25V
X1601	1-767-925-21	VIBRATOR, CRYSTAL		C50	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
*****				C51	1-126-947-11	ELECT	47UF 20% 16V
* A-1299-428-A A BOARD, COMPLETE				C52	1-162-974-11	CERAMIC CHIP	0.01UF 50V
*****				C53	1-164-156-11	CERAMIC CHIP	0.1UF 25V
4-382-854-11 SCREW (M3X10), P, SW (+)				C54	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
< CAPACITOR >				C55	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
C1	1-126-933-11	ELECT	100UF 20% 16V	C56	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C2	1-104-665-11	ELECT	100UF 20% 25V	C57	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C3	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C59	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C4	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C60	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C5	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C61	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C6	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C62	1-126-947-11	ELECT	47UF 20% 16V
C7	1-126-933-11	ELECT	100UF 20% 16V	C63	1-126-935-11	ELECT	470UF 20% 6.3V
C8	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C65	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C9	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V	C66	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C10	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C67	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C11	1-126-933-11	ELECT	100UF 20% 16V	C68	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C12	1-126-933-11	ELECT	100UF 20% 16V	C69	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C13	1-164-392-11	CERAMIC CHIP	390PF 5% 50V	C70	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C14	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C73	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C15	1-164-392-11	CERAMIC CHIP	390PF 5% 50V	C74	1-126-964-11	ELECT	10UF 20% 50V
C16	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C75	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C17	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C76	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
C18	1-162-975-11	CERAMIC CHIP	24PF 5% 50V	C77	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C19	1-162-975-11	CERAMIC CHIP	24PF 5% 50V	C78	1-104-665-11	ELECT	100UF 20% 25V
C20	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C79	1-126-933-11	ELECT	100UF 20% 16V
C21	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C80	1-126-967-11	ELECT	47UF 20% 50V
C22	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C81	1-104-665-11	ELECT	100UF 20% 10V
C23	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C82	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C24	1-126-947-11	ELECT	47UF 20% 16V	C83	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C26	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C84	1-126-933-11	ELECT	100UF 20% 16V
C27	1-126-947-11	ELECT	47UF 20% 16V	C85	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C28	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C86	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V
C29	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C87	1-126-960-11	ELECT	1UF 20% 50V
C30	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C88	1-126-933-11	ELECT	100UF 20% 16V
C31	1-126-947-11	ELECT	47UF 20% 16V	C90	1-126-964-11	ELECT	10UF 20% 50V
C33	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C92	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C34	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C93	1-126-964-11	ELECT	10UF 20% 50V
C35	1-126-947-11	ELECT	47UF 20% 16V	C94	1-164-346-11	CERAMIC CHIP	1UF 16V
C36	1-126-934-11	ELECT	220UF 20% 10V	C95	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V
C37	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C96	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C38	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C97	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C39	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C98	1-126-960-11	ELECT	1UF 20% 50V
C40	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C99	1-165-176-11	CERAMIC CHIP	0.047UF 10% 16V
C41	1-126-934-11	ELECT	220UF 20% 10V	C101	1-162-960-11	CERAMIC CHIP	220PF 10% 50V
C42	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C102	1-126-964-11	ELECT	10UF 20% 50V
C43	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C103	1-126-964-11	ELECT	10UF 20% 50V
				C104	1-164-156-11	CERAMIC CHIP	0.1UF 25V
				C105	1-164-156-11	CERAMIC CHIP	0.1UF 25V
				C106	1-126-933-11	ELECT	100UF 20% 16V
				C108	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
				C109	1-162-917-11	CERAMIC CHIP	15PF 5% 50V



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C110	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C329	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C111	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C330	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V
C112	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C331	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C113	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C332	1-126-964-11	ELECT	10UF 20% 50V
C115	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C333	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C116	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C334	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C119	1-126-933-11	ELECT	100UF 20% 16V	C335	1-126-933-11	ELECT	100UF 20% 16V
C120	1-126-933-11	ELECT	100UF 20% 16V	C336	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C123	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V	C337	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C124	1-164-346-11	CERAMIC CHIP	1UF 16V	C338	1-126-963-11	ELECT	4.7UF 20% 50V
C125	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C339	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C128	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	C340	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C129	1-165-176-11	CERAMIC CHIP	0.047UF 10% 16V	C341	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
C130	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	C342	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C131	1-126-961-11	ELECT	2.2UF 20% 50V	C343	1-126-963-11	ELECT	4.7UF 20% 50V
C132	1-126-935-11	ELECT	470UF 20% 16V	C344	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C133	1-126-964-11	ELECT	10UF 20% 50V	C345	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C134	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C346	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C135	1-126-964-11	ELECT	10UF 20% 50V	C347	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C136	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C348	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C137	1-126-964-11	ELECT	10UF 20% 50V	C349	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C138	1-126-964-11	ELECT	10UF 20% 50V	C350	1-126-935-11	ELECT	470UF 20% 16V
C139	1-126-964-11	ELECT	10UF 20% 50V	C351	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C140	1-126-933-11	ELECT	100UF 20% 16V	C352	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C141	1-126-933-11	ELECT	100UF 20% 16V	C353	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C142	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C354	1-126-963-11	ELECT	4.7UF 20% 50V
C143	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C355	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C144	1-126-964-11	ELECT	10UF 20% 50V	C356	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C145	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	C357	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C301	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	C358	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C302	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C359	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C303	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C360	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C304	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	C361	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C305	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C362	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C306	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C363	1-126-933-11	ELECT	100UF 20% 16V
C307	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C364	1-126-933-11	ELECT	100UF 20% 16V
C308	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C365	1-126-933-11	ELECT	100UF 20% 16V
C309	1-126-933-11	ELECT	100UF 20% 16V	C366	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V
C310	1-126-964-11	ELECT	10UF 20% 50V	C367	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V
C311	1-126-933-11	ELECT	100UF 20% 16V	C368	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C312	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C369	1-126-933-11	ELECT	100UF 20% 16V
C313	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C370	1-126-933-11	ELECT	100UF 20% 16V
C314	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C371	1-126-933-11	ELECT	100UF 20% 16V
C315	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C372	1-126-933-11	ELECT	100UF 20% 16V
C316	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V	C373	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C317	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C374	1-126-933-11	ELECT	100UF 20% 16V
C318	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C375	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C319	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C376	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C320	1-126-963-11	ELECT	4.7UF 20% 50V	C377	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C321	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C378	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C322	1-126-933-11	ELECT	100UF 20% 16V	C379	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C323	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C380	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
C324	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C381	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C325	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C382	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C326	1-164-315-11	CERAMIC CHIP	470PF 5% 50V	C383	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C327	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C384	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C328	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C385	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C386	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C470	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V
C387	1-126-964-11	ELECT	10UF 20% 50V	C472	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C388	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C476	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C389	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C477	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V
C390	1-126-964-11	ELECT	10UF 20% 50V	C478	1-216-864-11	SHORT	0
C391	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C479	1-162-923-11	CERAMIC CHIP	47PF 5% 50V
C392	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C480	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C393	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C481	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C394	1-126-933-11	ELECT	100UF 20% 16V	C482	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C395	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C483	1-162-968-11	CERAMIC CHIP	0.0047UF 10% 50V
C396	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C484	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C397	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	C485	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C398	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C486	1-115-467-11	CERAMIC CHIP	0.22UF 10% 10V
C399	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C488	1-126-933-11	ELECT	100UF 20% 16V
C400	1-126-933-11	ELECT	100UF 20% 16V	C489	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V
C401	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C490	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C402	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C494	1-126-933-11	ELECT	100UF 20% 16V
C403	1-126-947-11	ELECT	47UF 20% 16V	C495	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C404	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C497	1-126-933-11	ELECT	100UF 20% 16V
C405	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C498	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C406	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V	C500	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
C407	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V	C501	1-162-974-11	CERAMIC CHIP	0.01UF 50V
C408	1-127-760-11	CERAMIC CHIP	4.7UF 10% 6.3V	C502	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
C410	1-126-933-11	ELECT	100UF 20% 16V	C503	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
C411	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C504	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C412	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C505	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
C413	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C506	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
C414	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	C507	1-162-966-11	CERAMIC CHIP	0.0022UF 10% 50V
C415	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C701	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C416	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C702	1-126-964-11	ELECT	10UF 20% 50V
C417	1-126-933-11	ELECT	100UF 20% 16V	C703	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C418	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C704	1-126-947-11	ELECT	47UF 20% 25V
C419	1-126-933-11	ELECT	100UF 20% 16V	C705	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C420	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C706	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C421	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V	C707	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C422	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C708	1-104-665-11	ELECT	100UF 20% 10V
C426	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C709	1-162-920-11	CERAMIC CHIP	27PF 5% 50V
C430	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C710	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C431	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C713	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C435	1-126-933-11	ELECT	100UF 20% 16V	C714	1-162-917-11	CERAMIC CHIP	15PF 5% 50V
C438	1-126-933-11	ELECT	100UF 20% 16V	C719	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V
C439	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C722	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C440	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C728	1-126-933-11	ELECT	100UF 20% 16V
C442	1-135-834-91	CERAMIC CHIP	2.2E+06PF 6.3V	C730	1-162-915-11	CERAMIC CHIP	10PF 0.50PF50V
C443	1-126-933-11	ELECT	100UF 20% 16V	C731	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C444	1-110-563-11	CERAMIC CHIP	0.068UF 10% 16V	C732	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C449	1-125-837-91	CERAMIC CHIP	1UF 10% 6.3V	C733	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C455	1-130-495-00	MYLAR	0.1UF 5% 50V	C735	1-126-933-11	ELECT	100UF 20% 16V
C457	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C736	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C458	1-136-244-11	FILM	0.1UF 5% 50V	C737	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C460	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C738	1-126-933-11	ELECT	100UF 20% 16V
C461	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C739	1-126-959-11	ELECT	0.47UF 20% 50V
C463	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C740	1-126-963-11	ELECT	4.7UF 20% 50V
C464	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C741	1-126-963-11	ELECT	4.7UF 20% 50V
C466	1-162-923-11	CERAMIC CHIP	47PF 5% 50V	C742	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C467	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C745	1-164-156-11	CERAMIC CHIP	0.1UF 25V
C468	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C746	1-126-947-11	ELECT	47UF 20% 25V	CN7	* 1-564-508-11	PLUG, CONNECTOR 5P	
C747	1-126-947-11	ELECT	47UF 20% 25V	CN8	1-695-915-11	TAB (CONTACT)	
C749	1-126-947-11	ELECT	47UF 20% 25V	CN9	* 1-564-509-11	PLUG, CONNECTOR 6P	
C750	1-164-156-11	CERAMIC CHIP	0.1UF 25V	CN10	* 1-564-511-11	PLUG, CONNECTOR 8P	
C751	1-126-943-11	ELECT	2200UF 20% 25V	CN11	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P	
C752	1-126-943-11	ELECT	2200UF 20% 25V	CN12	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P	
C754	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	CN13	* 1-793-922-11	CONNECTOR, DIN (RECEPTACLE)64P	
C755	1-126-947-11	ELECT	47UF 20% 25V	CN14	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P	
C756	1-126-964-11	ELECT	10UF 20% 50V	CN15	1-695-915-11	TAB (CONTACT)	
C757	1-130-495-00	MYLAR	0.1UF 5% 50V	CN16	* 1-564-506-11	PLUG, CONNECTOR 3P	
C758	1-126-947-11	ELECT	47UF 20% 25V	CN17	* 1-564-508-11	PLUG, CONNECTOR 5P	
C759	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	CN18	* 1-564-508-11	PLUG, CONNECTOR 5P	
C760	1-126-933-11	ELECT	100UF 20% 16V	CN19	* 1-564-508-11	PLUG, CONNECTOR 5P	
C761	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	CN701	* 1-564-507-11	PLUG, CONNECTOR 4P	
C762	1-104-665-11	ELECT	100UF 20% 25V	CN702	* 1-564-509-11	PLUG, CONNECTOR 6P	
C764	1-130-495-00	MYLAR	0.1UF 5% 50V	CN703	* 1-564-509-11	PLUG, CONNECTOR 6P	
C765	1-126-933-11	ELECT	100UF 20% 16V	CN704	* 1-564-509-11	PLUG, CONNECTOR 6P	
C766	1-164-156-11	CERAMIC CHIP	0.1UF 25V	CN705	* 1-564-507-11	PLUG, CONNECTOR 4P	
C768	1-164-218-11	CERAMIC CHIP	180PF 5% 50V	CN706	* 1-564-507-11	PLUG, CONNECTOR 4P	
C769	1-164-156-11	CERAMIC CHIP	0.1UF 25V			< DIODE >	
C770	1-162-928-11	CERAMIC CHIP	120PF 5% 50V	D1	8-719-404-50	MA111-TX	
C771	1-130-495-00	MYLAR	0.1UF 5% 50V	D5	8-719-083-87	UDZS-TE17-33B	
C772	1-130-495-00	MYLAR	0.1UF 5% 50V	D7	8-719-069-55	UDZSTE-175.6B	
C773	1-164-677-11	CERAMIC CHIP	0.033UF 10% 16V	D307	8-719-069-33	DTZ-TT11-6.8B	
C775	1-162-967-11	CERAMIC CHIP	0.0033UF 10% 16V	D312	8-719-069-55	UDZSTE-175.6B	
C777	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D317	8-719-404-50	MA111-TX	
C778	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D318	8-719-404-50	MA111-TX	
C779	1-126-933-11	ELECT	100UF 20% 16V	D319	8-719-404-50	MA111-TX	
C780	1-104-665-11	ELECT	100UF 20% 25V	D321	8-719-404-50	MA111-TX	
C781	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D701	8-719-941-86	DAN202U	
C782	1-130-489-00	MYLAR	0.033UF 5% 50V	D702	8-719-404-50	MA111-TX	
C783	1-137-364-11	MYLAR	0.001UF 5% 50V	D703	8-719-083-57	DIODE UDZSTE-173.6B	
C784	1-125-891-11	CERAMIC CHIP	0.47UF 10% 10V	D704	8-719-941-86	DAN202U	
C785	1-126-963-11	ELECT	4.7UF 20% 50V	D705	8-719-083-87	UDZS-TE17-33B	
C786	1-126-963-11	ELECT	4.7UF 20% 50V	D706	8-719-083-87	UDZS-TE17-33B	
C787	1-126-960-11	ELECT	1UF 20% 50V	D708	8-719-404-50	MA111-TX	
C788	1-165-176-11	CERAMIC CHIP	0.047UF 10% 16V	D709	8-719-404-50	MA111-TX	
C789	1-126-964-11	ELECT	10UF 20% 50V	D710	8-719-941-86	DAN202U	
C790	1-164-677-11	CERAMIC CHIP	0.033UF 10% 16V	D711	8-719-941-86	DAN202U	
C791	1-162-967-11	CERAMIC CHIP	0.0033UF 10% 16V	D712	8-719-941-86	DAN202U	
C792	1-130-489-00	MYLAR	0.033UF 5% 50V	D713	8-719-941-86	DAN202U	
C793	1-137-364-11	MYLAR	0.001UF 5% 50V	D718	8-719-404-50	MA111-TX	
C795	1-126-963-11	ELECT	4.7UF 20% 50V	D719	8-719-404-50	MA111-TX	
C796	1-126-933-11	ELECT	100UF 20% 16V	D720	8-719-920-67	ERC91-02	
C797	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	D721	8-719-920-67	ERC91-02	
C799	1-164-156-11	CERAMIC CHIP	0.1UF 25V	D723	8-719-083-85	UDZS-TE17-22B	
C800	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	D724	8-719-083-85	UDZS-TE17-22B	
C801	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	D725	8-719-083-85	UDZS-TE17-22B	
C802	1-126-935-11	ELECT	470UF 20% 16V	D726	8-719-083-85	UDZS-TE17-22B	
		< CONNECTOR >		D729	8-719-404-50	MA111-TX	
CN1	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P		D730	8-719-069-33	DTZ-TT11-6.8B	
CN2	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P				< FERRITE BEAD >	
CN3	* 1-779-892-11	CONNECTOR, BOARD TO BOARD 10P		FB1	1-414-445-11	FERRITE 0UH	
CN4	* 1-564-510-11	PLUG, CONNECTOR 7P		FB2	1-414-445-11	FERRITE 0UH	
CN5	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P		FB3	1-414-445-11	FERRITE 0UH	
CN6	* 1-793-922-11	CONNECTOR, DIN (RECEPTACLE)64P					

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

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



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
FB4	1-414-445-11	FERRITE	0UH	L8	1-414-856-11	INDUCTOR	10UH
FB5	1-216-864-11	SHORT	0	L9	1-414-856-11	INDUCTOR	10UH
FB6	1-414-445-11	FERRITE	0UH	L10	1-412-537-31	INDUCTOR	100UH
FB301	1-414-760-21	FERRITE	0UH	L11	1-414-856-11	INDUCTOR	10UH
		< FILTER >		L12	1-414-856-11	INDUCTOR	10UH
FL3	1-233-512-21	FERRITE	37UH	L13	1-414-856-11	INDUCTOR	10UH
FL4	1-239-848-11	FILTER, LOW PASS		L301	1-469-555-21	INDUCTOR	10UH
FL5	1-239-848-11	FILTER, LOW PASS		L302	1-469-555-21	INDUCTOR	10UH
FL6	1-239-848-11	FILTER, LOW PASS		L303	1-469-555-21	INDUCTOR	10UH
FL7	1-239-848-11	FILTER, LOW PASS		L304	1-469-555-21	INDUCTOR	10UH
		< IC >		L305	1-469-555-21	INDUCTOR	10UH
IC1	8-759-445-59	BA033T		L306	1-414-193-41	INDUCTOR	220UH
IC2	8-759-198-03	PQ09RF21		L307	1-469-555-21	INDUCTOR	10UH
IC3	8-759-830-08	IC NJM2068V-TE2		L308	1-414-856-11	INDUCTOR	10UH
IC4	8-759-568-27	MSM514265C-60JS		L309	1-469-555-21	INDUCTOR	10UH
IC5	8-759-100-96	UPC4558G2		L310	1-469-555-21	INDUCTOR	10UH
IC6	8-759-594-44	UPD64082GF-3BA		L311	1-469-555-21	INDUCTOR	10UH
IC7	8-759-100-96	UPC4558G2		L312	1-469-555-21	INDUCTOR	10UH
IC8	8-759-445-59	BA033T		L313	1-414-856-11	INDUCTOR	10UH
IC9	8-759-231-58	TA7812S		L314	1-469-555-21	INDUCTOR	10UH
IC10	8-759-100-96	UPC4558G2		L315	1-469-555-21	INDUCTOR	10UH
IC11	8-759-100-96	UPC4558G2		L316	1-414-856-11	INDUCTOR	10UH
IC12	8-759-833-12	IC NJM2395AF05		L317	1-414-856-11	INDUCTOR	10UH
IC301	8-752-089-50	CXA2103Q		L321	1-414-856-11	INDUCTOR	10UH
IC302	8-752-916-40	CXP85840A-039Q		L701	1-414-179-21	INDUCTOR	2.2UH
IC303	8-752-089-50	CXA2103Q		L702	1-412-911-11	FERRITE	0UH
IC304	8-752-916-40	CXP85840A-039Q		L704	1-469-555-21	INDUCTOR	10UH
IC305	8-759-595-97	SN74LV4053ANSR		L705	1-469-555-21	INDUCTOR	10UH
IC306	8-752-093-84	CXA2151Q				< NEON LAMP >	
IC307	8-759-595-97	SN74LV4053ANSR		NL701	1-517-778-21	LAMP, NEON	
IC308	8-752-395-13	CXD2085M-T4		NL702	1-517-778-21	LAMP, NEON	
IC309	8-752-100-25	CXA2150AQ		NL703	1-517-778-21	LAMP, NEON	
IC310	8-759-349-11	PST9145NL				< IC LINK >	
IC311	8-759-700-07	NJM2903M		PS1	Δ 1-532-679-00	LINK, IC	
IC312	8-759-082-58	TC7W08FU		PS2	Δ 1-532-685-00	LINK, IC	
IC701	8-759-349-11	PST9145NL		PS3	Δ 1-532-679-00	LINK, IC	
IC702	8-759-675-72	M24C08-WMN6T		PS701	Δ 1-576-336-21	LINK, IC	
IC703	8-759-675-72	M24C08-WMN6T		PS702	Δ 1-576-336-21	LINK, IC	
IC704	8-759-833-74	IC M306V2ME-175FP				< TRANSISTOR >	
IC705	8-752-068-37	CXA1726AM		Q1	8-729-026-49	2SA1037AK-T146-R	
IC706	8-752-068-37	CXA1726AM		Q2	8-729-026-49	2SA1037AK-T146-R	
IC707	8-759-100-96	UPC4558G2		Q3	8-729-422-27	2SD601A-Q	
IC708	8-759-190-89	TDA7265		Q4	8-729-026-49	2SA1037AK-T146-R	
IC709	8-759-830-08	IC NJM2068V-TE2		Q5	8-729-422-27	2SD601A-Q	
IC710	8-759-830-08	IC NJM2068V-TE2		Q6	8-729-422-27	2SD601A-Q	
IC711	8-759-690-57	BH3868BFS-E2		Q7	8-729-026-49	2SA1037AK-T146-R	
		< COIL >		Q8	8-729-026-49	2SA1037AK-T146-R	
L1	1-414-181-11	INDUCTOR	4.7UH	Q11	8-729-422-27	2SD601A-Q	
L2	1-412-058-11	INDUCTOR	10UH	Q12	8-729-026-49	2SA1037AK-T146-R	
L3	1-412-058-11	INDUCTOR	10UH	Q13	8-729-026-49	2SA1037AK-T146-R	
L4	1-412-058-11	INDUCTOR	10UH	Q14	8-729-422-27	2SD601A-Q	
L5	1-414-193-41	INDUCTOR	220UH	Q15	8-729-026-49	2SA1037AK-T146-R	
L6	1-412-058-11	INDUCTOR	10UH	Q16	8-729-026-49	2SA1037AK-T146-R	
L7	1-414-856-11	INDUCTOR	10UH	Q17	8-729-422-27	2SD601A-Q	



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q18	8-729-422-27	2SD601A-Q		Q347	8-729-122-63	2SA1226	
Q19	8-729-422-27	2SD601A-Q		Q348	8-729-026-49	2SA1037AK-T146-R	
Q20	8-729-422-27	2SD601A-Q		Q349	8-729-422-27	2SD601A-Q	
Q21	8-729-026-49	2SA1037AK-T146-R		Q350	8-729-422-27	2SD601A-Q	
Q22	8-729-422-27	2SD601A-Q		Q351	8-729-122-63	2SA1226	
Q23	8-729-422-27	2SD601A-Q		Q352	8-729-422-27	2SD601A-Q	
Q24	8-729-422-27	2SD601A-Q		Q353	8-729-026-49	2SA1037AK-T146-R	
Q25	8-729-422-27	2SD601A-Q		Q354	8-729-026-49	2SA1037AK-T146-R	
Q26	8-729-422-27	2SD601A-Q		Q355	8-729-422-27	2SD601A-Q	
Q27	8-729-422-27	2SD601A-Q		Q356	8-729-026-49	2SA1037AK-T146-R	
Q28	8-729-026-49	2SA1037AK-T146-R		Q357	8-729-026-49	2SA1037AK-T146-R	
Q301	8-729-422-27	2SD601A-Q		Q358	8-729-026-49	2SA1037AK-T146-R	
Q302	8-729-422-27	2SD601A-Q		Q361	8-729-422-27	2SD601A-Q	
Q303	8-729-026-49	2SA1037AK-T146-R		Q363	8-729-422-27	2SD601A-Q	
Q304	8-729-422-27	2SD601A-Q		Q367	8-729-122-63	2SA1226	
Q305	8-729-422-27	2SD601A-Q		Q368	8-729-422-27	2SD601A-Q	
Q306	8-729-422-27	2SD601A-Q		Q369	1-801-806-11	TR DTC144EKA	
Q307	8-729-422-27	2SD601A-Q		Q373	8-729-422-27	2SD601A-Q	
Q308	8-729-026-49	2SA1037AK-T146-R		Q374	8-729-422-27	2SD601A-Q	
Q309	8-729-422-27	2SD601A-Q		Q378	8-729-422-27	2SD601A-Q	
Q310	8-729-422-27	2SD601A-Q		Q379	8-729-026-49	2SA1037AK-T146-R	
Q311	8-729-422-27	2SD601A-Q		Q380	8-729-422-27	2SD601A-Q	
Q312	8-729-026-49	2SA1037AK-T146-R		Q381	8-729-422-27	2SD601A-Q	
Q313	8-729-422-27	2SD601A-Q		Q701	8-729-422-27	2SD601A-Q	
Q314	8-729-422-27	2SD601A-Q		Q702	8-729-026-49	2SA1037AK-T146-R	
Q315	8-729-422-27	2SD601A-Q		Q703	8-729-422-27	2SD601A-Q	
Q316	8-729-422-27	2SD601A-Q		Q704	8-729-026-49	2SA1037AK-T146-R	
Q317	8-729-422-27	2SD601A-Q		Q705	8-729-422-27	2SD601A-Q	
Q318	8-729-422-27	2SD601A-Q		Q706	8-729-026-49	2SA1037AK-T146-R	
Q319	8-729-422-27	2SD601A-Q		Q707	1-801-806-11	TR DTC144EKA	
Q320	8-729-422-27	2SD601A-Q		Q708	8-729-422-27	2SD601A-Q	
Q321	8-729-422-27	2SD601A-Q		Q709	8-729-422-27	2SD601A-Q	
Q322	8-729-422-27	2SD601A-Q		Q710	8-729-422-27	2SD601A-Q	
Q323	8-729-422-27	2SD601A-Q		Q712	8-729-026-49	2SA1037AK-T146-R	
Q324	8-729-422-27	2SD601A-Q		Q713	8-729-026-49	2SA1037AK-T146-R	
Q325	8-729-026-49	2SA1037AK-T146-R		Q714	8-729-027-38	DTA144EKA-T146	
Q326	8-729-026-49	2SA1037AK-T146-R		Q715	8-729-422-27	2SD601A-Q	
Q327	8-729-026-49	2SA1037AK-T146-R		Q716	8-729-422-27	2SD601A-Q	
Q328	8-729-026-49	2SA1037AK-T146-R		Q717	8-729-422-27	2SD601A-Q	
Q329	8-729-026-49	2SA1037AK-T146-R		Q718	8-729-422-27	2SD601A-Q	
Q330	8-729-026-49	2SA1037AK-T146-R		Q721	8-729-026-49	2SA1037AK-T146-R	
Q331	8-729-026-49	2SA1037AK-T146-R		Q722	8-729-422-27	2SD601A-Q	
Q332	8-729-026-49	2SA1037AK-T146-R		Q723	8-729-422-27	2SD601A-Q	
Q333	8-729-026-49	2SA1037AK-T146-R		Q724	8-729-422-27	2SD601A-Q	
Q334	8-729-026-49	2SA1037AK-T146-R		Q725	8-729-026-49	2SA1037AK-T146-R	
Q335	8-729-422-27	2SD601A-Q		Q726	8-729-026-49	2SA1037AK-T146-R	
Q336	8-729-422-27	2SD601A-Q				< RESISTOR >	
Q337	8-729-422-27	2SD601A-Q		R1	1-216-464-11	METAL OXIDE	18K 5% 2W
Q338	8-729-422-27	2SD601A-Q		R2	1-216-813-11	RES-CHIP	220 5% 1/16W
Q339	8-729-422-27	2SD601A-Q		R3	1-216-813-11	RES-CHIP	220 5% 1/16W
Q340	8-729-422-27	2SD601A-Q		R4	1-216-813-11	RES-CHIP	220 5% 1/16W
Q341	8-729-422-27	2SD601A-Q		R5	1-216-813-11	RES-CHIP	220 5% 1/16W
Q342	8-729-422-27	2SD601A-Q		R6	1-216-813-11	RES-CHIP	220 5% 1/16W
Q343	8-729-122-63	2SA1226		R7	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q344	8-729-026-49	2SA1037AK-T146-R		R8	1-216-813-11	RES-CHIP	220 5% 1/16W
Q345	8-729-026-49	2SA1037AK-T146-R		R9	1-216-813-11	RES-CHIP	220 5% 1/16W
Q346	8-729-422-27	2SD601A-Q					



REF. NO.	PART NO.	DESCRIPTION		REMARK	REF. NO.	PART NO.	DESCRIPTION		REMARK
R10	1-216-829-11	RES-CHIP	4.7K	5% 1/16W	R75	1-216-829-11	RES-CHIP	4.7K	5% 1/16W
R11	1-218-720-11	METAL CHIP	15K	0.5% 1/16W	R76	1-216-818-11	RES-CHIP	560	5% 1/16W
R12	1-218-722-11	METAL CHIP	18K	0.5% 1/16W	R77	1-216-821-11	RES-CHIP	1K	5% 1/16W
R13	1-218-740-11	METAL CHIP	100K	0.5% 1/16W	R78	1-218-686-11	METAL CHIP	560	0.5% 1/16W
R14	1-218-295-11	RES-CHIP	43K	5% 1/16W	R79	1-216-818-11	RES-CHIP	560	5% 1/16W
R15	1-216-821-11	RES-CHIP	1K	5% 1/16W	R80	1-218-686-11	METAL CHIP	560	0.5% 1/16W
R16	1-218-702-11	METAL CHIP	2.7K	0.5% 1/16W	R81	1-216-825-11	RES-CHIP	2.2K	5% 1/16W
R17	1-218-706-11	METAL CHIP	3.9K	0.5% 1/16W	R82	1-216-821-11	RES-CHIP	1K	5% 1/16W
R18	1-218-714-11	METAL CHIP	8.2K	0.5% 1/16W	R85	1-216-830-11	RES-CHIP	5.6K	5% 1/16W
R19	1-216-817-11	RES-CHIP	470	5% 1/16W	R87	1-216-833-11	RES-CHIP	10K	5% 1/16W
R20	1-216-827-11	RES-CHIP	3.3K	5% 1/16W	R88	1-216-830-11	RES-CHIP	5.6K	5% 1/16W
R21	1-216-839-11	RES-CHIP	33K	5% 1/16W	R89	1-216-813-11	RES-CHIP	220	5% 1/16W
R22	1-216-817-11	RES-CHIP	470	5% 1/16W	R90	1-216-864-11	SHORT	0	
R23	1-216-809-11	RES-CHIP	100	5% 1/16W	R91	1-216-864-11	SHORT	0	
R24	1-216-809-11	RES-CHIP	100	5% 1/16W	R92	1-216-830-11	RES-CHIP	5.6K	5% 1/16W
R25	1-216-809-11	RES-CHIP	100	5% 1/16W	R93	1-216-830-11	RES-CHIP	5.6K	5% 1/16W
R26	1-216-809-11	RES-CHIP	100	5% 1/16W	R95	1-216-818-11	RES-CHIP	560	5% 1/16W
R27	1-218-707-11	METAL CHIP	4.3K	0.5% 1/16W	R96	1-216-818-11	RES-CHIP	560	5% 1/16W
R29	1-216-864-11	SHORT	0		R99	1-216-825-11	RES-CHIP	2.2K	5% 1/16W
R30	1-216-809-11	RES-CHIP	100	5% 1/16W	R100	1-216-833-11	RES-CHIP	10K	5% 1/16W
R31	1-216-809-11	RES-CHIP	100	5% 1/16W	R102	1-216-818-11	RES-CHIP	560	5% 1/16W
R32	1-216-864-11	SHORT	0		R103	1-216-825-11	RES-CHIP	2.2K	5% 1/16W
R33	1-216-809-11	RES-CHIP	100	5% 1/16W	R104	1-216-821-11	RES-CHIP	1K	5% 1/16W
R37	1-216-853-11	RES-CHIP	470K	5% 1/16W	R105	1-216-821-11	RES-CHIP	1K	5% 1/16W
R39	1-216-855-11	RES-CHIP	680K	5% 1/16W	R107	1-216-833-11	RES-CHIP	10K	5% 1/16W
R40	1-216-809-11	RES-CHIP	100	5% 1/16W	R108	1-216-818-11	RES-CHIP	560	5% 1/16W
R42	1-216-855-11	RES-CHIP	680K	5% 1/16W	R109	1-216-807-11	RES-CHIP	68	5% 1/16W
R43	1-216-853-11	RES-CHIP	470K	5% 1/16W	R110	1-216-809-11	RES-CHIP	100	5% 1/16W
R44	1-249-377-11	CARBON	0.47	5% 1/4W	R111	1-216-809-11	RES-CHIP	100	5% 1/16W
R46	1-216-822-11	RES-CHIP	1.2K	5% 1/16W	R112	1-216-857-11	RES-CHIP	1M	5% 1/16W
R48	1-216-809-11	RES-CHIP	100	5% 1/16W	R113	1-216-845-11	RES-CHIP	100K	5% 1/16W
R49	1-216-829-11	RES-CHIP	4.7K	5% 1/16W	R114	1-216-809-11	RES-CHIP	100	5% 1/16W
R50	1-216-809-11	RES-CHIP	100	5% 1/16W	R115	1-216-820-11	RES-CHIP	820	5% 1/16W
R51	1-216-833-11	RES-CHIP	10K	5% 1/16W	R116	1-216-825-11	RES-CHIP	2.2K	5% 1/16W
R52	1-216-833-11	RES-CHIP	10K	5% 1/16W	R117	1-216-821-11	RES-CHIP	1K	5% 1/16W
R53	1-216-817-11	RES-CHIP	470	5% 1/16W	R118	1-216-820-11	RES-CHIP	820	5% 1/16W
R54	1-216-817-11	RES-CHIP	470	5% 1/16W	R119	1-216-825-11	RES-CHIP	2.2K	5% 1/16W
R55	1-216-822-11	RES-CHIP	1.2K	5% 1/16W	R120	1-216-834-11	RES-CHIP	12K	5% 1/16W
R56	1-216-805-11	RES-CHIP	47	5% 1/16W	R121	1-216-839-11	RES-CHIP	33K	5% 1/16W
R57	1-216-805-11	RES-CHIP	47	5% 1/16W	R122	1-216-820-11	RES-CHIP	820	5% 1/16W
R59	1-216-821-11	RES-CHIP	1K	5% 1/16W	R123	1-216-833-11	RES-CHIP	10K	5% 1/16W
R60	1-216-833-11	RES-CHIP	10K	5% 1/16W	R124	1-216-834-11	RES-CHIP	12K	5% 1/16W
R61	1-216-825-11	RES-CHIP	2.2K	5% 1/16W	R125	1-216-839-11	RES-CHIP	33K	5% 1/16W
R62	1-216-821-11	RES-CHIP	1K	5% 1/16W	R126	1-216-825-11	RES-CHIP	2.2K	5% 1/16W
R63	1-216-809-11	RES-CHIP	100	5% 1/16W	R127	1-216-839-11	RES-CHIP	33K	5% 1/16W
R64	1-216-837-11	RES-CHIP	22K	5% 1/16W	R128	1-216-821-11	RES-CHIP	1K	5% 1/16W
R65	1-216-833-11	RES-CHIP	10K	5% 1/16W	R129	1-216-805-11	RES-CHIP	47	5% 1/16W
R66	1-216-849-11	RES-CHIP	220K	5% 1/16W	R130	1-216-821-11	RES-CHIP	1K	5% 1/16W
R67	1-216-841-11	RES-CHIP	47K	5% 1/16W	R131	1-216-837-11	RES-CHIP	22K	5% 1/16W
R68	1-216-839-11	RES-CHIP	33K	5% 1/16W	R133	1-218-686-11	METAL CHIP	560	0.5% 1/16W
R69	1-216-857-11	RES-CHIP	1M	5% 1/16W	R134	1-218-683-11	METAL CHIP	430	0.5% 1/16W
R70	1-216-845-11	RES-CHIP	100K	5% 1/16W	R135	1-216-809-11	RES-CHIP	100	5% 1/16W
R71	1-216-813-11	RES-CHIP	220	5% 1/16W	R136	1-216-821-11	RES-CHIP	1K	5% 1/16W
R72	1-216-821-11	RES-CHIP	1K	5% 1/16W	R137	1-216-833-11	RES-CHIP	10K	5% 1/16W
R73	1-218-686-11	METAL CHIP	560	0.5% 1/16W	R138	1-216-833-11	RES-CHIP	10K	5% 1/16W
R74	1-218-684-11	METAL CHIP	470	0.5% 1/16W	R139	1-216-841-11	RES-CHIP	47K	5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R140	1-216-833-11	RES-CHIP	10K 5% 1/16W	R347	1-216-817-11	RES-CHIP	470 5% 1/16W
R141	1-216-809-11	RES-CHIP	100 5% 1/16W	R348	1-216-841-11	RES-CHIP	47K 5% 1/16W
R142	1-216-843-11	RES-CHIP	68K 5% 1/16W	R349	1-216-813-11	RES-CHIP	220 5% 1/16W
R143	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R350	1-216-809-11	RES-CHIP	100 5% 1/16W
R144	1-216-843-11	RES-CHIP	68K 5% 1/16W	R351	1-216-813-11	RES-CHIP	220 5% 1/16W
R145	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R352	1-216-813-11	RES-CHIP	220 5% 1/16W
R146	1-218-295-11	RES-CHIP	43K 5% 1/16W	R353	1-216-809-11	RES-CHIP	100 5% 1/16W
R151	1-216-833-11	RES-CHIP	10K 5% 1/16W	R354	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R152	1-216-833-11	RES-CHIP	10K 5% 1/16W	R355	1-216-809-11	RES-CHIP	100 5% 1/16W
R153	1-216-833-11	RES-CHIP	10K 5% 1/16W	R356	1-216-841-11	RES-CHIP	47K 5% 1/16W
R154	1-216-830-11	RES-CHIP	5.6K 5% 1/16W	R357	1-216-837-11	RES-CHIP	22K 5% 1/16W
R155	1-216-864-11	SHORT	0	R358	1-216-837-11	RES-CHIP	22K 5% 1/16W
R301	1-216-809-11	RES-CHIP	100 5% 1/16W	R359	1-216-837-11	RES-CHIP	22K 5% 1/16W
R302	1-216-809-11	RES-CHIP	100 5% 1/16W	R360	1-216-837-11	RES-CHIP	22K 5% 1/16W
R303	1-216-833-11	RES-CHIP	10K 5% 1/16W	R361	1-216-837-11	RES-CHIP	22K 5% 1/16W
R304	1-216-833-11	RES-CHIP	10K 5% 1/16W	R362	1-216-837-11	RES-CHIP	22K 5% 1/16W
R305	1-216-835-11	RES-CHIP	15K 5% 1/16W	R363	1-216-809-11	RES-CHIP	100 5% 1/16W
R306	1-218-696-11	METAL CHIP	1.5K 0.5% 1/16W	R364	1-216-809-11	RES-CHIP	100 5% 1/16W
R307	1-218-696-11	METAL CHIP	1.5K 0.5% 1/16W	R365	1-216-809-11	RES-CHIP	100 5% 1/16W
R308	1-216-821-11	RES-CHIP	1K 5% 1/16W	R366	1-216-841-11	RES-CHIP	47K 5% 1/16W
R309	1-216-813-11	RES-CHIP	220 5% 1/16W	R367	1-216-821-11	RES-CHIP	1K 5% 1/16W
R310	1-216-857-11	RES-CHIP	1M 5% 1/16W	R368	1-216-821-11	RES-CHIP	1K 5% 1/16W
R311	1-216-840-11	RES-CHIP	39K 5% 1/16W	R369	1-216-821-11	RES-CHIP	1K 5% 1/16W
R312	1-216-809-11	RES-CHIP	100 5% 1/16W	R370	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R313	1-216-833-11	RES-CHIP	10K 5% 1/16W	R371	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R314	1-216-833-11	RES-CHIP	10K 5% 1/16W	R372	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R315	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R373	1-216-809-11	RES-CHIP	100 5% 1/16W
R316	1-216-821-11	RES-CHIP	1K 5% 1/16W	R374	1-216-815-11	RES-CHIP	330 5% 1/16W
R317	1-216-821-11	RES-CHIP	1K 5% 1/16W	R375	1-216-815-11	RES-CHIP	330 5% 1/16W
R318	1-216-833-11	RES-CHIP	10K 5% 1/16W	R376	1-216-815-11	RES-CHIP	330 5% 1/16W
R319	1-216-864-11	SHORT	0	R377	1-216-837-11	RES-CHIP	22K 5% 1/16W
R320	1-216-833-11	RES-CHIP	10K 5% 1/16W	R378	1-216-837-11	RES-CHIP	22K 5% 1/16W
R321	1-216-821-11	RES-CHIP	1K 5% 1/16W	R379	1-216-837-11	RES-CHIP	22K 5% 1/16W
R322	1-216-809-11	RES-CHIP	100 5% 1/16W	R380	1-216-837-11	RES-CHIP	22K 5% 1/16W
R323	1-216-809-11	RES-CHIP	100 5% 1/16W	R381	1-216-837-11	RES-CHIP	22K 5% 1/16W
R324	1-216-809-11	RES-CHIP	100 5% 1/16W	R382	1-216-837-11	RES-CHIP	22K 5% 1/16W
R325	1-216-835-11	RES-CHIP	15K 5% 1/16W	R383	1-216-809-11	RES-CHIP	100 5% 1/16W
R326	1-216-864-11	SHORT	0	R384	1-216-809-11	RES-CHIP	100 5% 1/16W
R327	1-216-817-11	RES-CHIP	470 5% 1/16W	R385	1-216-821-11	RES-CHIP	1K 5% 1/16W
R329	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R386	1-216-809-11	RES-CHIP	100 5% 1/16W
R330	1-216-828-11	RES-CHIP	3.9K 5% 1/16W	R387	1-216-845-11	RES-CHIP	100K 5% 1/16W
R331	1-216-833-11	RES-CHIP	10K 5% 1/16W	R388	1-216-837-11	RES-CHIP	22K 5% 1/16W
R332	1-218-700-11	METAL CHIP	2.2K 0.5% 1/16W	R389	1-216-809-11	RES-CHIP	100 5% 1/16W
R333	1-216-809-11	RES-CHIP	100 5% 1/16W	R390	1-216-809-11	RES-CHIP	100 5% 1/16W
R334	1-216-809-11	RES-CHIP	100 5% 1/16W	R391	1-216-809-11	RES-CHIP	100 5% 1/16W
R335	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R392	1-216-809-11	RES-CHIP	100 5% 1/16W
R336	1-216-809-11	RES-CHIP	100 5% 1/16W	R393	1-216-809-11	RES-CHIP	100 5% 1/16W
R337	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	R394	1-216-809-11	RES-CHIP	100 5% 1/16W
R338	1-216-823-11	RES-CHIP	1.5K 5% 1/16W	R395	1-216-821-11	RES-CHIP	1K 5% 1/16W
R339	1-216-809-11	RES-CHIP	100 5% 1/16W	R396	1-216-821-11	RES-CHIP	1K 5% 1/16W
R340	1-216-828-11	RES-CHIP	3.9K 5% 1/16W	R397	1-216-821-11	RES-CHIP	1K 5% 1/16W
R341	1-218-706-11	METAL CHIP	3.9K 0.5% 1/16W	R398	1-216-845-11	RES-CHIP	100K 5% 1/16W
R342	1-216-841-11	RES-CHIP	47K 5% 1/16W	R399	1-216-833-11	RES-CHIP	10K 5% 1/16W
R343	1-216-809-11	RES-CHIP	100 5% 1/16W	R400	1-216-845-11	RES-CHIP	100K 5% 1/16W
R344	1-216-809-11	RES-CHIP	100 5% 1/16W	R401	1-216-845-11	RES-CHIP	100K 5% 1/16W
R345	1-218-696-11	METAL CHIP	1.5K 0.5% 1/16W	R402	1-216-845-11	RES-CHIP	100K 5% 1/16W
R346	1-218-696-11	METAL CHIP	1.5K 0.5% 1/16W	R403	1-216-845-11	RES-CHIP	100K 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R404	1-216-845-11	RES-CHIP	100K 5% 1/16W	R463	1-218-716-11	METAL CHIP	10K 0.5% 1/16W
R405	1-216-845-11	RES-CHIP	100K 5% 1/16W	R464	1-216-809-11	RES-CHIP	100 5% 1/16W
R406	1-216-864-11	SHORT	0	R468	1-216-809-11	RES-CHIP	100 5% 1/16W
R407	1-216-833-11	RES-CHIP	10K 5% 1/16W	R469	1-216-797-11	RES-CHIP	10 5% 1/16W
R408	1-216-821-11	RES-CHIP	1K 5% 1/16W	R470	1-216-839-11	RES-CHIP	33K 5% 1/16W
R409	1-216-821-11	RES-CHIP	1K 5% 1/16W	R472	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R410	1-218-673-11	METAL CHIP	160 0.5% 1/16W	R473	1-216-809-11	RES-CHIP	100 5% 1/16W
R411	1-218-673-11	METAL CHIP	160 0.5% 1/16W	R476	1-216-808-11	RES-CHIP	82 5% 1/16W
R412	1-216-813-11	RES-CHIP	220 5% 1/16W	R477	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R413	1-218-668-11	METAL CHIP	100 0.5% 1/16W	R480	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R414	1-218-668-11	METAL CHIP	100 0.5% 1/16W	R481	1-216-821-11	RES-CHIP	1K 5% 1/16W
R415	1-218-668-11	METAL CHIP	100 0.5% 1/16W	R482	1-216-839-11	RES-CHIP	33K 5% 1/16W
R416	1-216-857-11	RES-CHIP	1M 5% 1/16W	R483	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R417	1-216-809-11	RES-CHIP	100 5% 1/16W	R484	1-216-809-11	RES-CHIP	100 5% 1/16W
R418	1-216-809-11	RES-CHIP	100 5% 1/16W	R486	1-216-809-11	RES-CHIP	100 5% 1/16W
R419	1-218-702-11	METAL CHIP	2.7K 0.5% 1/16W	R487	1-216-809-11	RES-CHIP	100 5% 1/16W
R420	1-218-698-11	METAL CHIP	1.8K 0.5% 1/16W	R489	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R421	1-216-809-11	RES-CHIP	100 5% 1/16W	R490	1-216-808-11	RES-CHIP	82 5% 1/16W
R422	1-216-809-11	RES-CHIP	100 5% 1/16W	R491	1-216-833-11	RES-CHIP	10K 5% 1/16W
R423	1-216-809-11	RES-CHIP	100 5% 1/16W	R492	1-216-864-11	SHORT	0
R424	1-218-674-11	METAL CHIP	180 0.5% 1/16W	R493	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R425	1-218-674-11	METAL CHIP	180 0.5% 1/16W	R494	1-216-833-11	RES-CHIP	10K 5% 1/16W
R426	1-218-674-11	METAL CHIP	180 0.5% 1/16W	R495	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R427	1-218-673-11	METAL CHIP	160 0.5% 1/16W	R496	1-216-809-11	RES-CHIP	100 5% 1/16W
R428	1-216-864-11	SHORT	0	R501	1-216-808-11	RES-CHIP	82 5% 1/16W
R431	1-216-809-11	RES-CHIP	100 5% 1/16W	R503	1-216-833-11	RES-CHIP	10K 5% 1/16W
R432	1-216-817-11	RES-CHIP	470 5% 1/16W	R504	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R433	1-216-817-11	RES-CHIP	470 5% 1/16W	R505	1-216-821-11	RES-CHIP	1K 5% 1/16W
R434	1-216-809-11	RES-CHIP	100 5% 1/16W	R506	1-216-837-11	RES-CHIP	22K 5% 1/16W
R435	1-216-817-11	RES-CHIP	470 5% 1/16W	R507	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R436	1-216-809-11	RES-CHIP	100 5% 1/16W	R508	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R437	1-216-809-11	RES-CHIP	100 5% 1/16W	R509	1-216-837-11	RES-CHIP	22K 5% 1/16W
R438	1-216-809-11	RES-CHIP	100 5% 1/16W	R511	1-216-847-11	RES-CHIP	150K 5% 1/16W
R439	1-216-817-11	RES-CHIP	470 5% 1/16W	R512	1-216-864-11	SHORT	0
R440	1-216-813-11	RES-CHIP	220 5% 1/16W	R514	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R441	1-216-813-11	RES-CHIP	220 5% 1/16W	R515	1-216-809-11	RES-CHIP	100 5% 1/16W
R442	1-216-813-11	RES-CHIP	220 5% 1/16W	R516	1-216-809-11	RES-CHIP	100 5% 1/16W
R443	1-216-809-11	RES-CHIP	100 5% 1/16W	R517	1-216-809-11	RES-CHIP	100 5% 1/16W
R444	1-216-809-11	RES-CHIP	100 5% 1/16W	R519	1-216-809-11	RES-CHIP	100 5% 1/16W
R445	1-216-809-11	RES-CHIP	100 5% 1/16W	R521	1-216-833-11	RES-CHIP	10K 5% 1/16W
R446	1-216-809-11	RES-CHIP	100 5% 1/16W	R526	1-216-839-11	RES-CHIP	33K 5% 1/16W
R447	1-216-809-11	RES-CHIP	100 5% 1/16W	R527	1-216-864-11	SHORT	0
R448	1-216-809-11	RES-CHIP	100 5% 1/16W	R538	1-216-809-11	RES-CHIP	100 5% 1/16W
R449	1-216-809-11	RES-CHIP	100 5% 1/16W	R540	1-216-809-11	RES-CHIP	100 5% 1/16W
R450	1-216-814-11	RES-CHIP	270 5% 1/16W	R541	1-216-831-11	RES-CHIP	6.8K 5% 1/16W
R451	1-216-814-11	RES-CHIP	270 5% 1/16W	R542	1-216-809-11	RES-CHIP	100 5% 1/16W
R452	1-216-814-11	RES-CHIP	270 5% 1/16W	R543	1-216-826-11	RES-CHIP	2.7K 5% 1/16W
R453	1-216-841-11	RES-CHIP	47K 5% 1/16W	R544	1-216-827-11	RES-CHIP	3.3K 5% 1/16W
R454	1-216-837-11	RES-CHIP	22K 5% 1/16W	R547	1-216-809-11	RES-CHIP	100 5% 1/16W
R455	1-216-837-11	RES-CHIP	22K 5% 1/16W	R550	1-216-863-11	RES-CHIP	3.3M 5% 1/16W
R456	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R551	1-216-833-11	RES-CHIP	10K 5% 1/16W
R457	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R552	1-216-809-11	RES-CHIP	100 5% 1/16W
R458	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	R553	1-216-834-11	RES-CHIP	12K 5% 1/16W
R459	1-216-815-11	RES-CHIP	330 5% 1/16W	R554	1-216-809-11	RES-CHIP	100 5% 1/16W
R460	1-216-815-11	RES-CHIP	330 5% 1/16W	R556	1-216-808-11	RES-CHIP	82 5% 1/16W
R461	1-216-815-11	RES-CHIP	330 5% 1/16W	R557	1-216-808-11	RES-CHIP	82 5% 1/16W
R462	1-216-817-11	RES-CHIP	470 5% 1/16W	R558	1-216-808-11	RES-CHIP	82 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R559	1-216-817-11	RES-CHIP	470 5% 1/16W	R720	1-216-809-11	RES-CHIP	100 5% 1/16W
R561	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R721	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
R562	1-216-817-11	RES-CHIP	470 5% 1/16W	R722	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R566	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R723	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R567	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	R724	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R568	1-216-809-11	RES-CHIP	100 5% 1/16W	R725	1-216-809-11	RES-CHIP	100 5% 1/16W
R569	1-216-809-11	RES-CHIP	100 5% 1/16W	R728	1-216-864-11	SHORT	0
R570	1-218-716-11	METAL CHIP	10K 0.5% 1/16W	R732	1-216-809-11	RES-CHIP	100 5% 1/16W
R571	1-216-864-11	SHORT	0	R733	1-216-821-11	RES-CHIP	1K 5% 1/16W
R572	1-216-835-11	RES-CHIP	15K 5% 1/16W	R735	1-216-833-11	RES-CHIP	10K 5% 1/16W
R574	1-216-833-11	RES-CHIP	10K 5% 1/16W	R736	1-216-813-11	RES-CHIP	220 5% 1/16W
R575	1-216-833-11	RES-CHIP	10K 5% 1/16W	R737	1-216-833-11	RES-CHIP	10K 5% 1/16W
R576	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R738	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W
R577	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R740	1-216-809-11	RES-CHIP	100 5% 1/16W
R593	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R742	1-216-821-11	RES-CHIP	1K 5% 1/16W
R596	1-216-841-11	RES-CHIP	47K 5% 1/16W	R743	1-216-809-11	RES-CHIP	100 5% 1/16W
R597	1-216-821-11	RES-CHIP	1K 5% 1/16W	R744	1-216-821-11	RES-CHIP	1K 5% 1/16W
R598	1-216-833-11	RES-CHIP	10K 5% 1/16W	R745	1-216-841-11	RES-CHIP	47K 5% 1/16W
R599	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R746	1-216-809-11	RES-CHIP	100 5% 1/16W
R602	1-216-837-11	RES-CHIP	22K 5% 1/16W	R747	1-216-809-11	RES-CHIP	100 5% 1/16W
R603	1-216-833-11	RES-CHIP	10K 5% 1/16W	R748	1-216-833-11	RES-CHIP	10K 5% 1/16W
R604	1-216-833-11	RES-CHIP	10K 5% 1/16W	R749	1-216-849-11	RES-CHIP	220K 5% 1/16W
R605	1-216-833-11	RES-CHIP	10K 5% 1/16W	R750	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R606	1-216-833-11	RES-CHIP	10K 5% 1/16W	R751	1-216-821-11	RES-CHIP	1K 5% 1/16W
R607	1-216-833-11	RES-CHIP	10K 5% 1/16W	R752	1-216-821-11	RES-CHIP	1K 5% 1/16W
R608	1-216-833-11	RES-CHIP	10K 5% 1/16W	R753	1-216-809-11	RES-CHIP	100 5% 1/16W
R609	1-216-809-11	RES-CHIP	100 5% 1/16W	R754	1-216-809-11	RES-CHIP	100 5% 1/16W
R613	1-216-833-11	RES-CHIP	10K 5% 1/16W	R755	1-216-809-11	RES-CHIP	100 5% 1/16W
R614	1-216-836-11	RES-CHIP	18K 5% 1/16W	R756	1-216-809-11	RES-CHIP	100 5% 1/16W
R615	1-216-832-11	RES-CHIP	8.2K 5% 1/16W	R758	1-216-809-11	RES-CHIP	100 5% 1/16W
R616	1-216-833-11	RES-CHIP	10K 5% 1/16W	R759	1-216-821-11	RES-CHIP	1K 5% 1/16W
R617	1-216-809-11	RES-CHIP	100 5% 1/16W	R760	1-216-849-11	RES-CHIP	220K 5% 1/16W
R618	1-216-809-11	RES-CHIP	100 5% 1/16W	R761	1-216-849-11	RES-CHIP	220K 5% 1/16W
R619	1-216-821-11	RES-CHIP	1K 5% 1/16W	R762	1-216-845-11	RES-CHIP	100K 5% 1/16W
R620	1-216-807-11	RES-CHIP	68 5% 1/16W	R763	1-216-815-11	RES-CHIP	330 5% 1/16W
R621	1-216-807-11	RES-CHIP	68 5% 1/16W	R764	1-216-821-11	RES-CHIP	1K 5% 1/16W
R622	1-216-807-11	RES-CHIP	68 5% 1/16W	R765	1-216-815-11	RES-CHIP	330 5% 1/16W
R624	1-216-809-11	RES-CHIP	100 5% 1/16W	R766	1-216-821-11	RES-CHIP	1K 5% 1/16W
R628	1-249-377-11	CARBON	0.47 5% 1/4W	R767	1-216-833-11	RES-CHIP	10K 5% 1/16W
R701	1-216-817-11	RES-CHIP	470 5% 1/16W	R768	1-216-809-11	RES-CHIP	100 5% 1/16W
R702	1-216-841-11	RES-CHIP	47K 5% 1/16W	R769	1-216-809-11	RES-CHIP	100 5% 1/16W
R703	1-216-821-11	RES-CHIP	1K 5% 1/16W	R770	1-216-845-11	RES-CHIP	100K 5% 1/16W
R705	1-216-809-11	RES-CHIP	100 5% 1/16W	R771	1-216-809-11	RES-CHIP	100 5% 1/16W
R706	1-216-809-11	RES-CHIP	100 5% 1/16W	R772	1-216-821-11	RES-CHIP	1K 5% 1/16W
R707	1-216-809-11	RES-CHIP	100 5% 1/16W	R773	1-216-809-11	RES-CHIP	100 5% 1/16W
R708	1-216-809-11	RES-CHIP	100 5% 1/16W	R774	1-216-809-11	RES-CHIP	100 5% 1/16W
R709	1-216-817-11	RES-CHIP	470 5% 1/16W	R775	1-216-821-11	RES-CHIP	1K 5% 1/16W
R710	1-216-813-11	RES-CHIP	220 5% 1/16W	R777	1-216-821-11	RES-CHIP	1K 5% 1/16W
R711	1-216-833-11	RES-CHIP	10K 5% 1/16W	R778	1-216-809-11	RES-CHIP	100 5% 1/16W
R712	1-216-813-11	RES-CHIP	220 5% 1/16W	R779	1-216-809-11	RES-CHIP	100 5% 1/16W
R714	1-216-809-11	RES-CHIP	100 5% 1/16W	R781	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
R715	1-216-809-11	RES-CHIP	100 5% 1/16W	R782	1-216-809-11	RES-CHIP	100 5% 1/16W
R716	1-216-821-11	RES-CHIP	1K 5% 1/16W	R783	1-216-809-11	RES-CHIP	100 5% 1/16W
R717	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R784	1-216-809-11	RES-CHIP	100 5% 1/16W
R718	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R785	1-216-821-11	RES-CHIP	1K 5% 1/16W
R719	1-216-813-11	RES-CHIP	220 5% 1/16W	R786	1-216-821-11	RES-CHIP	1K 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R787	1-216-833-11	RES-CHIP	10K 5% 1/16W	R866	1-216-841-11	RES-CHIP	47K 5% 1/16W
R788	1-216-845-11	RES-CHIP	100K 5% 1/16W	R867	1-216-837-11	RES-CHIP	22K 5% 1/16W
R790	1-216-837-11	RES-CHIP	22K 5% 1/16W	R868	1-216-837-11	RES-CHIP	22K 5% 1/16W
R796	1-216-821-11	RES-CHIP	1K 5% 1/16W	R869	1-216-834-11	RES-CHIP	12K 5% 1/16W
R797	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R870	1-216-841-11	RES-CHIP	47K 5% 1/16W
R803	1-216-833-11	RES-CHIP	10K 5% 1/16W	R871	1-216-809-11	RES-CHIP	100 5% 1/16W
R804	1-216-837-11	RES-CHIP	22K 5% 1/16W	R872	1-216-809-11	RES-CHIP	100 5% 1/16W
R806	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R873	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R807	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R874	1-216-841-11	RES-CHIP	47K 5% 1/16W
R808	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R875	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
R809	1-216-835-11	RES-CHIP	15K 5% 1/16W	R876	1-216-841-11	RES-CHIP	47K 5% 1/16W
R810	1-216-833-11	RES-CHIP	10K 5% 1/16W	R877	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
R811	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	R878	1-216-821-11	RES-CHIP	1K 5% 1/16W
R813	1-216-857-11	RES-CHIP	1M 5% 1/16W	R879	1-216-821-11	RES-CHIP	1K 5% 1/16W
R814	1-218-701-11	METAL CHIP	2.4K 0.5% 1/16W	R880	1-216-809-11	RES-CHIP	100 5% 1/16W
R815	1-216-830-11	RES-CHIP	5.6K 5% 1/16W	R881	1-216-809-11	RES-CHIP	100 5% 1/16W
R816	1-216-830-11	RES-CHIP	5.6K 5% 1/16W	R882	1-216-809-11	RES-CHIP	100 5% 1/16W
R817	1-216-845-11	RES-CHIP	100K 5% 1/16W	R883	1-216-832-11	RES-CHIP	8.2K 5% 1/16W
R818	1-216-833-11	RES-CHIP	10K 5% 1/16W	R884	1-216-833-11	RES-CHIP	10K 5% 1/16W
R819	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R885	1-216-833-11	RES-CHIP	10K 5% 1/16W
R820	1-216-838-11	RES-CHIP	27K 5% 1/16W	R886	1-216-833-11	RES-CHIP	10K 5% 1/16W
R821	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R887	1-216-821-11	RES-CHIP	1K 5% 1/16W
R823	1-216-835-11	RES-CHIP	15K 5% 1/16W	R888	1-216-849-11	RES-CHIP	220K 5% 1/16W
R824	1-216-838-11	RES-CHIP	27K 5% 1/16W	R889	1-216-807-11	RES-CHIP	68 5% 1/16W
R825	1-216-827-11	RES-CHIP	3.3K 5% 1/16W	R890	1-216-807-11	RES-CHIP	68 5% 1/16W
R826	1-216-830-11	RES-CHIP	5.6K 5% 1/16W	R891	1-216-807-11	RES-CHIP	68 5% 1/16W
R828	1-216-817-11	RES-CHIP	470 5% 1/16W	R892	1-216-837-11	RES-CHIP	22K 5% 1/16W
R829	1-216-864-11	SHORT	0	R893	1-216-857-11	RES-CHIP	1M 5% 1/16W
R830	1-216-849-11	RES-CHIP	220K 5% 1/16W	R895	1-216-830-11	RES-CHIP	5.6K 5% 1/16W
R831	1-216-839-11	RES-CHIP	33K 5% 1/16W	R896	1-216-864-11	SHORT	0
R832	1-216-817-11	RES-CHIP	470 5% 1/16W	R897	1-216-821-11	RES-CHIP	1K 5% 1/16W
R833	1-216-839-11	RES-CHIP	33K 5% 1/16W	R898	1-216-805-11	RES-CHIP	47 5% 1/16W
R835	1-216-837-11	RES-CHIP	22K 5% 1/16W	R899	1-216-821-11	RES-CHIP	1K 5% 1/16W
R836	1-216-864-11	SHORT	0			< NETWORK RESISTOR >	
R840	1-216-841-11	RES-CHIP	47K 5% 1/16W	RB1	1-233-576-11	RES, CHIP NETWORK	100
R841	1-216-839-11	RES-CHIP	33K 5% 1/16W	RB2	1-233-576-11	RES, CHIP NETWORK	100
R842	1-216-817-11	RES-CHIP	470 5% 1/16W	RB3	1-233-576-11	RES, CHIP NETWORK	100
R843	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	RB4	1-233-576-11	RES, CHIP NETWORK	100
R844	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	RB5	1-233-576-11	RES, CHIP NETWORK	100
R845	1-216-817-11	RES-CHIP	470 5% 1/16W	RB6	1-233-576-11	RES, CHIP NETWORK	100
R848	1-216-836-11	RES-CHIP	18K 5% 1/16W			< TUNER >	
R849	1-216-836-11	RES-CHIP	18K 5% 1/16W	TU1	8-598-430-50	TUNER, FSS BTF-FA401	
R850	1-216-830-11	RES-CHIP	5.6K 5% 1/16W	TU2	8-598-542-20	TUNER, FSS BTF-WA412	
R851	1-216-833-11	RES-CHIP	10K 5% 1/16W			< VIBRATOR >	
R852	1-216-833-11	RES-CHIP	10K 5% 1/16W	X1	1-577-110-11	VIBRATOR, CRYSTAL	
R854	1-216-838-11	RES-CHIP	27K 5% 1/16W	X301	1-567-505-11	OSCILLATOR, CRYSTAL	
R855	1-216-825-11	RES-CHIP	2.2K 5% 1/16W	X302	1-767-179-31	VIBRATOR, SERAMIC	
R856	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	X303	1-567-505-11	OSCILLATOR, CRYSTAL	
R857	1-216-838-11	RES-CHIP	27K 5% 1/16W	X304	1-767-179-31	VIBRATOR, SERAMIC	
R858	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	X305	1-781-282-11	VIBRATOR, CERAMIC	
R859	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	X306	1-767-989-11	VIBRATOR, CERAMIC	
R860	1-249-389-11	CARBON	4.7 5% 1/4W	X307	1-760-895-21	VIBRATOR, CERAMIC	
R861	1-249-389-11	CARBON	4.7 5% 1/4W	X701	1-579-358-21	VIBLATOR, CRYSTAL	
R862	1-216-839-11	RES-CHIP	33K 5% 1/16W				
R863	1-216-841-11	RES-CHIP	47K 5% 1/16W				
R864	1-216-839-11	RES-CHIP	33K 5% 1/16W				
R865	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1348-038-A D BOARD, COMPLETE							

	3-710-578-01	COVER, VOLUME, 6 MOLD		C8065	1-106-383-00	MYLAR	0.047UF 10% 200V
	4-382-854-11	SCREW (M3X10), P, SW (+)		C8066	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
	7-682-952-09	SCREW +PSW 3X16		C8067	1-104-665-11	ELECT	100UF 20% 25V
< CAPACITOR >				C8068	1-102-038-00	CERAMIC	0.001UF 500V
C8001	1-137-372-11	MYLAR	0.022UF 5% 50V	C8069	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C8002	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C8070	1-126-964-11	ELECT	10UF 20% 50V
C8003	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C8071	1-126-964-11	ELECT	10UF 20% 50V
C8004	1-104-666-11	ELECT	220UF 20% 25V	C8072	1-126-964-11	ELECT	10UF 20% 50V
C8005	1-126-942-61	ELECT	1000UF 20% 25V	C8073	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C8006	1-126-942-61	ELECT	1000UF 20% 25V	C8074	1-104-665-11	ELECT	100UF 20% 25V
C8007	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C8075	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C8008	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C8076	1-128-551-11	ELECT	22UF 20% 25V
C8009	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C8077	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C8010	1-136-177-00	FILM	1UF 5% 50V	C8078	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C8011	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C8079	1-126-964-11	ELECT	10UF 20% 50V
C8012	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C8080	1-126-964-11	ELECT	10UF 20% 50V
C8013	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C8081	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C8014	1-104-665-11	ELECT	100UF 20% 25V	C8082	1-165-176-11	CERAMIC CHIP	0.047UF 10% 16V
C8015	1-126-969-11	ELECT	220UF 20% 50V	C8083	1-130-495-00	MYLAR	0.1UF 5% 50V
C8016	1-104-665-11	ELECT	100UF 20% 25V	C8084	1-130-992-11	FILM	0.022UF 5% 50V
C8017	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V	C8085	1-162-924-11	CERAMIC CHIP	56PF 5% 50V
C8018	1-126-964-11	ELECT	10UF 20% 50V	C8086	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C8023	1-106-220-00	MYLAR	0.1UF 10% 100V	C8087	1-126-960-11	ELECT	1UF 20% 50V
C8024	1-137-372-11	MYLAR	0.022UF 5% 50V	C8088	1-126-964-11	ELECT	10UF 20% 50V
C8025	1-126-968-11	ELECT	100UF 20% 50V	C8089	1-107-444-11	CERAMIC	100PF 10% 2KV
C8026	1-126-968-11	ELECT	100UF 20% 50V	C8090	1-126-960-11	ELECT	1UF 20% 50V
C8028	1-126-968-11	ELECT	100UF 20% 50V	C8091	1-104-665-11	ELECT	100UF 20% 25V
C8029	1-126-968-11	ELECT	100UF 20% 50V	C8092	1-117-640-11	FILM	6800PF 3% 1.2KV
C8031	1-107-636-11	ELECT	10UF 20% 160V	C8093	1-107-648-91	ELECT	100UF 20% 160V
C8032	1-126-968-11	ELECT	100UF 20% 50V	C8094	1-104-665-11	ELECT	100UF 20% 25V
C8033	1-126-968-11	ELECT	100UF 20% 50V	C8095	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V
C8036	1-126-968-11	ELECT	100UF 20% 50V	C8096	1-136-684-51	MYLAR	0.0022UF 10% 100V
C8037	1-126-968-11	ELECT	100UF 20% 50V	C8097	1-162-131-11	CERAMIC	220PF 10% 2KV
C8040	1-115-349-51	CERAMIC	0.01UF 2KV	C8098	1-162-131-11	CERAMIC	220PF 10% 2KV
C8045	1-126-965-11	ELECT	22UF 20% 50V	C8099	1-115-416-11	CERAMIC CHIP	0.001UF 5% 25V
C8046	1-126-965-11	ELECT	22UF 20% 50V	C8100	1-126-961-11	ELECT	2.2UF 20% 50V
C8047	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C8102	1-102-038-00	CERAMIC	0.001UF 500V
C8048	1-126-965-11	ELECT	22UF 20% 50V	C8103	1-126-964-11	ELECT	10UF 20% 50V
C8049	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C8104	1-162-965-11	CERAMIC CHIP	0.0015UF 10% 50V
C8050	1-126-965-11	ELECT	22UF 20% 50V	C8105	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C8051	1-102-038-00	CERAMIC	0.001UF 500V	C8106	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C8052	1-126-965-11	ELECT	22UF 20% 50V	C8107	1-136-187-11	MYLAR	0.047UF 10% 250V
C8053	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C8108	1-126-964-11	ELECT	10UF 20% 50V
C8054	1-162-974-11	CERAMIC CHIP	0.01UF 50V	C8109	1-162-924-11	CERAMIC CHIP	56PF 5% 50V
C8055	1-164-156-11	CERAMIC CHIP	0.1UF 25V	C8110	1-126-960-11	ELECT	1UF 20% 50V
C8056	1-107-652-11	ELECT	10UF 20% 250V	C8111	1-126-960-11	ELECT	1UF 20% 50V
C8057	1-126-959-11	ELECT	0.47UF 20% 50V	C8112	1-164-315-11	CERAMIC CHIP	470PF 5% 50V
C8058	1-164-230-11	CERAMIC CHIP	220PF 5% 50V	C8113	1-130-495-00	MYLAR	0.1UF 5% 50V
C8059	1-127-715-91	CERAMIC CHIP	0.22UF 10% 16V	C8114	1-125-473-11	ELECT(BLOCK)	1000UF 20% 160V
C8060	1-104-665-11	ELECT	100UF 20% 25V	C8115	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C8061	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C8116	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
C8062	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	C8117	1-102-038-00	CERAMIC	0.001UF 500V
C8063	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	C8118	1-136-189-00	MYLAR	0.1UF 10% 250V
C8064	1-107-636-11	ELECT	10UF 20% 160V	C8119	1-164-156-11	CERAMIC CHIP	0.1UF 25
				C8120	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
				C8121	1-115-349-51	CERAMIC	0.01UF 2KV
				C8122	1-126-934-11	ELECT	220UF 20% 16V



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C8123	1-107-444-11	CERAMIC	100PF 10% 2KV	D8013	8-719-921-88	RD5.1ESB2	
C8124	1-117-642-11	FILM	8200PF 3% 1.2KV	D8014	8-719-921-88	RD5.1ESB2	
C8125	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	D8015	8-719-991-33	1SS133T-77	
C8126	1-106-357-00	MYLAR	0.0039UF 99% 200V	D8016	8-719-991-33	1SS133T-77	
C8127	1-126-942-61	ELECT	1000UF 20% 25V	D8019	8-719-991-33	1SS133T-77	
C8129	1-137-150-11	MYLAR	0.01UF 5% 50V	D8020	8-719-991-33	1SS133T-77	
C8131	1-128-582-11	ELECT	10UF 20% 100V	D8021	8-719-061-21	FMQ-G5FMS	
C8132	1-126-942-61	ELECT	1000UF 20% 25V	D8022	8-719-991-33	1SS133T-77	
C8133	1-107-649-11	ELECT	2.2UF 20% 250V	D8023	8-719-991-33	1SS133T-77	
C8135	1-109-961-11	FILM	0.75UF 5% 250V	D8024	8-719-921-88	RD15ES-B2	
C8136	1-130-495-00	MYLAR	0.1UF 5% 50V	D8025	8-719-991-33	1SS133T-77	
C8137	1-126-942-61	ELECT	1000UF 20% 25V	D8026	8-719-10*-89	RD5.6ESB2	
C8138	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V	D8027	8-719-028-45	D2L20U	
C8139	1-126-964-11	ELECT	10UF 20% 50V	D8028	8-719-921-88	RD15ES-B2	
C8142	1-117-664-11	FILM	0.27UF 5% 250V	D8029	8-719-028-45	D2L20U	
C8143	1-126-960-11	ELECT	1UF 20% 50V	D8030	8-719-028-45	D2L20U	
C8148	1-104-665-11	ELECT	100UF 20% 25V	D8031	8-719-921-88	RD18ES-B2	
C8150	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V	D8032	8-719-302-43	ELIZ	
C8153	1-126-960-11	ELECT	1UF 20% 50V	D8033	8-719-028-72	RGP02-17EL-6433	
		< CONNECTOR >		D8034	6-500-004-01	DIODE ERD07-15L	
CN8002*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P		D8035	6-500-004-01	DIODE ERD07-15L	
CN8003*	1-691-135-11	PIN, CONNECTOR (PC BOARD) 4P		D8036	8-719-921-88	RD15ES-B2	
CN8004*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P		D8037	8-719-028-45	D2L20U	
CN8005*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P		D8038	8-719-302-43	ELIZ	
CN8006*	1-779-890-11	CONNECTOR, BOARD TO BOARD 10P		D8039	8-719-028-72	RGP02-17EL-6433	
CN8007*	1-564-506-11	PLUG, CONNECTOR 3P		D8043	8-719-991-33	1SS133T-77	
CN8008*	1-564-506-11	PLUG, CONNECTOR 3P		D8045	8-719-908-03	GP08D	
CN8009*	1-564-506-11	PLUG, CONNECTOR 3P		D8046	8-719-991-33	1SS133T-77	
CN8010*	1-564-507-11	PLUG, CONNECTOR 4P		D8047	8-719-991-33	1SS133T-77	
CN8011*	1-564-507-11	PLUG, CONNECTOR 4P				< FERRITE BEAD >	
CN8012*	1-564-507-11	PLUG, CONNECTOR 4P		FB8001	1-410-397-21	FERRITE	1.1UH
CN8013*	1-766-177-11	PIN, CONNECTOR (PC BOARD) 9P		FB8002	1-410-397-21	FERRITE	1.1UH
CN8015*	1-506-371-00	PIN, CONNECTOR 2P		FB8003	1-414-229-11	FERRITE	0UH
CN8016*	1-564-507-11	PLUG, CONNECTOR 4P		FB8004	1-216-864-11	SHORT	0
CN8018*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		FB8005	1-469-869-21	FERRITE	0UH
CN8019*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		FB8006	1-469-869-21	FERRITE	0UH
CN8020*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P		FB8008	1-410-396-41	FERRITE	0.45UH
CN8021*	1-506-371-00	PIN, CONNECTOR 2P		FB8009	1-410-396-41	FERRITE	0.45UH
CN8022*	1-564-510-11	PLUG, CONNECTOR 7P		FB8010	1-410-396-41	FERRITE	0.45UH
CN8023*	1-564-507-11	PLUG, CONNECTOR 4P		FB8011	1-410-396-41	FERRITE	0.45UH
		< DIODE >		FB8014	1-469-869-21	FERRITE	0UH
D8001	8-719-109-98	RD5.6ESB2		FB8015	1-469-869-21	FERRITE	0UH
D8002	8-719-110-53	RD20ES-B2		FB8016	1-469-869-21	FERRITE	0UH
D8003	8-719-924-13	MTZJ-T-77-22B		FB8017	1-469-869-21	FERRITE	0UH
D8004	8-719-908-03	GP08D		FB8018	1-469-869-21	FERRITE	0UH
D8005	8-719-991-33	1SS133T-77		FB8019	1-410-397-21	FERRITE	1.1UH
D8006	8-719-991-33	1SS133T-77		FB8020	1-414-229-11	FERRITE	0UH
D8007	8-719-991-33	1SS133T-77		FB8021	1-410-397-21	FERRITE	1.1UH
D8008	8-719-991-33	1SS133T-77		FB8022	1-410-396-41	FERRITE	0.45UH
D8009	8-719-991-33	1SS133T-77		FB8023	1-410-396-41	FERRITE	0.45UH
D8010	8-719-991-33	1SS133T-77		FB8024	1-469-869-21	FERRITE	0UH
		< IC >					
D8011	8-719-991-33	1SS133T-77		IC8001	8-749-019-08	IC STK392-560	
D8012	8-719-991-33	1SS133T-77		IC8002	8-749-019-08	IC STK392-560	

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

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

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC8003	8-759-593-33	LA78045		Q8008	8-729-207-89	2SA1358-Y	
IC8004	8-759-077-88	AN77L12-TA		Q8009	8-729-207-82	2SC3421-Y	
IC8005	8-759-585-82	BA9759F-E2		Q8010	8-729-422-27	2SD601A-Q	
IC8006	8-759-700-07	NJM2903M		Q8011	8-729-026-49	2SA1037AK-T146-R	
IC8007	8-759-700-07	NJM2903M		Q8014	8-729-422-27	2SD601A-Q	
IC8008	8-759-585-82	BA9759F-E2		Q8015	8-729-422-27	2SD601A-Q	
IC8009	8-759-803-42	LA6500-FA		Q8016	8-729-422-27	2SD601A-Q	
IC8012	8-759-701-01	NJM2904M		Q8019	8-729-026-49	2SA1037AK-T146-R	
		< COIL >		Q8020	8-729-422-27	2SD601A-Q	
L8001	1-412-533-21	INDUCTOR	47UH	Q8021	8-729-422-27	2SD601A-Q	
L8002	1-412-533-21	INDUCTOR	47UH	Q8022	8-729-422-27	2SD601A-Q	
L8003	1-412-525-31	INDUCTOR	10UH	Q8023	8-729-048-47	2SC2688(5)-LK	
L8004	1-412-533-21	INDUCTOR	47UH	Q8024	8-729-056-50	TRANSISTOR 2SC5681-YB	
L8005	1-412-533-21	INDUCTOR	47UH	Q8027	8-729-050-13	2SJ585LS-CC11	
L8006	1-412-525-31	INDUCTOR	10UH	Q8028	8-729-422-27	2SD601A-Q	
L8007	1-412-533-21	INDUCTOR	47UH	Q8029	8-729-422-27	2SD601A-Q	
L8008	1-412-533-21	INDUCTOR	47UH	Q8030	8-729-026-49	2SA1037AK-T146-R	
L8009	1-412-525-31	INDUCTOR	10UH	Q8031	8-729-422-27	2SD601A-Q	
L8010	1-414-187-11	INDUCTOR	47UH	Q8032	8-729-422-27	2SD601A-Q	
L8011	1-412-525-31	INDUCTOR	10UH	Q8035	8-729-050-13	2SJ585LS-CC11	
L8012	1-414-187-11	INDUCTOR	47UH	Q8036	8-729-026-49	2SA1037AK-T146-R	
L8013	1-414-856-11	INDUCTOR	10UH	Q8037	8-729-422-27	2SD601A-Q	
L8014	1-414-189-31	INDUCTOR	100UH	Q8038	8-729-038-10	TRANSISTOR 1MB12-140-F153A	
L8015	1-414-189-31	INDUCTOR	100UH	Q8039	8-729-048-47	2SC2688(5)-LK	
L8016	1-412-537-31	INDUCTOR	100UH	Q8101	8-729-026-49	2SA1037AK-T146-R	
L8017	1-414-856-11	INDUCTOR	10UH			< RESISTOR >	
L8018	1-406-663-21	INDUCTOR	47UH	R8001	1-216-825-11	RES-CHIP	2.2K 5% 1/16W
L8019	1-419-352-11	COIL, HORIZONTAL LINEARITY		R8002	1-216-809-11	RES-CHIP	100 5% 1/16W
L8020	1-412-525-31	INDUCTOR	10UH	R8003	1-216-809-11	RES-CHIP	100 5% 1/16W
L8021	1-406-659-11	INDUCTOR	10UH	R8004	1-216-809-11	RES-CHIP	100 5% 1/16W
L8022	1-412-552-11	INDUCTOR	2.2mmH	R8005	1-215-875-11	METAL OXIDE	10K 5% 1W
L8023	1-414-856-11	INDUCTOR	10UH	R8007	1-216-809-11	RES-CHIP	100 5% 1/16W
L8024	1-414-856-11	INDUCTOR	10UH	R8008	1-216-809-11	RES-CHIP	100 5% 1/16W
L8025	1-414-856-11	INDUCTOR	10UH	R8009	1-216-809-11	RES-CHIP	100 5% 1/16W
L8026	1-414-856-11	INDUCTOR	10UH	R8010	1-260-131-11	CARBON	470K 5% 1/2W
		< NEON LAMP >		R8011	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
NL8001	1-517-778-21	LAMP, NEON		R8012	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
		< IC LINK >		R8013	1-218-710-11	METAL CHIP	5.6K 0.5% 1/16W
PS8001 Δ	1-533-595-31	LINK, IC		R8014	1-218-709-11	METAL CHIP	5.1K 0.5% 1/16W
PS8002 Δ	1-533-595-31	LINK, IC		R8015	1-216-837-11	RES-CHIP	22K 5% 1/16W
PS8003 Δ	1-533-595-31	LINK, IC		R8016	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
PS8004 Δ	1-533-595-31	LINK, IC		R8017	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
PS8005 Δ	1-533-595-31	LINK, IC		R8018	1-216-821-11	RES-CHIP	1K 5% 1/16W
PS8006 Δ	1-533-595-31	LINK, IC		R8019	1-218-712-11	METAL CHIP	6.8K 0.5% 1/16W
PS8007 Δ	1-533-595-31	LINK, IC		R8020	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
		< TRANSISTOR >		R8021	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8001	8-729-422-27	2SD601A-Q		R8022	1-216-839-11	RES-CHIP	33K 5% 1/16W
Q8002	8-729-046-80	2SC4634LS-CB11		R8023	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8003	8-729-026-49	2SA1037AK-T146-R		R8024	1-216-833-11	RES-CHIP	10K 5% 1/16W
Q8004	8-729-026-49	2SA1037AK-T146-R		R8025	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8005	8-729-026-49	2SA1037AK-T146-R		R8026	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q8007	8-729-046-80	2SC4634LS-CB11		R8029	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
				R8030	1-215-903-11	METAL OXIDE	68K 5% 2W
				R8031	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
				R8032	1-216-821-11	RES-CHIP	1K 5% 1/16W
				R8033	1-216-833-11	RES-CHIP	10K 5% 1/16W



REF. NO.	PART NO.	DESCRIPTION		REMARK	REF. NO.	PART NO.	DESCRIPTION		REMARK		
R8034	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8095	1-216-801-11	RES-CHIP	22	5%	1/16W
R8035	1-218-694-11	METAL CHIP	1.2K	0.5%	1/16W	R8096	1-216-801-11	RES-CHIP	22	5%	1/16W
R8036	1-214-800-11	METAL	2.2	1%	1/2W	R8097	1-214-808-11	METAL	4.7	1%	1/2W
R8037	1-215-903-11	METAL OXIDE	68K	5%	2W						
R8038	1-216-809-11	RES-CHIP	100	5%	1/16W	R8098	1-214-808-11	METAL	4.7	1%	1/2W
						R8099	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R8039	1-214-800-11	METAL	2.2	1%	1/2W	R8100	1-216-475-11	METAL OXIDE	120	5%	3W
R8040	1-215-913-11	METAL OXIDE	220	5%	3W	R8101	1-216-475-11	METAL OXIDE	120	5%	3W
R8041	1-218-709-11	METAL CHIP	5.1K	0.5%	1/16W	R8102	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8042	1-216-826-11	RES-CHIP	2.7K	5%	1/16W						
R8043	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W	R8103	1-216-816-11	RES-CHIP	390	5%	1/16W
						R8104	1-216-832-11	RES-CHIP	8.2K	5%	1/16W
R8044	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W	R8105	1-214-808-11	METAL	4.7	1%	1/2W
R8045	1-214-808-11	METAL	4.7	1%	1/2W	R8106	1-214-808-11	METAL	4.7	1%	1/2W
R8046	1-214-808-11	METAL	4.7	1%	1/2W	R8107	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8047	1-215-857-71	METAL OXIDE	10	5%	1W						
R8048	1-414-189-31	INDUCTOR	100UH			R8108	1-216-821-11	RES-CHIP	1K	5%	1/16W
						R8109	1-216-814-11	RES-CHIP	270	5%	1/16W
R8049	1-414-189-31	INDUCTOR	100UH			R8110	1-249-427-11	CARBON	6.8K	5%	1/4W
R8050	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8111	1-216-819-11	RES-CHIP	680	5%	1/16W
R8051	1-214-808-11	METAL	4.7	1%	1/2W	R8112	1-216-824-11	RES-CHIP	1.8K	5%	1/16W
R8053	1-214-808-11	METAL	4.7	1%	1/2W						
R8055	1-218-748-11	METAL CHIP	220K	0.5%	1/16W	R8113	1-216-475-11	METAL OXIDE	120	5%	3W
						R8114	1-216-475-11	METAL OXIDE	120	5%	3W
R8056	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R8115	1-216-475-11	METAL OXIDE	120	5%	3W
R8057	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R8116	1-216-475-11	METAL OXIDE	120	5%	3W
R8058	1-216-809-11	RES-CHIP	100	5%	1/16W	R8117	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8059	1-214-808-11	METAL	4.7	1%	1/2W						
R8060	1-214-808-11	METAL	4.7	1%	1/2W	R8118	1-216-833-11	RES-CHIP	10K	5%	1/16W
						R8119	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8061	1-216-390-11	METAL OXIDE	1.2	5%	3W	R8120	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8062	1-260-107-11	CARBON	4.7K	5%	1/2W	R8121	1-216-809-11	RES-CHIP	100	5%	1/16W
R8063	1-214-808-11	METAL	4.7	1%	1/2W	R8123	1-216-821-11	RES-CHIP	1K	5%	1/16W
R8064	1-214-808-11	METAL	4.7	1%	1/2W						
R8065	1-260-328-11	CARBON	1K	5%	1/2W	R8124	1-249-377-11	CARBON	0.47	5%	1/4W
						R8125	1-216-816-11	RES-CHIP	390	5%	1/16W
R8066	1-214-808-11	METAL	4.7	1%	1/2W	R8126	1-216-823-11	RES-CHIP	1.5K	5%	1/16W
R8067	1-214-808-11	METAL	4.7	1%	1/2W	R8128	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8068	1-216-809-11	RES-CHIP	100	5%	1/16W	R8129	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
R8069	1-214-808-11	METAL	4.7	1%	1/2W						
R8070	1-214-808-11	METAL	4.7	1%	1/2W	R8130	1-216-825-11	RES-CHIP	2.2K	5%	1/16W
						R8131	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8071	1-215-381-00	METAL	22	1%	1/4W	R8132	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8073	1-214-808-11	METAL	4.7	1%	1/2W	R8133	1-216-487-11	METAL OXIDE	12K	5%	3W
R8075	1-214-808-11	METAL	4.7	1%	1/2W						
R8076	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W
R8077	1-216-829-11	RES-CHIP	4.7K	5%	1/16W	R8135	1-216-487-11	METAL OXIDE	12K	5%	3W
						R8136	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8078	1-214-808-11	METAL	4.7	1%	1/2W	R8137	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
R8079	1-214-808-11	METAL	4.7	1%	1/2W	R8138	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W						
R8081	1-214-808-11	METAL	4.7	1%	1/2W	R8139	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R8082	1-214-808-11	METAL	4.7	1%	1/2W	R8140	1-216-833-11	RES-CHIP	10K	5%	1/16W
						R8141	1-216-827-11	RES-CHIP	3.3K	5%	1/16W
R8083	1-216-821-11	RES-CHIP	1K	5%	1/16W	R8142	1-216-833-11	RES-CHIP	10K	5%	1/16W
R8084	1-216-833-11	RES-CHIP	10K	5%	1/16W	R8143	1-218-734-11	METAL CHIP	56K	0.5%	1/16W
R8085	1-214-808-11	METAL	4.7	1%	1/2W						
R8086	1-214-808-11	METAL	4.7	1%	1/2W	R8144	1-216-809-11	RES-CHIP	100	5%	1/16W
R8087	1-249-385-11	CARBON	2.2	5%	1/4W	R8145	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
						R8146	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8088	1-249-385-11	CARBON	2.2	5%	1/4W	R8147	1-218-710-11	METAL CHIP	5.6K	0.5%	1/16W
R8089	1-214-808-11	METAL	4.7	1%	1/2W	R8148	1-216-845-11	RES-CHIP	100K	5%	1/16W
R8090	1-214-808-11	METAL	4.7	1%	1/2W						
R8091	1-214-808-11	METAL	4.7	1%	1/2W	R8149	1-215-905-11	METAL OXIDE	10	5%	3W
R8092	1-214-808-11	METAL	4.7	1%	1/2W	R8150	1-218-740-11	METAL CHIP	100K	0.5%	1/16W
						R8151	1-218-692-11	METAL CHIP	1K	0.5%	1/16W
R8093	1-214-808-11	METAL	4.7	1%	1/2W	R8152	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R8094	1-214-808-11	METAL	4.7	1%	1/2W	R8153	1-218-692-11	METAL CHIP	1K	0.5%	1/16W

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

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

KP-43HT20/53HS20/53HS30/61HS20/61HS30
 RM-Y908 RM-Y908 RM-Y908 RM-Y908 RM-Y908

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



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R8154	1-218-728-11	METAL CHIP	33K 0.5% 1/16W	R8228	1-260-314-11	CARBON	68 5% 1/2W
R8155	1-215-469-00	METAL	100K 1% 1/4W	R8230	1-218-751-11	METAL CHIP	300K 0.5% 1/16W
R8156	1-215-469-00	METAL	100K 1% 1/4W	< TRANSFORMER >			
R8157	1-218-738-11	METAL CHIP	82K 0.5% 1/16W	T8001	1-435-142-11	TRANSFORMER, FERRITE (DFT)	
R8159	1-216-833-11	RES-CHIP	10K 5% 1/16W	T8002	1-437-400-11	TRANSFORMER, FERRITE (HDT)	
R8160	1-249-393-11	CARBON	10 5% 1/4W	T8003	1-437-401-11	TRANSFORMER, FERRITE (HOT)	
R8161	1-216-841-11	RES-CHIP	47K 5% 1/16W	T8004 Δ	1-437-399-11	TRANSFORMER, FERRITE (LOT)	
R8163	1-216-841-11	RES-CHIP	47K 5% 1/16W	T8005 Δ	1-453-285-21	FBT ASSY, NX-4006/X4P4	
R8164	1-218-734-11	METAL CHIP	56K 0.5% 1/16W	< THERMISTOR >			
R8165	1-249-425-11	CARBON	4.7K 5% 1/4W	TH8001	1-800-193-00	THERMISTOR	
R8167	1-414-189-31	INDUCTOR	100UH	< VARIABLE RESISTOR >			
R8166	1-218-716-11	METAL CHIP	10K 0.5% 1/16W	\blacktriangleright VR8001 Δ 1-225-628-9 1RES, VAR, ADJ, CERME 5K			
R8168	1-216-809-11	RES-CHIP	100 5% 1/16W	\blacktriangleright VR8002 Δ 1-225-632-91 RES, VAR, ADJ, CERMET 100K			
R8169	1-216-841-11	RES-CHIP	47K 5% 1/16W	*****			
R8170	1-218-716-11	METAL CHIP	10K 0.5% 1/16W	* A-1316-566-A G BOARD, COMPLETE			
R8171	1-216-809-11	RES-CHIP	100 5% 1/16W	*****			
R8172	1-249-405-11	CARBON	100 5% 1/4W	1-533-223-11	HOLDER, FUSE		
R8173	1-216-841-11	RES-CHIP	47K 5% 1/16W	* 4-374-846-01	COVER, CAPACITOR, CAP TYPE		
R8174	1-249-425-11	CARBON	4.7K 5% 1/4W	4-382-854-11	SCREW (M3X10), P, SW (+)		
R8176	1-218-740-11	METAL CHIP	100K 0.5% 1/16W	< CAPACITOR >			
R8178	1-216-841-11	RES-CHIP	47K 5% 1/16W	C5001	1-164-645-11	CERAMIC	1000PF 10% 500V
R8179	1-414-189-31	INDUCTOR	100UH	C5002	1-164-645-11	CERAMIC	1000PF 10% 500V
R8180	1-216-841-11	RES-CHIP	47K 5% 1/16W	C5006	1-104-665-11	ELECT	100UF 20% 25V
R8181	1-216-841-11	RES-CHIP	47K 5% 1/16W	C5007	1-164-645-11	CERAMIC	1000PF 10% 500V
R8182	1-218-748-11	RES-CHIP	220K 5% 1/16W	C5008	1-164-645-11	CERAMIC	1000PF 10% 500V
R8183	1-218-748-11	RES-CHIP	220K 5% 1/16W	C5009	1-126-953-11	ELECT	2200UF 20% 35V
R8184	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5010	1-126-953-11	ELECT	2200UF 20% 35V
R8187	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5011	1-164-645-11	CERAMIC	1000PF 10% 500V
R8189	1-249-377-11	CARBON	0.47 5% 1/4W	C5012	1-164-645-11	CERAMIC	1000PF 10% 500V
R8190	1-215-431-00	METAL	2.7K 1% 1/4W	C5015	1-115-758-11	ELECT	470UF 20% 16V
R8191	1-215-429-00	METAL	2.2K 1% 1/4W	C5016	1-126-942-61	ELECT	1000UF 20% 25V
R8192	1-215-449-00	METAL	15K 1% 1/4W	C5017	1-126-942-61	ELECT	1000UF 20% 25V
R8193	1-215-449-00	METAL	15K 1% 1/4W	C5018	1-126-952-11	ELECT	1000UF 20% 35V
R8194	1-215-449-00	METAL	15K 1% 1/4W	C5019	1-126-952-11	ELECT	1000UF 20% 35V
R8195	1-215-449-00	METAL	15K 1% 1/4W	C5020	1-110-626-11	ELECT	330UF 20% 160V
R8196	1-249-425-11	CARBON	4.7K 5% 1/4W	C5021	1-115-771-51	ELECT	0.0047F 20% 16V
R8197	1-216-809-11	RES-CHIP	100 5% 1/16W	C5022	1-126-947-11	ELECT	47UF 20% 25V
R8198	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5024	1-126-947-11	ELECT	47UF 20% 25V
R8201	1-249-397-11	CARBON	22 5% 1/4W	C5025	1-126-947-11	ELECT	47UF 20% 25V
R8202	1-260-092-11	CARBON	270 5% 1/2W	C5026	1-126-947-11	ELECT	47UF 20% 25V
R8203	1-249-377-11	CARBON	0.47 5% 1/4W	C5027	1-126-951-11	ELECT	470UF 20% 35V
R8205	1-249-377-11	CARBON	0.47 5% 1/4W	C5028	1-126-951-11	ELECT	470UF 20% 35V
R8206	1-249-377-11	CARBON	0.47 5% 1/4W	C5029	1-107-639-11	ELECT	47UF 20% 160V
R8208	1-260-288-11	CARBON	0.47 5% 1/2W	C5030	1-126-947-11	ELECT	47UF 20% 25V
R8209	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5031	1-126-768-11	ELECT	2200UF 20% 16V
R8210	1-216-809-11	RES-CHIP	100 5% 1/16W	C5038	1-126-947-11	ELECT	47UF 20% 25V
R8211	1-215-906-11	METAL OXIDE	15 5% 3W	C5039	1-126-947-11	ELECT	47UF 20% 25V
R8212	1-215-907-11	METAL OXIDE	22 5% 3W	C5040	1-107-826-11	CERAMIC CHIP	0.1UF 10% 16V
R8213	1-216-821-11	RES-CHIP	1K 5% 1/16W	C5041	1-126-767-11	ELECT	1000UF 20% 16V
R8216	1-216-833-11	RES-CHIP	10K 5% 1/16W	C5042	1-126-963-11	ELECT	4.7UF 20% 50V
R8217	1-216-821-11	RES-CHIP	1K 5% 1/16W	C5043	1-126-935-11	ELECT	470UF 20% 16V
R8218	1-260-123-11	CARBON	100K 5% 1/2W				
R8219	1-249-377-11	CARBON	0.47 5% 1/4W				
R8220	1-216-821-11	RES-CHIP	1K 5% 1/16W				
R8223	1-218-748-11	METAL CHIP	220K 0.5% 1/16W				
R8224	1-260-127-11	CARBON	220K 5% 1/2W				
R8225	1-260-292-11	CARBON	1 5% 1/2W				



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C5047	1-162-970-11	CERAMIC CHIP	0.01UF 10% 16V	D5013	8-719-069-56	UDZSTE-176.2B	
C5049	1-162-970-11	CERAMIC CHIP	0.01UF 10% 25V	D5014	8-719-404-50	MA111-TX	
C5050	1-128-554-11	ELECT	330UF 20% 63V	D5015	8-719-404-50	MA111-TX	
C5051	1-126-961-11	ELECT	2.2UF 20% 50V	D5016	8-719-083-44	DIODE FSQ05A04	
C5053	1-126-967-11	ELECT	47UF 20% 50V	D5017	8-719-073-25	S1VBA20	
C5054	1-126-955-11	ELECT	4700UF 20% 35V	D5018	8-719-056-84	UDZ-TE-17-7.5B	
C5055	1-126-933-11	ELECT	100UF 20% 16V	D5019	8-719-404-50	MA111-TX	
C6001	1-126-967-11	ELECT	47UF 20% 50V	D5020	8-719-404-50	MA111-TX	
C6002	1-104-666-11	ELECT	220UF 20% 25V	D5021	8-719-404-50	MA111-TX	
C6004	1-126-967-11	ELECT	47UF 20% 50V	D5022	8-719-404-50	MA111-TX	
C6008	1-117-228-11	MYLAR	2.2UF 10% 450V	D5023	8-719-404-50	MA111-TX	
C6012 △	1-119-888-51	CERAMIC	2200PF 20% 250V	D5024	8-719-404-50	MA111-TX	
C6013 △	1-119-888-51	CERAMIC	2200PF 20% 250V	D5025	8-719-404-50	MA111-TX	
C6014 △	1-104-708-11	MYLAR	0.47UF 20% 250V	D5026	8-719-404-50	MA111-TX	
C6015	1-161-964-91	CERAMIC	0.0047UF 250V	D5031	8-719-404-50	MA111-TX	
C6016	1-161-964-91	CERAMIC	0.0047UF 250V	D6001	8-719-404-50	MA111-TX	
C6017	1-162-964-11	CERAMIC CHIP	0.001UF 10% 50V	D6002	8-719-948-45	ERA22-08	
C6018	1-162-974-11	CERAMIC CHIP	0.01UF 50V	D6003	8-719-069-87	DTZ10B	
C6019	1-126-968-11	ELECT	100UF 20% 50V	D6004	8-719-404-50	MA111-TX	
C6020	1-126-963-11	ELECT	4.7UF 20% 50V	D6005	8-719-404-50	MA111-TX	
C6021	1-126-964-11	ELECT	10UF 20% 50V	D6006	8-719-063-70	D1NL20U	
C6022	1-161-964-91	CERAMIC	0.0047UF 250V	D6007	8-719-022-XX	D6SB60L	
C6023	1-161-964-91	CERAMIC	0.0047UF 250V	D6009	8-719-083-60	UDZSTE-174.7B	
C6025	1-136-479-11	FILM	0.001UF 2% 50V	D6011	8-719-404-50	MA111-TX	
C6029	1-136-165-00	FILM	0.1UF 5% 50V	D6012	8-719-979-64	UF4005PKG23	
C6030	1-126-947-11	ELECT	47UF 20% 25V	D6019	8-719-083-60	UDZSTE-174.7B	
C6031	1-137-750-11	ELECT	1500UF 20% 250V	D6023	8-719-068-00	ERC04-06SE	
C6032	1-137-750-11	ELECT	1500UF 20% 250V	D6024	8-719-068-00	ERC04-06SE	
C6041	1-125-969-91	CERAMIC	680PF 10% 1KV	D6030	8-719-063-70	D1NL20U	
C6042	1-125-969-91	CERAMIC	680PF 10% 1KV			< FUSE >	
C6043 △	1-104-706-11	MYLAR	0.22UF 20% 250V	F6001 △	1-576-193-11	FUSE	
C6046	1-126-968-11	ELECT	100UF 20% 50V			< FERRITE BEAD >	
C6047	1-135-998-21	FILM	56000PF 3% 800V	FB5001	1-410-396-41	FERRITE	0.45UH
		< CONNECTOR >		FB5002	1-410-396-41	FERRITE	0.45UH
CN5001*	1-564-508-11	PLUG, CONNECTOR 5P		FB5003	1-410-396-41	FERRITE	0.45UH
CN5002*	1-564-507-11	PLUG, CONNECTOR 4P		FB5004	1-410-396-41	INDUCTOR	0.45UH
CN5003*	1-564-510-11	PLUG, CONNECTOR 7P		FB5005	1-410-396-41	FERRITE	0.45UH
CN5004*	1-766-177-11	PIN, CONNECTOR (PC BOARD) 9P		FB5006	1-410-396-41	FERRITE	0.45UH
CN5005	1-695-915-11	TAB (CONTACT)		FB6001	1-410-396-41	FERRITE	0.45UH
CN5006	1-695-915-11	TAB (CONTACT)		FB6004	1-469-869-21	FERRITE	0UH
CN5007	1-695-915-11	TAB (CONTACT)		FB6005	1-469-869-21	FERRITE	0UH
CN6005	1-580-843-11	PIN, CONNECTOR (POWER)		FB6006	1-216-864-11	SHORT	0
		< DIODE >		FB6007	1-216-864-11	SHORT	0
D5001	8-719-083-69	DIODE UDZSTE-1724B		FB6013	1-410-397-21	FERRITE	1.1UH
D5002	8-719-060-89	D4SBS6-F		FB6014	1-410-397-21	FERRITE	1.1UH
D5003	8-719-060-89	D4SBS6-F		FB6015	1-410-397-21	FERRITE	1.1UH
D5004	8-719-083-45	DIODE 31DF4N-FC5		FB6016	1-410-397-21	FERRITE	1.1UH
D5005	8-719-083-45	DIODE 31DF4N-FC5				< IC >	
D5006	8-719-052-37	F10P04Q		IC501	8-749-012-13	DM-58	
D5007	8-719-404-50	MA111-TX		IC5002	8-759-103-93	UPC393C	
D5008	8-719-028-45	D2L20U		IC5003	8-759-701-84	NJM7905FA	
D5009	8-719-028-45	D2L20U		IC5004	8-759-640-19	PQ1CG2032FZ	
D5010	8-719-200-31	21DQ05		IC5005	8-759-198-31	UPC1093J-1-T	
D5011	8-719-404-50	MA111-TX					
D5012	8-719-083-66	DIODE UDZSTE-1718B					

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
IC5006	8-759-450-47	BA05T		R5016	1-216-833-11	RES-CHIP	10K 5% 1/16W
IC6003	8-759-670-30	MCZ3001D		R5017	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
		< JUMPER RESISTOR >		R5018	1-216-821-11	RES-CHIP	1K 5% 1/16W
JR5002	1-216-864-11	SHORT	0	R5019	1-216-857-11	RES-CHIP	1M 5% 1/16W
JR5003	1-216-864-11	SHORT	0	R5020	1-216-821-11	RES-CHIP	1K 5% 1/16W
JR5004	1-216-864-11	SHORT	0	R5021	1-216-821-11	RES-CHIP	1K 5% 1/16W
		< COIL >		R5022	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W
L5001	1-412-523-41	INDUCTOR	6.8UH	R5023	1-218-750-11	METAL CHIP	270K 0.5% 1/16W
L5002	1-412-523-41	INDUCTOR	6.8UH	R5024	1-218-682-11	METAL CHIP	390 0.5% 1/16W
L5003	1-412-529-11	INDUCTOR	22UH	R5025	1-218-697-11	METAL CHIP	1.6K 0.5% 1/16W
L5004	1-412-531-31	INDUCTOR	33UH	R5026	1-216-833-11	RES-CHIP	10K 5% 1/16W
L5005	1-412-527-11	INDUCTOR	15UH	R5027	1-216-821-11	RES-CHIP	1K 5% 1/16W
L5006	1-412-533-21	INDUCTOR	47UH	R5028	1-216-821-11	RES-CHIP	1K 5% 1/16W
L5007	1-412-533-21	INDUCTOR	47UH	R5029	1-216-833-11	RES-CHIP	10K 5% 1/16W
L5008	1-412-529-11	INDUCTOR	22UH	R5030	1-216-833-11	RES-CHIP	10K 5% 1/16W
L5009	1-412-529-11	INDUCTOR	22UH	R5032	1-249-415-11	CARBON	680 5% 1/4W
L5012	1-406-663-21	INDUCTOR	47UH	R5034	1-216-833-11	RES-CHIP	10K 5% 1/16W
L5013	1-412-525-31	INDUCTOR	10UH	R5035	1-216-819-11	RES-CHIP	680 5% 1/16W
L5014	1-406-663-21	INDUCTOR	47UH	R5036	1-216-819-11	RES-CHIP	680 5% 1/16W
L5015	1-424-862-11	INDUCTOR	33UH	R5037	1-216-821-11	RES-CHIP	1K 5% 1/16W
L5016	1-406-663-21	INDUCTOR	47UH	R5038	1-216-821-11	RES-CHIP	1K 5% 1/16W
L5017	1-412-537-31	INDUCTOR	100UH	R5039	1-216-864-11	SHORT	0
L6001 Δ	1-437-479-11	TRANSFORMER, LINE FILTER		R5040	1-216-833-11	RES-CHIP	10K 5% 1/16W
L6002 Δ	1-437-479-11	TRANSFORMER, LINE FILTER		R5041	1-215-866-11	METAL OXIDE	330 5% 1W
L6003	1-424-862-11	INDUCTOR	33UH	R5042	1-216-833-11	RES-CHIP	10K 5% 1/16W
		< PHOTO COUPLER >		R5043	1-216-821-11	RES-CHIP	1K 5% 1/16W
PH6001	8-749-924-35	ON3171-R		R5044	1-216-821-11	RES-CHIP	1K 5% 1/16W
PH6002 Δ	8-749-924-35	ON3171-R		R5045	1-216-832-11	RES-CHIP	8.2K 5% 1/16W
		< IC LINK >		R5047	1-216-833-11	RES-CHIP	10K 5% 1/16W
PS5001 Δ	1-533-597-31	LINK, IC		R6002	1-240-251-	CMT-MELF	6.8 5% 10W
PS5002 Δ	1-533-597-31	LINK, IC		R6003	1-260-328-11	CARBON	1K 5% 1/2W
		< TRANSISTOR >		R6004	1-216-829-11	RES-CHIP	4.7K 5% 1/16W
Q5001	8-729-050-50	TRANSISTOR 2SD1782K-T146-R		R6006	1-216-430-11	METAL OXIDE	390 5% 1W
Q5002	8-729-422-27	2SD601A-Q		R6007	1-216-823-11	RES-CHIP	1.5K 5% 1/16W
Q5003	8-729-026-49	2SA1037AK-T146-R		R6008	1-216-845-11	RES-CHIP	100K 5% 1/16W
Q5004	8-729-422-27	2SD601A-Q		R6015	1-219-776-11	CARBON	2.2M 10% 1/2W
Q5005	8-729-027-23	DTA114EKA-T146		R6036	1-218-715-11	METAL CHIP	9.1K 0.5% 1/16W
Q5006	8-729-901-87	2SC2411K-CQ		R6037	1-215-481-00	METAL	330K 1% 1/4W
Q5007	8-729-026-49	2SA1037AK-T146-R		R6038	1-215-481-00	METAL	330K 1% 1/4W
Q6005	8-729-052-32	IRFIB7N50A		R6039	1-216-851-11	RES-CHIP	330K 5% 1/16W
Q6006	8-729-052-32	IRFIB7N50A		R6040	1-215-481-00	METAL	330K 1% 1/4W
		< RESISTOR >		R6041	1-218-668-11	METAL CHIP	100 0.5% 1/16W
R5005	1-216-831-11	RES-CHIP	6.8K 5% 1/16W	R6042	1-218-719-11	METAL CHIP	13K 0.5% 1/16W
R5006	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6045	1-218-675-11	METAL CHIP	200 0.5% 1/16W
R5007	1-249-377-11	CARBON	0.47 5% 1/4W	R6046	1-216-813-11	RES-CHIP	220 5% 1/16W
R5010	1-247-903-00	CARBON	1M 5% 1/4W	R6047	1-216-813-11	RES-CHIP	220 5% 1/16W
R5011	1-216-818-11	RES-CHIP	560 5% 1/16W	R6050	1-249-417-11	CARBON	1K 5% 1/4W
R5012	1-216-361-00	METAL OXIDE	0.22 5% 2W	R6054	1-249-393-11	CARBON	10 5% 1/4W
R5013	1-216-833-11	RES-CHIP	10K 5% 1/16W	R6056	1-260-131-11	CARBON	470K 5% 1/2W
R5014	1-216-829-11	RES-CHIP	4.7K 5% 1/16W	R6057	1-260-131-11	CARBON	470K 5% 1/2W
R5015	1-218-708-11	METAL CHIP	4.7K 0.5% 1/16W	R6058	1-249-393-11	CARBON	10 5% 1/4W
				R6062	1-216-833-11	RES-CHIP	10K 5% 1/16W
				R6063	1-216-833-11	RES-CHIP	10K 5% 1/16W
				R6064	1-202-933-61	FUSIBLE	0.1 10% 1/2W
				R6076	1-243-979-71	METAL OXIDE	0.1 5% 2W
				R6080	1-243-979-71	METAL OXIDE	0.1 5% 2W

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REF. NO.	PART NO.	DESCRIPTION	REMARK
R6081	1-249-393-11	CARBON 10 5% 1/4W	
		< RELAY >	
	RY6002 Δ 1-755-395-11	RELAY (AC POWER)	
	RY6003 Δ 1-755-395-11	RELAY (AC POWER)	
		< TRANSFORMER >	
	T6001 Δ 1-437-436-11	CONVERTER TRANSFORMER (PIT)	
	T6004 Δ 1-435-675-11	TRANSFORMER, STANDBY	
		< POSISTOR >	
TH6002	1-804-475-21	POSISTOR	
		< VARISTOR >	
VD6001	1-801-073-31	VARISTOR TNR14V471K660	

	* A-1372-934-A	H4 BOARD, COMPLETE	

		< CAPACITOR >	
C9401	1-107-826-11	CERAMIC CHIP 0.1UF 10% 16V	
		< CONNECTOR >	
CN9401*	1-564-518-11	PLUG, CONNECTOR 3P	
		< DIODE >	
D9401	8-719-921-8838	RD5.6ESB2	
D9402	8-719-921-8838	RD5.6ESB2	
		< IC >	
IC9401	8-719-066-43	GP1U28Y	
		< RESISTOR >	
R9401	1-216-833-11	RES-CHIP 10K 5% 1/16W	
R9402	1-216-809-11	RES-CHIP 100 5% 1/16W	

	* A-1391-148-A	S BOARD, COMPLETE	

		< CONNECTOR >	
CN3001*	1-564-506-11	PLUG, CONNECTOR 3P	
		< DIODE >	
D3001	8-719-109-89	RD5.6ESB2	
		< SOLAR BATTERY >	
S3002	1-756-063-21	BATTERY, SOLAR	

REF. NO.	PART NO.	DESCRIPTION	REMARK
	* A-1372-932-A	H2 BOARD, COMPLETE	

		< CONNECTOR >	
CN9201*	1-564-520-11	PLUG, CONNECTOR 5P	
CN9202	1-564-521-11	PLUG, CONNECTOR 6P	
		< RESISTOR >	
R9201	1-218-684-11	METAL CHIP 470 0.5% 1/16W	
R9202	1-218-684-11	METAL CHIP 470 0.5% 1/16W	
R9203	1-218-684-11	METAL CHIP 470 0.5% 1/16W	
R9204	1-218-684-11	METAL CHIP 470 0.5% 1/16W	
R9205	1-218-688-11	METAL CHIP 680 0.5% 1/16W	
R9206	1-218-688-11	METAL CHIP 680 0.5% 1/16W	
R9207	1-218-692-11	METAL CHIP 1K 0.5% 1/16W	
R9208	1-218-696-11	METAL CHIP 1.5K 0.5% 1/16W	
R9209	1-218-700-11	METAL CHIP 2.2K 0.5% 1/16W	
R9210	1-218-704-11	METAL CHIP 3.3K 0.5% 1/16W	
R9211	1-218-712-11	METAL CHIP 6.8K 0.5% 1/16W	
		< SWITCH >	
S9201	1-572-198-11	SWITCH, KEYBOARD	
S9202	1-572-198-11	SWITCH, KEYBOARD	
S9203	1-572-198-11	SWITCH, KEYBOARD	
S9204	1-572-198-11	SWITCH, KEYBOARD	
S9205	1-572-198-11	SWITCH, KEYBOARD	
S9206	1-572-198-11	SWITCH, KEYBOARD	
S9207	1-572-198-11	SWITCH, KEYBOARD	
S9208	1-572-198-11	SWITCH, KEYBOARD	
S9209	1-572-198-11	SWITCH, KEYBOARD	
S9210	1-572-198-11	SWITCH, KEYBOARD	
S9211	1-572-198-11	SWITCH, KEYBOARD	
S9212	1-572-198-11	SWITCH, KEYBOARD	

	* A-1377-001-A	H1 BOARD, COMPLETE	

		< CONNECTOR >	
CN9101*	1-564-508-11	PLUG, CONNECTOR 5P	
		< DIODE >	
D9101	8-719-053-43	SLR-325VCT31	
D9102	8-719-053-43	SLR-325VCT31	
		< RESISTOR >	
R9103	1-216-813-11	RES-CHIP 220 5% 1/16W	
R9104	1-216-813-11	RES-CHIP 220 5% 1/16W	
		< SWITCH >	
S9101	1-571-532-21	SWITCH, TACTIL	

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

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

H1 **H3**

REF. NO.	PART NO.	DESCRIPTION	REMARK
	* A-1372-933-A	H3 BOARD, COMPLETE *****	
		< CAPACITOR >	
C9301	1-126-964-11	ELECT 10UF 20%	50V
C9302	1-126-964-11	ELECT 10UF 20%	50V
C9303	1-126-959-11	ELECT 0.47UF 20%	50V
C9304	1-126-959-11	ELECT 0.47UF 20%	50V
C9305	1-162-970-11	CERAMIC CHIP 0.01UF 10%	25V
		< CONNECTOR >	
CN9301*	1-564-526-11	PLUG, CONNECTOR 11P	
		< DIODE >	
D9301	8-719-110-53	RD10ESB2	
D9302	8-719-110-53	RD10ESB2	
D9303	8-719-110-53	RD10ESB2	
D9304	8-719-110-53	RD10ESB2	
D9305	8-719-110-53	RD10ESB2	
D9306	8-719-110-53	RD10ESB2	
		< JACK >	
J9301	1-565-929-11	TERMINAL BLOCK, S 3P	
		< RESISTOR >	
R9301	1-216-821-11	RES-CHIP 1K 5%	1/16W
R9302	1-216-853-11	RES-CHIP 470K 5%	1/16W
R9303	1-216-853-11	RES-CHIP 470K 5%	1/16W
R9304	1-218-285-11	RES-CHIP 75 5%	1/16W
R9305	1-218-285-11	RES-CHIP 75 5%	1/16W
R9306	1-218-285-11	RES-CHIP 75 5%	1/16W
		MISCELLANEOUS *****	
	Δ A-1501-975-A	COUPLER (R) ASSY, CRT (53HS20,53HS30)	
	Δ A-1501-976-A	COUPLER (G) ASSY, CRT	
	Δ A-1501-977-A	COUPLER (B) ASSY, CRT (53HS20,53HS30)	
	Δ A-1501-978-A	COUPLER (R) ASSY CRT (61HS20,61HS30)	
	Δ A-1501-979-A	COUPLER (B) ASSY CRT (61HS20,61HS30)	
	Δ A-1501-980-A	COUPLER (R) ASSY, CRT (43HT20)	
	Δ A-1501-981-A	COUPLER (B) ASSY, CRT (43HT20)	
	Δ 1-223-925-11	RESISTOR ASSY (FOCUS PACK)	
	Δ 1-451-535-11	COIL ASSY, VM	
	Δ 1-451-537-11	DEFLECTION YOKE	
	1-500-021-11	CLAMP, SLEEVE FERRITE	
	1-529-403-11	SPEAKER (6.6CM)	
	1-543-653-11	CORE ASSY, BEAD (DIVISION TYPE)	
	1-544-849-11	SPEAKER (13CM) (EXCEPT 43HT20)	
	1-544-893-11	SPEAKER (10CM) (43HT20)	

- * 1-556-945-21 CABLE, P-P
- * 1-557-056-31 CABLE, P-P
- 1-771-787-11 SWITCH, RF ANTENNA
- Δ 1-790-130-11 CORD, AC POWER (WITH CONNECTOR)
- Δ 8-598-955-31 BLOCK ASSY, HV HVB-1031

ACCESSORIES & PACKING MATERIALS

- * 4-041-423-01 SHEET, PROTECTION (43HT20)
- * 4-041-426-01 BAG, PROTECTION (53HS20,53HS30)
- * 4-042-463-01 SHEET, PROTECTION (EXCEPT 43HT20)
- * 4-049-155-01 BAG, PROTECTION (43HT20)
- * 4-069-575-02 TRAY (53HS20,53HS30)
- * 4-069-584-01 TRAY (61HS20,61HS30)
- * 4-069-585-02 CUSHION (UPPER) (ASSY) (61HS20,61HS30)
- * 4-076-420-01 BAG, PROTECTION (61HS20,61HS30)
- * 4-080-860-11 CUSHION UPPER (ASSY) (53HS20,53HS30)
- * 4-080-866-01 CUSHION UPPER (ASSY) (43HT20)
- 4-081-143-11 MANUAL, INSTRUCTION
- 4-081-143-21 MANUAL, INSTRUCTION
- 4-081-143-31 MANUAL, INSTRUCTION
- * 4-081-544-01 CUSHION, LOWER (ASSY) (53HS20,53HS30)
- * 4-081-591-01 TRAY (43HT20)
- * 4-081-619-01 CUSHION, LOWER ASSY (43HT20)
- * 4-081-694-01 CUSHION, LOWER ASSY (61HS20)
- * 4-083-615-01 INDIVIDUAL CARTON (53HS20,53HS30)
- * 4-083-685-01 INDIVIDUAL CARTON (61HS20,61HS30)
- * 4-083-695-01 CARTON, INDIVIDUAL (43HT20)

REMOTE COMMANDER

- 1-476-853-11 REMOTE COMMANDER (RM-Y908)



Projection TV

Operating Instructions

KP-43HT20

KP-53HS20

KP-53HS30

KP-61HS20

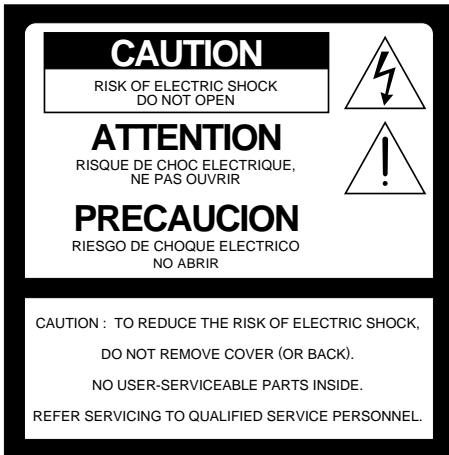
KP-61HS30

Hi-Scan
1080i

DRC-MF
Digital Reality Creation

WARNING

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



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.

CAUTION

To prevent electric shock, do not use this polarized AC plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

CAUTION

When using TV games, computers, and similar products with your projection TV, or viewing a TV station whose logo always stays on the screen, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern such as a station logo is left on the screen for long periods of time, especially at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. These types of imprints are not covered by your warranty.

Note on Caption Vision

This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

Note on convergence adjustment

Before you use your projection TV, make sure to adjust convergence. For details, see “Adjusting the Convergence Automatically – FLASH FOCUS™ –” on page 33.

Note to CATV system installer

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF, VHF, transmitted by cable companies or satellite for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

NOTIFICATION

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antennas.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

This document is for the remote control RM-Y908.

MODELS: KP-43HT20, KP-53HS20, KP-53HS30, KP-61HS20, KP-61HS30

Please keep this notice with the instruction manual.

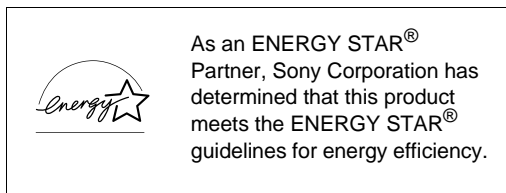
Safety

- ❑ Operate the projection TV only on 120 V AC.
- ❑ The plug is designed, for safety purposes, to fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- ❑ If any liquid or solid object should fall inside the cabinet, unplug the projection TV immediately and have it checked by qualified service personnel before operating it further.
- ❑ If you will not be using the projection TV for several days, disconnect the power by pulling the plug itself. Never pull on the cord.

For details concerning safety precautions, see “Important Safeguards” on page 4.

Installing

- ❑ To prevent internal heat buildup, do not block the ventilation openings.
- ❑ Do not install the projection TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- ❑ Avoid operating the projection TV at temperature below 5°C (41°F).
- ❑ If the projection TV is transported directly from a cold to a warm location, or if the room temperature changes suddenly, the picture may be blurred or show poor color. In this case, please wait a few hours to let the moisture evaporate before turning on the projection TV.
- ❑ To obtain the best picture, do not expose the screen to direct illumination or direct sunlight. It is recommended to use spot lighting directed down from the ceiling or to cover the windows that face the screen with opaque drapery. It is desirable to install the projection TV in a room where the floor and walls are not of a reflective material.



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ATTENTION

Pour prévenir les chocs électriques, ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.

Owner's Record

The model and serial numbers are located at the rear of the projection TV, below the Sony logo, on the sticker, and also on the TV box (white label). Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____

Serial No. _____

Important Safeguards

For your protection, please read these instructions completely, and keep this manual for future reference.

Carefully observe and comply with all warnings, cautions and instructions placed on the set or described in the operating instructions or service manual.

WARNING

To guard against injury, the following basic safety precautions should be observed in the installation, use and servicing of the set.

Use

Power Sources

This set should be operated only from the type of power source indicated on the serial/model plate. If you are not sure of the type of electrical power supplied to your home, consult your dealer or local power company. For those sets designed to operate from battery power, refer to the operating instructions.

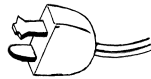


Grounding or Polarization

This set is equipped with a polarized AC power cord plug (a plug having one blade wider than the other), or with a three-wire grounding type plug (a plug having a third pin for grounding). Follow the instructions below:

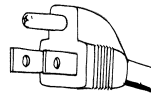
For the set with a polarized AC power cord plug

This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the polarized plug by forcing it in.



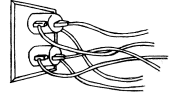
Alternate Warning for the set with a three-wire grounding type AC plug

This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to have a suitable outlet installed. Do not defeat the safety purpose of the grounding plug.



Overloading

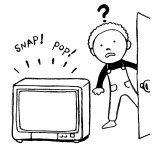
Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.



Always turn the set off when it is not being used. When the set is left unattended and unused for long periods of time, unplug it from the wall outlet as a precaution against the possibility of an internal malfunction that could create a fire hazard.



If a snapping or popping sound from a TV set is continuous or frequent while the TV is operating, unplug the TV and consult your dealer or service technician. It is normal for some TV sets to make occasional snapping or popping sounds, particularly when being turned on or off.



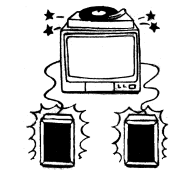
Object and Liquid Entry

Never push objects of any kind into the set through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the set.



Attachments

Do not use attachments not recommended by the manufacturer, as they may cause hazards.



Cleaning

Clean the cabinet of the projection TV with a dry soft cloth. To remove dust from the screen, wipe it gently with a soft cloth. Stubborn stains may be removed with a cloth slightly dampened with solution of mild soap and warm water. Never use strong solvents such as thinner or benzene for cleaning.



If the picture becomes dark after using the projection TV for a long period of time, it may be necessary to clean the inside of the projection TV. Consult qualified service personnel.

Installation

Water and Moisture

Do not use power-line operated sets near water — for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



Accessories

Do not place the set on an unstable cart, stand, table or shelf. The set may fall, causing serious injury to a child or an adult and serious damage to the set. Use only a cart or stand recommended by the manufacturer for the specific model of projection TV. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



Ventilation

The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of the set, and to protect it from overheating, these slots and openings must never be blocked or covered.

- Never cover the slots and openings with a cloth or other materials.
- Never block the slots and openings by placing the set on a bed, sofa, rug or other similar surface.
- Never place the set in a confined space, such as a bookcase or built-in cabinet, unless proper ventilation is provided.
- Do not place the set near or over a radiator or heat register, or where it is exposed to direct sunlight.



Power-Cord Protection

Do not allow anything to rest on or roll over the power cord, and do not place the set where the power cord is subject to wear or abuse.



Antennas

Outdoor Antenna Grounding

If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

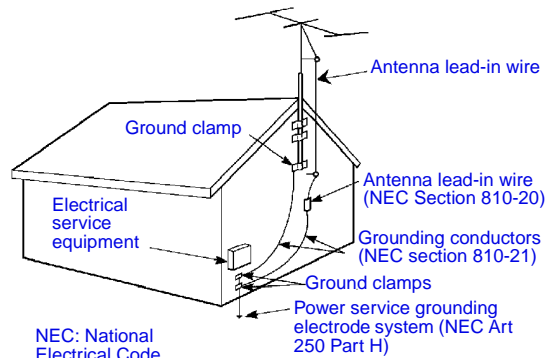
WHEN INSTALLING AN OUTDOOR ANTENNA SYSTEM, EXTREME CARE SHOULD BE TAKEN TO KEEP FROM CONTACTING SUCH POWER LINES OR CIRCUITS AS CONTACT WITH THEM IS ALMOST INVARIABLY FATAL.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in USA and Section 54 of the Canadian Electrical Code in Canada provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

Antenna Grounding According to the NEC

Refer to section 54-300 of Canadian Electrical Code for Antenna Grounding.



Lightning

For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

Service

Damage Requiring Service

Unplug the set from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- ❑ When the power cord or plug is damaged or frayed.
- ❑ If liquid has been spilled into the set.
- ❑ If the set has been exposed to rain or water.
- ❑ If the set has been subject to excessive shock by being dropped, or the cabinet has been damaged.
- ❑ If the set does not operate normally when following the operating instructions. Adjust only those controls that are specified in the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the set to normal operation.
- ❑ When the set exhibits a distinct change in performance, it indicates a need for service.



Safety Check

Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the set.



For Safety

Be careful when moving the projection TV

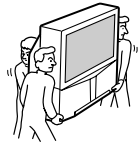
When you place the projection TV in position, be careful not to drop it on your foot or fingers.



Watch your footing while installing the projection TV.

Carry the projection TV in the specified manner

If you carry the projection TV in a manner other than the specified manner and without the specified number of persons, it may drop and a serious injury may be caused. Be sure to follow the instructions mentioned below.



- ❑ Carry the projection TV with the specified number of persons. (see page 10)
- ❑ Do not carry the projection TV holding the speaker grill.
- ❑ Hold the projection TV tightly when carrying it.

Servicing

Do not attempt to service the set yourself since opening the cabinet may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



Replacement Parts

When replacement parts are required, be sure the service technician certifies in writing that he has used replacement parts specified by the manufacturer that have the same characteristics as the original parts.

Unauthorized substitutions may result in fire, electric shock or other hazards.

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Introducing the Sony Projection TV

Presenting the Sony Projection TV

Thank you for purchasing the Sony Projection TV.

This manual is for models KP-43HT20, KP-53HS20, KP-53HS30, KP-61HS20 and KP-61HS30.

Model KP-53HS30 is used for illustration purposes.

Features

Some of the features that you will enjoy with your new projection TV include:

- ❑ **Hi Scan 1080™**: Enables you to receive the 1080i, 720p, 480p and 480i digital TV formats. By using the VIDEO 5/6 IN jacks, you can connect a DTV (digital television) receiver to view DTV programs.
- ❑ **DRC™ Multi-Function**: Unlike conventional line doublers, the DRC feature doubles vertical and horizontal lines, resulting in four times the density for quality sources such as DVD, Satellite and Digital camcorder.
- ❑ **CineMotion™**: Using the 2-3 Pull-Down technology, the CineMotion feature allows you to obtain a smooth picture movement when playing back movies or other video sources on film.
- ❑ **Twin View™**: Using Multi-Image Driver (MID-X), Twin View allows you to watch two programs side by side with the ability to zoom in one picture and listen to selected window. You can watch pictures from two different sources (1080i, 720p, 480p or 480i) simultaneously.
- ❑ **16:9 Enhancement**: Vertical Compression technology that maximizes picture resolution on “anamorphic” or “enhanced for wide screen” sources, including selected DVDs.
- ❑ **Steady Sound™**: Equalizes volume levels so there is consistent output between programs and commercials.
- ❑ **Parental Control**: V-Chip technology allows parents to block unsuitable programming for younger viewers.
- ❑ **Component Video Inputs**: Offers the best video quality for DVD (480p, 480i) and Digital Set-top box (1080i, 720p, 480p, 480i) connections.
- ❑ **S-VIDEO Inputs**: Provides a high-quality image for connected equipment.
- ❑ **Favorite Channel Preview**: Preview up to eight favorite channels without leaving the current channel.

- ❑ **Channel Index:** Allows you to view and choose from twelve programs.
- ❑ **Flash Focus™:** Allows you to adjust convergence automatically.

Using this manual

We recommend that you carefully review the contents of the following four sections in the order provided to ensure that you fully understand the operation of your new projection TV.

1 Installing and Connecting the Projection TV

This section guides you through your initial setup. It shows you how to install your projection TV, to connect your new components and to connect the antenna and cable.

2 Using the Features

This section shows you how to begin using your new projection TV. It shows you how to use your remote control functions.

3 Using the menus

This section teaches you how to access on-screen menus and adjust your projection TV settings.

Instructions in this manual are written for the remote control. Similar controls may be found on the projection TV console.

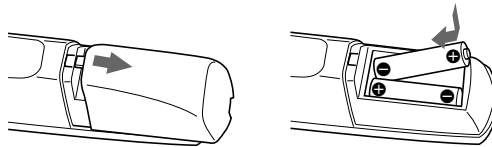
Installing and Connecting the Projection TV




Contents

Your box contains your new projection TV, a remote control and two AA batteries. No peripheral cables are included. If you intend to add additional equipment to your projection TV, please check the hookup instructions for your desired setup before you begin. You may need to purchase cables and/or splitters to complete the hookup properly.

Inserting Batteries to the Remote Control

Insert two size AA (R6) batteries (supplied) by matching the + and – on the batteries to the diagram inside the battery compartment.



-  Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.
-  Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.
-  Your remote control can be programmed to operate most video equipment. (See “Programming the Remote Control” on page 65.)

Carrying Your Projection TV

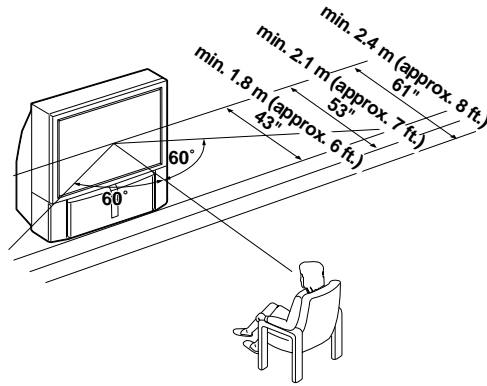
Carrying the projection TV requires three or more people.

The projection TV has been equipped with casters for easy movement on a hard surface. (for KP-53HS20, KP-53HS30, KP-61HS20 and KP-61HS30 only)

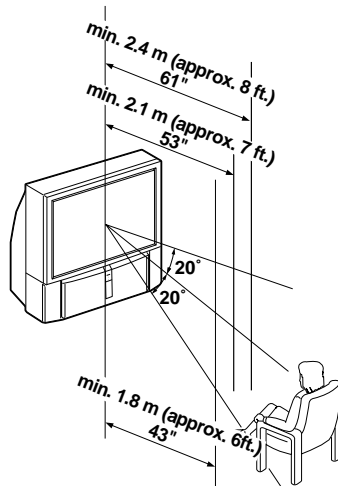
Please move your projection TV using the casters.

Installing the Projection TV

Recommended viewing area (Horizontal)



Recommended viewing area (Vertical)



Connector Types

You may find it necessary to use some of the following connector types during set up.

Coaxial cable

Standard TV cable and antenna cable

Plug Type



Screw-on Type



S Video cable

High quality video cable for enhanced picture quality



Audio/Video cable



Video - Yellow

Audio (Left) - White

Audio (Right) - Red

Some DVD Players are equipped with the following three video connectors.

Y - Green

P_B (C_B, C_b or B-Y) - Blue

P_R (C_R, C_r or R-Y) - Red

CONTROL S cable

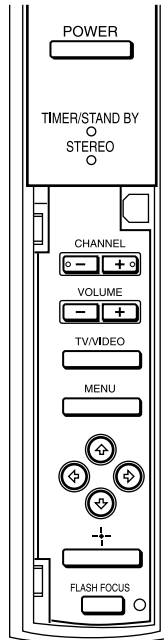
CONTROL S connections are exclusive to Sony products and allow greater control of all Sony equipment.



Projection TV Controls and Connectors

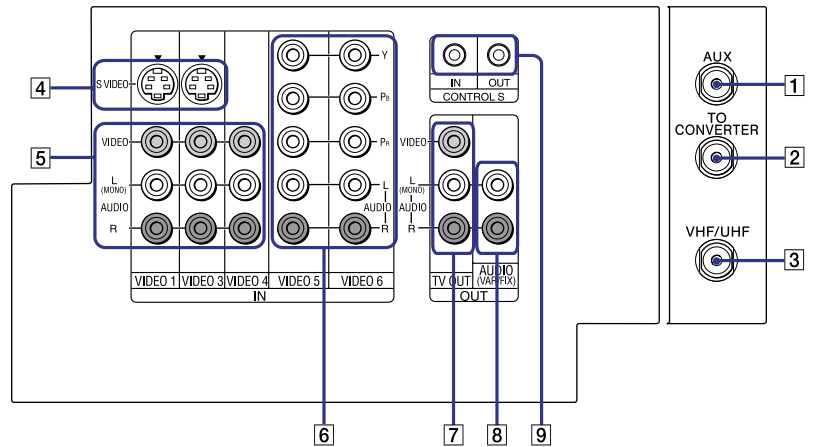
Front Panel Menu Controls

The front panel menu controls allow access to the on-screen menus without the use of a remote control. Pressing MENU brings up the on-screen menus. The arrow buttons move the on-screen cursor in the menus and the Select button (↵) selects the menu item.

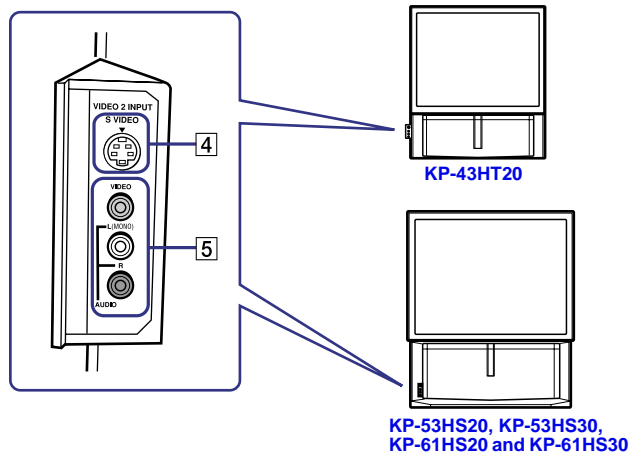


Projection TV Rear and Front/Side Panel Connectors

Rear of projection TV



Front or side of projection TV



Connection	Description
1 AUX	Allows you to view local and cable channels if your cable provider does not feature local channels. You can switch between local and cable channels easily by pressing ANT on the remote control. Devices connected to the AUX input cannot be viewed in Twin View.
2 TO CONVERTER	This is a VHF/UHF OUT jack that lets you set up your projection TV to switch between scrambled channels (through a cable box) and normal cable channels (CATV). Use this jack instead of a splitter to get better picture quality when switching between scrambled and unscrambled cable channels.
3 VHF/UHF	Connects to your VHF/UHF antenna or cable.
4 S VIDEO (Rear and front/ side)	Connects to the S VIDEO OUT jack of your VCR or other S VIDEO-equipped video component. Provides better picture quality than the VHF/UHF jacks or the Video IN jack.
5 VIDEO (L/R)/AUDIO (Rear and front/ side)	Connects to the audio and video OUT jacks on your VCR or other video component. A fourth video input (VIDEO 2) is located on the side panel (for KP-43HT20) or the front panel (for KP-53HS20, KP-53HS30, KP-61HS20 and KP-61HS30) of the projection TV.
6 Y/P _B /P _R (L/R)/AUDIO	Connects to your DVD player's or Digital Set-top box's component video (Y, P _B , P _R) and audio (L/R) jacks.
7 TV OUT	Connects to an AV receiver for greater control of all audio and video equipment. (see page 30) For detailed information about connection, refer to the operating manual supplied with the AV receiver.
8 AUDIO OUT (VAR/FIX) L (MONO)/R	Connects to the left and right audio inputs of your audio or video component.
9 CONTROL S IN/OUT	<p>To control other Sony equipment with the projection TV's remote control, connect the CONTROL S IN jack of the equipment to the CONTROL S OUT jack on the projection TV with the CONTROL S cable.</p> <p>To control the projection TV with a remote control for another Sony product, connect the CONTROL S OUT jack of the equipment to the CONTROL S IN jack on the projection TV with the CONTROL S cable.</p>

Basic Connections (Connecting Cable TV or Antenna)

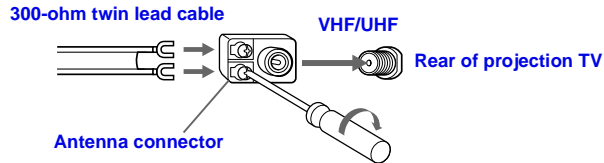
Connecting Directly to Cable or an Antenna

The connection you choose depends on the cable found in your home. Newer homes are equipped with standard coaxial cable (see **A**); older homes probably have 300-ohm twin lead cable (see **B**); other homes may contain both (see **C**).

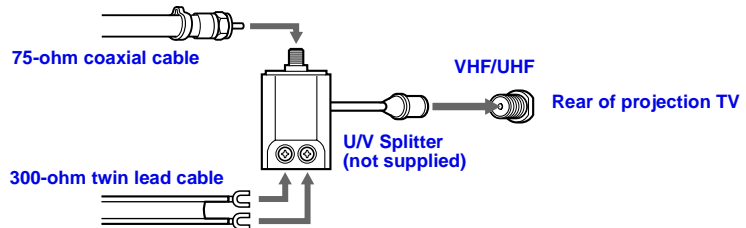
A VHF Only or VHF/UHF or Cable



B VHF Only or UHF Only or VHF/UHF

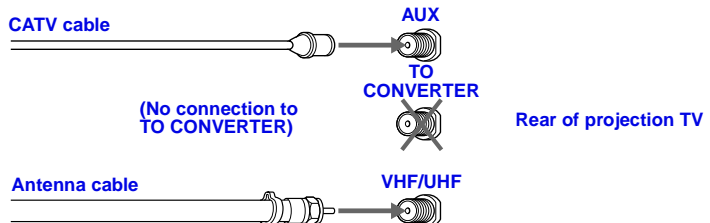


C VHF and UHF




Cable and Antenna

If your cable provider does not feature local channels, you may find this set up convenient.



Select CABLE or antenna (ANT) mode by pressing ANT on the remote control.

 To receive channels with an antenna, you need to turn your Cable to OFF (see page 52) and perform the Auto Program function (see page 53).

Cable Box Connections

Cable Box and Cable

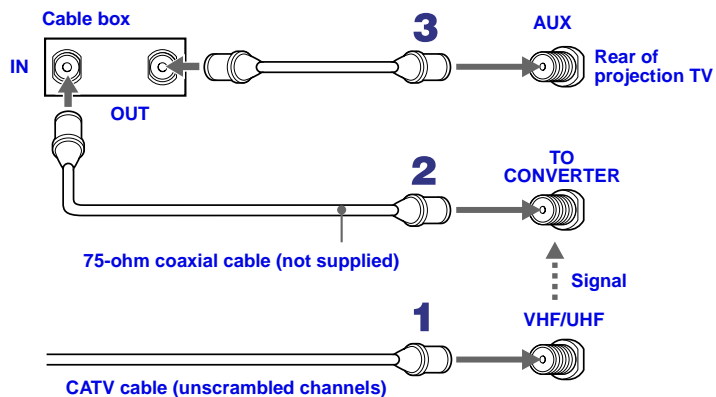
This is the preferred basic cable TV hookup to use if:


- ❑ Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- ❑ You want to enjoy the Twin View feature.

With this setup you can:

- ❑ Use the projection TV remote control to change channels using your cable box when the signal is scrambled.
- ❑ Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. (Your projection TV's tuner provides a better signal than the cable box.)
- ❑ Use the Twin View feature. (When all channels are routed through your cable box, only one channel is sent to the projection TV, so you can not use the Twin View or Channel Index features for your cable box.)

- 1 Connect the Cable TV cable to the projection TV's VHF/UHF jack.
- 2 Using a coaxial cable, connect the projection TV's TO CONVERTER jack to the cable box's IN jack. The projection TV's internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
- 3 Using a coaxial cable, connect the cable box's OUT jack to the projection TV's AUX jack.



 Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the TV (unscrambled).

(Continued)

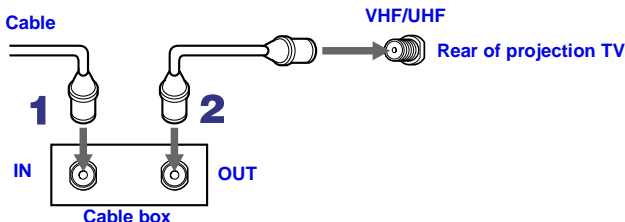
Cable Box Only

Use this hookup if:


- ❑ You subscribe to a cable TV system that uses scrambled or encoded signals requiring a cable box to view all channels, and
- ❑ You do not intend to hook up any other audio or video equipment to your projection TV.




When all channels are routed through your cable box, only one unscrambled channel is sent to the projection TV, so you cannot use the Twin View feature. If some channels are scrambled, but others are not, consider using the hookup on page 17 instead.

- 1 Connect the coaxial connector from your cable service to the cable box's IN jack.
- 2 Using a coaxial cable, connect the cable box's OUT jack to the TV's VHF/UHF jack.



Also, set Cable to ON in the Channel menu. (see page 52)

 Setting the Channel Fix feature in the Channel menu (see "Using the Channel Menu" on page 52) ensures that you do not accidentally switch the channels using your projection TV.

-  If you will be controlling all channel selection through your cable box, consider using the Channel Fix feature to set your projection TV to channel 3 or 4. (see page 53)
-  Your Sony remote control can be programmed to operate your cable box. (see "Programming the Remote Control" on page 65)
-  To change channels using the cable box, set your projection TV to channel 3 or 4 depending on the cable box channel output.

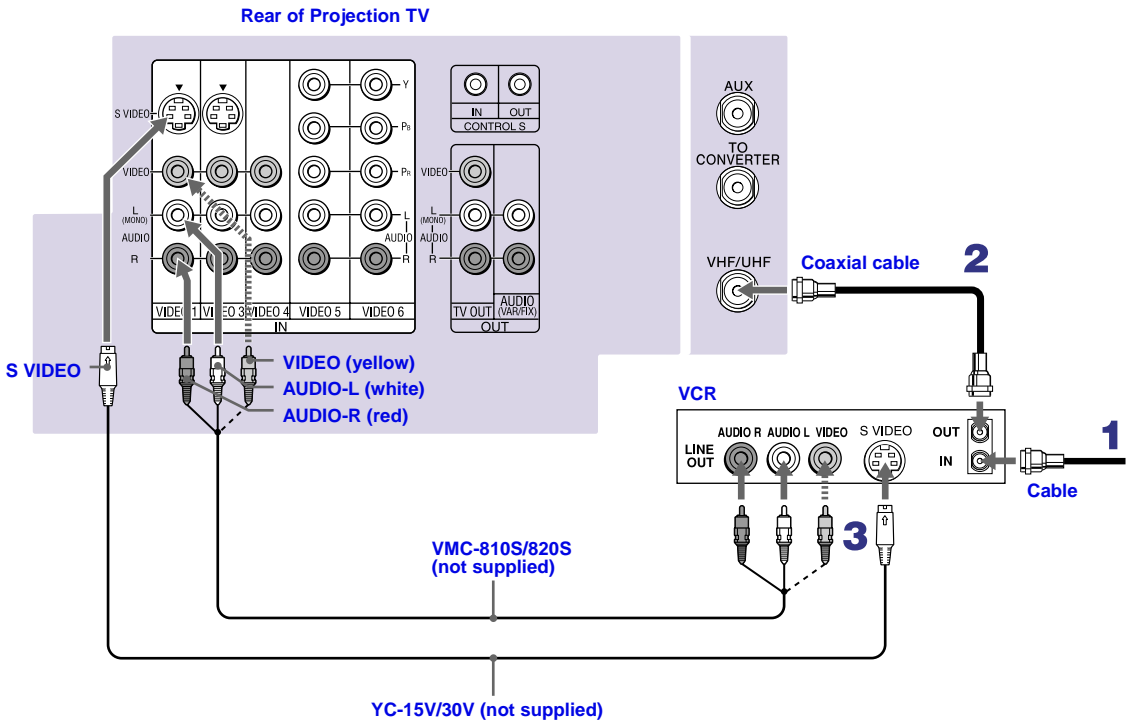
Connecting a VCR and Cable

Use this hookup if:

- You have cable TV that does not require a cable box.

Disconnect all power sources before making any connections.

- 1 Connect the cable TV cable to the VCR's IN jack.
- 2 Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
- 3 Using AUDIO and S VIDEO cables, connect the VCR's Audio and Video OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.



⚠ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting a VCR and Cable Box

Use this hookup if:

- ❑ Your cable TV company scrambles some channels, but not all of them (pay channels vs. regular cable channels) and you need to use a cable box, and
- ❑ You want to enjoy the Twin View feature.

With this setup you can:

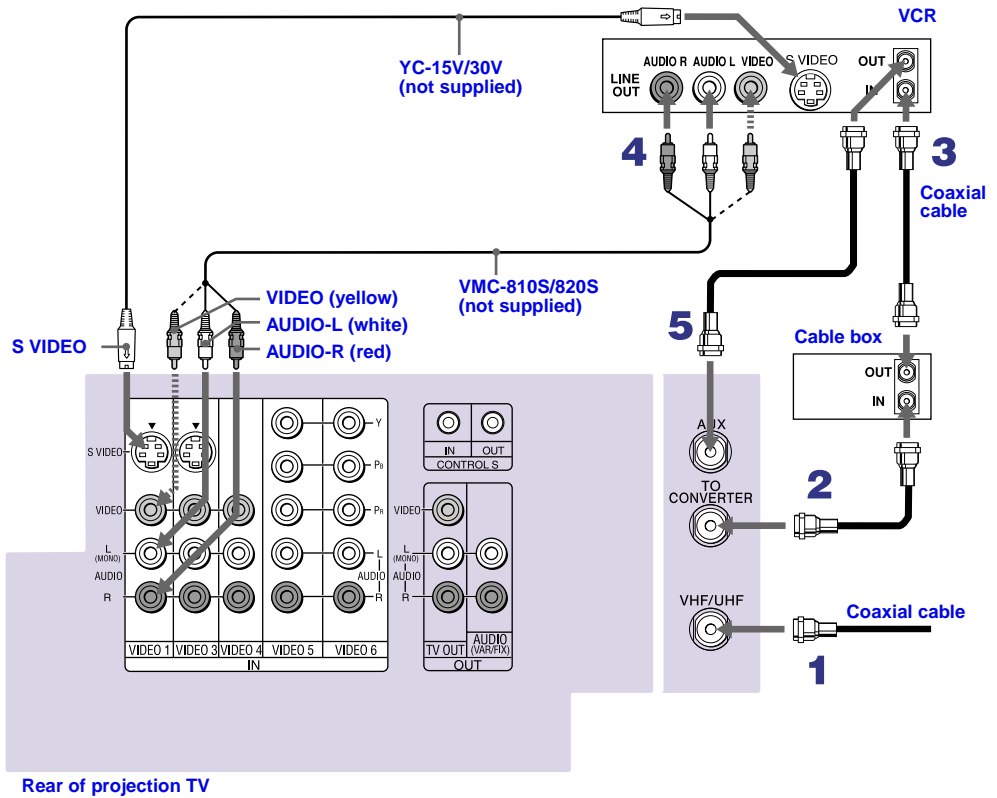
- ❑ Use the projection TV remote control to change channels using your cable box when the signal is scrambled.
- ❑ Use the projection TV remote control to change channels using your projection TV when the signal is not scrambled. Your projection TV's tuner provides a better signal than the cable box.
- ❑ Use the Twin View feature. (When all channels are routed through your cable box, only one signal is sent to the projection TV, so you cannot use the Twin View feature.)




Disconnect all power sources before making any connections.

- 1 Connect the Cable TV cable to the projection TV's VHF/UHF jack.
- 2 Using a coaxial cable, connect the TV's TO CONVERTER jack to the cable box's IN jack. The projection TV's internal converter allows you to switch between unscrambled signals coming straight into the projection TV and scrambled signals coming in through the cable box, eliminating the need for an external splitter.
- 3 Using a coaxial cable, connect the cable box's OUT jack to the VCR's IN jack.
- 4 Using AUDIO and S VIDEO cables, connect the VCR's AUDIO and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.
- 5 Using a coaxial cable, connect the VCR's OUT jack to the projection TV's AUX jack.



To view scrambled channels, set your projection TV to AUX 3 or 4 (depending on your cable box output). Change channels using your cable box.



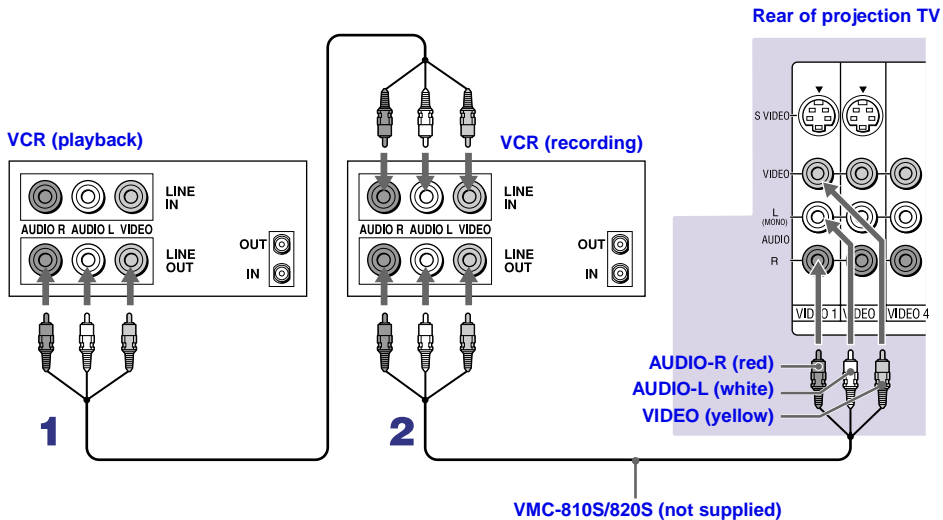
-  If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.
-  You will not be able to change channels on the VCR. Set your projection TV and VCR to channel 3 or 4, depending on your cable box channel output.
-  Pressing ANT on the remote control switches between the channels coming in through the cable box (scrambled) and those coming directly to the projection TV (unscrambled).

Connecting Two VCRs for Tape Editing

Connecting two VCRs together, then into the projection TV, allows you to switch between the two to be sure that what you are playing on one is recording on the other.

Disconnect all power sources before making any connections.

- 1 Using AUDIO and VIDEO cables, connect the playback VCR's Audio and Video OUT jacks to the recording VCR's Audio and Video IN jacks.
- 2 Using AUDIO and VIDEO cables, connect the recording VCR's AUDIO and Video OUT jacks to the projection TV's AUDIO and VIDEO IN jacks.




- To perform tape editing, set the projection TV to the video input intended for playback by pressing TV/VIDEO on the remote control.
- You may need to change the video input on your VCR. Consult your VCR's operating manual for instructions.
- If your VCRs have an S VIDEO jack: For best picture quality, use an S VIDEO connection instead of the yellow video cable on your combined A/V cable.
Using an S VIDEO cable, connect the playback VCR's S VIDEO OUT jack to the recording VCR's S VIDEO IN jack. S VIDEO does not provide audio, so audio cables must still be connected to provide sound.
- You cannot record signals from equipment connected to the Y, P_B, P_R input.

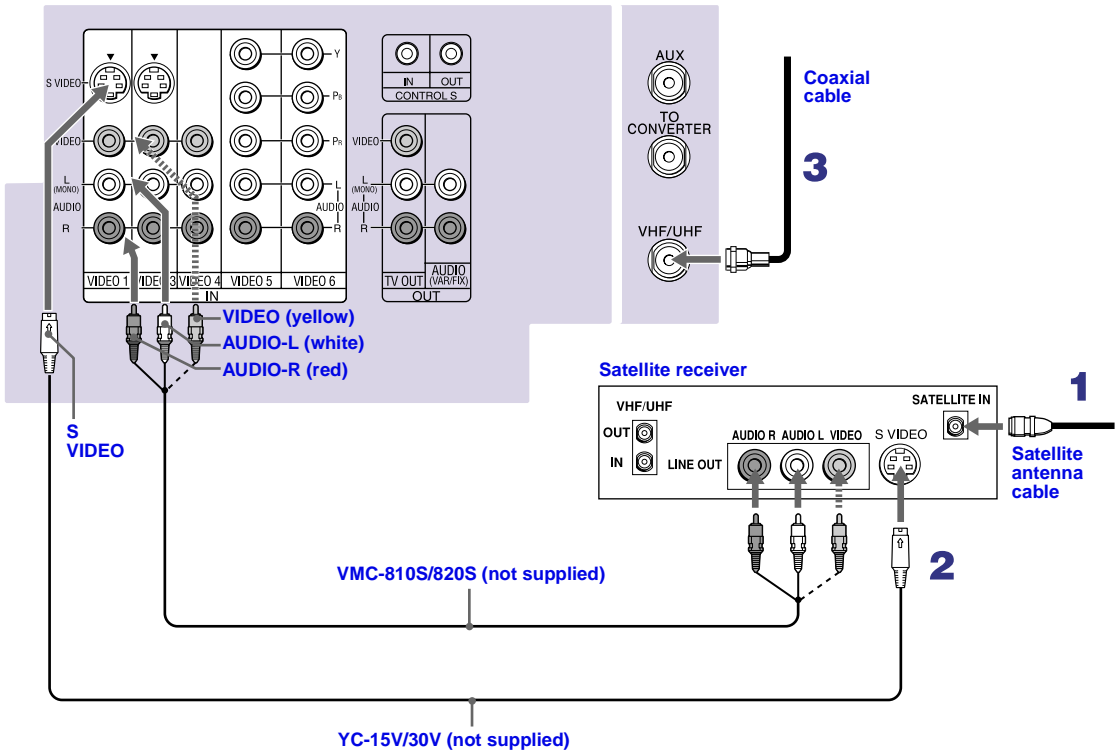
Connecting a Satellite Receiver

Disconnect all power sources before making any connections.

- 1 Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
- 2 Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.
- 3 Connect a coaxial cable from your cable or antenna to the projection TV's VHF/UHF jack.

 If your satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

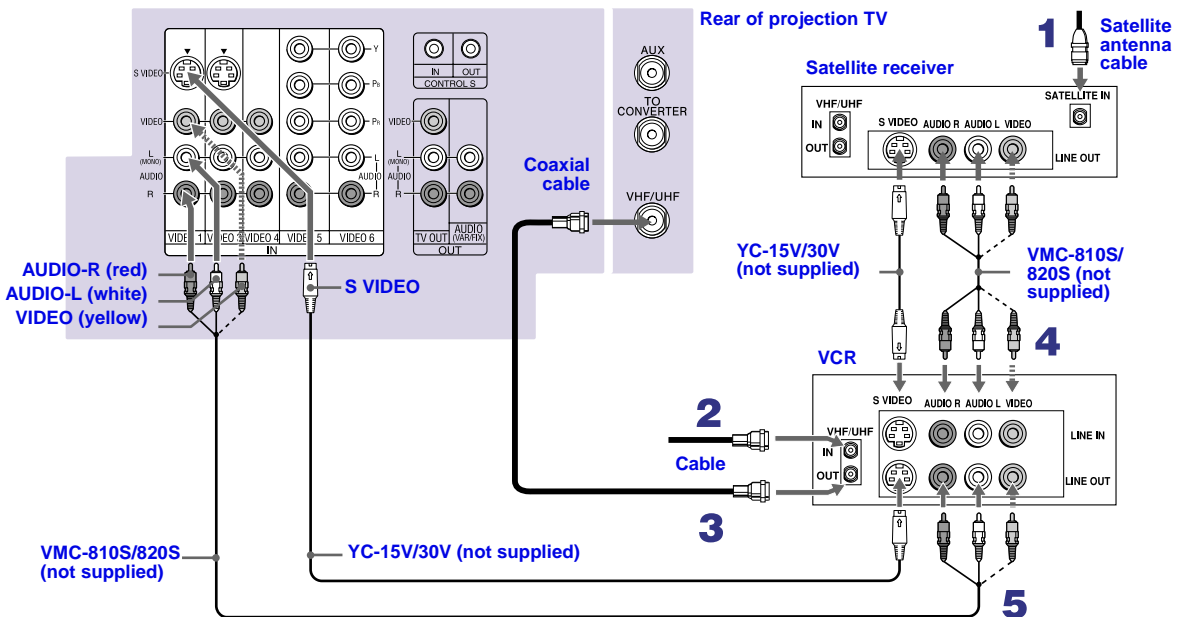
Rear of projection TV



Connecting a Satellite Receiver with a VCR

Disconnect all power sources before making any connections.

- 1 Connect the satellite antenna cable to the satellite receiver's SATELLITE IN jack.
- 2 Connect the CATV cable to the VCR's VHF/UHF IN jack.
- 3 Using a coaxial cable, connect the VCR's OUT jack to the projection TV's VHF/UHF jack.
- 4 Using AUDIO and S VIDEO cables, connect the satellite receiver's AUDIO and S VIDEO OUT jacks to the VCR's AUDIO and S VIDEO IN jacks.
- 5 Using AUDIO and S VIDEO cables, connect the VCR's AUDIO and S VIDEO OUT jacks to the TV's AUDIO and S VIDEO IN jacks.



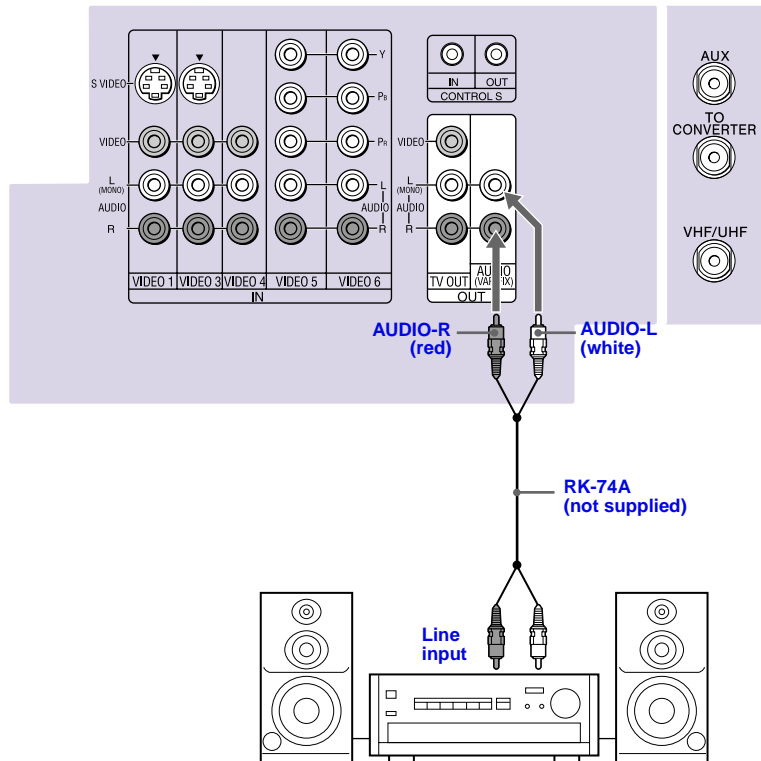
- Be sure your VCR's video input is set correctly. Consult your VCR's operating manual for instructions.
- Use TV/VIDEO to select
 - VIDEO 1 to watch satellite TV or the VCR. (Your VCR must be turned on)
 - VHF/UHF to watch cable TV.
- If your VCR or satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

Connecting an Audio Receiver

Disconnect all power sources before making any connections.

Using audio cables, connect the projection TV's AUDIO OUT (VAR/FIX) jacks to the audio receiver's audio LINE IN jacks.

Rear of projection TV




Connecting a DVD Player with Component Video Connectors

This is the preferred hookup to use if:

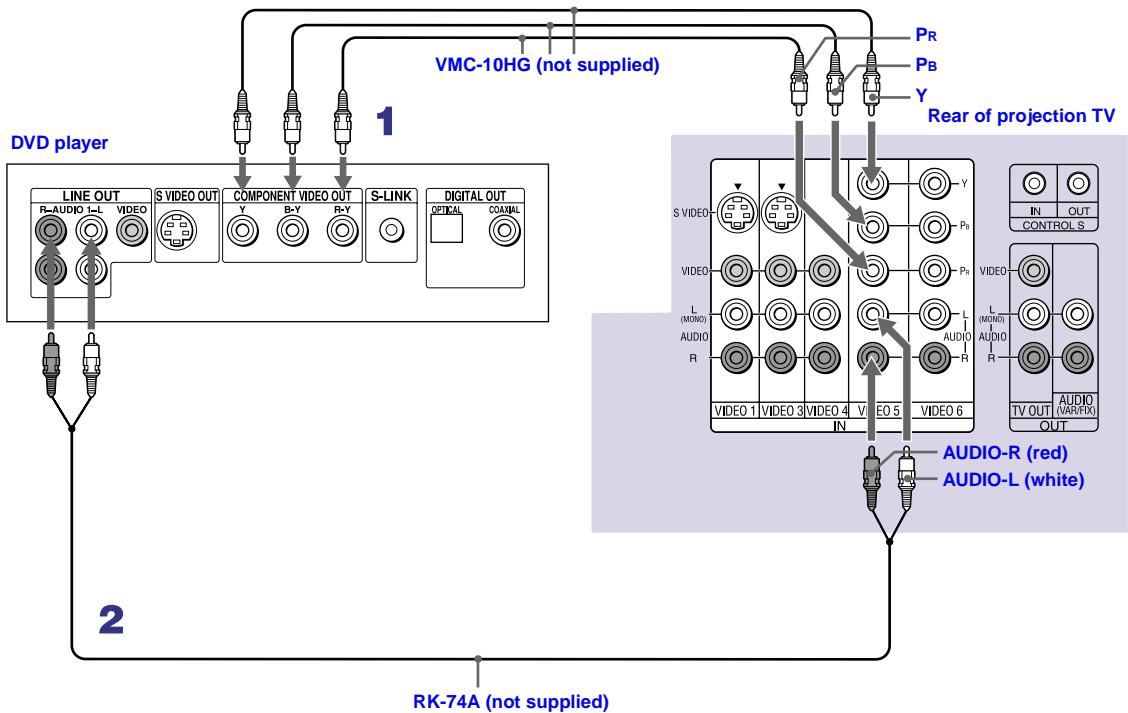
- Your DVD player has component (Y, PB, PR) jacks.

Disconnect all power sources before making any connections.

- 1 Using three separate component video cables, connect the DVD player's Y, PB and PR jacks to the Y, PB and PR jacks on the projection TV. Use the VIDEO IN 5 or 6 connections.

 The Y, PB and PR jacks on your DVD player are sometimes labeled Y, CB and CR, or Y, B-Y and R-Y. If so, connect the cables to like colors.

- 2 Using an audio cable, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks. Be sure to use the same row of inputs that you used for the video connection (VIDEO IN 5 or 6).



Connecting a DVD Player with A/V Connectors

Use this hookup if:

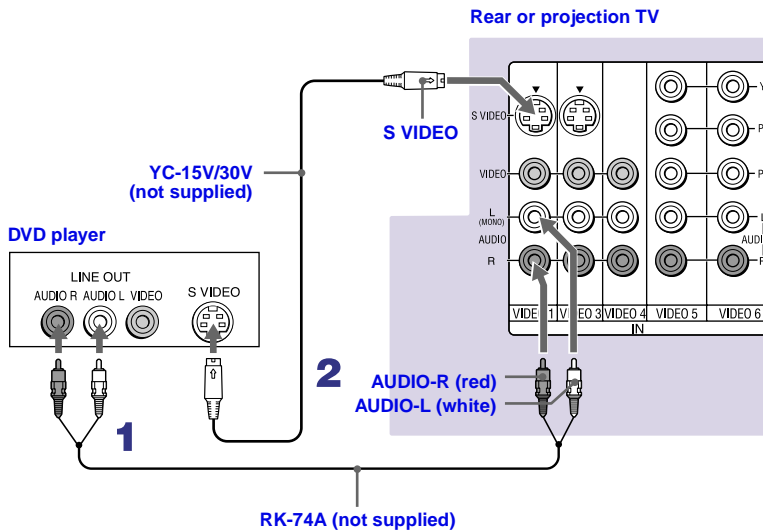
- Your DVD player does not have component (Y, PB, PR) jacks.



If your DVD player has video component output connectors: for best picture quality use the connection described on page 26.


Disconnect all power sources before making any connections.

- 1 Using audio cables, connect the DVD player's Audio OUT jacks to the projection TV's AUDIO IN jacks.
- 2 Using an S VIDEO cable, connect the DVD player's S VIDEO jack to the projection TV's S VIDEO jack.




Use TV/VIDEO on the remote control to switch between the VCR, DVD player and cable TV inputs.

Connecting a Digital TV Receiver

 Be sure to read the Set-top box manual.

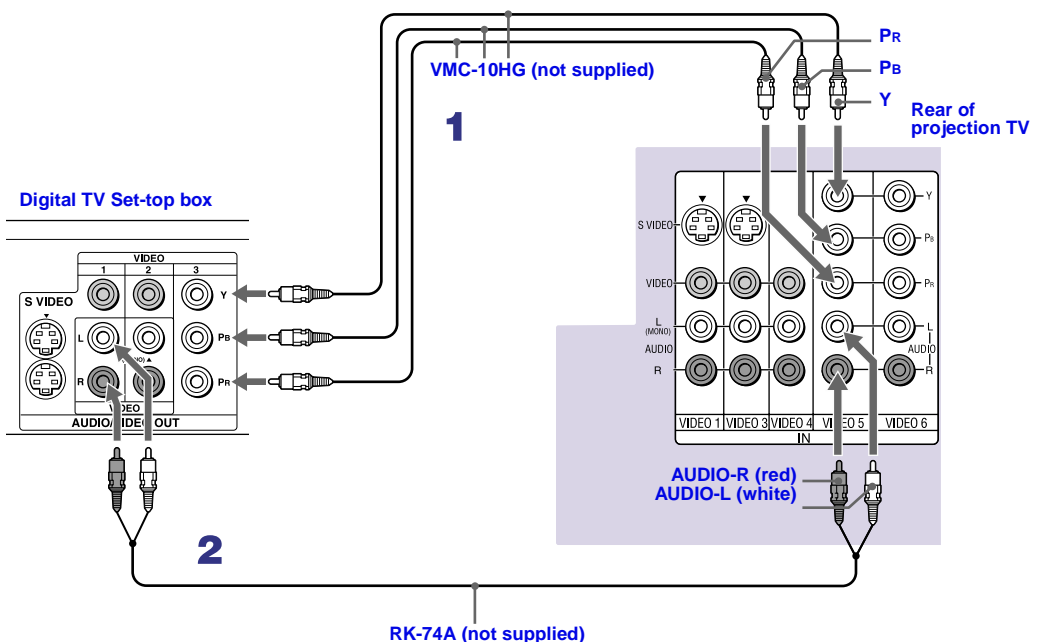
Disconnect all power sources before making any connections.


- 1 Using three separate component video cables, connect the Digital TV Set-top box's Y, P_B and P_R jacks to the projection TV.


 The Y, P_B and P_R jacks do not provide audio, so audio cables must be connected to provide sound.

Component input (Y, P_B and P_R) is recommended for optimum picture quality. Component input is necessary to view 480p, 720p and 1080i formats. You may also use component video or S VIDEO connections.

- 2 Using an audio cable, connect the Digital TV Set-top box's Audio OUT jacks to the projection TV's AUDIO IN jacks.





 You cannot record the signal from any equipment connected into the Y, P_B and P_R connectors.

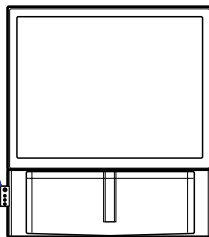
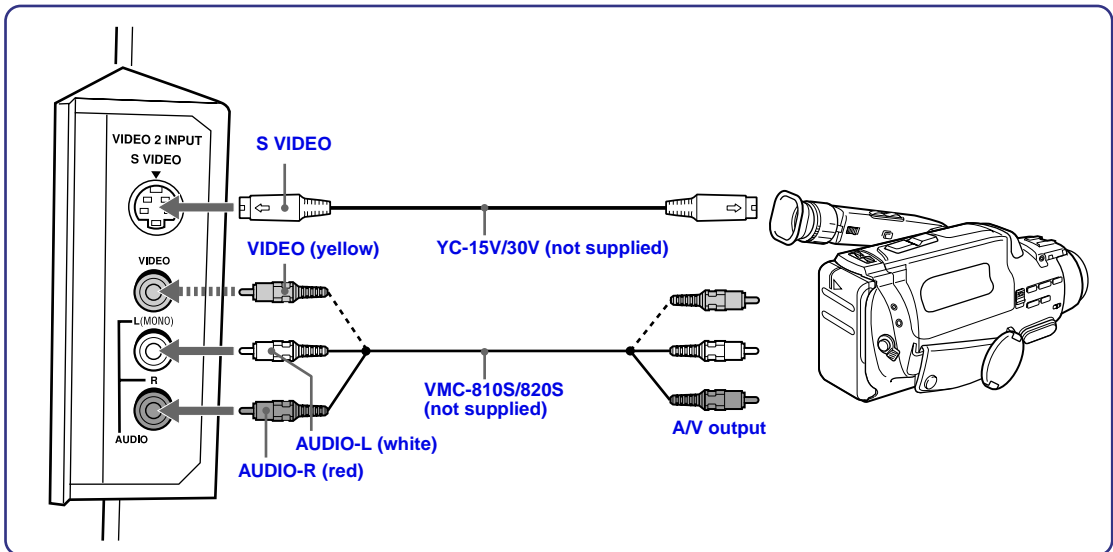
 This projection TV is not compatible with digital TV receivers configured with RGB or VGA output connectors.

Connecting a Camcorder

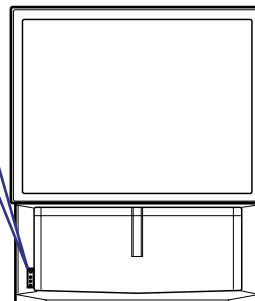
For easy connection of the camcorder, the projection TV has front Audio and Video inputs (shown below). However, if you prefer, you can also connect the camcorder to the projection TV's rear Audio and Video IN jacks.

Using AUDIO and S VIDEO cables, connect the camcorder's Audio and S VIDEO OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.

-  If you have a mono camcorder, connect its left audio output to the projection TV's AUDIO L jack.
-  If your camcorder is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



KP-43HT20



KP-53HS20, KP-53HS30,
KP-61HS20, and KP-61HS30

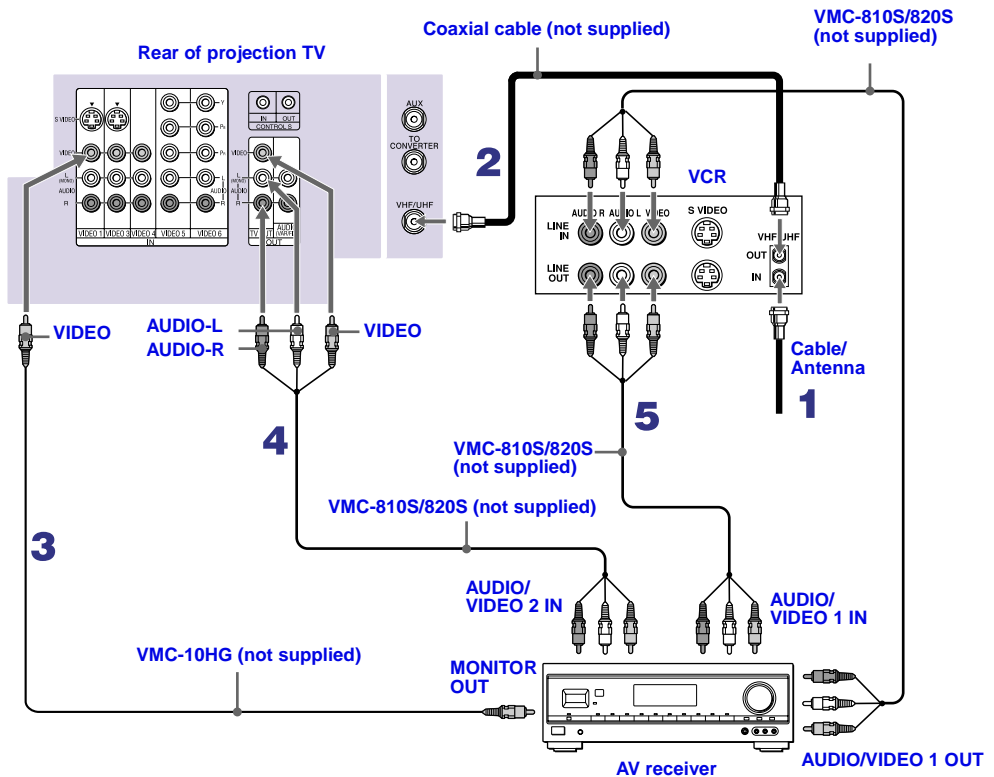
Connecting an AV Receiver

For greater control of all audio and video equipment, connect an AV receiver.

 Change "Video Label" for the VIDEO 1 input to "Receiver." (see page 64)

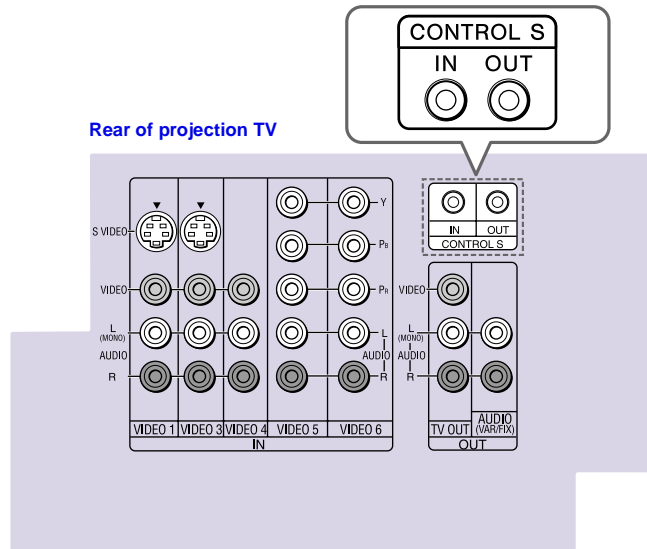
Disconnect all power sources before making any connections.

- 1 Connect the coaxial cable from the incoming cable connection or antenna to IN on the VCR.
- 2 Using a coaxial cable, connect OUT on the VCR to VHF/UHF on the projection TV.
- 3 Using a VIDEO cable, connect VIDEO of VIDEO 1 IN on the projection TV to MONITOR OUT on the AV receiver.
- 4 Using an AUDIO/VIDEO cable, connect TV OUT on the projection TV to AUDIO/VIDEO 2 IN on the AV receiver.
- 5 Using an AUDIO/VIDEO cable, connect the video equipment to the AV receiver.
- 6 Select the Setup menu and set "Video Label" to "Receiver" to fix your TV's input to AV receiver. (see "Video Label" on page 64)




Using the CONTROL S Feature

CONTROL S allows you to control your projection TV system and other Sony equipment with one remote control. In addition to allowing you to control multiple devices with one remote control, the CONTROL S feature allows you to always point your remote control at your projection TV, instead of having to point it at the other equipment, which might be hidden or out of direct line of sight.




Setting Up the Projection TV Automatically

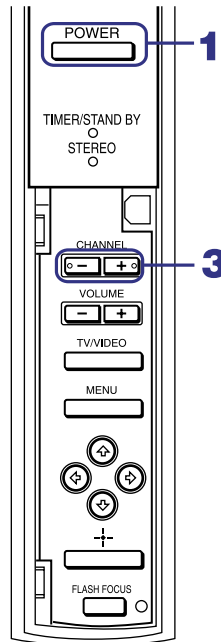
After you finish connecting your projection TV, you can run Auto Setup to set up your channels. The Auto Setup screen appears when you turn your projection TV on for the first time after installing it. If you do not want to set up the channels at this time, you can do it later by using the Auto Program feature in the Channel menu. (see page 53)


 The Auto Setup feature does not apply for installations that use a cable box for all channel selection.

Using Auto Setup

- 1 Press POWER on the front panel of your projection TV or on the remote control to turn on the projection TV.
- 2 Press the TV (FUNCTION) button on your remote control. Red light will briefly appear.
- 3 Press CH+ on your projection TV to run Auto Setup, or press CH- to exit. If you use the channel buttons on your remote control, be sure to use the main set of buttons ().

Projection TV front panel



 You can run Auto Program by selecting it in the Channel menu, as described on page 53.

Adjusting the Convergence Automatically – FLASH FOCUS™ –

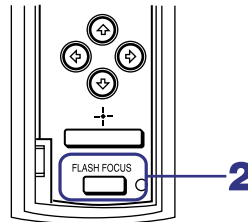
The projection tube image appears on the screen in three layers (red, green and blue). If they do not converge, the color is poor and the picture blurs.

Before you use your projection TV, be sure to adjust the convergence.

The FLASH FOCUS feature allows you to adjust the convergence automatically.

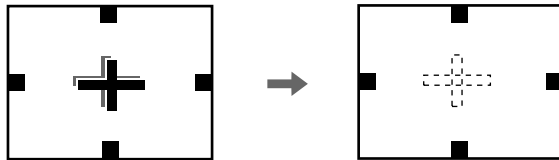
 It is recommended to perform FLASH FOCUS about 30 minutes after the projection TV is first turned on.

Projection TV
front panel






- 1 Receive a TV or cable TV program.
- 2 Press FLASH FOCUS.

The cross pattern appears and FLASH FOCUS begins to work. The adjustment is completed when the cross pattern becomes white and will come back to the program you are watching.



To obtain an optimum convergence for Digital TV programs

The optimum convergence alignment varies with digital TV formats. Whenever you find that the picture blurs, press FLASH FOCUS.

-  You cannot perform any other functions until FLASH FOCUS has completed its cycle.
-  If you perform any other operation while FLASH FOCUS is in progress, FLASH FOCUS operation is canceled.
-  Unshielded speakers or other metallic objects can cause picture distortion if placed close to the projection TV.

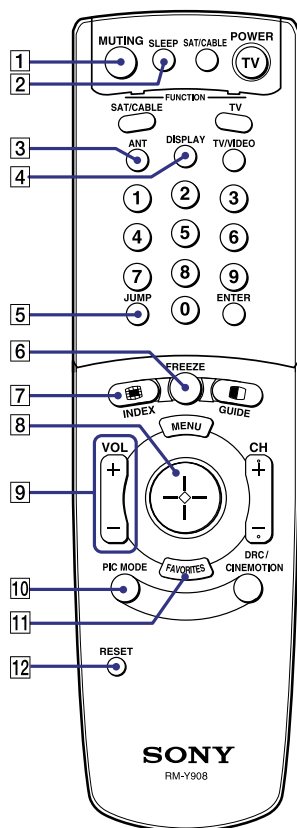
Using the Features

Using the Remote Control



The following table describes the buttons on the remote control that are for more advanced functions.

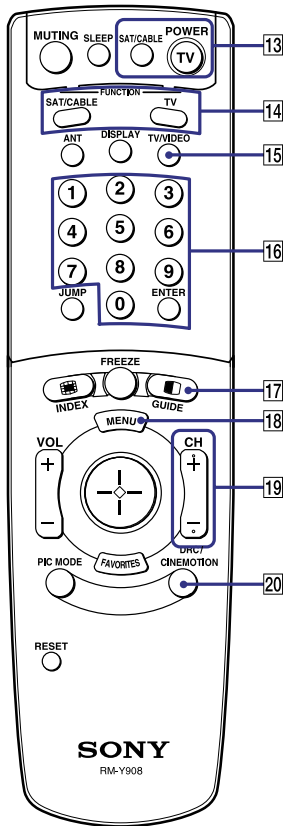
 Main Power button must be turned ON to activate the remote control.


Button Descriptions




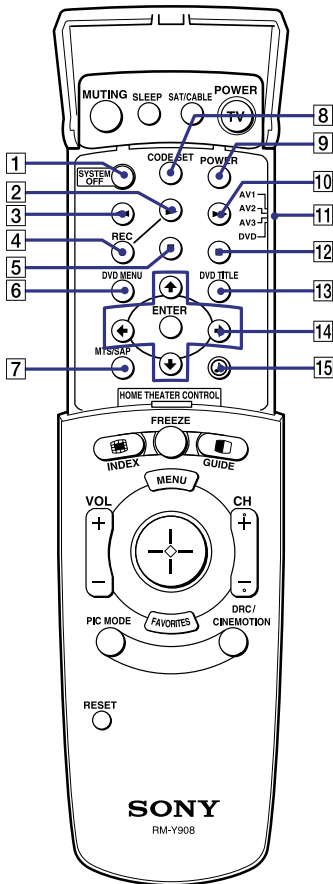
Outside Panel

Button	Description
1 MUTING	Press to mute the sound. Press again or press VOL + to restore the sound.
2 SLEEP	Press repeatedly until the projection TV displays the time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically. Cancel by pressing until SLEEP OFF appears. While Sleep feature is set, press once to view remaining time.
3 ANT	Changes between the VHF/UHF input to the AUX input.
4 DISPLAY	Press once to display the current time and channel label (if set) and channel number. Press again to turn Display off. See page 62 for details on setting the time.
5 JUMP	Press to jump back and forth between two channels. The projection TV alternates between the current channel and the last channel that was selected.
6 FREEZE	Freezes the window picture. Press again to restore the picture.
7  INDEX	Press to enter the Channel Index mode. You can view and select from twelve channels without leaving the current one.
8 	Joystick allows for movement of the on-screen cursor. Pressing down on the center of the joystick selects the item.
9 VOL +/-	Adjusts the volume.
10 PIC MODE	Press repeatedly to step through the available video picture modes: Vivid, Standard, Movie and Pro. Also available in the Video menu. For details, see "Selecting Video Options" on page 48.
11 FAVORITES	Displays the Favorite Channels list. For details, see "Using Favorite Channels" on page 40.
12 RESET	Press when in a menu to reset the settings to the factory defaults.











Button	Description
13 POWER buttons (GREEN)	Turn on and off the projection TV and other audio/video equipment you have programmed into the remote control. For instructions, see “Programming the Remote Control” on page 65.
14 FUNCTION buttons	Select the equipment (TV, SAT/CABLE) that you want to operate. The indicator lights up momentarily when pushed to show which device the remote control is operating.
15 TV/VIDEO	Cycles through the video equipment connected to your projection TV’s video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5 and VIDEO 6.
16 0 – 9 and ENTER	Press 0 - 9 to select a channel, the channel changes after 2 seconds. Press ENTER to select immediately.
17 	Turns on/off Twin View. For details, see “Using Twin View™” on page 41.
GUIDE	Displays the program guide of your satellite.
18 MENU	Press to display the projection TV on-screen menu. Press again to exit from the menus.
19 CH +/-	Scan through channels.
20 DRC/ CINEMOTION	Press repeatedly to step through the available high-resolution picture modes: Interlaced, Progressive and CineMotion. For details, see “Using the Video Menu” on page 48.

 To scan rapidly through the channels, press and hold down CH+ or CH-.



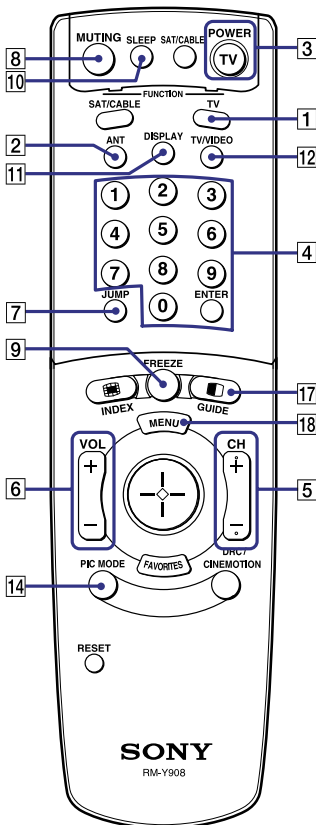
Inside Panel

Button	Description
1 SYSTEM OFF	Press to turn off the projection TV and all equipment connected with S-Link.
2 	Play
3 	Rewind
4 REC	Record
5 	Stop
6 DVD MENU	Displays the DVD menu.
7 MTS/SAP	Press to scroll through the Multi-channel TV Sound (MTS) options: Stereo, Auto SAP, and Mono.
8 CODE SET	Used for programming the remote control to operate non-Sony video equipment. For details, see "Programming the Remote Control" on page 65.
9 POWER	Press to turn on the DVD/VCR player you have programmed into the remote control. For instructions, see "Programming the Remote Control" on page 65.
10 	Fast-forward
11 	Use to switch control for connected video equipment. You can program one video source for each switch position. For details, see "Programming the Remote Control" on page 65.
12 	Pause (Press again to resume normal playback)
13 DVD TITLE	Displays the DVD title.
14  and ENTER	Use to operate the DVD menu.
15 	Press to select an audio option: Steady Sound ON or OFF.

Watching the TV

Many TV features can be accessed directly through the remote control. The following will explain the function of some buttons found on your remote control.

Buttons for Projection TV Operations



1 TV (FUNCTION)

Activates the remote control for use with the projection TV.

2 ANT— (AUX input)

Press to change between the VHF/UHF input and the AUX input. (for detailed connection information, see “Cable and Antenna” on page 16 or “Cable Box Connections” on page 17)

3 TV (POWER)

Turns the projection TV on and off. If a video input indication (e.g., VIDEO 1, VIDEO 2) appears on the screen, press TV/VIDEO or CH +/- until a channel number appears.

4 0-9 and ENTER

Use for direct channel selection. Press 0-9 to select a channel (for example, to select channel 10, press 1 and 0). The channel will change after 2 seconds, or you can press ENTER for immediate selection.

5 CH +/-

Press to scan through the channels (+ up or – down).

6 VOL +/-

Press to adjust the volume (+ up or – down).

7 JUMP

Press to alternate or jump back and forth between two channels. The projection TV will jump between the current channel and the last channel selected.

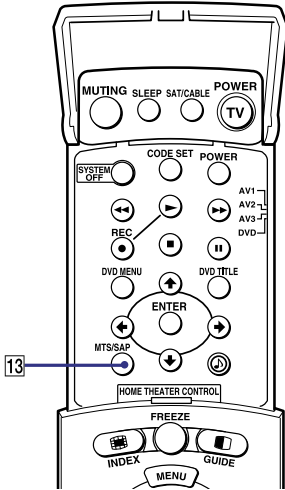
8 MUTING

Press to mute the sound. “MUTING” will appear on the screen and will dim three seconds later. To restore sound, press again or press VOL +.

9 FREEZE — (yellow labeled button)

This is useful when you need to copy down information that appears on the TV’s screen. (see “Using the Freeze Function” on page 44)

(Continued)



10 SLEEP

Press repeatedly until the projection TV displays the approximate time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically.

Cancel by pressing SLEEP until “SLEEP OFF” appears.

11 DISPLAY

Press to display the channel number, current time and channel label (if set).

To turn the display off, press DISPLAY again.

12 TV/VIDEO

Press repeatedly to scroll through available video inputs: TV, VIDEO 1, VIDEO 2, VIDEO 3, VIDEO 4, VIDEO 5 and VIDEO 6.

If you select Skip as a Video Label in the Setup menu, your projection TV will skip the video input you selected. (see “Video Label” on page 64)

13 MTS/SAP

Press to scroll through the Multi-channel TV Sound (MTS) options. (see “MTS” on page 50)

14 PIC MODE

Press PIC MODE repeatedly to directly choose one of five different video modes that best suits the program you are watching.

Vivid: Select for enhanced picture contrast and sharpness.

Standard: Select to display a standard picture for normal viewing environments.

Movie: Select to display a finely detailed picture for low light environments.

Pro (Professional): Select to display a picture with minimum enhancements.

When you select each mode, you can also adjust the picture quality (such as Brightness, Color, etc.) to suit your taste. For details, see “Mode” on page 48.

Watching the Digital TV

When you have connected the DTV receiver, you can enjoy digital TV programs. This projection TV is capable of receiving the 1080i, 720p, 480p and 480i digital TV formats.



This projection TV is not capable of displaying a native 720p format signal. When the 720p format signal is received, it is converted into a 480p format signal.

To view a digital TV program

- 1** Connect the DTV receiver to VIDEO 5 or 6 IN on the projection TV. (for details, see page 28)
- 2** Press TV/VIDEO to select VIDEO 5 or 6.
- 3** Select a digital channel on the DTV receiver. For details, see the Operating Manual of the DTV receiver.
- 4** Adjust the volume on this projection TV as necessary.




The optimum convergence alignment varies with digital TV formats. Whenever you find that the picture blurs, press FLASH FOCUS. (for details, see page 33)

Using Favorite Channels

The Favorite Channel feature lets you select programs from a list of favorite channels that you preset.

To display a list of your favorite channels:


 Your Favorite Channel options can be set automatically or manually. The factory setting for Favorite Channel is Auto. When Favorite Channel is set to Auto, the last eight channels selected with 0-9 buttons will be set as Favorite Channel options. If you want to input your own selections as Favorite Channel settings, see “Favorite Channel” on page 52.

- 1 Press FAVORITES.

The Favorite Channel options appear.



Preview window


- 2 Move the joystick up or down to highlight the channel you want to watch. The program on that channel appears in the preview window. Press  to select.

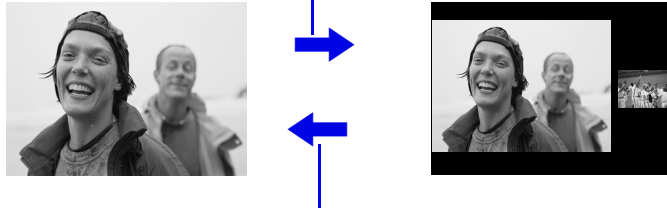
Using Twin View™

Twin View enables you to watch two programs at the same time. You can also change the size of both the left and right pictures.



Displaying Twin Pictures

To display twin pictures

- 1 Make sure your projection TV is tuned to a working channel.
- 2 Press .



To cancel twin pictures

- Press  again (or press .

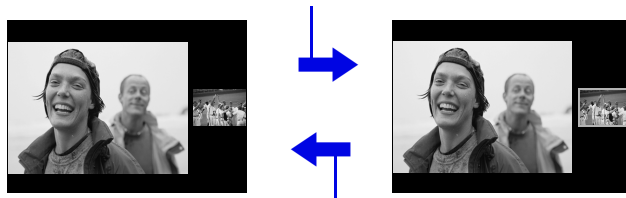
Activating the Picture

Although two pictures appear on the screen at the same time, only one picture is active. Change the picture size by using the joystick. For an active picture, you can:

- Change channels.
- Adjust the volume.
- Switch the input sources from VHF/UHF to cable by pressing ANT or TV/VIDEO to switch the video input.
- Change the picture size by pressing the joystick up or down.

To activate the right picture






- Move the joystick to the right.



To activate the left picture

- Move the joystick to the left.

(Continued)

-  When you adjust the twin screen sizes, the projection TV memorizes the change. The next time you use the Twin View feature with 480i or 480p format input source, the memorized sizes appear.
-  When viewing an enhanced 16:9 picture, the aspect ratio changes to 4:3 in Twin View. The picture will be reformatted to that aspect ratio.
-  If viewing a 720p or 1080i format input source, the aspect ratio will maintain the original 16:9 aspect ratio.
-  Hookups that affect your ability to use Twin View:
 - If you are viewing all channels through the cable box, the Twin View feature will not work. The cable box only unscrambles one signal at a time, so the right picture will be the same as the left picture.
 - You can watch a scrambled cable channel and another video source. Be sure your DVD player, VCR or satellite receiver are connected to one of the VIDEO IN 1-6 and AUX inputs on the rear of the projection TV. Pictures from equipment connected to VIDEO 5, 6 and AUX will only appear in the left picture, not in the right.
-  The active picture is highlighted in cyan.

Changing the Picture Size

The zoom feature lets you change the size of the left and right pictures.

To enlarge the left picture (reduce the right)

- 1 Move the joystick left to activate the left picture (if not already activated).
- 2 Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.



To enlarge the right picture (reduce the left)

- 1 Move the joystick right to activate the right picture (if not already activated).
- 2 Move the joystick up to enlarge the picture and move the joystick down to reduce the picture.



When you adjust the twin screen sizes, the projection TV memorizes the change. The next time you use the Twin View function, the memorized sizes appear.

Using the Freeze Function


The FREEZE button allows you to temporarily capture a program's picture. You can use this feature to write down information such as phone numbers, recipes, etc.

To use the Freeze function

- 1 When the program information you want to capture is displayed, press FREEZE.
- 2 The projection TV switches to Twin View mode and displays the "frozen" picture on the right, while the current program continues on the left.




- 3 To cancel and return to normal viewing, press FREEZE.

 Freeze feature is not available if you are already in Twin View™ mode.

Using Channel Index

Channel Index allows you to display multiple channels and select one directly.

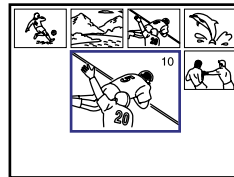
The channels used for Channel Index will come directly from the projection TV's list of receivable channels (those set during "Auto Program" on page 53)

 Channel Index will not function when Parental Lock is activated. (See "Using the Parent Menu" on page 54.)


To use the Channel Index function

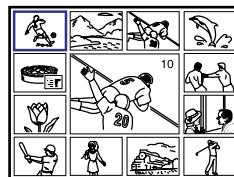
1 Press .

The current channel will be reduced in size and displayed in the center of the screen in normal motion picture format. The first twelve receivable channels will appear one after another, clockwise, around the center picture. These small pictures are updated in intervals of one second. The channel number and channel caption (if set) on the second and later appearances will dim.

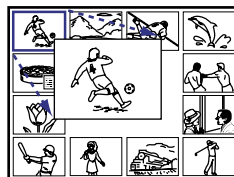


A cyan-colored frame will appear to indicate current channel selection.

2 Move the joystick in any direction to move the cyan frame to the channel that you wish to view, and press .






The selected channel will zoom in and move to the center, and the sound of that channel will be heard.



(Continued)

For the center picture you can:

- Change the channel by pressing 0-9 and ENTER.
- Switch the input sources from VHF/UHF to cable by pressing ANT or to the video input by pressing TV/VIDEO, without changing the surrounding channels.

-  Sound will only be heard from the center picture.
-  If one of the pictures received through Channel Index is snowy, the entire screen may become unstable. In this case, erase the snowy channel. (see "Channel Skip/Add" on page 53)
-  If you leave the Channel Index screen displayed for an hour without any additional operation, Channel Index is canceled and the normal picture reappears.

3 If you wish to view another channel, repeat step 2.

To view another twelve channels, press CH+.

To view the previous twelve, press CH-.


To view the normal picture of the selected channel, proceed to step 4.

4 Press .

The center picture will be enlarged for normal viewing.

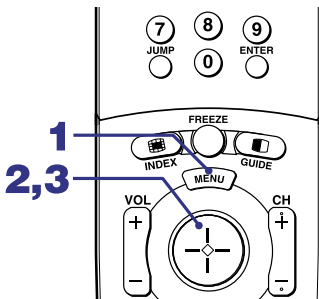


To cancel Channel Index

- Press  again to resume normal viewing.

Using the Menus

Overview



Opening and choosing a menu:

- 1 Press MENU to display the menu screen.
- 2 Move the joystick to the desired menu icon and press to select it.
- 3 Use the joystick to scroll through the features.
- 4 See the specific menu page for instructions on moving through the menu.

The menu gives you access to the following features:

<i>Menu Icon</i>	<i>Description</i>	<i>Page</i>
	Allows you to make adjustments to your picture settings. It also allows you to customize the Picture Mode based on the type of program you are viewing.	48
	Offers enhanced audio options such as listening to second audio programming (SAP), or customizing the Effect of the sound on your projection TV.	50
	Allows you to set up a Favorite Channel list, run the Auto Program function, and more.	52
	Lets you control the viewing of programs based on their ratings.	54
	Lets you set the clock on your projection TV and allows you to program your projection TV for scheduled viewing using the Timers.	62
	Provides several options for setting up your channels, labeling your Video inputs, and selecting the language of the on-screen menus.	63

To end a menu session:

Press MENU again.





To end one menu session and move to another:

Press the joystick to return to the menu icons. Move the joystick to choose the next menu icon and press to select it.



Using the Video Menu

To select the Video Menu


- 1 Press MENU.
- 2 Move the joystick to the Video icon  and press .
- 3 Use the joystick to scroll through the features.
- 4 Press  to select a feature. That feature's adjustment appears.
- 5 Use the joystick to make the desired adjustments.
- 6 Press  to select/set.
- 7 Press MENU to exit the menu screen.




To restore the factory default settings for Picture, Brightness, Color, Hue, Sharpness and Color Temp

- Press RESET on the remote control when in the Video menu.

Selecting Video Options

 To quickly and easily change from one Video Mode to another, use the PIC MODE on the remote control.

The Video menu includes the following options.





Option	Description
Mode	Vivid Select for enhanced picture contrast and sharpness.
<i>Customized picture viewing</i>	Standard Recommended for Normal viewing conditions.
	Movie Select for soft, film like, picture.
	Pro Select for professional monitor like appearance.
	 You can alter the Video menu settings (Picture, Brightness, Color, etc.) for each Mode.
Picture	Adjust to increase picture contrast and deepen the color or decrease picture contrast and soften the color.
Brightness	Adjust to brighten or darken the picture.
Color	Adjust to increase or decrease color intensity.
Hue	Adjust to increase or decrease the green tones.
Sharpness	Adjust to sharpen or soften the picture.
Color Temp	Choose from three color temperatures:
<i>White intensity adjustment</i>	Cool Select to give the white colors a blue tint.
	Neutral Select to give the white colors a neutral tint.
	Warm Select to give the white colors a red tint (NTSC-Standard).

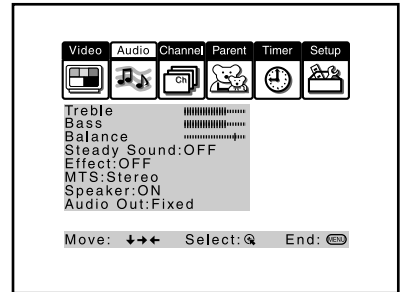
Option	Description
DRC Mode	Creates a high-resolution picture with 4x density, for high quality sources (i.e., DVD player, Satellite receiver).
Digital Reality Creation	Select from Interlaced, Progressive and CineMotion.
Interlaced	Recommended for moving pictures.
Progressive	Recommended for still images and text.
CineMotion	Recommended for 24 frame-per-second films.



Using the Audio Menu

To select the Audio Menu

- 1 Press MENU.
- 2 Move the joystick to the Audio icon  and press .
- 3 Use the joystick to scroll through the options.
- 4 Press  to select an option. That option's settings appear.
- 5 Use the joystick to scroll through the settings.
- 6 Press  to select the desired setting.
- 7 Press MENU to exit the menu screen.



To restore the factory default settings for Treble, Bass and Balance

- Press RESET on the remote control when in the Audio menu.

Selecting Audio Options

The Audio menu includes the following options:





Option	Description
Treble	Adjust to increase or decrease higher-pitched sounds.
Bass	Adjust to increase or decrease lower-pitched sounds.
Balance	Adjust to emphasize left or right speaker balance.
Steady Sound	ON Select to stabilize the volume.
	OFF Select to turn off Steady Sound.
Effect	TruSurround Select for surround sound (for stereo programs only).
	Simulated Adds a surround-like effect to mono programs.
	OFF Normal stereo or mono reception.
MTS <i>Enjoy stereo, bilingual and mono programs</i>	Stereo Select for stereo reception when viewing a program broadcast in stereo.
	Auto-SAP Select to automatically switch the projection TV to second audio programs when a signal is received. (If no SAP signal is present, the projection TV remains in Stereo mode.)
	Mono Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)

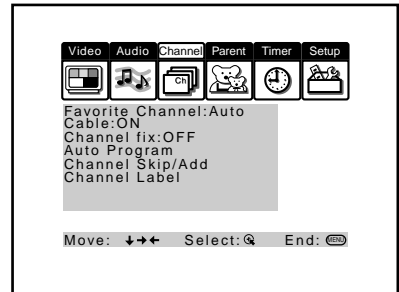
Option	Description	
Speaker	ON	Select to turn on the projection TV speakers.
	OFF	Select to turn off the projection TV speakers and listen to the projection TV's sound only through your external audio system speakers.
Audio Out <i>Easy control of volume adjustments</i>	Variable	The projection TV's speakers are turned off, but the volume output from your audio system can still be controlled by the projection TV's remote control.
	Fixed	The projection TV's speakers are turned off and the volume, bass and treble output of the projection TV is fixed. Use your audio receiver's volume control to adjust the volume through your audio system.



Using the Channel Menu




To select the Channel Menu



- 1 Press MENU.
- 2 Move the joystick to the Channel icon  and press .
- 3 Use the joystick to scroll through the features.
- 4 Press  to select a feature. That feature's options appear.
- 5 Use the joystick to scroll through the options.
- 6 Press  to select the desired option.
- 7 Press MENU to exit the menu screen.



Selecting Channel Options

The Channel menu includes the following options:

Option	Description
Favorite Channel	<p>Auto Select if you want Favorite Channel options to be set automatically to the last eight channels selected with the 0-9 buttons.</p> <p>Manual Select if you want to input your own selections as Favorite Channel options.</p> <ol style="list-style-type: none"> 1 Press  to select a favorite channel number. 2 Use the joystick to scroll through the channels until you find the channel you want to add to your favorites. 3 Press  to select it.
Cable	<p>ON Select if you are receiving cable channels with a CATV cable.</p> <p>OFF Select if you are using an antenna.</p> <p> You should run Auto Program after changing the Cable setting.</p>

Option	Description
Channel Fix <i>Useful when you have a cable box or satellite receiver connected</i>	<p>2-6 “Fix” your projection TV’s channel setting to 3 or 4 and use the cable box, VCR or satellite receiver to change channels. Select one of these settings if you have connected the device to the VHF/UHF jack.</p> <hr/> <p>AUX 2-6 Same as 2-6, except you select one of these settings if you have connected the device to the AUX jack. (see page 15)</p> <hr/> <p>VIDEO 1 Use when connecting an AV receiver to control external video sources. TV output should be connected through the AV receiver.</p>
Auto Program	Automatically programs the projection TV for all receivable channels.
Channel Skip/Add	<p>Removes and adds viewable channels.</p> <ol style="list-style-type: none"> 1 Use the joystick to scroll through the channels until you find the channel you want to skip/add. 2 Press  to select it. 3 Press the joystick up or down to toggle between “Add” and “Skip.” 4 Press  to select.
Channel Label	Label up to 20 channels with their station call letters.



Using the Parent Menu

The Parent menu allows you to set up the TV to block programs according to their content and rating levels.

These ratings are assigned by a federal rating board. Not all programs are rated. Using the Parental Lock blocks programs with a specific rating, but it does not block an entire channel.

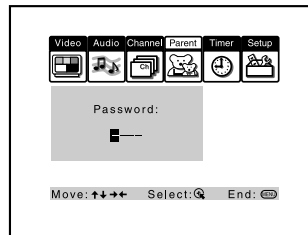
Channel Index will not function when Parental Lock is activated.

Using the Parent Menu

To select the rating

First, set a password, then select the country you reside in (U.S.A. or Canada) and your desired rating.

- 1 Press MENU.
- 2 Move the joystick to the Parent icon and press .




- 3 Use the 0-9 buttons on the remote control to enter your four-digit password.
- 4 Confirm your password by entering it again. Your password is stored and the Parent menu options appear.

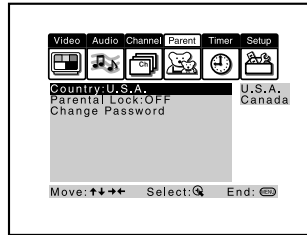
You need the password entered here for any future access into the Parent menu. If you lose your password, see “Lost password” on page 71.


If you want to change the password, see page 56.

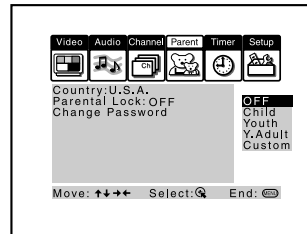
- 5 Make sure that “Country” is selected, and press .




- 6 Move the joystick up or down to select U.S.A. or Canada according to the country you reside in, and press .

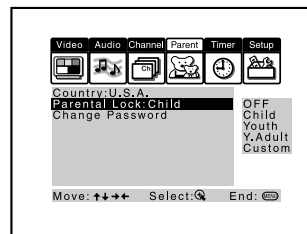


- 7 Move the joystick down to select “Parental Lock”, and press .



- 8 Move the joystick up or down to select a desired rating, and press .


If you select Child, Youth, Young Adult or Custom, the Parental Control is activated automatically.




If you want to select the ratings from Custom, see “Using Custom Rating Options” on page 57.

- 9 Press MENU to exit the menu screen.

Using the Menus

 If you are not familiar with the Parental Guideline rating system, you should select Child, Youth, or Young Adult to help simplify the rating selection. To set more restrictive ratings, select Custom.

 For descriptions of Child, Youth, and Young Adult ratings, see pages 60 and 61.


The Parent menu includes the following options.

Option	Description	
Parental Lock	OFF	Parental lock is off. No programs are blocked from viewing.
<i>Turn ratings on/off and select a rating system</i>	Child	Maximum ratings permitted are: <input type="checkbox"/> US: TV-Y, TV-G, G <input type="checkbox"/> Canada: TV-Y, C, G
	Youth	Maximum ratings permitted are: <input type="checkbox"/> US: TV-PG, PG <input type="checkbox"/> Canada: TV-PG, PG, 8 ans+
	Young Adult	Maximum ratings permitted are: <input type="checkbox"/> US: TV-14, PG-13 <input type="checkbox"/> Canada: TV-14, 14+, 13 ans+
	Custom	Select to set ratings manually. <input type="checkbox"/> US: See page 60 for details. <input type="checkbox"/> Canada: See page 61 for details.
Change Password		For changing your password. (see below)

To deactivate the Parental Control feature

- Set Parental Lock to OFF when in the Parent menu.

To change the password

- 1 Select Change Password option when in the Parent menu using the joystick, and press .
- 2 Enter a new four-digit password using the 0-9 buttons.
- 3 Confirm the new password by entering it again.
- 4 Press MENU to exit the menu screen.

Viewing Blocked Programs


You can view a blocked program by entering the password.

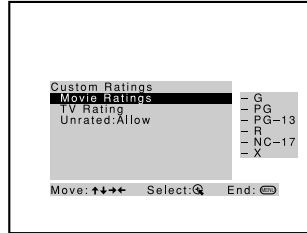
- 1 Press ENTER when tuned to a blocked program.
- 2 Enter your password using the 0-9 buttons.


Parental Control will be canceled temporarily until you turn your projection TV off.

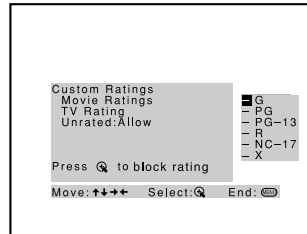
Using Custom Rating Options


If you want to select the ratings to be blocked from Custom, follow the procedure below.


- 1 Perform the steps 1 to 7 in “To select the rating” on page 54 to display the Parental Lock options.
- 2 Move the joystick up or down to select “Custom,” and press .

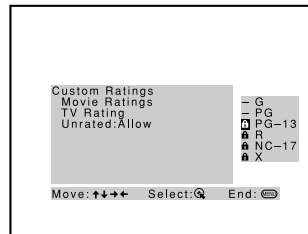




- 3 Make sure that “Movie Ratings” is selected, and press .




- 4 Move the joystick up or down to select the rating to be blocked, and press .

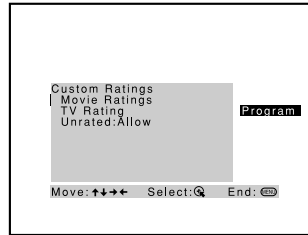
The  indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



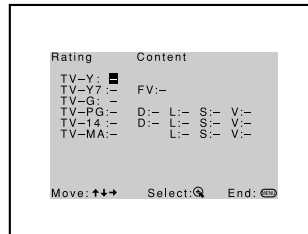
To unblock a rating, select it by moving the joystick up or down, then press . The indicator  changes into “-” and all “lower” ratings are unblocked.


(Continued)


- 5 Move the joystick left, then down, to select “TV Rating” or “Program,” and press .

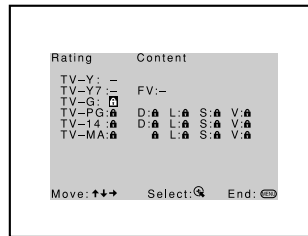




- 6 The “TV Rating” setting menu appears.




- 7 Move the joystick up or down to select the rating to be blocked, and press .

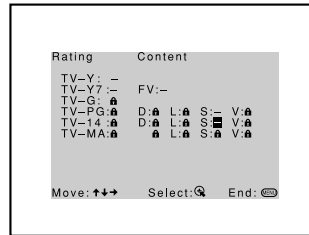
The  indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.





To unblock a rating, select it by moving the joystick up or down, then press . The indicator  changes into “-” and all “lower” ratings are unblocked.

Some TV ratings have additional content ratings called “extenders.” The extenders are defined as follows: D (sexually suggestive Dialog), FV (Fantasy Violence), L (coarse Language), S (Sexual situations) and V (Violence). By setting the extenders, you can define additional viewing limits. All of the extenders included in the selected ratings will be blocked. If you wish to allow any of them to be viewed, go to step 8.

- 8 Move the joystick left or right to select the extender to be viewed, and press .



“-” appears beside the selected extender, indicating that the programs that match the extender can be viewed.

If you press  again,  is displayed to show that the programs that match the extender will be blocked again.


- 9 Repeat step 8 for other extenders.


All programs that match the ratings you select and higher, except for the extenders that were canceled, will be blocked.

- 10 Press MENU to exit the menu screen.


US custom rating options

If you selected U.S.A. as the country of residence on page 54, the Custom Rating Menu includes the following options. (If you selected Canada, see page 61.)

 To ensure maximum blocking capability, the age-based ratings should be blocked.

 If you choose to block unrated TV programs, please be aware that the following programs may be blocked: emergency broadcasts, political programs, sports, news, public service announcements, religious programs and weather.

Option	Description	
Movie Rating	G	All children and General Audience.
	PG	Parental Guidance suggested.
	PG-13	Parental Guidance for children under 13.
	R	Restricted viewing, parental guidance is suggested for children under 17.
	NC-17 and X	No one 17 and under allowed.
TV Rating	Age-Based Options	
<i>Block programs by their rating, content or both</i>	TV-Y	All children.
	TV-Y7	Directed to older children.
	TV-G	General Audience.
	TV-PG	Parental Guidance suggested.
	TV-14	Parents Strongly cautioned.
	TV-MA	Mature Audience only.
	Content-Based Options	
	FV	Fantasy Violence.
	D	Suggestive Dialogue.
	L	Strong Language.
	S	Sexual situations.
	V	Violence.
Unrated <i>Block programs or movies that are broadcast without a rating</i>	Block	Blocks all programs and movies that are broadcast without a rating.
	Allow	Allows programs and movies that are broadcast without a rating.

 The content ratings will increase depending on the level of the age-based rating. For example, a program with a TV-PG V (Violence) rating may contain moderate violence, while a TV-14 V (Violence) rating may contain more intense violence.

Canadian custom rating options



If you selected Canada as the country of residence on page 54, the Custom Rating Menu includes the following options. (If you selected U.S.A., see page 60.)

Option	Description	
English Rating	C	All children.
	C8+	Children 8 years and older.
	G	General programming.
	PG	Parental Guidance.
	14+	Viewers 14 and older.
	18+	Adult programming.
French Rating	G	General programming.
	8 ans+	Not recommended for young children.
	13 ans+	Not recommended for ages under 13.
	16 ans+	Not recommended for ages under 16.
	18 ans+	Programming restricted to adults.
USA Rating	See “TV Rating” on page 60 for details.	





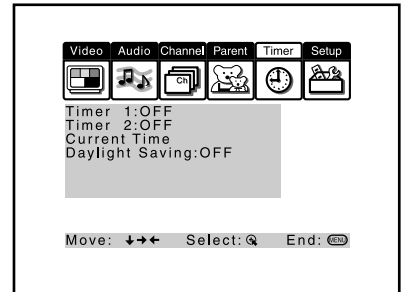
Using the Timer Menu

To select the Timer menu

- 1 Press MENU.
- 2 Move the joystick to the Timer icon  and press .



To set the Current Time

- 1 Use the joystick to select “Current Time”, then press .
- 2 If it is currently Daylight Saving Time, be sure to set the mode to “ON” first.
- 3 Use the joystick to enter the correct time, then press .
- 4 Press MENU to exit the menu screen.



To set the Timer

Before setting the timer, be sure to set your projection TV’s clock to the current time and Daylight Saving Mode.

- 1 Move the joystick to “Timer 1” or “Timer 2”, then press .
- 2 Use the joystick to enter your day, time and channel preferences, then press  to select each one.
- 3 Press MENU to exit the menu screen.

To reset the Clock or Timers

- Press RESET on the remote control after selecting that option in the Timer menu.

Selecting Timer Options





The Timer menu includes the following options:

Option	Description
Timer 1	Program
Timer 2	Program
	OFF
Current Time	Set the current time.
Daylight Saving	ON
	OFF



Using the Setup Menu

To select the Setup Menu

- 1 Press MENU.
- 2 Move the joystick to the Setup icon  and press .
- 3 Use the joystick to scroll through the features.
- 4 Press  to select a feature. That feature's options appear.
- 5 Use the joystick to scroll through the options.
- 6 Press  to select the desired option.
- 7 Press MENU to exit the menu screen.



Selecting Setup Options

The Setup menu includes the following options:

Option	Description
Caption Vision	Allows you to select from three closed caption modes (for programs that are broadcast with closed caption).
OFF	Turns off Caption Vision.
CC1, CC2, CC3, CC4	Displays a printed version of the dialog or sound effects of a program. (Should be set to CC1 for most programs.)
TEXT1, TEXT2, TEXT3, TEXT4	Displays network/station information presented using either half or the whole screen (if available). For closed captioning, set to CC1.
XDS (Extended Data Service)	Displays a network name, program name, program length, and time of the show if the broadcaster offers this service.

(Continued)

Option	Description						
Video Label	<p>Allows you to label the audio/video components you connected to the projection TV so you can identify them when using TV/VIDEO. When in the Setup menu's Video Label feature, use the joystick to highlight an input to label, then press to select it. Use the joystick to scroll through the labels. Press to select the component you connected to each of the input jacks on the back of your projection TV. Select "Skip" if you do not have a component connected to a particular set of input jacks.</p> <table border="1"> <tr> <td>VIDEO 1/2/3/4</td> <td>VHS, 8mm, Beta, LD, Game, SAT, DVD, Web, Receiver, DTV, Skip</td> </tr> <tr> <td>VIDEO 5/6</td> <td>DVD, DTV, HD, Skip</td> </tr> </table> <p>If you select "Skip", your projection TV skips this connection when you press TV/VIDEO.</p> <p> When you select "Receiver" on Video Label, your projection TV's input is fixed.</p>	VIDEO 1/2/3/4	VHS, 8mm, Beta, LD, Game, SAT, DVD, Web, Receiver, DTV, Skip	VIDEO 5/6	DVD, DTV, HD, Skip		
VIDEO 1/2/3/4	VHS, 8mm, Beta, LD, Game, SAT, DVD, Web, Receiver, DTV, Skip						
VIDEO 5/6	DVD, DTV, HD, Skip						
Language	Select to display all on-screen menus in your language of choice: English, Español, Français.						
16:9 Enhanced	<p>Provides enhanced picture resolution for widescreen sources, such as selected DVD titles (only available when the projection TV is in VIDEO mode). Press TV/VIDEO and select from one of the following options:</p> <table border="1"> <tr> <td>AUTO</td> <td>To activate automatically when a 16:9 signal is received.</td> </tr> <tr> <td>ON</td> <td>To activate manually.</td> </tr> <tr> <td>OFF</td> <td>To deactivate manually.</td> </tr> </table>	AUTO	To activate automatically when a 16:9 signal is received.	ON	To activate manually.	OFF	To deactivate manually.
AUTO	To activate automatically when a 16:9 signal is received.						
ON	To activate manually.						
OFF	To deactivate manually.						

To use this feature with widescreen DVDs, set your DVD player to 16:9 aspect ratio.

AUTO/ON will appear when projection TV is in video mode 1-6. ON/OFF will appear when projection TV is in VIDEO mode 5-6 and the 480p signal occurs.


Other Information

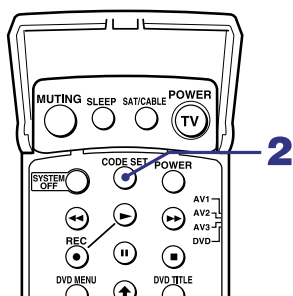
Programming the Remote Control

The remote control is preset to operate Sony brand video equipment.

Sony Equipment	Switch Position on Remote Control	Programmable Code Number
Beta, ED Beta VCRs	AV1	303
8 mm VCR	AV2	302
VHS VCR	AV3	301
DVD Player	DVD	751

If you have video equipment other than Sony brand that you want to control with the projection TV's remote control, use the following procedures to program the remote control.

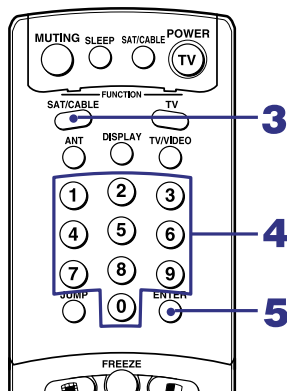
 The equipment must have infrared (IR) remote capability in order to be used with the remote control.



From the "Manufacturer's Codes" listed on page 67, select the three-digit code number for the manufacturer's code for your component. If more than one code number is listed, start with the number listed first. Use the code number to complete the following procedure.

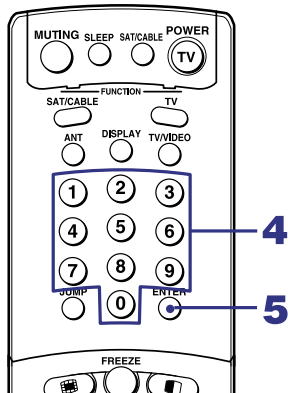
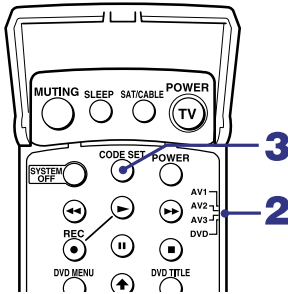
To program a cable box or a satellite receiver

- 1 Open the panel of the remote control.
- 2 Press CODE SET inside the panel.
- 3 Close the panel and press SAT/CABLE (FUNCTION).
- 4 Enter the three-digit manufacturer's code number using the 0-9 buttons.
- 5 Press ENTER.
- 6 To check if the code number works, aim the projection TV's remote control at the component and press the green POWER button that corresponds with that component. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.




(Continued)

Other Information



To program video equipment

- 1 Open the panel of the remote control.
- 2 Move the slide switch to the desired component type.
- 3 Press CODE SET inside the panel.

 You must perform step 4 within 10 seconds of step 3, or you must start again from step 3.

- 4 Close the panel and enter the three-digit manufacturer's code number using the 0-9 buttons.
- 5 Press ENTER.
- 6 To check if the code number works, aim the projection TV's remote control at the component, open the panel, and press the green POWER button. If it responds, the programming is completed. If not, try using the other codes listed for that manufacturer.

Tips

- ❑ If more than one code number is listed, try entering them one by one until you come to the correct code for your component.
- ❑ If you enter a new code number, the code number you previously entered at that setting is erased.
- ❑ In some rare cases, you may not be able to operate your component with the Sony remote control. In this case, use the component's own remote control unit.

Manufacturer's Codes**VCRs**

Manufacturer	Code
Sony	301
Admiral (M. Ward)	327
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
Curtis Mathes	304, 338, 309
Daewoo	341, 312, 309
DBX	314, 336, 337
Dimensia	304
Emerson	319, 320, 316, 317, 318, 341
Fisher	330, 335
Funai	338
General Electric	329, 304, 309
Go Video	322, 339, 340
Goldstar	332
Hitachi	306, 304, 305, 338
Instant Replay	309, 308
JC Penney	309, 305, 304, 330, 314, 336, 337
JVC	314, 336, 337, 345, 346, 347
Kenwood	314, 336, 332, 337
LXI (Sears)	332, 305, 330, 335, 338
Magnavox	308, 309, 310
Marantz	314, 336, 337
Marta	332
Memorex	309, 335

Manufacturer	Code
Minolta	305, 304
Mitsubishi/ MGA	323, 324, 325, 326
Multitech	325, 338, 321
NEC	314, 336, 337
Olympic	309, 308
Optimus	327
Panasonic	308, 309, 306, 307
Pentax	305, 304
Philco	308, 309
Philips	308, 309, 310
Pioneer	308
Quasar	308, 309, 306
RCA/ PROSCAN	304, 305, 308, 309, 311, 312, 313, 310, 329
Realistic	309, 330, 328, 335, 324, 338
Sansui	314
Samsung	322, 313, 321
Sanyo	330, 335
Scott	312, 313, 321, 335, 323, 324, 325, 326
Sharp	327, 328
Shintom	315
Signature 2000 (M. Ward)	338, 327
SV2000	338
Sylvania	308, 309, 338, 310
Symphonic	338
Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
Technics	309, 308
Toshiba	312, 311

Manufacturer	Code
Wards	327, 328, 335, 331, 332
Yamaha	314, 330, 336, 337
Zenith	331

DVD Players

Manufacturer	Code
Sony	751
Panasonic	753
Pioneer	752
RCA	755
Toshiba	754

Cable Boxes

Manufacturer	Code
Hamlin/Regal	222, 223, 224, 225, 226
Jerrold/G. I.	201, 202, 203, 204, 205, 206, 207, 208, 218
Oak	227, 228, 229
Panasonic	219, 220, 221
Pioneer	214, 215
Scientific Atlanta	209, 210, 211
Tocom	216, 217
Zenith	212, 213

Satellite Receivers

Manufacturer	Code
Sony	801
General Electric	802
Hitachi	805
Hughes	804
Panasonic	803
RCA/ PROSCAN	802, 808
Toshiba	806, 807

Operating Other Components with Your Projection TV Remote Control

Operating a VCR

Open the panel and move the slide switch to the AV input you coded for this device.

<i>To Do This ...</i>	<i>Press</i>
Turn on/off	green POWER button (inside the panel)
Change channels	CH +/-
Record	▶ and REC simultaneously
Play	▶
Stop	■
Fast forward	▶▶
Rewind the tape	◀◀
Pause	(press again to resume normal playback)
Search the picture forward or backward	▶▶ or ◀◀ during playback (release to resume normal playback)
Change input mode	Slide switch

Operating a DVD Player


Open the panel and move the slide switch to the DVD input you coded for this device.

<i>To Do This ...</i>	<i>Press</i>
Turn on/off	green POWER button (inside the panel)
Play	▶
Stop	■
Pause	(press again to resume normal playback)
Step through different tracks of an audio disc	▶▶ to step forward or ◀◀ to step backward
Step through different chapters of a video disc	CH+ to step forward or CH- to step backward
Display the DVD menu	DVD MENU
Select tracks directly	0-9 buttons
Display the menu (Setup)	MENU
Display the DVD title	DVD TITLE
Operate the DVD menu	↑, ↓, ←, →, ENTER

Operating a Cable Box

<i>To Do This ...</i>	<i>Press</i>
Turn on/off	SAT/CABLE (POWER)
Select Cable Box	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/-
Back to previous channel	JUMP

Operating a Satellite Receiver

<i>To Do This ...</i>	<i>Press</i>
Turn on/off	SAT/CABLE (POWER)
Select Satellite Receiver	SAT/CABLE (FUNCTION)
Select a channel	0-9 buttons, ENTER
Change channels	CH +/-
Back to previous channel	JUMP
Display channel number	DISPLAY
Display DBS guide	GUIDE
Display DBS menu	MENU
Move highlight (cursor)	Joystick or arrows
Select item	

Troubleshooting

If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Customer Information Services Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

Problem	Possible Remedies
No picture (screen not lit), no sound	<ul style="list-style-type: none"><input type="checkbox"/> Make sure the projection TV's power cord is connected securely to the wall outlet.<input type="checkbox"/> Push the power button on the front of the projection TV.<input type="checkbox"/> Check to see if the TV/VIDEO setting is correct: when watching TV, set to TV, and when watching connected equipment, set to VIDEO 1, 2, 3, 4, 5 or 6.<input type="checkbox"/> Try another channel. It could be station trouble.<input type="checkbox"/> The Parental Control feature is activated. (see "Using the Parent Menu" on page 54)<input type="checkbox"/> If your projection TV does not turn on, and a red light keeps flashing, your projection TV may need service. Call your local Sony Service Center.
Remote control does not operate	<ul style="list-style-type: none"><input type="checkbox"/> Batteries could be weak. Replace the batteries.<input type="checkbox"/> Press TV (FUNCTION) when operating your projection TV.<input type="checkbox"/> Make sure the projection TV's power cord is connected securely to the wall outlet.<input type="checkbox"/> Locate the projection TV at least 3-4 feet away from fluorescent lights.<input type="checkbox"/> Check the orientation of the batteries.
Dark, poor or no picture (screen lit), good sound	<ul style="list-style-type: none"><input type="checkbox"/> Adjust the Picture setting in the Video menu. (see page 48)<input type="checkbox"/> Adjust the Brightness setting in the Video menu. (see page 48)<input type="checkbox"/> Check antenna/cable connections.<input type="checkbox"/> Adjust the convergence again using FLASH FOCUS. (see "Adjusting the Convergence Automatically – FLASH FOCUS™ –" on page 33)
Good picture, no sound	<ul style="list-style-type: none"><input type="checkbox"/> Press MUTING so that "MUTING" disappears from the screen. (see page 34)<input type="checkbox"/> Make sure Speaker is set to ON in the Audio menu. (see page 51)<input type="checkbox"/> Check the MTS setting in the Audio menu. (see "MTS" on page 50)
Cannot receive digital channels (when a DTV receiver is connected)	<ul style="list-style-type: none"><input type="checkbox"/> Check the connections between the DTV receiver and the projection TV. (see page 28)<input type="checkbox"/> Check your local listings to find out if you can receive digital broadcasts in your area.
Cannot receive upper channels (UHF) when using an antenna	<ul style="list-style-type: none"><input type="checkbox"/> Change Cable to OFF. (see page 52)<input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory. (see page 53)
No color	<ul style="list-style-type: none"><input type="checkbox"/> Adjust the Color settings in the Video menu. (see page 48)
Only snow and noise appear on the screen	<ul style="list-style-type: none"><input type="checkbox"/> Check the Cable setting in the Channel menu. (see "Cable" on page 52)<input type="checkbox"/> Check the antenna/cable connections.<input type="checkbox"/> Make sure the channel is broadcasting programs.<input type="checkbox"/> Press ANT to change the input mode. (see page 37)
Dotted lines or stripes	<ul style="list-style-type: none"><input type="checkbox"/> Adjust the antenna.<input type="checkbox"/> Move the projection TV away from noise sources such as cars, neon signs, or hair-dryers.

Problem	Possible Remedies
Projection TV is fixed to one channel	<ul style="list-style-type: none"> <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory. (see page 53) <input type="checkbox"/> Check your Channel Fix settings. (see page 53)
Double images or ghosts	<ul style="list-style-type: none"> <input type="checkbox"/> Use a highly directional outdoor antenna or a cable (when the problem is caused by reflections from nearby mountains or tall buildings).
Cannot operate menu	<ul style="list-style-type: none"> <input type="checkbox"/> If the item you want to choose appears in gray, you cannot select it. <input type="checkbox"/> Turn the projection TV's power off and on again.
Cannot receive any channels when using cable TV	<ul style="list-style-type: none"> <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory. (see page 53) <input type="checkbox"/> Check your cable settings. <input type="checkbox"/> Make sure Cable is set to ON in the Channel menu. (see page 52)
Cannot gain enough volume when using a cable box	<ul style="list-style-type: none"> <input type="checkbox"/> Increase the volume of the cable box using the cable box's remote control. Then press TV (FUNCTION) and adjust the projection TV's volume.
Channel Index does not display all available channels	<ul style="list-style-type: none"> <input type="checkbox"/> Make sure Cable is set to ON in the Channel menu. (see "Cable" on page 52) <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory. (see page 53)
Cannot receive channels Unable to select a channel	<ul style="list-style-type: none"> <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory. (see page 53)
Lost password	<ul style="list-style-type: none"> <input type="checkbox"/> In the password screen (see page 54), enter the following master password: 4357. The master password clears your previous password; it cannot be used to temporarily unblock channels.
Cannot change channels with the remote control	<ul style="list-style-type: none"> <input type="checkbox"/> Be sure you have not inadvertently switched your projection TV from channel 3 or 4 setting if you are using another device to change channels. <input type="checkbox"/> If you are using another device to control channels, be sure the "function" button for that device has been pressed, or the slide switch is set correctly. For example, if you are using your cable to control channels, be sure to press SAT/CABLE.
Cannot cycle through the other video equipment connected to the projection TV	<ul style="list-style-type: none"> <input type="checkbox"/> Be sure the Video Label feature has not been set to Skip. (see page 64)
There is a black box on the screen	<ul style="list-style-type: none"> <input type="checkbox"/> You have selected a text option in the Setup menu and no text is available. (see page 63 to reset Setup selections) To turn this feature off, select OFF in the Caption Vision option. If you were trying to get closed captioning, select CC1 instead of Text 1-4.
There is no twin picture or it is just static	<ul style="list-style-type: none"> <input type="checkbox"/> Be sure your twin picture is set to a video source/channel that has a program airing. <input type="checkbox"/> You may be tuned to a video input with nothing connected to it. Try cycling through your video inputs using TV/VIDEO. <input type="checkbox"/> Twin View is not set to receive a signal from the AUX input. If you have connected a VCR, DVD player or satellite receiver to the AUX input on the projection TV, it will not show in the second picture.

(Continued)

Other Information

Problem	Possible Remedies
I get the same program in the window picture as in the main picture	<ul style="list-style-type: none">❑ Both may be set to the same channel. Try changing channels in either the main picture or the window picture.❑ You may be running all your channels through a cable box. The cable box will only unscramble one signal at a time, so you cannot use the Twin View feature. If possible, run a direct cable to your projection TV's VHF/UHF input. (This will only work if your cable system provides an unscrambled signal.)
I cannot get anything but TV channels in my second picture	<ul style="list-style-type: none">❑ Be sure the video label has not been set to skip your video inputs. See the Setup menu on page 63.
Favorite Channel does not display your choices	<ul style="list-style-type: none">❑ Verify that Favorite Channel is set to Manual in the Channel menu. (see "Favorite Channel" on page 52)
Some video sources do not appear when you press TV/VIDEO	<ul style="list-style-type: none">❑ Ensure that Video Label is not set to SKIP. (see "Video Label" on page 64)

Specifications

Projection system	3 picture tubes, 3 lenses, horizontal in-line system	
Picture Tube	7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system	
Projection lenses	High performance, large diameter hybrid lens F1.1	
Antenna	75 ohm external terminal for VHF/UHF	
Television System	NTSC, American TV Standard	
Screen size (measured diagonally)	43 inches (KP-43HT20) 53 inches (KP-53HS20, KP-53HS30) 61 inches (KP-61HS20, KP-61HS30)	
Channel Coverage		
VHF	2-13	
UHF	14-69	
CATV	1-125	
Power Requirements	120V, 60 Hz	
Number of Inputs/Outputs		
Video (IN)	4	1 V _{p-p} , 75 ohms unbalanced, sync negative
S Video (IN)	3	Y: 1 V _{p-p} , 75 ohms unbalanced, sync negative C: 0.286 V _{p-p} (Burst signal), 75 ohms
Audio (IN)	6	500 mV _{rms} (100% modulation) Impedance: 47 kilohms
AUDIO (VAR/FIX) OUT	1	500 mV _{rms} (100 % modulation), Impedance: 470 ohms
TV Out	1	1 V _{p-p} , 75 ohms unbalanced, sync negative
CONTROL S (IN/OUT)	1	minijacks
Component Video Input	2 (Y, P _B , P _R)	Y: 1.0 V _{p-p} , 75 ohms unbalanced, sync negative P _B : 0.7 V _{p-p} , 75 ohms P _R : 0.7 V _{p-p} , 75 ohms
RF Inputs	2	
Converter	1	

(Continued)

Other Information

Supplied Accessories	
Remote Control	RM-Y908
AA (R6) Batteries	2 supplied for remote control
Optional Accessories	
AV Cable	VMC-810/820/830 HG
Audio Cable	RKC-515HG
Control S Cable	RK-G69HG
Component Video Cable	VMC-10/30 HG
AV receiver	STR-V555ES
TV Stand	SU-43HT4/43HT5
Speaker Output	20 W × 2 (KP-43HT20, KP-53HS30, KP-61HS30) 18 W × 2 (KP-53HS20, KP-61HS20)
Dimensions (W × H × D)	38 × 42 1/8 × 22 4/8 inches (965 × 1,069 × 577 mm) (KP-43HT20) 46 1/2 × 55 7/8 × 25 inches (1,180 × 1,417 × 632 mm) (KP-53HS20, KP-53HS30) 54 × 61 1/2 × 26 1/4 inches (1,370 × 1,560 × 666 mm) (KP-61HS20, KP-61HS30)
Mass	119 lb 8 oz (54.2 kg) (KP-43HT20) 152 lb 9 oz (69.2 kg) (KP-53HS20) 157 lb (71.2 kg) (KP-53HS30) 203 lb 11 oz (92.4 kg) (KP-61HS20) 210 lb 5 oz (95.4 kg) (KP-61HS30)
Power Consumption	
In Use	230 W
In Standby	Under 1 W

Design and specifications are subject to change without notice.

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If, after reading this instruction manual, you have additional questions related to the use of your Sony projection TV, please call one of the following numbers (English only).

Customers in the continental United States contact the Direct Response Center at:

1-800-222-SONY (7669)

Customers in Canada contact the Customer Relations Center at:

(416) 499-SONY (7669)