

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

RA-6 CHASSIS

MODEL NAME

REMOTE COMMANDER

DESTINATION

CHASSIS NO.

KP-46WT500

RM-Y909

US/CND

SCC-P65LA

ORIGINAL MANUAL ISSUE DATE: 7/2002

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

REVISION DATE	REVISION TYPE	SUBJECT
7/2002		No revisions or updates are applicable at this time.
10/2002	Correction-1	Added Locator Lists to D and A PWB's.
1/2003	Supplement-1	New CRT's introduced. Affects S/N's 9,700,001 and up.
4/2003	Supplement-2	Additional information added to Supplement-1. D and C Board P/N's added.
11/2003	Correction-2	Updated data relating to CR, CG and CB Boards. Affects Pages 55-57 (Schematics), 87 (Exploded View), 89-92 (Parts List).

**COLOR REAR VIDEO PROJECTOR
SONY®**

9-965-935-05

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KP46WT500



RM-Y909

COLOR REAR VIDEO PROJECTOR
SONY®

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SPECIFICATIONS

Power Requirements 120V AC, 60Hz

Power Consumption (W)

In Use (Max) 230W

In Standby Under 1 W

Inputs/Outputs DVI-HDTV

1 terminal, 3.3V T.M.D.S., 50 ohms

The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Video (IN)

4 total (1 on front panel)

1Vp-p, 75 ohms unbalanced, sync negative

S Video (IN)

3 total (1 on front panel)

Y: 1Vp-p, 75 ohms unbalanced, sync negative

C: 0.286Vp-p (Burst signal), 75 ohms

Audio (IN)

6 total (1 on front panel)

500 mVrms (100% modulation)

Impedance: 47 kilo ohms

Audio (VAR/RIX)

1 total

500 mVrms at the maximum volume setting (Variable)

500 mVrms (Fixed)

Impedance (Output): 1 kilo ohm

TV Out

1 total

Video: 1 Vp-p 75 ohms unbalanced, Sync negative

Audio: 500 mVrms (100% modulation)

Impedance (output): 1 kilo ohms

Control S (IN/OUT)

1 total

Minijacks

Component Video Input

2 (Y, P_B, P_R)

Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative

P_B: 0.7 Vp-p, 75 ohms;

P_R: 0.7 Vp-p, 75 ohms

RF Inputs

2 total

Converter

1 total

	KP-46WT500
Speaker Output (W)	20W x 2
Dimensions (W x H x D)	
mm	1086 x 1017 x 609 mm
in	42 ^{3/4} x 40 x 24 in
Mass kg	61.3 kg
lbs	135 lbs

Projection System

3 picture tubes, 3 lenses, horizontal in-line system

Screen Size (measured diagonally)

46 inches (KP-46WT500)

Picture Tube

7-inch high-brightness monochrome tubes (6.3 raster size), with optical coupling and liquid cooling system.

Supplied Accessories

Remote Control RM-Y909

Batteries (2) size AA (R6)

Projection Lenses

High performance, large diameter hybrid lens F1.1

Optional Accessories

A/V Cable (VMC-810/820/830 HG)

Audio Cable (RKC-515HG)

Component Video Cable (VMC-10/30 HG)

Control S Cable (RK-G69HG)

AV Receiver (STR-V555ES or equivalent)

TV Stand SU-46WT5

Antenna

75 ohm external terminal for VHF/UHF

Television System

NTSC, American TV Standard

Channel Coverage

VHF: 2-13/ UHF: 14-69/ CATV: 1-125

Design and specifications are subject to change without notice.

WARNINGS AND CAUTIONS

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 on the schematic diagrams, exploded views, and in the parts list are critical for safe operation. Replace these components with Sony parts whose part numbers appear as shown in this manual or in supplements published by Sony. Circuit adjustments that are critical for safe operation are identified in this manual. Follow these procedures whenever critical components are replaced or improper operation is suspected.

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 la couche de carbone peinte sur le tube cathodique ou au blindage du tube cathodique.

Afin d'éviter tout risque d'électrocution provenant d'un châssis sous tension, un transformateur d'isolement doit être utilisé lors de tout dépannage. Le châssis de ce récepteur est directement raccordé à l'alimentation du secteur.



ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

Les composants identifiés par une trame et par une marque  sur les schémas de principe, les vues exploées et les listes de pièces sont d'une importance critique pour la sécurité du fonctionnement. Ne les remplacer que par des composants Sony dont le numéro de pièce est indiqué dans le présent manuel ou dans des suppléments publiés par Sony. Les réglages de circuit dont l'importance est critique pour la sécurité du fonctionnement sont identifiés dans le présent manuel. Suivre ces procédures lors de chaque remplacement de composants critiques, ou lorsqu'un mauvais fonctionnement suspecte.

SAFETY CHECK-OUT

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

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

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

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

How to Find a Good Earth Ground

A cold-water pipe is a 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- to 100-watt 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 on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

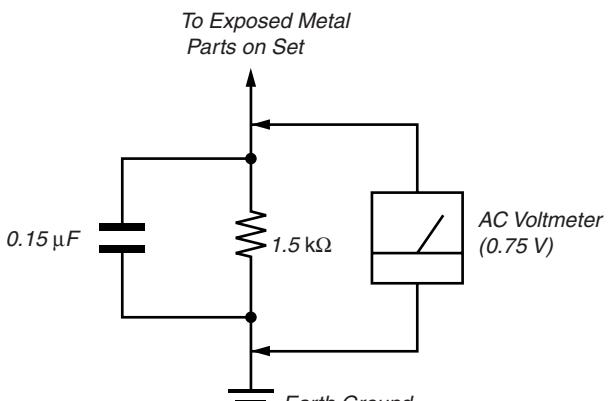


Figure A. Using an AC voltmeter to check AC leakage.

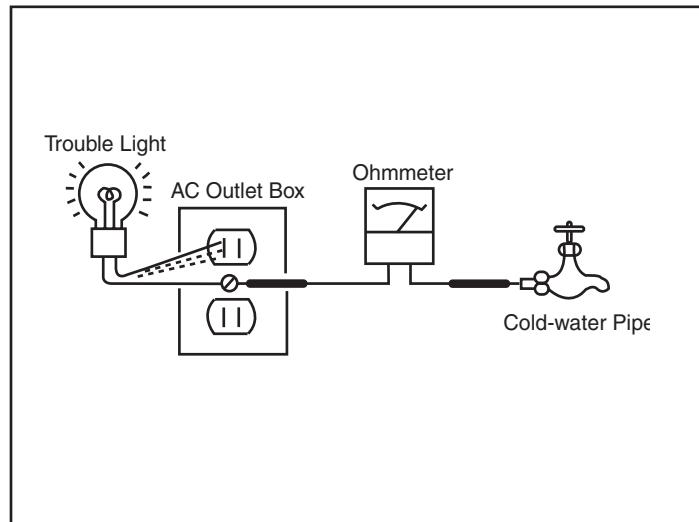


Figure B. Checking for earth ground.

SELF-DIAGNOSTIC FUNCTION



The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

Results for all of the following diagnostic items are displayed on screen. If the screen displays a "0", no error has occurred.

Diagnostic Item	No. of times STAND BY / TIMER lamp flashes	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light	<ul style="list-style-type: none"> Power cord is not plugged in. Fuse is burned out (F6001). (G Board) 	<ul style="list-style-type: none"> Power does not come on. No power is supplied to the TV. AC Power supply is faulty.
+B overcurrent (OCP)*	2 times	<ul style="list-style-type: none"> H.OUT (Q8024) is shorted. (D Board) +B PWM (Q8035, Q8038) is shorted. (D Board) 	<ul style="list-style-type: none"> Power does not come on. Load on power line shorted.
+B overvoltage (OVP)	3 times	<ul style="list-style-type: none"> IC501 is faulty. (G Board) IC5002 is faulty. (G Board) 	<ul style="list-style-type: none"> Has entered standby mode.
Vertical deflection stopped	4 times	<ul style="list-style-type: none"> ±15V is not supplied. (D Board) IC8003 is faulty. (A Board) 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Video OUT (IC7101, IC7201, IC7301) is faulty. (CR, CG, CB Boards) CRT drive (IC309) is faulty. (A Board) Screen (G2) is improperly adjusted. ** 	<ul style="list-style-type: none"> No raster is generated. CRT Cathode current detection reference pulse output is small.
Low B OCP/OVP (Overcurrent/O vervoltage) ***	6 times	<ul style="list-style-type: none"> +5 line is overloaded. (A, B Boards) +5 line is shorted. (A, B Boards) 	<ul style="list-style-type: none"> No picture
Horizontal deflection stopped	7 times	<ul style="list-style-type: none"> Q8035, Q8038 is shorted. (D Board) 	
High-voltage error	8 times	<ul style="list-style-type: none"> T8005 is faulty. (D Board) 	
Audio error	9 times	<ul style="list-style-type: none"> ± 19V line is shorted. (A, B Boards) IC708 is faulty. (A Board) PS701 or PS702 is opened. (A Board) 	<ul style="list-style-type: none"> No sound

* 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 the screen.

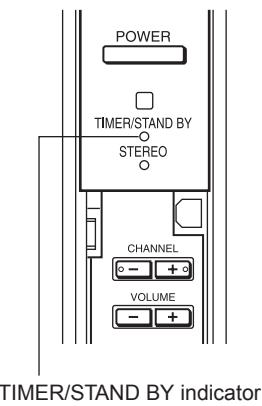
** Refer to Screen (G2) Adjustments in Section 2-2 of this manual

*** If TIMER or STANDBY indicator blinks six (6) times, unplug the unit and wait 10 minutes before performing the adjustment.

Display of Standby/Timer LED Flash Count

* One blink is not used for self-diagnosis.

< FRONT PANEL >



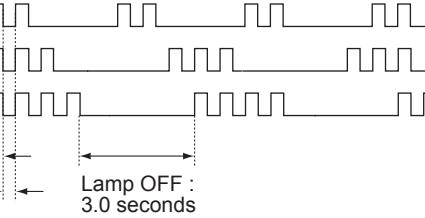
TIMER/STAND BY indicator

• 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/STANDBY indicator blinking display is released by turning OFF the power switch on the TV main unit or removing the plug from the power.

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.

[Display] → Channel [5] → Sound Volume* [] → Power ON

*Note that this differs from entering the service mode (sound volume [+])

SELF DIAGNOSIS	
2 : +B OCP	N/A
3 : +B OVP	N/A
4 : V STOP	0
5 : AKB	1
10 : WDT	24

Numeral "0" means that no fault was detected.
Numeral "1" means a fault was detected one time or more

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] → Sound Volume [+] → Power ON (Service Mode)**
3. **Channel [8] → [ENTER] (Test reset = Factory preset condition)**

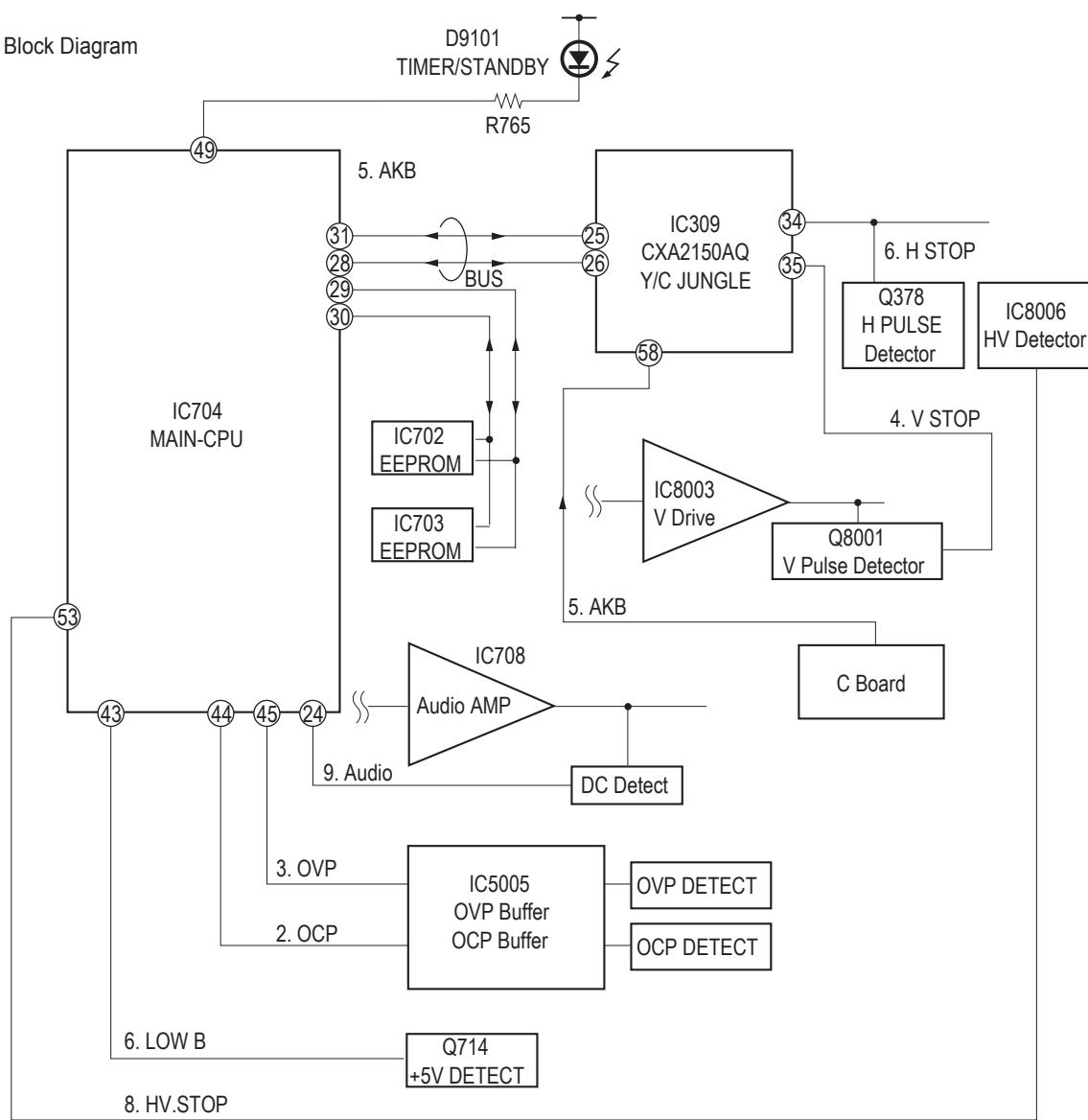
Method of Ending Self Diagnosis Screen

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

Self-Diagnosis Function Operation

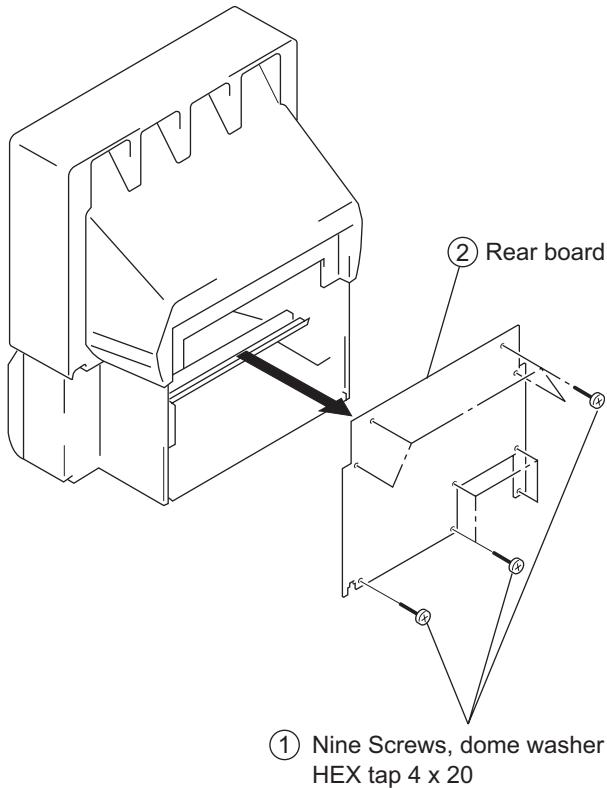
- OCP Low B and +B line detect DET SHORT, and shut-down POWER ON RELAY.
Reset by turning power on/off. In case of +B is loaded approx. 1.5A or more, microcomputer detects it via IC5005.
- OVP In case of +B becomes approx. 150V or more, POWER ON RELAY shuts down and microcomputer detects it via IC5005.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

Self-Diagnosis Block Diagram

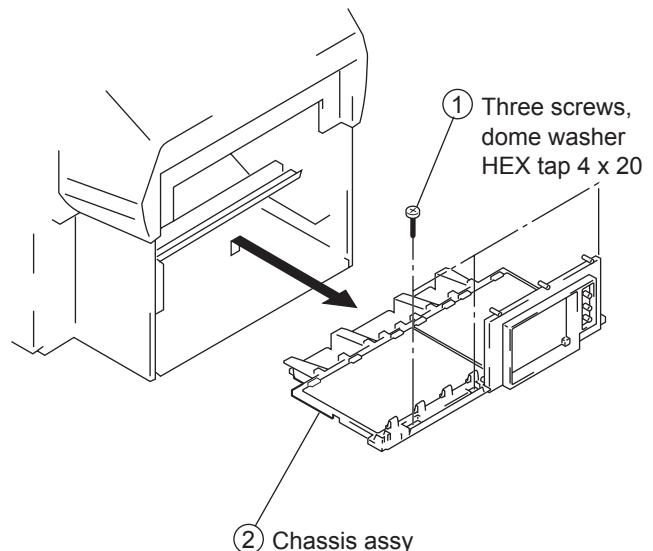


SECTION 1: DISASSEMBLY

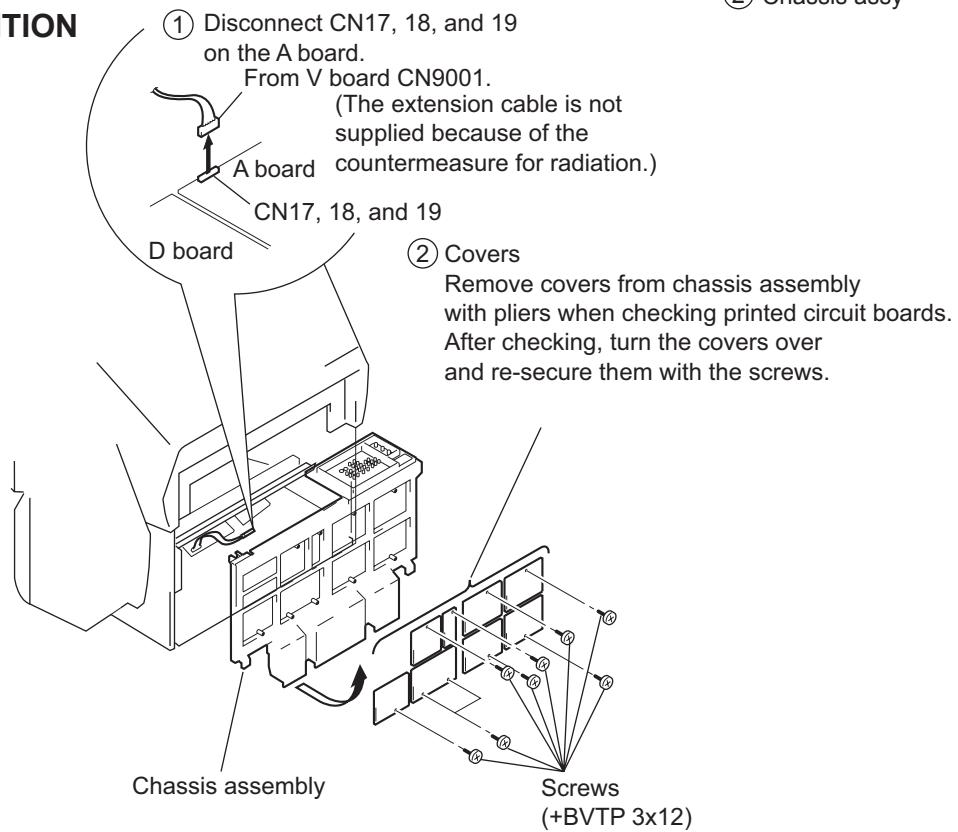
1-1. REAR BOARD REMOVAL



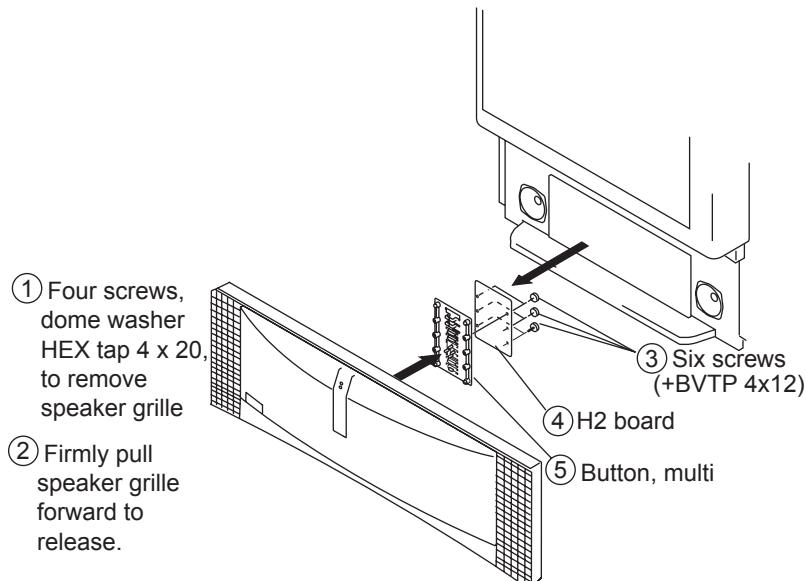
1-2. CHASSIS ASSEMBLY REMOVAL



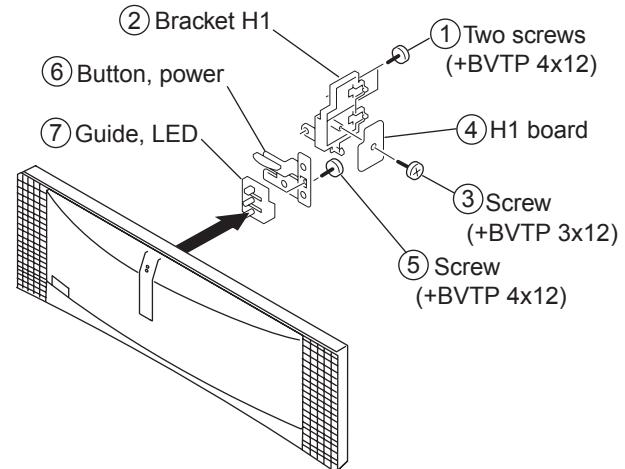
1-3. SERVICE POSITION



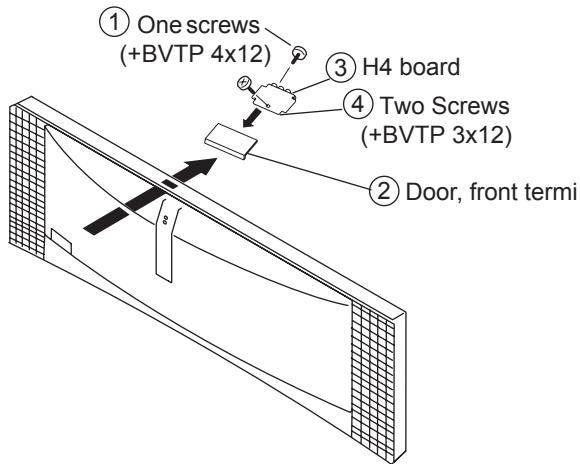
1-4. SPEAKER GRILLE AND H2 BOARD REMOVAL



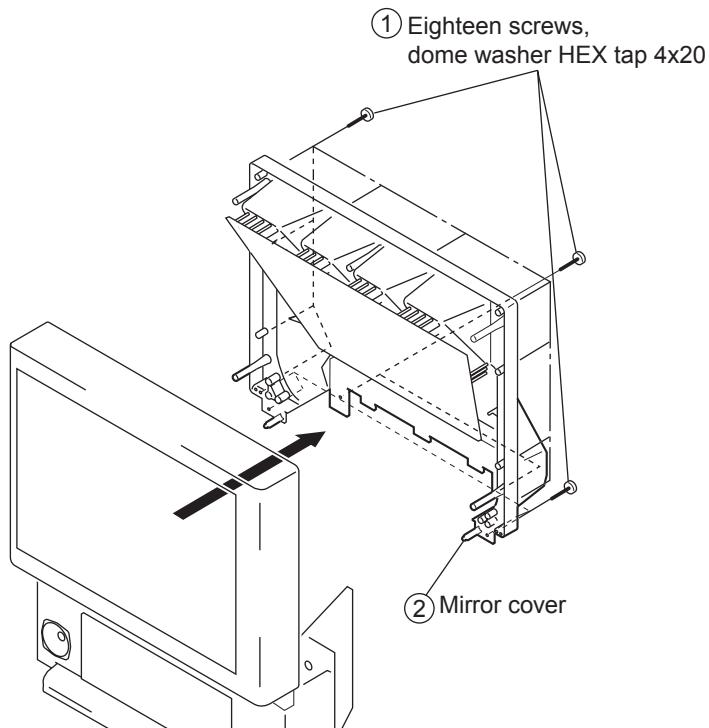
1-5. H1 BOARD REMOVAL



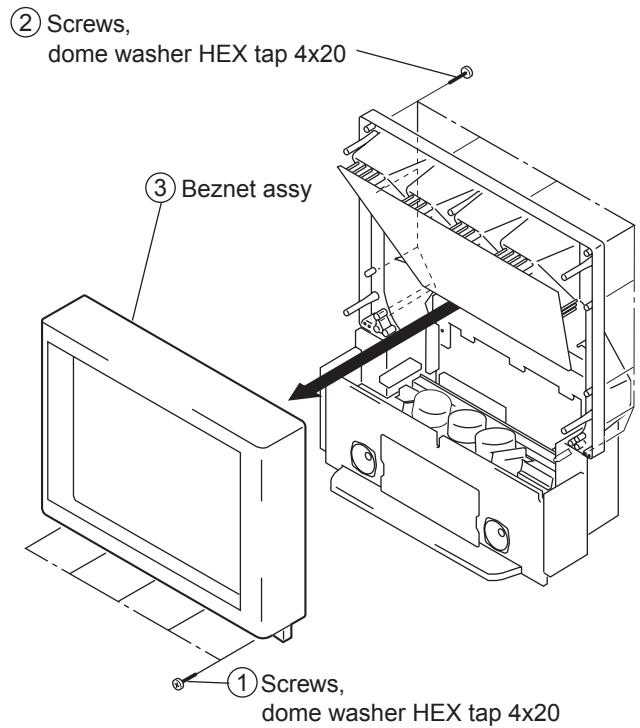
1-6. H4 BOARD REMOVAL



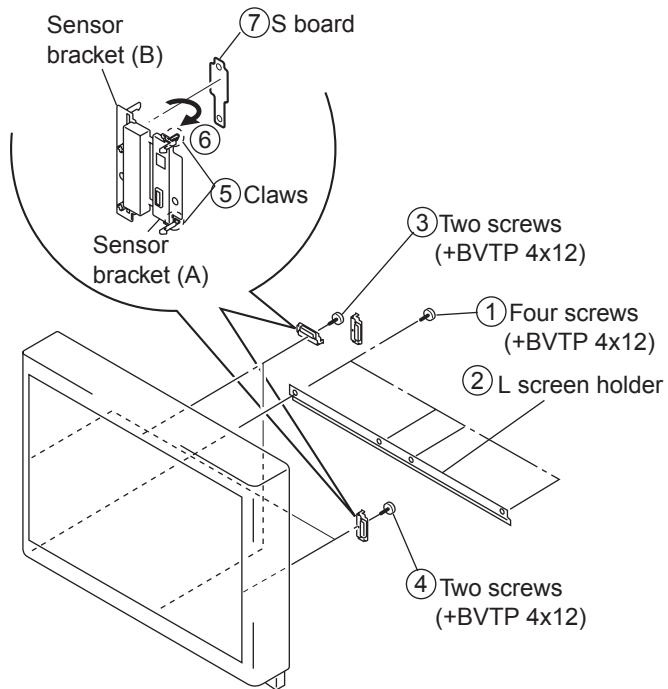
1-7. MIRROR COVER REMOVAL



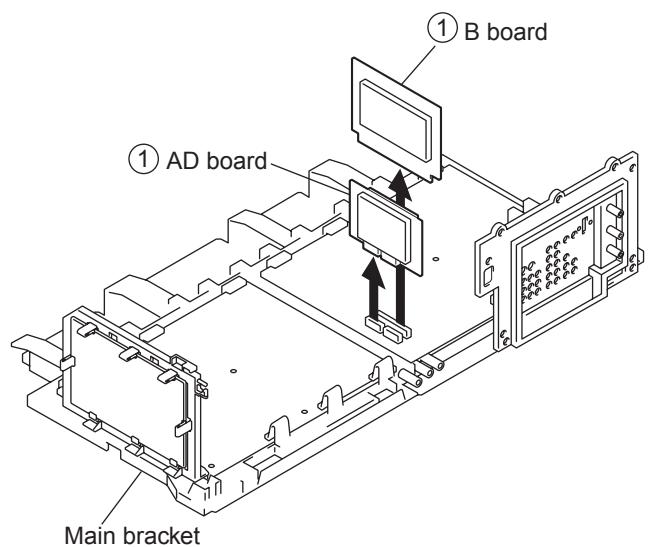
1-8. BEZNET ASSEMBLY REMOVAL



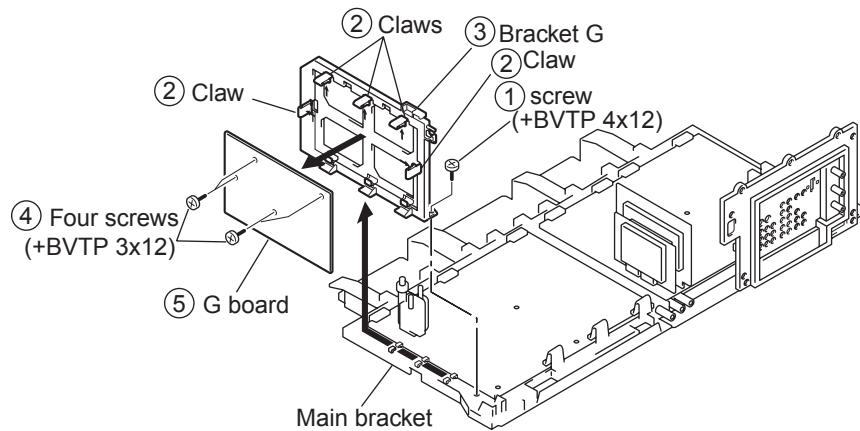
1-9. S BOARD REMOVAL



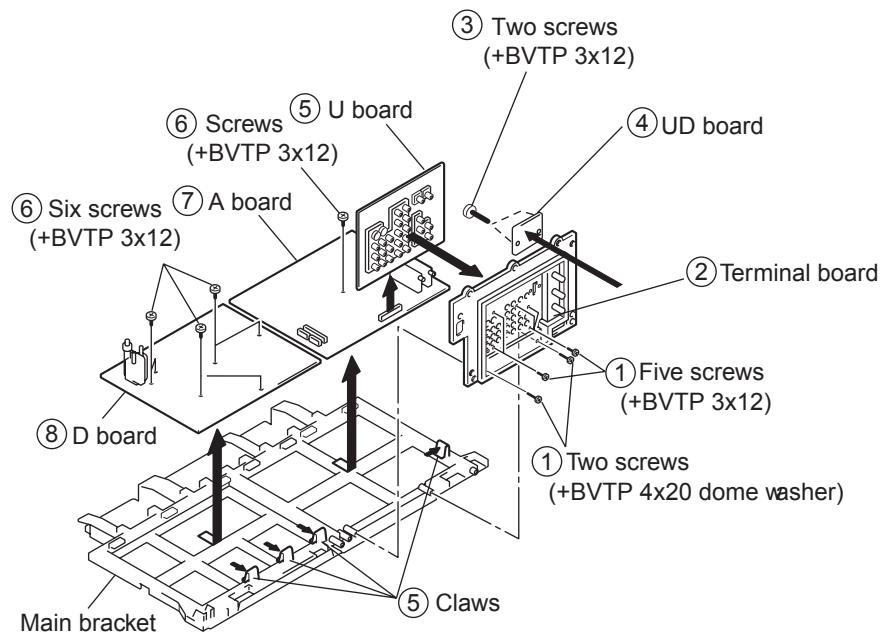
1-10. AD BOARD AND B BOARD REMOVAL



1-11. G BOARD REMOVAL

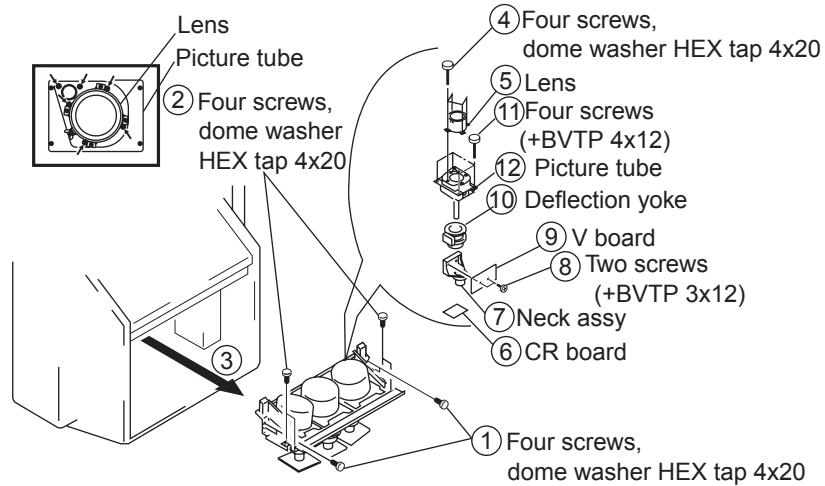


1-12. TERMINAL BOARD, A BOARD, D BOARD, U BOARD, AND UD BOARD REMOVAL



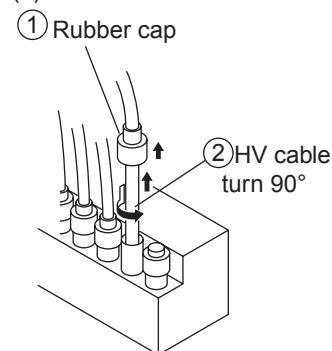
1-13.PICTURE TUBE REMOVAL

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

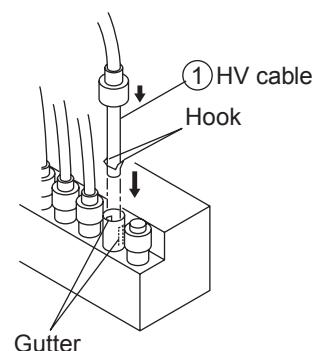


1-14.HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

(1) Removal



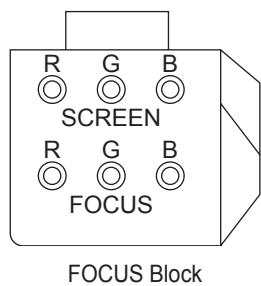
(2) Installation



SECTION 2: SET-UP ADJUSTMENTS

2-1. SCREEN VOLTAGE ADJUSTMENT (COARSE ADJUSTMENT)

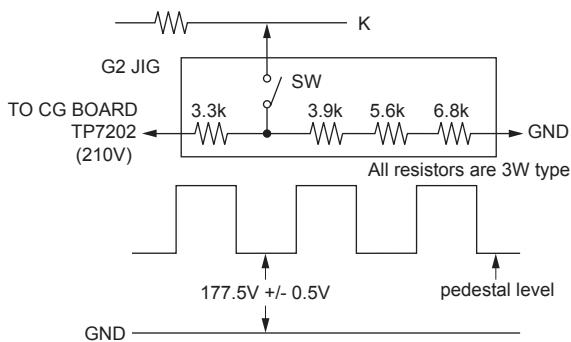
1. Receive the Monoscope signal..
2. Set BRIGHTNESS to 50% and PICTURE to minimum.
3. Turn the red VR on the focus block all the way to the left and then gradually turn it to the right until the retrace line is barely visible.
4. Gradually turn the control to the left until the retrace line disappears.



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

If the jig described below is available, it is recommended that the G2 Fine Mode Adjustment be performed to set the screen controls to their optimal condition. If desired, you can build the jig illustrated below, using 3-watt resistors. Please note that if the proper voltage is not obtained with the listed resistor's values, then increase or decrease one of the values in the resistor network to obtain the correct voltage.

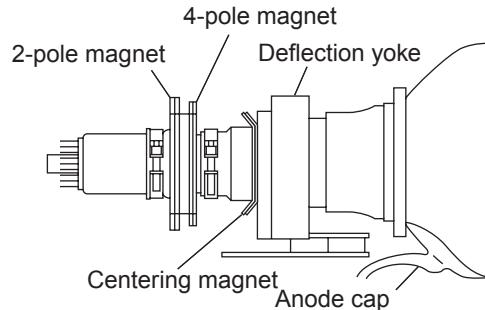
1. Select VIDEO-1 mode no signal applied (the screen must be black).
2. Connect the G2 JIG.
3. SW on JIG.
4. Connect an oscilloscope to the TP7101(KR), TP7202(KG) and TP7301(KB) of CR board, CG board, and CB board.
5. Adjust red, green, and blue screen voltage to $177.5V \pm 0.5V$ with screen VR on the focus block.



2-3. DEFLECTION YOKE TILT ADJUSTMENT

1. Connect the color bar generator monoscope pattern to Video 1 input.
 2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
 3. Loosen the CRT's deflection yoke set screw and align the tilt of the deflection yoke so that the horizontal 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.
- The tilt of the deflection yoke is aligned in the mode.
5. Cover the green and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the red CRT.
- Cover the green and red CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps), then repeat steps 3 and 4 for the blue CRT.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

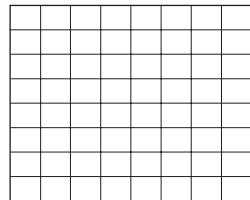


2-4. FOCUS LENS ADJUSTMENT

In this adjustment, use the remote commander while in service mode. For details on the usage of the service mode and the remote commander, please refer to section 2-10. ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER.

1. Loosen the lens screw.
 2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
 3. Turn the green lens to adjust to the optimum focus point with the crosshatch signal.
 4. Tighten the lens screw.
 5. Cover the green and blue CRT lenses with the lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
 6. Turn the red lens to adjust to the optimum focus point with the crosshatch signal.
 7. Tighten the lens screw.
 8. Cover the green and red CRT lenses with the lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
 9. Turn the blue lens to adjust to the optimum focus point with the crosshatch signal.
 10. Tighten the lens screw.
 11. After adjusting the items:
- 2-5. FOCUS VR ADJUSTMENT,
2-6. 2-POLE MAGNET ADJUSTMENT,
2-8. 4-POLE MAGNET ADJUSTMENT,
reconfirm the optimum focus point and adjust again if necessary.

* Every time 6 is pressed, the test signal changes to:
“crosshatch+video signal” → “crosshatch+borderline(black)” →
“crosshatch(black)” → “dots(black)” → off

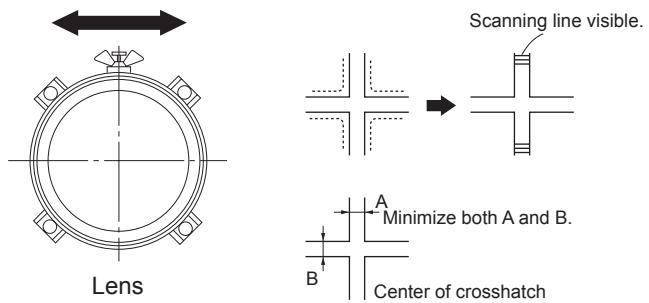


Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

2-5. FOCUS VR ADJUSTMENT

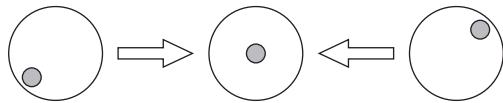
1. Set generator to crosshatch.
2. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
3. Turn the green focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
4. Cover the green and blue picture lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
5. Turn the red focus VR on the focus block to adjust to the optimum focus point with the crosshatch signal.
6. Cover the green and red picture lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
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:
2-4. FOCUS LENS ADJUSTMENT,
2-6. 2-POLE MAGNET ADJUSTMENT,
2-8. 4-POLE MAGNET ADJUSTMENT,
reconfirm the optimum focus point and adjust again if necessary.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.



2-6. 2-POLE MAGNET AND CENTERING MAGNET ADJUSTMENT

1. Set the picture mode to PRO and picture to MAX.
2. Either select the PJED Test Pattern dot hatch signal or apply an external dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the focus VR on the focus block to the left (counter clockwise) and set it to overfocus to enlarge the spot.
5. Adjust the CRT's 2-pole magnet so that the small bright spot is in the center.
6. Align the focus VR on the focus block and set it for the best focus.
7. Apply a Monoscope signal to the set.
8. Adjust the H-CENTERING and V-CENTERING roughly by the centering magnets.
9. Check 2-pole magnet adjustment. If necessary repeat steps 1-6.
10. Repeat steps 1 through 9 for the red CRT covering the green and blue CRT lenses with lens caps to allow only red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and adjust the red focus control on the focus block.
11. Repeat steps 1 through 9 for the blue CRT covering the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps) and adjust the blue focus control on the focus block.



Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

2-7. CENTERING MAGNET ADJUSTMENT

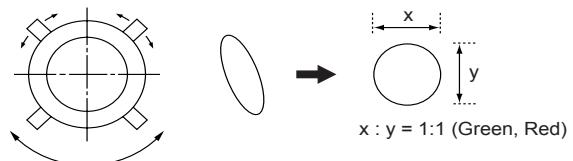
Not required - Combined with 2-6 2-Pole And Centering Magnet Adjustment.

2-8. 4-POLE MAGNET ADJUSTMENT

1. Set the picture mode to PRO and picture to MAX.
2. Receive the Dot signal.
3. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the (green) focus VR on the focus block to the right (clockwise) and set it to under-focus to reduce the spot.
5. Adjust the 4-pole magnet so that the small spot in the center of the screen becomes round for green and red.
6. Adjust the blue spot to an oval shape X:Y=1:1.2

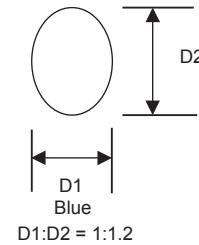
Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

Use the center dot



2-9. BLUE DEFOCUS ADJUSTMENT

1. Setup: Apply a Dot Hatch Signal and set the mode to Pro Mode. Change the color temperature to Cool in the user's menu.
2. Cover the red and green CRT lenses with lens caps to allow only blue to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
4. Turn the blue focus VR on the focus block to the right (clockwise) to make the round dot oval.



5. Check the flare with a high luminance signal to make sure the flare is minimal while the bright spot is located in the center. If not, readjust the 2 and 4-pole magnets.
6. Check for uniformity on a 100% IRE to an all white signal.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

2-10.ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

All of the circuit adjustments can be made by using the remote commander (RM-Y909).

NOTE : The following test equipment is required:

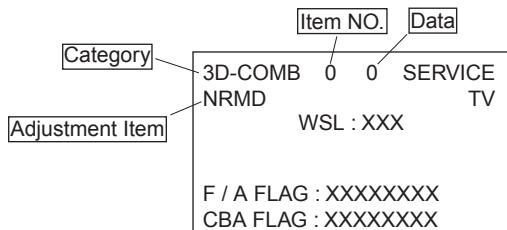
1. Pattern Generator (with component outputs)
2. Frequency counter
3. Digital multimeter
4. Audio oscillator

2-10-1.METHOD OF ENTERING THE SERVICE ADJUSTMENT MODE

SERVICE MODE PROCEDURE

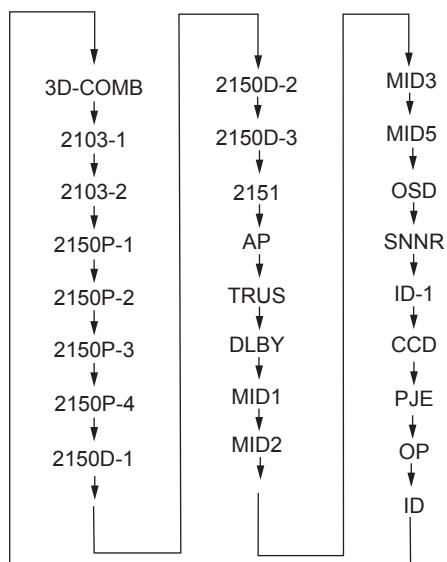
1. TV must be in Standby mode. (Power off)
 2. Press "DISPLAY", "5", "VOL +", then "POWER" on the remote commander.
- (Press each button within 1 second of pressing the previous button.)

SERVICE MODE ADJUSTMENT



3. The screen displays the item being adjusted within that category.
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 adjustment category.

Every time you press 2 (Category up), service mode changes in the order shown below:



then "ENTER" to read the memory.

8. Press "MUTING" then "ENTER" to write the new adjustment data into memory.
9. When you want to exit the service mode, turn the power off.

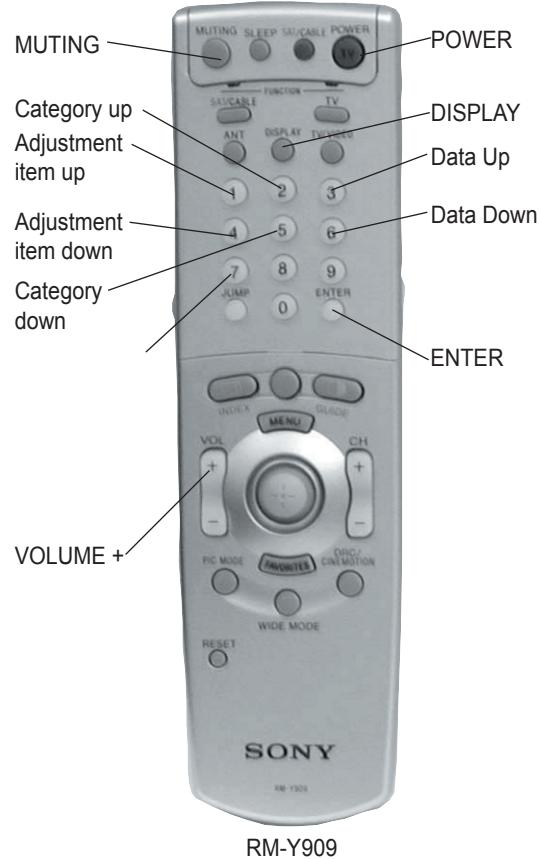
Note: Press "8" then "ENTER" on the remote commander to restore the factory settings for user controls and channel memories (this will also turn set off and then on to exit the service mode).

2-10-2.MEMORY WRITE CONFIRMATION METHOD

1. After adjustment, turn the power off with the remote commander.
2. Turn the power ON and set to service mode.
3. Cycle through the adjusted items again and confirm that the adjustments were saved.

2-10-3.ADJUSTING BUTTONS AND INDICATOR

Note: When the PJE mode (which displays an internally generated signal) is activated, several buttons on the remote commander will have different functions than the ones listed below. Therefore, when in the PJE mode, refer to section 2-12-3 for button functions.



7. If you want to go back to the most recently saved value, press "0"

2-11. SERVICE DATA LISTS

11. APPENDIX

3D-COMB uPD64082

Reg.No & Name	FUNCTION	RF/Video1-4				Svideo			
		Standard	Non-standard	Standard	Non-standard	Standard	Non-standard	Standard	Non-standard
0 NRMD	Operation mode setting	0	1	3	3				
1 YAPS	Y-output correction	3							
2 CLKS	System clock setting	1							
		RF/Video1-4				Svideo			
		Standard	Non-standard	Standard	Non-standard	Standard	Non-standard	Standard	Non-standard
3 NSDS	Selection for standard/non-standard signal processing	0	0	0	0				
4 MSS	Selection for inter-frame/inter-line processing	0							
5 KILS	Killer processing selection	1							
		RF				Video1-4			
6 CDL	C-signal phase with respect to the Y-signal	3	3						
		NRMD=0	NRMD=1	NRMD=2	NRMD=3				
7 DYCO	DY detection coring level	2	2	2	2				
8 DYGA	DY detection gain	10	10	10	10				
9 DCCO	DC detection coring level	5	5	5	5				
10 DCGA	DC detection gain	5	5	5	5				
11 YNRL	Frame recursive YNR nonlinear filter limit level	1 (
12 CNRL	Frame recursive CNR nonlinear filter limit level	1							
		RF				Video1-4			
13 VTRH	Hysteresis for Hsync non-standard signal detection	1	1	1	1				
14 VTRR	Sensitivity for Hsync non-standard signal detection	1	1	1	1				
15 LDSR	Sensitivity for frame non-standard signal detection	2	2	2	2				
		VM=off	VM=Low	VM=Mid	VM=High				
16 VAPG	V-aperture compensation gain	0	0	0	0				
17 VAPI	V-aperture compensation convergence point	0	0	0	0				
		SNNR=0	SNNR=1	SNNR=2	SNNR=3				
18 YPET	Y peaking filter center frequency	3	0	0	0				
19 YPFG	Y peaking filter gain	8	0	1	2				
		SNNR=0	SNNR=1	SNNR=2	SNNR=3				
20 YHCO	Y output high frequency component coring	0	1	1	1				
21 YHCG	Y output high frequency component coring gain	1	1	1	1				
22 HSSL	Hsync slice level	12							
23 VSSL	Vsync slice level	8							
24 ADCL	ADC clock delay	3							
		NRMD=0	NRMD=1	NRMD=2	NRMD=3				
25 D2GA	Moving detection gain	4	4	4	4				
26 KILR	Killer detection reference	3							

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

3D-COMB uPD64082								
Reg.No	&Name	FUNCTION						
27	OP	Option:Selection of comb filter&recursive n.reduction types	1	RF	CVideo1	SVideo1	CVideo2	SVideo2
28	NR1	Noise reduction on/off	0		0	1	0	1
29	NR2	SNNR control on/off	0				0	1
30	WSL	Noise level detection level data	0					
31	HPLL	H-PLL filter	1					
32	BPLL	Burst PLL filter	1					
33	FSCF	Burst extraction gain	0					
34	PLLF	PLL loop gain	1					
35	CC3N	Selection if a line-comb filter C separation filter characteristic	0	RF	Video1-4	Video5,6,7		
36	HDP	Fine adjustment of the system H-phase	5		0	0		
37	BGPS	Internal burst gate start position	4					
38	BGPW		10					
39	TEST	Test bit * forbidden setting	0					
40	WSC	Amount of noise detection coring	1	RF	Video1-4	Video5,6,7		
41	LIND	DRC-M line-doubling setting for non-standard signals	0		0	2		
42	PFGO	* Not used	3					
					SNNR=0	SNNR=1	SNNR=2	SNNR=3
#16	VAPG				0	0	0	0
NTSC-YCT CXA2103-1								
Reg.No	&Name	FUNCTION						
			RF/Video1-4	Video5,6-480i	Video7-480i			
			P&P Left	P&P Left	P&P Left			
			-DRC	-DRC	-DRC			
0	YLEV	Y-Out gain	34	40	40			
1	CLEV	Cb&Cr-Out gain	27	46	46			
			RF	Video1-4				
2	SCON	Sub contrast						
3	SCOL	Sub color						
4	SHUE	Sub hue						
5	YDLY	Y/C delay time	0	0				
			RF	Video1-4	Svideo	Video 5,6-480i	Video7-480i	
6	SHAP	Sharpness	5	4	4	4	8	
7	SHF0	Sharpness f0 selector	3	3	3	3	0	
8	PRE0	Sharpness pre/over-shoot ratio	3	0	0	0	3	
9	BPF0	Chroma band filter f0 setting	3	0	0	0	0	
10	BPFO	Chroma band filter O setting	0	3	3	3	3	
11	BPSW	Chroma band filter on/off	1	0	0	0	0	
12	TRAP	Y block chroma trap filter on/off	0	0	0	0	0	
13	LPF	Y Cb Cr-Output LPF on/off	1	1	1	1	1	
			RF	Video1-4	Video5,6	Video7		
14	AFCG	AFC Loop gain	1	0	0	0		
15	CDMD	V countdown system mode selector	3	3	3	3		
16	SSMD	H&Vsync slide level setting	0	0	0	0		
17	HMSK	Masking of macrovision signal on/off	1	1	1	0		
18	HALI	H automatic adjustment on/off	0	0	0	0		
19	PPHA	H TIM phase adjustment video	7	7	7	7		

NTSC-YCT CXA2103-1			RF/Video1-4	Video5,6-480i	Video7-480i							
			P&P Left -DRC	P&P Left -DRC	P&P Left -DRC							
20	CBOF	Cb Offset Adjustment			34	Note: CBOF adjustment does not affect Video 7						
21	CROF	Cr Offset Adjustment			32	Note: CROF adjustment does not affect Video 7						
22	CBO2	Cb Offset Adjustment	0	0		Note: CB02 adjustment only affects Video 7						
23	CRO2	Cr Offset Adjustment	0	0		Note: CR02 adjustment only affects Video 7						
			P&P & Favorite							P&P & Favorite		
			UBLK-0	UBLK-1	UBLK-2	UBLK-3	UBLK-4	UBLK-5	UBLK-6	UBLK-7		
24	ATPD	Auto-pedestal Inflection Point	0	0	2	0	0	2	3	2		
25	DCTR	DC Transmission Ratio	0	0	1	0	0	2	2	3		

NTSC-YCT CXA2103-2			RF/Video1-4	Video5,6,7-480							
Reg.No	&Name	FUNCTION	P&P Right	P&P Right , DRC							
0	YLEV	Y-Out gain		34	Note: Data in the right column is used when main signal is NOT 480i						
1	CLEV	Cb&Cr-Out gain		27	Note: Sub signal goes through DRC, when main signal is 480p, 1080i, or 720p						
			RF	Video1-4							
2	SCON	Sub contrast									
3	SCOL	Sub color									
4	SHUE	Sub hue									
5	YDLY	Y/C delay time	0	0							
			RF	Cvideo	Svideo	SNNR=0	SNNR=1	SNNR=2	SNNR=3		
6	SHAP	Sharpness	4	4	4	0	1	2	3		
7	SHF0	Sharpness f0 selector	3	3	3						
8	PREO	Sharpness pre/over-shoot ratio	0	0	0						
9	BPF0	Chroma band filter f0 setting	0	0	0						
10	BPF0	Chroma band filter O setting	0	0	0						
11	BPSW	Chroma band filter on/off	0	0	0						
12	TRAP	Y block chroma trap filter on/off	0	0	0						
13	LPF	Y Cb Cr-Output LPF on/off	0	0	0						
			RF	Video1-4							
14	AFCG	AFC Loop gain	1	0							
15	CDMD	V countdown system mode selector	3	3							
16	SSMD	H&Sync slide level setting	0	0							
17	HMSK	Masking of macrovision signal on/off	1	1							
18	HALI	H automatic adjustment on/off	0	0							
19	PPHA	H TIM phase adjustment video	7	7							
			RF/Video1-4	Video5,6,7-480	P&P Right	P&P Right , DRC					
20	CBOF	Cb Offset Adjustment									
21	CROF	Cr Offset Adjustment									
			P&P & Favorite							P&P & Favorite	
			Single Picture	UBLK-0	UBLK-1	UBLK-2	UBLK-3	UBLK-4	UBLK-5	UBLK-6	UBLK-7
22	ATPD	Auto-pedestal Inflection Point P&P & Favorite	0	0	0	2	0	0	2	3	2
23	DCTR	DC Transmission Ratio P&P & Favorite	0	0	0	1	0	0	2	2	3

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

CRT Driver CXA2150P-1													
Reg.No	Name	FUNCTION	RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i
0	SBOT	Offset for SBRT	0	0	0	5	7	7	7	7	0	5	15
1	YOF	DC-offset for Y	0	0	0	0	0	0	0	7	5	7	7
2	CBOF	DC-offset for Cb	35	35	35	37	40	31	35	49	32	49	49
3	CRDF	DC-offset for Cr	36	36	36	39	41	31	36	49	31	49	49
4	SBRT	Sub Bright											
5	RDRV	R output drive											
6	GDRV	G output drive	31										
7	BDRV	B output drive											
8	RCUT	R output cutoff											
9	GCUT	G output cutoff	31										
10	BCUT	B output cutoff											
46WT500													
			Vivid	Std	Movie	Pro							
11	WBSW	WB_S	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)							
13	RDOF	Offset for RDRV	64	63 (no memory)	66	63 (no memory)							
14	GDOF	Offset for GDRV	63	63 (no memory)	63	63 (no memory)							
15	BDOF	Offset for BDRV	68	63 (no memory)	55	63 (no memory)							
16	RCOF	Offset for RCUT	62	63 (no memory)	64	63 (no memory)							
17	GCOF	Offset for GCUT	63	63 (no memory)	63	63 (no memory)							
18	BCOF	Offset for BCUT	66	63 (no memory)	61	63 (no memory)							
CRT Driver CXA2150P-2 settings for Vivid mode													
Reg.No	Name	FUNCTION											
0	ALBK	PIC_ON:RGB output including AKB reference pulse on/off				1							
1	RGBS	R_ON/G_ON/B_ON : R/G/B outputs on/off				7							
2	BLKB	BLK_BTM:RGB output bottom limit 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	AGNG	AGING_W/AGING_B:AGING_W/AGING_B modes on/off				0							
7	AKBO	AKBOFF:Automatic/Manual =Cut off setting				0							
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P						
8	SYPH	SYNC_PHASE:Hsync delay with respect to Video		0	0	0	0	0	0	0	0		
9	CLPH	CLP_PHASE:Internal clamp pulse phase		3	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	0		
11	JAXS	JAXIS:color axis switch		0									
12	BLKO	BLKO:Blanking switch		0									

CRT Driver CXA2150P-3		Vivid						
Reg.No	FUNCTION	RF	Cvideo	Svideo	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P
0	SYSM SYSTEM:Signal bandwidth setting	1	1	1	1	1	2	2
1	UVML VM_LEV:VM_OUT level	3	3	3	2	2	3	3
2	VMMO System Micro pin#40	1	1	1	1	1	1	0
3	VMCR VM_COR:VM_OUT coring level	0	0	0	1	1	3	3
4	VMLM VM_LMT:VM_OUT limit level	3	3	3	3	3	3	3
5	VMF0 VM F0: VM f0	2	2	2	2	2	2	2
6	VMDL VM_DLY:VM_OUT phase	1	2	2	2	2	0	1
7	SHOF Offset for USHP=SHOF x 4	0	1	1	2	3	3	3
8	SHF0 SHP_F0:Sharpness circuit f0	1	1	1	1	1	0	1
9	PROV PRE/OVER:Y signal pre/over-shoot ratio	0	0	0	3	3	3	3
10	F1LV SHP_F1:Sharpness for higher f0	0	0	0	0	1	3	3
11	CDSP SHP_CD:Sharpness in part of high color saturation	3	3	3	3	3	3	3
12	LTLV LTI_LEV:Luminance transient improvement	3	3	3	3	3	3	3
13	LTM0 LTI_MODE:LTI mode setting	1	1	1	1	0	0	1
14	CTLV CTI_LEV:Chrominance transient improvement	0	0	0	0	0	0	0
15	CTMD CTI_MODE:CTI mode setting	0	0	0	0	0	0	0
16	UBOF Offset for UBRT	0	0	0	0	7	9	7
17	UCOF Offset for UCOL=UCOF x 2	3	3	3	3	3	0	2
18	UHOF Offset for UHUE	0	0	0	0	0	0	0
19	MIDE MDE enhancement setting	3	15	15	7	11		

CRT Driver CXA2150P-2 Video7 Settings for Vivid Mode					
Reg.No & Name	FUNCTION	Video7 VGA	Video7 480i	Video7 480P	Video7 1080i
0	ALBK	-			
1	RGBS	-			
2	BLKB	-			
3	LIML	-			
4	PABL	-			
5	SABL	-			
6	AGNG	-			
7	AKBO	-			
		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i
8	SYPH SYNC_PHASE:Hsync delay with respect to Videc	0	0	0	0
9	CLPH CLP_PHASE:Internal clamp pulse phase	3	3	3	3
10	CLGA CLP_GATE:Switch for the gated internal clamp pulse with Hsync	0	0	0	0
11	JAXS	-			
12	BLKO	-			

CRT Driver CXA2150P-3 DVI Settings			Vivid											
Reg.No	&Name	FUNCTION	Video7 VGA			Video7 480i			Video7 480p			Video7 1080i		
0	SYSM	SYSTEM:Signal bandwidth setting		2		1		1		1		3		
1	UVML	VM_LEV:VM_OUT level		2		2		2		2		3		
2	VMMO	System Micro pin#40		1		1		1		1		1		
3	VMCR	VM_COR:VM_OUT coring level		0		0		0		0		0		
4	VMLM	VM_LMT:VM_OUT limit level		3		3		3		3		3		
5	VMF0	VM F0: VM f0		0		1		1		1		0		
6	VMDL	VM_DLY:VM_OUT phase		2		1		1		1		2		
7	SHOF	Offset for USHP=SHOF x 4		0		2		2		2		3		
8	SHF0	SHP_F0:Sharpness circuit f0		1		1		1		1		1		
9	PROV	PRE/OVER:Y signal pre/over-shoot ratio		3		3		3		3		3		
10	F1LV	SHP_F1:Sharpness for higher f0		0		0		0		0		0		
11	CDSP	SHP_CD:Sharpness in part of high color saturation		3		3		3		3		3		
12	LTLV	LTI_LEV:Luminance transient improvement		0		3		3		3		3		
13	LTMD	LTI_MODE:LTI mode setting		1		0		0		0		1		
14	CTLV	CTI_LEV:Chrominance transient improvement		0		0		0		0		3		
15	CTMD	CTI_MODE:CTI mode setting		0		0		0		0		0		
16	UBOF	Offset for UBRT		2		2		2		2		2		
17	UCOF	Offset for UCOL=UCOF x 2		0		1		0		0		0		
18	UHOF	Offset for UHUE		0		0		0		0		0		
19	MIDE	MID enhancement setting		8		7		11		0				

CRT Driver CXA2150P-3 settings for standard, movie and pro			Standard												Movie												Pro											
Reg.No	&Name	RF	CV	SV	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	RF	CV	SV	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	RF	CV	SV	V5.6 480i	V5.6 480P	V5.6 1080i	P&P																
#0	SYSM	1	1	1	1	1	2	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	2	2	2	2	2	2										
#1	UVML	2	2	2	2	2	2	3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0									
#2	VMMO	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
#3	VMCR	1	0	0	1	1	3	3	1	1	1	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	3	3	3	3	3											
#5	VMF0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2											
#6	VMDL	0	2	2	2	2	2	1	1	1	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2											
#7	SHOF	1	0	0	0	2	3	3	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0										
#8	SHF0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1											
#9	PROV	0	3	0	0	0	0	0	0	3	3	3	3	3	2	2	3	3	3	3	2	3	2	3	2	2	2											
#10	F1LV	0	0	0	0	0	1	3	3	0	0	0	1	2	3	3	0	0	0	1	2	3	3	0	1	2	3											
#11	CDSP	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
#12	LTLV	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
#13	LTMD	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1											
#14	CTLV	0	0	0	0	0	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	0	0	0	0	0											
#16	UBOF	7	7	7	7	7	7	9	7	7	7	7	7	7	7	7	7	7	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	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	0	0	0	0												
#19	MIDE	2	14	14	6	10	--	--	1	13	13	5	9	--	--	0	12	12	4	8	--	--	--	--	--	--												

NVM ADDRESS: see the next page

CRT Driver CXA2150P-3														
Reg.No	&Name	FUNCTION		SNNR=0	SNNR=1		SNNR=2		SNNR=3					
#1	UVML			0		0		0		0				
#3	VMCR			0	+1	+2	+2	+3						
#10	F1LV			0	-1	-2	-2	-3						
#11	CDSP			0	0	0	0	0						
#12	LTLV			0	0	0	0	0						
#14	CTLV			0	0	0	0	0						
#19	MIDE			0	0	0	0	0						
CRT Driver CXA2150P-3 Video7 settings for standard, movie and pro														
Reg.No	&Name	Standard				Movie				Pro				
		Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	Video7 VGA	Video7 480i	Video7 480p	Video7 1080i	
#0	SYSM	2	1	1	3	2	1	1	3	2	2	2	3	
#1	UVML	2	2	2	2	2	1	1	1	2	0	0	0	
#2	VMMO	1	1	1	1	1	0	0	0	1	0	0	0	
#3	VMCR	0	0	0	0	0	0	0	0	0	0	0	0	
#4	VMLM	3	3	3	3	3	3	3	3	3	3	3	3	
#5	VMF0	0	1	1	0	0	1	1	0	0	0	0	0	
#6	VMDL	2	1	1	2	2	1	1	2	2	2	2	2	
#7	SHOF	0	3	3	3	0	1	1	1	0	0	0	2	
#8	SHFO	1	1	1	1	1	1	1	1	1	1	1	1	
#9	PROV	3	3	3	3	3	3	3	3	3	3	3	3	
#10	F1LV	0	0	0	0	0	0	0	0	0	0	0	0	
#11	CDSP	3	3	3	3	0	0	0	0	0	0	0	0	
#12	LTLV	0	2	3	3	0	1	2	2	0	0	0	0	
#13	LTMD	1	1	0	1	1	1	1	1	1	1	1	1	
#14	CTLV	0	0	0	3	0	0	0	2	0	0	0	0	
#15	CTMD	0	0	0	0	0	0	0	0	0	0	0	0	
#16	UBOF	2	4	4	4	2	2	2	2	2	2	2	2	
#17	UCOF	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	
#19	MIDE	8	6	10	0	8	5	9	0	8	4	8	0	

NVM ADDRESS: see the next page

CRT Driver CXA2150P-3													
Reg.No	&Name	FUNCTION		SNNR=0	SNNR=1		SNNR=2		SNNR=3				
#1	UVML			0		0		0		0			
#3	VMCR			0	+1	+2	+2	+3					
#10	F1LV			0	-1	-2	-2	-3					
#11	CDSP			0	0	0	0	0					
#12	LTLV			0	0	0	0	0					
#14	CTLV			0	0	0	0	0					
#19	MIDE			0	0	0	0	0					

CRT Driver CXA2150P-4												
Reg.No	Name	FUNCTION										
0	UPIC	PICTURE:Picture	Vivid	Standard	Movie	Pro						
1	UBRT	BRIGHT: Brightness	63	44	31	31						
2	UCOL	COLOR: Color	26	31	31	31						
3	UHUE	HUE: Hue	31	31	31	31						
4	USHP	SHARPNESS: Sharpness	32	40	31	31						
5	UTMP	Color Temperature	2	1	0	1						
6	UDCL	DCOL: Dynamic color setting	2	2	0	0						
			RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i	
7	AIXIS	COL_AXIS: color matrix setting	0	0	0	0	0	0	0	0	0	
							Picture Mode Vivid					
8	UGAM	GAMMA_L: RGB output GAMMA correction	RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i	
9	AGAM	GAMMA_L--Void Data	5	4	4	1	5	0	4	4	1	
			---	UGAM-0	UGAM-1	UGAM-2	UGAM-3	UGAM-4	UGAM-5	UGAM-6	UGAM-7	
10	GSBO	Offset for SBRT	0	0	0	0	0	0	0	0		
11	GCOO	Offset for UCOL	0	0	0	0	0	0	0	0		
12	GHOU	Offset for UHUE	0	0	0	0	0	0	0	0		
							Picture Mode Vivid					
13	UBLK	Initial Black Level	RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i	
14	ABLK	-- Void Data	6	6	6	6	4	0	6	6	6	
			---	UBLK0	UBLK1	UBLK2	UBLK3	UBLK4	UBLK5	UBLK6	UBLK7	
15	DCTR	DC_TRAN: Y signal DC transmission	1	1	1	2	3	2	3	3		
16	DPIC	DPICLEV: Y signal AUTO PEDESTAL level	0	1	2	1	1	2	1	2		
17	DSBO	Offset for SBRT	7	7	7	7	7	7	7	7		
18	ABL_M	ABL MODE: ABL mode	0	0	0	0	0	0	1	1		
			Full									
19	ABLT	ABL_TH: ABL current detection Vth control	0									
20	EPOF	Offset for UPIC=EP0F x - void Data	{A6 E9 1F}									
21	SPOF	Offset for UPIC=SPOF x - Not used	15									
				<< Only available at Vcomp1&2.								
22	SCON	SUB CONTRAST: SUB PICTURE	RF/Video1-4	Video5,6 480i	Video5,6 480P	Video5,6 1080i	P&P	Video7 vga	Video7 480i	Video7 480p	Video7 1080i	
23	CLOF	Offset for UCOL	8	8	8	8	8	8	8	8	8	
24	HUOF	Offset for UHUE	4	4	4	4	4	4	4	4	4	
25	IDSW	Not used										
26	DATA	Display of vertical compression modes. Not used	0									

CRT Driver CXA2150P-4			FUNCTION															
			SNNR =0	SNNR =1	SNNR =2	SNNR =3												
#4	USHP	SHARPNESS:Sharpness	0	1	3	4												
			Picture Mode : Standard															
			RF & V1-4	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	RF & V1-4	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	RF & V1-4	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	
#8	UGAM	GAMMA_L:RGB output GAMMA correction	2 A6 22 07	2 A6 23 07	2 A6 24 07	1 A6 25 07	1 A6 26 07	0 A6 27 07	0 A6 28 07	0 A6 29 07	0 A6 2A 07	0 A6 2B 07	0 A6 2C 07	0 A6 2D 07	0 A6 2E 07	0 A6 2F 07	0 A6 30 07	
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		
#8	UGAM	GAMMA_L:RGB output DVI GAMMA correction	0 A6 35 07	2 A6 36 07	2 A6 37 07	1 A6 38 07		0 A6 39 07	0 A6 3A 07	0 A6 3B 07	0 A6 3C 07		0 A6 3D 07	0 A6 3E 07	0 A6 3F 07	0 A6 40 07		
			Picture Mode : Standard				Picture Mode : Movie				Picture Mode : Pro							
			RF & V1-4	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	RF & V1-4	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	RF & V1-4	V5.6 480i	V5.6 480P	V5.6 1080i	P&P	
#13	UBLK	Initial Black Level	3 A6 22 38	3 A6 23 38	3 A6 24 38	3 A6 25 38	3 A6 26 38	1 A6 27 38	1 A6 28 38	1 A6 29 38	1 A6 2A 38	1 A6 2B 38	0 A6 2C 38	0 A6 2D 38	0 A6 2E 38	0 A6 2F 38	0 A6 30 38	
			Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		Video7 VGA	Video7 480i	Video7 480P	Video7 1080i		
#13	UBLK	Initial Black Level DVI	0 A6 35 38	3 A6 36 38	3 A6 37 38	3 A6 38 38		0 A6 39 38	1 A6 3A 38	1 A6 3B 38	1 A6 3C 38		0 A6 3D 38	0 A6 3E 38	0 A6 3F 38	0 A6 40 38		

CRT Driver CXA2150D-1									
Reg.No&Name	FUNCTION	1080i		FULL		NORMAL		ZOOM	WIDE ZOOM
0 VPOS	V_POSITION:Vertical position								
1 VSIZ	V_SIZE:Vertical size								
2 VSZO	V_SIZE OFFSET						0		
3 VLIN	V_LINEARITY:Vertical linearity					7			
4 VSCO	S_CORRECTION:Vertical S-correction	9		9			9		9
5 VCEN	VSAW0_DCH/VSAW0_DCL:Vertical center adjustment					31			
6 VPIN	VSAW0_AMP:Vertical PIN adjustment					15			
7 NSCO	VSAW1_DC:Rotation					7			
8 HTPZ	VSAW1_AMP:Horizontal trapezoid					15			
9 ZOOM	ZOOM_SW:Zoom switch		0		0		1		1
10 APWS	ASP_SW:Aspect switch	0	0	0	0		0		0
11 ASPT	V_ASPECT:Aspect ratio	0	0	0	0		44		22
12 SCRL	V_SCROLL:Vertical scroll	29	29	29	29		29		29
13 UVLN	UP_VLIN:Upper vertical linearity		0	0	0		0		5
14 LVLN	LO_VLIN:lower vertical linearity		0	0	0		0		5

CRT Driver CXA2150D-2

Reg.No	&Name	FUNCTION	1080i	FULL/NORM	ZOOM	WIDE ZOOM
0	HCNT	HC_PARA_DC:Horizontal center		19		
1	HPOS	H_POSITION:Horizontal position		25		
2	HSIZ	H_SIZE:Horizontal size				
3	SLIN	MP_PARA_DC:Horizontal S-correction				
4	MPIN	MP_PARA_AMP:Horizontal middle pin	0		0	
5	PIN	PIN_AMP:Horizontal pin	10		10	
6	PINO	PIN AMP offset	7	7	7	7
7	UCP	UP_CPIN:Upper corner pin	31		31	
8	LCP	LO_CPIN:Lower corner pin	31		31	
9	UXCG	UP_UCG:Upper extra corner pin gain	0		0	
10	LXCG	LO_UCG:Lower extra corner pin gain	0		0	
11	UXCP	UP_UCP:Upper extra corner pin position	2		2	
12	LXCP	LO_UCP:Lower extra corner pin position	2		2	
13	XCPP	UC_POL:Extra corner pin polarity	0		0	
14	PPHA	PIN_PHASE:Pin phase	31			
15	VANG	AFC_ANGLE:AFC angle	31			
16	LANG	HC_PARA_PHASE:Linearity angle	33			
17	VBOW	AFC_BOW:AFC bow	31			
18	LBOW	HC_PARA_AMP:Linearity bow	48			
19	CPY1	Copy function 1: * Not used	0			

CRT Driver CXA2150D-3

Reg.No	&Name	FUNCTION	1080i	Full	NORMAL	Zoom	WideZoom
0	HBLK	HBLK_SW:Horizontal blanking switch			1		
1	LBLK	LEFT_BLK:Left blanking	56		58		
2	RBLK	RIGHT_BLK:Right blanking	25		23		
3	VBLK	VBLK_SW:Vertical blanking switch	1		1	0	0
4	TBLK	UP_BLK:Top blanking	4	15	15	15	15
5	BBLK	LO_BLK:Bottom blanking	5	15	15	15	15
6	VCMP	V_COMP:Vertical compensation	0	0	0	0	0
7	HCMP	H_COMP:Horizontal compensation	0	0	0	0	0
8	ACMP	AFC_COMP:AFC compensation	0	0	0	0	0
9	PCMP	PIN_COMP:Pin compensation	0	0	0	0	0
10	AFCM	AFC_MODE:AFC compensation	2		3		
11	VFRQ	V_FREQ:Vertical frequency		1			
12	VON	V_ON:Vertical drive on		1			
13	JUMP	JMP_SW:Reference pulse jump switch		0			
14	VDJP	VDRV_SW:Vertical drive switch	1	1	1	1	1
15	VDST	RST_SW:Vertical drive start switch	0	0	0	0	0
16	EWDC	EW_DC:Pin DC level shift		0			
17	AKBT	AKBTIM:AKB timing	9	9	9	9	9

Component I/F & Sync Separation CXA2171										
Reg.No	&Name	FUNCTION	Video5,6 480i	Video5,6 480P	Video5,6 1080i	Video5,6 720P	Video7 480i	Video7 480P	Video7 1080i	Video7 720P
0	MTRX	MAT_OUT	0	0	1	1	0	0	1	1
1	GAIN	GAIN_SEL	0							
2	CBGN	CBGAIN	9							
3	VTC	V_TC	1							
4	HWID	H_WIDTH	1							
			Video5,6	Video7	Sub					
5	HSEP	HSEP_SEL	1	1	0					
6	TEST	TEST	0							
7	FRGB	No used	0							
			V5,6,7 1080i	ELSE						
8	HMSK	Hsync masking in vertical retrace	0	1						

Audio Processor BH3868FS									
Reg.No	&Name	FUNCTION							
0	SVOL	Volume:Offset for Volume							0
1	SBAL	Balance Offset for Balance							7
2	SBAS	Bass:Offset for Bass							7
3	STRE	Treble:Offset for Treble							7
4	BBLP	BBE low pass filter							0
5	BBHP	BBE high pass filter							2
6	SREF	Surround effect							11
7	AGC	Auto gain control							0
8	BBE	BBe on/off							0

TruSurround NJM2180									
Reg.No	&Name	FUNCTION							
0	TSMD	Trusurround effect selection							2
1	ATT	No used for Wide model							0

DLBY NJW1106									
Reg.No	&Name	FUNCTION							
0	DBMD								0
1	SCH								0
2	ADSW								0
3	CECH								0
4	DELY								7
5	SSEL								0

MID-1				
Reg.No	&Name	FUNCTION		
	Display Data			
0	DHPH	H active display area phase	110	
1	DVPH	V active display area phase	20	
2	DHAR	H active display area size	240	
3	DVAR	V active display area size	135	
4	DHPW	display H pulse width	55	
5	DVPW	display V pulse width	5	
22	DPSW	display PLL switch	1	
23	MDL	model select	0	
	Misc. Common Data	Data		
6	DYCD	display output Y-C delay correction	2	
7	DYSI	display output YS signal delay select	1	
	Favorite / Other	Normal	Favorite	Others
8	MDHP	main display picture H position	154	9 0
10	MDHS	main display picture H size	162	149 240
	Single / Favorite	Single 480i/480	Single 720P	Favorite
9	MDVP	main display picture V position	30	30 20
11	MDVS	main display picture V size	120	120 97
	Index / Others	Index	Others	
12	MLHP	multi picture mode H position	36	36
13	MLVP	multi picture mode V position	31	31
	Favorite	Favorite		
14	SDHP	sub display picture H position	166	
15	SDVP	sub display picture V position	20	
	Favorite	Favorite		
16	SDHS	sub display picture H size	44	
17	SDVS	sub display picture V size	29	
	PinP Position			
18	PDHP		-	
19	PDVS		-	
	PinP Size			
20	PDHS		-	
21	PDVS		-	
	Single / Others	Single	Others	
24	BCOL	Background Y level	5	5

MID-2				
Reg.No	&Name	FUNCTION		
	MID Mode, Wide mode, Input Signal Format		Single	Single
			RF,Video, YC	YPbPr
0	DRHP	DRC H active area position	142	141 111 110
1	DRHS	DRC H active area size	162	162 178 178
2	DRVVP	DRC V active area position	37	37 37 37
3	DRVSV	DRC V active area size	120	120 120 120

MID-2 (Continued)			Twin, Favorite		Memo	
			RF,Video, YC	YPbPr	RF,Video, YC	YPbPr
0	DRHP	DRC H active area position	132	131	142	141
1	DRHS	DRC H active area size	166	166	162	162
2	DRVVP	DRC V active area position	54	54	58	58
3	DRVVS	DRC V active area size	112	112	110	110
			Index		Twin-Right	Scroll-Small
			RF,Video, YC	YPbPr	RF,Video, YC	RF
0	DRHP	DRC H active area position	139	138	138	143
1	DRHS	DRC H active area size	164	164	166	162
2	DRVVP	DRC V active area position	50	50	54	54
3	DRVVS	DRC V active area size	114	114	112	112

MID-3 : INPUT)			Reg No & Name FUNCTION			
	MID mode, Wide mode, Input Signal Format		Single			
			480P	720P	YPbPr No Sig.	
0	VDHP	VDO H active area position	109	95	205	
1	VDHS	VDO H active area pixel size	166	108	226	
2	VDVE	VDO V active area even position	37	24	37	
3	VDVS	VDO V active area line size	120	180	56	
			Twin, Favorite		Twin-Right	
			480P	1080i	720P	YPbPr No Sig.
0	VDHP	VDO H active area position	128	94	111	179
1	VDHS	VDO H active area pixel size	155	150	99	199
2	VDVE	VDO V active area even position	53	37	50	24
3	VDVS	VDO V active area line size	112	126	168	56
			Memo			
			480P	1080i	720P	YPbPr No Sig.
0	VDHP	VDO H active area position	136	102	115	179
1	VDHS	VDO H active area pixel size	152	147	98	199
2	VDVE	VDO V active area even position	57	44	58	24
3	VDVS	VDO V active area line size	110	123	164	56
			Index		Index-Small	
			480P	1080i	720P	YPbPr No Sig.
0	VDHP	VDO H active area position	132	99	112	166
1	VDHS	VDO H active area pixel size	154	149	99	187
2	VDVE	VDO V active area even position	51	34	48	24
3	VDVS	VDO V active area line size	113	128	169	56
	Input Signal Format		RF,Video, S-Video, YPbPr 480	480P	1080i	720P
4	VDVO	VDO V active area line size	0	0	0	0
5	VCPO	VDO V active area odd position	95	70	40	40
6	VCWD	VDO clamp pulse output timing	3	3	3	3
7	VYCD	VDO clamp pulse width	0	0	0	0
8	VSTP	VDO PLL phase detect stop line count	-	119	160	146
9	VSTT	VDO PLL phase detect start line count	-	4	0	0
10	VHSC	VDO H sync cycle	130	-	-	-

MID-5 Enhance Table Data Setting

		RF				YPbPr-480i				
0	P-OP	Table select	0	1	2	3	4	5	6	7
1	MHLY	Main H LPF Y Coefficient select	1	1	1	1	1	1	1	1
2	MHLC	Main H LPF C Coefficient select	3	3	3	3	3	3	3	3
3	MVLY	Main V LPF Y Coefficient select	0	0	0	0	0	0	0	0
4	MVLC	Main V LPF C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR	Main H Enhance, Y Coreing level	1	1	2	1	0	0	0	1
6	MHYL	Main H Enhance, Y Clip level	1	1	1	1	1	1	1	1
7	MHYE	Main H Enhance, Y Enhancement level	7	7	3	3	3	3	3	5
8	MHYC	Main H Enhance, Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR	Main H Enhance, C Coreing level	0	0	0	0	0	0	0	0
10	MHCL	Main H Enhance, C Clip level	1	1	1	1	1	1	1	1
11	MHCE	Main H Enhance, C Enhancement level	0	0	0	0	0	0	0	0
12	MHCC	Main H Enhance, C Coefficient select	1	1	1	1	1	1	1	1
13	MVYR	Main V Enhance, Y Coreing level	0	0	2	2	0	0	2	2
14	MVYL	Main V Enhance, Y Clip level	1	1	1	0	1	1	1	1
15	MVYE	Main V Enhance, Y Enhancement level	0	0	2	5	0	0	2	5
16	MVCR	Main V Enhance, C Coreing level	0	0	0	0	0	0	0	0
17	MVCL	Main V Enhance, C Clip level	1	1	1	1	1	1	1	1
18	MVCE	Main V Enhance, C Enhancement level	0	0	0	0	0	0	0	0
		YPbPr-480p				Cvideo/Svideo				
0	P-OP	Table select	8	9	10	11	12	13	14	15
1	MHLY	Main H LPF Y Coefficient select	0	0	0	0	1	1	1	1
2	MHLC	Main H LPF C Coefficient select	3	3	3	3	3	3	3	3
3	MVLY	Main V LPF Y Coefficient select	0	0	0	0	0	0	0	0
4	MVLC	Main V LPF C Coefficient select	0	0	0	0	0	0	0	0
5	MHYR	Main H Enhance, Y Coreing level	0	0	0	1	0	0	0	1
6	MHYL	Main H Enhance, Y Clip level	1	1	1	1	1	1	1	1
7	MHYE	Main H Enhance, Y Enhancement level	7	7	3	5	7	7	3	3
8	MHYC	Main H Enhance, Y Coefficient select	1	1	1	1	1	1	1	1
9	MHCR	Main H Enhance, C Coreing level	0	0	0	0	0	0	0	0
10	MHCL	Main H Enhance, C Clip level	1	1	1	1	1	1	1	1
11	MHCE	Main H Enhance, C Enhancement level	0	0	0	0	0	0	0	0
12	MHCC	Main H Enhance, C Coefficient select	1	1	1	1	1	1	1	1
13	MVYR	Main V Enhance, Y Coreing level	0	0	2	2	0	0	2	2
14	MVYL	Main V Enhance, Y Clip level	1	1	1	1	1	1	1	1
15	MVYE	Main V Enhance, Y Enhancement level	0	0	2	5	0	0	2	5
16	MVCR	Main V Enhance, C Coreing level	0	0	0	0	0	0	0	0
17	MVCL	Main V Enhance, C Clip level	1	1	1	1	1	1	1	1
18	MVCE	Main V Enhance, C Enhancement level	0	0	0	0	0	0	0	0

On-Screen Display

Reg.No & Name	FUNCTION
0	HPOS OSD horizontal position
1	HPOF Horizontal position for Favorite mode
2	VPOS OSD vertical position
3	VPOT Vertical position for P&Pmode

SNNR					
Reg.No &Name	FUNCTION	0	1	2	3
0 SNNR	SNNR data setting	0	1	2	3
1 SNFX	Selection of SNNR data setting	0			
2 WSLT	Noise level detection data thresholds for SNNR data	0 ~ 30	31 ~ 62	63 ~ 126	127 ~ 255
	SNNR Settings based on WSL Data				
	SNNR=0/1/2/3	0	1	2	3
3 CPFG	Related to 3D-COMB / #19 YPFG settings	0	1	2	3
4 CPFT	Related to 3D-COMB / #18 YPF1 settings	0	0	0	0
5 CCOR	Related to 3D-COMB / #20 VHCO settings	0	1	1	1
6 CHCG	Related to 3D-COMB / #21 VHCG settings	1	1	1	1
7 CAPG	Related to 3D-COMB / #16 VAPG settings	0	0	0	0
8 3SHP	Related to CXA2103 / #6 SHAP settings	0	1	2	3
9 MIDD	Related to CXA2150P-3 / #19 MIDE settings	0	0	0	0
10 5SHP	Related to CXA2150P-4 / #4 USHP settings	0	1	3	4
11 5YF1	Related to CXA2150P-3 / #10 F1LV settings	0	1	2	3
12 5CDS	Related to CXA2150P-3 / #11 CDSP settings	0	0	0	0
13 5LTI	Related to CXA2150P-3 / #12 LTLV settings	0	0	0	0
14 5CTI	Related to CXA2150P-3 / #14 CCTL settings	0	0	0	0
15 5VML	Related to CXA2150P-3 / #1 UVML settings	0	0	0	0
16 5YMC	Related to CXA2150P-3 / #3 VMCR settings	0	1	2	3
ID-1 Detection					
Reg.No &Name	FUNCTION	0	1	2	3
0 XJGL	XJGLK:Setting for memorizing or not the ID-1 detection status	0			
1 LNJI	LNJI:Setting for the multi/single-line ID-1 detection	0			
Closed Caption Display & Parental Control					
Reg.No &Name	FUNCTION	0	1	2	3
0 HPRM	Horizontal position of CCD				
1 HPRS	Horizontal position of CCD				
2 RND	OSD rounding control	1			
3 CCDI	Interruption 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	1	2	3
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			
7 SOFF		0			

ITEM No.	ITEM Name	Contents	min	max				
					Normal	Zoom	W Zoom	HD
0	FDIS	Switch of display for fine adjustment data	0	1			-	
1	COPY	Service copy adjustment	0	1			-	
2	ALCP	Service all copy adjustment	0	1			-	
3	OSDH	Osd horizontal position of PJED service menu	1	255		22		
4	OSDV	Osd vertical position of PJED service menu	1	255	100	120	100	60
5	FVSL	Start position of fine adjustment	0	15	0	14	15	0
6	FVSP	Start line of fine adjustment	0	255	3	21	25	53
7	V1DL	Value of V1 delay	0	255	1	139	60	1
8	V1CU	Value of V1 count up	0	4095	454	598	506	387
9	V1OH	Value of V1 offset upper data	0	255	5	5	5	79
10	V1OL	Value of V1 offset lower data	0	255	0	0	0	0
11	OEVP	Odd/Even select positioin	0	4095		1056		
12	COHP	Horizontal phase for rough adjustment	0	4095		0		
13	34CS	Start center clamp position of H3 and H4 pulse	0	31		14		
14	34CW	Width center clamp position of H3 and H4 pulse	0	31		0		
15	FIHP	Horizontal phase for fine adjustment	0	4095		1104		
16	TPHP	Horizontal phase for test pattern	0	4095		69		
17	TPVP	Vertical phase for test pattern	0	255	55	111	79	15
18	DFHP	Horizontal phase for dynamic focus	0	4095		250		
19	DFHG	Value of horizontal parabola wave for dynamic focus	-128	127	-70	-70	-70	-70
20	DFVG	Value of vertical parabola wave for dynamic focus	-128	127	-65	-65	-65	-65
21	DFDC	Value of center for dynamic focus	-128	127	127	127	127	127
22	DFV1	Value of V1 saw wave for dynamic focus	-128	127	-50	-50	-50	-50
23	SDHP	Compensation of horizontal phase for shading	0	4095		422		
24	SDH1	Value of horizontal saw wave for dynamic focus	-128	127	127	127	127	127
25	RVCS	Start positioin of Red vertical clamp	0	31		0		
26	RVCW	Width of Red vertical clamp	0	31		0		
27	GVCS	Start position of Green vertical clamp	0	31		0		
28	GVCW	Width of Green vertical clamp	0	31		0		
29	BVCS	Start position of Blue vertical clamp	0	31		0		
30	BVCW	Width of Blue vertical clamp	0	31		0		
31	RHCS	Start position of Red horizontal clamp	0	31		0		
32	RHCW	Width of Red horizontal clamp	0	31		0		

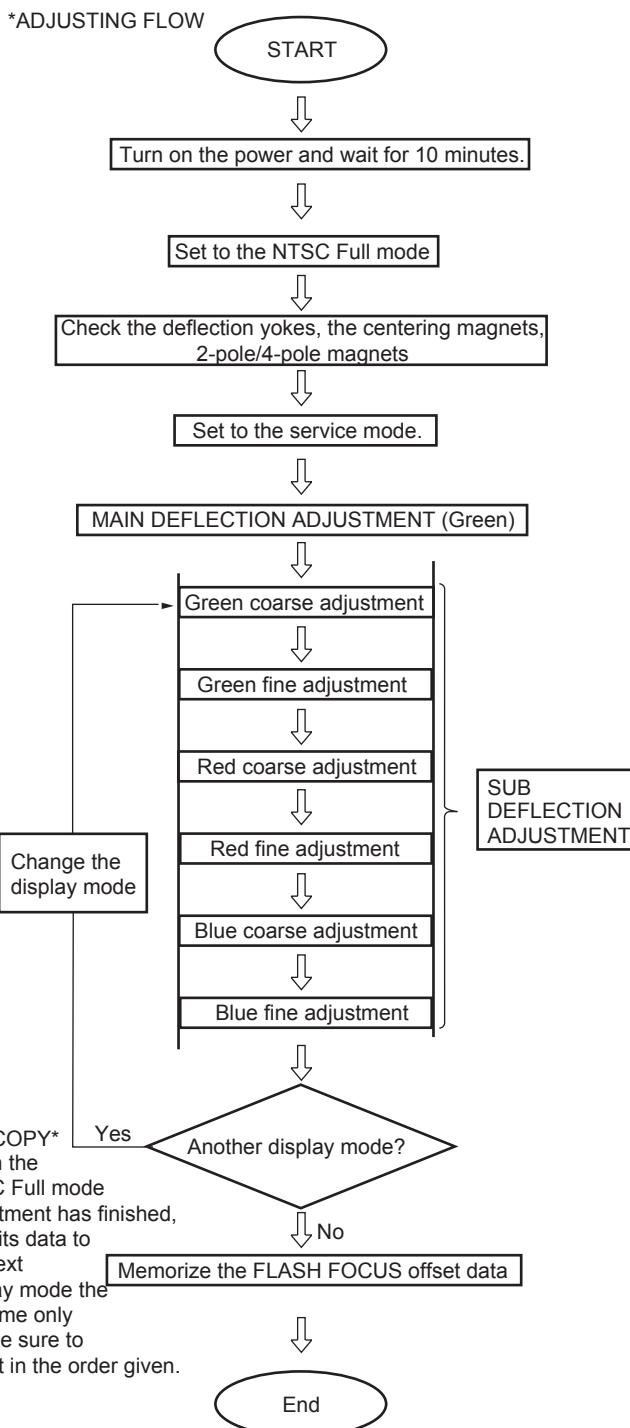
ITEM No.	ITEM Name	Contents	min	max	PJ Engine			
					Normal	Zoom	W Zoom	HD
33	GHCS	Start position of Green horizontal clamp	0	31			0	
34	GHCW	Width of Green horizontal clamp	0	31			0	
35	BHCS	Start position of Blue horizontal clamp	0	31			0	
36	BHCW	Width of Blue horizontal clamp	0	31			0	
37	BDVU	Vertical position for border line 1	0	2047	28	21	12	49
38	BDVL	Vertical position for border line 2	0	2047	900	683	820	1039
39	BDHL	Horizontal position for border line 1	0	2047			148	
40	BDHR	Horizontal position for border line 2	0	2047			1262	
41	HBLD	Horizontal phase for output of H.Blank out	0	4095			0	
42	HBLW	Width for output of H.Blank out	0	4095			0	
43	PWM2	PWM2 output width setting of Regi IC	0	4095			345	
44	COGV	Green vertical center offset data for Auto Regi.	-128	127			0	
45	CORV	Red vertical center offset data for Auto Regi.	-128	127			0	
46	COBV	Blue vertical center offset data for Auto Regi.	-128	127			0	
47	COGH	Green horizontal center offset data for Auto Regi.	-128	127			0	
48	CORH	Red horizontal center offset data for Auto Regi.	-128	127			0	
49	COBH	Blue horizontal center offset data for Auto Regi.	-128	127			0	
50	SOGV	Green vertical skew offset data for Auto Regi.	-128	127			0	
51	SORV	Red vertical skew offset data for Auto Regi.	-128	127			0	
52	SOBV	Blue vertical skew offset data for Auto Regi.	-128	127			0	
53	SOGH	Green horizontal skew offset data for Auto Regi.	-128	127			0	
54	SORH	Red horizontal skew offset data for Auto Regi.	-128	127			0	
55	SOBH	Blue horizontal skew offset data for Auto Regi.	-128	127			0	
56	ZOGH	Green horizontal size offset data for Auto Regi.	-128	127			0	
57	ZORH	Red horizontal size offset data for Auto Regi.	-128	127			0	
58	ZOBH	Blue horizontal size offset data for Auto Regi.	-128	127			0	
59	LOGH	Green horizontal linearity offset data for Auto Regi.	-128	127			0	
60	LORH	Red horizontal linearity offset data for Auto Regi.	-128	127			0	
61	LOBH	Blue horizontal linearity offset data for Auto Regi.	-128	127			0	
62	ERR	Auto Regi. Error code	0	-			0	
63	ADTM	A/D data input timing of Auto Regi.	0	127			144	
64	VUP	Auto Regi. Pattern Upper vertical position	0	2047			50	
65	VUPM	Auto Regi. Pattern Upper middle vertical position	0	2047			0	
66	VMID	Auto Regi. Pattern Middle vertical position	0	2047			512	

PJ Engine			16:9							
ITEM No.	ITEM Name	Contents	min	max	Normal	Zoom	W Zoom	HD		
67	VLOM	Auto Regi. Pattern Lower middle vertical position	0	2047		0				
68	VLOW	Auto Regi. Pattern Lower vertical position	0	2047		975				
69	HLE	Auto Regi. Pattern left horizontal position	0	4095		90				
70	HLEM	Auto Regi. Pattern left middle horizontal position	0	4095		0				
71	H MID	Auto Regi. Pattern middle horizontal position	0	4095		655				
72	HRIM	Auto Regi. Pattern right middle horizontal position	0	4095		0				
73	HRIV	Auto Regi. Pattern right horizontal position	0	4095		1215				
74	SFTF	Switch of shift fast	0	1		0				
75	ACTL	Account timer counter lower byte	0	-		0				
76	ACTH	Account timer counter upper byte	0	-		0				
77	SLSW	Auto Regi adjustment item select	0	3		3				
78	VB2S		0	1023	0	0	0	0		
79	VB2W		0	1023	49	106	68	9		
80	VB3S		0	1023	521	464	502	561		
81	VB3W		0	1023	42	99	61	1		
ITEM No.	ITEM Name	Contents	min	max	Green H	Green V	Blue H	Blue V	Red H	Red V
82	CENT	Normal/Full Coarse Center Adjustment	-512	511						
83	SKEW	Normal/Full Coarse Skew Adjustment	-512	511						
84	SIZE	Normal/Full Coarse Size Adjustment	-512	511						
85	LIN	Normal/Full Coarse Linearity Adjustment	-512	511						
86	KEY	Normal/Full Coarse Key Adjustment	-512	511	-	-				
87	PIN	Normal/Full Coarse Pin Adjustment	-512	511						
88	MLIN	Normal/Full Coarse Middle Linearity Adjustment	-512	511		-				
89	MSIZ	Normal/Full Coarse Middle Size Adjustment	-512	511		-				
82	CENT	Zoom Coarse Center Adjustment	-512	511						
83	SKEW	Zoom Coarse Skew Adjustment	-512	511						
84	SIZE	Zoom Coarse Size Adjustment	-512	511						
85	LIN	Zoom Coarse Linearity Adjustment	-512	511						
86	KEY	Zoom Coarse Key Adjustment	-512	511	-	-				
87	PIN	Zoom Coarse Pin Adjustment	-512	511						
88	MLIN	Zoom Coarse Middle Linearity Adjustment	-512	511		-				
89	MSIZ	Zoom Coarse Middle Size Adjustment	-512	511		-				
82	CENT	Wide Zoom Coarse Center Adjustment	-512	511						
83	SKEW	Wide Zoom Coarse Skew Adjustment	-512	511						
84	SIZE	Wide Zoom Coarse Size Adjustment	-512	511						
85	LIN	Wide Zoom Coarse Linearity Adjustment	-512	511						
86	KEY	Wide Zoom Coarse Key Adjustment	-512	511	-	-				
87	PIN	Wide Zoom Coarse Pin Adjustment	-512	511						
88	MLIN	Wide Zoom Coarse Middle Linearity Adjustment	-512	511		-				
89	MSIZ	Wide Zoom Coarse Middle Size Adjustment	-512	511		-				
82	CENT	HD Coarse Center Adjustment	-512	511						
83	SKEW	HD Coarse Skew Adjustment	-512	511						
84	SIZE	HD Coarse Size Adjustment	-512	511						
85	LIN	HD Coarse Linearity Adjustment	-512	511						
86	KEY	HD Coarse Key Adjustment	-512	511	-	-				
87	PIN	HD Coarse Pin Adjustment	-512	511						
88	MLIN	HD Coarse Middle Linearity Adjustment	-512	511		-				
89	MSIZ	HD Coarse Middle Size Adjustment	-512	511		-				

PJ Engine			
Contents	min	max	data
Normal/Full Red Horizontal Fine Data	-128	127	0
Normal/Full Red Vertical Fine Data	-128	127	0
Normal/Full Green Horizontal Fine Data	-128	127	0
Normal/Full Green Vertical Fine Data	-128	127	0
Normal/Full Blue Horizontal Fine Data	-128	127	0
Normal/Full Blue Vertical Fine Data	-128	127	0
Normal/Full Zoom Red Horizontal Fine Data	-128	127	0
Zoom Red Vertical Fine Data	-128	127	0
Zoom Green Horizontal Fine Data	-128	127	0
Zoom Green Vertical Fine Data	-128	127	0
Zoom Blue Horizontal Fine Data	-128	127	0
Zoom Blue Vertical Fine Data	-128	127	0
Wide Zoom Red Horizontal Fine Data	-128	127	0
Wide Zoom Red Vertical Fine Data	-128	127	0
Wide Zoom Green Horizontal Fine Data	-128	127	0
Wide Zoom Green Vertical Fine Data	-128	127	0
Wide Zoom Blue Horizontal Fine Data	-128	127	0
Wide Zoom Blue Vertical Fine Data	-128	127	0
HD Red Horizontal Fine Data	-128	127	0
HD Red Vertical Fine Data	-128	127	0
HD Green Horizontal Fine Data	-128	127	0
HD Green Vertical Fine Data	-128	127	0
HD Blue Horizontal Fine Data	-128	127	0
HD Blue Vertical Fine Data	-128	127	0

ID	Reg.No & Name	FUNCTION	
0	ID0	Selection of OSD languages & color systems	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 advanced system settings	203
5	ID5	Selection of sub picture related settings	177
6	ID6	Selection of some reserved settings	54
7	ID7	Selection of some reserved settings	24

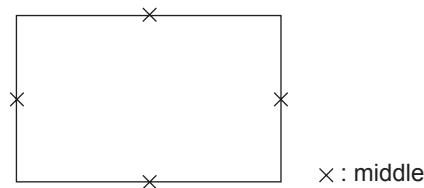
2-12. REGISTRATION ADJUSTMENTS



2-12-1. SETUP FOR ADJUSTMENT

MARKING

- At the 4 sides of the screen, use a tape measure to locate the middle.



DATA SETTING

- Set NTSC Full mode.
- Enter the service mode, and select "PJE".

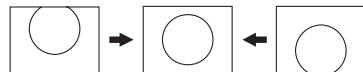
NOTE: When you replace printed circuit boards, devices, or CRTs, and when correction is drastically necessary, press the "7" + ENTER on the remote commander to initialize the data in the Projector Engine mode. Press MUTING + ENTER on the remote commander to write the data.

2-12-2. MAIN DEFLECTION ADJUSTMENT

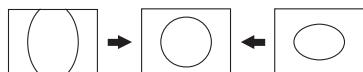
NOTE: Before this adjustment, refer to section 2-11 for PJE input data items #78-85.

- Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
- Enter the monoscope signal and set to NTSC Full mode.
- Enter the service mode, and select "2150D-1".
- Adjust "0 VPOS" and "1 VSIZ" so that the picture is displayed in the center of the screen.
- Adjust "2VSZ0" for 1080i vertical size adjustment.

0 VPOS



1 V-Size



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

SPEC

Overscan Spec. = 9%

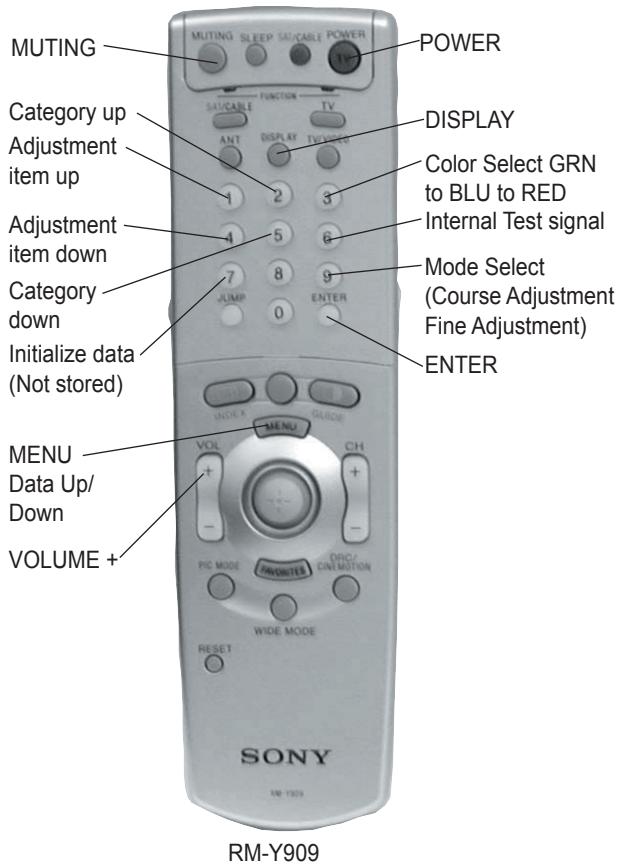
Input Signal	H SIZE	V SIZE
Monoscope	15.6 ± 0.2 sq.	11.5 ± 0.2 sq.

2 H-Size



- Copy the data of the NTSC Full mode to the other display mode and, if necessary, adjust in the other mode.

2-12-3. OPERATION METHOD FOR PROJECTOR ENGINE MODE



RM-Y909

1. FUNCTION OF KEYS ON COMMANDER

- ① Changes adjustment item. (Item # moves up)
Marker moves clockwise from center to outside.
(In Fine Adjustment mode)
- ④ Changes adjustment item. (Item # moves down)
Marker moves counter clockwise from outside to center.
(In Fine Adjustment mode)
- ② Changes adjustment category.
(Category # moves up)
- ⑤ Changes adjustment category.
(Category # moves down)
- Joystick** Changes data value. (Up or down)
Marker moves clockwise from center
(up, down, right, and then left) to outside.
(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 Switches marker moving method.

Joystick (In Fine Adjustment mode)

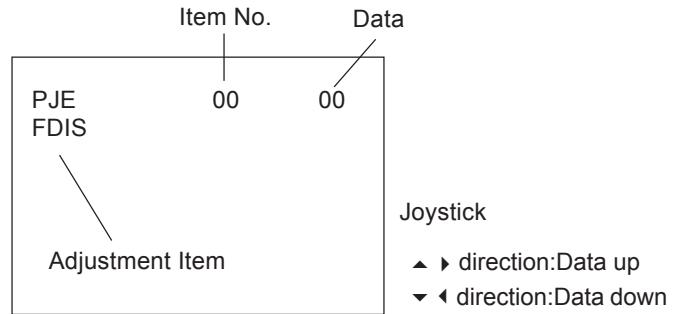
Joystick ▲ ▼ ← → keys → 1 and 4 buttons

Commander Function

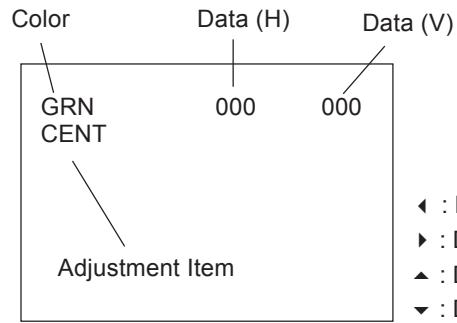
Buttons	Mode	Description
0 + ENTER	READ	Reads data to NVM.
MUTING+ENTER	WRITE	Writes data from NVM.
7 + ENTER	PJE INITIAL	Service data initialization. Not stored. (Be sure not to use usually)

2. OPERATION METHOD FOR COARSE ADJUSTMENT

1. Enter the service mode and select "PJE".
2. Press the "1" or "4" button on the remote commander to select the item, and then use the joystick to change the data.



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

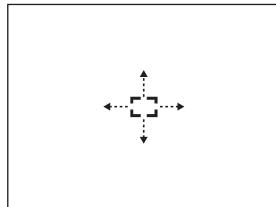


5. Before returning to the service mode, press the "MUTING" + "ENTER" buttons on the remote commander to write the data.
(You must complete step 5 to write the data. If you omit step 5 the set data is returned to the data prior to the adjustment.)

3. OPERATION METHOD FOR FINE ADJUSTMENT

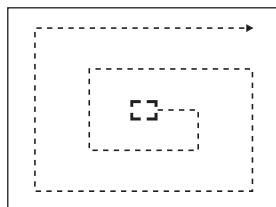
1. Enter the service mode and select "PJE".
2. Select FDIS and set the data to "01" so that the data at each position can be displayed in fine adjustment mode.

3. Press the "9" button on the remote commander and fine adjustment mode will be active where a green marker appears in the center of the screen. (In the case of GRN mode)
 4. Press down on the joystick, and the marker color will be alternately switched between green (GRN mode) and white.
 5. Press the "1" or "4" button on the remote commander, or use the joystick to move the marker to the position to be adjusted, where fine adjustment can be made.
- * When the marker color is white:
(in this case, fine adjustment is disabled)



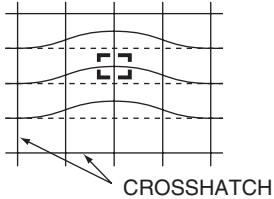
Use the joystick to move the marker up, down, left, or right.

- * When the marker color is green:
(GRN mode)

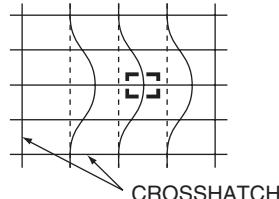


- ① : Moves the marker clockwise from the center to the outside.
 - ④ : Moves the marker counter clockwise from the outside to the center.
- * Fine adjustment can be made on the basis of a marker position using the joystick to move \uparrow \downarrow \leftarrow or \rightarrow .

Move joystick \uparrow direction



Move joystick \rightarrow direction



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

2-13. PJE ADJUSTMENT (SUB DEFLECTION ADJUSTMENT)

Adjustment item	Adjustment type		
	G	R	B
	H/V*	H/V*	H/V*
CENT	O/O	O/O	O/O
SKEW	O/O	O/O	O/O
SIZE	O/O	O/O	O/O
LIN	O/O	O/O	O/O
KEY	-/O	-/O	-/O
PIN	O/O	O/O	O/O
MLIN	O/-	O/-	O/-
MSIZ	O/-	O/-	O/-

* H = Horizontal V = Vertical O = Yes - = No

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

Coarse Data Limit Value:

CENT H	35 ± 170V
CENT V	20 ± 170V
SIZE H	-75 MAX
BLUE H LIN	-425 MIN
RED H LIN	425 MAX

2-13-1. ADJUSTMENT FOR NTSC FULL MODE

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

1) GREEN ADJUSTMENT

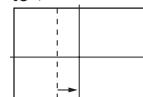
1. Cover the red and blue CRT lenses with lens caps to allow only green to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

2. Enter the monoscope signal to set.
3. Select the PJE mode.
4. Press the "6" button on the remote commander to display the internal test signal (crosshatch).
5. Select "GRN CENT", and adjust so that the pictures coincide in the center of screen.

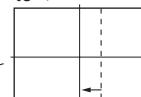
GRN CENT (Horizontally/Vertically)

Push the joystick
to \rightarrow

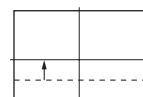


Push the joystick
to \leftarrow

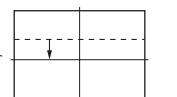
Push the joystick
to \leftarrow



Push the joystick
to \uparrow

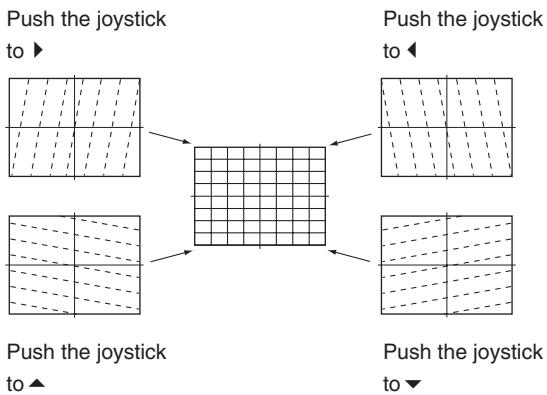


Push the joystick
to \downarrow



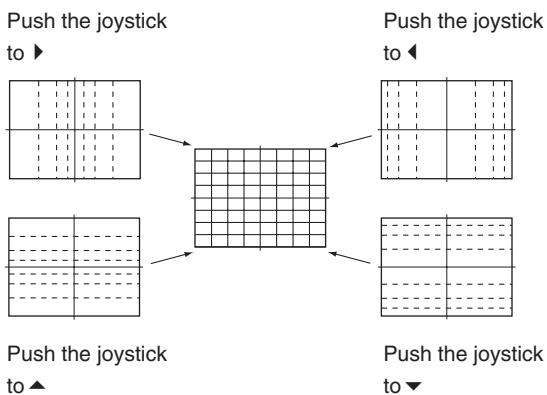
7. Select "GRN SKEW", and correct the tilt of horizontal lines and vertical lines.

GRN SKEW (Horizontally/Vertically)



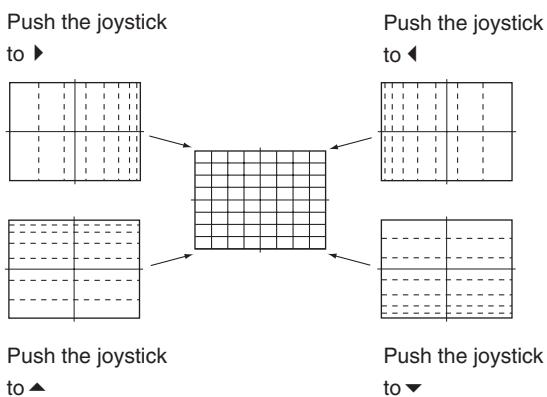
8. Select "GRN SIZE", and adjust so that each distance from center to left end and to right end is equal. Adjust so that each distance from center to top and to bottom is equal.

GRN SIZE (Horizontally/Vertically)



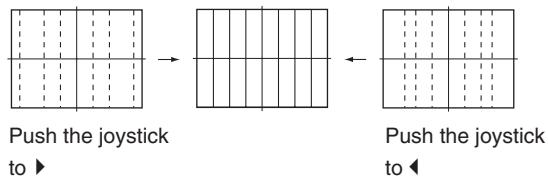
9. Select "GRN LIN", and adjust so that each space at the right end and at the left end of screen is equal. Adjust so that each space at the top and at the bottom of screen is equal.

GRN LIN (Horizontally/Vertically)



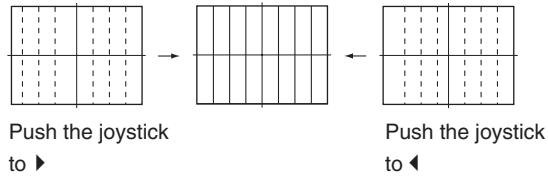
10. Select "GRN MSIZ", and correct the space intervals for the horizontal section so the screen is equal.

GRN MSIZ (Horizontally)



11. Select "GRN MLIN", and correct the sizes of the horizontal line so the center of the screen is symmetrical left and right.

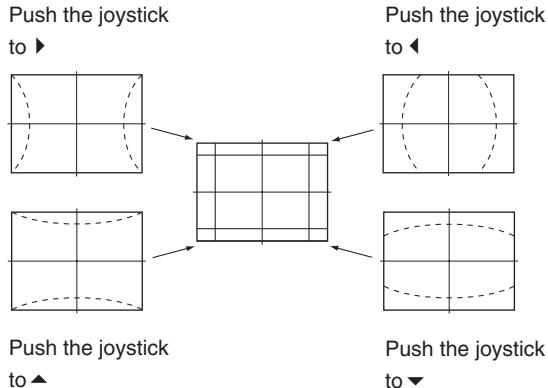
GRN MLIN (Horizontally)



Note: The SIZE and LIN, MSIZ and MLIN adjustments affect each other. If necessary, adjust these mutually.

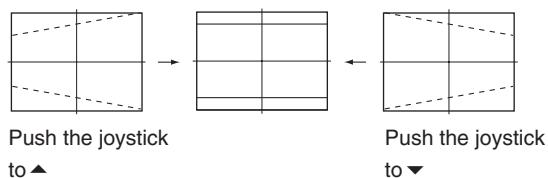
12. Select "GRN PIN", and adjust so that right and left vertical lines on the screen become straight. Adjust so that upper and lower horizontal lines on the screen become straight.

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 affect each other. If necessary, adjust these mutually.

14. Press the "9" button on the remote commander to enter fine adjustment mode.

15. Make the fine adjustment so that horizontal lines and vertical lines become straight.
16. Press the "9" button on the remote commander to return to coarse adjustment mode.

2) RED ADJUSTMENT

1. Cover the blue CRT lens with a lens caps to allow only the green and red to show (or use the method shown in the note below for turning off the CRTs individually without using lens caps).
2. Press the "3" button on the remote 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 the "9" button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green lines.
6. Press the "9" button on the remote commander to return to coarse adjustment mode.

Note: If lens caps are unavailable, you can cut off the unnecessary color beams by controlling the service mode 2150P-2 1 RGBS.

3) BLUE ADJUSTMENT

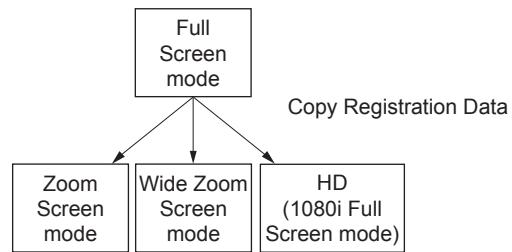
1. Remove the lens cap from the blue picture lens to display all colors.
2. Press the "3" button on the remote commander to select BLU mode.
3. Adjust the following items so that blue lines overlap with green and red lines.
 - BLU CENT (horizontally/vertically)
 - BLU SKEW (horizontally/vertically)
 - BLU SIZE (horizontally/vertically)
 - BLU LIN (horizontally/vertically)
 - BLU MSIZ (horizontally)
 - BLU MLIN (horizontally)
 - BLU PIN (horizontally/vertically)
 - BLU KEY (vertically)
4. Press the "9" button on the remote commander to enter fine adjustment mode.
5. Make the fine adjustment so that horizontal lines and vertical lines overlap with green and red lines.
6. Press the "9" button on the remote commander to return to coarse adjustment mode.

4) REGISTRATION DATA WRITING

1. After completing each adjustment of green, blue, and red for the NTSC Full mode press the "MUTING"+ "ENTER" buttons on the remote commander to write the registration data to the NVM.

2-13-2.COPYING ALL REGISTRATION DATA TO OTHER MODES

1. Make sure that the adjustment for NTSC Full mode are complete and the data has already been written.
2. Select the PJE mode.
3. Select ALCP and set the data to "01", and press the "MUTING"+ "ENTER" buttons on the remote commander.
4. The data from the NTSC Full mode is copied to all other modes.



5. Check in the other modes and adjust as demands.

Be sure to write data in each mode.

2-14.AUTO CONVERGENCE OFFSETS

IMPORTANT

This adjustment must be performed after registration adjustment or after readjustment for any reason!

Once registration in all modes is satisfactory, do the following:

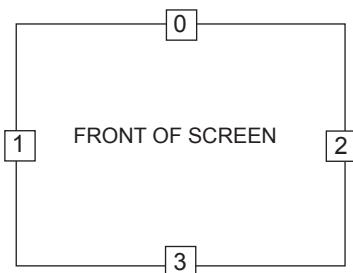
1. Darken the room environment near the set.
2. Enter the monoscope signal to set the NTSC Full mode.
3. Select the PJE mode.
4. To automatically store the offset values, press the "FLASH FOCUS" button on the front panel of the set.
(The offset value is now stored)
5. Select "ERR" of PJE mode.
Confirm ERR is "00".
If ERR is not "00", recheck. (Refer to section 2-15)
6. Exit the service mode.

2-15.AUTO REGISTRATION ERROR CODES

If an error code is displayed after the set has been correctly adjusted, check the following items: position, tilt and sizing. If any 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 are being flashed on the screen for the sensors 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

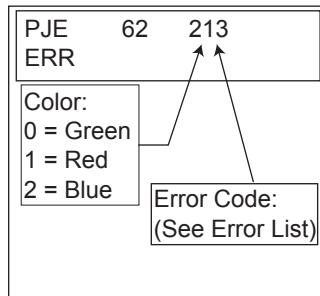
ERROR CODE	DESCRIPTION	NOTE
00	No Error	
10	Sensor 0 low output	Check sensor 0, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "64 VUP" if necessary.
11	Sensor 1 low output	Check sensor 1, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "69 HLE" if necessary.
12	Sensor 2 low output	Check sensor 2, connection/wiring, circuit, and pattern position (are patterns hitting sensor?) adjust "73 HRIV" if necessary.
13	Sensor 3 low output	Check sensor 3, connection/wiring, circuit, and pattern position (are patterns hitting 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 modes) is not near 511.
41	H CENT regi data overflow	Check "71 HMID" data and confirm H CENT data (all modes) is not near 511.
42	V SKEW regi data overflow	Check "66 VMID" data and confirm V SKEW data (all modes) is not near 511.
43	H SKEW regi data overflow	Check "71 HMID" data and confirm H SKEW data (all modes) is not near 511.
44	H LIN regi data overflow	Check "71 HMID" data and confirm H LIN data (all modes) is not near 511.
45	H SIZE regi data overflow	Check "71 HMID" data and confirm H SIZE data (all modes) is not near 511.
50	V CENT regi data overdrw	Check "66 VMID" data and confirm V CENT data (all modes) is not near -512.
51	H CENT regi data overdrw	Check "71 HMID" data and confirm H CENT data (all modes) is not near -512.
52	V SKEW regi data overdrw	Check "66 VMID" data and confirm V SKEW data (all modes) is not near -512.
53	H SKEW regi data overdrw	Check "71 HMID" data and confirm H SKEW data (all modes) is not near -512.
54	H LIN regi data overdrw	Check "71 HMID" data and confirm H LIN data (all modes) is not near -512.
55	H SIZE regi data overdrw	Check "71 HMID" data and confirm H SIZE data (all modes) is not near -512.
60	H or V CENT offset overflow	Check "71 HMID" and "66 VMID" data and check registration condition.
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 overdrw	Check "71 HMID" data and check "66 VMID" data.
71	H or V SKEW offset overdrw	Check SKEW adjustment.
72	H SIZE or LIN offset overdrw	Check "69 HLB" data, check "73 HRIV" data, and check SIZE and LIN adjustment.
80	SIZE Limit Error	Check that H SIZE data is negative and not near zero.

SENSOR POSITIONS

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

• ERROR CODE SCREEN DISPLAY

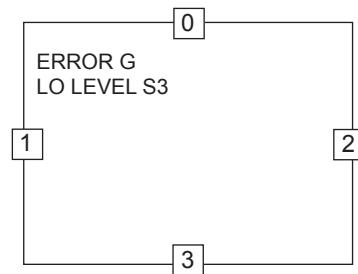
Error codes in normal (customer) mode are not displayed. You must enter PJED service mode to see the error code.

**AUTO REGI ERROR CODE FORMAT
ERROR EXAMPLE**

Example Blue Low Level Sensor 3

0 = Green
1 = Red
2 = Blue

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



SECTION 3: SAFETY-RELATED ADJUSTMENTS

D BOARD

3-1. HV REGULATION CIRCUIT CHECK AND ADJUSTMENT

When replacing the following components marked with a **[■]** on the schematic diagram always check the HV regulation, and if necessary re-adjust.

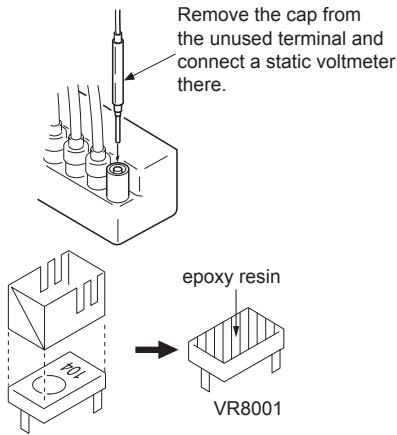
Part Replaced ([■])	Adjustment ([■])
A BOARD: C8079, C8083, C8090, C8129, D8013, D8015, D8038, D8043, IC8006, Q8021, R8055, R8099, R8102, R8128, R8129, R8131, R8139, R8140, R8142, R8153, R8163, R8223, R8230, T8004 (LOT), T8005 (FBT), HV Block, D Board	HV REGULATOR VR8001

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. Receive the all white signal.
4. Set PIC MAX/BRT CENT.
5. Confirm that the static voltmeter reading is $31.0 \pm 0.4V$.
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.



3-2. HV HOLD DOWN CIRCUIT OPERATION CHECK AND ADJUSTMENT

When replacing the following components marked with a **[■]** on the schematic diagram always check the hold-down voltage and re-adjust when necessary.

Part Replaced ([■])	Adjustment ([■])
A BOARD: 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	HV HOLD DOWN VR8002

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. Connect an external $10k\Omega$ 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

3-3. +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 3 is not satisfied, replace IC501 and repeat steps 1-3.

3-4. +B OVP CONFIRMATION

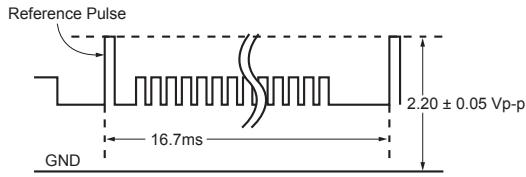
1. Add to low voltage power supply between TP5001 and ground.
2. Supply 120VAC to variable autotransformer.
3. Power on the Set and receive dot signal pattern.
4. Set the PICTURE and BRIGHTNESS settings.
5. Check the OVP is activated.

Operate :less than 2.50V

SECTION 4: CIRCUIT ADJUSTMENTS

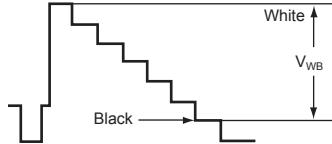
4-1. BLUE OFFSET ADJUSTMENT

1. Receive the all black (1080i, component) signal with VIDEO 5 input, and set PICTURE to maximum.
2. Connect an oscilloscope between CN5 ⑦ pin (B) on the (A board) and ground.
3. Set in the service mode and select the category "2150D-2".
4. Adjust "SLIN" so that the waveform level is 2.20 ± 0.05 Vp-p.
5. After completing the adjustments, write the data into memory by pressing "MUTING" → "ENTER" on the remote commander.
6. Receive the RF signal and change the wide screen mode to "Wide Zoom". Copy the same data to "SLIN".



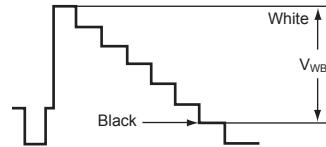
4-2. P & P SUB CONTRAST ADJUSTMENT (VIDEO) (SCON)

1. Receive the signal.
TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
PICTURE : Maximum
COLOR : Minimum
2150P-2 1 RGBS : 2
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
Check points : CN5 pin ⑧
A Board : CN5 pin ⑥
5. Select "2103-1-02" (Main scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04 Vp-p.
6. Select "2103-2-02" (Sub scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04 Vp-p.
7. After completing the adjustments, write the data into memory by pressing "MUTING" → "ENTER" on the remote commander.



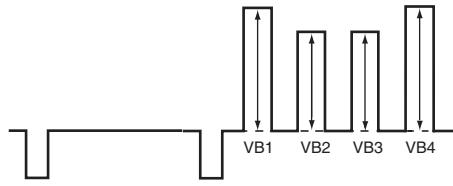
4-3. P & P SUB CONTRAST ADJUSTMENT (RF) (SCON)

1. Receive the signal.
TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
PICTURE : Maximum
COLOR : Minimum
2150P-2 1 RGBS : 2
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between the check point and ground.
Check points : CN5 ⑧
A Board : CN5 ⑥
5. Select "2103-1-02" (Main scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04 Vp-p.
6. Select "2103-2-02" (Sub scon), and adjust so that the waveform level of V_{WB} is 1.55 ± 0.04 Vp-p.
7. After completing the adjustments, write the data into memory by pressing "MUTING" → "ENTER" on the remote commander.



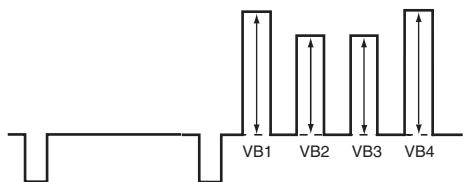
4-4. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (VIDEO) (SHUE, SCOL)

1. Receive the signal.
TV terminal (sub) : Color-bar (white-75%, 7.5% setup)
VIDEO terminal (main) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
PICTURE : Maximum
COLOR : Center
2150P-2 1 RGBS : 7
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ⑦ of CN5 (A board) connector and ground.
5. Select "2103-1-03 SCOL, -04 SHUE" (Main), and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
6. Select "2103-2-03 SCOL, -04 SHUE" (Sub), and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
7. After completing the adjustments, write the data into memory by pressing "MUTING" → "ENTER" on the remote commander.



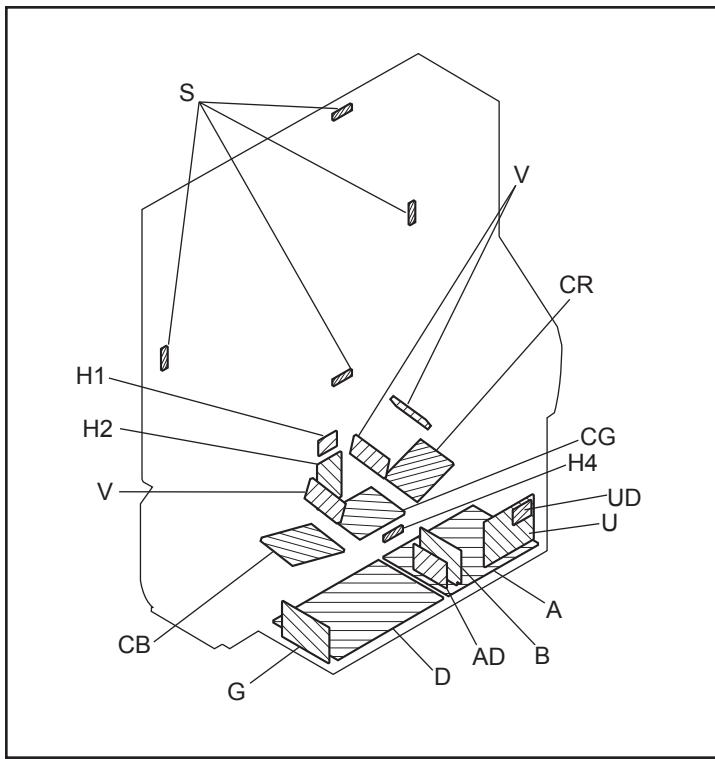
4-5. P & P SUB-HUE AND SUB-COLOR ADJUSTMENT (RF) (SHUE, SCOL)

1. Receive the signal.
 TV terminal (main) : Color-bar (white-75%, 7.5% setup)
 VIDEO terminal (sub) : Color-bar (white-75%, 7.5% setup)
2. VIDEO MODE : Pro
 PICTURE : Maximum
 COLOR : Center
 2150P-2 1 RGBS : 7
3. Set to P & P mode, and set to service mode.
4. Connect an oscilloscope between pin ⑦ of CN5 (A board) connector and ground.
5. Select "2103-1-03 SCOL, -04 SHUE" (Main), and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
6. Select "2103-2-03 SCOL, -04 SHUE" (Sub), and adjust them to have $VB1 \leq VB4$ and $VB2 \leq VB3$ in the waveform levels.
7. After completing the adjustments, write the data into memory by pressing "MUTING" → "ENTER" on the remote commander.



SECTION 5: DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



—: B+ line

—: B-line. (Actual measured value may be different).

⇒: signal path. (RF)

Circled numbers are waveform references.

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 necessary, replace only with the value originally used.

When replacing components identified by **█**, make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by **█** and repeat the adjustment until the specified value is achieved.

(Refer to Safety-Related Adjustments in Sections 3-1 and 3-2.)

When replacing the parts listed in the table below, it is important to perform the related adjustments.

Part Replaced (█)	Adjustment (█)
A BOARD: 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	HV REGULATOR VR8001
A BOARD: 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	HV HOLD DOWN VR8002

5-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. K=1000, M=1000k

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm
Rating electrical power : $1/4 \text{ W}$

$1/4 \text{ W}$ in resistance, $1/10 \text{ W}$ and $1/8 \text{ W}$ in chip resistance.

: nonflammable resistor.

: fusible resistor.

Δ : internal component.

: panel designation and adjustment for repair.

\perp : earth ground

\nparallel : earth-chassis

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

Readings are taken with a NTSC color-bar signal input.

Readings are taken with a 10M 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.

S : Measurement impossibility.

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

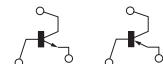
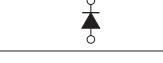
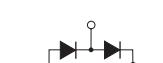
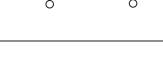
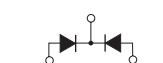
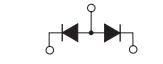
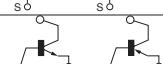
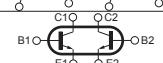
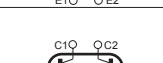
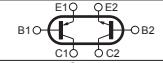
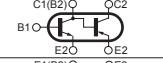
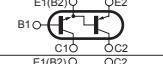
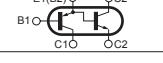
The components identified by shading and  symbol are critical for safety. Replace only with part number specified.

The symbol  indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

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

Le symbole  indique une fusible à action rapide. Doit être remplacé par une fusible de même valeur, comme maqué.

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

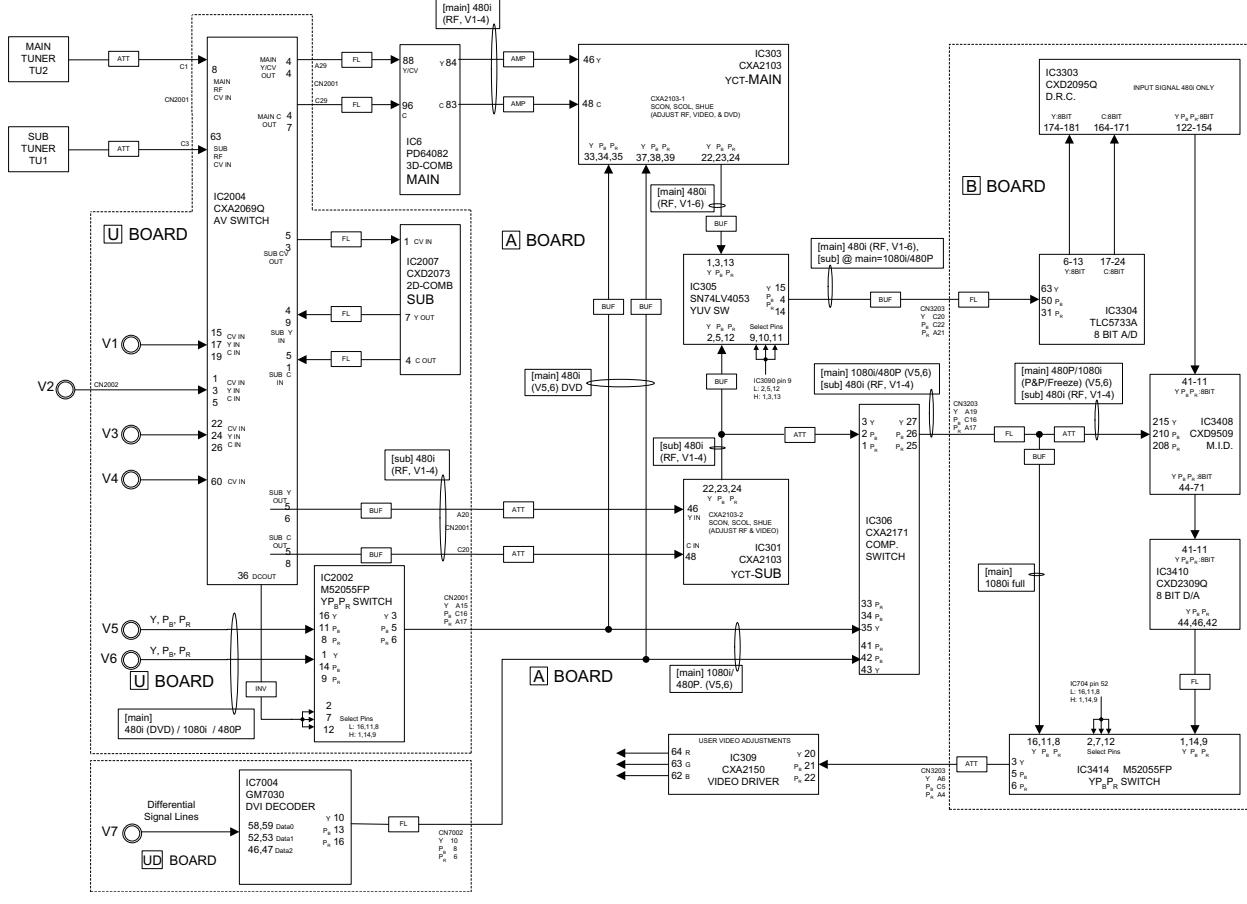
	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector Base Emitter	
②	Transistor		Collector Base Emitter	
③	Diode		Cathode Anode	
④	Diode		Cathode Anode (NC)	
⑤	Diode		Cathode Anode (NC)	
⑥	Diode		Common Anode Cathode	
⑦	Diode		Common Anode Cathode	
⑧	Diode		Common Anode Anode	
⑨	Diode		Common Anode Anode	
⑩	Diode		Common Cathode Cathode	
⑪	Diode		Common Cathode Cathode	
⑫	Diode		Anode Anode Anode 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.)

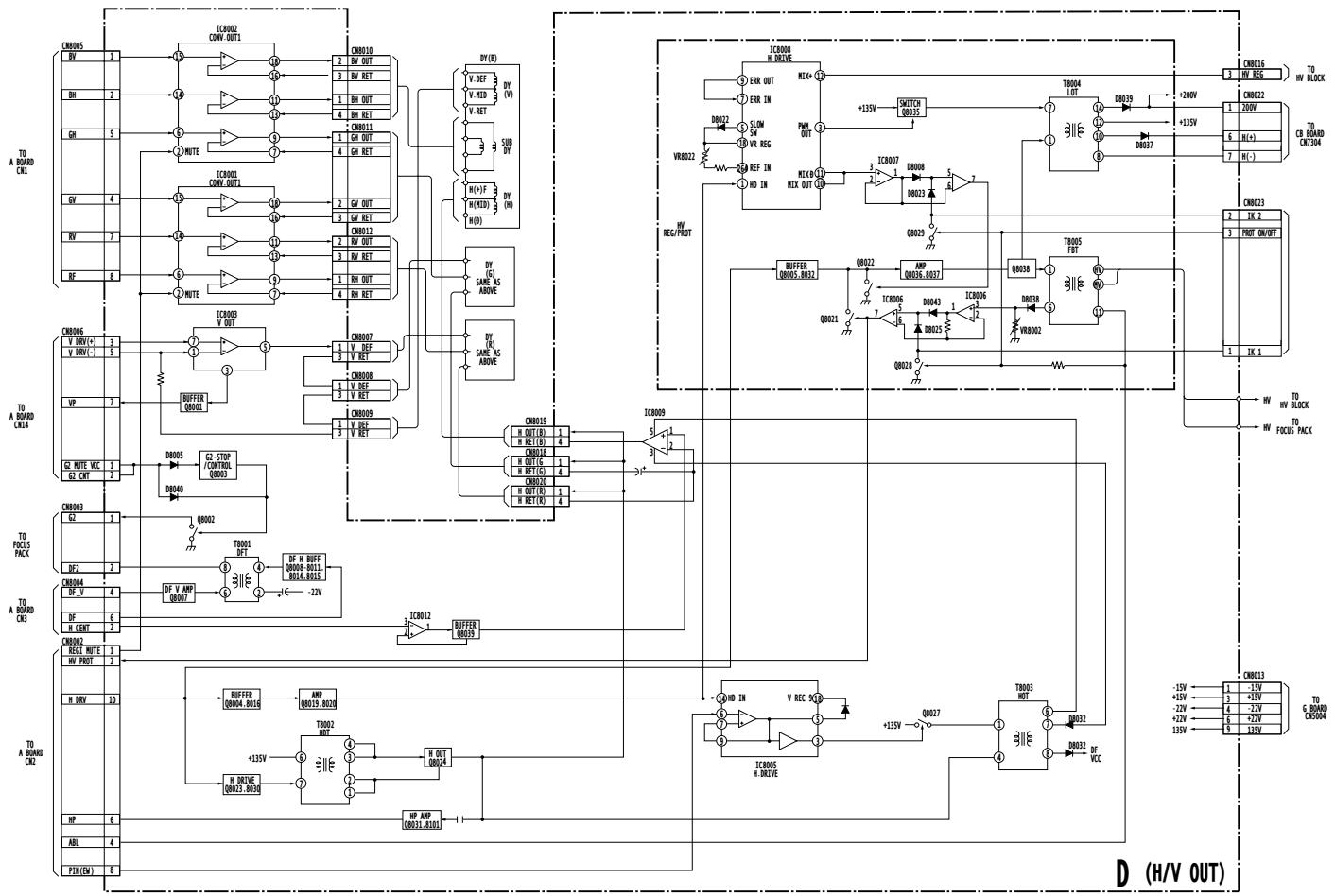
Ver.1.6

5-3. BLOCK DIAGRAMS

BLOCK DIAGRAM (1 OF 3)

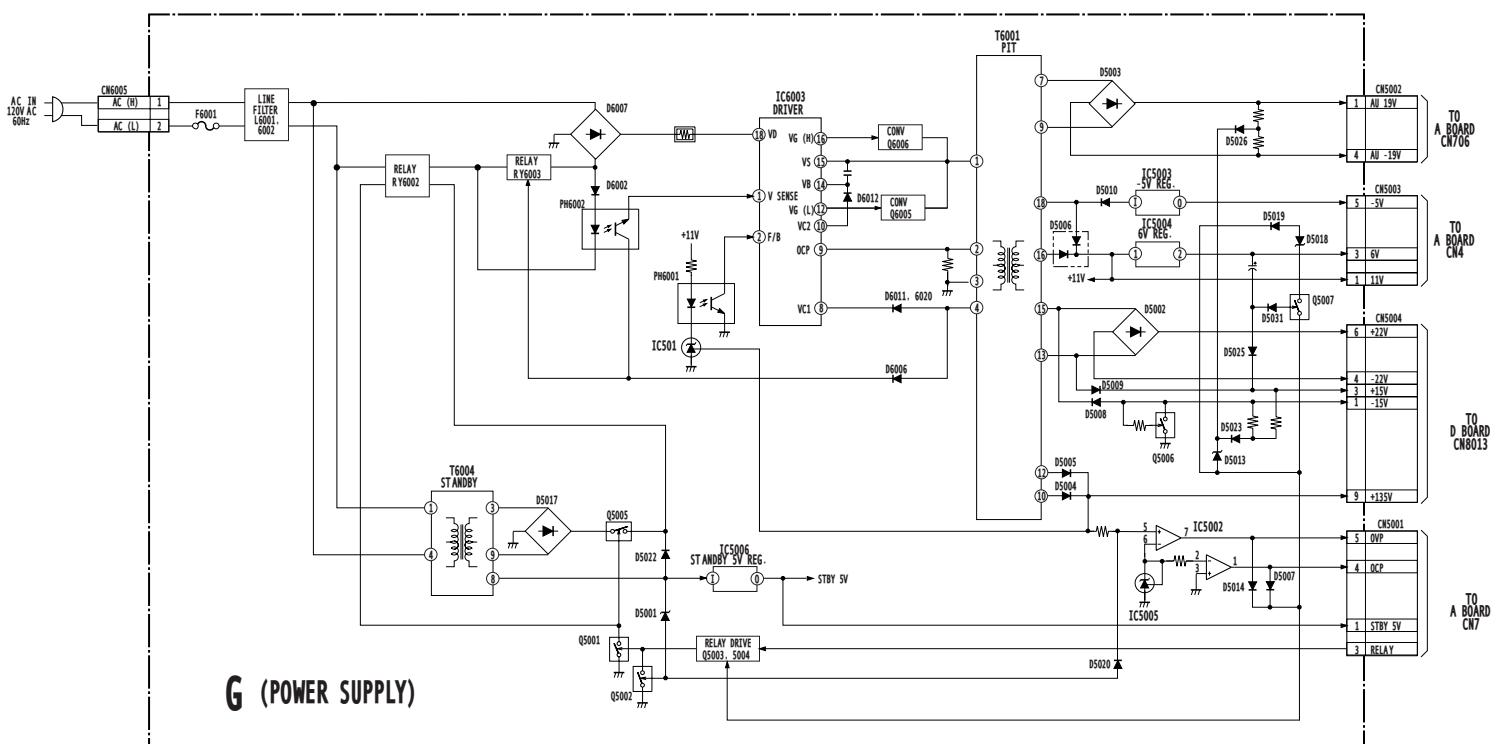


BLOCK DIAGRAM (2 OF 3)

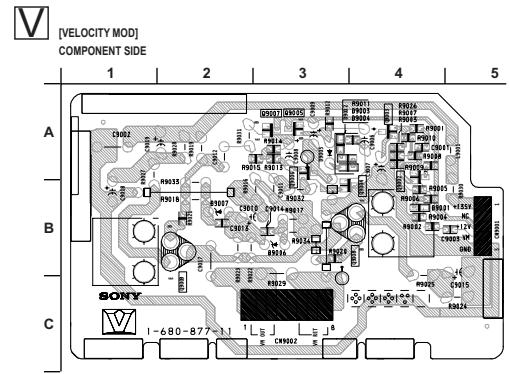
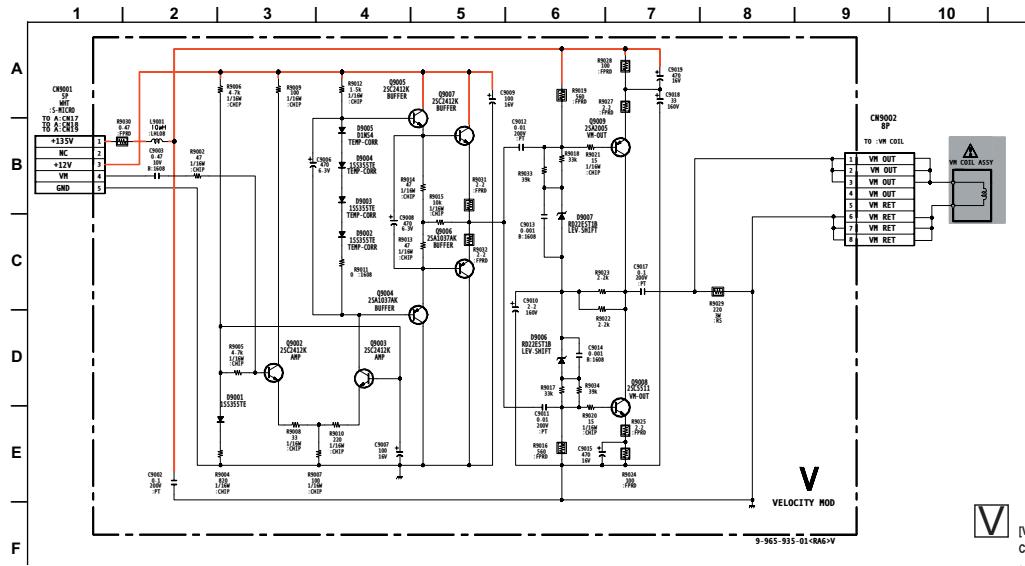


D (H/V OUT)

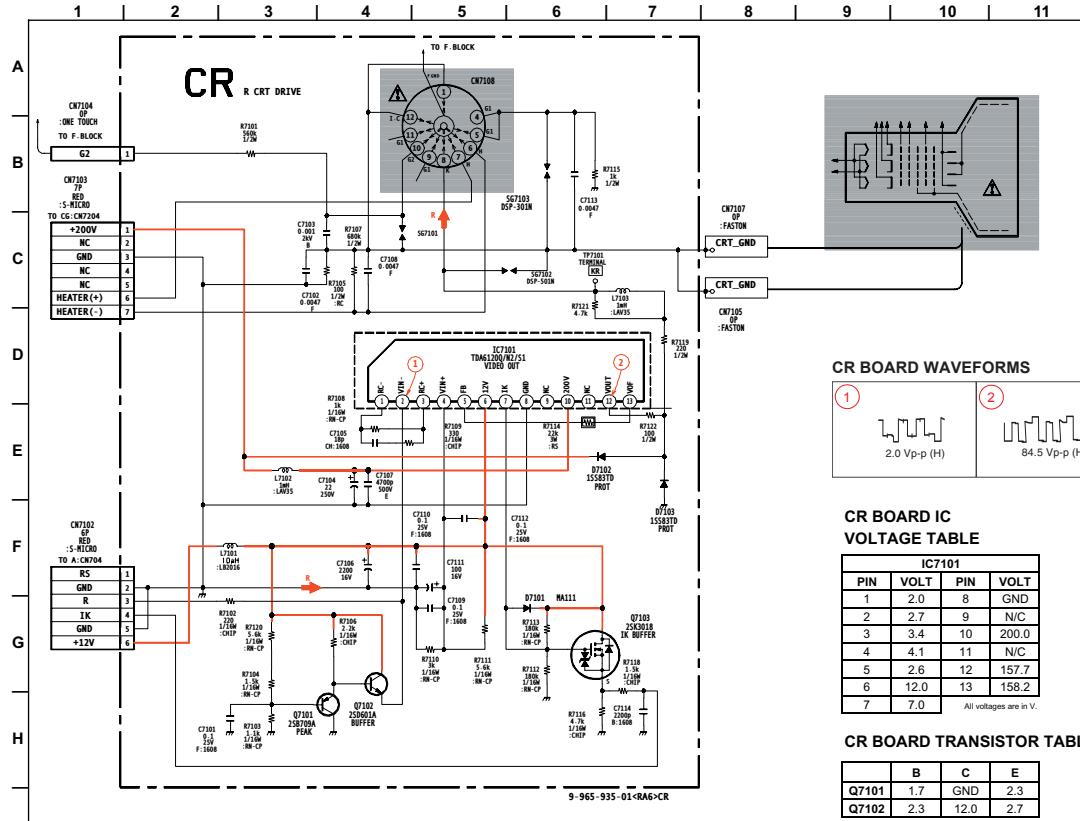
BLOCK DIAGRAM (3 OF 3)



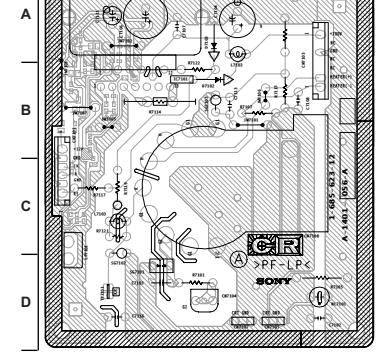
**5-4. SCHEMATICS AND SUPPORTING INFORMATION
V BOARD SCHEMATIC DIAGRAM**



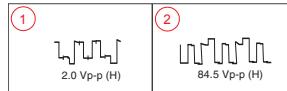
CR BOARD SCHEMATIC DIAGRAM

CR [R CRT DRIVE]
COMPONENT SIDE

1 | 2 | 3 | 4



CR BOARD WAVEFORMS

CR BOARD IC
VOLTAGE TABLE

IC7101			
PIN	VOLT	PIN	VOLT
1	2.0	8	GND
2	2.7	9	N/C
3	3.4	10	200.0
4	4.1	11	N/C
5	2.6	12	157.7
6	12.0	13	158.2
7	7.0		

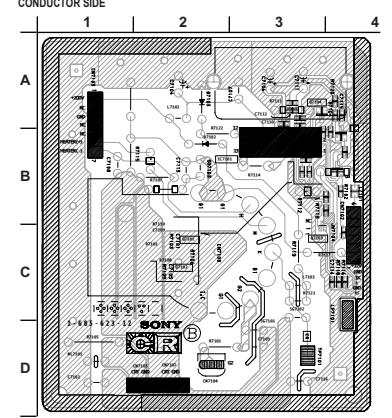
All voltages are in V.

CR BOARD TRANSISTOR TABLE

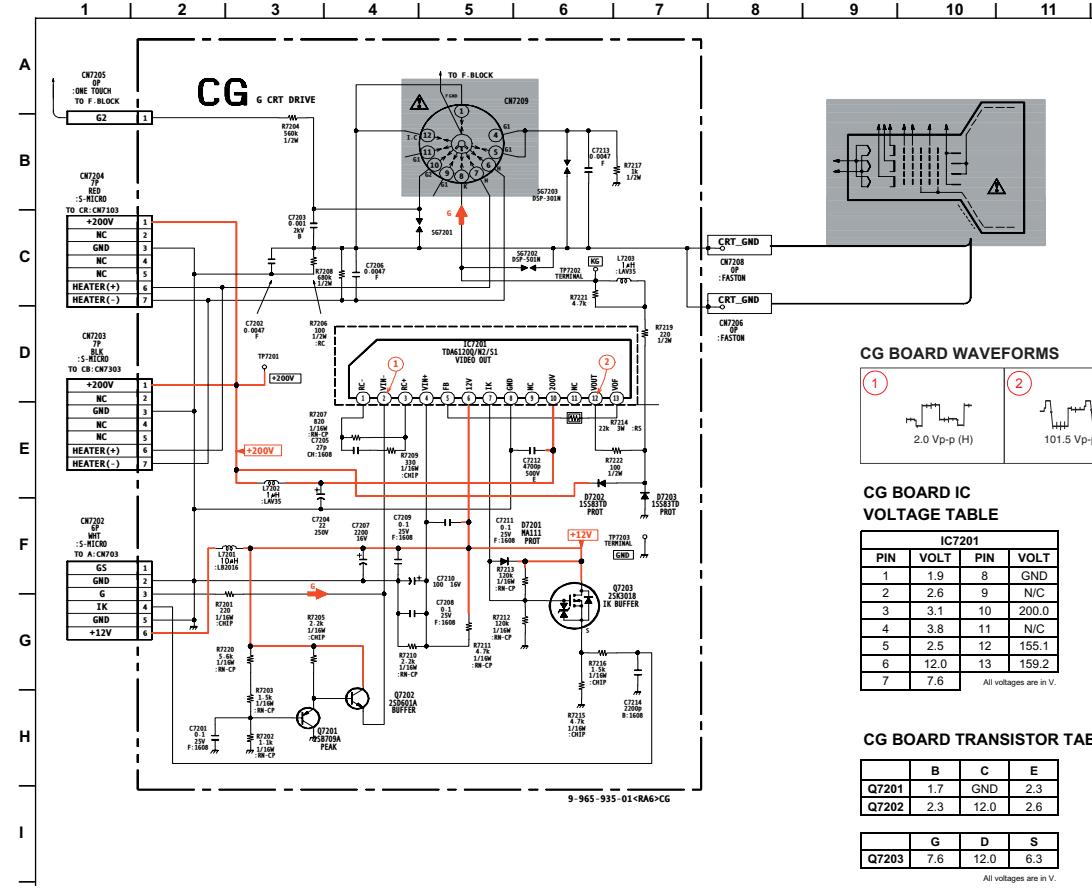
	B	C	E
Q7101	1.7	GND	2.3
Q7102	2.3	12.0	2.7

	G	D	S
Q7103	7.0	12.0	5.7

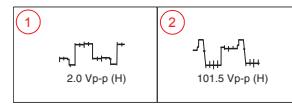
All voltages are in V.



CG BOARD SCHEMATIC DIAGRAM



CG BOARD WAVEFORMS

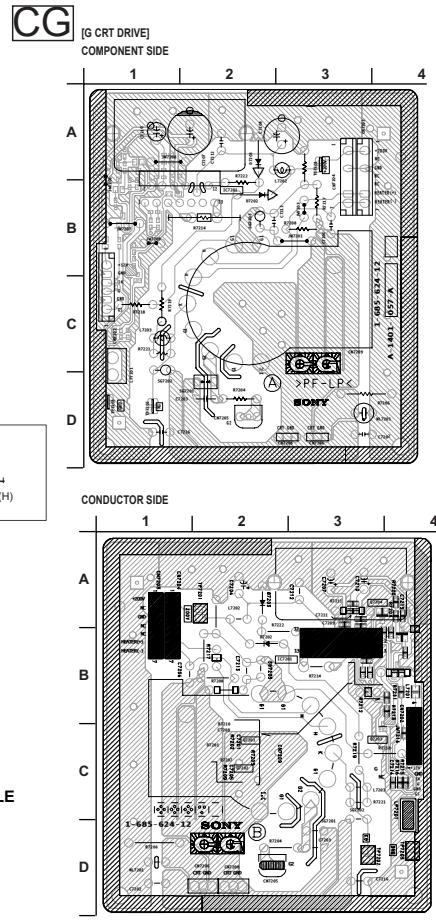


**CG BOARD IC
VOLTAGE TABLE**

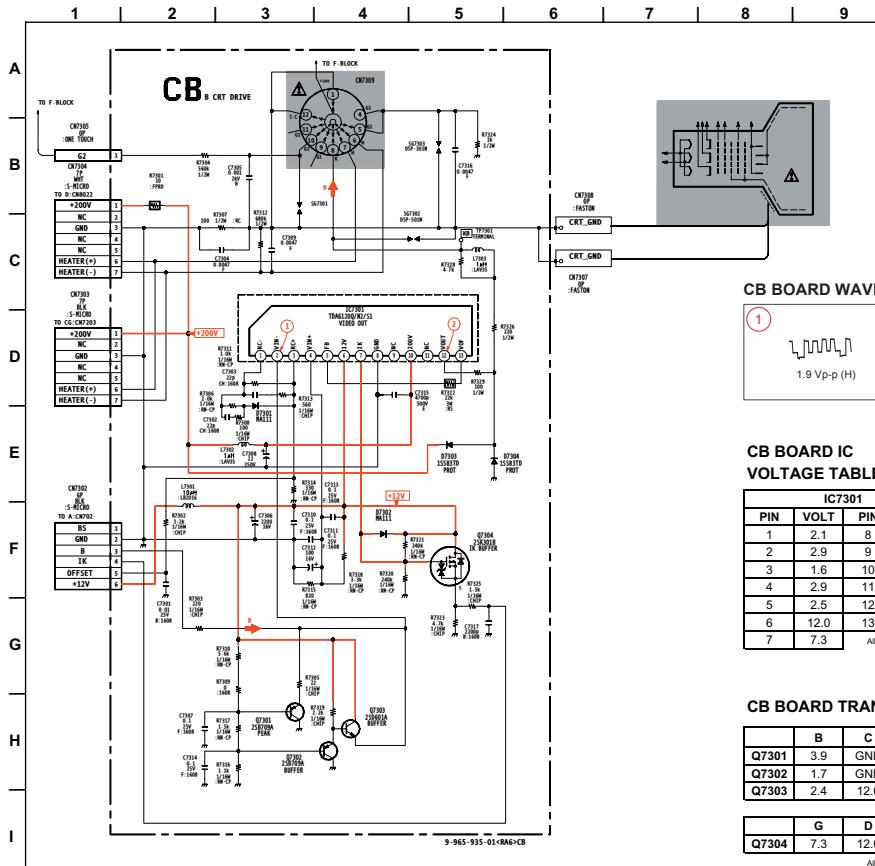
IC7201			
PIN	VOLT	PIN	VOLT
1	1.9	8	GND
2	2.6	9	N/C
3	3.1	10	200.0
4	3.8	11	N/C
5	2.5	12	155.1
6	12.0	13	159.2
7	7.6	All voltages are in V	

CG BOARD TRANSISTOR TABLE

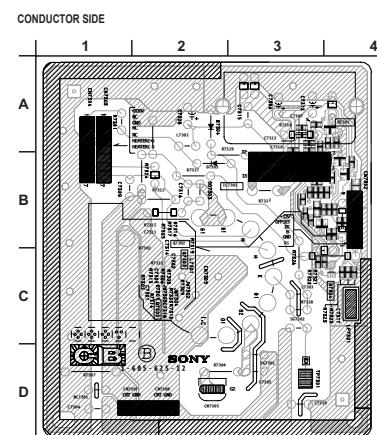
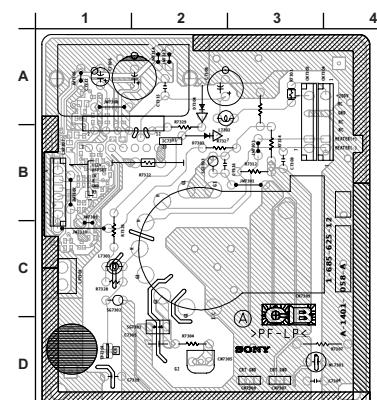
	B	C	E
Q7201	1.7	GND	2.3
Q7202	2.3	12.0	2.6
	G	D	S
Q7203	7.6	12.0	6.3



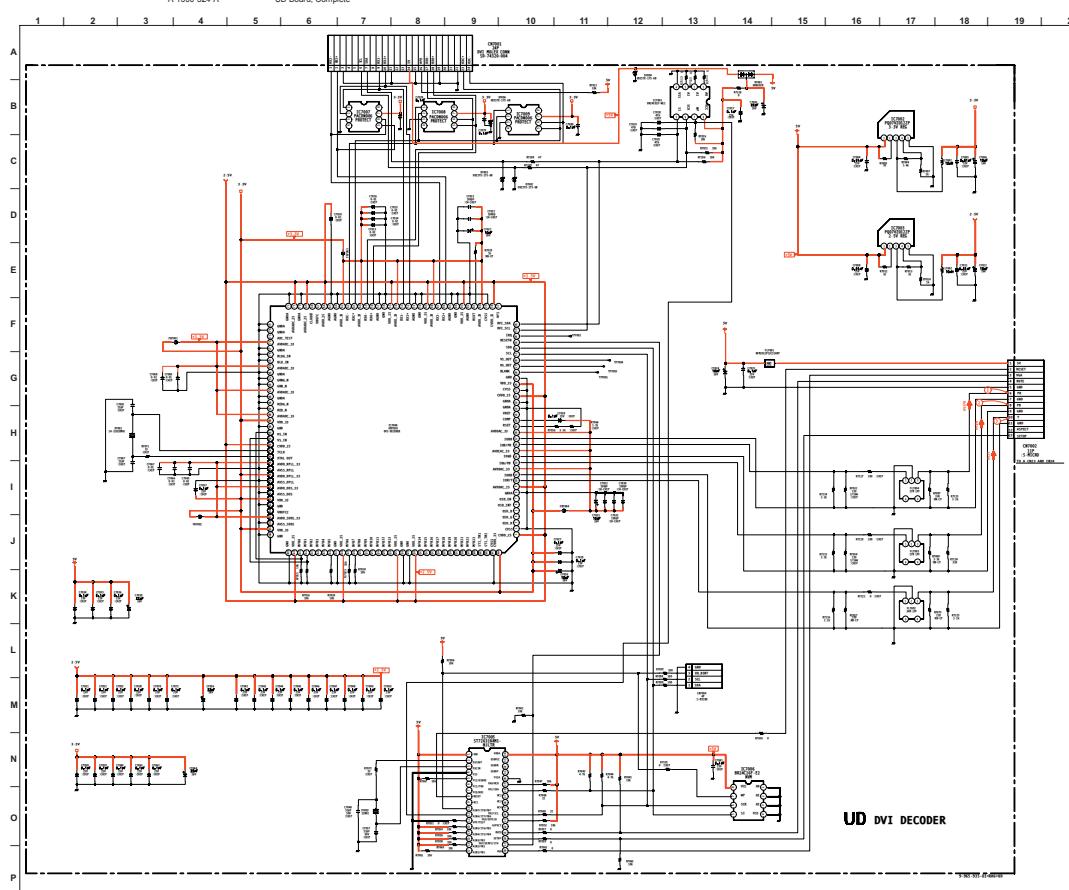
CB BOARD SCHEMATIC DIAGRAM



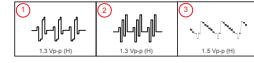
CB [B CRT DRIVE]
COMPONENT SIDE

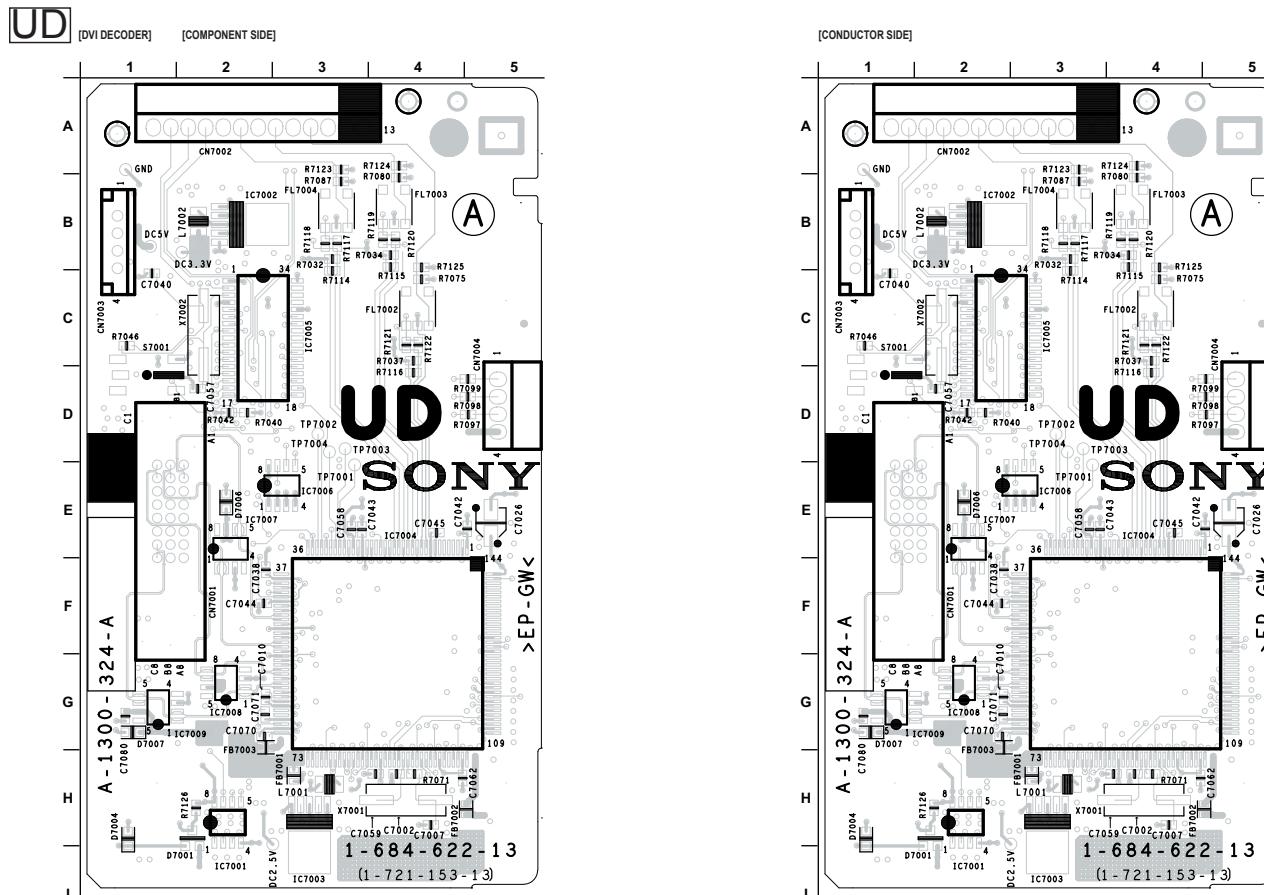


UD BOARD SCHEMATIC DIAGRAM The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-324-A UD Board, Complete

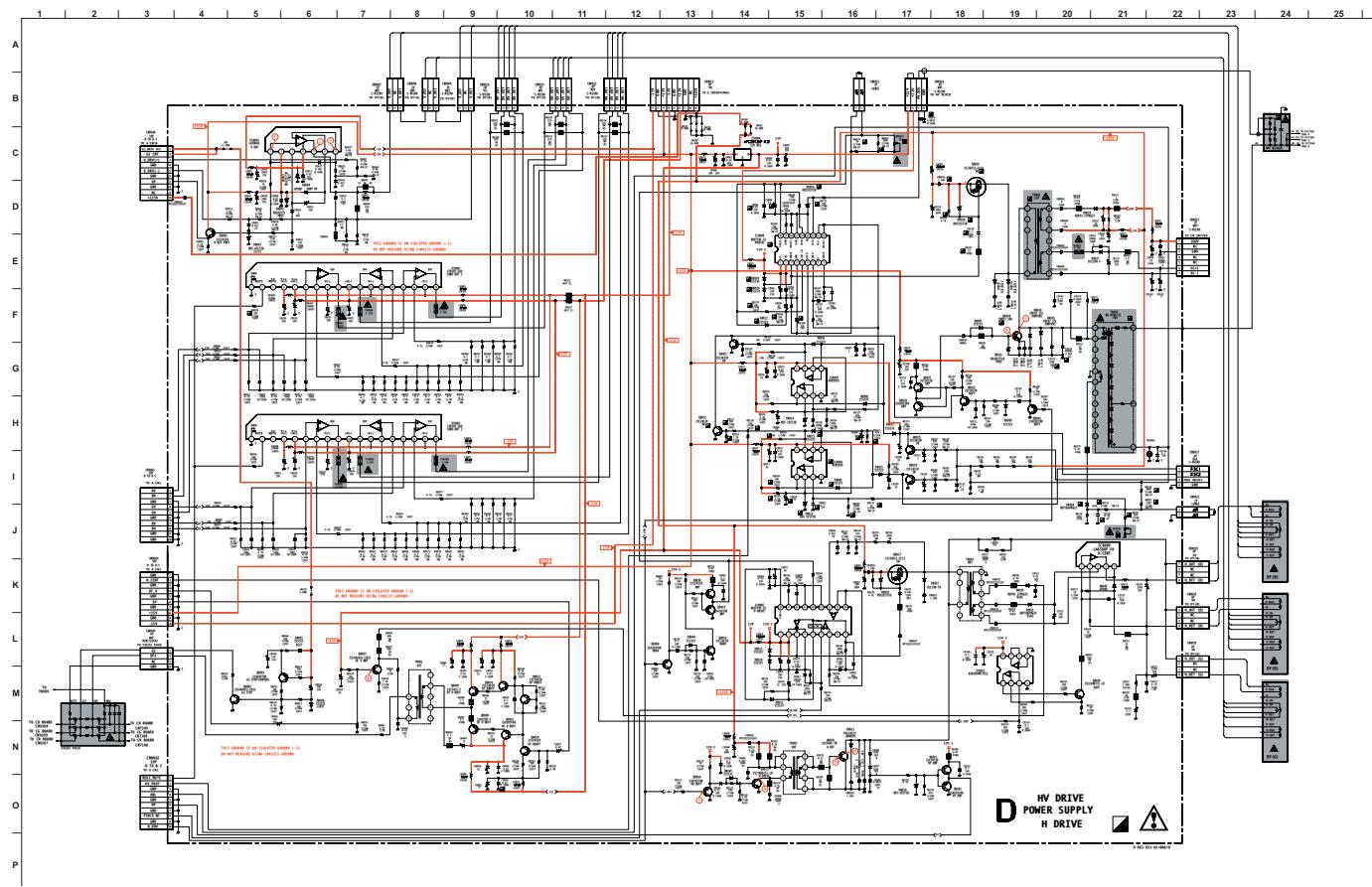


UD BOARD WAVEFORMS

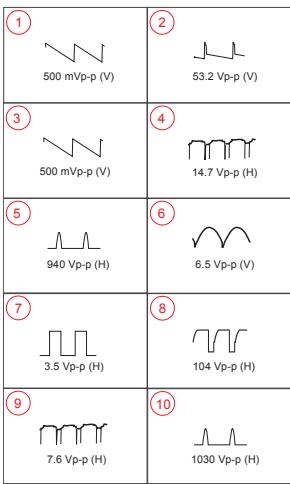




D BOARD SCHEMATIC DIAGRAM



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D BOARD WAVEFORMS**D BOARD IC VOLTAGE LIST**

IC8001		14	0.3	15	GND	10	7.4
PIN	VOLT	15	0	16	3.2	11	7.4
1	GND	16	0	17	2.6	12	7.4
2	4.3	17	-22	18	9.1	13	GND
3	N/C	18	0.1	IC8006	14	7.1	
4	-22.0	IC8003	PIN	VOLT	15	GND	
5	22.0	PIN	VOLT	1	0.1	16	3.2
6	-0.3	1	1.3	2	5.0	17	2.6
7	-0.3	2	15.0	3	4.5	18	9.1
8	-22.0	3	-13.1	4	GND	IC8009	
9	-0.5	4	-15.0	5	0.0	PIN	VOLT
10	22.0	5	0.4	6	5.0	1	98.2
11	0.1	6	15.0	7	0.1	2	98.2
12	-22.0	7	1.3	8	15.0	3	94.0
13	0.0	IC8004	IC8007	4	97.8		
14	0.0	PIN	VOLT	PIN	VOLT	5	101.1
15	0.0	1	15.0	1	0.1	IC8010	
16	0.0	0	12.0	2	5.0	PIN	VOLT
17	-22.0	G	GND	3	4.0	I	7.0
18	0.1	IC8005	4	GND	O	5.0	
IC8002		PIN	VOLT	5	0.0	G	GND
PIN	VOLT	1	12.0	6	5.0	IC8012	
1	GND	2	12.0	7	0.1	PIN	VOLT
2	4.3	3	5.8	8	15.0	1	2.7
3	N/C	4	GND	IC8008	2	2.1	
4	-22.0	5	3.8	PIN	VOLT	3	2.1
5	22.0	6	3.8	1	12.0	4	GND
6	-0.1	7	3.8	2	12.0	5	GND
7	-0.1	8	N/C	3	6.0	6	0.0
8	-22.0	9	3.8	4	GND	7	0.0
9	0.0	10	3.6	5	8.0	8	12.0
10	22.0	11	3.6	6	7.4		
11	0.5	12	3.6	7	7.4		
12	-22.0	13	GND	8	N/C		
13	0.3	14	7.1	9	3.3		

All voltages are in V.

D BOARD TRANSISTOR VOLTAGE LIST

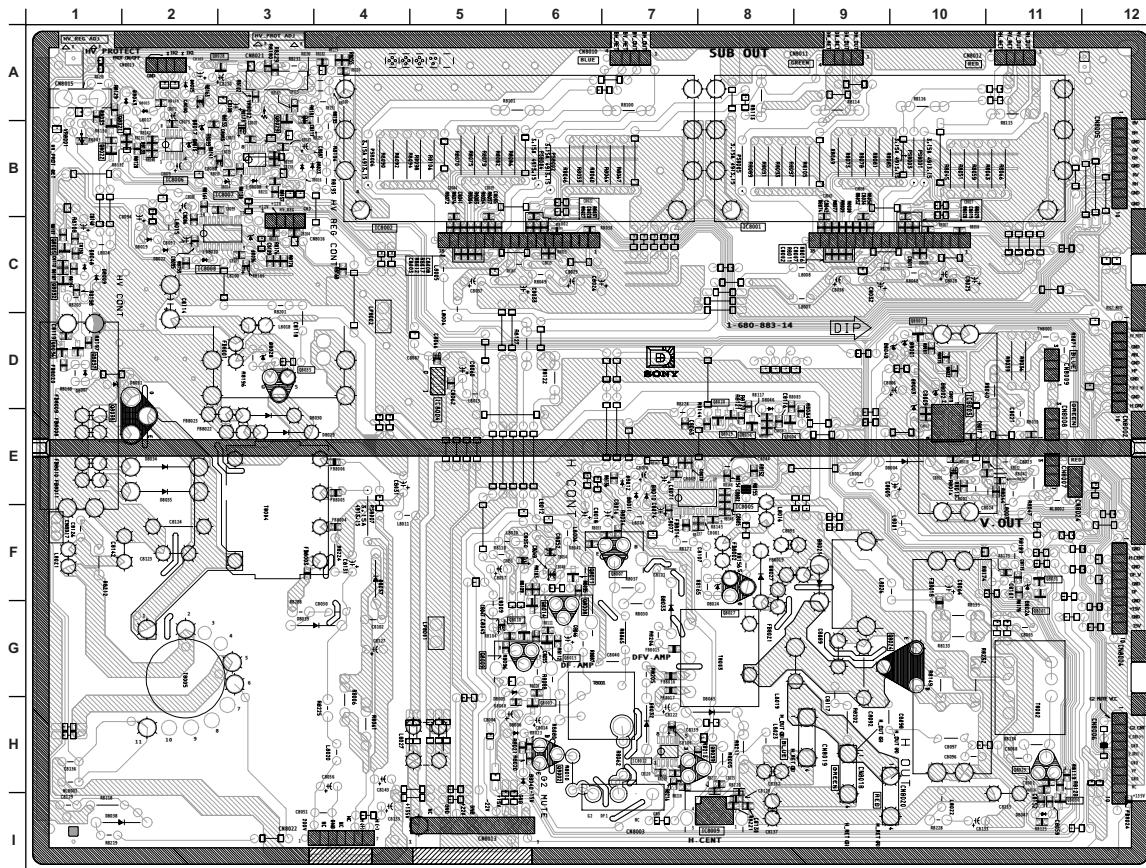
	B	C	E		B	C	E
Q8001	-0.4	15.0	0.1	Q8022	0.0	8.9	GND
Q8002	0	13.0	GND	Q8023	-0.5	68.0	GND
Q8003	14.6	0.0	14.6	Q8024	0.1	242.0	GND
Q8004	3.4	GND	4.0	Q8028	0.5	0.0	GND
Q8005	3.4	GND	4.1	Q8029	0.5	0.0	GND
Q8007	5.8	204.0	5.2	Q8030	3.4	GND	4.0
Q8008	2.8	-22.0	3.3	Q8031	0.2	12.0	0.6
Q8009	4.0	22.0	3.4	Q8032	3.4	4.1	GND
Q8010	4.5	22.0	4.0	Q8036	8.9	GND	8.7
Q8011	2.3	-22.0	2.7	Q8037	8.9	14.6	8.7
Q8014	-20.0	2.3	-20.6	Q8039	2.7	76.7	2.1
Q8015	2.9	4.5	2.3	Q8041	3.4	GND	8.9
Q8016	-0.3	7.4	GND	Q8042	9.6	29.8	GND
Q8019	7.4	GND	7.2	Q8043	8.9	192.0	0.1
Q8020	7.4	12.0	7.2	Q8044	0.6	0.0	GND
Q8021	0.0	8.9	GND	Q8101	0.2	GND	0.6
				Q8038	8.9	192.0	0.6

All voltages are in V.

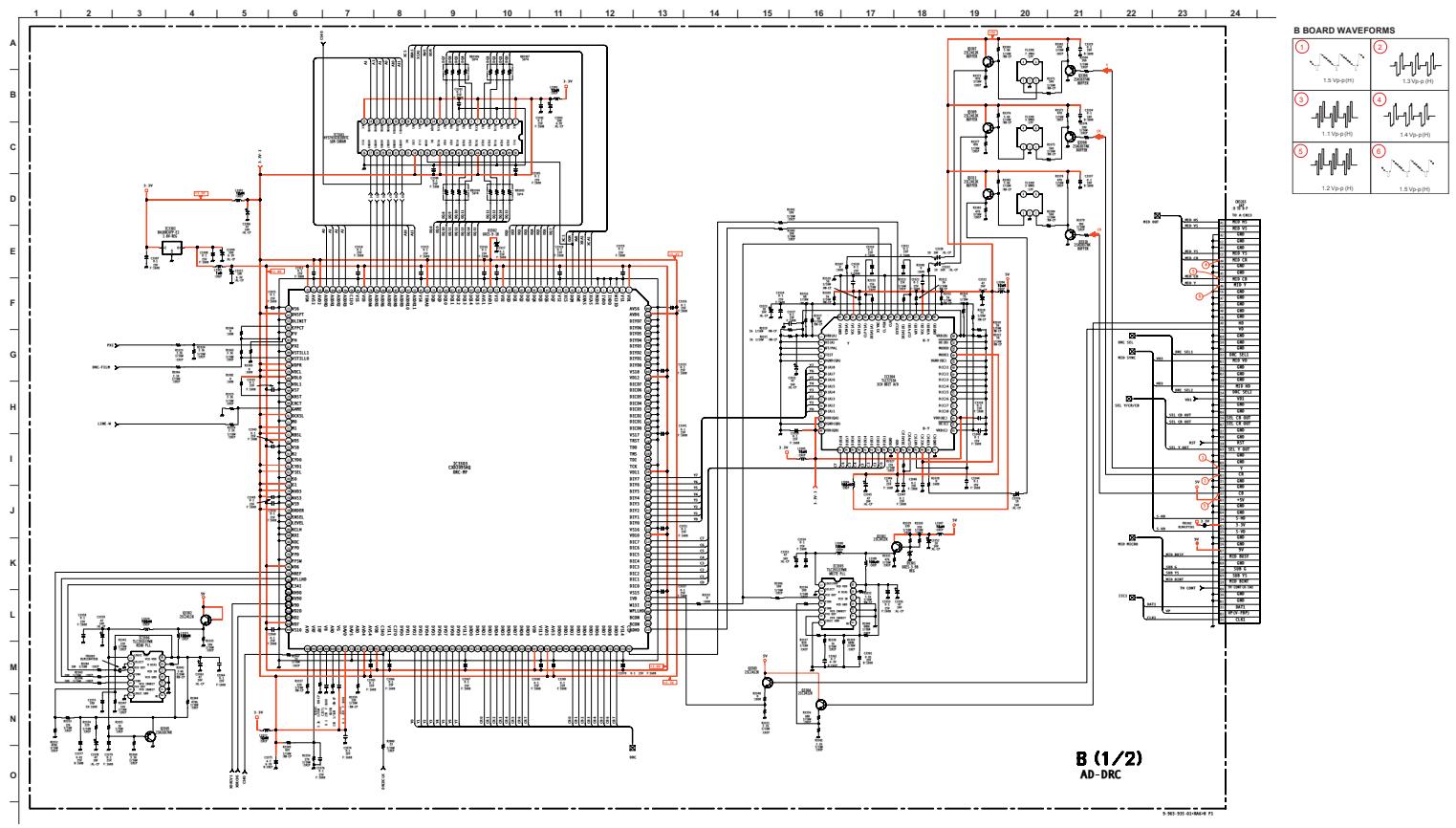
	D	G	S
Q8027	115.6	130.9	135.9
Q8035	115.6	130.9	135.9

All voltages are in V.

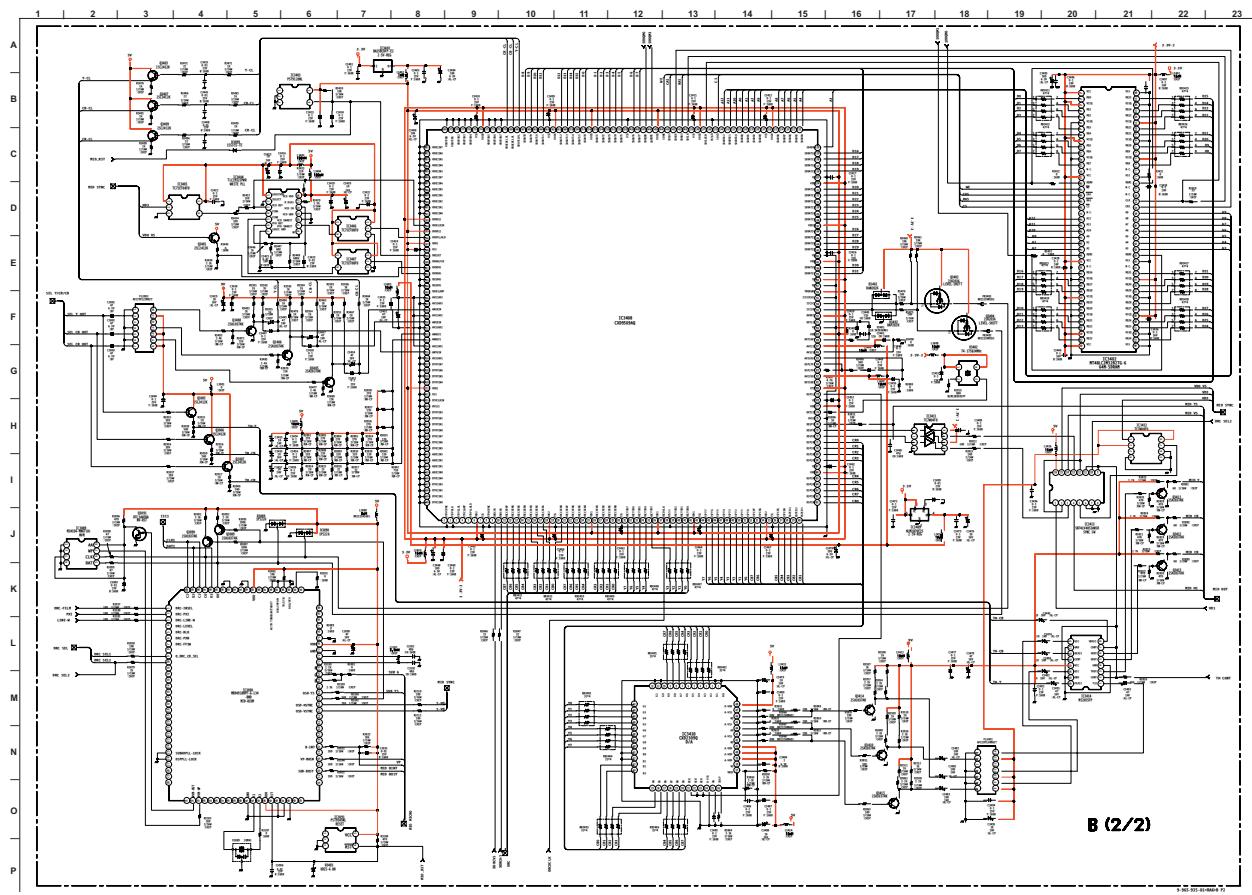
D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



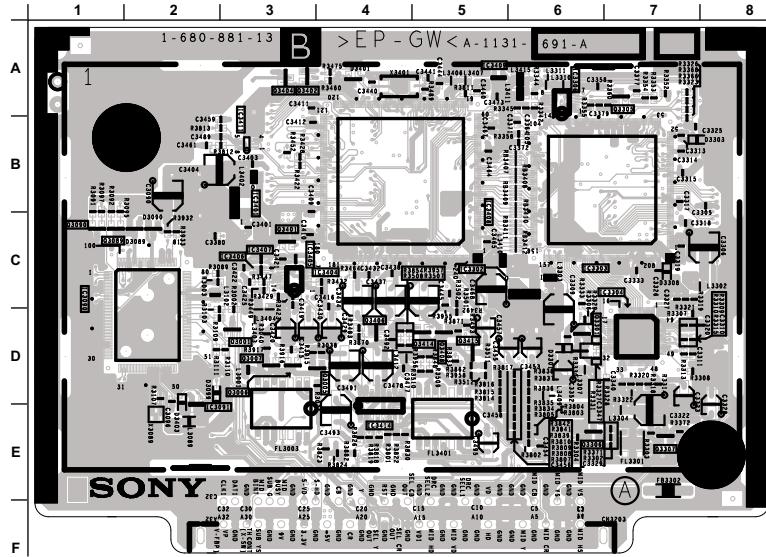
B BOARD SCHEMATIC DIAGRAM (1 OF 2) The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1136-271-A
B Board, Complete



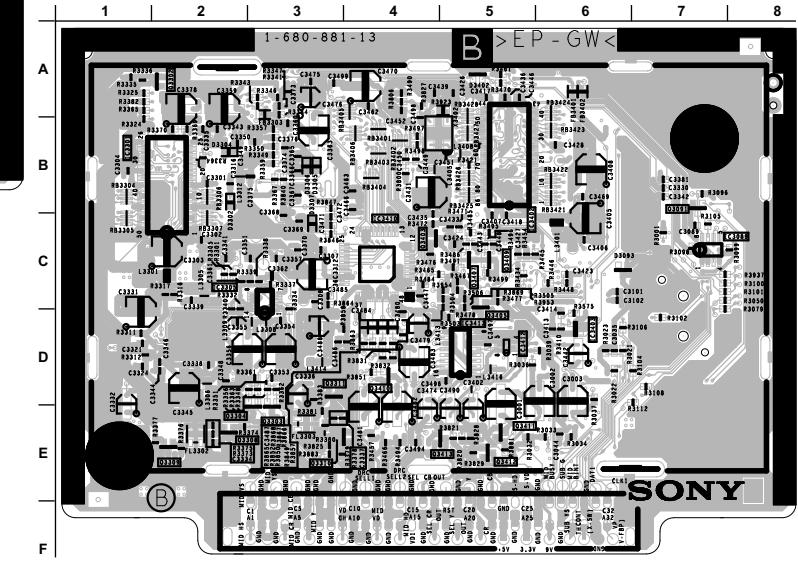
B BOARD SCHEMATIC DIAGRAM (2 OF 2)



[B] [AD-DRC] [COMPONENT SIDE]

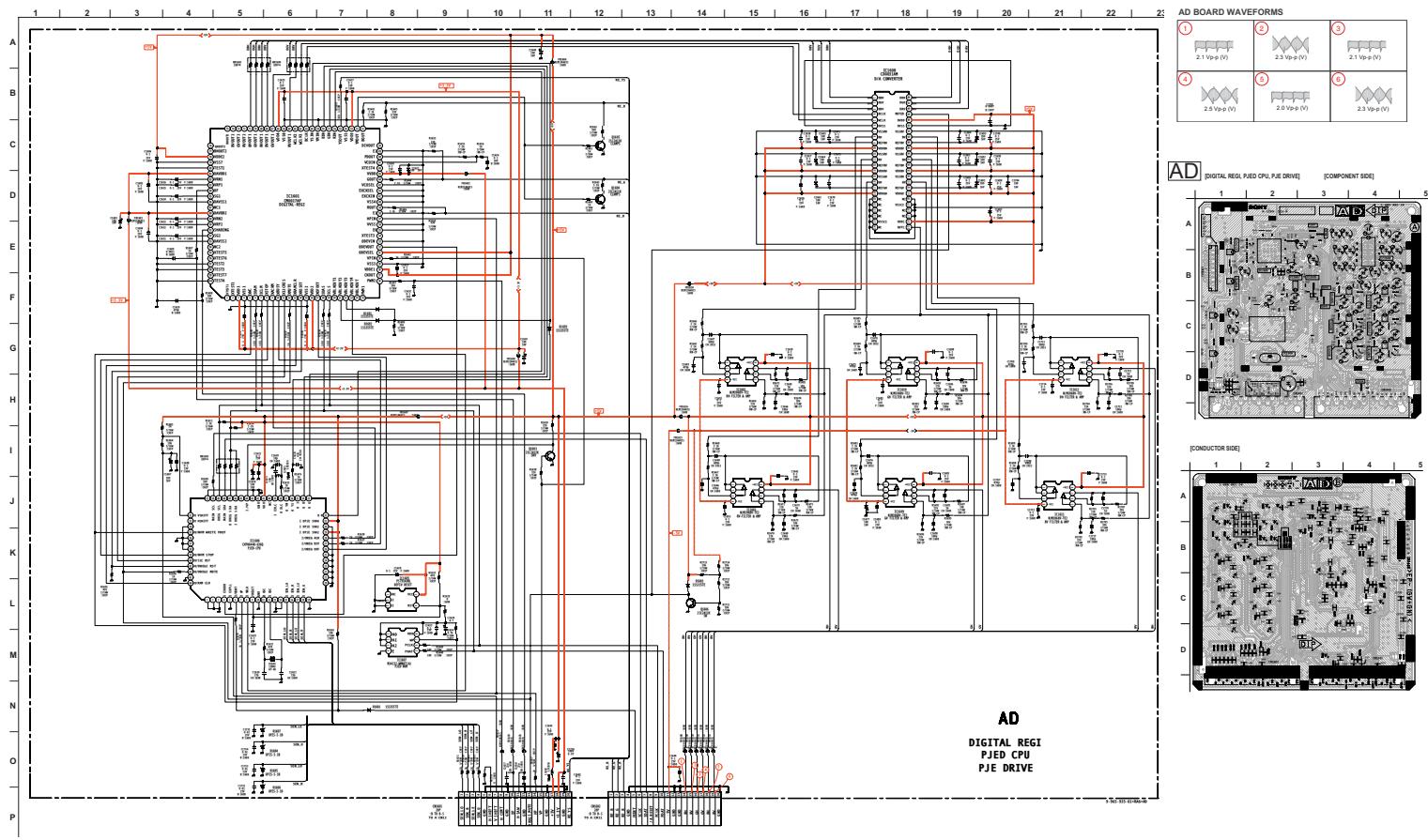


[CONDUCTOR SIDE]



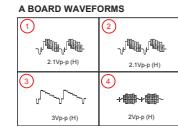
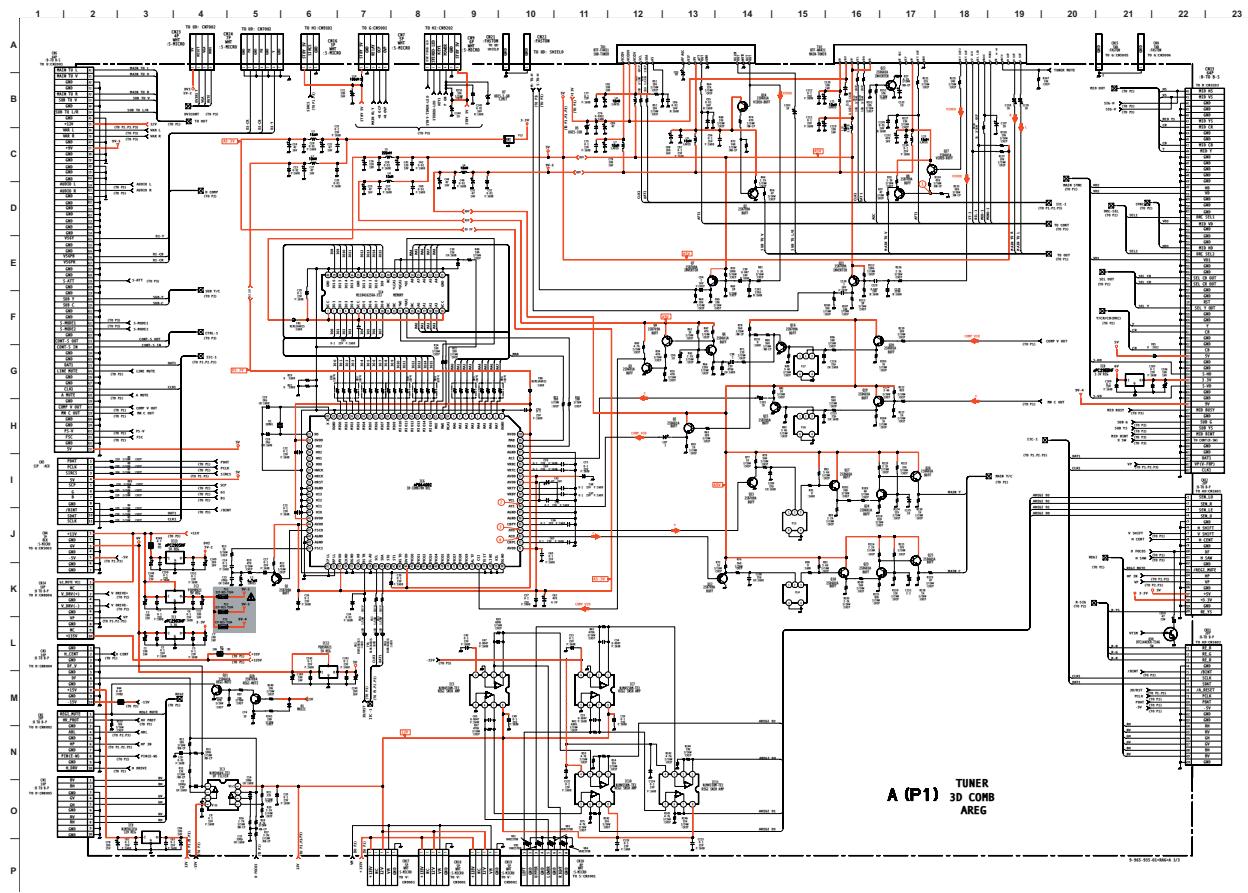
AD BOARD SCHEMATIC DIAGRAM

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1259-523-A
AD Board, Complete

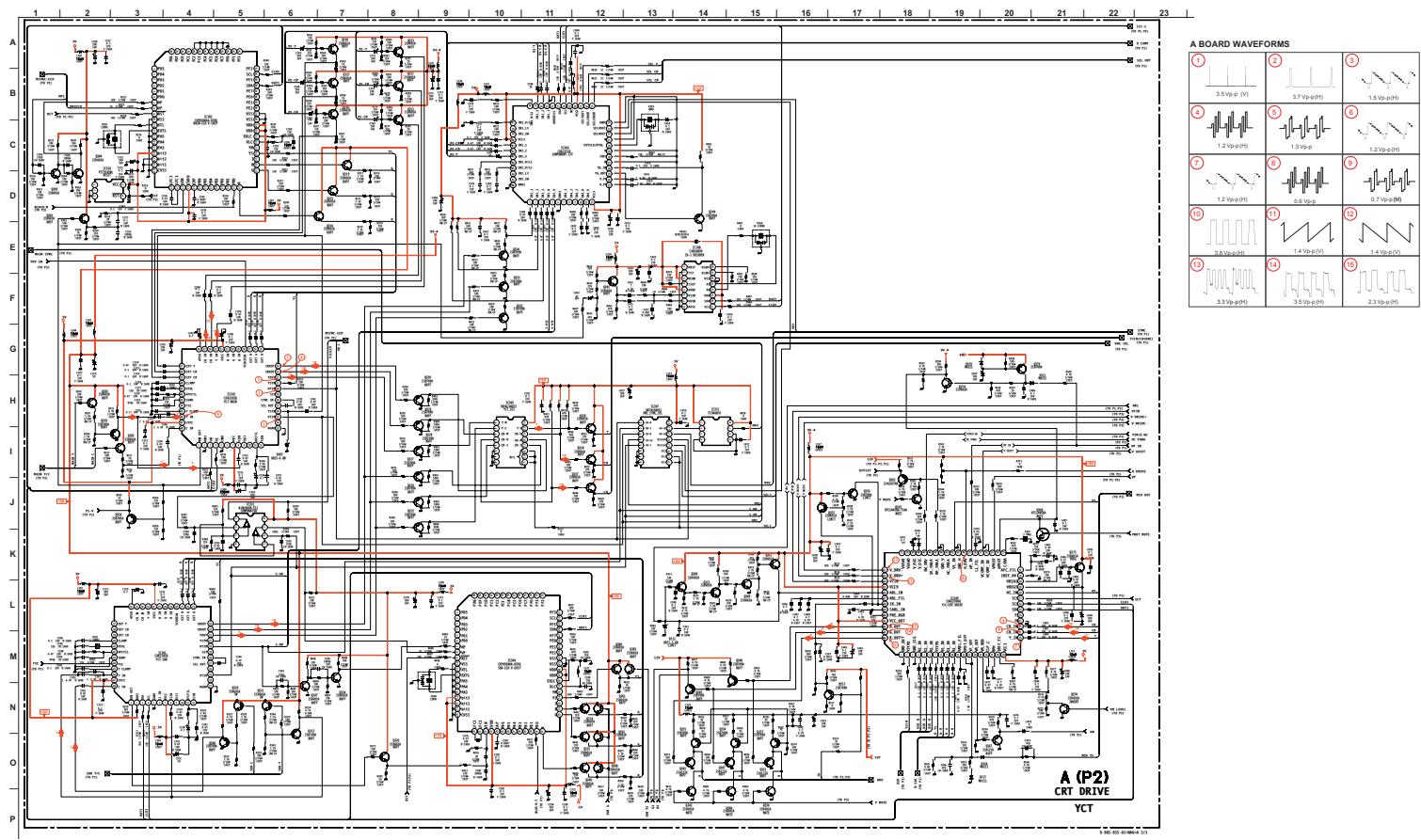


AD
DIGITAL REGI
PJE CPU
PJE DRIVE

A BOARD SCHEMATIC DIAGRAM (1 OF 3)

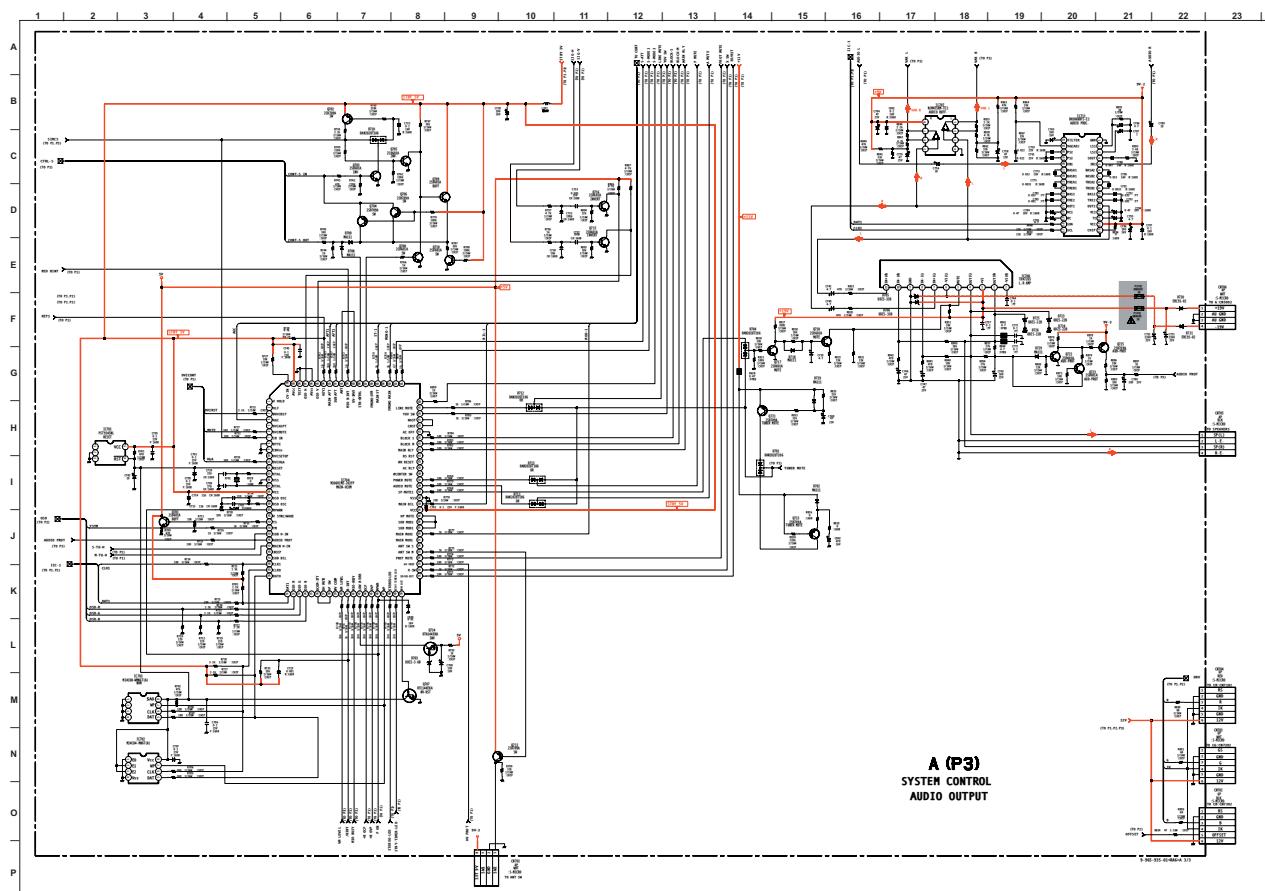


A BOARD SCHEMATIC DIAGRAM (2 OF 3)



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A BOARD SCHEMATIC DIAGRAM (3 OF 3)



A BOARD IC VOLTAGE LIST

IC1	28	1	26	1.8	76	4.1	4	-15	24	2.2	24	1.6	8	2.8	8	5	58	NC	24	GND	6	1.9	38	3.3	5	GND			
PIN	VOLT	29	1	27	2	77	GND	5	0.1	25	3.5	25	NC	9	NC	9	5	59	NC	25	2.6	7	1.6	39	0.7	6	GND		
I	6	30	NC	28	2	78	GND	6	0	26	3.5	26	NC	10	NC	10	GND	60	NC	26	2.6	8	GND	40	3	7	HD2		
O	3.3	31	1.9	29	GND	79	0	7	1	27	3.5	27	NC	11	2.4	11	2.5	61	NC	27	2.6	9	4.3	41	GND	8	5		
GND	GND	32	2.5	30	1.4	80	GND	8	12	28	NC	28	NC	12	NC	12	2.1	62	NC	28	5	10	3.3	42	0	IC701			
IC2	33	1.3	31	1.5	81	3.2	IC11		29	NC	29	NC	13	GND	13	GND	63	NC	29	NC	11	5	43	2.5	PIN	VOLT			
PIN	VOLT	34	1.7	32	3.2	82	1	1	1.2	30	NC	30	NC	14	NC	14	GND	64	NC	30	4.4	12	2.6	44	GND	1	NC		
I	11	35	0	33	NC	83	1.6	2	0.1	31	NC	31	0	15	0.4	15	GND	IC305		31	4.4	13	2.4	45	2.1	2	GND		
O	9	36	1.9	34	NC	84	1.7	3	0.3	32	5	32	0	16	2.5	16	5	PIN	VOLT	32	GND	14	GND	46	NC	3	GND		
GND	GND	37	1.8	35	NC	85	1	4	-15	33	NC	33	0	17	2	17	5	1	2.4	33	2.9	15	0	47	3.9	4	5		
4	11	38	1.8	36	NC	86	0	5	0.2	34	NC	34	0	18	3.1	18	GND	2	0	34	2.9	16	0	48	4.4	5	5		
IC3	39	1.8	37	NC	87	0	6	0	35	NC	35	NC	19	NC	19	GND	3	2.8	35	2.9	IC309		49	5.4	IC702				
PIN	VOLT	40	0	38	NC	88	1.3	7	2	36	2.7	36	0	20	0	20	1.7	4	2.9	36	1	PIN	VOLT	50	NC	PIN	VOLT		
1	1.5	IC5		39	NC	89	0.5	8	12	37	NC	37	NC	21	0	21	2.6	5	0	37	1	1	GND	51	NC	1	GND		
2	0	PIN	VOLT	40	GND	90	0.9	IC12		38	NC	38	2.6	22	1.8	22	2.9	6	GND	38	NC	2	0	52	0	2	5		
3	GND	1	0	41	0	91	1.6	PIN	VOLT	39	NC	39	2.6	23	2.1	23	5	7	GND	39	NC	3	GND	53	3.5	3	5		
4	-15	2	0	42	0	92	3.2	I	6	40	1.7	40	5	24	2.2	24	1.8	8	GND	40	5	4	3.1	54	0.5	4	GND		
5	1.1	3	GND	43	0	93	3.2	O	5	41	1.8	41	5	25	3.6	25	NC	9	4.9	41	2.9	5	3.2	55	9.1	5	4.4		
6	1.1	4	-15	44	0	94	3.2	GND	GND	42	2.6	42	GND	26	3.6	26	NC	10	4.9	42	2.8	6	3.1	56	3.1	6	4.4		
7	0.3	5	GND	45	3.2	95	2	4	6	43	GND	43	GND	27	3.6	27	NC	11	4.9	43	2.1	7	0	57	5	7	5		
8	11.9	6	0	46	3.2	96	2.6	IC13		44	2.5	44	NC	28	2.9	28	NC	12	0	44	1	8	3.6	58	3.9	8	5		
IC4	7	0.1	47	1.7	97	0	PIN	VOLT	45	3.2	45	NC	29	NC	13	2.8	45	1	9	0	59	1.7	IC703						
PIN	VOLT	8	12	48	GND	98	0.5	I	11	46	3	46	NC	30	NC	30	NC	14	2.9	46	NC	10	3.6	60	1.7	PIN	VOLT		
1	4.8	IC6		49	GND	99	1.5	O	5	47	4.9	47	NC	31	NC	31	0	15	2.6	47	NC	11	0	61	9	1	GND		
2	2	PIN	VOLT	50	1.4	100	3.2	GND	GND	48	3.2	48	4.4	32	5	32	0	16	5	48	GND	12	0.4	62	2.7	2	GND		
3	2	1	GND	51	0	IC7		IC301		IC302		49	NC	33	3.2	33	0	IC306		IC307		13	0.4	63	2.9	3	GND		
4	1.8	2	1.5	52	0	PIN	VOLT	PIN	VOLT	PIN	VOLT	PIN	VOLT	50	4.3	34	3.2	34	0	PIN	VOLT	PIN	VOLT	14	2.5	64	2.9	4	GND
5	1.9	3	1.5	53	3.2	1	0.1	1	2.3	1	NC	51	NC	35	3.2	35	NC	1	2.9	1	0.5	15	3.8	IC310		5	4.4		
6	4.8	4	1.5	54	GND	2	0	2	4.7	2	NC	52	NC	36	3.2	36	0	2	2.9	2	0.5	16	2.6	PIN	VOLT	6	4.4		
7	1.6	5	1.5	55	GND	3	GND	3	4.4	3	NC	53	NC	37	3.6	37	NC	3	2.9	3	0.5	17	2.6	1	NC	7	5		
8	1.4	6	1.5	56	NC	4	-15	4	4.5	4	NC	54	NC	38	3.2	38	2.5	4	1.3	4	0.5	18	1.1	2	GND	8	5		
9	1.1	7	1.5	57	5	5	GND	5	GND	5	NC	55	GND	39	3.3	39	2.5	1	5	0.5	19	5	3	GND	IC704				
10	0.8	8	1.5	58	GND	6	0	6	NC	6	NC	56	GND	40	1.7	40	5	6	GND	6	GND	20	3.6	4	5	PIN	VOLT		
11	NC	9	1.5	59	4.5	7	0.2	7	5	7	0.4	57	GND	41	1.8	41	5	7	NC	7	GND	21	0	5	5	1	NC		
12	NC	10	1	60	4.5	8	12	8	3	8	5	58	GND	42	2.6	42	GND	8	NC	8	GND	22	3.1	IC311		2	NC		
IC8	9	NC	9	5	59	GND	43	GND	43	GND	9	NC	9	4.9	23	GND	PIN	VOLT	3	0	IC303								
PIN	VOLT	10	NC	10	GND	60	GND	44	2.5	44	NC	10	1	10	4.9	24	NC	1	5	4	0	IC308							
I	6	11	2.4	61	NC	11	2.4	11	2.5	61	NC	45	3.2	45	NC	11	1	11	0	25	4.4	2	0.4	5	NC				
O	3.3	12	NC	12	NC	12	2.2	62	NC	46	2.8	46	NC	12	5	12	0.4	26	4.4	3	2.5	6	0	IC312					
G	13	12	NC	13	GND	13	GND	63	NC	47	5	47	NC	13	4.1	13	0.5	27	0.7	4	GND	7	4.7						
IC9	14	NC	14	GND	64	NC	48	3.2	48	SDA	14	4.1	14	0.4	28	0.2	5	15	0.5	29	5	6	0.5	9	GND				
PIN	VOLT	15	0.5	15	GND	IC303		IC304		49	NC	15	3.2	15	0.5	29	5	6	0.5	30	5.7	7	5	10	NC				
SCL	16	2.8	16	5	IC308		31	1.3	8	5	17	NC	17	NC	17	NC	17	1	PIN	VOLT	32	3.1	IC312	12	4.9				
PIN	VOLT	17	1	1.8	1	NC	51	NC	51	NC	52	NC	18	1	PIN	VOLT	33	1.6	PIN	VOLT	13	2.3							
IC10	19	NC	19	GND	3	4.4	3	NC	53	NC	19	NC	19	1	5	33	1.6	PIN	VOLT	14	GND								
PIN	VOLT	20	0.5	20	1.7	4	4.4	4	NC	54	NC	20	2.9	2	GND	34	0	1	5	14	GND								
GND	21	1	0.1	21	0	21	2.6	5	GND	5	NC	55	NC	21	NC	3	5	35	0.3	2	0.5	15	2.4						
NC	22	0	22	2.1	22	2.4	6	NC	6	NC	56	NC	22	0.4	4	1.4	36	GND	3	NC	16	4.9							
NC	23	1.4	73	NC	1	0.1	23	2.2	23	5	7	4.8	7	0.4	57	NC	23	0.1	5	5	37	2.7	4	GND	17	0			

A BOARD IC VOLTAGE LIST (Continued)

18	0	68	NC	6	-19
19	0	69	NC	7	0
20	NC	70	NC	8	0
21	0	71	NC	9	0
22	0	72	6.3	10	0
23	0	73	0	11	0
24	GND	74	0	IC711	
25	0	75	GND	PIN	VOLT
26	NC	76	0	1	GND
27	NC	77	0	2	0
28	4.4	78	0	3	0
29	4.9	79	0	4	4.5
30	4.9	80	NC	5	4.5
31	4.4	81	0	6	4.5
32	0	82	0	7	4.5
33	0	83	0	8	4.5
34	0	84	NC	9	4.5
35	NC	85	0	10	4.5
36	0	86	NC	11	4.5
37	4.6	87	0	12	0
38	0	88	0	13	1.2
39	0	89	0	14	2
40	0	90	0	15	9
41	2.3	91	0	16	9
42	0	92	0	17	4.4
43	4.6	93	0	18	4.4
44	2.8	94	4.6	19	2
45	0.1	95	4.6	20	1.2
46	0	96	GND	21	4.5
47	4.6	97	4.6	22	4.5
48	5	98	GND	23	4.5
49	5	99	4.9	24	4.5
50	0	100	4.6	25	4.5
51	5	IC707	26	4.6	
52	0	PIN	VOLT	27	4.5
53	2.8	1	4.8	28	4.5
54	0	2	4.5	29	4.5
55	0	3	4.5	30	4.5
56	NC	4	GND	31	2.9
57	NC	5	4.6	32	4.5
58	0	6	4.5		
59	0	7	4.8		
60	0	8	9		
61	0	IC708			
62	4.9	PIN	VOLT		
63	4.9	1	-19		
64	GND	2	0		
65	0	3	22.1		
66	NC	4	0		
67	0	5	11.6		

All voltages are in V.

A BOARD TRANSISTOR VOLTAGE LIST

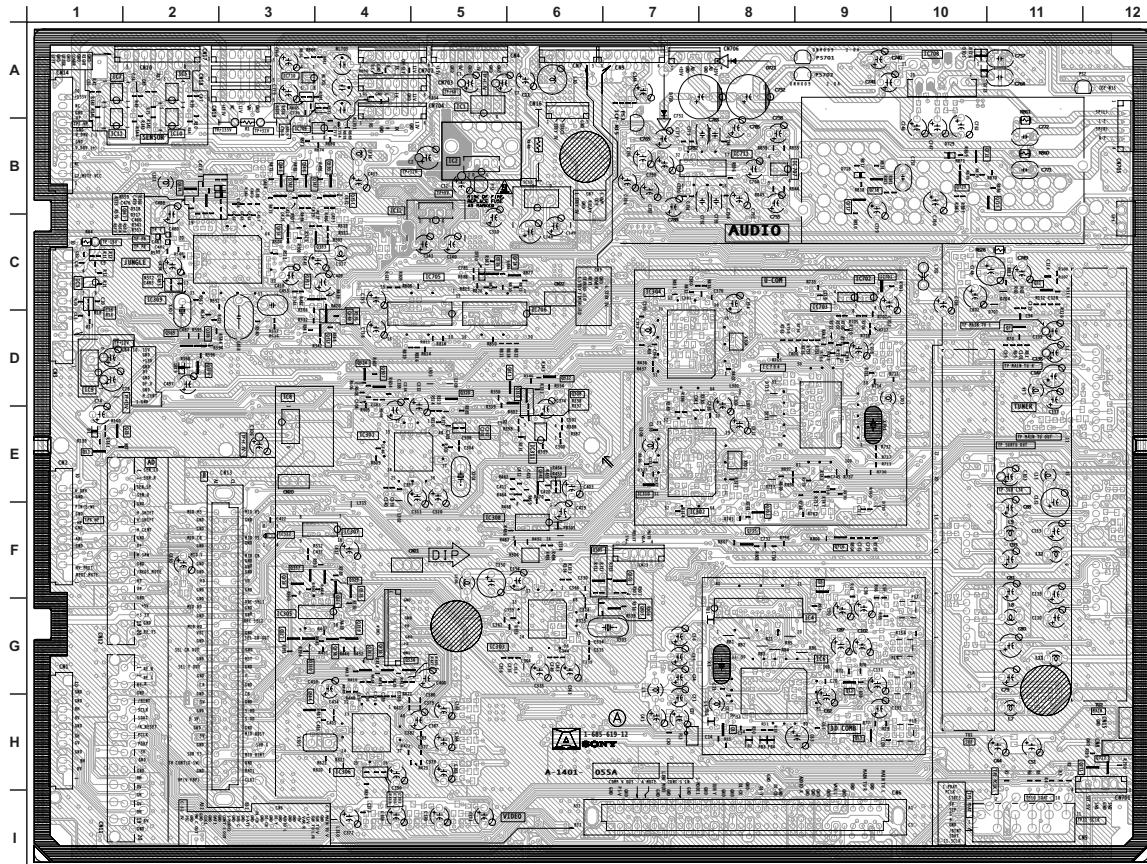
	B	C	E		B	C	E		B	C	E
Q1	1.9	GND	2.5	Q321	4.4	9.1	3.8	Q380	0	9.1	0
Q2	2.2	2.9	GND	Q322	4.4	9.1	3.8	Q381	0	9.1	0
Q3	0.1	0	GND	Q323	4.4	9.1	3.8	Q501	2.1	2.7	GND
Q4	4.8	0.6	5	Q324	0.5	0.4	GND	Q502	0.8	1.4	GND
Q5	6.2	8.9	5.5	Q325	2.2	GND	0	Q701	0	5	0
Q6	3.4	4.8	3.7	Q326	2.2	GND	0	Q702	4.4	4	5
Q7	5.3	0.9	5	Q327	2.2	GND	0	Q703	0	4.2	GND
Q8	2.4	3	GND	Q328	1.8	GND	2.5	Q704	4.9	0	0
Q11	0	10.4	GND	Q329	2.1	GND	2.8	Q705	0.6	0.1	GND
Q12	1.7	GND	2.4	Q330	2.2	GND	2.8	Q706	4.3	0	0
Q13	1.6	GND	2.3	Q331	8.5	3.6	9.2	Q707	0	5	GND
Q14	4.7	9	0	Q332	2.1	GND	2.8	Q708	0	0.1	GND
Q15	2.9	GND	3.5	Q333	2.1	GND	2.6	Q709	0.1	5	0
Q16	2.8	GND	3.5	Q334	2.2	GND	2.8	Q710	0.6	0	GND
Q17	2.9	8.9	2.3	Q335	0	9.1	0	Q712	4.9	0	5
Q18	3	8.9	2.3	Q336	0	9.1	0	Q713	10.3	0	10.3
Q19	3.7	8.9	3.1	Q337	2.4	5	2.2	Q714	0	0	4.9
Q20	3.7	8.9	3.1	Q338	2.4	5	2.2	Q715	0	4.7	GND
Q21	5	0.8	5	Q339	2.5	5	1.9	Q716	0	5	GND
Q22	0	4.1	GND	Q340	0	9.1	0	Q717	0.3	13.1	GND
Q23	2.3	6.6	1.7	Q341	3.2	5	2.5	Q718	12.3	11.6	11.6
Q24	2.3	6	1.8	Q342	0	0	GND	Q721	10.3	0	10.4
Q25	6.6	8.9	5.9	Q343	2.9	GND	3.6	Q722	0	9	GND
Q26	6	8.9	5.3	Q344	3.2	GND	3.8	Q723	0	9	0
Q27	4.8	9	4.2	Q345	2.9	GND	3.5	Q725	8.9	0	9
Q28	10.4	0	10.2	Q346	0	0	GND				
Q30	0	0	GND	Q347	2.9	GND	3.7				
Q301	0	5	1.2	Q348	2.7	GND	3.3				
Q302	5.4	9.1	4.8	Q349	7.9	8.7	GND				
Q303	3.2	GND	6	Q350	0	0	GND				
Q304	0.4	0.5	GND	Q351	2.7	GND	3.5				
Q305	6	9.1	5.3	Q352	7.9	9	3.1				
Q306	0.2	2.5	GND	Q353	9.3	0	3.9				
Q307	0.2	2.5	GND	Q354	8.5	3.7	9.2				
Q308	2.6	GND	6.6	Q355	2.2	9.1	3.9				
Q309	2.9	9.1	8.1	Q356	4.4	GND	4				
Q310	3.7	9.1	3.1	Q357	8.5	3.4	9.2				
Q311	3.9	9.1	3.3	Q358	1.1	GND	1.7				
Q312	1.6	GND	2.3	Q361	0	9.1	0				
Q313	7.9	8.8	GND	Q363	0	9.1	0				
Q314	0	8.9	0	Q367	2.4	GND	3.3				
Q315	0	9	0	Q368	0	9.1	0				
Q316	4.4	9.1	3.8	Q369	0	0	GND				
Q317	4.4	9.1	3.8	Q373	5.7	9.1	5				
Q318	4.4	9.1	3.8	Q374	0	2.6	GND				
Q319	0	9.1	0	Q378	0.7	0.1	GND				
Q320	2.3	5	1.7	Q379	9.1	0.7	9.1				

All voltages are in V.

A

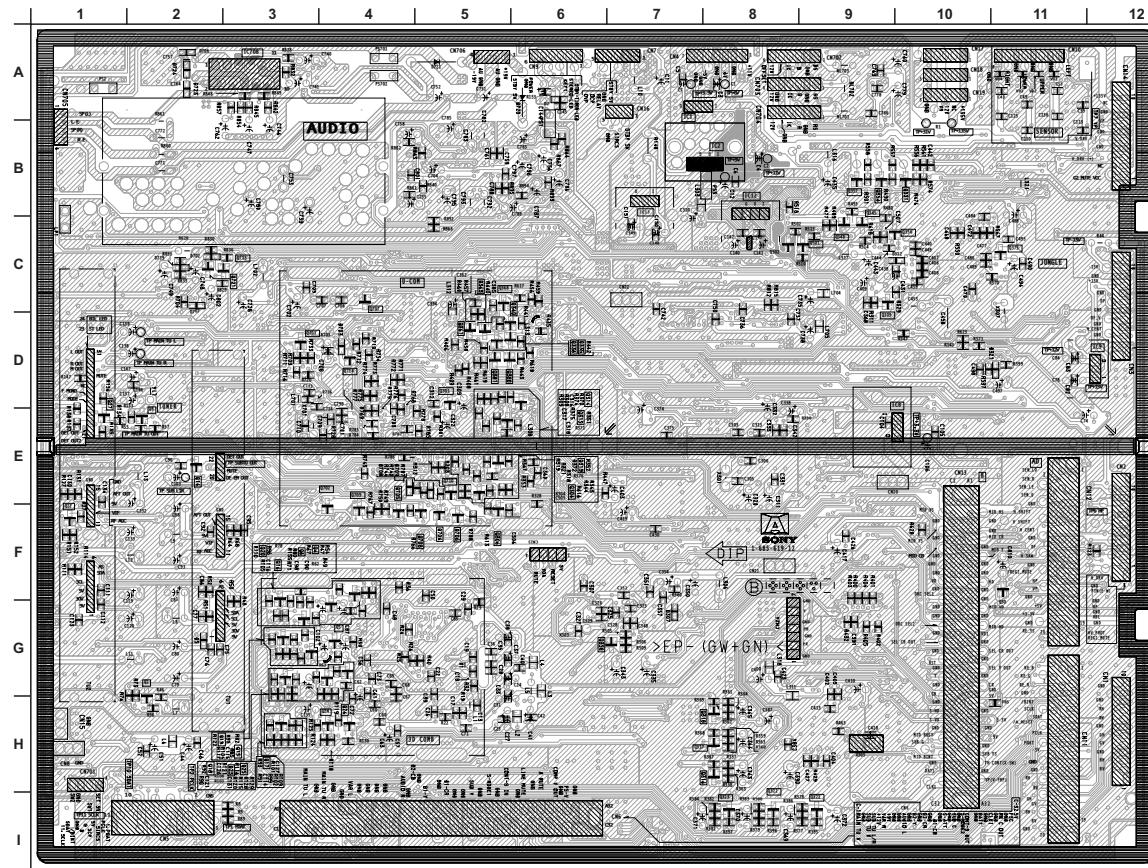
[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT]

[COMPONENT SIDE]

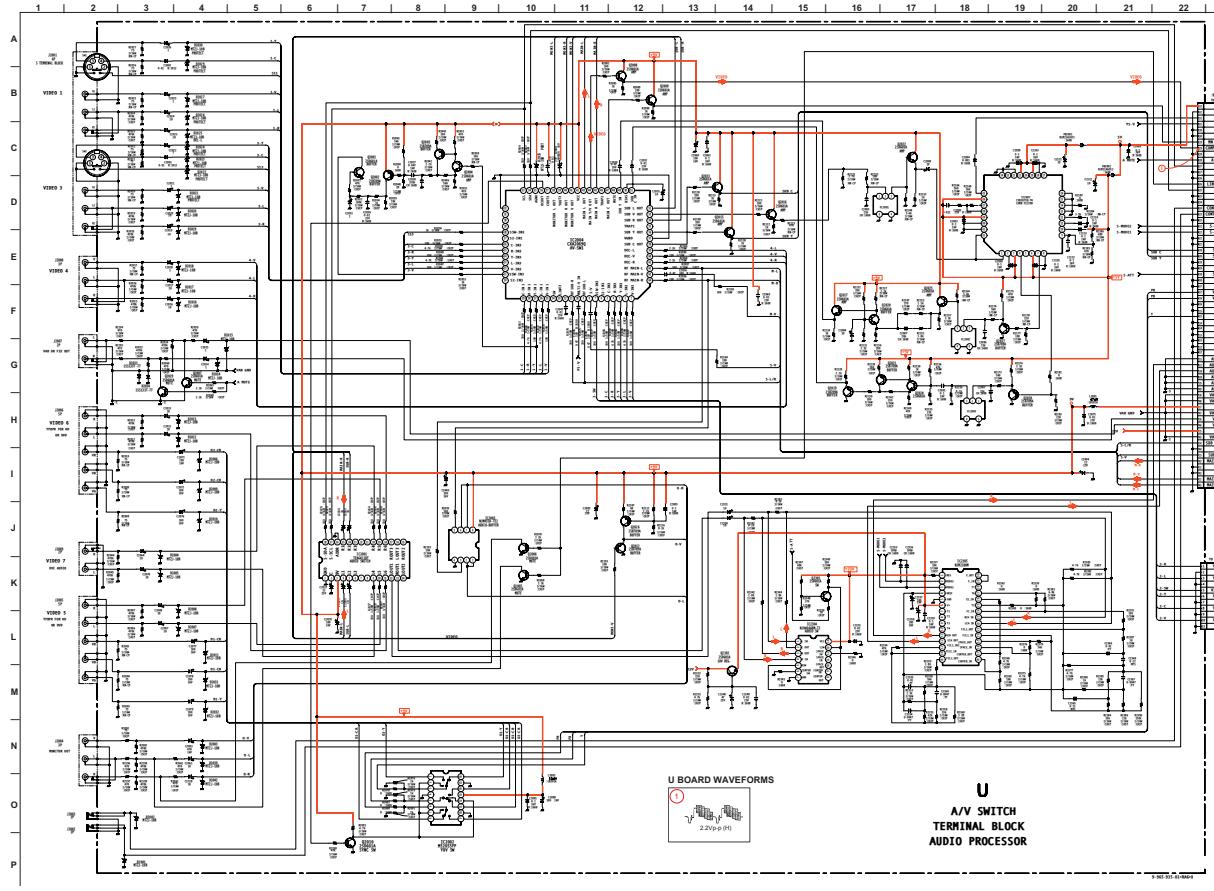


A

[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [CONDUCTOR SIDE]



U BOARD SCHEMATIC DIAGRAM

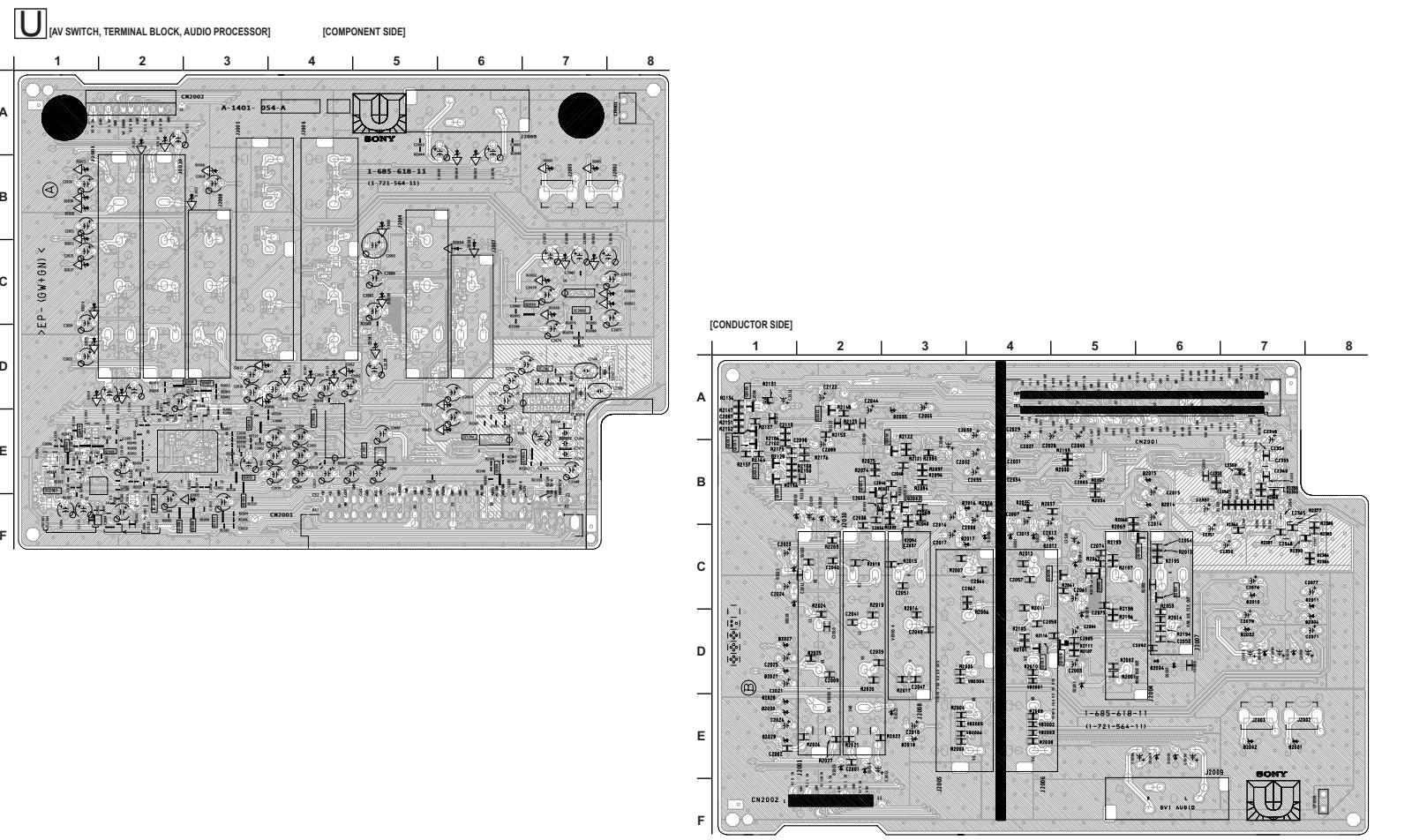


U BOARD IC VOLTAGE LIST

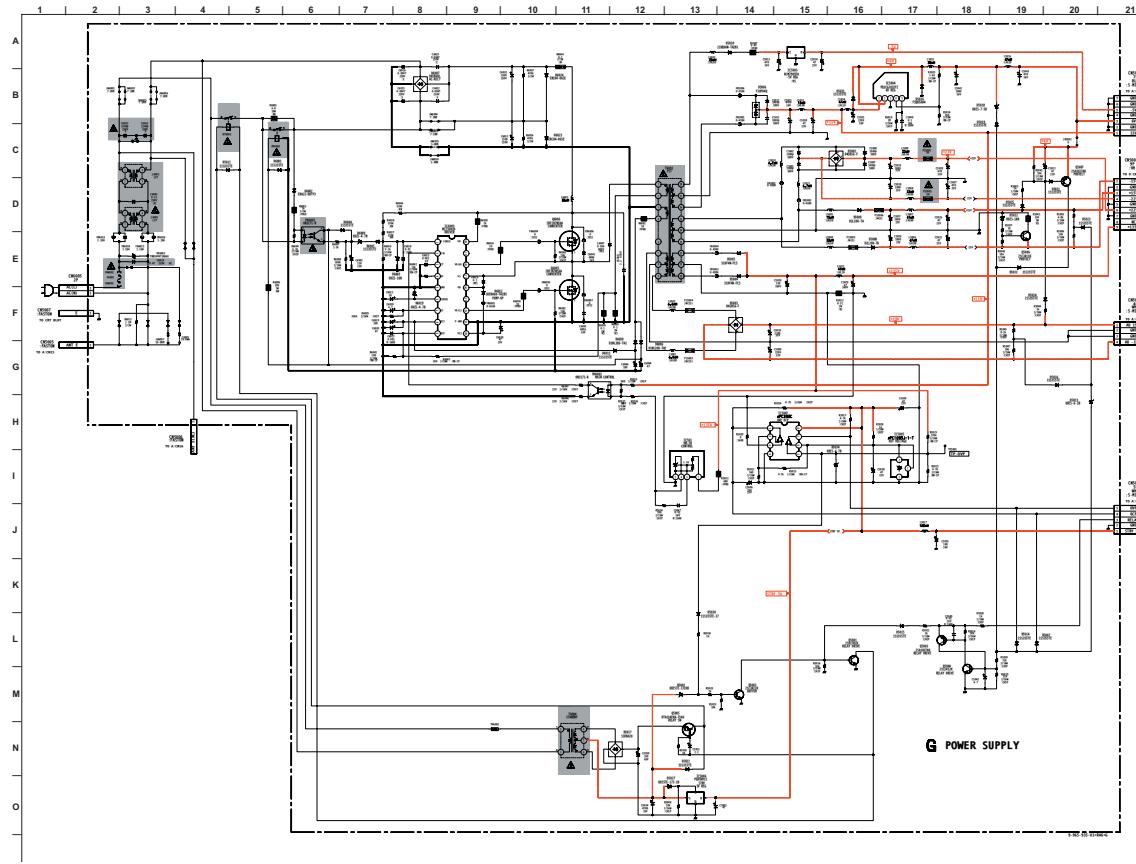
IC2001	IC2001	37	NC	19	5.0	17	6.0	
PIN	VOLT	2.0	GND	2.0	5.0	2.0	6.0	
2	4.5	2	4.5	3.9	NC	21	5.0	
3	2.0	4	4.4	4.4	2.0	NC	21	6.0
4	4.5	4	4.4	4.4	2.0	NC	21	6.0
5	4.5	5	4.4	4.4	2.5	25	2.0	
6	4.5	6	4.5	4.4	4.3	26	5.0	
7	4.5	7	4.4	4.4	4.3	26	5.0	
8	NC	8	9.0	46	NC	28	2.2	
9	NC	IC2004	47	4.4	29	5.0	27	6.0
10	4.4	PIN	VOLT	48	NC	30	GND	
11	4.5	1	4.4	4.4	3.1	31	5.0	
12	4.5	2	4.4	4.5	4.5	33	6.0	
13	4.5	3	3.9	51	4.4	34	6.0	
14	4.5	4	4.4	4.5	4.5	35	6.0	
15	NC	5	0.5	53	4.9	36	6.0	
16	NC	6	NC	54	4.5	2	4.5	
17	NC	7	4.9	55	NC	4	4.5	
18	4.4	8	4.4	56	4.5	4	4.5	
19	4.4	9	4.4	57	GND	5	8.6	
20	NC	10	4.3	58	4.3	8	0.3	
21	4.4	11	4.4	59	4.3	8	0.3	
22	NC	12	4.4	60	3.9	8	4.5	
23	4.4	13	NC	61	4.4	9	4.5	
24	4.4	14	4.4	62	4.4	10	4.5	
25	4.4	15	3.9	63	4.3	10	4.5	
26	GND	16	4.4	64	4.5	12	0.5	
27	4.4	17	3.9	65	4.5	12	0.5	
28	4.4	18	4.4	66	4.5	12	0.5	
29	4.4	19	4.4	67	4.5	12	0.5	
30	4.4	IC2007	13	4.4	68	4.5	12	
31	4.4	IC2007	14	4.4	69	4.5	12	
32	4.4	IC2002	15	4.4	70	4.5	12	
PIN	VOLT	2.0	GND	2.0	GND	2.0	IC2006	
33	4.4	3	4.5	71	4.0	5.0	11.0	
34	2.0	22	4.4	72	4.0	5.0	11.0	
35	3.1	23	3.9	73	5	NC	3	0.0
4	GND	24	4.4	74	6	0.0	4	6.0
5	4.4	25	4.4	75	6	0.0	4	6.0
6	3.1	26	4.4	8	GND	6	10.0	
7	5.0	27	NC	9	2.0	7	NC	
8	4.5	28	NC	10	2.0	7	NC	
9	4.5	29	NC	11	0.0	9	NC	
10	GND	30	NC	12	2.0	10	NC	
11	4.6	31	NC	13	GND	11	8.0	
12	4.6	32	NC	14	4.6	11	8.0	
13	9.0	33	4.4	15	GND	13	8.0	
14	4.6	34	4.4	16	GND	14	8.0	
15	GND	35	OND	17	NC	15	8.0	

U BOARD TRANSISTOR TABLE

Q2091	0.1	4.9	GND
Q2092	8.4	0.1	GND
Q2093	7.8	5.6	6.5
Q2094	3.8	7.8	3.2
Q2095	0.0	0.0	GND
Q2096	0.3	0.1	GND
Q2097	0.4	0.0	GND
Q2098	4.3	9.0	3.7
Q2099	4.4	9.0	3.7
Q2100	0.0	0.0	GND
Q2101	0.3	0.0	GND
Q2102	4.3	9.0	3.7
Q2103	4.5	9.0	3.9
Q2104	4.5	9.0	3.9
Q2105	4.5	9.0	3.9
Q2106	4.7	9.0	3.7
Q2107	5.0	9.0	4.4
Q2108	1.3	GND	2.0
Q2109	0.5	0.0	GND
Q2110	4.2	1.3	4.9
Q2111	3.3	9.0	2.7
Q2112	3.3	9.0	2.7
Q2113	1.5	4.2	0.9
Q2114	2.6	9.0	5.0
Q2115	7.2	5.1	7.9
Q2116	1.5	4.2	0.9
Q2117	1.1	GND	2.0
Q2118	0.4	0.0	GND
Q2119	3.4	11.9	5.0
Q2120	0.0	12.0	12.0



G BOARD SCHEMATIC DIAGRAM



G BOARD IC VOLTAGE LIST

IC	PIN	VOLT	IC	PIN	VOLT	IC	PIN	VOLT
IC501	1	-0.1	IC5004	1	0.0	IC5003	1	0.0
	2	0.0		2	0.0		2	0.0
	3	2.5	2	0.5	2	-0.3	3	0.0
	4	7.3	5	GND	3	-0.3	4	0.0
	5	GND	6	GND	4	-0.3	5	0.0
	6	GND	7	1.7	5	GND	6	22.5
	7	IC5005	1	0.1	6	0.0	7	0.0
	8	0.0		2	0.0		8	0.0
	9	0.0		3	0.0		9	0.0
	10	0.0		4	0.1		10	0.0
	11	0.0		5	0.2		11	0.0
	12	0.0		6	0.0		12	0.0
	13	0.0		7	0.1		13	N/C
	14	0.0		8	0.0		14	0.3
	15	0.0		9	0.0		15	0.3
	16	0.0		10	0.0		16	0.3
	17	0.0		11	0.0		17	N/C
	18	0.0		12	0.0		18	0.2
	19	0.0		13	0.0		19	0.3
	20	0.0		14	0.0		20	0.3
	21	0.0		15	0.0		21	0.3

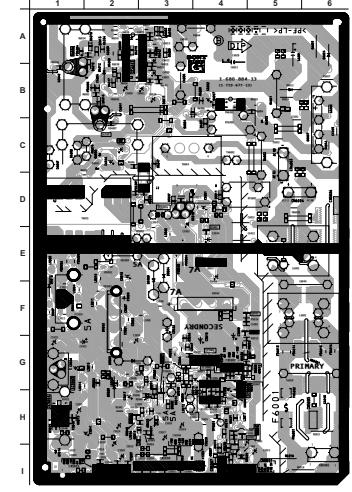
G BOARD TRANSISTOR VOLTAGE LIST

Q	D	G	E
Q5001	0.7	0	GND
Q5002	0.0	0.0	0.0
Q5003	3.0	0.0	3.0
Q5004	0.0	3.0	GND
Q5005	22.5	0.0	22.5
Q5006	0.0	22.5	GND
Q5007	0.3	0.0	0.3
Q5008	0.2	0.1	0.2

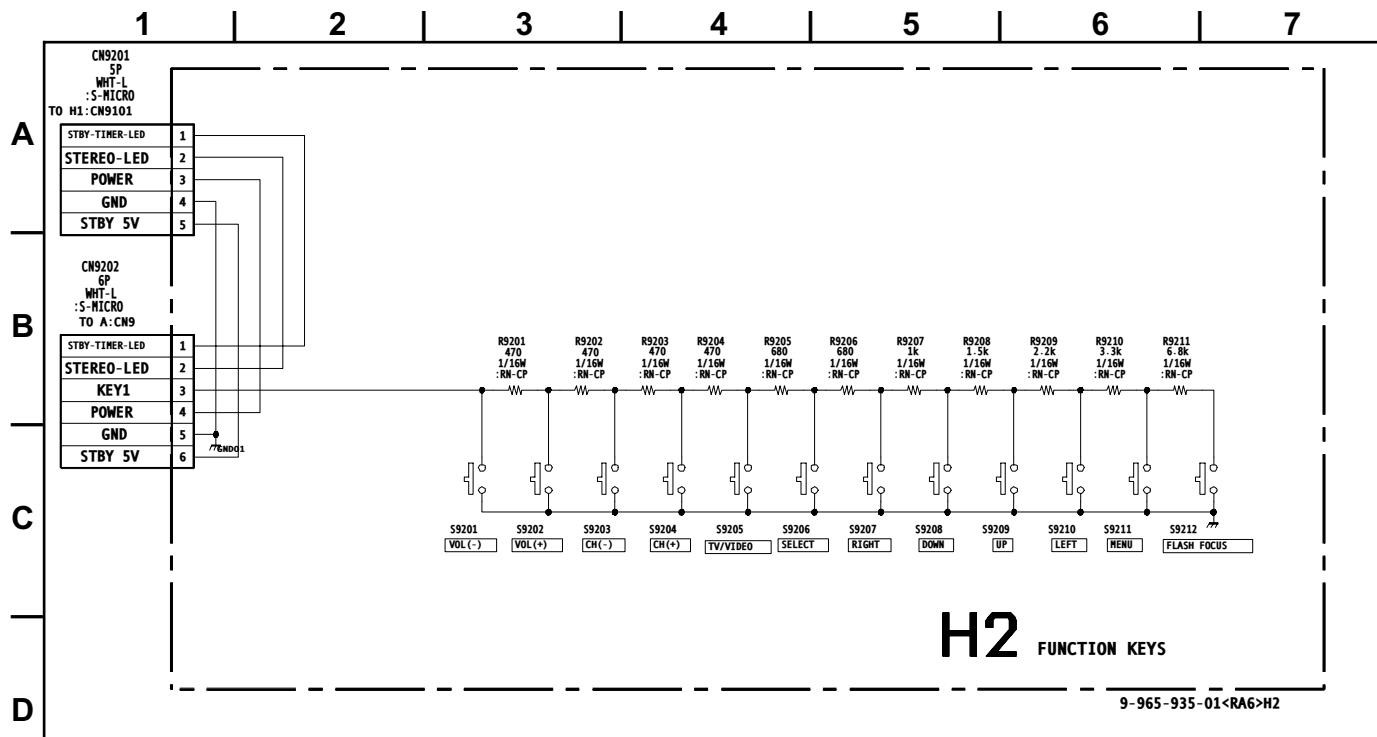
All voltages are in V.

Q	D	G	E
Q6001	0.3	-0.1	GND
Q6002	0.3	0.3	0.3

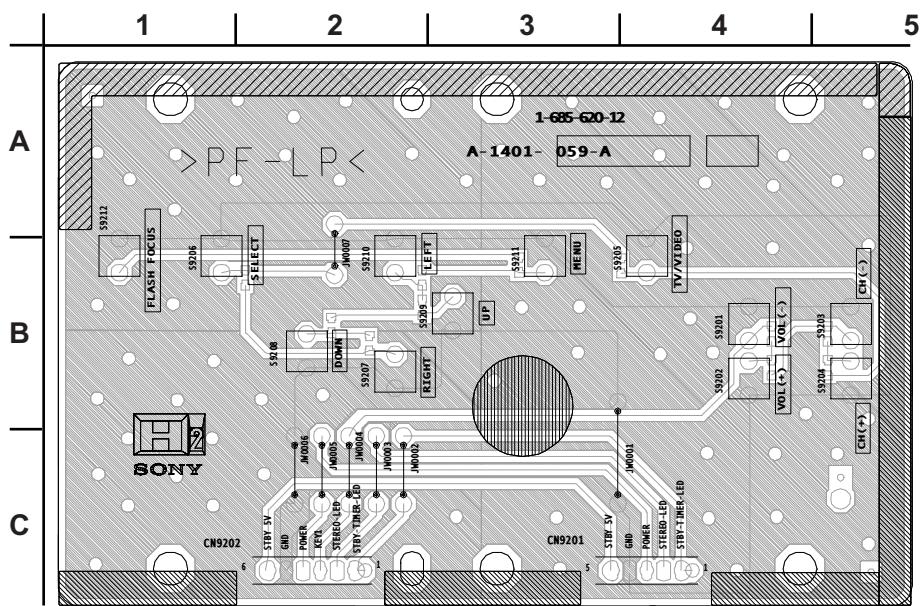
G (POWER SUPPLY) [COMPONENT SIDE]



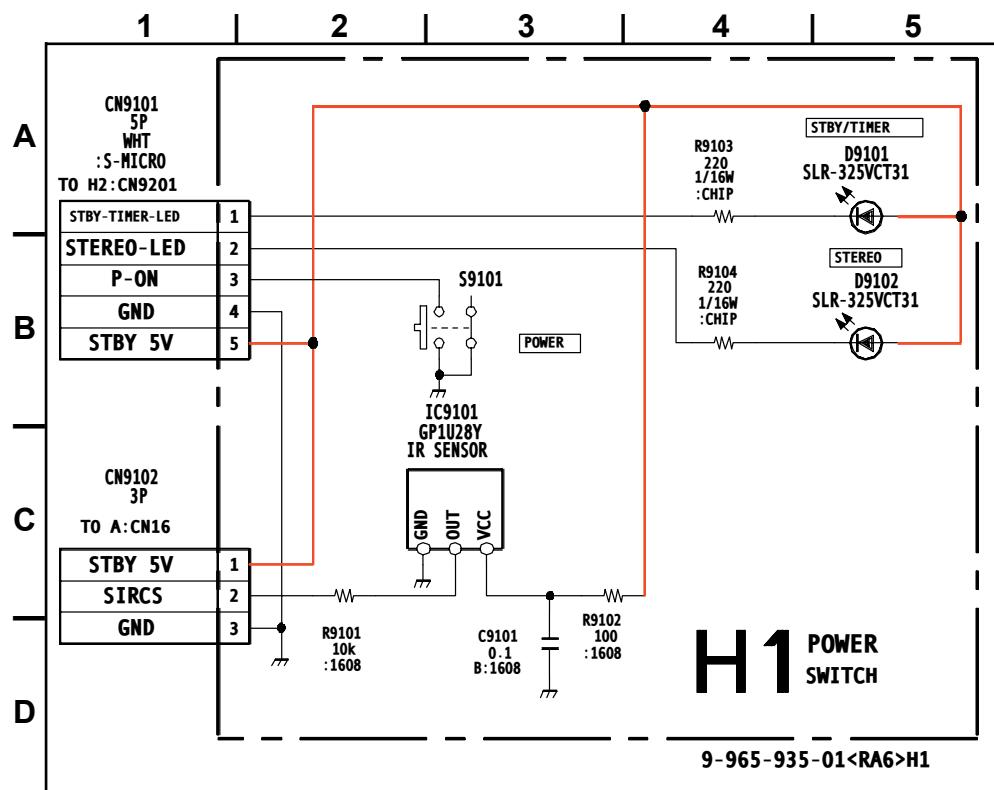
H2 BOARD SCHEMATIC DIAGRAM



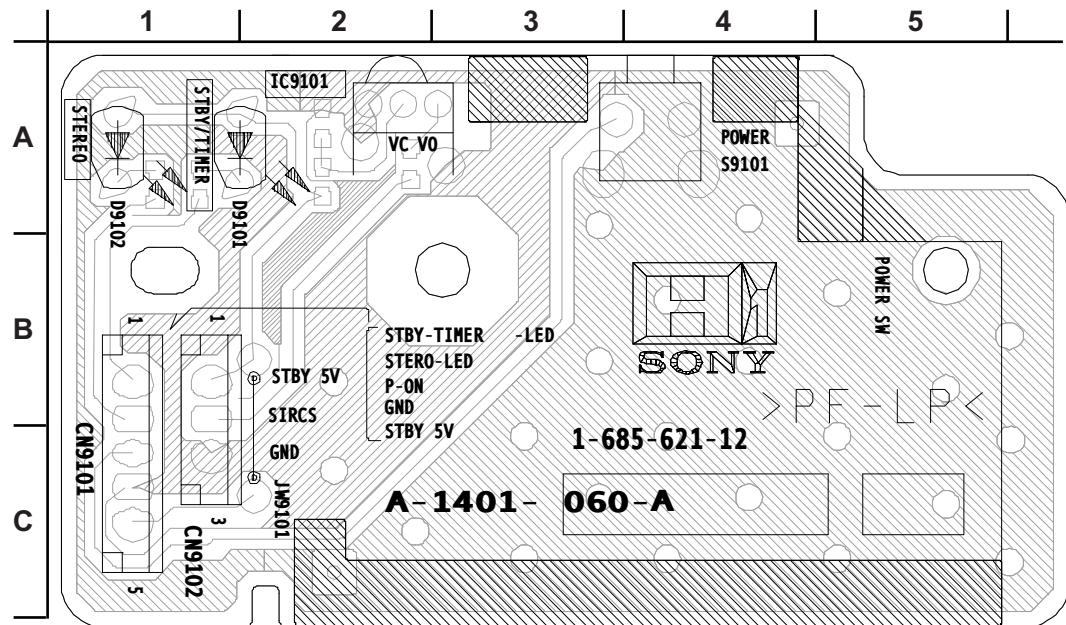
H2 [FUNCTION KEYS]
COMPONENT SIDE

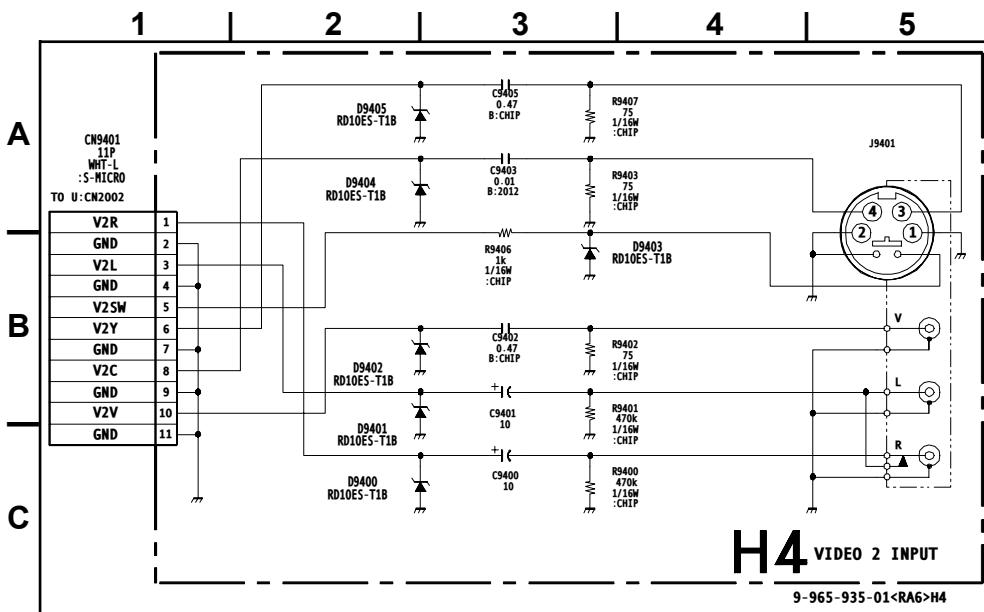


H1 BOARD SCHEMATIC DIAGRAM

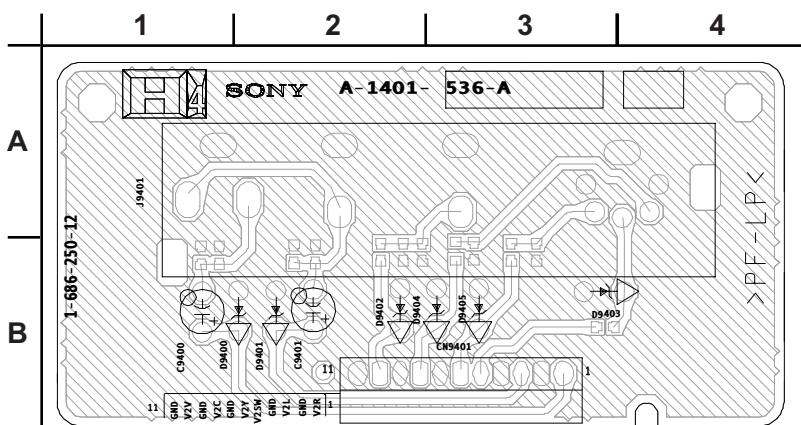


H1 [POWER SWITCH]
COMPONENT SIDE



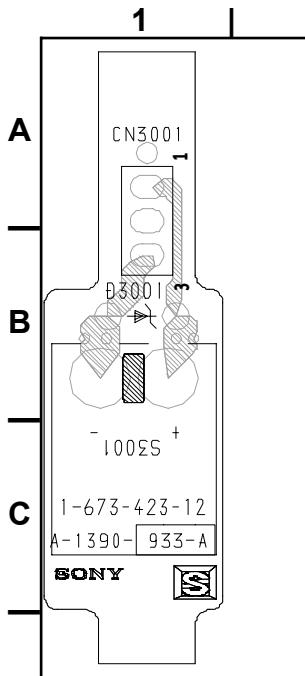
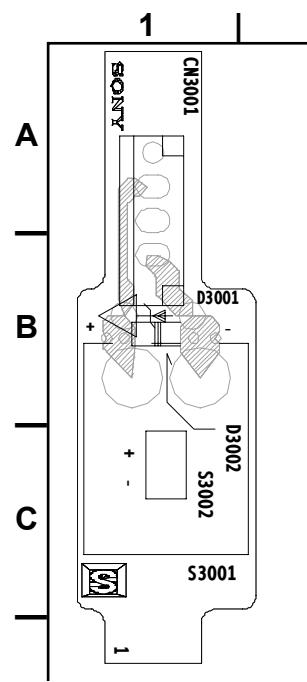
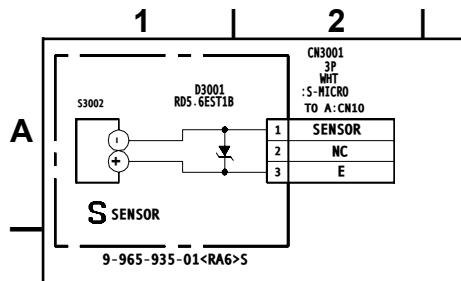
H4 BOARD SCHEMATIC DIAGRAM

H4 [VIDEO 2 INPUT]
COMPONENT SIDE



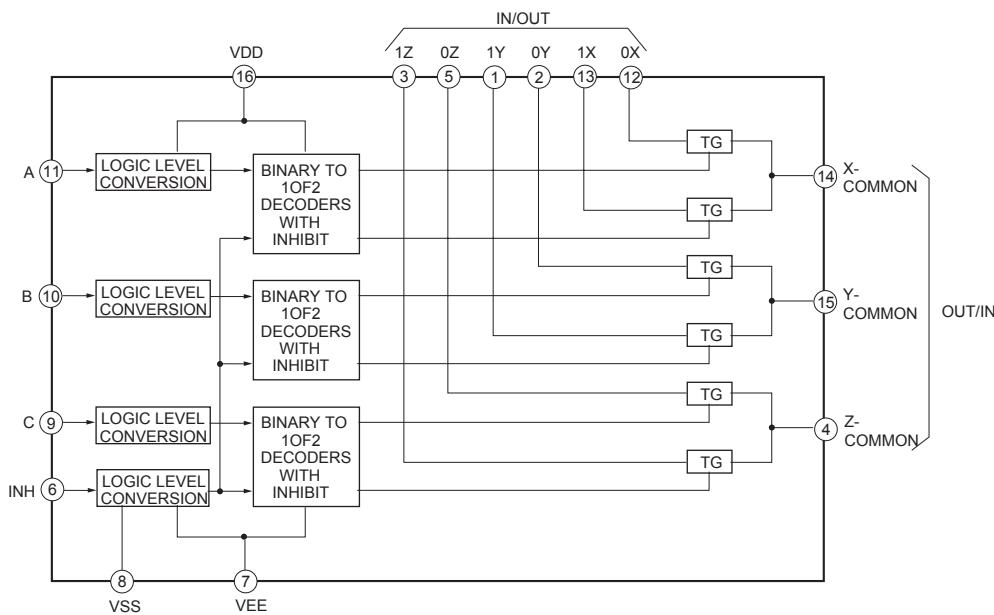
S [SENSOR]
COMPONENT SIDE

CONDUCTOR SIDE

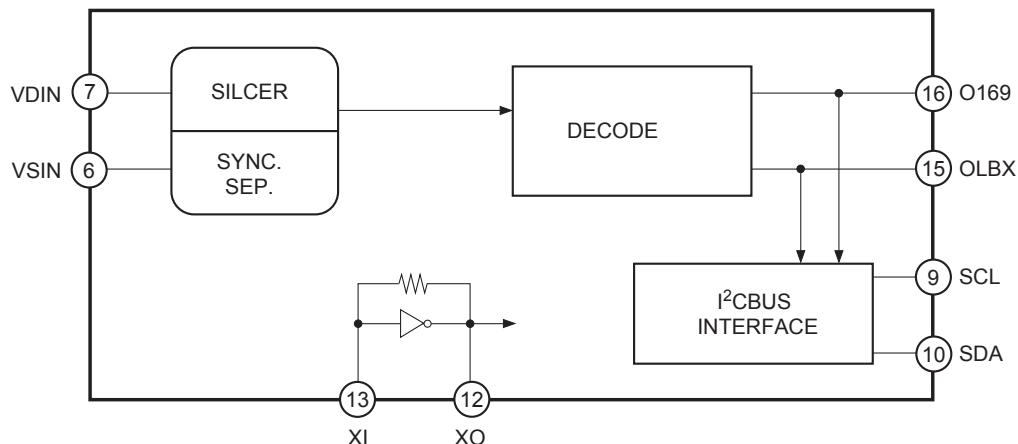
S BOARD SCHEMATIC DIAGRAM

5-5. IC BLOCK DIAGRAMS

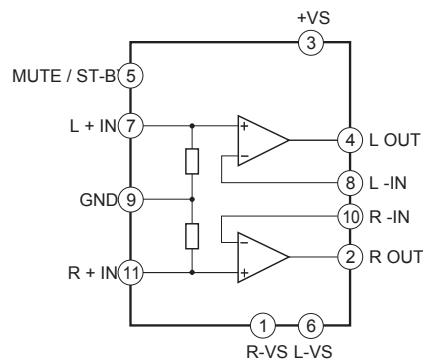
A BOARD: IC305, 307 SN74LV4053ANSR

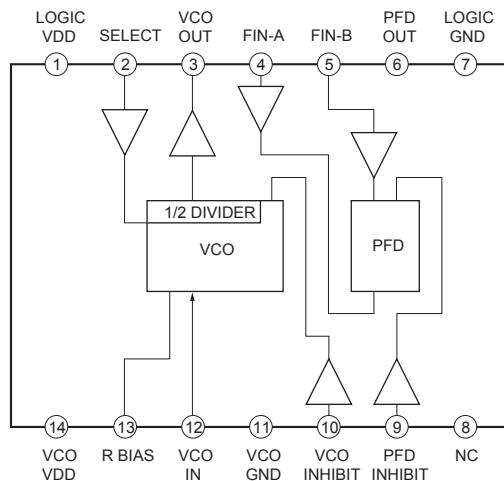
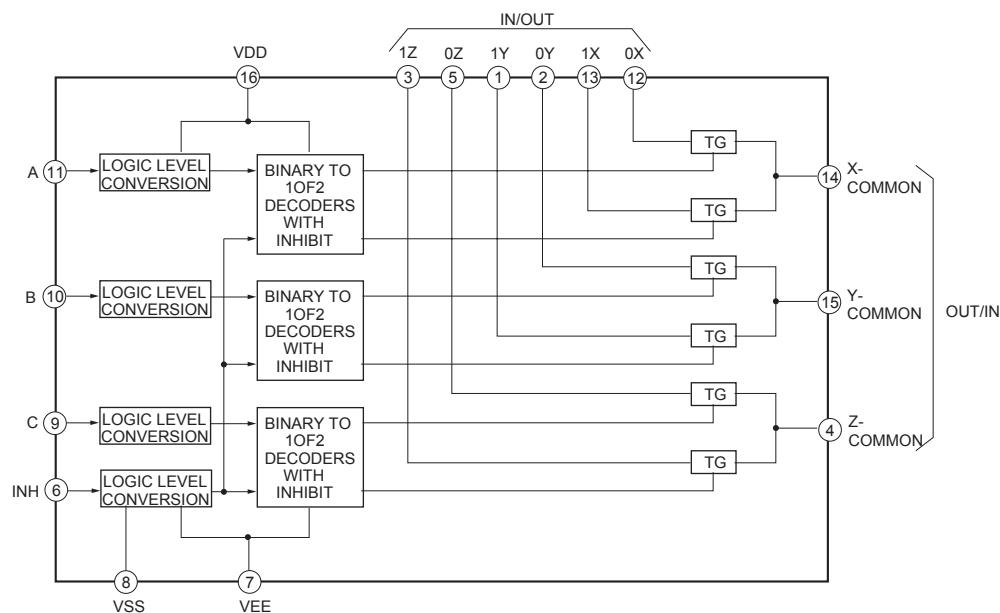
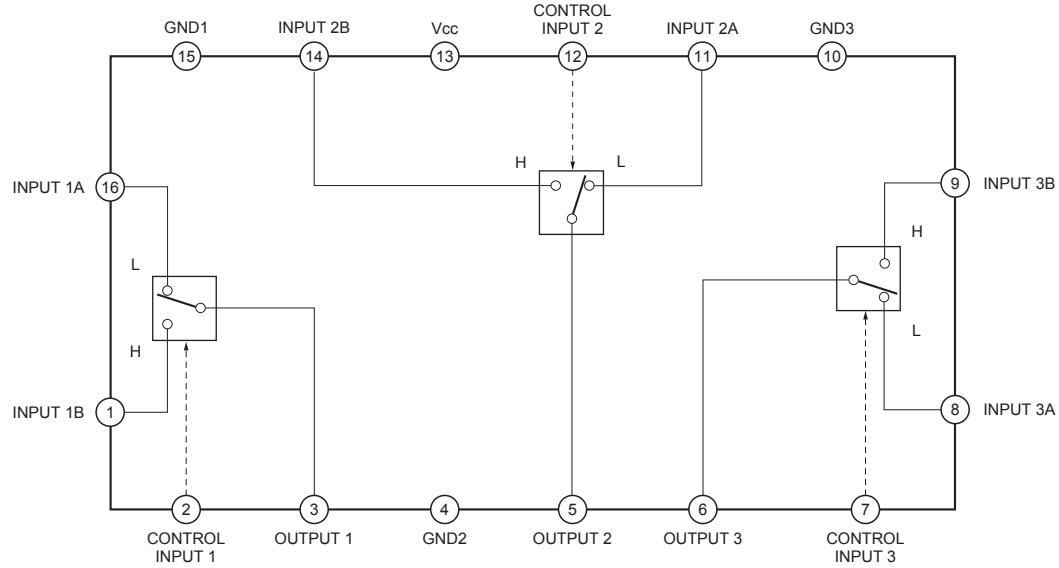


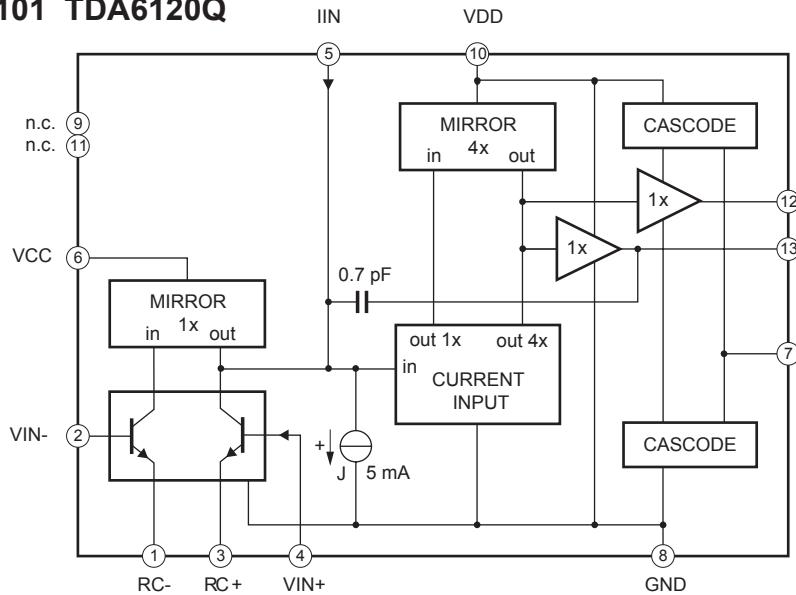
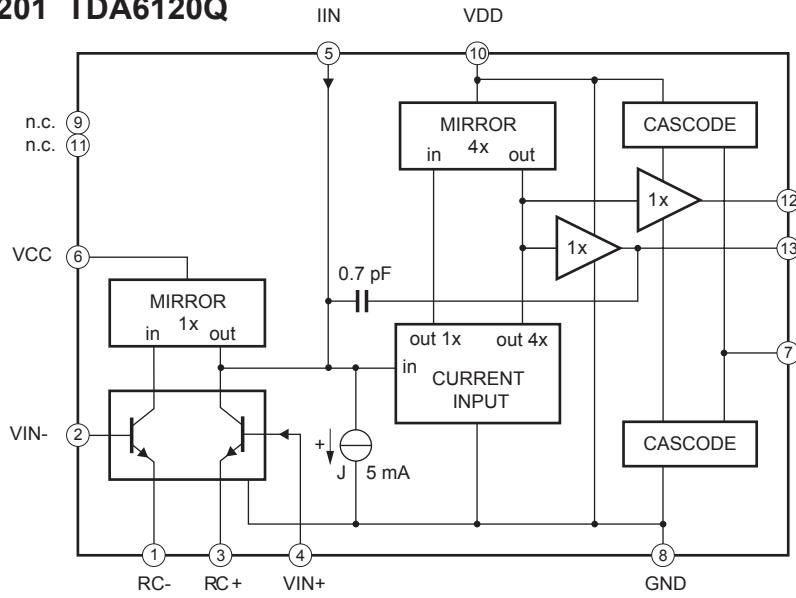
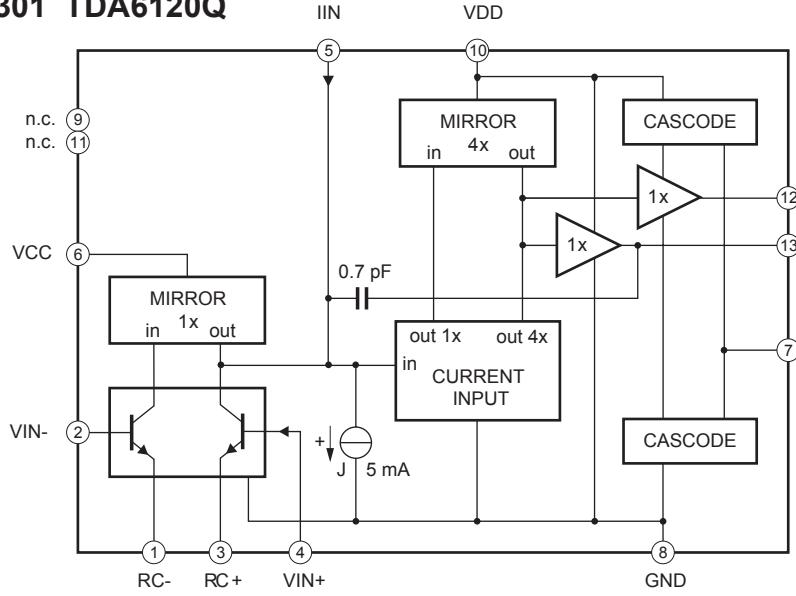
A BOARD: IC308 CXD2085M



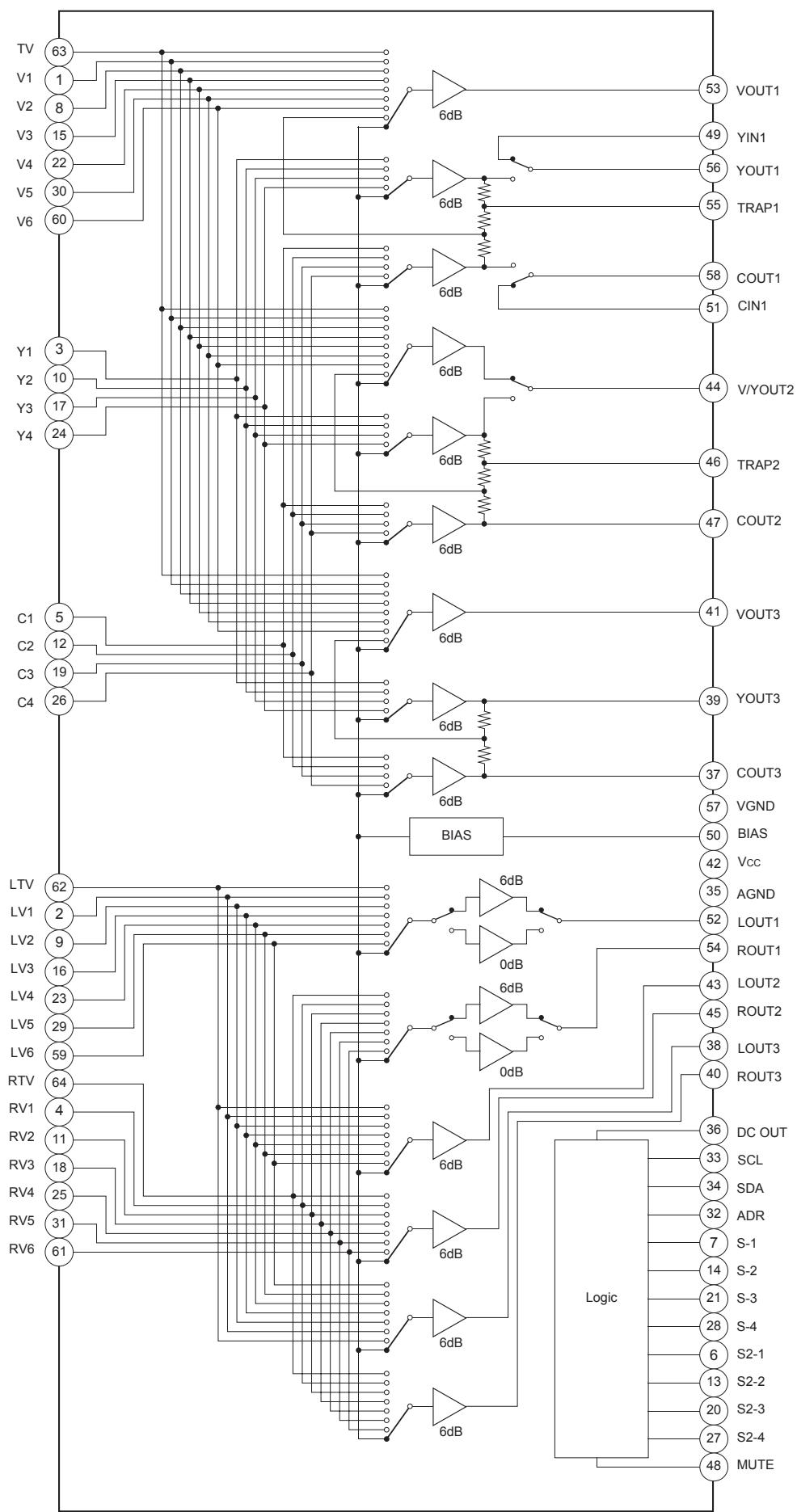
A BOARD: IC305, TDA7265



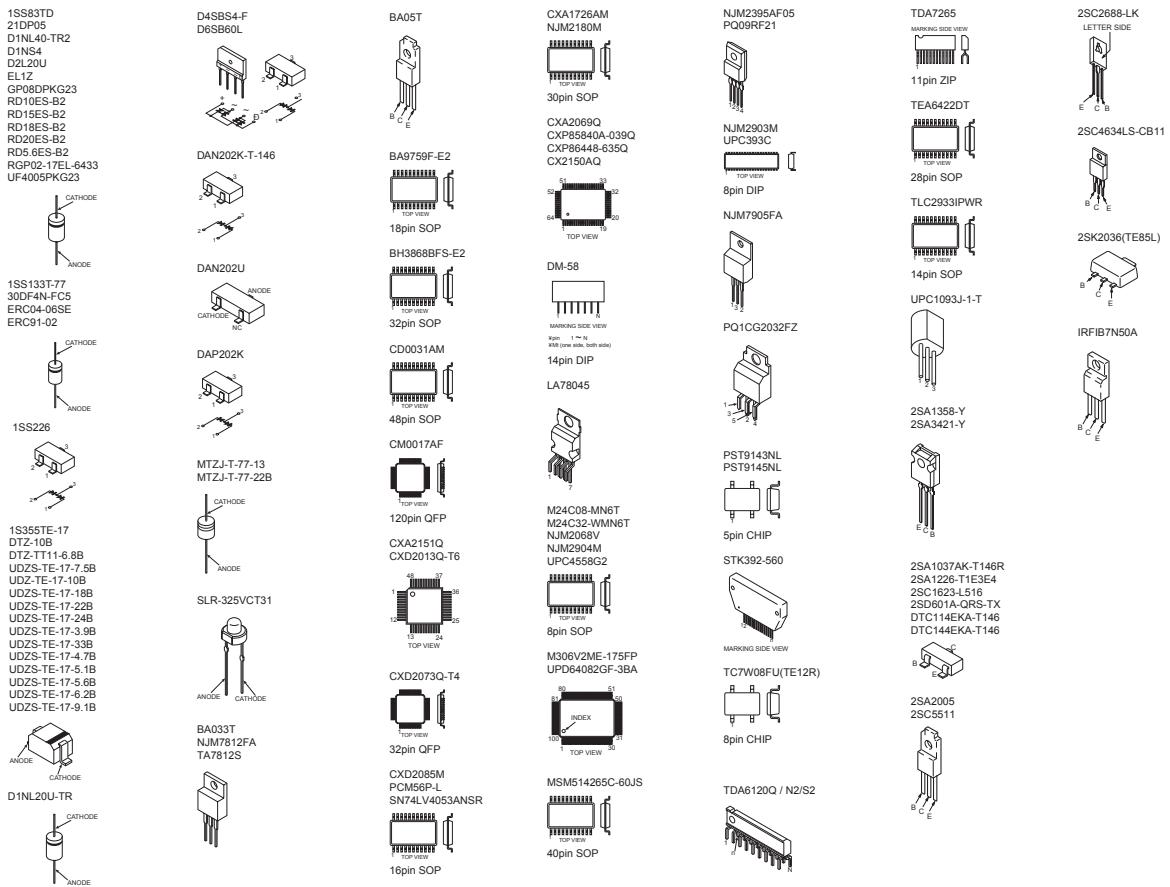
B BOARD: IC3305, 3404 TLC2932IPWR**B BOARD: IC3413 SN74LV4053ANSR****B BOARD: IC3414 M52055P**

CR BOARD: IC7101 TDA6120Q**CG BOARD: IC7201 TDA6120Q****CB BOARD: IC7301 TDA6120Q**

U BOARD: IC2004 CXA2069Q



5-6. SEMICONDUCTORS



SECTION 6: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

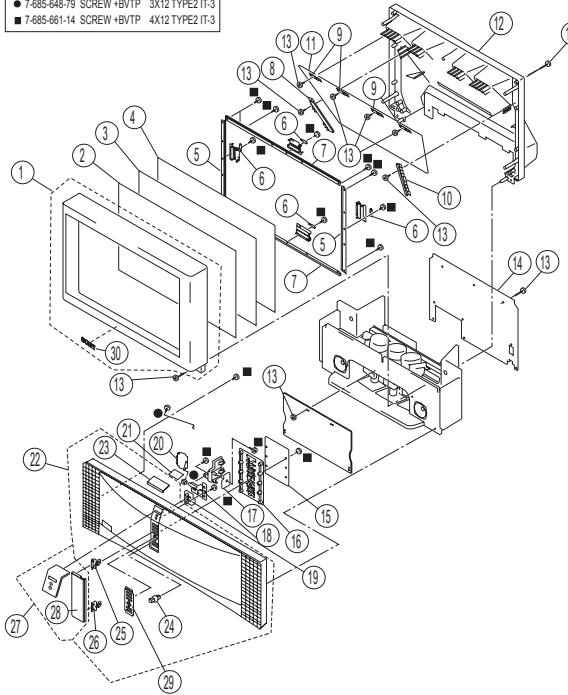
* Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.

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

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

6-1. COVER

- 7-685-648-79 SCREW +BVT P 3X12 TYPE2 IT-3
- 7-685-661-14 SCREW +BVT P 4X12 TYPE2 IT-3



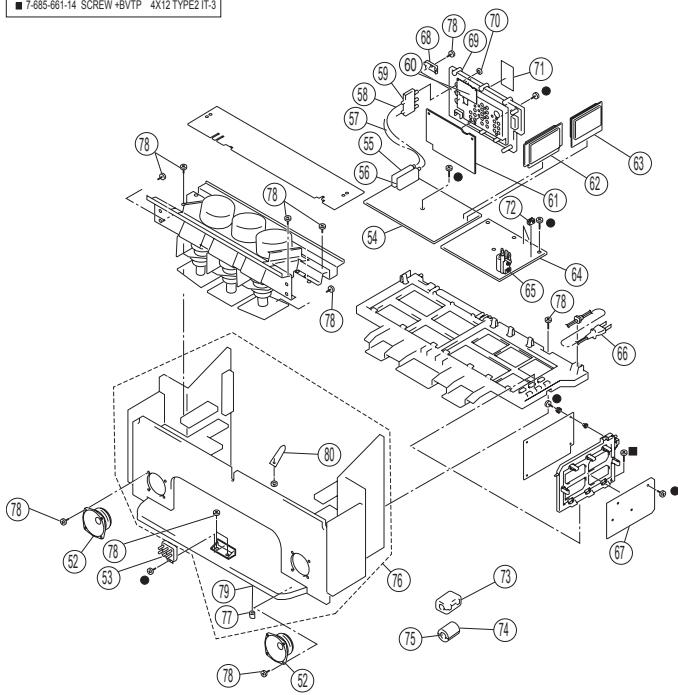
REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES	REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
1	X-4041-069-1	BEZNET (46) ASSY	(30)	*	A-1401-060-A	H1 BOARD, MOUNTED	
2	4-090-943-11	SCREEN (46W), CONTRAST		17	4-082-283-01	BUTTON, POWER	
3	4-090-944-11	PLATE (46WL), DIFFUSION		18	4-083-733-01	GUIDE (HW), LED	
4	4-090-945-11	PLATE (46WF), DIFFUSION		19	A-1401-536-A	H4 BOARD, MOUNTED	
5	4-084-568-31	HOLDER, SCREEN		20	4-082-291-03	LABEL, CONTROL	
6	A-1391-148-A	S BOARD, MOUNTED		21	X-4041-088-1	GRILLE ASSY, SPEAKER (46)	(23-26)
7	4-084-568-21	HOLDER, SCREEN		22	4-090-952-01	DOOR, TERMINAL	
8	4-091-245-01	HOLDER (46L), MIRROR		23	4-042-192-01	CATCHER, PUSH	
9	4-081-501-01	HOLDER, MIRROR		24	4-045-250-01	DAMPER	
10	4-091-246-01	HOLDER (46R), MIRROR		25	3-703-035-11	SHAFT LID	
11	4-090-957-01	MIRROR (46)		26	4-092-070-01	PANEL ASSY, FRONT	(28)
12	4-090-956-02	COVER (46), MIRROR		27	4-090-954-01	DOOR, CONTROL	
13	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20		28	4-082-291-03	LABEL, CONTROL	
14	4-090-950-01	BOARD, REAR		29	3-704-179-81	EMBLEM (NO.9), SONY	
15	A-1401-059-A	H2 BOARD, MOUNTED		30			
16	4-082-284-01	BUTTON, MULTI					

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

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

6-2. CHASSIS

- 7-685-648-79 SCREW #BVTIP 3X12 TYPE2 IT-3
- 7-685-661-14 SCREW #BVTIP 4X12 TYPE2 IT-3



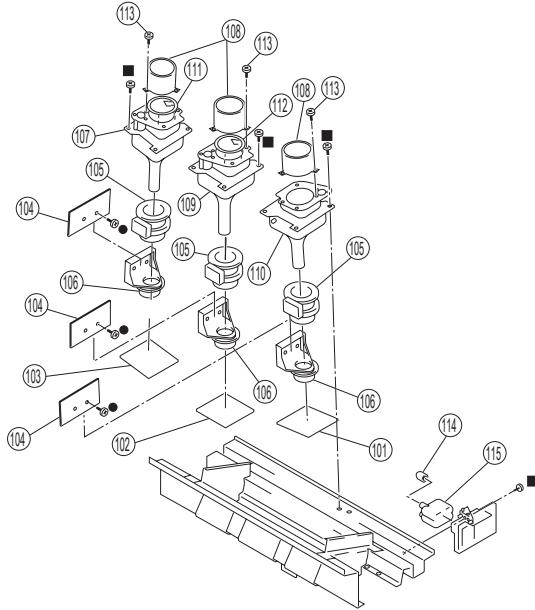
REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION	ASSEMBLY INCLUDES
52	1-544-893-21	SPEAKER (10CM)	66	1-790-001-22	CORD, AC POWER (WITH CONNECTOR)	
\triangle^* 53	1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	67	A-1316-566-A	G BOARD, COMPLETE	
54	A-1300-550-A	A BOARD, COMPLETE	68	4-089-675-01	CAP, TERMINAL BOARD	
55	8-598-593-20	TUNER, FSS BT-T-WA421	69	4-089-438-01	BOARD, TERMINAL	
56	8-598-594-10	TUNER, FSS BT-F-FA421	70	4-635-966-01	SCREW (HEX)	
57	1-557-056-31	CABLE, P.P	71	4-089-194-01	LABEL, TERMINAL	
58	1-556-945-21	CABLE, P.P	72	3-710-578-01	COVER, VOLUME, 6 MOLD	
\triangle 59	1-771-787-13	SWITCH, RF ANTENNA	73	1-500-603-11	CLAMP, FERRITE	
60	A-1300-324-A	UD BOARD, COMPLETE	74	1-500-082-11	CLAMP, SLEEVE FERRITE	
61	A-1300-551-A	U BOARD, COMPLETE	75	1-469-241-11	CORE, FERRITE (RFC-8 BK)	
62	A-1136-271-A	B BOARD, COMPLETE	76	X-4041-067-1	CABINET (46) ASSY, BOTTOM	(77 & 78-80)
63	A-1299-523-A	AD BOARD, COMPLETE	77	4-084-920-01	FOOT	
\triangle^* 64	A-1300-417-A	D BOARD, COMPLETE	78	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20	
		The high voltage leads associated with the FBT on the D Board are not included and must be ordered separately.	79	4-084-932-21	CATCH (S)	
\triangle 65	1-453-285-41	FBT ASSY NX-4006/4P4	80	4-084-922-01	STRAP, SAFETY	
\triangle^* 65	1-900-260-40	CONNECTOR ASSY, MN				
	1-779-095-51	LEAD ASSY, HIGH-VOLTAGE				

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

NOTE: Les composants identifiés par un trait et une marque \triangle , sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifique.

6-3. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
101	A-1401-058-A	CB BOARD, MOUNTED	109	8-733-652-15	CRT 07MVC21(G)-L(FL)
102	A-1401-057-A	CG BOARD, MOUNTED	110	8-733-656-25	CRT 07MVC21(B)-L(FLG)
103	A-1401-056-A	CR BOARD, MOUNTED	*	111	4-092-690-01
104	A-1342-598-A	V BOARD, MOUNTED	112	4-092-691-01	SHADE (R)
105	1451-537-22	DEFLECTION YOKE	113	4-081-063-01	SCREW,DOME WASHER HEX TAP 4X20 CAP (Z), RUBBER
106	1452-790-31	NECK ASSY	114	4-373-137-01	BLOCK ASSY, HV/HVB-1031
107	8-733-657-15	CRT 07MVC21(R)-L(FL)	115	8-598-955-32	
108	4-083-751-01	LENS (DELTA 250)			

SECTION 7: ELECTRICAL PARTS LIST

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

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

The components in this manual identified by the following symbol:  indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.



RESISTORS

- All resistors are in ohms
- F : nonflammable
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

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

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
V						COIL					
*	A-1342-598-A	V BOARD, MOUNTED	L9001	1-412-525-31	INDUCTOR	10μH					
	4-382-854-11	SCREW (M3X10), P, SW (+)				TRANSISTOR					
*	7-651-000-50	GREASE,SILICON (G-746) 200G	Q9002	8-729-120-28	TRANSISTOR	2SC1623-L5L6					
CAPACITOR			Q9003	8-729-120-28	TRANSISTOR	2SC1623-L5L6					
C9002	1-104-999-11	MYLAR	0.1μF	5%	200V	Q9004	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
C9003	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V	Q9005	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
C9006	1-126-935-11	ELECT	470μF	20%	16V	Q9006	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R		
C9007	1-126-933-11	ELECT	100μF	20%	16V	Q9007	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
C9008	1-126-935-11	ELECT	470μF	20%	16V	Q9008	8-729-045-04	TRANSISTOR	2SC5511		
C9009	1-126-933-11	ELECT	100μF	20%	16V	Q9009	8-729-045-05	TRANSISTOR	2SA2005		
C9010	1-107-667-11	ELECT	2.2μF	20%	400V	RESISTOR					
C9011	1-107-364-11	MYLAR	0.01μF	10%	200V	R9002	1-216-805-11	METAL CHIP	47	5%	1/10W
C9012	1-107-364-11	MYLAR	0.01μF	10%	200V	R9004	1-216-820-11	METAL CHIP	820	5%	1/10W
C9013	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V	R9005	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
C9014	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V	R9006	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
C9015	1-126-935-11	ELECT	470μF	20%	16V	R9007	1-216-809-11	METAL CHIP	100	5%	1/10W
C9017	1-104-999-11	MYLAR	0.1μF	5%	200V	R9008	1-216-803-11	METAL CHIP	33	5%	1/10W
C9018	1-107-638-11	ELECT	33μF	20%	160V	R9009	1-216-809-11	METAL CHIP	100	5%	1/10W
C9019	1-126-935-11	ELECT	470μF	20%	16V	R9010	1-216-813-11	METAL CHIP	220	5%	1/10W
CONNECTOR			R9011	1-216-864-11	SHORT CHIP						
*	CN9001	1-564-508-11	PLUG, CONNECTOR	5P		R9012	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
*	CN9002	1-770-723-11	CONNECTOR, BOARD TO BOARD	8P		R9013	1-216-805-11	METAL CHIP	47	5%	1/10W
DIODE			R9014	1-216-805-11	METAL CHIP						
D9001	8-719-988-61	DIODE	1SS355TE-17			R9015	1-216-833-11	METAL CHIP	10K	5%	1/10W
D9002	8-719-988-61	DIODE	1SS355TE-17			R9016	1-249-414-11	CARBON	560	5%	1/4W
D9003	8-719-988-61	DIODE	1SS355TE-17			R9017	1-249-435-11	CARBON	33K	5%	1/4W
D9004	8-719-988-61	DIODE	1SS355TE-17			R9018	1-249-435-11	CARBON	33K	5%	1/4W
D9005	8-719-510-02	DIODE	D1NS4			R9019	1-249-414-11	CARBON	560	5%	1/4W
D9006	8-719-110-56	DIODE	RD22ESB1			R9020	1-216-799-11	METAL CHIP	15	5%	1/10W
D9007	8-719-110-56	DIODE	RD22ESB1			R9021	1-216-799-11	METAL CHIP	15	5%	1/10W
						R9022	1-249-421-11	CARBON	2.2K	5%	1/4W

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

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

V CR

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9023	1-249-421-11	CARBON	2.2K	5%	1/4W			<u>DIODE</u>			
R9024	1-249-405-11	CARBON	100	5%	1/4W	D7101	8-719-404-50	DIODE	MA111-TX		
R9025	1-249-385-11	CARBON	2.2	5%	1/4W	D7102	8-719-901-83	DIODE	1SS83		
R9027	1-249-385-11	CARBON	2.2	5%	1/4W	D7103	8-719-901-83	DIODE	1SS83		
R9028	1-249-405-11	CARBON	100	5%	1/4W			<u>IC</u>			
R9029	1-215-913-11	METAL OXIDE	220	5%	3W	IC7101	8-759-680-01	IC	TDA6120Q/N2/S1		
R9030	1-249-377-11	CARBON	0.47	5%	1/4W			<u>JUMPER WIRE</u>			
R9031	1-249-385-11	CARBON	2.2	5%	1/4W	JW7104	1-216-864-11	SHORT CHIP			
R9032	1-249-385-11	CARBON	2.2	5%	1/4W			<u>COIL</u>			
R9033	1-249-436-11	CARBON	39K	5%	1/4W	L7101	1-469-555-21	INDUCTOR	10µH		
R9034	1-249-436-11	CARBON	39K	5%	1/4W	L7102	1-414-855-31	INDUCTOR	1µH		
						L7103	1-414-855-31	INDUCTOR	1µH		
*	A-1401-056-A	CR BOARD, MOUNTED						<u>TRANSISTOR</u>			
	4-382-854-11	SCREW (M3X10), P, SW (+)				Q7101	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
*	7-651-000-50	GREASE,SILICON (G-746) 200G				Q7102	8-729-422-27	TRANSISTOR	2SD601A-Q		
		CAPACITOR				Q7103	8-729-048-50	TRANSISTOR	2SK3018-T106		
C7101	1-164-156-11	CERAMIC CHIP	0.1µF		25V			<u>RESISTOR</u>			
C7102	1-101-003-00	CERAMIC	0.0047µF		50V	R7101	1-260-132-11	CARBON	560K	5%	1/2W
C7103	1-104-570-11	CERAMIC	0.001µF	10%	2KV	R7102	1-216-813-11	METAL CHIP	220	5%	1/10W
C7104	1-107-662-11	ELECT	22µF	20%	350V	R7103	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
C7105	1-162-918-11	CERAMIC CHIP	18pF	5%	50V	R7104	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
C7106	1-126-768-11	ELECT	2200µF	20%	16V	R7105	1-219-743-11	METAL	100	5%	1/2W
C7107	1-161-830-00	CERAMIC	0.0047µF		500V	R7106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
C7108	1-101-003-00	CERAMIC	0.0047µF		50V	R7107	1-260-133-11	CARBON	680K	5%	1/2W
C7109	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7108	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
C7110	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7109	1-216-815-11	METAL CHIP	330	5%	1/10W
C7111	1-126-933-11	ELECT	100µF	20%	16V	R7110	1-218-703-11	METAL CHIP	3K	0.50%	1/10W
C7112	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7111	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
C7113	1-101-003-00	CERAMIC	0.0047µF		50V	R7112	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
C7114	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V	R7113	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
		CONNECTOR				R7114	1-215-925-11	METAL OXIDE	22K	5%	3W
*	CN7102	1-564-509-11	PLUG, CONNECTOR	6P		R7115	1-260-328-11	CARBON	1K	5%	1/2W
*	CN7103	1-564-510-11	PLUG, CONNECTOR	7P		R7116	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
	CN7104	1-785-879-11	CONNECTOR, ONE TOUCH			R7118	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
	CN7105	1-695-915-11	TAB (CONTACT)			R7119	1-260-320-11	CARBON	220	5%	1/2W
	CN7107	1-695-915-11	TAB (CONTACT)			R7120	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
 CN7108	1-251-182-11	SOCKET, CRT				R7121	1-249-425-11	CARBON	4.7K	5%	1/4W
						R7122	1-260-087-11	CARBON	100	5%	1/2W

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

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

CR **CG**

REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES	
SPARK GAP				JUMPER WIRE				
SG7101	1-519-422-11	GAP, SPARK		JW7214	1-216-864-11	SHORT CHIP		
SG7102	1-517-729-31	GAP, SPARK		L7201	1-469-555-21	INDUCTOR	10µH	
SG7103	1-519-421-11	GAP, DISCHARGE		L7202	1-414-855-31	INDUCTOR	1µH	
				L7203	1-414-855-31	INDUCTOR	1µH	
CG				COIL				
*	A-1401-057-A	CG BOARD, MOUNTED		Q7201	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
	4-382-854-11	SCREW (M3X10), P, SW (+)		Q7202	8-729-422-27	TRANSISTOR	2SD601A-Q	
*	7-651-000-50	GREASE,SILICON (G-746) 200G		Q7203	8-729-048-50	TRANSISTOR	2SK3018-T106	
CAPACITOR				RESISTOR				
C7201	1-164-156-11	CERAMIC CHIP	0.1µF	25V	R7201	1-216-813-11	METAL CHIP	220
C7202	1-101-003-00	CERAMIC	0.0047µF	50V	R7202	1-218-693-11	METAL CHIP	1.1K
C7203	1-104-570-11	CERAMIC	0.001µF	10%	R7203	1-218-696-11	METAL CHIP	1.5K
C7204	1-107-662-11	ELECT	22µF	20%	R7204	1-260-132-11	CARBON	560K
C7205	1-162-920-11	CERAMIC CHIP	27pF	5%	R7205	1-216-825-11	METAL CHIP	2.2K
C7206	1-101-003-00	CERAMIC	0.0047µF	50V	R7206	1-219-743-11	METAL	100
C7207	1-126-768-11	ELECT	2200µF	20%	R7207	1-218-690-11	METAL CHIP	820
C7208	1-164-156-11	CERAMIC CHIP	0.1µF	25V	R7208	1-260-133-11	CARBON	680K
C7209	1-164-156-11	CERAMIC CHIP	0.1µF	25V	R7209	1-216-815-11	METAL CHIP	330
C7210	1-126-933-11	ELECT	100µF	20%	R7210	1-218-700-11	METAL CHIP	2.2K
C7211	1-164-156-11	CERAMIC CHIP	0.1µF	25V	R7211	1-218-708-11	METAL CHIP	4.7K
C7212	1-161-830-00	CERAMIC	0.0047µF	500V	R7212	1-218-742-11	METAL CHIP	120K
C7213	1-101-003-00	CERAMIC	0.0047µF	50V	R7213	1-218-742-11	METAL CHIP	120K
C7214	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	R7214	1-215-925-11	METAL OXIDE	22K
CONNECTOR				R7215	1-216-829-11	METAL CHIP	4.7K	
*	CN7202	1-564-509-11	PLUG, CONNECTOR	6P	R7216	1-216-823-11	METAL CHIP	5%
*	CN7203	1-564-510-11	PLUG, CONNECTOR	7P	R7217	1-260-328-11	CARBON	1/10W
*	CN7204	1-564-510-11	PLUG, CONNECTOR	7P	R7219	1-260-320-11	CARBON	5%
	CN7205	1-785-879-11	CONNECTOR, ONE TOUCH		R7220	1-218-710-11	METAL CHIP	220
	CN7206	1-695-915-11	TAB (CONTACT)		R7221	1-249-425-11	CARBON	5.6K
	CN7208	1-695-915-11	TAB (CONTACT)		R7222	1-260-087-11	CARBON	4.7K
	CN7209	1-251-182-11	SOCKET, CRT				5%	
							1/4W	
DIODE				SPARK GAP				
D7201	8-719-404-50	DIODE	MA111-TX	SG7201	1-519-422-11	GAP, SPARK		
D7202	8-719-901-83	DIODE	1SS83	SG7202	1-517-729-31	GAP, SPARK		
D7203	8-719-901-83	DIODE	1SS83	SG7203	1-519-421-11	GAP, DISCHARGE		
IC								
IC7201	8-759-680-01	IC	TDA6120Q/N2/S1					

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

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



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
CB								JUMPER WIRE			
*	A-1401-058-A	CB BOARD, MOUNTED				JW7302	1-216-864-11	SHORT CHIP			
	4-382-854-11	SCREW (M3X10), P, SW (+)				JW7304	1-216-864-11	SHORT CHIP			
*	7-651-000-50	GREASE,SILICON (G-746) 200G				JW7305	1-216-864-11	SHORT CHIP			
								COIL			
C7301	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	L7301	1-469-555-21	INDUCTOR	10μH		
C7302	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	L7302	1-414-855-31	INDUCTOR	1μH		
C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	L7303	1-414-855-31	INDUCTOR	1μH		
C7304	1-101-003-00	CERAMIC	0.0047μF		50V	Q7301	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
C7305	1-104-570-11	CERAMIC	0.001μF	10%	2KV	Q7302	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
						Q7303	8-729-422-27	TRANSISTOR	2SD601A-Q		
C7306	1-126-768-11	ELECT	2200μF	20%	16V	Q7304	8-729-048-50	TRANSISTOR	2SK3018-T106		
C7307	1-164-156-11	CERAMIC CHIP	0.1μF		25V						
C7308	1-107-662-11	ELECT	22μF	20%	350V			RESISTOR			
C7309	1-101-003-00	CERAMIC	0.0047μF		50V	R7301	1-249-393-11	CARBON	10	5%	1/4W
C7310	1-164-156-11	CERAMIC CHIP	0.1μF		25V	R7302	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
						R7303	1-216-813-11	METAL CHIP	220	5%	1/10W
C7311	1-164-156-11	CERAMIC CHIP	0.1μF		25V	R7304	1-260-132-11	CARBON	560K	5%	1/2W
C7312	1-126-933-11	ELECT	100μF	20%	16V	R7305	1-216-801-11	METAL CHIP	22	5%	1/10W
C7313	1-164-156-11	CERAMIC CHIP	0.1μF		25V						
C7314	1-164-156-11	CERAMIC CHIP	0.1μF		25V	R7306	1-218-699-11	METAL CHIP	2K	0.50%	1/10W
C7315	1-161-830-00	CERAMIC	0.0047μF		500V	R7307	1-219-743-11	METAL	100	5%	1/2W
						R7308	1-216-809-11	METAL CHIP	100	5%	1/10W
C7316	1-101-003-00	CERAMIC	0.0047μF		50V	R7309	1-216-864-11	SHORT CHIP			
C7317	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V	R7310	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
		CONNECTOR				R7311	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
*	CN7302	1-564-509-11	PLUG, CONNECTOR	6P		R7312	1-260-133-11	CARBON	680K	5%	1/2W
*	CN7303	1-564-510-11	PLUG, CONNECTOR	7P		R7313	1-216-818-11	METAL CHIP	560	5%	1/10W
*	CN7304	1-564-510-11	PLUG, CONNECTOR	7P		R7314	1-218-680-11	METAL CHIP	330	0.50%	1/10W
	CN7305	1-785-879-11	CONNECTOR, ONE TOUCH			R7315	1-218-690-11	METAL CHIP	820	0.50%	1/10W
	CN7307	1-695-915-11	TAB (CONTACT)								
	CN7308	1-695-915-11	TAB (CONTACT)			R7316	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
△	CN7309	1-251-182-11	SOCKET, CRT			R7317	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
						R7318	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
						R7319	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
		DIODE				R7320	1-218-749-11	METAL CHIP	240K	0.50%	1/10W
	D7301	8-719-404-50	DIODE	MA111-TX							
	D7302	8-719-404-50	DIODE	MA111-TX		R7321	1-218-749-11	METAL CHIP	240K	0.50%	1/10W
	D7303	8-719-901-83	DIODE	1SS83		R7322	1-215-925-11	METAL OXIDE	22K	5%	3W
	D7304	8-719-901-83	DIODE	1SS83		R7323	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
						R7324	1-260-328-11	CARBON	1K	5%	1/2W
		IC				R7325	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
	IC7301	8-759-680-01	IC	TDA6120Q/N2/S1							

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R7326	1-260-320-11	CARBON	220	5%	1/2W	C7028	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
R7328	1-249-425-11	CARBON	4.7K	5%	1/4W	C7029	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
R7329	1-260-087-11	CARBON	100	5%	1/2W	C7030	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
<u>SPARK GAP</u>											
SG7301	1-519-422-11	GAP, SPARK				C7033	1-124-779-00	ELECT CHIP	10µF	20%	16V
SG7302	1-517-729-31	GAP, SPARK				C7034	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
SG7303	1-519-421-11	GAP, DISCHARGE				C7035	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
<u>UD</u>											
The UD Board is <u>not</u> field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.											
*	A-1300-324-A	UD BOARD, COMPLETE				C7038	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
<u>CAPACITOR</u>											
C7001	1-126-395-11	ELECT CHIP	22µF	20%	16V	C7043	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7002	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C7044	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7004	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7045	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7005	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7046	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7006	1-124-779-00	ELECT CHIP	10µF	20%	16V	C7047	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7007	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C7048	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7008	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7049	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7010	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7050	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7011	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7051	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7012	1-124-779-00	ELECT CHIP	10µF	20%	16V	C7052	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7013	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7053	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7014	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7056	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7015	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7057	1-162-921-11	CERAMIC CHIP	33pF	5%	50V
C7016	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C7058	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7017	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C7059	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7018	1-162-923-11	CERAMIC CHIP	47pF	5%	50V	C7060	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7019	1-162-923-11	CERAMIC CHIP	47pF	5%	50V	C7061	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7020	1-162-923-11	CERAMIC CHIP	47pF	5%	50V	C7062	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C7021	1-124-779-00	ELECT CHIP	10µF	20%	16V	C7064	1-126-395-11	ELECT CHIP	22µF	20%	16V
C7022	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V	C7065	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7023	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	C7066	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7024	1-124-779-00	ELECT CHIP	10µF	20%	16V	C7067	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7025	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C7068	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7026	1-124-779-00	ELECT CHIP	10µF	20%	16V	C7069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C7027	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C7070	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
						C7071	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
						C7078	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
						C7079	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
						C7080	1-164-156-11	CERAMIC CHIP	0.1µF	25V	



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
		CONNECTOR		R7014	1-216-821-11	METAL CHIP	1K 5% 1/10W
*	CN7001	1-816-228-21	CONNECTOR, DIV	R7015	1-216-833-11	METAL CHIP	10K 5% 1/10W
*	CN7002	1-564-526-11	PLUG, CONNECTOR 11P	R7016	1-216-833-11	METAL CHIP	10K 5% 1/10W
*	CN7004	1-564-519-11	PLUG, CONNECTOR 4P	R7020	1-216-833-11	METAL CHIP	10K 5% 1/10W
		DIODE		R7021	1-216-833-11	METAL CHIP	10K 5% 1/10W
D7001	8-719-914-43	DIODE	DAN202K	R7023	1-216-833-11	METAL CHIP	10K 5% 1/10W
D7002	8-719-069-55	DIODE	UDZSTE-175.6B	R7024	1-216-833-11	METAL CHIP	10K 5% 1/10W
D7003	8-719-069-55	DIODE	UDZSTE-175.6B	R7025	1-216-833-11	METAL CHIP	10K 5% 1/10W
D7004	8-719-069-55	DIODE	UDZSTE-175.6B	R7026	1-216-833-11	METAL CHIP	10K 5% 1/10W
D7006	8-719-069-55	DIODE	UDZSTE-175.6B	R7029	1-218-692-11	METAL CHIP	1K 0.50% 1/10W
		FERRITE BEAD		R7030	1-216-864-11	SHORT CHIP	
FB7001	1-414-760-21	FERRITE	0µH	R7032	1-218-676-11	METAL CHIP	220 0.50% 1/10W
FB7002	1-414-760-21	FERRITE	0µH	R7034	1-218-676-11	METAL CHIP	220 0.50% 1/10W
FB7003	1-414-760-21	FERRITE	0µH	R7036	1-218-704-11	METAL CHIP	3.3K 0.50% 1/10W
FB7004	1-414-760-21	FERRITE	0µH	R7037	1-218-676-11	METAL CHIP	220 0.50% 1/10W
		FILTER		R7041	1-216-833-11	METAL CHIP	10K 5% 1/10W
FL7001	1-400-087-21	FILTER, EMI REMOVAL (SMD)		R7043	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
FL7002	1-234-560-21	FILTER, LOW PASS		R7044	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
FL7003	1-234-559-21	FILTER, LOW PASS		R7045	1-216-833-11	METAL CHIP	10K 5% 1/10W
FL7004	1-234-559-21	FILTER, LOW PASS		R7047	1-216-833-11	METAL CHIP	10K 5% 1/10W
		IC		R7051	1-216-864-11	SHORT CHIP	
IC7001	8-759-640-39	IC	BR24C02F-WE2	R7053	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC7002	8-749-015-18	IC	PQ07VZ012ZP	R7054	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC7003	8-749-015-18	IC	PQ07VZ012ZP	R7056	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC7004	6-702-080-01	IC	GM7030-H	R7057	1-216-864-11	SHORT CHIP	
IC7005	6-802-346-01	IC	ST72631K4M1/NNLTR	R7058	1-216-833-11	METAL CHIP	10K 5% 1/10W
		COIL		R7059	1-216-864-11	SHORT CHIP	
IC7006	8-759-641-86	IC	BR24C16F-E2	R7060	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC7007	6-702-170-01	IC	PACDN006S	R7061	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC7008	6-702-170-01	IC	PACDN006S	R7062	1-216-864-11	SHORT CHIP	
IC7009	6-702-170-01	IC	PACDN006S	R7065	1-216-833-11	METAL CHIP	10K 5% 1/10W
		RESISTOR		R7066	1-218-694-11	METAL CHIP	1.2K 0.50% 1/10W
L7001	1-412-058-11	INDUCTOR	10µH	R7067	1-216-833-11	METAL CHIP	10K 5% 1/10W
L7002	1-412-058-11	INDUCTOR	10µH	R7068	1-216-801-11	METAL CHIP	22 5% 1/10W
		COIL		R7069	1-216-801-11	METAL CHIP	22 5% 1/10W
R7003	1-216-821-11	METAL CHIP	1K 5% 1/10W	R7071	1-216-803-11	METAL CHIP	33 5% 1/10W
R7004	1-218-852-11	METAL CHIP	1.6K 0.50% 1/10W	R7072	1-216-803-11	METAL CHIP	33 5% 1/10W
R7007	1-216-821-11	METAL CHIP	1K 5% 1/10W	R7075	1-218-676-11	METAL CHIP	220 0.50% 1/10W
R7012	1-216-821-11	METAL CHIP	1K 5% 1/10W	R7080	1-218-704-11	METAL CHIP	3.3K 0.50% 1/10W
R7013	1-216-821-11	METAL CHIP	1K 5% 1/10W	R7087	1-218-680-11	METAL CHIP	330 0.50% 1/10W
		RESISTOR		R7096	1-216-833-11	METAL CHIP	10K 5% 1/10W
		COIL		R7097	1-216-809-11	METAL CHIP	100 5% 1/10W
		RESISTOR		R7098	1-216-809-11	METAL CHIP	100 5% 1/10W

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UD **D**

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES					
R7099	1-216-809-11	METAL CHIP	100	5%	1/10W	C8006	1-126-942-61	ELECT	1000 μ F	20%	25V			
R7101	1-216-864-11	SHORT CHIP				C8007	1-162-927-11	CERAMIC CHIP	100pF	5%	50V			
R7106	1-216-833-11	METAL CHIP	10K	5%	1/10W	C8008	1-162-927-11	CERAMIC CHIP	100pF	5%	50V			
R7108	1-216-805-11	METAL CHIP	47	5%	1/10W	C8009	1-162-970-11	CERAMIC CHIP	0.01 μ F	10%	25V			
R7109	1-216-805-11	METAL CHIP	47	5%	1/10W	C8010	1-136-177-00	FILM	1 μ F	5%	50V			
R7111	1-216-864-11	SHORT CHIP				C8011	1-162-927-11	CERAMIC CHIP	100pF	5%	50V			
R7112	1-216-864-11	SHORT CHIP				C8012	1-162-970-11	CERAMIC CHIP	0.01 μ F	10%	25V			
R7113	1-216-864-11	SHORT CHIP				C8013	1-162-927-11	CERAMIC CHIP	100pF	5%	50V			
R7114	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C8014	1-104-665-11	ELECT	100 μ F	20%	25V			
R7115	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C8015	1-126-969-11	ELECT	220 μ F	20%	50V			
R7116	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C8016	1-104-665-11	ELECT	100 μ F	20%	25V			
R7117	1-218-668-11	METAL CHIP	100	0.50%	1/10W	C8017	1-162-964-11	CERAMIC CHIP	0.001 μ F	10%	50V			
R7119	1-218-668-11	METAL CHIP	100	0.50%	1/10W	C8018	1-126-964-11	ELECT	10 μ F	20%	50V			
R7121	1-216-864-11	SHORT CHIP				C8023	1-106-220-00	MYLAR	0.1 μ F	10%	100V			
R7123	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W	C8024	1-137-372-11	MYLAR	0.022 μ F	5%	50V			
R7124	1-218-680-11	METAL CHIP	330	0.50%	1/10W	C8025	1-126-968-11	ELECT	100 μ F	20%	50V			
R7125	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C8026	1-126-968-11	ELECT	100 μ F	20%	50V			
R7126	1-216-864-11	SHORT CHIP				C8028	1-126-968-11	ELECT	100 μ F	20%	50V			
<u>CRYSTAL</u>						C8029	1-126-968-11	ELECT	100 μ F	20%	50V			
X7001	1-795-568-21	VIBRATOR, CRYSTAL				C8031	1-107-636-11	ELECT	10 μ F	20%	160V			
X7002	1-795-567-21	VIBRATOR, CRYSTAL				C8032	1-126-968-11	ELECT	100 μ F	20%	50V			
D						C8033	1-126-968-11	ELECT	100 μ F	20%	50V			
<u>△*</u>						C8036	1-126-968-11	ELECT	100 μ F	20%	50V			
A-1300-417-A			D BOARD, COMPLETE			C8037	1-126-968-11	ELECT	100 μ F	20%	50V			
4-382-854-11			SCREW (M3X10), P, SW (+)			C8040	1-115-349-51	CERAMIC	0.01 μ F		2KV			
*	7-651-000-50			GREASE,SILICON (G-746) 200G			C8045	1-126-965-91	ELECT	22 μ F	20%	50V		
	7-682-952-09			SCREW +PSW 3X16			C8046	1-126-965-91	ELECT	22 μ F	20%	50V		
The high-voltage leads associated with the FBT on the D board are not included and must be ordered separately. Order the following leads when requesting this D board:						C8047	1-162-974-11	CERAMIC CHIP	0.01 μ F		50V			
<u>△</u>						C8048	1-126-965-91	ELECT	22 μ F	20%	50V			
<u>△*</u>						C8049	1-162-974-11	CERAMIC CHIP	0.01 μ F		50V			
						C8050	1-126-965-91	ELECT	22 μ F	20%	50V			
						C8051	1-102-038-00	CERAMIC	0.001 μ F		500V			
						C8052	1-126-965-91	ELECT	22 μ F	20%	50V			
						C8053	1-162-974-11	CERAMIC CHIP	0.01 μ F		50V			
						C8054	1-162-974-11	CERAMIC CHIP	0.01 μ F		50V			
<u>CAPACITOR</u>						C8055	1-164-156-11	CERAMIC CHIP	0.1 μ F		25V			
C8001	1-137-372-11	MYLAR	0.022 μ F	5%	50V	C8056	1-107-652-11	ELECT	10 μ F	20%	250V			
C8002	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	C8057	1-126-959-11	ELECT	0.47 μ F	20%	50V			
C8003	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	C8058	1-164-230-11	CERAMIC CHIP	220pF	5%	50V			
C8004	1-104-666-11	ELECT	220 μ F	20%	25V	C8059	1-127-715-91	CERAMIC CHIP	0.22 μ F	10%	16V			
C8005	1-126-942-61	ELECT	1000 μ F	20%	25V	C8060	1-104-665-11	ELECT	100 μ F	20%	25V			
						C8061	1-107-826-11	CERAMIC CHIP	0.1 μ F	10%	16V			
						C8062	1-162-970-11	CERAMIC CHIP	0.01 μ F	10%	25V			



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C8063	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V	C8106	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C8064	1-107-636-11	ELECT	10μF	20%	160V	C8107	1-136-187-11	MYLAR	0.047μF	10%	250V
C8065	1-106-383-00	MYLAR	0.047μF	10%	200V	C8108	1-126-964-11	ELECT	10μF	20%	50V
C8066	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8109	1-162-924-11	CERAMIC CHIP	56pF	5%	50V
C8067	1-104-665-11	ELECT	100μF	20%	25V	C8110	1-126-960-11	ELECT	1μF	20%	50V
C8068	1-102-038-00	CERAMIC	0.001μF		500V	C8111	1-126-960-11	ELECT	1μF	20%	50V
C8069	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8112	1-164-315-11	CERAMIC CHIP	470pF	5%	50V
						C8113	1-130-495-00	MYLAR	0.1μF	5%	50V
C8070	1-126-964-11	ELECT	10μF	20%	50V	C8114	1-125-473-11	ELECT(BLOCK)	1000μF	20%	160V
C8071	1-126-964-11	ELECT	10μF	20%	50V	C8115	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C8072	1-126-964-11	ELECT	10μF	20%	50V	C8116	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C8073	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8117	1-102-038-00	CERAMIC	0.001μF		500V
C8074	1-104-665-11	ELECT	100μF	20%	25V	C8118	1-136-189-00	MYLAR	0.1μF	10%	250V
C8075	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8119	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C8076	1-128-551-11	ELECT	22μF	20%	63V	C8120	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C8077	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8121	1-115-349-51	CERAMIC	0.01μF		2KV
C8078	1-115-416-11	CERAMIC CHIP	0.001μF	5%	25V	C8122	1-126-934-11	ELECT	220μF	20%	16V
C8079	1-126-964-11	ELECT	10μF	20%	50V	C8123	1-107-444-11	CERAMIC	100pF	5%	2KV
C8080	1-126-964-11	ELECT	10μF	20%	50V	C8124	1-117-642-11	FILM	8200pF	3%	1.2KV
C8081	1-115-416-11	CERAMIC CHIP	0.001μF	5%	25V	C8125	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C8082	1-165-176-11	CERAMIC CHIP	0.047μF	10%	16V	C8126	1-106-357-00	MYLAR	0.0039μF	99%	200V
C8083	1-130-495-00	MYLAR	0.1μF	5%	50V	C8127	1-126-942-61	ELECT	1000μF	20%	25V
C8084	1-130-992-11	FILM	0.022μF	5%	50V	C8129	1-137-150-11	FILM	0.01μF	5%	100V
C8085	1-162-924-11	CERAMIC CHIP	56pF	5%	50V	C8131	1-128-582-11	ELECT	10μF	20%	100V
C8086	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8132	1-126-927-11	ELECT	2200μF	20%	10V
C8087	1-126-960-11	ELECT	1μF	20%	50V	C8133	1-107-649-11	ELECT	2.2μF	20%	250V
C8088	1-126-964-11	ELECT	10μF	20%	50V	C8135	1-117-813-11	FILM	0.75μF	5%	250V
C8089	1-107-444-11	CERAMIC	100pF	5%	2KV	C8136	1-130-495-00	MYLAR	0.1μF	5%	50V
C8090	1-126-960-11	ELECT	1μF	20%	50V	C8137	1-126-927-11	ELECT	2200μF	20%	10V
C8091	1-104-665-11	ELECT	100μF	20%	25V	C8138	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C8092	1-117-640-11	FILM	6800pF	3%	1.2KV	C8139	1-126-964-11	ELECT	10μF	20%	50V
C8093	1-107-648-91	ELECT	100μF	20%	200V	C8142	1-117-664-11	FILM	0.27μF	5%	250V
C8094	1-126-947-11	ELECT	47μF	20%	35V	C8143	1-126-960-11	ELECT	1μF	20%	50V
C8095	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C8148	1-104-665-11	ELECT	100μF	20%	25V
C8096	1-136-684-51	FILM	0.0022μF	2.00%	100V	C8150	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C8097	1-162-131-11	CERAMIC	220pF	10%	2KV	C8153	1-126-960-11	ELECT	1μF	20%	50V
C8098	1-162-131-11	CERAMIC	220pF	10%	2KV						
C8099	1-115-416-11	CERAMIC CHIP	0.001μF	5%	25V						
C8100	1-104-665-11	ELECT	100μF	20%	25V						
C8102	1-102-038-00	CERAMIC	0.001μF		500V	*	CN8002	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P	
C8103	1-126-964-11	ELECT	10μF	20%	50V	*	CN8003	1-691-135-11	PIN, CONNECTOR (PC BOARD)	4P	
C8104	1-162-965-11	CERAMIC CHIP	0.0015μF	10%	50V	*	CN8004	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P	
C8105	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V	*	CN8005	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P	
						*	CN8006	1-779-890-11	CONNECTOR, BOARD TO BOARD	10P	

CONNECTOR



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
* CN8007	1-564-506-11	PLUG, CONNECTOR	3P	D8030	8-719-028-45	DIODE	D2L20U
* CN8008	1-564-506-11	PLUG, CONNECTOR	3P	D8031	8-719-110-47	DIODE	RD18ESB
* CN8009	1-564-506-11	PLUG, CONNECTOR	3P	D8032	8-719-302-43	DIODE	EL1Z
* CN8010	1-564-507-11	PLUG, CONNECTOR	4P	D8033	8-719-028-72	DIODE	RGP02-17EL-6433
* CN8011	1-564-507-11	PLUG, CONNECTOR	4P	D8034	6-500-004-01	DIODE	ERD07-15L
* CN8012	1-564-507-11	PLUG, CONNECTOR	4P	D8035	6-500-004-01	DIODE	ERD07-15L
* CN8013	1-766-177-11	PIN, CONNECTOR (PC BOARD)	9P	D8036	8-719-110-39	DIODE	RD15ESB1
* CN8015	1-506-371-00	PIN, CONNECTOR	2P	D8037	8-719-028-45	DIODE	D2L20U
* CN8016	1-564-507-11	PLUG, CONNECTOR	4P	D8038	8-719-302-43	DIODE	EL1Z
* CN8018	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P	D8039	8-719-028-72	DIODE	RGP02-17EL-6433
* CN8019	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P	D8043	8-719-991-33	DIODE	1SS133T-77
* CN8020	1-580-689-11	PIN, CONNECTOR (PC BOARD)	4P	D8045	8-719-908-03	DIODE	GP08D
* CN8021	1-506-371-00	PIN, CONNECTOR	2P	D8046	8-719-991-33	DIODE	1SS133T-77
* CN8022	1-564-510-11	PLUG, CONNECTOR	7P	D8047	8-719-991-33	DIODE	1SS133T-77
* CN8023	1-564-507-11	PLUG, CONNECTOR	4P				
DIODE				FERRITE BEAD			
D8001	8-719-109-88	DIODE	RD5.6ESB1	FB8001	1-410-397-21	FERRITE	1.1μH
D8002	8-719-110-53	DIODE	RD20ESB2	FB8002	1-410-397-21	FERRITE	1.1μH
D8003	8-719-110-56	DIODE	RD22ESB1	FB8003	1-216-864-11	SHORT CHIP	
D8004	8-719-908-03	DIODE	GP08D	FB8004	1-216-864-11	SHORT CHIP	
D8005	8-719-991-33	DIODE	1SS133T-77	FB8005	1-469-869-21	FERRITE	0μH
D8006	8-719-991-33	DIODE	1SS133T-77	FB8006	1-469-869-21	FERRITE	0μH
D8007	8-719-991-33	DIODE	1SS133T-77	FB8008	1-410-396-41	FERRITE	0.45μH
D8008	8-719-991-33	DIODE	1SS133T-77	FB8009	1-410-396-41	FERRITE	0.45μH
D8009	8-719-991-33	DIODE	1SS133T-77	FB8010	1-410-396-41	FERRITE	0.45μH
D8010	8-719-991-33	DIODE	1SS133T-77	FB8011	1-410-396-41	FERRITE	0.45μH
D8011	8-719-991-33	DIODE	1SS133T-77	FB8014	1-469-869-21	FERRITE	0μH
D8012	8-719-991-33	DIODE	1SS133T-77	FB8015	1-469-869-21	FERRITE	0μH
D8013	8-719-109-85	DIODE	RD5.1ESB2	FB8016	1-469-869-21	FERRITE	0μH
D8014	8-719-109-85	DIODE	RD5.1ESB2	FB8017	1-469-869-21	FERRITE	0μH
D8015	8-719-991-33	DIODE	1SS133T-77	FB8018	1-469-869-21	FERRITE	0μH
D8016	8-719-991-33	DIODE	1SS133T-77	FB8019	1-410-397-21	FERRITE	1.1μH
D8019	8-719-991-33	DIODE	1SS133T-77	FB8020	1-414-229-11	FERRITE	0μH
D8020	8-719-991-33	DIODE	1SS133T-77	FB8021	1-410-397-21	FERRITE	1.1μH
D8021	8-719-061-21	DIODE	FMQ-G5FMS	FB8022	1-410-396-41	FERRITE	0.45μH
D8022	8-719-991-33	DIODE	1SS133T-77	FB8023	1-410-396-41	FERRITE	0.45μH
D8023	8-719-991-33	DIODE	1SS133T-77	FB8024	1-469-869-21	FERRITE	0μH
D8024	8-719-110-39	DIODE	RD15ESB1				
D8025	8-719-991-33	DIODE	1SS133T-77	IC			
D8026	8-719-109-88	DIODE	RD5.6ESB1	IC8001	8-749-019-08	IC	STK392-560
D8027	8-719-028-45	DIODE	D2L20U	IC8002	8-749-019-08	IC	STK392-560
D8028	8-719-110-39	DIODE	RD15ESB1	IC8003	8-759-593-33	IC	LA78045
D8029	8-719-028-45	DIODE	D2L20U	IC8004	8-759-647-17	IC	UPC2912HF
				IC8005	8-759-585-82	IC	BA9759F-E2

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

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



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES				
TRANSISTOR											
IC8006	8-759-700-07	IC	NJM2903M	Q8001	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC8007	8-759-700-07	IC	NJM2903M	Q8002	8-729-046-80	TRANSISTOR	2SC4634LS-CB11				
IC8008	8-759-585-82	IC	BA9759F-E2	Q8003	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
IC8009	8-759-803-42	IC	LA6500-FA	Q8004	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
IC8012	8-759-701-01	IC	NJM2904M	Q8005	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
COIL											
L8001	1-412-533-21	INDUCTOR	47µH	Q8007	8-729-046-80	TRANSISTOR	2SC4634LS-CB11				
L8002	1-412-533-21	INDUCTOR	47µH	Q8008	8-729-207-89	TRANSISTOR	2SA1358-Y				
L8003	1-412-525-31	INDUCTOR	10µH	Q8009	8-729-207-82	TRANSISTOR	2SC3421-Y				
L8004	1-412-533-21	INDUCTOR	47µH	Q8010	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8005	1-412-533-21	INDUCTOR	47µH	Q8011	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L8006	1-412-525-31	INDUCTOR	10µH	Q8014	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8007	1-412-533-21	INDUCTOR	47µH	Q8015	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8008	1-412-533-21	INDUCTOR	47µH	Q8016	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8009	1-412-525-31	INDUCTOR	10µH	Q8019	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L8010	1-414-187-11	INDUCTOR	47µH	Q8020	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8011	1-412-525-31	INDUCTOR	10µH	Q8021	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8012	1-414-187-11	INDUCTOR	47µH	Q8022	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8013	1-414-856-11	INDUCTOR	10µH	Q8023	8-729-048-47	TRANSISTOR	2SC2688(5)-LK				
L8014	1-414-189-31	INDUCTOR	100µH	Q8024	8-729-056-50	TRANSISTOR	2SC5681-YB				
L8015	1-414-189-31	INDUCTOR	100µH	Q8027	8-729-050-13	TRANSISTOR	2SJ585LS-CC11				
L8016	1-412-537-31	INDUCTOR	100µH	Q8028	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8017	1-414-856-11	INDUCTOR	10µH	Q8029	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8018	1-406-667-11	INDUCTOR	220µH	Q8030	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L8019	1-419-352-11	COIL, HORIZONTAL LINEARITY		Q8031	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8020	1-412-525-31	INDUCTOR	10µH	Q8032	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8021	1-406-659-11	INDUCTOR	10µH	Q8035	8-729-050-13	TRANSISTOR	2SJ585LS-CC11				
L8022	1-412-552-11	INDUCTOR	2.2MH	Q8036	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L8023	1-414-856-11	INDUCTOR	10µH	Q8037	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L8024	1-414-856-11	INDUCTOR	10µH	Q8038	8-729-038-10	TRANSISTOR	1MB12-140-F153A				
L8025	1-414-856-11	INDUCTOR	10µH	Q8039	8-729-048-47	TRANSISTOR	2SC2688(5)-LK				
L8026	1-414-856-11	INDUCTOR	10µH	Q8101	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
NL8001	1-517-778-21	LAMP, NEON		RESISTOR							
IC LINK											
 PS8001	1-533-595-31	IC LINK	3.15A 90V	R8001	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		
 PS8002	1-533-595-31	IC LINK	3.15A 90V	R8002	1-216-809-11	METAL CHIP	100	5%	1/10W		
 PS8003	1-533-595-31	IC LINK	3.15A 90V	R8003	1-216-809-11	METAL CHIP	100	5%	1/10W		
 PS8004	1-533-595-31	IC LINK	3.15A 90V	R8004	1-216-809-11	METAL CHIP	100	5%	1/10W		
 PS8005	1-533-595-31	IC LINK	3.15A 90V	R8005	1-215-875-11	METAL OXIDE	10K	5%	1W		
 PS8006	1-533-595-31	IC LINK	3.15A 90V	R8007	1-216-809-11	METAL CHIP	100	5%	1/10W		
 PS8007	1-533-595-31	IC LINK	3.15A 90V	R8008	1-216-809-11	METAL CHIP	100	5%	1/10W		
				R8009	1-216-809-11	METAL CHIP	100	5%	1/10W		
				R8010	1-260-131-11	CARBON	470K	5%	1/2W		
				R8011	1-216-829-11	METAL CHIP	4.7K	5%	1/10W		



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8012	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8059	1-214-808-11	METAL	4.7	1%	1/2W
R8013	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W	R8060	1-214-808-11	METAL	4.7	1%	1/2W
R8014	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W	R8061	1-216-392-11	METAL OXIDE	1.8	5%	3W
R8015	1-216-837-11	METAL CHIP	22K	5%	1/10W	R8062	1-260-107-11	CARBON	4.7K	5%	1/2W
R8016	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8063	1-214-808-11	METAL	4.7	1%	1/2W
R8017	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8064	1-214-808-11	METAL	4.7	1%	1/2W
R8018	1-216-821-11	METAL CHIP	1K	5%	1/10W	R8065	1-260-328-11	CARBON	1K	5%	1/2W
R8019	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W	R8066	1-214-808-11	METAL	4.7	1%	1/2W
R8020	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8067	1-214-808-11	METAL	4.7	1%	1/2W
R8021	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8068	1-216-809-11	METAL CHIP	100	5%	1/10W
R8022	1-216-839-11	METAL CHIP	33K	5%	1/10W	R8069	1-214-808-11	METAL	4.7	1%	1/2W
R8023	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8070	1-214-808-11	METAL	4.7	1%	1/2W
R8024	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8071	1-215-381-00	METAL	22	1%	1/4W
R8025	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8073	1-214-808-11	METAL	4.7	1%	1/2W
R8026	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8075	1-214-808-11	METAL	4.7	1%	1/2W
R8029	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8076	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8030	1-215-903-11	METAL OXIDE	68K	5%	2W	R8077	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R8031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8078	1-214-808-11	METAL	4.7	1%	1/2W
R8032	1-216-821-11	METAL CHIP	1K	5%	1/10W	R8079	1-214-808-11	METAL	4.7	1%	1/2W
R8033	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8080	1-216-353-00	METAL OXIDE	2.2	5%	1W
R8034	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8081	1-214-808-11	METAL	4.7	1%	1/2W
R8035	1-218-692-11	METAL CHIP	1K	0.50%	1/10W	R8082	1-214-808-11	METAL	4.7	1%	1/2W
R8036	1-214-800-11	METAL	2.2	1%	1/2W	R8083	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8037	1-215-903-11	METAL OXIDE	68K	5%	2W	R8084	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8038	1-216-809-11	METAL CHIP	100	5%	1/10W	R8085	1-214-808-11	METAL	4.7	1%	1/2W
R8039	1-214-800-11	METAL	2.2	1%	1/2W	R8086	1-214-808-11	METAL	4.7	1%	1/2W
R8040	1-215-913-11	METAL OXIDE	220	5%	3W	R8087	1-249-385-11	CARBON	2.2	5%	1/4W
R8041	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W	R8088	1-249-385-11	CARBON	2.2	5%	1/4W
R8042	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	R8089	1-214-808-11	METAL	4.7	1%	1/2W
R8043	1-218-740-11	METAL CHIP	100K	0.50%	1/10W	R8090	1-214-808-11	METAL	4.7	1%	1/2W
R8044	1-218-712-11	METAL CHIP	6.8K	0.50%	1/10W	R8091	1-214-808-11	METAL	4.7	1%	1/2W
R8045	1-214-808-11	METAL	4.7	1%	1/2W	R8092	1-214-808-11	METAL	4.7	1%	1/2W
R8046	1-214-808-11	METAL	4.7	1%	1/2W	R8093	1-214-808-11	METAL	4.7	1%	1/2W
R8047	1-215-857-71	METAL OXIDE	10	5%	1W	R8094	1-214-808-11	METAL	4.7	1%	1/2W
R8048	1-414-189-31	INDUCTOR	100μH			R8095	1-216-801-11	METAL CHIP	22	5%	1/10W
R8049	1-414-189-31	INDUCTOR	100μH			R8096	1-216-801-11	METAL CHIP	22	5%	1/10W
R8050	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8097	1-214-808-11	METAL	4.7	1%	1/2W
R8051	1-214-808-11	METAL	4.7	1%	1/2W	R8098	1-214-808-11	METAL	4.7	1%	1/2W
R8053	1-214-808-11	METAL	4.7	1%	1/2W	R8099	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8055	1-218-748-11	METAL CHIP	220K	0.50%	1/10W	R8100	1-216-475-11	METAL OXIDE	120	5%	3W
R8056	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8101	1-216-475-11	METAL OXIDE	120	5%	3W
R8057	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R8102	1-218-738-11	METAL CHIP	82K	0.50%	1/10W
R8058	1-216-809-11	METAL CHIP	100	5%	1/10W						



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8103	1-216-816-11	METAL CHIP	390	5%	1/10W	R8148	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8104	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R8149	1-215-905-11	METAL OXIDE	10	5%	3W
R8105	1-214-808-11	METAL	4.7	1%	1/2W	R8150	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8106	1-214-808-11	METAL	4.7	1%	1/2W	R8151	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8107	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8152	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8108	1-216-821-11	METAL CHIP	1K	5%	1/10W	R8153	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
R8109	1-216-814-11	METAL CHIP	270	5%	1/10W	R8154	1-218-728-11	METAL CHIP	33K	0.50%	1/10W
R8110	1-249-427-11	CARBON	6.8K	5%	1/4W	R8155	1-215-469-00	METAL	100K	1%	1/4W
R8111	1-216-819-11	METAL CHIP	680	5%	1/10W	R8156	1-215-469-00	METAL	100K	1%	1/4W
R8112	1-216-824-11	METAL CHIP	1.8K	5%	1/10W	R8157	1-218-738-11	METAL CHIP	82K	0.50%	1/10W
R8113	1-216-475-11	METAL OXIDE	120	5%	3W	R8159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8114	1-216-475-11	METAL OXIDE	120	5%	3W	R8160	1-249-393-11	CARBON	10	5%	1/4W
R8115	1-216-475-11	METAL OXIDE	120	5%	3W	R8161	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8116	1-216-475-11	METAL OXIDE	120	5%	3W	R8163	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8117	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8164	1-218-734-11	METAL CHIP	56K	0.50%	1/10W
R8118	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8165	1-249-425-11	CARBON	4.7K	5%	1/4W
R8119	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8166	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8120	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8167	1-414-189-31	INDUCTOR	100μH		
R8121	1-216-809-11	METAL CHIP	100	5%	1/10W	R8168	1-216-809-11	METAL CHIP	100	5%	1/10W
R8123	1-216-821-11	METAL CHIP	1K	5%	1/10W	R8169	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8124	1-249-377-11	CARBON	0.47	5%	1/4W	R8170	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R8125	1-216-816-11	METAL CHIP	390	5%	1/10W	R8171	1-216-809-11	METAL CHIP	100	5%	1/10W
R8126	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R8172	1-249-405-11	CARBON	100	5%	1/4W
R8128	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8173	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8129	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8174	1-249-425-11	CARBON	4.7K	5%	1/4W
R8130	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R8176	1-218-740-11	METAL CHIP	100K	0.50%	1/10W
R8131	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8178	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8132	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8179	1-414-189-31	INDUCTOR	100μH		
R8133	1-216-486-00	METAL OXIDE	8.2K	5%	3W	R8180	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8134	1-215-873-00	METAL OXIDE	4.7K	5%	1W	R8181	1-216-841-11	METAL CHIP	47K	5%	1/10W
R8135	1-216-486-00	METAL OXIDE	8.2K	5%	3W	R8182	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8136	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8183	1-218-748-11	METAL CHIP	220K	0.50%	1/10W
R8137	1-218-740-11	METAL CHIP	100K	0.50%	1/10W	R8184	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8138	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8187	1-216-833-11	METAL CHIP	10K	5%	1/10W
R8139	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R8189	1-249-377-11	CARBON	0.47	5%	1/4W
R8140	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8190	1-215-431-00	METAL	2.7K	1%	1/4W
R8141	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R8191	1-215-429-00	METAL	2.2K	1%	1/4W
R8142	1-216-833-11	METAL CHIP	10K	5%	1/10W	R8192	1-215-449-00	METAL	15K	1%	1/4W
R8143	1-218-734-11	METAL CHIP	56K	0.50%	1/10W	R8193	1-215-449-00	METAL	15K	1%	1/4W
R8144	1-216-809-11	METAL CHIP	100	5%	1/10W	R8194	1-215-449-00	METAL	15K	1%	1/4W
R8145	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	R8195	1-215-449-00	METAL	15K	1%	1/4W
R8146	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	R8196	1-249-425-11	CARBON	4.7K	5%	1/4W
R8147	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W						

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

A component identified by this  symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

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REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R8197	1-216-809-11	METAL CHIP	100	5%	1/10W						
R8198	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R8201	1-249-397-11	CARBON	22	5%	1/4W						
R8202	1-260-092-11	CARBON	270	5%	1/2W						
R8203	1-249-377-11	CARBON	0.47	5%	1/4W						
R8205	1-249-377-11	CARBON	0.47	5%	1/4W						
R8206	1-249-377-11	CARBON	0.47	5%	1/4W						
R8208	1-260-288-11	CARBON	0.47	5%	1/2W						
R8209	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R8210	1-216-809-11	METAL CHIP	100	5%	1/10W						
R8211	1-215-906-11	METAL OXIDE	15	5%	3W						
R8212	1-215-907-11	METAL OXIDE	22	5%	3W						
R8213	1-216-821-11	METAL CHIP	1K	5%	1/10W						
R8216	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R8217	1-216-821-11	METAL CHIP	1K	5%	1/10W						
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	METAL CHIP	1K	5%	1/10W						
R8223	1-218-748-11	METAL CHIP	220K	0.50%	1/10W						
R8224	1-260-127-11	CARBON	220K	5%	1/2W						
R8225	1-260-292-11	CARBON	1	5%	1/2W						
R8228	1-260-314-11	CARBON	68	5%	1/2W						
R8230	1-218-751-11	METAL CHIP	300K	0.50%	1/10W						
R8232	1-216-341-11	METAL OXIDE	0.22	5%	1W						
<u>TRANSFORMER</u>											
T8001	1-435-142-11	TRANSFORMER, FERRITE (DFT)									
T8002	1-437-400-11	TRANSFORMER, FERRITE (HDT)									
T8003	1-437-401-21	FERRITE TRANSFORMER (HOT)									
△ T8004	1-437-399-21	TRANSFORMER, FERRITE (LOT)									
△ T8005	1-453-285-41	FBT ASSY, NX-4006									
<u>THERMISTOR</u>											
TH8001	1-800-193-00	THERMISTOR									
<u>VARIABLE RESISTOR</u>											
△ VR8001	1-225-627-91	RES, VAR, ADJ, CERMET	2K								
△ VR8002	1-225-630-91	RES, VAR, ADJ, CERMET	20K								
B											
The B Board is <u>not</u> field repairable. If service is required, use the following part number to order a complete replacement board. Data is provided for reference only.											
*							A-1136-271-A	B BOARD, MOUNTED			
<u>CAPACITOR</u>											
							C3001	1-128-453-21	ELECT CHIP	47µF	20%
							C3002	1-128-453-21	ELECT CHIP	47µF	20%
							C3003	1-128-453-21	ELECT CHIP	47µF	20%
							C3035	1-162-970-11	CERAMIC CHIP	0.01µF	10%
							C3044	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3089	1-162-970-11	CERAMIC CHIP	0.01µF	10%
							C3090	1-126-204-11	ELECT CHIP	47µF	20%
							C3096	1-162-970-11	CERAMIC CHIP	0.01µF	10%
							C3101	1-162-925-11	CERAMIC CHIP	68pF	5%
							C3102	1-162-925-11	CERAMIC CHIP	68pF	5%
							C3301	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3302	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3303	1-126-206-11	ELECT CHIP	100µF	20%
							C3304	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3305	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3306	1-126-204-11	ELECT CHIP	47µF	20%
							C3307	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3308	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3309	1-126-206-11	ELECT CHIP	100µF	20%
							C3310	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3311	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3312	1-126-206-11	ELECT CHIP	100µF	20%
							C3313	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3314	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3315	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3316	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3317	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3318	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3319	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3320	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3321	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3322	1-126-204-11	ELECT CHIP	47µF	20%
							C3323	1-124-779-00	ELECT CHIP	10µF	20%
							C3324	1-164-156-11	CERAMIC CHIP	0.1µF	25V
							C3325	1-164-156-11	CERAMIC CHIP	0.1µF	25V

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REF. NO.	PART NO.	DESCRIPTION	VALUES		REF. NO.	PART NO.	DESCRIPTION	VALUES	
C3326	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3371	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3327	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3372	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3328	1-124-779-00	ELECT CHIP	10µF	20% 16V	C3373	1-162-915-11	CERAMIC CHIP	10pF	0.50pF 50V
C3329	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V	C3374	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3331	1-126-204-11	ELECT CHIP	47µF	20% 16V	C3375	1-127-760-11	CERAMIC CHIP	4.7µF	10% 6.3V
C3332	1-124-779-00	ELECT CHIP	10µF	20% 16V	C3376	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3333	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3377	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V
C3334	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V	C3378	1-126-204-11	ELECT CHIP	47µF	20% 16V
C3335	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3379	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3336	1-124-779-00	ELECT CHIP	10µF	20% 16V	C3401	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3337	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V	C3402	1-124-779-00	ELECT CHIP	10µF	20% 16V
C3338	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3403	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3339	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3404	1-126-206-11	ELECT CHIP	100µF	20% 6.3V
C3340	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3405	1-126-206-11	ELECT CHIP	100µF	20% 6.3V
C3341	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3406	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V
C3343	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3407	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V
C3344	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3408	1-126-206-11	ELECT CHIP	100µF	20% 6.3V
C3345	1-126-204-11	ELECT CHIP	47µF	20% 16V	C3409	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3346	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3410	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3347	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3411	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3348	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3412	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3349	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3413	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3350	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3414	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3351	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3415	1-124-779-00	ELECT CHIP	10µF	20% 16V
C3352	1-124-779-00	ELECT CHIP	10µF	20% 16V	C3416	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3353	1-126-204-11	ELECT CHIP	47µF	20% 16V	C3417	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3354	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3418	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V
C3355	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3419	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3356	1-126-204-11	ELECT CHIP	47µF	20% 16V	C3420	1-124-779-00	ELECT CHIP	10µF	20% 16V
C3357	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3421	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3358	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3422	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3359	1-126-204-11	ELECT CHIP	47µF	20% 16V	C3423	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V
C3360	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3424	1-164-156-11	CERAMIC CHIP	0.1pF	10% 10V
C3361	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V	C3425	1-125-891-11	CERAMIC CHIP	0.47µF	10% 25V
C3362	1-127-760-11	CERAMIC CHIP	4.7µF	10% 6.3V	C3426	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3363	1-126-204-11	ELECT CHIP	47µF	20% 16V	C3428	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V
C3364	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3429	1-124-779-00	ELECT CHIP	10µF	20% 16V
C3365	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3430	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3366	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3431	1-126-204-11	ELECT CHIP	47µF	20% 16V
C3367	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3432	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C3368	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3433	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V
C3369	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3434	1-126-204-11	ELECT CHIP	47µF	20% 16V
C3370	1-164-156-11	CERAMIC CHIP	0.1µF	25V					



REF. NO.	PART NO.	DESCRIPTION	VALUES		REF. NO.	PART NO.	DESCRIPTION	VALUES			
C3435	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3482	1-117-681-11	ELECT CHIP	100µF	20%	16V	
C3436	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3483	1-117-681-11	ELECT CHIP	100µF	20%	16V
C3437	1-126-204-11	ELECT CHIP	47µF	20%	16V	C3484	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C3438	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3485	1-164-156-11	CERAMIC CHIP	0.1µF	25V		
C3439	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3486	1-164-156-11	CERAMIC CHIP	0.1µF	25V		
C3440	1-162-916-11	CERAMIC CHIP	12pF	5%	50V	C3487	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C3441	1-162-916-11	CERAMIC CHIP	12pF	5%	50V	C3488	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3442	1-124-779-00	ELECT CHIP	10µF	20%	16V	C3489	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C3443	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C3490	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3444	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3491	1-126-204-11	ELECT CHIP	47µF	20%	16V	
C3445	1-126-204-11	ELECT CHIP	47µF	20%	16V	C3492	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C3446	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C3493	1-126-204-11	ELECT CHIP	47µF	20%	16V
C3447	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3494	1-164-156-11	CERAMIC CHIP	0.1µF	25V		
C3448	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C3495	1-124-779-00	ELECT CHIP	10µF	20%	16V
C3449	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3496	1-164-156-11	CERAMIC CHIP	0.1µF	25V		
C3450	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C3499	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	
C3451	1-164-156-11	CERAMIC CHIP	0.1µF	25V							
C3452	1-164-156-11	CERAMIC CHIP	0.1µF	25V							
C3453	1-124-779-00	ELECT CHIP	10µF	20%	16V						
C3454	1-164-156-11	CERAMIC CHIP	0.1µF	25V	*	CN3203	1-793-923-11	CONNECTOR, DIN (PLUG)	64P		
C3455	1-124-779-00	ELECT CHIP	10µF	20%	16V						
C3456	1-164-156-11	CERAMIC CHIP	0.1µF	25V		D3089	8-719-062-51	DIODE	1PS226-115		
C3457	1-124-779-00	ELECT CHIP	10µF	20%	16V	D3090	8-719-062-51	DIODE	1PS226-115		
C3458	1-164-156-11	CERAMIC CHIP	0.1µF	25V	D3099	8-719-988-61	DIODE	1SS355TE-17			
C3460	1-162-923-11	CERAMIC CHIP	47pF	5%	50V	D3301	8-719-083-58	DIODE	UDZSTE-173.9B		
C3462	1-164-156-11	CERAMIC CHIP	0.1µF	25V	D3302	8-719-069-60	DIODE	UDZSTE-179.1B			
C3463	1-164-156-11	CERAMIC CHIP	0.1µF	25V							
C3464	1-164-156-11	CERAMIC CHIP	0.1µF	25V	D3401	8-719-914-43	DIODE	DAN20K			
C3465	1-164-156-11	CERAMIC CHIP	0.1µF	25V	D3402	8-719-914-44	DIODE	DAP20K			
C3466	1-164-156-11	CERAMIC CHIP	0.1µF	25V	D3403	8-719-978-33	DIODE	DTZ-TT11-6.8B			
C3467	1-164-156-11	CERAMIC CHIP	0.1µF	25V							
C3468	1-126-206-11	ELECT CHIP	100µF	20%	6.3V	FB3302	1-500-451-11	FERRITE	0µH		
C3469	1-164-156-11	CERAMIC CHIP	0.1µF	25V	FB3303	1-469-110-21	FERRITE	0µH			
C3470	1-126-206-11	ELECT CHIP	100µF	20%	6.3V	FB3401	1-414-235-22	FERRITE	0µH		
C3473	1-164-156-11	CERAMIC CHIP	0.1µF	25V	FB3402	1-414-235-22	FERRITE	0µH			
C3474	1-124-779-00	ELECT CHIP	10µF	20%	16V						
C3475	1-164-156-11	CERAMIC CHIP	0.1µF	25V	FL3003	1-781-924-21	FILTER, LOW PASS (SMD)				
C3476	1-124-779-00	ELECT CHIP	10µF	20%	16V	FL3301	1-234-558-21	FILTER, LOW PASS			
C3477	1-164-156-11	CERAMIC CHIP	0.1µF	25V	FL3302	1-234-557-21	FILTER, LOW PASS				
C3478	1-126-204-11	ELECT CHIP	47µF	20%	16V	FL3303	1-234-557-21	FILTER, LOW PASS			
C3479	1-124-779-00	ELECT CHIP	10µF	20%	16V	FL3401	1-781-923-21	FILTER, LOW PASS (SMD)			
C3480	1-164-156-11	CERAMIC CHIP	0.1µF	25V							
C3481	1-117-681-11	ELECT CHIP	100µF	20%	16V						



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES				
<u>IC</u>											
IC3089	6-700-149-01	IC	M24C04-MN6T(A)	L3404	1-469-561-21	INDUCTOR	100µH				
IC3090	8-759-832-08	IC	MB94918RpF-G-134-BND	L3405	1-469-555-21	INDUCTOR	10µH				
IC3091	8-759-349-11	IC	PST9145NL	L3406	1-469-555-21	INDUCTOR	10µH				
IC3301	8-759-663-74	IC	HY57V161610DTC-7TR	L3407	1-469-555-21	INDUCTOR	10µH				
IC3302	8-759-832-05	IC	BA18BC0FP-E2	L3408	1-469-555-21	INDUCTOR	10µH				
IC3303	8-752-409-78	IC	CXD2095AQ	L3409	1-469-555-21	INDUCTOR	10µH				
IC3304	8-759-447-90	IC	TLC5733AIPM	L3410	1-412-058-11	INDUCTOR	10µH				
IC3305	8-759-669-75	IC	TLC2932IPWR	L3411	1-412-058-11	INDUCTOR	10µH				
IC3306	8-759-669-78	IC	TLC2933IPWR-12	L3412	1-469-555-21	INDUCTOR	10µH				
IC3401	6-700-394-01	IC	BA25BC0FP-E2	L3413	1-469-555-21	INDUCTOR	10µH				
IC3402	6-703-430-01	IC	MT48LC2M32B2TG-6-Y94W	L3414	1-469-555-21	INDUCTOR	10µH				
IC3403	8-759-460-29	IC	PST9120NL	L3416	1-469-555-21	INDUCTOR	10µH				
IC3404	8-759-669-75	IC	TLC2932IPWR	<u>TRANSISTOR</u>							
IC3405	8-759-485-79	IC	TC7SET08FU(TE85L)	Q3005	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC3406	8-759-485-79	IC	TC7SET08FU(TE85L)	Q3006	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
				Q3007	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC3407	8-759-485-79	IC	TC7SET08FU(TE85L)	Q3089	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
IC3408	8-759-672-57	IC	CXD9509AQ	Q3090	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
IC3409	8-759-833-72	IC	NJM2870F25-TE2								
IC3410	8-752-367-59	IC	CXD2309Q	Q3091	1-801-806-11	TRANSISTOR	DTC144EKA				
IC3411	8-759-082-57	IC	TC7W04FU	Q3301	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC3412	8-759-082-58	IC	TC7W08FU	Q3302	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC3413	8-759-595-97	IC	SN74LV4053ANSR	Q3303	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
IC3414	8-759-548-56	IC	M52055FP	Q3304	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
<u>COIL</u>											
L3001	1-216-295-91	SHORT CHIP		Q3305	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3089	1-414-233-22	FERRITE	0µH	Q3306	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3102	1-412-946-11	INDUCTOR	3.9µH	Q3307	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3301	1-412-058-11	INDUCTOR	10µH	Q3308	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3302	1-469-555-21	INDUCTOR	10µH	Q3309	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3303	1-412-052-21	INDUCTOR	1µH	Q3310	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3304	1-469-555-21	INDUCTOR	10µH	Q3311	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3305	1-469-555-21	INDUCTOR	10µH	Q3401	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3306	1-469-561-21	INDUCTOR	100µH	Q3402	8-729-028-28	TRANSISTOR	2SK2036(TE85L)				
L3307	1-469-555-21	INDUCTOR	10µH	Q3403	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3308	1-469-561-21	INDUCTOR	100µH	Q3404	8-729-028-28	TRANSISTOR	2SK2036(TE85L)				
L3309	1-469-561-21	INDUCTOR	100µH	Q3405	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3310	1-469-561-21	INDUCTOR	100µH	Q3406	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3311	1-469-561-21	INDUCTOR	100µH	Q3407	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3312	1-469-555-21	INDUCTOR	10µH	Q3408	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3401	1-412-058-11	INDUCTOR	10µH	Q3409	8-729-120-28	TRANSISTOR	2SC1623-L5L6				
L3402	1-412-052-21	INDUCTOR	1µH	Q3410	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
L3403	1-469-561-21	INDUCTOR	100µH	Q3411	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
				Q3412	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				
				Q3413	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R				



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
Q3414	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R			R3308	1-216-864-11	SHORT CHIP			
Q3415	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R			R3309	1-218-662-11	METAL CHIP	56	0.50%	1/10W
<u>RESISTOR</u>											
R3001	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3310	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3002	1-216-864-11	SHORT CHIP				R3311	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3021	1-216-809-11	METAL CHIP	100	5%	1/10W	R3312	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3022	1-216-809-11	METAL CHIP	100	5%	1/10W	R3313	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3023	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3314	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R3035	1-216-809-11	METAL CHIP	100	5%	1/10W	R3315	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3036	1-216-809-11	METAL CHIP	100	5%	1/10W	R3316	1-218-664-11	METAL CHIP	68	0.50%	1/10W
R3037	1-216-809-11	METAL CHIP	100	5%	1/10W	R3317	1-218-664-11	METAL CHIP	68	0.50%	1/10W
R3038	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R3318	1-218-665-11	METAL CHIP	75	0.50%	1/10W
R3039	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R3319	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3040	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R3320	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3050	1-216-809-11	METAL CHIP	100	5%	1/10W	R3321	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3079	1-216-821-11	METAL CHIP	1K	5%	1/10W	R3322	1-218-662-11	METAL CHIP	56	0.50%	1/10W
R3089	1-216-864-11	SHORT CHIP				R3323	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3091	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3324	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3092	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3325	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3095	1-216-845-11	METAL CHIP	100K	5%	1/10W	R3326	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3096	1-216-817-11	METAL CHIP	470	5%	1/10W	R3327	1-216-835-11	METAL CHIP	15K	5%	1/10W
R3097	1-216-845-11	METAL CHIP	100K	5%	1/10W	R3328	1-216-864-11	SHORT CHIP			
R3098	1-216-805-11	METAL CHIP	47	5%	1/10W	R3329	1-216-815-11	METAL CHIP	330	5%	1/10W
R3099	1-216-805-11	METAL CHIP	47	5%	1/10W	R3330	1-216-815-11	METAL CHIP	330	5%	1/10W
R3100	1-216-809-11	METAL CHIP	100	5%	1/10W	R3331	1-216-841-11	METAL CHIP	47K	5%	1/10W
R3101	1-216-809-11	METAL CHIP	100	5%	1/10W	R3332	1-218-709-11	METAL CHIP	5.1K	0.50%	1/10W
R3102	1-216-809-11	METAL CHIP	100	5%	1/10W	R3333	1-216-864-11	SHORT CHIP			
R3103	1-216-822-11	METAL CHIP	1.2K	5%	1/10W	R3334	1-216-809-11	METAL CHIP	100	5%	1/10W
R3104	1-216-809-11	METAL CHIP	100	5%	1/10W	R3335	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3105	1-216-809-11	METAL CHIP	100	5%	1/10W	R3337	1-216-820-11	METAL CHIP	820	5%	1/10W
R3106	1-216-818-11	METAL CHIP	560	5%	1/10W	R3338	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3107	1-216-864-11	SHORT CHIP				R3339	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3108	1-216-817-11	METAL CHIP	470	5%	1/10W	R3340	1-216-855-11	METAL CHIP	680K	5%	1/10W
R3109	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R3341	1-216-813-11	METAL CHIP	220	5%	1/10W
R3110	1-216-809-11	METAL CHIP	100	5%	1/10W	R3342	1-218-705-11	METAL CHIP	3.6K	0.50%	1/10W
R3111	1-216-809-11	METAL CHIP	100	5%	1/10W	R3343	1-216-809-11	METAL CHIP	100	5%	1/10W
R3301	1-216-809-11	METAL CHIP	100	5%	1/10W	R3344	1-216-853-11	METAL CHIP	470K	5%	1/10W
R3302	1-216-817-11	METAL CHIP	470	5%	1/10W	R3345	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R3303	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W	R3346	1-216-809-11	METAL CHIP	100	5%	1/10W
R3304	1-216-809-11	METAL CHIP	100	5%	1/10W	R3347	1-216-815-11	METAL CHIP	330	5%	1/10W
R3305	1-216-809-11	METAL CHIP	100	5%	1/10W	R3348	1-216-864-11	SHORT CHIP			
R3306	1-216-809-11	METAL CHIP	100	5%	1/10W	R3349	1-218-687-11	METAL CHIP	620	0.50%	1/10W
R3307	1-216-864-11	SHORT CHIP				R3350	1-216-814-11	METAL CHIP	270	5%	1/10W
						R3351	1-216-825-11	METAL CHIP	2.2K	5%	1/10W



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3352	1-216-853-11	METAL CHIP	470K	5%	1/10W	R3460	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3353	1-216-837-11	METAL CHIP	22K	5%	1/10W	R3461	1-216-833-11	METAL CHIP	10K	5%	1/10W
R3354	1-216-813-11	METAL CHIP	220	5%	1/10W	R3464	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3355	1-216-821-11	METAL CHIP	1K	5%	1/10W	R3465	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3356	1-216-819-11	METAL CHIP	680	5%	1/10W	R3467	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3357	1-218-676-11	METAL CHIP	220	0.50%	1/10W	R3470	1-216-809-11	METAL CHIP	100	5%	1/10W
R3358	1-218-676-11	METAL CHIP	220	0.50%	1/10W	R3471	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R3472	1-216-801-11	METAL CHIP	22	5%	1/10W
R3359	1-218-676-11	METAL CHIP	220	0.50%	1/10W	R3475	1-216-809-11	METAL CHIP	100	5%	1/10W
R3360	1-216-827-11	METAL CHIP	3.3K	5%	1/10W						
R3361	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3476	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3364	1-216-864-11	SHORT CHIP				R3477	1-218-701-11	METAL CHIP	2.4K	0.50%	1/10W
R3365	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R3478	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R3483	1-218-701-11	METAL CHIP	2.4K	0.50%	1/10W
R3366	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3484	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3367	1-216-803-11	METAL CHIP	33	5%	1/10W						
R3369	1-216-864-11	SHORT CHIP				R3485	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3371	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R3486	1-216-801-11	METAL CHIP	22	5%	1/10W
R3372	1-216-817-11	METAL CHIP	470	5%	1/10W	R3489	1-216-864-11	SHORT CHIP			
						R3490	1-216-864-11	SHORT CHIP			
R3373	1-216-817-11	METAL CHIP	470	5%	1/10W	R3491	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3374	1-216-809-11	METAL CHIP	100	5%	1/10W						
R3375	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R3492	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3376	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W	R3493	1-218-701-11	METAL CHIP	2.4K	0.50%	1/10W
R3377	1-216-817-11	METAL CHIP	470	5%	1/10W	R3495	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R3496	1-216-801-11	METAL CHIP	22	5%	1/10W
R3378	1-216-817-11	METAL CHIP	470	5%	1/10W	R3497	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R3379	1-216-809-11	METAL CHIP	100	5%	1/10W						
R3380	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R3498	1-216-818-11	METAL CHIP	560	5%	1/10W
R3381	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W	R3499	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3382	1-216-864-11	SHORT CHIP				R3501	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R3502	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3383	1-216-817-11	METAL CHIP	470	5%	1/10W	R3503	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3384	1-216-809-11	METAL CHIP	100	5%	1/10W						
R3410	1-216-833-11	METAL CHIP	10K	5%	1/10W	R3504	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3421	1-216-864-11	SHORT CHIP				R3505	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3422	1-216-864-11	SHORT CHIP				R3506	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R3507	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3423	1-216-813-11	METAL CHIP	220	5%	1/10W	R3508	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3428	1-216-803-11	METAL CHIP	33	5%	1/10W						
R3429	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R3509	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3432	1-216-815-11	METAL CHIP	330	5%	1/10W	R3510	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3434	1-216-809-11	METAL CHIP	100	5%	1/10W	R3511	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R3512	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3445	1-216-864-11	SHORT CHIP				R3800	1-216-864-11	SHORT CHIP			
R3446	1-216-821-11	METAL CHIP	1K	5%	1/10W						
R3447	1-216-819-11	METAL CHIP	680	5%	1/10W	R3802	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3448	1-216-855-11	METAL CHIP	680K	5%	1/10W	R3803	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3452	1-216-864-11	SHORT CHIP				R3804	1-218-678-11	METAL CHIP	270	0.50%	1/10W
						R3805	1-218-678-11	METAL CHIP	270	0.50%	1/10W
R3454	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R3806	1-218-662-11	METAL CHIP	56	0.50%	1/10W



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R3807	1-218-670-11	METAL CHIP	120	0.50%	1/10W	R3862	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3808	1-218-670-11	METAL CHIP	120	0.50%	1/10W	R3863	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R3809	1-218-670-11	METAL CHIP	120	0.50%	1/10W	R3864	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R3810	1-218-670-11	METAL CHIP	120	0.50%	1/10W	R3865	1-216-809-11	METAL CHIP	100	5%	1/10W
R3811	1-216-809-11	METAL CHIP	100	5%	1/10W	R3866	1-414-234-22	FERRITE	0µH		
R3812	1-216-809-11	METAL CHIP	100	5%	1/10W	R3867	1-414-234-22	FERRITE	0µH		
R3813	1-216-809-11	METAL CHIP	100	5%	1/10W	R3868	1-414-234-22	FERRITE	0µH		
R3814	1-218-644-11	METAL CHIP	10	0.50%	1/10W	R3869	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R3815	1-218-648-11	METAL CHIP	15	0.50%	1/10W	R3870	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R3816	1-218-652-11	METAL CHIP	22	0.50%	1/10W	R3871	1-218-719-11	METAL CHIP	13K	0.50%	1/10W
R3817	1-218-652-11	METAL CHIP	22	0.50%	1/10W	R3881	1-216-807-11	METAL CHIP	68	5%	1/10W
R3820	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R3882	1-216-807-11	METAL CHIP	68	5%	1/10W
R3821	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R3883	1-216-807-11	METAL CHIP	68	5%	1/10W
R3822	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R3915	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3823	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	R3916	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3824	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	R3917	1-218-644-11	METAL CHIP	10	0.50%	1/10W
R3825	1-216-826-11	METAL CHIP	2.7K	5%	1/10W	R3923	1-412-363-21	FERRITE	0µH		
R3826	1-216-809-11	METAL CHIP	100	5%	1/10W	R3933	1-216-864-11	SHORT CHIP			
R3828	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R3937	1-216-809-11	METAL CHIP	100	5%	1/10W
R3829	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R3953	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3830	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R3954	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3831	1-216-864-11	SHORT CHIP				R3955	1-216-821-11	METAL CHIP	1K	5%	1/10W
R3832	1-216-864-11	SHORT CHIP				R3956	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3833	1-216-864-11	SHORT CHIP				R3957	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3834	1-218-678-11	METAL CHIP	270	0.50%	1/10W	R3958	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R3835	1-218-678-11	METAL CHIP	270	0.50%	1/10W	RESISTOR BRIDGE					
R3836	1-218-678-11	METAL CHIP	270	0.50%	1/10W	RB3304	1-234-525-21	RES, CHIP NETWORK	56		
R3837	1-218-678-11	METAL CHIP	270	0.50%	1/10W	RB3305	1-234-525-21	RES, CHIP NETWORK	56		
R3838	1-218-678-11	METAL CHIP	270	0.50%	1/10W	RB3306	1-234-525-21	RES, CHIP NETWORK	56		
R3839	1-218-670-11	METAL CHIP	120	0.50%	1/10W	RB3307	1-234-525-21	RES, CHIP NETWORK	56		
R3840	1-216-803-11	METAL CHIP	33	5%	1/10W	RB3401	1-234-524-21	RES, CHIP NETWORK	33		
R3841	1-218-670-11	METAL CHIP	120	0.50%	1/10W	RB3402	1-234-524-21	RES, CHIP NETWORK	33		
R3842	1-218-689-11	METAL CHIP	750	0.50%	1/10W	RB3403	1-234-524-21	RES, CHIP NETWORK	33		
R3846	1-216-801-11	METAL CHIP	22	5%	1/10W	RB3404	1-234-524-21	RES, CHIP NETWORK	33		
R3847	1-216-801-11	METAL CHIP	22	5%	1/10W	RB3405	1-234-524-21	RES, CHIP NETWORK	33		
R3848	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	RB3406	1-234-524-21	RES, CHIP NETWORK	33		
R3849	1-218-675-11	METAL CHIP	200	0.50%	1/10W	RB3407	1-239-409-11	NETWORK RESISTOR(CHIP)	47		
R3850	1-218-675-11	METAL CHIP	200	0.50%	1/10W	RB3408	1-239-409-11	NETWORK RESISTOR(CHIP)	47		
R3851	1-216-809-11	METAL CHIP	100	5%	1/10W	RB3409	1-239-409-11	NETWORK RESISTOR(CHIP)	47		
R3852	1-218-675-11	METAL CHIP	200	0.50%	1/10W	RB3410	1-239-409-11	NETWORK RESISTOR(CHIP)	47		
R3854	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	RB3411	1-239-409-11	NETWORK RESISTOR(CHIP)	47		
R3857	1-216-809-11	METAL CHIP	100	5%	1/10W						
R3858	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W						

REF. NO.	PART NO.	DESCRIPTION	VALUES		REF. NO.	PART NO.	DESCRIPTION	VALUES		
RB3412	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1623	1-162-915-11	CERAMIC CHIP	10pF	0.50pF 50V	
RB3421	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1624	1-162-915-11	CERAMIC CHIP	10pF	0.50pF 50V	
RB3422	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1625	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
RB3423	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1626	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
RB3424	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1627	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
RB3425	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1628	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
RB3426	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1629	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
RB3427	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1630	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
RB3428	1-239-409-11	NETWORK RESISTOR(CHIP)	47		C1631	1-126-933-11	ELECT	100μF	20% 16V	
<u>CRYSTAL</u>					C1632	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
X3089	1-781-945-21	VIBRATOR, CERAMIC			C1633	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
X3401	1-781-887-21	VIBRATOR, CRYSTAL			C1634	1-126-963-11	ELECT	4.7μF	20% 50V	
X3402	1-781-579-21	OSCILLATOR, CRYSTAL			C1635	1-162-923-11	CERAMIC CHIP	47pF	5% 50V	
					C1636	1-107-826-11	CERAMIC CHIP	0.1μF	10% 16V	
					C1637	1-162-919-11	CERAMIC CHIP	22pF	5% 50V	
					C1638	1-162-919-11	CERAMIC CHIP	22pF	5% 50V	
					C1639	1-126-933-11	ELECT	100μF	20% 16V	
					C1640	1-126-933-11	ELECT	100μF	20% 16V	
					C1641	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
					C1643	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
*	A-1299-523-A	AD BOARD, MOUNTED			C1644	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
<u>CAPACITOR</u>					C1645	1-164-315-11	CERAMIC CHIP	470pF	5% 50V	
C1601	1-126-933-11	ELECT	100μF	20%	16V	C1646	1-164-315-11	CERAMIC CHIP	470pF	5% 50V
C1604	1-164-156-11	CERAMIC CHIP	0.1μF		C1647	1-163-137-00	CERAMIC CHIP	680pF	5% 50V	
C1605	1-164-156-11	CERAMIC CHIP	0.1μF		C1649	1-163-137-00	CERAMIC CHIP	680pF	5% 50V	
C1606	1-164-156-11	CERAMIC CHIP	0.1μF		C1651	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
C1607	1-126-933-11	ELECT	100μF	20%	16V	C1652	1-164-156-11	CERAMIC CHIP	0.1μF	25V
C1608	1-164-156-11	CERAMIC CHIP	0.1μF		C1656	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
C1609	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V	C1657	1-164-156-11	CERAMIC CHIP	0.1μF	25V
C1610	1-162-962-11	CERAMIC CHIP	470pF	10%	50V	C1658	1-164-156-11	CERAMIC CHIP	0.1μF	25V
C1611	1-164-156-11	CERAMIC CHIP	0.1μF		C1659	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
C1612	1-164-156-11	CERAMIC CHIP	0.1μF		C1661	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
C1613	1-164-156-11	CERAMIC CHIP	0.1μF		C1663	1-126-933-11	ELECT	100μF	20% 16V	
C1614	1-164-156-11	CERAMIC CHIP	0.1μF		C1664	1-126-933-11	ELECT	100μF	20% 16V	
C1615	1-164-156-11	CERAMIC CHIP	0.1μF		C1665	1-126-933-11	ELECT	100μF	20% 16V	
C1616	1-164-156-11	CERAMIC CHIP	0.1μF		C1666	1-162-927-11	CERAMIC CHIP	100pF	5% 50V	
C1617	1-164-156-11	CERAMIC CHIP	0.1μF		C1668	1-162-927-11	CERAMIC CHIP	100pF	5% 50V	
C1618	1-126-933-11	ELECT	100μF	20%	16V	C1669	1-162-910-11	CERAMIC CHIP	5pF	0.25pF 50V
C1619	1-164-156-11	CERAMIC CHIP	0.1μF		C1670	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
C1620	1-162-920-11	CERAMIC CHIP	27pF	5%	50V	C1671	1-164-156-11	CERAMIC CHIP	0.1μF	25V
C1621	1-164-156-11	CERAMIC CHIP	0.1μF		C1672	1-164-156-11	CERAMIC CHIP	0.1μF	25V	
C1622	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C1673	1-162-910-11	CERAMIC CHIP	5pF	0.25pF 50V
					C1674	1-164-315-11	CERAMIC CHIP	470pF	5% 50V	

AD

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C1675	1-164-315-11	CERAMIC CHIP	470pF	5%	50V			<u>CONNECTOR</u>			
C1676	1-163-137-00	CERAMIC CHIP	680pF	5%	50V	CN1601	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P			
C1677	1-126-933-11	ELECT	100µF	20%	16V	CN1602	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P			
C1678	1-163-137-00	CERAMIC CHIP	680pF	5%	50V			<u>DIODE</u>			
C1680	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1601	8-719-988-61	DIODE	1SS355TE-17		
C1681	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1603	8-719-988-61	DIODE	1SS355TE-17		
C1682	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1604	8-719-069-54	DIODE	UDZSTE-175.1B		
C1683	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1605	8-719-069-54	DIODE	UDZSTE-175.1B		
C1684	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1606	8-719-069-54	DIODE	UDZSTE-175.1B		
C1685	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1607	8-719-069-54	DIODE	UDZSTE-175.1B		
C1688	1-164-156-11	CERAMIC CHIP	0.1µF		25V	D1691	8-719-988-61	DIODE	1SS355TE-17		
C1690	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	D1692	8-719-988-61	DIODE	1SS355TE-17		
C1691	1-126-933-11	ELECT	100µF	20%	16V	D1693	8-719-988-61	DIODE	1SS355TE-17		
C1692	1-126-933-11	ELECT	100µF	20%	16V			<u>FERRITE BEAD</u>			
C1693	1-126-933-11	ELECT	100µF	20%	16V	FB1601	1-414-445-11	FERRITE	0µH		
C1694	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	FB1602	1-414-445-11	FERRITE	0µH		
C1695	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V	FB1603	1-414-445-11	FERRITE	0µH		
C1696	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V	FB1604	1-414-445-11	FERRITE	0µH		
C1697	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1605	1-414-445-11	FERRITE	0µH		
C1698	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1606	1-414-445-11	FERRITE	0µH		
C1699	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1607	1-414-445-11	FERRITE	0µH		
C1700	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1608	1-414-445-11	FERRITE	0µH		
C1701	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V	FB1609	1-414-445-11	FERRITE	0µH		
C1704	1-126-933-11	ELECT	100µF	20%	16V	FB1610	1-414-445-11	FERRITE	0µH		
C1707	1-164-315-11	CERAMIC CHIP	470pF	5%	50V	FB1611	1-414-445-11	FERRITE	0µH		
C1708	1-163-137-00	CERAMIC CHIP	680pF	5%	50V	FB1612	1-414-445-11	FERRITE	0µH		
C1709	1-164-315-11	CERAMIC CHIP	470pF	5%	50V	FB1613	1-414-445-11	FERRITE	0µH		
C1711	1-163-137-00	CERAMIC CHIP	680pF	5%	50V	FB1614	1-414-445-11	FERRITE	0µH		
C1712	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1615	1-414-445-11	FERRITE	0µH		
C1714	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1616	1-414-445-11	FERRITE	0µH		
C1715	1-164-156-11	CERAMIC CHIP	0.1µF		25V	FB1617	1-414-445-11	FERRITE	0µH		
C1717	1-162-927-11	CERAMIC CHIP	100pF	5%	50V			<u>IC</u>			
C1718	1-164-156-11	CERAMIC CHIP	0.1µF		25V	IC1601	8-759-683-55	IC	CM0017AF		
C1720	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V	IC1602	8-759-830-08	IC	NJM2068V-TE2		
C1721	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	IC1603	8-759-830-08	IC	NJM2068V-TE2		
C1722	1-162-910-11	CERAMIC CHIP	5pF	0.25pF	50V	IC1605	8-759-352-91	IC	PST9143NL		
C1730	1-126-916-11	ELECT	1000µF	20%	6.3V	IC1606	8-752-916-82	IC	CXP86448-646Q		
C1731	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	IC1607	8-759-682-41	IC	M24C32-WMN6T(A)		
C1732	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	IC1608	8-759-829-87	IC	CD0031AM		
C1733	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	IC1609	8-759-830-08	IC	NJM2068V-TE2		
C1734	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V						

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REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
IC1610	8-759-830-08	IC	NJM2068V-TE2	R1646	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
IC1611	8-759-830-08	IC	NJM2068V-TE2	R1647	1-216-833-11	METAL CHIP	10K 5% 1/10W
IC1612	8-759-830-08	IC	NJM2068V-TE2	R1648	1-216-809-11	METAL CHIP	100 5% 1/10W
<u>COIL</u>				R1649	1-216-809-11	METAL CHIP	100 5% 1/10W
L1601	1-469-555-21	INDUCTOR	10µH	R1650	1-216-815-11	METAL CHIP	330 5% 1/10W
L1602	1-469-555-21	INDUCTOR	10µH	R1651	1-216-815-11	METAL CHIP	330 5% 1/10W
<u>TRANSISTOR</u>				R1652	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q1603	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R1653	1-216-817-11	METAL CHIP	470 5% 1/10W
Q1604	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R1654	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q1605	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R1655	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
Q1606	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R1656	1-218-692-11	METAL CHIP	1K 0.50% 1/10W
<u>RESISTOR</u>				R1657	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1600	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1658	1-216-837-11	METAL CHIP	22K 5% 1/10W
R1601	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1659	1-216-837-11	METAL CHIP	22K 5% 1/10W
R1604	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1660	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1605	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1661	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1606	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1662	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
R1607	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1663	1-216-818-11	METAL CHIP	560 5% 1/10W
R1608	1-216-809-11	METAL CHIP	100 5% 1/10W	R1665	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1609	1-216-809-11	METAL CHIP	100 5% 1/10W	R1666	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1611	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R1667	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1614	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R1668	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1615	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1669	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1618	1-216-809-11	METAL CHIP	100 5% 1/10W	R1670	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1619	1-216-864-11	SHORT CHIP		R1671	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1620	1-216-809-11	METAL CHIP	100 5% 1/10W	R1672	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1621	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1673	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
R1622	1-216-817-11	METAL CHIP	470 5% 1/10W	R1674	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
R1623	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1675	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
R1625	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1676	1-216-821-11	METAL CHIP	1K 5% 1/10W
R1627	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1681	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
R1634	1-216-809-11	METAL CHIP	100 5% 1/10W	R1682	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1635	1-216-809-11	METAL CHIP	100 5% 1/10W	R1683	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1636	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1684	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1637	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1685	1-218-700-11	METAL CHIP	2.2K 0.50% 1/10W
R1638	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1690	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1639	1-216-809-11	METAL CHIP	100 5% 1/10W	R1691	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1641	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R1692	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1642	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1693	1-218-724-11	METAL CHIP	22K 0.50% 1/10W
R1643	1-216-821-11	METAL CHIP	1K 5% 1/10W	R1694	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
R1644	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R1695	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
R1645	1-216-815-11	METAL CHIP	330 5% 1/10W	R1696	1-218-716-11	METAL CHIP	10K 0.50% 1/10W
				R1697	1-218-716-11	METAL CHIP	10K 0.50% 1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R1698	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C11	1-126-933-11	ELECT	100µF	20%	16V
R1699	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C12	1-126-933-11	ELECT	100µF	20%	16V
R1700	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C13	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
R1701	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	C14	1-164-156-11	CERAMIC CHIP	0.1µF		25V
R1702	1-218-724-11	METAL CHIP	22K	0.50%	1/10W	C15	1-164-392-11	CERAMIC CHIP	390pF	5%	50V
R1703	1-218-724-11	METAL CHIP	22K	0.50%	1/10W	C16	1-162-927-11	CERAMIC CHIP	100pF	5%	50V
R1704	1-218-724-11	METAL CHIP	22K	0.50%	1/10W	C17	1-164-156-11	CERAMIC CHIP	0.1µF		25V
R1705	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	C18	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
R1706	1-218-724-11	METAL CHIP	22K	0.50%	1/10W	C19	1-162-975-11	CERAMIC CHIP	24pF	5%	50V
R1707	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	C20	1-164-156-11	CERAMIC CHIP	0.1µF		25V
R1708	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	C21	1-164-156-11	CERAMIC CHIP	0.1µF		25V
R1709	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	C22	1-164-156-11	CERAMIC CHIP	0.1µF		25V
R1710	1-216-864-11	SHORT CHIP				C23	1-162-974-11	CERAMIC CHIP	0.01µF		50V
R1711	1-216-833-11	METAL CHIP	10K	5%	1/10W	C24	1-126-947-11	ELECT	47µF	20%	35V
R1712	1-216-833-11	METAL CHIP	10K	5%	1/10W	C26	1-164-156-11	CERAMIC CHIP	0.1µF		25V
R1713	1-216-833-11	METAL CHIP	10K	5%	1/10W	C27	1-126-947-11	ELECT	47µF	20%	35V
R1714	1-216-833-11	METAL CHIP	10K	5%	1/10W	C28	1-162-974-11	CERAMIC CHIP	0.01µF		50V
<u>RESISTOR BRIDGE</u>						C29	1-164-156-11	CERAMIC CHIP	0.1µF		25V
RB1603	1-233-576-11	RES, CHIP NETWORK	100			C30	1-162-974-11	CERAMIC CHIP	0.01µF		50V
RB1604	1-233-576-11	RES, CHIP NETWORK	100			C31	1-126-947-11	ELECT	47µF	20%	35V
RB1605	1-233-576-11	RES, CHIP NETWORK	100			C33	1-164-156-11	CERAMIC CHIP	0.1µF		25V
<u>CRYSTAL</u>						C34	1-162-974-11	CERAMIC CHIP	0.01µF		50V
X1601	1-767-925-21	VIBRATOR, CRYSTAL				C35	1-126-947-11	ELECT	47µF	20%	35V
						C36	1-126-934-11	ELECT	220µF	20%	16V
						C37	1-162-974-11	CERAMIC CHIP	0.01µF		50V
						C38	1-162-974-11	CERAMIC CHIP	0.01µF		50V
						C39	1-164-156-11	CERAMIC CHIP	0.1µF		25V
						C40	1-162-974-11	CERAMIC CHIP	0.01µF		50V
						C41	1-126-934-11	ELECT	220µF	20%	16V
						C42	1-162-974-11	CERAMIC CHIP	0.01µF		50V
A-1300-550-A			A BOARD, COMPLETE			C43	1-164-156-11	CERAMIC CHIP	0.1µF		25V
4-382-854-11			SCREW (M3X10), P, SW (+)			C44	1-126-947-11	ELECT	47µF	20%	35V
*	7-651-000-50	GREASE,SILICON (G-746) 200G				C45	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
<u>CAPACITOR</u>						C46	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C1	1-126-933-11	ELECT	100µF	20%	16V	C47	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C2	1-104-665-11	ELECT	100µF	20%	25V	C49	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C3	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C50	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C4	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C51	1-126-947-11	ELECT	47µF	20%	35V
C5	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C52	1-162-974-11	CERAMIC CHIP	0.01µF		50V
C6	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C53	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C7	1-126-933-11	ELECT	100µF	20%	16V	C54	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C8	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C55	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C9	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V	C56	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C10	1-162-974-11	CERAMIC CHIP	0.01µF		50V						

REF. NO.	PART NO.	DESCRIPTION	VALUES		REF. NO.	PART NO.	DESCRIPTION	VALUES	
C57	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C106	1-126-933-11	ELECT	100µF	20% 16V
C59	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C108	1-162-917-11	CERAMIC CHIP	15pF	5% 50V
C60	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C109	1-162-917-11	CERAMIC CHIP	15pF	5% 50V
C61	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C110	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C62	1-126-947-11	ELECT	47µF	20% 35V	C111	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C63	1-126-935-11	ELECT	470µF	20% 16V	C112	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C65	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C113	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C66	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C115	1-162-917-11	CERAMIC CHIP	15pF	5% 50V
C67	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C116	1-162-917-11	CERAMIC CHIP	15pF	5% 50V
C68	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C119	1-126-933-11	ELECT	100µF	20% 16V
C69	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C120	1-126-933-11	ELECT	100µF	20% 16V
C70	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C123	1-162-966-11	CERAMIC CHIP	0.0022µF	10% 50V
C73	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C124	1-164-346-11	CERAMIC CHIP	1µF	16V
C74	1-126-964-11	ELECT	10µF	20% 50V	C125	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C75	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C128	1-162-960-11	CERAMIC CHIP	220pF	10% 50V
C76	1-162-966-11	CERAMIC CHIP	0.0022µF	10% 50V	C129	1-165-176-11	CERAMIC CHIP	0.047µF	10% 16V
C77	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C130	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V
C78	1-104-665-11	ELECT	100µF	20% 25V	C131	1-126-961-11	ELECT	2.2µF	20% 50V
C79	1-126-933-11	ELECT	100µF	20% 16V	C132	1-126-935-11	ELECT	470µF	20% 16V
C80	1-126-967-11	ELECT	47µF	20% 50V	C133	1-126-964-11	ELECT	10µF	20% 50V
C81	1-104-665-11	ELECT	100µF	20% 25V	C134	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C82	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C135	1-126-964-11	ELECT	10µF	20% 50V
C83	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C136	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C84	1-126-933-11	ELECT	100µF	20% 16V	C137	1-126-964-11	ELECT	10µF	20% 50V
C85	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C138	1-126-964-11	ELECT	10µF	20% 50V
C86	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V	C139	1-126-964-11	ELECT	10µF	20% 50V
C87	1-126-960-11	ELECT	1µF	20% 50V	C140	1-126-933-11	ELECT	100µF	20% 16V
C88	1-126-933-11	ELECT	100µF	20% 16V	C141	1-126-933-11	ELECT	100µF	20% 16V
C90	1-126-964-11	ELECT	10µF	20% 50V	C142	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C92	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C143	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C93	1-126-964-11	ELECT	10µF	20% 50V	C144	1-126-964-11	ELECT	10µF	20% 50V
C94	1-164-346-11	CERAMIC CHIP	1µF	16V	C145	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V
C95	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V	C148	1-104-665-11	ELECT	100µF	20% 25V
C96	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C149	1-126-933-11	ELECT	100µF	20% 16V
C97	1-164-315-11	CERAMIC CHIP	470pF	5% 50V	C150	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C98	1-126-960-11	ELECT	1µF	20% 50V	C151	1-164-156-11	CERAMIC CHIP	0.1µF	25V
C99	1-165-176-11	CERAMIC CHIP	0.047µF	10% 16V	C301	1-162-970-11	CERAMIC CHIP	0.01µF	10% 25V
C101	1-162-960-11	CERAMIC CHIP	220pF	10% 50V	C302	1-125-837-91	CERAMIC CHIP	1µF	10% 6.3V
C102	1-126-964-11	ELECT	10µF	20% 50V	C303	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V
C103	1-126-964-11	ELECT	10µF	20% 50V	C304	1-164-315-11	CERAMIC CHIP	470pF	5% 50V
C104	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C305	1-162-917-11	CERAMIC CHIP	15pF	5% 50V
C105	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C306	1-107-826-11	CERAMIC CHIP	0.1µF	10% 16V
					C307	1-164-156-11	CERAMIC CHIP	0.1µF	25V

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C308	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C350	1-126-935-11	ELECT	470µF	20%	16V
C309	1-126-933-11	ELECT	100µF	20%	16V	C351	1-164-156-11	CERAMIC CHIP	0.1µF	25V	
C310	1-126-964-11	ELECT	10µF	20%	50V	C352	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C311	1-126-933-11	ELECT	100µF	20%	16V	C353	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C312	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C354	1-126-963-11	ELECT	4.7µF	20%	50V
C313	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C355	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C314	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C356	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
						C357	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
C315	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C358	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C316	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V	C359	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C317	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C360	1-162-917-11	CERAMIC CHIP	15pF	5%	50V
C318	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C361	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C319	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C362	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C320	1-126-963-11	ELECT	4.7µF	20%	50V	C363	1-126-933-11	ELECT	100µF	20%	16V
C321	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C364	1-126-933-11	ELECT	100µF	20%	16V
C322	1-126-933-11	ELECT	100µF	20%	16V	C365	1-126-933-11	ELECT	100µF	20%	16V
C323	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C366	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C324	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V	C367	1-125-837-91	CERAMIC CHIP	1µF	10%	6.3V
C325	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C368	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C326	1-164-315-11	CERAMIC CHIP	470pF	5%	50V	C369	1-126-933-11	ELECT	100µF	20%	16V
C327	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C370	1-126-933-11	ELECT	100µF	20%	16V
C328	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C371	1-126-933-11	ELECT	100µF	20%	16V
C329	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C372	1-126-933-11	ELECT	100µF	20%	16V
C330	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C373	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C331	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C374	1-126-933-11	ELECT	100µF	20%	16V
C332	1-126-964-11	ELECT	10µF	20%	50V	C375	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C333	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C376	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C334	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C377	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C335	1-126-933-11	ELECT	100µF	20%	16V	C378	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C336	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C379	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C337	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C380	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
C338	1-126-963-11	ELECT	4.7µF	20%	50V	C381	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
C339	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C382	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C340	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C383	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C341	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V	C384	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C342	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C385	1-162-968-11	CERAMIC CHIP	0.0047µF	10%	50V
C343	1-126-963-11	ELECT	4.7µF	20%	50V	C386	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C344	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C387	1-126-964-11	ELECT	10µF	20%	50V
C345	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C388	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C346	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C389	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V
C347	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C390	1-126-964-11	ELECT	10µF	20%	50V
C348	1-164-156-11	CERAMIC CHIP	0.1µF		25V	C391	1-164-156-11	CERAMIC CHIP	0.1µF		25V
C349	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C392	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
C393	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V	C455	1-130-495-00	MYLAR	0.1μF	5%	50V
C394	1-126-933-11	ELECT	100μF	20%	16V	C457	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C395	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V	C458	1-136-244-11	FILM	0.1μF	2.00%	50V
C396	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V	C460	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C397	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V	C461	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C398	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C463	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C399	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C464	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
						C466	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C400	1-126-933-11	ELECT	100μF	20%	16V	C467	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C401	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C468	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V
C402	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C470	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V
C403	1-126-947-11	ELECT	47μF	20%	35V	C472	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V
C404	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C476	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C405	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C477	1-127-760-11	CERAMIC CHIP	4.7μF	10%	6.3V
C406	1-127-760-11	CERAMIC CHIP	4.7μF	10%	6.3V	C478	1-216-864-11	SHORT CHIP			
C407	1-127-760-11	CERAMIC CHIP	4.7μF	10%	6.3V	C479	1-162-923-11	CERAMIC CHIP	47pF	5%	50V
C408	1-127-760-11	CERAMIC CHIP	4.7μF	10%	6.3V	C480	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C410	1-126-934-11	ELECT	220μF	20%	16V	C481	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
						C482	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C411	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V	C483	1-162-968-11	CERAMIC CHIP	0.0047μF	10%	50V
C412	1-125-837-91	CERAMIC CHIP	1μF	10%	6.3V	C484	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C413	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C485	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V
C414	1-162-970-11	CERAMIC CHIP	0.01μF	10%	25V	C486	1-115-467-11	CERAMIC CHIP	0.22μF	10%	10V
C415	1-125-837-91	CERAMIC CHIP	1μF	10%	6.3V	C487	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C416	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C488	1-126-933-11	ELECT	100μF	20%	16V
C417	1-126-933-11	ELECT	100μF	20%	16V	C489	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V
C418	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V	C490	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C419	1-126-933-11	ELECT	100μF	20%	16V	C494	1-126-933-11	ELECT	100μF	20%	16V
C420	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C495	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C421	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V	C497	1-126-933-11	ELECT	100μF	20%	16V
C422	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C498	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V
C423	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C500	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C426	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C501	1-162-974-11	CERAMIC CHIP	0.01μF		50V
C427	1-125-891-11	CERAMIC CHIP	0.47μF	10%	10V	C502	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
						C503	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C430	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C504	1-115-416-11	CERAMIC CHIP	0.001μF	5%	25V
C431	1-107-826-11	CERAMIC CHIP	0.1μF	10%	16V	C505	1-162-964-11	CERAMIC CHIP	0.001μF	10%	50V
C435	1-126-933-11	ELECT	100μF	20%	16V	C506	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
C438	1-126-933-11	ELECT	100μF	20%	16V	C507	1-162-966-11	CERAMIC CHIP	0.0022μF	10%	50V
C439	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C701	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C440	1-164-156-11	CERAMIC CHIP	0.1μF		25V	C702	1-126-964-11	ELECT	10μF	20%	50V
C442	1-135-834-91	CERAMIC CHIP	2.2E+06pF		6.3V	C703	1-164-156-11	CERAMIC CHIP	0.1μF		25V
C443	1-126-933-11	ELECT	100μF	20%	16V	C704	1-126-947-11	ELECT	47μF	20%	35V
C444	1-110-563-11	CERAMIC CHIP	0.068μF	10%	16V						
C449	1-125-837-91	CERAMIC CHIP	1μF	10%	6.3V						



REF. NO.	PART NO.	DESCRIPTION	VALUES		REF. NO.	PART NO.	DESCRIPTION	VALUES				
C705	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C786	1-126-963-11	ELECT	4.7µF	20%	50V		
C706	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C787	1-126-960-11	ELECT	1µF	20%	50V		
C707	1-164-156-11	CERAMIC CHIP	0.1µF	25V	C788	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V		
C708	1-104-665-11	ELECT	100µF	20%	25V	C789	1-126-964-11	ELECT	10µF	20%	50V	
C709	1-162-920-11	CERAMIC CHIP	27pF	5%	50V	C790	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V	
C710	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	C791	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V	
C713	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C792	1-130-489-00	MYLAR	0.033µF	5%	50V	
						C793	1-130-471-00	MYLAR	0.001µF	5%	50V	
C714	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	C794	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	
C719	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V	C795	1-126-963-11	ELECT	4.7µF	20%	50V	
C722	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C796	1-126-933-11	ELECT	100µF	20%	16V	
C728	1-126-933-11	ELECT	100µF	20%	16V	C797	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	
C730	1-162-915-11	CERAMIC CHIP	10pF	0.50pF	50V	C799	1-164-156-11	CERAMIC CHIP	0.1µF		25V	
C731	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	C800	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	
C732	1-162-927-11	CERAMIC CHIP	100pF	5%	50V	C801	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	
C733	1-115-416-11	CERAMIC CHIP	0.001µF	5%	25V							
C739	1-126-963-11	ELECT	4.7µF	20%	50V	C802	1-126-935-11	ELECT	470µF	20%	16V	
C740	1-126-963-11	ELECT	4.7µF	20%	50V	C810	1-126-947-11	ELECT	47µF	20%	35V	
C741	1-126-963-11	ELECT	4.7µF	20%	50V			<u>CONNECTOR</u>				
C745	1-164-156-11	CERAMIC CHIP	0.1µF		25V	*	CN1	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P		
C746	1-126-947-11	ELECT	47µF	20%	35V	*	CN2	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P		
C747	1-126-947-11	ELECT	47µF	20%	35V	*	CN3	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P		
C749	1-126-947-11	ELECT	47µF	20%	35V	*	CN4	1-564-510-11	PLUG, CONNECTOR	7P		
C751	1-126-943-11	ELECT	2200µF	20%	25V		CN5	1-573-979-21	CONNECTOR, BOARD TO BOARD	11P		
C752	1-126-943-11	ELECT	2200µF	20%	25V	*	CN6	1-793-922-11	CONNECTOR, DIN (RECEPTACLE)	64P		
C755	1-126-947-11	ELECT	47µF	20%	35V	*	CN7	1-564-508-11	PLUG, CONNECTOR	5P		
C756	1-126-964-11	ELECT	10µF	20%	50V		CN8	1-695-915-11	TAB (CONTACT)			
C757	1-130-495-00	MYLAR	0.1µF	5%	50V	*	CN9	1-564-509-11	PLUG, CONNECTOR	6P		
C758	1-126-947-11	ELECT	47µF	20%	35V	*	CN10	1-564-511-11	PLUG, CONNECTOR	8P		
C759	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V							
C761	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V		CN11	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P		
C762	1-104-665-11	ELECT	100µF	20%	25V		CN12	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P		
C764	1-130-495-00	MYLAR	0.1µF	5%	50V	*	CN13	1-793-922-11	CONNECTOR, DIN (RECEPTACLE)	64P		
C765	1-126-933-11	ELECT	100µF	20%	16V	*	CN14	1-779-892-11	CONNECTOR, BOARD TO BOARD	10P		
C771	1-130-495-00	MYLAR	0.1µF	5%	50V			CN15	1-695-915-11	TAB (CONTACT)		
C772	1-130-495-00	MYLAR	0.1µF	5%	50V	*	CN16	1-564-506-11	PLUG, CONNECTOR	3P		
C773	1-164-677-11	CERAMIC CHIP	0.033µF	10%	16V	*	CN17	1-564-508-11	PLUG, CONNECTOR	5P		
C775	1-162-967-11	CERAMIC CHIP	0.0033µF	10%	50V	*	CN18	1-564-508-11	PLUG, CONNECTOR	5P		
C780	1-104-665-11	ELECT	100µF	20%	25V	*	CN19	1-564-508-11	PLUG, CONNECTOR	5P		
C782	1-130-489-00	MYLAR	0.033µF	5%	50V			CN21	1-695-915-11	TAB (CONTACT)		
C783	1-130-471-00	MYLAR	0.001µF	5%	50V			CN22	1-695-915-11	TAB (CONTACT)		
C784	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	*	CN23	1-564-507-11	PLUG, CONNECTOR	4P		
C785	1-126-963-11	ELECT	4.7µF	20%	50V	*	CN24	1-564-510-11	PLUG, CONNECTOR	7P		
						*	CN701	1-564-507-11	PLUG, CONNECTOR	4P		
						*	CN702	1-564-509-11	PLUG, CONNECTOR	6P		



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
*	CN703	PLUG, CONNECTOR	6P			<u>FILTER</u>	
*	CN704	PLUG, CONNECTOR	6P	FL3	1-233-512-21	FERRITE	37μH
*	CN705	PLUG, CONNECTOR	4P	FL4	1-239-848-21	FILTER, LOW PASS	
*	CN706	PLUG, CONNECTOR	4P	FL5	1-239-848-21	FILTER, LOW PASS	
<u>DIODE</u>				FL6	1-239-848-21	FILTER, LOW PASS	
D1	8-719-404-50	DIODE	MA111-TX	FL7	1-239-848-21	FILTER, LOW PASS	
D5	8-719-083-87	DIODE	UDZS-TE17-33B			<u>IC</u>	
D7	8-719-069-55	DIODE	UDZSTE-175.6B	IC1	8-759-647-10	IC	UPC2933HF
D307	8-719-978-33	DIODE	DTZ-TT11-6.8B	IC2	8-759-653-07	IC	PQ09RD21
D312	8-719-069-55	DIODE	UDZSTE-175.6B	IC3	8-759-830-08	IC	NJM2068V-TE2
D317	8-719-404-50	DIODE	MA111-TX	IC4	6-702-698-01	IC	M11B416256AC-35J(T)
D318	8-719-404-50	DIODE	MA111-TX	IC5	8-759-100-96	IC	UPC4558G2
D319	8-719-404-50	DIODE	MA111-TX	IC6	8-759-594-44	IC	UPD64082GF-3BA
D321	8-719-404-50	DIODE	MA111-TX	IC7	8-759-100-96	IC	UPC4558G2
D701	8-719-082-05	DIODE	M1MA142WKT1	IC8	8-759-647-10	IC	UPC2933HF
D702	8-719-404-50	DIODE	MA111-TX	IC9	8-759-701-79	IC	NJM7812FA
D703	8-719-083-57	DIODE	UDZSTE-173.6B	IC10	8-759-100-96	IC	UPC4558G2
D704	8-719-082-05	DIODE	M1MA142WKT1	IC11	8-759-100-96	IC	UPC4558G2
D705	8-719-083-87	DIODE	UDZS-TE17-33B	IC12	6-700-898-01	IC	PQ05RD21
D706	8-719-083-87	DIODE	UDZS-TE17-33B	IC13	8-759-647-11	IC	UPC2905HF
D708	8-719-404-50	DIODE	MA111-TX	IC301	8-752-102-21	IC	CXA2103AQ
D709	8-719-404-50	DIODE	MA111-TX	IC302	8-752-916-40	IC	CXP85840A-039Q
D710	8-719-082-05	DIODE	M1MA142WKT1	IC303	8-752-102-21	IC	CXA2103AQ
D711	8-719-082-05	DIODE	M1MA142WKT1	IC304	8-752-916-40	IC	CXP85840A-039Q
D712	8-719-082-05	DIODE	M1MA142WKT1	IC305	8-759-595-97	IC	SN74LV4053ANSR
D713	8-719-082-05	DIODE	M1MA142WKT1	IC306	8-752-103-44	IC	CXA2171Q
D718	8-719-404-50	DIODE	MA111-TX	IC307	8-759-595-97	IC	SN74LV4053ANSR
D719	8-719-404-50	DIODE	MA111-TX	IC308	8-752-395-13	IC	CXD2085M-T4
D720	8-719-920-67	DIODE	ERC91-02	IC309	8-752-100-25	IC	CXA2150AQ
D721	8-719-920-67	DIODE	ERC91-02	IC310	8-759-349-11	IC	PST9145NL
D723	8-719-083-85	DIODE	UDZS-TE17-22B	IC311	8-759-700-07	IC	NJM2903M
D724	8-719-083-85	DIODE	UDZS-TE17-22B	IC312	8-759-082-58	IC	TC7W08FU
D725	8-719-083-85	DIODE	UDZS-TE17-22B	IC701	8-759-349-11	IC	PST9145NL
D726	8-719-083-85	DIODE	UDZS-TE17-22B	IC702	6-700-149-01	IC	M24C04-MN6T(A)
D729	8-719-404-50	DIODE	MA111-TX	IC703	8-759-575-72	IC	M24C08-WMN6T
<u>FERRITE BEAD</u>				IC704	6-802-317-01	IC	M306V2ME-202FP
FB1	1-414-445-11	FERRITE	0μH	IC707	8-759-100-96	IC	UPC4558G2
FB2	1-414-445-11	FERRITE	0μH	IC708	8-759-190-89	IC	TDA7265
FB3	1-414-445-11	FERRITE	0μH	IC711	8-759-690-57	IC	BH3868BFS-E2
FB4	1-414-445-11	FERRITE	0μH			<u>CHIP CONDUCTOR</u>	
FB5	1-216-295-91	SHORT CHIP		JR001	1-216-864-11	SHORT CHIP	
FB6	1-414-445-11	FERRITE	0μH				
FB301	1-414-760-21	FERRITE	0μH				

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

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



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<u>COIL</u>				<u>TRANSISTOR</u>			
L1	1-414-181-11	INDUCTOR	4.7µH	Q1	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L2	1-469-555-21	INDUCTOR	10µH	Q2	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L3	1-469-555-21	INDUCTOR	10µH	Q3	8-729-422-27	TRANSISTOR	2SD601A-Q
L4	1-469-555-21	INDUCTOR	10µH	Q4	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L5	1-414-193-41	INDUCTOR	220µH	Q5	8-729-422-27	TRANSISTOR	2SD601A-Q
L6	1-469-555-21	INDUCTOR	10µH	Q6	8-729-422-27	TRANSISTOR	2SD601A-Q
L7	1-414-856-11	INDUCTOR	10µH	Q7	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L8	1-414-856-11	INDUCTOR	10µH	Q8	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L9	1-414-856-11	INDUCTOR	10µH	Q11	8-729-422-27	TRANSISTOR	2SD601A-Q
L10	1-412-537-31	INDUCTOR	100µH	Q12	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L11	1-414-856-11	INDUCTOR	10µH	Q13	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L12	1-414-856-11	INDUCTOR	10µH	Q14	8-729-422-27	TRANSISTOR	2SD601A-Q
L13	1-414-856-11	INDUCTOR	10µH	Q15	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L301	1-469-555-21	INDUCTOR	10µH	Q16	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L302	1-469-555-21	INDUCTOR	10µH	Q17	8-729-422-27	TRANSISTOR	2SD601A-Q
L303	1-469-555-21	INDUCTOR	10µH	Q18	8-729-422-27	TRANSISTOR	2SD601A-Q
L304	1-469-555-21	INDUCTOR	10µH	Q19	8-729-422-27	TRANSISTOR	2SD601A-Q
L305	1-469-555-21	INDUCTOR	10µH	Q20	8-729-422-27	TRANSISTOR	2SD601A-Q
L306	1-414-193-41	INDUCTOR	220µH	Q21	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L307	1-469-555-21	INDUCTOR	10µH	Q22	8-729-422-27	TRANSISTOR	2SD601A-Q
L308	1-414-856-11	INDUCTOR	10µH	Q23	8-729-422-27	TRANSISTOR	2SD601A-Q
L309	1-469-555-21	INDUCTOR	10µH	Q24	8-729-422-27	TRANSISTOR	2SD601A-Q
L310	1-469-555-21	INDUCTOR	10µH	Q25	8-729-422-27	TRANSISTOR	2SD601A-Q
L311	1-469-555-21	INDUCTOR	10µH	Q26	8-729-422-27	TRANSISTOR	2SD601A-Q
L312	1-469-555-21	INDUCTOR	10µH	Q27	8-729-422-27	TRANSISTOR	2SD601A-Q
L313	1-414-856-11	INDUCTOR	10µH	Q28	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L314	1-469-555-21	INDUCTOR	10µH	Q30	1-801-806-11	TRANSISTOR	DTC144EKA
L315	1-469-555-21	INDUCTOR	10µH	Q301	8-729-422-27	TRANSISTOR	2SD601A-Q
L316	1-414-856-11	INDUCTOR	10µH	Q302	8-729-422-27	TRANSISTOR	2SD601A-Q
L317	1-414-856-11	INDUCTOR	10µH	Q303	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
L318	1-469-555-21	INDUCTOR	10µH	Q304	8-729-422-27	TRANSISTOR	2SD601A-Q
L321	1-414-856-11	INDUCTOR	10µH	Q305	8-729-422-27	TRANSISTOR	2SD601A-Q
L701	1-414-179-21	INDUCTOR	2.2µH	Q306	8-729-422-27	TRANSISTOR	2SD601A-Q
L702	1-412-911-11	FERRITE	0µH	Q307	8-729-422-27	TRANSISTOR	2SD601A-Q
<u>IC LINK</u>				Q308	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
 PS1	1-532-679-00	IC	LINK 0.6A 50V	Q309	8-729-422-27	TRANSISTOR	2SD601A-Q
 PS2	1-532-685-00	IC	LINK 0.8A 50V	Q310	8-729-422-27	TRANSISTOR	2SD601A-Q
 PS3	1-532-679-00	IC	LINK 0.6A 50V	Q311	8-729-422-27	TRANSISTOR	2SD601A-Q
 PS701	1-576-336-21	IC	LINK 2A 50V	Q312	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
 PS702	1-576-336-21	IC	LINK 2A 50V	Q313	8-729-422-27	TRANSISTOR	2SD601A-Q
				Q314	8-729-422-27	TRANSISTOR	2SD601A-Q
				Q315	8-729-422-27	TRANSISTOR	2SD601A-Q



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
Q316	8-729-422-27	TRANSISTOR	2SD601A-Q	Q361	8-729-422-27	TRANSISTOR	2SD601A-Q
Q317	8-729-422-27	TRANSISTOR	2SD601A-Q	Q363	8-729-422-27	TRANSISTOR	2SD601A-Q
Q318	8-729-422-27	TRANSISTOR	2SD601A-Q	Q367	8-729-122-63	TRANSISTOR	2SA1226-E4
				Q368	8-729-422-27	TRANSISTOR	2SD601A-Q
Q319	8-729-422-27	TRANSISTOR	2SD601A-Q	Q369	1-801-806-11	TRANSISTOR	DTC144EKA
Q320	8-729-422-27	TRANSISTOR	2SD601A-Q	Q373	8-729-422-27	TRANSISTOR	2SD601A-Q
Q321	8-729-422-27	TRANSISTOR	2SD601A-Q	Q374	8-729-422-27	TRANSISTOR	2SD601A-Q
Q322	8-729-422-27	TRANSISTOR	2SD601A-Q	Q378	8-729-422-27	TRANSISTOR	2SD601A-Q
Q323	8-729-422-27	TRANSISTOR	2SD601A-Q	Q379	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q324	8-729-422-27	TRANSISTOR	2SD601A-Q	Q380	8-729-422-27	TRANSISTOR	2SD601A-Q
Q325	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q381	8-729-422-27	TRANSISTOR	2SD601A-Q
Q326	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q501	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R
Q327	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q502	1-801-806-11	TRANSISTOR	DTC144EKA
Q328	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q701	8-729-422-27	TRANSISTOR	2SD601A-Q
Q329	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q702	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q330	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q703	8-729-422-27	TRANSISTOR	2SD601A-Q
Q331	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q704	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q332	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q705	8-729-422-27	TRANSISTOR	2SD601A-Q
Q333	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q706	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q334	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q707	1-801-806-11	TRANSISTOR	DTC144EKA
Q335	8-729-422-27	TRANSISTOR	2SD601A-Q	Q708	8-729-422-27	TRANSISTOR	2SD601A-Q
Q336	8-729-422-27	TRANSISTOR	2SD601A-Q	Q709	8-729-422-27	TRANSISTOR	2SD601A-Q
Q337	8-729-422-27	TRANSISTOR	2SD601A-Q	Q710	8-729-422-27	TRANSISTOR	2SD601A-Q
Q338	8-729-422-27	TRANSISTOR	2SD601A-Q	Q712	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q339	8-729-422-27	TRANSISTOR	2SD601A-Q	Q713	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q340	8-729-422-27	TRANSISTOR	2SD601A-Q	Q714	8-729-027-38	TRANSISTOR	DTA144EKA-T146
Q341	8-729-422-27	TRANSISTOR	2SD601A-Q	Q715	8-729-422-27	TRANSISTOR	2SD601A-Q
Q342	8-729-422-27	TRANSISTOR	2SD601A-Q	Q716	8-729-422-27	TRANSISTOR	2SD601A-Q
Q343	8-729-122-63	TRANSISTOR	2SA1226-E4	Q717	8-729-422-27	TRANSISTOR	2SD601A-Q
Q344	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q718	8-729-422-27	TRANSISTOR	2SD601A-Q
Q345	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q721	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q346	8-729-422-27	TRANSISTOR	2SD601A-Q	Q722	8-729-422-27	TRANSISTOR	2SD601A-Q
Q347	8-729-122-63	TRANSISTOR	2SA1226-E4	Q723	8-729-422-27	TRANSISTOR	2SD601A-Q
Q348	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	Q725	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
Q349	8-729-422-27	TRANSISTOR	2SD601A-Q	RESISTOR			
Q350	8-729-422-27	TRANSISTOR	2SD601A-Q	R1	1-216-464-11	METAL OXIDE	18K 5% 2W
Q351	8-729-122-63	TRANSISTOR	2SA1226-E4	R2	1-216-813-11	METAL CHIP	220 5% 1/10W
Q352	8-729-422-27	TRANSISTOR	2SD601A-Q	R3	1-216-813-11	METAL CHIP	220 5% 1/10W
Q353	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R4	1-216-813-11	METAL CHIP	220 5% 1/10W
Q354	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R5	1-216-813-11	METAL CHIP	220 5% 1/10W
Q355	8-729-422-27	TRANSISTOR	2SD601A-Q	R6	1-216-813-11	METAL CHIP	220 5% 1/10W
Q356	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R7	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q357	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	R8	1-216-813-11	METAL CHIP	220 5% 1/10W
Q358	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX				



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R9	1-216-813-11	METAL CHIP	220	5%	1/10W	R60	1-216-833-11	METAL CHIP	10K	5%	1/10W
R10	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R61	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R11	1-218-720-11	METAL CHIP	15K	0.50%	1/10W	R62	1-216-821-11	METAL CHIP	1K	5%	1/10W
R12	1-218-722-11	METAL CHIP	18K	0.50%	1/10W	R63	1-216-809-11	METAL CHIP	100	5%	1/10W
R13	1-218-740-11	METAL CHIP	100K	0.50%	1/10W	R64	1-216-837-11	METAL CHIP	22K	5%	1/10W
R14	1-216-839-11	METAL CHIP	33K	5%	1/10W	R65	1-216-833-11	METAL CHIP	10K	5%	1/10W
R15	1-216-821-11	METAL CHIP	1K	5%	1/10W	R66	1-216-849-11	METAL CHIP	220K	5%	1/10W
R16	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W	R67	1-216-841-11	METAL CHIP	47K	5%	1/10W
R17	1-218-706-11	METAL CHIP	3.9K	0.50%	1/10W	R68	1-216-839-11	METAL CHIP	33K	5%	1/10W
R18	1-218-714-11	METAL CHIP	8.2K	0.50%	1/10W	R69	1-216-857-11	METAL CHIP	1M	5%	1/10W
R19	1-216-817-11	METAL CHIP	470	5%	1/10W	R70	1-216-845-11	METAL CHIP	100K	5%	1/10W
R20	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R71	1-216-813-11	METAL CHIP	220	5%	1/10W
R21	1-216-839-11	METAL CHIP	33K	5%	1/10W	R72	1-216-821-11	METAL CHIP	1K	5%	1/10W
R22	1-216-817-11	METAL CHIP	470	5%	1/10W	R73	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R23	1-216-809-11	METAL CHIP	100	5%	1/10W	R74	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R24	1-216-809-11	METAL CHIP	100	5%	1/10W	R75	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R25	1-216-809-11	METAL CHIP	100	5%	1/10W	R76	1-216-818-11	METAL CHIP	560	5%	1/10W
R26	1-216-809-11	METAL CHIP	100	5%	1/10W	R77	1-216-821-11	METAL CHIP	1K	5%	1/10W
R27	1-218-707-11	METAL CHIP	4.3K	0.50%	1/10W	R78	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R29	1-216-864-11	SHORT CHIP				R79	1-216-818-11	METAL CHIP	560	5%	1/10W
R30	1-216-809-11	METAL CHIP	100	5%	1/10W	R80	1-218-686-11	METAL CHIP	560	0.50%	1/10W
R31	1-216-809-11	METAL CHIP	100	5%	1/10W	R81	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R32	1-216-864-11	SHORT CHIP				R82	1-216-821-11	METAL CHIP	1K	5%	1/10W
R33	1-216-809-11	METAL CHIP	100	5%	1/10W	R85	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R37	1-216-853-11	METAL CHIP	470K	5%	1/10W	R87	1-216-833-11	METAL CHIP	10K	5%	1/10W
R39	1-216-855-11	METAL CHIP	680K	5%	1/10W	R88	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R40	1-216-809-11	METAL CHIP	100	5%	1/10W	R89	1-216-813-11	METAL CHIP	220	5%	1/10W
R42	1-216-855-11	METAL CHIP	680K	5%	1/10W	R90	1-216-864-11	SHORT CHIP			
R43	1-216-853-11	METAL CHIP	470K	5%	1/10W	R91	1-216-864-11	SHORT CHIP			
R44	1-249-377-11	CARBON	0.47	5%	1/4W	R92	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R46	1-216-822-11	METAL CHIP	1.2K	5%	1/10W	R93	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R48	1-216-809-11	METAL CHIP	100	5%	1/10W	R95	1-216-818-11	METAL CHIP	560	5%	1/10W
R49	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R96	1-216-818-11	METAL CHIP	560	5%	1/10W
R50	1-216-809-11	METAL CHIP	100	5%	1/10W	R99	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R51	1-216-833-11	METAL CHIP	10K	5%	1/10W	R100	1-216-833-11	METAL CHIP	10K	5%	1/10W
R52	1-216-833-11	METAL CHIP	10K	5%	1/10W	R102	1-216-818-11	METAL CHIP	560	5%	1/10W
R53	1-216-817-11	METAL CHIP	470	5%	1/10W	R103	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R54	1-216-817-11	METAL CHIP	470	5%	1/10W	R104	1-216-821-11	METAL CHIP	1K	5%	1/10W
R55	1-216-822-11	METAL CHIP	1.2K	5%	1/10W	R105	1-216-821-11	METAL CHIP	1K	5%	1/10W
R56	1-216-805-11	METAL CHIP	47	5%	1/10W	R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R57	1-216-805-11	METAL CHIP	47	5%	1/10W	R108	1-216-818-11	METAL CHIP	560	5%	1/10W
R59	1-216-821-11	METAL CHIP	1K	5%	1/10W	R109	1-216-807-11	METAL CHIP	68	5%	1/10W
						R110	1-216-809-11	METAL CHIP	100	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R111	1-216-809-11	METAL CHIP	100	5%	1/10W	R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-857-11	METAL CHIP	1M	5%	1/10W	R302	1-216-809-11	METAL CHIP	100	5%	1/10W
R113	1-216-845-11	METAL CHIP	100K	5%	1/10W	R303	1-216-833-11	METAL CHIP	10K	5%	1/10W
R114	1-216-809-11	METAL CHIP	100	5%	1/10W	R304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R115	1-216-820-11	METAL CHIP	820	5%	1/10W	R305	1-216-835-11	METAL CHIP	15K	5%	1/10W
R116	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R306	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R117	1-216-821-11	METAL CHIP	1K	5%	1/10W	R307	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
R118	1-216-820-11	METAL CHIP	820	5%	1/10W	R308	1-216-821-11	METAL CHIP	1K	5%	1/10W
R119	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R309	1-216-813-11	METAL CHIP	220	5%	1/10W
R120	1-216-834-11	METAL CHIP	12K	5%	1/10W	R310	1-216-857-11	METAL CHIP	1M	5%	1/10W
R121	1-216-839-11	METAL CHIP	33K	5%	1/10W	R311	1-216-840-11	METAL CHIP	39K	5%	1/10W
R122	1-216-820-11	METAL CHIP	820	5%	1/10W	R312	1-216-809-11	METAL CHIP	100	5%	1/10W
R123	1-216-833-11	METAL CHIP	10K	5%	1/10W	R313	1-216-833-11	METAL CHIP	10K	5%	1/10W
R124	1-216-834-11	METAL CHIP	12K	5%	1/10W	R314	1-216-833-11	METAL CHIP	10K	5%	1/10W
R125	1-216-839-11	METAL CHIP	33K	5%	1/10W	R315	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R126	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R316	1-216-821-11	METAL CHIP	1K	5%	1/10W
R127	1-216-839-11	METAL CHIP	33K	5%	1/10W	R317	1-216-821-11	METAL CHIP	1K	5%	1/10W
R128	1-216-821-11	METAL CHIP	1K	5%	1/10W	R318	1-216-833-11	METAL CHIP	10K	5%	1/10W
R129	1-216-805-11	METAL CHIP	47	5%	1/10W	R319	1-216-864-11	SHORT CHIP			
R130	1-216-821-11	METAL CHIP	1K	5%	1/10W	R320	1-216-833-11	METAL CHIP	10K	5%	1/10W
R131	1-216-837-11	METAL CHIP	22K	5%	1/10W	R321	1-216-821-11	METAL CHIP	1K	5%	1/10W
R133	1-218-686-11	METAL CHIP	560	0.50%	1/10W	R322	1-216-809-11	METAL CHIP	100	5%	1/10W
R134	1-218-683-11	METAL CHIP	430	0.50%	1/10W	R323	1-216-809-11	METAL CHIP	100	5%	1/10W
R135	1-216-809-11	METAL CHIP	100	5%	1/10W	R324	1-216-809-11	METAL CHIP	100	5%	1/10W
R136	1-216-821-11	METAL CHIP	1K	5%	1/10W	R325	1-216-835-11	METAL CHIP	15K	5%	1/10W
R137	1-216-833-11	METAL CHIP	10K	5%	1/10W	R326	1-216-864-11	SHORT CHIP			
R138	1-216-833-11	METAL CHIP	10K	5%	1/10W	R327	1-216-817-11	METAL CHIP	470	5%	1/10W
R139	1-216-841-11	METAL CHIP	47K	5%	1/10W	R329	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/10W	R330	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R141	1-216-809-11	METAL CHIP	100	5%	1/10W	R331	1-216-833-11	METAL CHIP	10K	5%	1/10W
R142	1-216-839-11	METAL CHIP	33K	5%	1/10W	R332	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W
R143	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R333	1-216-809-11	METAL CHIP	100	5%	1/10W
R144	1-216-840-11	METAL CHIP	39K	5%	1/10W	R334	1-216-809-11	METAL CHIP	100	5%	1/10W
R145	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R146	1-216-839-11	METAL CHIP	33K	5%	1/10W	R336	1-216-809-11	METAL CHIP	100	5%	1/10W
R147	1-216-833-11	METAL CHIP	10K	5%	1/10W	R337	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R148	1-216-397-11	METAL OXIDE	4.7	5%	3W	R338	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R151	1-216-833-11	METAL CHIP	10K	5%	1/10W	R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W	R340	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R153	1-216-833-11	METAL CHIP	10K	5%	1/10W	R341	1-218-706-11	METAL CHIP	3.9K	0.50%	1/10W
R154	1-216-830-11	METAL CHIP	5.6K	5%	1/10W	R342	1-216-841-11	METAL CHIP	47K	5%	1/10W
R155	1-216-864-11	SHORT CHIP				R343	1-216-809-11	METAL CHIP	100	5%	1/10W
						R344	1-216-809-11	METAL CHIP	100	5%	1/10W



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R345	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W	R387	1-216-845-11	METAL CHIP	100K	5%	1/10W
R346	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W	R388	1-216-837-11	METAL CHIP	22K	5%	1/10W
R347	1-216-817-11	METAL CHIP	470	5%	1/10W	R389	1-216-809-11	METAL CHIP	100	5%	1/10W
R348	1-216-841-11	METAL CHIP	47K	5%	1/10W	R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R349	1-216-813-11	METAL CHIP	220	5%	1/10W	R391	1-216-809-11	METAL CHIP	100	5%	1/10W
R350	1-216-809-11	METAL CHIP	100	5%	1/10W	R392	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-813-11	METAL CHIP	220	5%	1/10W	R393	1-216-809-11	METAL CHIP	100	5%	1/10W
R352	1-216-813-11	METAL CHIP	220	5%	1/10W	R394	1-216-809-11	METAL CHIP	100	5%	1/10W
R353	1-216-809-11	METAL CHIP	100	5%	1/10W	R395	1-216-821-11	METAL CHIP	1K	5%	1/10W
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R396	1-216-821-11	METAL CHIP	1K	5%	1/10W
R355	1-216-809-11	METAL CHIP	100	5%	1/10W	R397	1-216-821-11	METAL CHIP	1K	5%	1/10W
R356	1-216-841-11	METAL CHIP	47K	5%	1/10W	R398	1-216-845-11	METAL CHIP	100K	5%	1/10W
R357	1-216-837-11	METAL CHIP	22K	5%	1/10W	R399	1-216-833-11	METAL CHIP	10K	5%	1/10W
R358	1-216-837-11	METAL CHIP	22K	5%	1/10W	R400	1-216-845-11	METAL CHIP	100K	5%	1/10W
R359	1-216-837-11	METAL CHIP	22K	5%	1/10W	R401	1-216-845-11	METAL CHIP	100K	5%	1/10W
R360	1-216-837-11	METAL CHIP	22K	5%	1/10W	R402	1-216-845-11	METAL CHIP	100K	5%	1/10W
R361	1-216-837-11	METAL CHIP	22K	5%	1/10W	R403	1-216-845-11	METAL CHIP	100K	5%	1/10W
R362	1-216-837-11	METAL CHIP	22K	5%	1/10W	R404	1-216-845-11	METAL CHIP	100K	5%	1/10W
R363	1-216-809-11	METAL CHIP	100	5%	1/10W	R405	1-216-845-11	METAL CHIP	100K	5%	1/10W
R364	1-216-809-11	METAL CHIP	100	5%	1/10W	R406	1-216-864-11	SHORT CHIP			
R365	1-216-809-11	METAL CHIP	100	5%	1/10W	R407	1-216-833-11	METAL CHIP	10K	5%	1/10W
R366	1-216-841-11	METAL CHIP	47K	5%	1/10W	R408	1-216-821-11	METAL CHIP	1K	5%	1/10W
R367	1-216-821-11	METAL CHIP	1K	5%	1/10W	R409	1-216-821-11	METAL CHIP	1K	5%	1/10W
R368	1-216-821-11	METAL CHIP	1K	5%	1/10W	R410	1-218-673-11	METAL CHIP	160	0.50%	1/10W
R369	1-216-821-11	METAL CHIP	1K	5%	1/10W	R411	1-218-673-11	METAL CHIP	160	0.50%	1/10W
R370	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R412	1-216-813-11	METAL CHIP	220	5%	1/10W
R371	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R413	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R372	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R414	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R373	1-216-809-11	METAL CHIP	100	5%	1/10W	R415	1-218-668-11	METAL CHIP	100	0.50%	1/10W
R374	1-216-815-11	METAL CHIP	330	5%	1/10W	R416	1-216-857-11	METAL CHIP	1M	5%	1/10W
R375	1-216-815-11	METAL CHIP	330	5%	1/10W	R417	1-216-809-11	METAL CHIP	100	5%	1/10W
R376	1-216-815-11	METAL CHIP	330	5%	1/10W	R418	1-216-809-11	METAL CHIP	100	5%	1/10W
R377	1-216-837-11	METAL CHIP	22K	5%	1/10W	R419	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W
R378	1-216-837-11	METAL CHIP	22K	5%	1/10W	R420	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R379	1-216-837-11	METAL CHIP	22K	5%	1/10W	R421	1-216-809-11	METAL CHIP	100	5%	1/10W
R380	1-216-837-11	METAL CHIP	22K	5%	1/10W	R422	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-837-11	METAL CHIP	22K	5%	1/10W	R423	1-216-809-11	METAL CHIP	100	5%	1/10W
R382	1-216-837-11	METAL CHIP	22K	5%	1/10W	R424	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R383	1-216-809-11	METAL CHIP	100	5%	1/10W	R425	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R384	1-216-809-11	METAL CHIP	100	5%	1/10W	R426	1-218-674-11	METAL CHIP	180	0.50%	1/10W
R385	1-216-821-11	METAL CHIP	1K	5%	1/10W	R427	1-218-673-11	METAL CHIP	160	0.50%	1/10W
R386	1-216-809-11	METAL CHIP	100	5%	1/10W	R428	1-216-864-11	SHORT CHIP			
						R429	1-216-850-11	METAL CHIP	270K	5%	1/10W



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R431	1-216-809-11	METAL CHIP	100	5%	1/10W	R481	1-216-821-11	METAL CHIP	1K	5%	1/10W
R432	1-216-817-11	METAL CHIP	470	5%	1/10W	R482	1-216-839-11	METAL CHIP	33K	5%	1/10W
R433	1-216-817-11	METAL CHIP	470	5%	1/10W	R483	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R434	1-216-809-11	METAL CHIP	100	5%	1/10W	R484	1-216-809-11	METAL CHIP	100	5%	1/10W
R435	1-216-817-11	METAL CHIP	470	5%	1/10W	R486	1-216-809-11	METAL CHIP	100	5%	1/10W
R436	1-216-809-11	METAL CHIP	100	5%	1/10W	R487	1-216-809-11	METAL CHIP	100	5%	1/10W
R437	1-216-809-11	METAL CHIP	100	5%	1/10W	R489	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R438	1-216-809-11	METAL CHIP	100	5%	1/10W	R490	1-216-808-11	METAL CHIP	82	5%	1/10W
R439	1-216-817-11	METAL CHIP	470	5%	1/10W	R491	1-216-833-11	METAL CHIP	10K	5%	1/10W
R440	1-216-813-11	METAL CHIP	220	5%	1/10W	R492	1-216-864-11	SHORT CHIP			
R441	1-216-813-11	METAL CHIP	220	5%	1/10W	R493	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R442	1-216-813-11	METAL CHIP	220	5%	1/10W	R494	1-216-833-11	METAL CHIP	10K	5%	1/10W
R443	1-216-809-11	METAL CHIP	100	5%	1/10W	R495	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R444	1-216-809-11	METAL CHIP	100	5%	1/10W	R496	1-216-809-11	METAL CHIP	100	5%	1/10W
R445	1-216-809-11	METAL CHIP	100	5%	1/10W	R501	1-216-808-11	METAL CHIP	82	5%	1/10W
R446	1-216-809-11	METAL CHIP	100	5%	1/10W	R502	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R447	1-216-809-11	METAL CHIP	100	5%	1/10W	R503	1-216-833-11	METAL CHIP	10K	5%	1/10W
R448	1-216-809-11	METAL CHIP	100	5%	1/10W	R504	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R449	1-216-809-11	METAL CHIP	100	5%	1/10W	R505	1-216-821-11	METAL CHIP	1K	5%	1/10W
R450	1-216-814-11	METAL CHIP	270	5%	1/10W	R506	1-216-837-11	METAL CHIP	22K	5%	1/10W
R451	1-216-814-11	METAL CHIP	270	5%	1/10W	R507	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R452	1-216-814-11	METAL CHIP	270	5%	1/10W	R508	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R453	1-216-841-11	METAL CHIP	47K	5%	1/10W	R509	1-216-837-11	METAL CHIP	22K	5%	1/10W
R454	1-216-837-11	METAL CHIP	22K	5%	1/10W	R510	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R455	1-216-837-11	METAL CHIP	22K	5%	1/10W	R512	1-216-864-11	SHORT CHIP			
R456	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R513	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R457	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R515	1-216-809-11	METAL CHIP	100	5%	1/10W
R458	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R516	1-216-809-11	METAL CHIP	100	5%	1/10W
R459	1-216-815-11	METAL CHIP	330	5%	1/10W	R517	1-216-809-11	METAL CHIP	100	5%	1/10W
R460	1-216-815-11	METAL CHIP	330	5%	1/10W	R518	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R461	1-216-815-11	METAL CHIP	330	5%	1/10W	R519	1-216-821-11	METAL CHIP	1K	5%	1/10W
R462	1-216-817-11	METAL CHIP	470	5%	1/10W	R521	1-216-833-11	METAL CHIP	10K	5%	1/10W
R463	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	R527	1-216-864-11	SHORT CHIP			
R464	1-216-809-11	METAL CHIP	100	5%	1/10W	R538	1-216-809-11	METAL CHIP	100	5%	1/10W
R468	1-216-809-11	METAL CHIP	100	5%	1/10W	R540	1-216-809-11	METAL CHIP	100	5%	1/10W
R469	1-216-797-11	METAL CHIP	10	5%	1/10W	R541	1-218-867-11	METAL CHIP	6.8K	0.50%	1/10W
R470	1-216-839-11	METAL CHIP	33K	5%	1/10W	R542	1-216-809-11	METAL CHIP	100	5%	1/10W
R472	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R543	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R473	1-216-809-11	METAL CHIP	100	5%	1/10W	R544	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R476	1-216-808-11	METAL CHIP	82	5%	1/10W	R550	1-216-863-11	METAL CHIP	3.3M	5%	1/10W
R477	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R551	1-216-833-11	METAL CHIP	10K	5%	1/10W
R480	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R552	1-216-809-11	METAL CHIP	100	5%	1/10W
						R553	1-216-834-11	METAL CHIP	12K	5%	1/10W



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R554	1-216-809-11	METAL CHIP	100	5%	1/10W	R701	1-216-817-11	METAL CHIP	470	5%	1/10W
R556	1-216-808-11	METAL CHIP	82	5%	1/10W	R702	1-216-841-11	METAL CHIP	47K	5%	1/10W
R557	1-216-808-11	METAL CHIP	82	5%	1/10W	R703	1-216-821-11	METAL CHIP	1K	5%	1/10W
R558	1-216-808-11	METAL CHIP	82	5%	1/10W	R705	1-216-809-11	METAL CHIP	100	5%	1/10W
R559	1-216-817-11	METAL CHIP	470	5%	1/10W	R706	1-216-809-11	METAL CHIP	100	5%	1/10W
R561	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R707	1-216-809-11	METAL CHIP	100	5%	1/10W
R562	1-216-817-11	METAL CHIP	470	5%	1/10W	R708	1-216-809-11	METAL CHIP	100	5%	1/10W
R566	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R709	1-216-817-11	METAL CHIP	470	5%	1/10W
R567	1-218-708-11	METAL CHIP	4.7K	0.50%	1/10W	R710	1-216-813-11	METAL CHIP	220	5%	1/10W
R568	1-216-809-11	METAL CHIP	100	5%	1/10W	R711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R569	1-216-809-11	METAL CHIP	100	5%	1/10W	R712	1-216-813-11	METAL CHIP	220	5%	1/10W
R570	1-218-716-11	METAL CHIP	10K	0.50%	1/10W	R713	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R571	1-216-864-11	SHORT CHIP				R714	1-216-809-11	METAL CHIP	100	5%	1/10W
R572	1-216-835-11	METAL CHIP	15K	5%	1/10W	R715	1-216-809-11	METAL CHIP	100	5%	1/10W
R574	1-216-833-11	METAL CHIP	10K	5%	1/10W	R716	1-216-821-11	METAL CHIP	1K	5%	1/10W
R575	1-216-833-11	METAL CHIP	10K	5%	1/10W	R717	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R576	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R718	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R577	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R719	1-216-813-11	METAL CHIP	220	5%	1/10W
R593	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R720	1-216-809-11	METAL CHIP	100	5%	1/10W
R594	1-216-833-11	METAL CHIP	10K	5%	1/10W	R721	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R596	1-216-841-11	METAL CHIP	47K	5%	1/10W	R722	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R597	1-216-821-11	METAL CHIP	1K	5%	1/10W	R723	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R598	1-216-833-11	METAL CHIP	10K	5%	1/10W	R724	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R599	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R725	1-216-809-11	METAL CHIP	100	5%	1/10W
R602	1-216-837-11	METAL CHIP	22K	5%	1/10W	R727	1-216-809-11	METAL CHIP	100	5%	1/10W
R603	1-216-833-11	METAL CHIP	10K	5%	1/10W	R728	1-216-864-11	SHORT CHIP			
R604	1-216-833-11	METAL CHIP	10K	5%	1/10W	R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R605	1-216-833-11	METAL CHIP	10K	5%	1/10W	R732	1-216-809-11	METAL CHIP	100	5%	1/10W
R606	1-216-833-11	METAL CHIP	10K	5%	1/10W	R733	1-216-821-11	METAL CHIP	1K	5%	1/10W
R607	1-216-833-11	METAL CHIP	10K	5%	1/10W	R735	1-216-833-11	METAL CHIP	10K	5%	1/10W
R608	1-216-833-11	METAL CHIP	10K	5%	1/10W	R736	1-216-813-11	METAL CHIP	220	5%	1/10W
R609	1-216-809-11	METAL CHIP	100	5%	1/10W	R737	1-216-833-11	METAL CHIP	10K	5%	1/10W
R613	1-216-833-11	METAL CHIP	10K	5%	1/10W	R738	1-218-708-11	METAL CHIP	4.7K	0.50%	1/10W
R616	1-216-833-11	METAL CHIP	10K	5%	1/10W	R740	1-216-809-11	METAL CHIP	100	5%	1/10W
R617	1-216-809-11	METAL CHIP	100	5%	1/10W	R742	1-216-821-11	METAL CHIP	1K	5%	1/10W
R618	1-216-809-11	METAL CHIP	100	5%	1/10W	R743	1-216-809-11	METAL CHIP	100	5%	1/10W
R619	1-216-821-11	METAL CHIP	1K	5%	1/10W	R744	1-216-821-11	METAL CHIP	1K	5%	1/10W
R620	1-216-801-11	METAL CHIP	22	5%	1/10W	R745	1-216-841-11	METAL CHIP	47K	5%	1/10W
R621	1-216-801-11	METAL CHIP	22	5%	1/10W	R747	1-216-809-11	METAL CHIP	100	5%	1/10W
R622	1-216-801-11	METAL CHIP	22	5%	1/10W	R748	1-216-833-11	METAL CHIP	10K	5%	1/10W
R624	1-216-809-11	METAL CHIP	100	5%	1/10W	R749	1-216-849-11	METAL CHIP	220K	5%	1/10W
R628	1-249-377-11	CARBON	0.47	5%	1/4W	R750	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
						R751	1-216-821-11	METAL CHIP	1K	5%	1/10W



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R752	1-216-821-11	METAL CHIP	1K	5%	1/10W	R813	1-216-845-11	METAL CHIP	100K	5%	1/10W
R753	1-216-809-11	METAL CHIP	100	5%	1/10W	R817	1-216-845-11	METAL CHIP	100K	5%	1/10W
R754	1-216-809-11	METAL CHIP	100	5%	1/10W	R818	1-216-833-11	METAL CHIP	10K	5%	1/10W
R755	1-216-809-11	METAL CHIP	100	5%	1/10W	R823	1-216-835-11	METAL CHIP	15K	5%	1/10W
R756	1-216-809-11	METAL CHIP	100	5%	1/10W	R828	1-216-817-11	METAL CHIP	470	5%	1/10W
R758	1-216-809-11	METAL CHIP	100	5%	1/10W	R829	1-216-864-11	SHORT CHIP			
R759	1-216-821-11	METAL CHIP	1K	5%	1/10W	R830	1-216-849-11	METAL CHIP	220K	5%	1/10W
R760	1-216-849-11	METAL CHIP	220K	5%	1/10W	R831	1-216-839-11	METAL CHIP	33K	5%	1/10W
R761	1-216-849-11	METAL CHIP	220K	5%	1/10W	R832	1-216-817-11	METAL CHIP	470	5%	1/10W
R762	1-216-845-11	METAL CHIP	100K	5%	1/10W	R833	1-216-839-11	METAL CHIP	33K	5%	1/10W
R763	1-216-815-11	METAL CHIP	330	5%	1/10W	R834	1-216-805-11	METAL CHIP	47	5%	1/10W
R764	1-216-821-11	METAL CHIP	1K	5%	1/10W	R835	1-216-837-11	METAL CHIP	22K	5%	1/10W
						R836	1-216-864-11	SHORT CHIP			
R765	1-216-815-11	METAL CHIP	330	5%	1/10W	R840	1-216-841-11	METAL CHIP	47K	5%	1/10W
R766	1-216-821-11	METAL CHIP	1K	5%	1/10W	R841	1-216-839-11	METAL CHIP	33K	5%	1/10W
R767	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R768	1-216-809-11	METAL CHIP	100	5%	1/10W	R842	1-216-817-11	METAL CHIP	470	5%	1/10W
R769	1-216-809-11	METAL CHIP	100	5%	1/10W	R843	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
						R844	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R770	1-216-845-11	METAL CHIP	100K	5%	1/10W	R845	1-216-817-11	METAL CHIP	470	5%	1/10W
R771	1-216-809-11	METAL CHIP	100	5%	1/10W	R848	1-216-836-11	METAL CHIP	18K	5%	1/10W
R772	1-216-821-11	METAL CHIP	1K	5%	1/10W						
R773	1-216-809-11	METAL CHIP	100	5%	1/10W	R849	1-216-836-11	METAL CHIP	18K	5%	1/10W
R774	1-216-809-11	METAL CHIP	100	5%	1/10W	R851	1-216-833-11	METAL CHIP	10K	5%	1/10W
						R854	1-216-838-11	METAL CHIP	27K	5%	1/10W
R775	1-216-821-11	METAL CHIP	1K	5%	1/10W	R855	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R777	1-216-821-11	METAL CHIP	1K	5%	1/10W	R857	1-216-838-11	METAL CHIP	27K	5%	1/10W
R778	1-216-809-11	METAL CHIP	100	5%	1/10W	R858	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R779	1-216-809-11	METAL CHIP	100	5%	1/10W	R860	1-249-389-11	CARBON	4.7	5%	1/4W
R781	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	R861	1-249-389-11	CARBON	4.7	5%	1/4W
						R862	1-216-839-11	METAL CHIP	33K	5%	1/10W
R782	1-216-809-11	METAL CHIP	100	5%	1/10W	R863	1-216-841-11	METAL CHIP	47K	5%	1/10W
R783	1-216-809-11	METAL CHIP	100	5%	1/10W						
R784	1-216-809-11	METAL CHIP	100	5%	1/10W	R864	1-216-839-11	METAL CHIP	33K	5%	1/10W
R785	1-216-821-11	METAL CHIP	1K	5%	1/10W	R867	1-216-837-11	METAL CHIP	22K	5%	1/10W
R786	1-216-821-11	METAL CHIP	1K	5%	1/10W	R868	1-216-837-11	METAL CHIP	22K	5%	1/10W
						R869	1-216-834-11	METAL CHIP	12K	5%	1/10W
R787	1-216-833-11	METAL CHIP	10K	5%	1/10W	R870	1-216-841-11	METAL CHIP	47K	5%	1/10W
R788	1-216-845-11	METAL CHIP	100K	5%	1/10W						
R790	1-216-837-11	METAL CHIP	22K	5%	1/10W	R871	1-216-809-11	METAL CHIP	100	5%	1/10W
R796	1-216-821-11	METAL CHIP	1K	5%	1/10W	R878	1-216-821-11	METAL CHIP	1K	5%	1/10W
R797	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R879	1-216-821-11	METAL CHIP	1K	5%	1/10W
						R885	1-216-833-11	METAL CHIP	10K	5%	1/10W
R803	1-216-833-11	METAL CHIP	10K	5%	1/10W	R886	1-216-833-11	METAL CHIP	10K	5%	1/10W
R804	1-216-837-11	METAL CHIP	22K	5%	1/10W						
R806	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R887	1-216-821-11	METAL CHIP	1K	5%	1/10W
R807	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R889	1-216-807-11	METAL CHIP	68	5%	1/10W
R810	1-216-833-11	METAL CHIP	10K	5%	1/10W	R890	1-216-807-11	METAL CHIP	68	5%	1/10W
						R891	1-216-807-11	METAL CHIP	68	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R892	1-216-837-11	METAL CHIP	22K	5%	1/10W						
R893	1-216-857-11	METAL CHIP	1M	5%	1/10W						
R895	1-216-830-11	METAL CHIP	5.6K	5%	1/10W						
R896	1-216-864-11	SHORT CHIP						A-1300-551-A	U BOARD, MOUNTED		
R897	1-216-821-11	METAL CHIP	1K	5%	1/10W						
R898	1-216-805-11	METAL CHIP	47	5%	1/10W						
R899	1-216-821-11	METAL CHIP	1K	5%	1/10W						
<u>RESISTOR BRIDGE</u>						C2001	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
RB1	1-233-576-11	RES, CHIP NETWORK	100			C2002	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
RB2	1-233-576-11	RES, CHIP NETWORK	100			C2003	1-126-935-11	ELECT	470µF	20%	16V
RB3	1-233-576-11	RES, CHIP NETWORK	100			C2004	1-128-551-11	ELECT	22µF	20%	63V
RB4	1-233-576-11	RES, CHIP NETWORK	100			C2005	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
RB5	1-233-576-11	RES, CHIP NETWORK	100			C2006	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
RB6	1-233-576-11	RES, CHIP NETWORK	100			C2007	1-126-964-11	ELECT	10µF	20%	50V
<u>TUNER</u>						C2008	1-126-964-11	ELECT	10µF	20%	50V
TU1	8-598-594-10	TUNER, FSS BTF-FA421				C2012	1-126-964-11	ELECT	10µF	20%	50V
TU2	8-598-593-20	TUNER, FSS BTF-WA421				C2013	1-126-964-11	ELECT	10µF	20%	50V
<u>VARISTOR</u>						C2014	1-126-960-11	ELECT	1µF	20%	50V
VD1	1-804-499-21	VARISTOR, CHIP	(1608)			C2015	1-126-960-11	ELECT	1µF	20%	50V
VD2	1-804-499-21	VARISTOR, CHIP	(1608)			C2016	1-126-964-11	ELECT	10µF	20%	50V
VD3	1-804-499-21	VARISTOR, CHIP	(1608)			C2017	1-126-964-11	ELECT	10µF	20%	50V
VD4	1-804-499-21	VARISTOR, CHIP	(1608)			C2018	1-126-960-11	ELECT	1µF	20%	50V
<u>CRYSTAL</u>						C2019	1-126-964-11	ELECT	10µF	20%	50V
X1	1-577-110-11	VIBRATOR, CRYSTAL				C2020	1-126-964-11	ELECT	10µF	20%	50V
X301	1-567-505-11	OSCILLATOR, CRYSTAL				C2021	1-126-960-11	ELECT	1µF	20%	50V
X302	1-767-179-31	VIBRATOR, CERAMIC				C2022	1-126-960-11	ELECT	1µF	20%	50V
X303	1-567-505-11	OSCILLATOR, CRYSTAL				C2023	1-126-964-11	ELECT	10µF	20%	50V
X304	1-767-179-31	VIBRATOR, CERAMIC				C2024	1-126-964-11	ELECT	10µF	20%	50V
X305	1-781-282-11	VIBRATOR, CERAMIC				C2025	1-126-960-11	ELECT	1µF	20%	50V
X306	1-767-989-11	VIBRATOR, CERAMIC				C2026	1-126-960-11	ELECT	1µF	20%	50V
X307	1-760-895-21	VIBRATOR, CERAMIC				C2027	1-128-551-11	ELECT	22µF	20%	63V
X701	1-795-572-11	VIBRATOR, CRYSTAL				C2028	1-126-933-11	ELECT	100µF	20%	16V
						C2029	1-126-964-11	ELECT	10µF	20%	50V
						C2030	1-126-964-11	ELECT	10µF	20%	50V
						C2031	1-126-964-11	ELECT	10µF	20%	50V
						C2032	1-126-964-11	ELECT	10µF	20%	50V
						C2033	1-126-960-11	ELECT	1µF	20%	50V
						C2036	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
						C2037	1-165-176-11	CERAMIC CHIP	0.047µF	10%	16V
						C2038	1-164-816-11	CERAMIC CHIP	220pF	2.00%	50V
						C2040	1-126-933-11	ELECT	100µF	20%	16V
						C2043	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
						C2044	1-126-933-11	ELECT	100µF	20%	16V
						C2045	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES				
C2046	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C2349	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V		
C2048	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C2350	1-126-964-11	ELECT	10µF	20%	50V		
C2050	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C2351	1-126-964-11	ELECT	10µF	20%	50V		
C2052	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C2352	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V		
C2055	1-126-964-11	ELECT	10µF	20%	50V	C2353	1-162-927-11	CERAMIC CHIP	100pF	5%	50V		
C2056	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	C2354	1-136-287-11	FILM	0.0047µF	5%	100V		
C2060	1-126-933-11	ELECT	100µF	20%	16V	C2355	1-137-150-11	FILM	0.01µF	5%	100V		
C2061	1-126-964-11	ELECT	10µF	20%	50V	C2356	1-162-927-11	CERAMIC CHIP	100pF	5%	50V		
C2062	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	C2357	1-126-933-11	ELECT	100µF	20%	16V		
C2064	1-126-964-11	ELECT	10µF	20%	50V	C2358	1-126-933-11	ELECT	100µF	20%	16V		
C2069	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C2359	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V		
C2070	1-126-964-11	ELECT	10µF	20%	50V	C2360	1-136-287-11	FILM	0.0047µF	5%	100V		
C2071	1-126-933-11	ELECT	100µF	20%	16V	C2365	1-136-169-00	FILM	0.22µF	5%	50V		
C2072	1-126-933-11	ELECT	100µF	20%	16V	C2366	1-137-150-11	FILM	0.01µF	5%	100V		
C2075	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	C2367	1-136-287-11	FILM	0.0047µF	5%	100V		
C2076	1-126-933-11	ELECT	100µF	20%	16V	C2368	1-136-169-00	FILM	0.22µF	5%	50V		
C2077	1-126-933-11	ELECT	100µF	20%	16V	CONNECTOR							
C2078	1-126-933-11	ELECT	100µF	20%	16V	*	CN2001	1-793-923-11	CONNECTOR, DIN (PLUG)	64P			
C2079	1-126-933-11	ELECT	100µF	20%	16V	*	CN2002	1-564-526-11	PLUG, CONNECTOR	11P			
C2080	1-126-933-11	ELECT	100µF	20%	16V	DIODE							
C2081	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2001	8-719-110-17	DIODE	RD10ESB2				
C2083	1-128-551-11	ELECT	22µF	20%	63V	D2002	8-719-110-17	DIODE	RD10ESB2				
C2084	1-126-964-11	ELECT	10µF	20%	50V	D2003	8-719-110-17	DIODE	RD10ESB2				
C2085	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	D2004	8-719-110-17	DIODE	RD10ESB2				
C2087	1-164-160-11	CERAMIC CHIP	20pF	5%	50V	D2005	8-719-110-17	DIODE	RD10ESB2				
C2089	1-126-964-11	ELECT	10µF	20%	50V	D2006	8-719-110-17	DIODE	RD10ESB2				
C2090	1-164-227-11	CERAMIC CHIP	0.022µF	10%	25V	D2007	8-719-110-17	DIODE	RD10ESB2				
C2091	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2008	8-719-110-17	DIODE	RD10ESB2				
C2092	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2009	8-719-110-17	DIODE	RD10ESB2				
C2094	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V	D2010	8-719-110-17	DIODE	RD10ESB2				
C2096	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	D2011	8-719-110-17	DIODE	RD10ESB2				
C2097	1-162-917-11	CERAMIC CHIP	15pF	5%	50V	D2012	8-719-110-17	DIODE	RD10ESB2				
C2098	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2013	8-719-110-17	DIODE	RD10ESB2				
C2099	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2014	8-719-110-17	DIODE	RD10ESB2				
C2102	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2015	8-719-110-17	DIODE	RD10ESB2				
C2103	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2016	8-719-110-17	DIODE	RD10ESB2				
C2111	1-126-964-11	ELECT	10µF	20%	50V	D2017	8-719-110-17	DIODE	RD10ESB2				
C2112	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2018	8-719-110-17	DIODE	RD10ESB2				
C2113	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2019	8-719-110-17	DIODE	RD10ESB2				
C2114	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D2020	8-719-110-17	DIODE	RD10ESB2				
C2122	1-126-964-11	ELECT	10µF	20%	50V	D2021	8-719-110-17	DIODE	RD10ESB2				
C2128	1-126-964-11	ELECT	10µF	20%	50V	D2022	8-719-110-17	DIODE	RD10ESB2				
C2348	1-126-947-11	ELECT	47µF	20%	35V								



REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES	
D2023	8-719-110-17	DIODE	RD10ESB2			<u>COIL</u>		
D2024	8-719-110-17	DIODE	RD10ESB2	L2001	1-469-559-21	INDUCTOR	47µH	
D2025	8-719-110-17	DIODE	RD10ESB2	L2002	1-469-555-21	INDUCTOR	10µH	
D2026	8-719-110-17	DIODE	RD10ESB2			<u>TRANSISTOR</u>		
D2027	8-719-110-17	DIODE	RD10ESB2	Q2001	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2029	8-719-110-17	DIODE	RD10ESB2	Q2002	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
D2030	8-719-110-17	DIODE	RD10ESB2	Q2003	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
D2031	8-719-110-17	DIODE	RD10ESB2	Q2004	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2032	8-719-110-17	DIODE	RD10ESB2	Q2005	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2033	8-719-991-33	DIODE	1SS133T-77	Q2006	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2034	8-719-991-33	DIODE	1SS133T-77	Q2007	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2035	8-719-110-17	DIODE	RD10ESB2	Q2008	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2039	8-719-110-17	DIODE	RD10ESB2	Q2009	8-729-422-27	TRANSISTOR	2SD601A-Q	
D2042	8-719-110-17	DIODE	RD10ESB2	Q2010	8-729-422-27	TRANSISTOR	2SD601A-Q	
		<u>FERRITE BEAD</u>		Q2012	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
FB2001	1-414-760-21	FERRITE	0µH	Q2013	8-729-422-27	TRANSISTOR	2SD601A-Q	
FB2002	1-414-445-11	FERRITE	0µH	Q2015	8-729-422-27	TRANSISTOR	2SD601A-Q	
		<u>FILTER</u>		Q2016	8-729-422-27	TRANSISTOR	2SD601A-Q	
FL2001	1-239-848-21	FILTER, LOW PASS		Q2017	8-729-422-27	TRANSISTOR	2SD601A-Q	
FL2002	1-239-848-21	FILTER, LOW PASS		Q2019	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
FL2003	1-239-848-21	FILTER, LOW PASS		Q2020	8-729-422-27	TRANSISTOR	2SD601A-Q	
		<u>IC</u>		Q2021	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
IC2001	8-759-351-01	IC	TEA6422DT	Q2022	8-729-422-27	TRANSISTOR	2SD601A-Q	
IC2002	8-759-548-56	IC	M52055FP	Q2024	8-729-422-27	TRANSISTOR	2SD601A-Q	
IC2003	8-759-100-96	IC	UPC4558G2	Q2025	8-729-422-27	TRANSISTOR	2SB709A-QRS-TX	
IC2004	8-752-080-04	IC	CXA2069Q	Q2026	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
IC2007	8-752-394-69	IC	CXD2073Q-T4	Q2027	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX	
				Q2028	8-729-424-02	TRANSISTOR	2SD601A-Q	
IC2304	8-759-711-10	IC	NJU4066BM	Q2029	8-729-422-27	TRANSISTOR	2SD601A-Q	
IC2305	8-759-686-15	IC	NJM2180M	(TE2)	Q2301	8-729-422-27	TRANSISTOR	2SD601A-Q
				Q2302	8-729-422-27	TRANSISTOR	2SD601A-Q	
		<u>JACK</u>				<u>RESISTOR</u>		
J2001	1-573-967-12	BLOCK, (S) TERMINAL		R2001	1-218-285-11	METAL CHIP	75 5% 1/10W	
J2002	1-764-143-21	JACK		R2002	1-216-853-11	METAL CHIP	470K 5% 1/10W	
J2003	1-764-143-21	JACK		R2003	1-218-665-11	METAL CHIP	75 0.50% 1/10W	
J2004	1-750-517-21	JACK BLOCK, PIN	3P	R2004	1-218-665-11	METAL CHIP	75 0.50% 1/10W	
J2005	1-815-015-11	JACK BLOCK, PIN		R2005	1-218-665-11	METAL CHIP	75 0.50% 1/10W	
				R2006	1-216-853-11	METAL CHIP	470K 5% 1/10W	
J2006	1-815-015-11	JACK BLOCK, PIN		R2007	1-216-853-11	METAL CHIP	470K 5% 1/10W	
J2007	1-750-516-21	JACK BLOCK, PIN	2P	R2008	1-218-665-11	METAL CHIP	75 0.50% 1/10W	
J2008	1-750-517-21	JACK BLOCK, PIN	3P	R2009	1-218-665-11	METAL CHIP	75 0.50% 1/10W	
J2009	1-750-516-21	JACK BLOCK, PIN	2P	R210	1-218-665-11	METAL CHIP	75 0.50% 1/10W	



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2011	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2055	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2012	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2056	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2013	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2057	1-216-809-11	METAL CHIP	100	5%	1/10W
R2014	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2058	1-218-716-11	METAL CHIP	10K	0.50%	1/10W
R2015	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2059	1-216-817-11	METAL CHIP	470	5%	1/10W
R2016	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2060	1-216-817-11	METAL CHIP	470	5%	1/10W
R2017	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2061	1-216-817-11	METAL CHIP	470	5%	1/10W
R2018	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2062	1-216-817-11	METAL CHIP	470	5%	1/10W
R2019	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2063	1-216-809-11	METAL CHIP	100	5%	1/10W
R2020	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2064	1-216-809-11	METAL CHIP	100	5%	1/10W
R2021	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2065	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2022	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2066	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2023	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2067	1-216-809-11	METAL CHIP	100	5%	1/10W
R2024	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2068	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2025	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2069	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2026	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2070	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2027	1-218-665-11	METAL CHIP	75	0.50%	1/10W	R2071	1-216-809-11	METAL CHIP	100	5%	1/10W
R2028	1-216-809-11	METAL CHIP	100	5%	1/10W	R2072	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2029	1-216-809-11	METAL CHIP	100	5%	1/10W	R2073	1-216-809-11	METAL CHIP	100	5%	1/10W
R2030	1-216-809-11	METAL CHIP	100	5%	1/10W	R2074	1-216-809-11	METAL CHIP	100	5%	1/10W
R2031	1-216-841-11	METAL CHIP	47K	5%	1/10W	R2075	1-216-809-11	METAL CHIP	100	5%	1/10W
R2032	1-216-845-11	METAL CHIP	100K	5%	1/10W	R2076	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2034	1-216-803-11	METAL CHIP	33	5%	1/10W	R2077	1-216-809-11	METAL CHIP	100	5%	1/10W
R2035	1-216-809-11	METAL CHIP	100	5%	1/10W	R2078	1-216-864-11	SHORT CHIP			
R2036	1-216-809-11	METAL CHIP	100	5%	1/10W	R2079	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2037	1-216-809-11	METAL CHIP	100	5%	1/10W	R2080	1-216-809-11	METAL CHIP	100	5%	1/10W
R2038	1-216-809-11	METAL CHIP	100	5%	1/10W	R2081	1-216-809-11	METAL CHIP	100	5%	1/10W
R2039	1-216-833-11	METAL CHIP	10K	5%	1/10W	R2082	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2040	1-216-857-11	METAL CHIP	1M	5%	1/10W	R2083	1-216-864-11	SHORT CHIP			
R2041	1-216-842-11	METAL CHIP	56K	5%	1/10W	R2084	1-216-809-11	METAL CHIP	100	5%	1/10W
R2042	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R2085	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2043	1-216-809-11	METAL CHIP	100	5%	1/10W	R2086	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2044	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2087	1-216-809-11	METAL CHIP	100	5%	1/10W
R2045	1-216-853-11	METAL CHIP	470K	5%	1/10W	R2088	1-216-864-11	SHORT CHIP			
R2046	1-216-818-11	METAL CHIP	560	5%	1/10W	R2089	1-216-809-11	METAL CHIP	100	5%	1/10W
R2047	1-216-809-11	METAL CHIP	100	5%	1/10W	R2090	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2048	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R2091	1-216-821-11	METAL CHIP	1K	5%	1/10W
R2049	1-216-809-11	METAL CHIP	100	5%	1/10W	R2092	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2050	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	R2094	1-216-864-11	SHORT CHIP			
R2051	1-216-809-11	METAL CHIP	100	5%	1/10W	R2096	1-216-809-11	METAL CHIP	100	5%	1/10W
R2052	1-216-817-11	METAL CHIP	470	5%	1/10W	R2097	1-216-809-11	METAL CHIP	100	5%	1/10W
R2053	1-216-817-11	METAL CHIP	470	5%	1/10W	R2098	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2054	1-216-809-11	METAL CHIP	100	5%	1/10W						



REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2099	1-216-809-11	METAL CHIP	100	5%	1/10W	R2175	1-216-817-11	METAL CHIP	470	5%	1/10W
R2100	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R2176	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R2103	1-216-809-11	METAL CHIP	100	5%	1/10W	R2177	1-216-809-11	METAL CHIP	100	5%	1/10W
R2104	1-216-809-11	METAL CHIP	100	5%	1/10W	R2178	1-218-676-11	METAL CHIP	220	0.50%	1/10W
R2105	1-216-809-11	METAL CHIP	100	5%	1/10W	R2182	1-216-864-11	SHORT CHIP			
R2107	1-216-807-11	METAL CHIP	68	5%	1/10W	R2183	1-216-813-11	METAL CHIP	220	5%	1/10W
R2108	1-216-841-11	METAL CHIP	47K	5%	1/10W	R2184	1-218-704-11	METAL CHIP	3.3K	0.50%	1/10W
R2109	1-216-809-11	METAL CHIP	100	5%	1/10W	R2185	1-218-684-11	METAL CHIP	470	0.50%	1/10W
R2110	1-216-809-11	METAL CHIP	100	5%	1/10W	R2186	1-218-688-11	METAL CHIP	680	0.50%	1/10W
R2111	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R2187	1-216-864-11	SHORT CHIP			
R2113	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2193	1-216-809-11	METAL CHIP	100	5%	1/10W
R2116	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R2194	1-216-817-11	METAL CHIP	470	5%	1/10W
R2118	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2195	1-216-817-11	METAL CHIP	470	5%	1/10W
R2121	1-216-809-11	METAL CHIP	100	5%	1/10W	R2196	1-216-817-11	METAL CHIP	470	5%	1/10W
R2122	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2197	1-216-817-11	METAL CHIP	470	5%	1/10W
R2123	1-218-684-11	METAL CHIP	470	0.50%	1/10W	R2198	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2124	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2199	1-216-853-11	METAL CHIP	470K	5%	1/10W
R2125	1-218-702-11	METAL CHIP	2.7K	0.50%	1/10W	R2330	1-216-864-11	SHORT CHIP			
R2128	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R2331	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2130	1-216-809-11	METAL CHIP	100	5%	1/10W	R2332	1-216-813-11	METAL CHIP	220	5%	1/10W
R2131	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R2333	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2132	1-216-833-11	METAL CHIP	10K	5%	1/10W	R2341	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2133	1-218-674-11	METAL CHIP	180	0.50%	1/10W	R2342	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R2136	1-216-816-11	METAL CHIP	390	5%	1/10W	R2343	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R2137	1-218-700-11	METAL CHIP	2.2K	0.50%	1/10W	R2344	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W
R2138	1-216-809-11	METAL CHIP	100	5%	1/10W	R2345	1-216-864-11	SHORT CHIP			
R2142	1-216-815-11	METAL CHIP	330	5%	1/10W	R2346	1-216-864-11	SHORT CHIP			
R2147	1-216-814-11	METAL CHIP	270	5%	1/10W	R2347	1-216-843-11	METAL CHIP	68K	5%	1/10W
R2148	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W	R2348	1-216-838-11	METAL CHIP	27K	5%	1/10W
R2149	1-216-817-11	METAL CHIP	470	5%	1/10W	R2349	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2150	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2350	1-216-797-11	METAL CHIP	10	5%	1/10W
R2151	1-218-698-11	METAL CHIP	1.8K	0.50%	1/10W	R2353	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R2152	1-218-694-11	METAL CHIP	1.2K	0.50%	1/10W	R2354	1-216-841-11	METAL CHIP	47K	5%	1/10W
R2153	1-216-821-11	METAL CHIP	1K	5%	1/10W	R2355	1-218-890-11	METAL CHIP	62K	0.50%	1/10W
R2155	1-216-837-11	METAL CHIP	22K	5%	1/10W	R2356	1-216-842-11	METAL CHIP	56K	5%	1/10W
R2156	1-216-841-11	METAL CHIP	47K	5%	1/10W	R2357	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2157	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R2358	1-216-839-11	METAL CHIP	33K	5%	1/10W
R2159	1-216-832-11	METAL CHIP	8.2K	5%	1/10W	R2359	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R2164	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W	R2360	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R2166	1-216-818-11	METAL CHIP	560	5%	1/10W	R2363	1-216-864-11	SHORT CHIP			
R2169	1-216-842-11	METAL CHIP	56K	5%	1/10W	R2365	1-216-833-11	METAL CHIP	10K	5%	1/10W
R2173	1-216-818-11	METAL CHIP	560	5%	1/10W	R2366	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R2174	1-218-686-11	METAL CHIP	560	0.50%	1/10W						

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REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R2369	1-216-864-11	SHORT CHIP	4.7K 5% 1/10W			C5027	1-126-951-11	ELECT	470µF	20%	35V
R2375	1-216-829-11	METAL CHIP				C5028	1-126-951-11	ELECT	470µF	20%	35V
R2376	1-216-864-11	SHORT CHIP				C5029	1-107-639-11	ELECT	47µF	20%	160V
R2377	1-216-829-11	METAL CHIP				C5030	1-126-947-11	ELECT	47µF	20%	35V
R2379	1-216-842-11	METAL CHIP	56K 5%	1/10W		C5031	1-126-768-11	ELECT	2200µF	20%	16V
R2380	1-216-821-11	METAL CHIP	1K 5%	1/10W		C5038	1-126-947-11	ELECT	47µF	20%	35V
R2381	1-218-867-11	METAL CHIP	6.8K 0.50%	1/10W		C5039	1-126-947-11	ELECT	47µF	20%	35V
R2382	1-216-829-11	METAL CHIP	4.7K 5%	1/10W		C5040	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V
R2383	1-216-829-11	METAL CHIP	4.7K 5%	1/10W		C5041	1-126-767-11	ELECT	1000µF	20%	16V
R2384	1-216-833-11	METAL CHIP	10K 5%	1/10W		C5042	1-126-963-11	ELECT	4.7µF	20%	50V
R2385	1-216-835-11	METAL CHIP	15K 5%	1/10W		C5043	1-126-935-11	ELECT	470µF	20%	16V
R2386	1-216-837-11	METAL CHIP	22K 5%	1/10W		C5047	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
R2387	1-216-821-11	METAL CHIP	1K 5%	1/10W		C5049	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V
R2389	1-216-847-11	METAL CHIP	150K 5%	1/10W		C5050	1-128-554-11	ELECT	330µF	20%	63V
						C5051	1-126-961-11	ELECT	2.2µF	20%	50V
						C5053	1-126-967-11	ELECT	47µF	20%	50V
						C5054	1-126-955-11	ELECT	4700µF	20%	35V
						C5055	1-126-933-11	ELECT	100µF	20%	16V
*	A-1316-566-A	G BOARD, COMPLETE				C6001	1-126-967-11	ELECT	47µF	20%	50V
*	4-374-846-01	COVER, CAPACITOR, CAP TYPE				C6002	1-104-666-11	ELECT	220µF	20%	25V
*	4-382-854-11	SCREW (M3X10), P, SW (+)				C6004	1-126-967-11	ELECT	47µF	20%	50V
*	7-651-000-50	GREASE,SILICON (G-746) 200G				C6008	1-117-228-11	MYLAR	2.2µF	10%	450V
						 C6012	1-119-894-51	CERAMIC	2200pF	20%	250V
						 C6013	1-119-894-51	CERAMIC	2200pF	20%	250V
						 C6014	1-104-708-11	MYLAR	0.47µF	20%	250V
						C6015	1-161-964-91	CERAMIC	0.0047µF		250V
						C6016	1-161-964-91	CERAMIC	0.0047µF		250V
						C6017	1-162-964-11	CERAMIC CHIP	0.001µF	10%	50V
						C6018	1-162-974-11	CERAMIC CHIP	0.01µF		50V
						C6019	1-126-968-11	ELECT	100µF	20%	50V
						C6020	1-126-963-11	ELECT	4.7µF	20%	50V
						C6021	1-126-964-11	ELECT	10µF	20%	50V
						C6022	1-161-964-91	CERAMIC	0.0047µF		250V
						C6023	1-161-964-91	CERAMIC	0.0047µF		250V
						C6025	1-136-479-11	FILM	0.001µF	5%	100V
						C6029	1-136-165-00	FILM	0.1µF	5%	50V
						C6030	1-126-947-11	ELECT	47µF	20%	35V
						C6031	1-137-750-11	ELECT	1500µF	20%	250V
						C6032	1-137-750-11	ELECT	1500µF	20%	250V
						C6041	1-125-969-91	CERAMIC	680pF	10%	1KV
						 C6043	1-104-706-11	MYLAR	0.22µF	20%	250V
						C6046	1-126-968-11	ELECT	100µF	20%	50V
						C6047	1-165-954-11	FILM	56000pF	3%	800V

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REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
		CONNECTOR		D6003	8-719-070-63	DIODE	PDZ10B-115
*	CN5001	1-564-508-11	PLUG, CONNECTOR 5P	D6004	8-719-988-61	DIODE	1SS355TE-17
*	CN5002	1-564-507-11	PLUG, CONNECTOR 4P	D6005	8-719-988-61	DIODE	1SS355TE-17
*	CN5003	1-564-510-11	PLUG, CONNECTOR 7P	D6006	8-719-063-70	DIODE	D1NL20U
*	CN5004	1-766-177-11	PIN, CONNECTOR (PC BOARD) 9P	D6007	8-719-022-99	DIODE	D6SB60L
	CN5005	1-695-915-11	TAB (CONTACT)	D6009	8-719-083-60	DIODE	UDZSTE-174.7B
	CN5006	1-695-915-11	TAB (CONTACT)	D6011	8-719-988-61	DIODE	1SS355TE-17
	CN5007	1-695-915-11	TAB (CONTACT)	D6012	6-500-158-01	DIODE	10ERA60-TA2B5
*	CN6005	1-580-843-11	PIN, CONNECTOR (POWER)	D6019	8-719-083-60	DIODE	UDZSTE-174.7B
		DIODE		D6023	8-719-068-00	DIODE	ERC04-06SE
D5001	8-719-083-67	DIODE	UDZSTE-1720B	D6024	8-719-068-00	DIODE	ERC04-06SE
D5002	8-719-060-89	DIODE	D4SBS6-F	D6030	8-719-063-70	DIODE	D1NL20U
D5003	8-719-060-89	DIODE	D4SBS6-F			FUSE	
D5004	8-719-083-45	DIODE	31DF4N-FC5	△ F6001	1-576-193-11	FUSE	6.3A 125V
D5005	8-719-083-45	DIODE	31DF4N-FC5			FERRITE BEAD	
D5006	8-719-052-37	DIODE	F10P04Q	FB5001	1-410-396-41	FERRITE	0.45μH
D5007	8-719-988-61	DIODE	1SS355TE-17	FB5002	1-410-396-41	FERRITE	0.45μH
D5008	8-719-028-45	DIODE	D2L20U	FB5003	1-410-396-41	FERRITE	0.45μH
D5009	8-719-028-45	DIODE	D2L20U	FB5004	1-410-396-41	FERRITE	0.45μH
D5010	8-719-200-31	DIODE	21DQ05	FB5005	1-410-396-41	FERRITE	0.45μH
D5011	8-719-988-61	DIODE	1SS355TE-17	FB5006	1-410-396-41	FERRITE	0.45μH
D5012	8-719-056-93	DIODE	UDZ-TE-17-18B	FB6001	1-410-396-41	FERRITE	0.45μH
D5013	8-719-069-56	DIODE	UDZSTE-176.2B	FB6004	1-216-295-91	SHORT CHIP	
D5014	8-719-988-61	DIODE	1SS355TE-17	FB6005	1-216-295-91	SHORT CHIP	
D5015	8-719-988-61	DIODE	1SS355TE-17	FB6006	1-216-295-91	SHORT CHIP	
D5016	8-719-083-44	DIODE	FSQ05A04	FB6007	1-216-295-91	SHORT CHIP	
D5017	8-719-073-25	DIODE	S1VBA20	FB6013	1-410-397-21	FERRITE	1.1μH
D5018	8-719-056-84	DIODE	UDZ-TE-17-7.5B	FB6014	1-410-397-21	FERRITE	1.1μH
D5019	8-719-988-61	DIODE	1SS355TE-17	FB6015	1-410-397-21	FERRITE	1.1μH
D5020	8-719-988-61	DIODE	1SS355TE-17	FB6016	1-410-397-21	FERRITE	1.1μH
D5021	8-719-988-61	DIODE	1SS355TE-17			FUSE HOLDER	
D5022	8-719-988-61	DIODE	1SS355TE-17	FH6001	1-533-223-11	FUSE HOLDER	
D5023	8-719-988-61	DIODE	1SS355TE-17	FH6002	1-533-223-11	FUSE HOLDER	
D5024	8-719-988-61	DIODE	1SS355TE-17			IC	
D5025	8-719-988-61	DIODE	1SS355TE-17				
D5026	8-719-988-61	DIODE	1SS355TE-17	IC501	8-749-012-13	IC	DM-58
D5027	8-719-069-54	DIODE	UDZSTE-175.1B	IC5002	8-759-103-93	IC	UPC393C
D5031	8-719-988-61	DIODE	1SS355TE-17	IC5003	8-759-701-84	IC	NJM7905FA
D5033	8-719-988-61	DIODE	1SS355TE-17	IC5004	8-759-640-19	IC	PQ1CG2032FZ
D5034	8-719-083-60	DIODE	UDZSTE-174.7B	IC5005	8-759-198-31	IC	UPC1093J-1-T
D6001	8-719-988-61	DIODE	1SS355TE-17	IC5006	8-759-471-81	IC	PQ05RD11
D6002	8-719-948-45	DIODE	ERA22-08	IC6003	8-759-670-30	IC	MCZ3001D

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

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REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<u>CHIP CONDUCTOR</u>							
JR5002	1-216-864-11	SHORT CHIP		R5005	1-218-867-11	METAL CHIP	6.8K
JR5003	1-216-295-91	SHORT CHIP		R5006	1-216-833-11	METAL CHIP	10K
<u>COIL</u>							
L5001	1-412-523-41	INDUCTOR	6.8µH	R5007	1-249-377-11	CARBON	0.47
L5002	1-412-523-41	INDUCTOR	6.8µH	R5010	1-247-903-00	CARBON	1M
L5003	1-412-529-11	INDUCTOR	22µH	R5011	1-216-818-11	METAL CHIP	560
L5004	1-412-531-31	INDUCTOR	33µH	R5012	1-216-361-00	METAL OXIDE	0.22
L5005	1-412-527-11	INDUCTOR	15µH	R5013	1-216-833-11	METAL CHIP	10K
L5006	1-412-533-21	INDUCTOR	47µH	R5014	1-216-829-11	METAL CHIP	4.7K
L5007	1-412-533-21	INDUCTOR	47µH	R5015	1-218-708-11	METAL CHIP	4.7K
L5008	1-412-529-11	INDUCTOR	22µH	R5016	1-216-833-11	METAL CHIP	10K
L5009	1-412-529-11	INDUCTOR	22µH	R5017	1-216-829-11	METAL CHIP	4.7K
L5010	1-412-521-31	INDUCTOR	4.7µH	R5018	1-216-821-11	METAL CHIP	1K
L5011	1-412-521-31	INDUCTOR	4.7µH	R5019	1-216-857-11	METAL CHIP	1M
L5012	1-406-663-21	INDUCTOR	47µH	R5020	1-216-821-11	METAL CHIP	1K
L5013	1-412-525-31	INDUCTOR	10µH	R5021	1-216-821-11	METAL CHIP	1K
L5014	1-406-663-21	INDUCTOR	47µH	R5022	1-218-708-11	METAL CHIP	4.7K
L5015	1-424-862-11	INDUCTOR	33µH	R5023	1-218-750-11	METAL CHIP	270K
L5016	1-406-663-21	INDUCTOR	47µH	R5024	1-218-682-11	METAL CHIP	390
L5017	1-412-537-31	INDUCTOR	100µH	R5025	1-218-697-11	METAL CHIP	1.6K
 L6001	1-437-479-11	TRANSFORMER, LINE FILTER		R5026	1-216-833-11	METAL CHIP	10K
 L6002	1-437-479-11	TRANSFORMER, LINE FILTER		R5027	1-216-821-11	METAL CHIP	1K
 L6003	1-424-862-11	INDUCTOR	33µH	R5028	1-216-821-11	METAL CHIP	1K
<u>PHOTO COUPLER</u>							
PH6001	8-749-924-35	PHOTO COUPLER	ON3171-R	R5029	1-216-837-11	METAL CHIP	22K
 PH6002	8-749-924-35	PHOTO COUPLER	ON3171-R	R5030	1-216-837-11	METAL CHIP	22K
<u>IC LINK</u>							
 PS5001	1-533-597-31	IC LINK	5A	R5031	1-249-415-11	CARBON	680
 PS5002	1-533-597-31	IC LINK	5A	R5032	1-216-833-11	METAL CHIP	5%
<u>TRANSISTOR</u>							
Q5001	8-729-050-50	TRANSISTOR	2SD1782K-T146-R	R5033	1-216-864-11	SHORT CHIP	
Q5002	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R5034	1-216-833-11	METAL CHIP	10K
Q5003	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R	R5035	1-216-819-11	METAL CHIP	680
Q5004	8-729-120-28	TRANSISTOR	2SC1623-L5L6	R5036	1-216-819-11	METAL CHIP	680
Q5005	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R5037	1-216-821-11	METAL CHIP	1K
Q5006	8-729-901-87	TRANSISTOR	2SC2411K-CQ	R5038	1-216-821-11	METAL CHIP	1K
Q5007	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R	R5039	1-216-864-11	SHORT CHIP	
Q6005	8-729-052-32	TRANSISTOR	IRFB7N50A-LF31	R5040	1-216-833-11	METAL CHIP	10K
Q6006	8-729-052-32	TRANSISTOR	IRFB7N50A-LF31	R5041	1-215-866-11	METAL OXIDE	330
				R5042	1-216-833-11	METAL CHIP	10K
				R5043	1-216-821-11	METAL CHIP	1K
				R5044	1-216-821-11	METAL CHIP	1K
				R5045	1-216-832-11	METAL CHIP	8.2K
				R5046	1-216-833-11	METAL CHIP	10K
				R5047	1-216-833-11	METAL CHIP	10K
				R5048	1-216-833-11	METAL CHIP	10K
				R6002	1-240-251-11	CEMENTED	6.8

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

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G H2

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
R6003	1-260-328-11	CARBON	1K	5%	1/2W						
R6004	1-216-829-11	METAL CHIP	4.7K	5%	1/10W						
R6006	1-216-430-11	METAL OXIDE	390	5%	1W						
R6007	1-216-823-11	METAL CHIP	1.5K	5%	1/10W						
R6008	1-216-845-11	METAL CHIP	100K	5%	1/10W	*	A-1401-059-A	H2 BOARD, MOUNTED			
R6015	1-219-776-11	CARBON	2.2M	10%	1/2W						
R6036	1-218-715-11	METAL CHIP	9.1K	0.50%	1/10W						
R6037	1-215-481-00	METAL	330K	1%	1/4W	*	CN9201	1-564-520-11	PLUG, CONNECTOR	5P	
R6038	1-215-481-00	METAL	330K	1%	1/4W	*	CN9202	1-564-521-11	PLUG, CONNECTOR	6P	
R6039	1-216-851-11	METAL CHIP	330K	5%	1/10W						
R6040	1-215-481-00	METAL	330K	1%	1/4W						
R6041	1-218-668-11	METAL CHIP	100	0.50%	1/10W						
R6042	1-218-719-11	METAL CHIP	13K	0.50%	1/10W						
R6045	1-218-675-11	METAL CHIP	200	0.50%	1/10W						
R6046	1-216-813-11	METAL CHIP	220	5%	1/10W						
R6047	1-216-813-11	METAL CHIP	220	5%	1/10W						
R6050	1-249-417-11	CARBON	1K	5%	1/4W						
R6054	1-249-393-11	CARBON	10	5%	1/4W						
R6056	1-260-131-11	CARBON	470K	5%	1/2W						
R6057	1-260-131-11	CARBON	470K	5%	1/2W						
R6058	1-249-393-11	CARBON	10	5%	1/4W						
R6062	1-216-833-11	METAL CHIP	10K	5%	1/10W						
R6063	1-216-833-11	METAL CHIP	10K	5%	1/10W						
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						
R6081	1-249-393-11	CARBON	10	5%	1/4W						
RELAY											
 RY6002	1-755-395-11	RELAY (AC POWER)				S9201	1-572-198-11	SWITCH, KEYBOARD			
 RY6003	1-755-395-11	RELAY (AC POWER)				S9202	1-572-198-11	SWITCH, KEYBOARD			
TRANSFORMER											
 T6001	1-437-436-11	CONVERTER	TRANSFORMER (PIT)			S9203	1-572-198-11	SWITCH, KEYBOARD			
 T6004	1-435-675-11	TRANSFORMER, STANDBY				S9204	1-572-198-11	SWITCH, KEYBOARD			
THERMISTOR											
TH6002	1-804-475-21	POSISTOR				S9205	1-572-198-11	SWITCH, KEYBOARD			
VARISTOR											
VD6001	1-801-073-31	VARISTOR	ERZV14D471			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			

REF. NO.	PART NO.	DESCRIPTION	VALUES			REF. NO.	PART NO.	DESCRIPTION	VALUES		
H1								DIODE			
*	A-1401-060-A	H1 BOARD, MOUNTED				D9400	8-719-110-17	DIODE	RD10ESB2		
		CAPACITOR				D9401	8-719-110-17	DIODE	RD10ESB2		
C9101	1-107-826-11	CERAMIC CHIP	0.1µF	10%	16V	D9402	8-719-110-17	DIODE	RD10ESB2		
		CONNECTOR				D9403	8-719-110-17	DIODE	RD10ESB2		
*	CN9101	1-564-508-11	PLUG, CONNECTOR	5P		D9404	8-719-110-17	DIODE	RD10ESB2		
*	CN9102	1-564-506-11	PLUG, CONNECTOR	3P		D9405	8-719-110-17	DIODE	RD10ESB2		
		DIODE						JACK			
D9101	8-719-053-43	DIODE	SLR-325VCT31			J9401	1-770-361-11	TERMINAL BLOCK, S			
D9102	8-719-053-43	DIODE	SLR-325VCT31					RESISTOR			
		IC				R9400	1-216-853-11	METAL CHIP	470K	5%	1/10W
IC9101	8-719-066-43	DIODE	GP1U28Y			R9401	1-216-853-11	METAL CHIP	470K	5%	1/10W
		RESISTOR				R9402	1-218-285-11	METAL CHIP	75	5%	1/10W
R9101	1-216-833-11	METAL CHIP	10K	5%	1/10W	R9403	1-218-285-11	METAL CHIP	75	5%	1/10W
R9102	1-216-809-11	METAL CHIP	100	5%	1/10W	R9406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R9103	1-216-813-11	METAL CHIP	220	5%	1/10W	R9407	1-218-285-11	METAL CHIP	75	5%	1/10W
R9104	1-216-813-11	METAL CHIP	220	5%	1/10W						
		SWITCH						S			
S9101	1-571-532-21	SWITCH, TACTILE									
H4						*	A-1391-148-A	S BOARD, MOUNTED			
*	A-1401-536-A	H4 BOARD, MOUNTED						CAPACITOR			
		CAPACITOR						CONNECTOR			
C9400	1-126-964-11	ELECT	10µF	20%	50V	*	CN3001	1-564-506-11	PLUG, CONNECTOR	3P	
C9401	1-126-964-11	ELECT	10µF	20%	50V			DIODE			
C9402	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	D3001	8-719-109-88	DIODE	RD5.6ESB1		
C9403	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V			SWITCH			
C9405	1-125-891-11	CERAMIC CHIP	0.47µF	10%	10V	S3002	1-756-063-21	BATTERY, SOLAR			
		CONNECTOR									
*	CN9401	1-564-526-11	PLUG, CONNECTOR	11P							

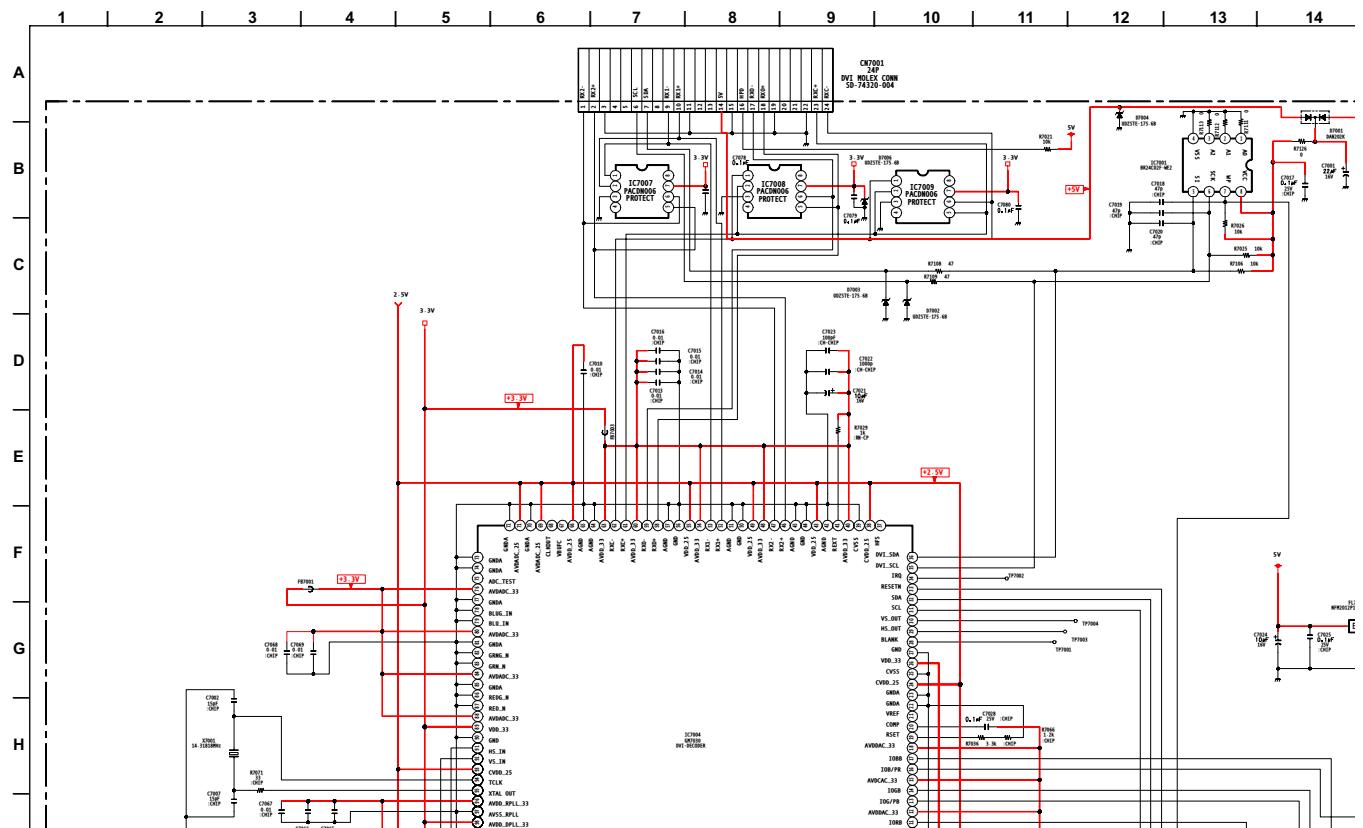
REF. NO.	PART NO.	DESCRIPTION	VALUES	REF. NO.	PART NO.	DESCRIPTION	VALUES
<u>ACCESSORIES AND PACKING</u>				<u>REMOTE COMMANDER</u>			
*	4-091-919-01	BAG, PROTECTION		1-476-864-11		REMOTE COMMANDER (RM-Y909)	
*	4-091-088-01	CARTON, INDIVIDUAL		4-081-888-01		BATTERY COVER (FOR RM-Y909)	
*	4-091-087-01	CUSHION, LOWER					
*	4-091-086-01	CUSHION, UPPER					
	4-088-847-12	MANUAL, INSTRUCTION (ENGLISH)					
	4-088-847-22	MANUAL, INSTRUCTION (FRENCH)					
	4-088-847-32	MANUAL, INSTRUCTION (SPANISH)					
	A-1100-667-A	PACKING GROUP (SET)					
*	4-085-133-01	PWB PROTECTION SHEET					
*	4-091-920-01	SHEET, PROTECTION					
*	4-091-089-01	TRAY					

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Technical Services
Service Promotion Department

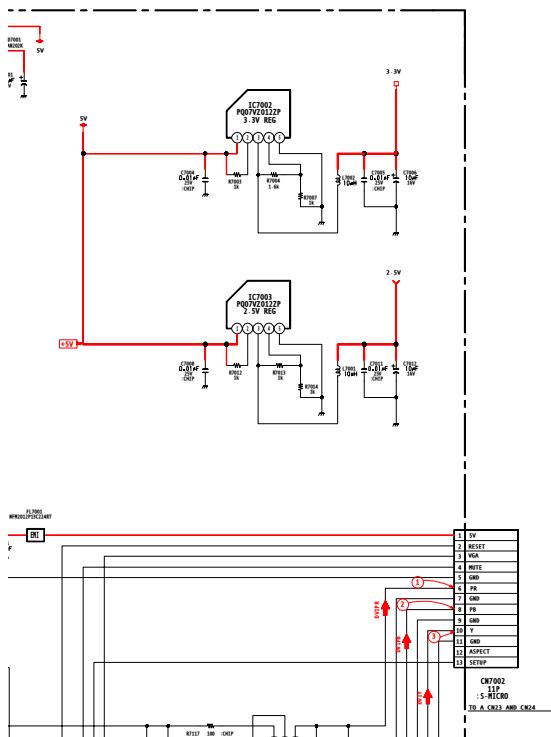
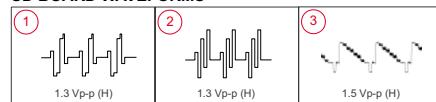
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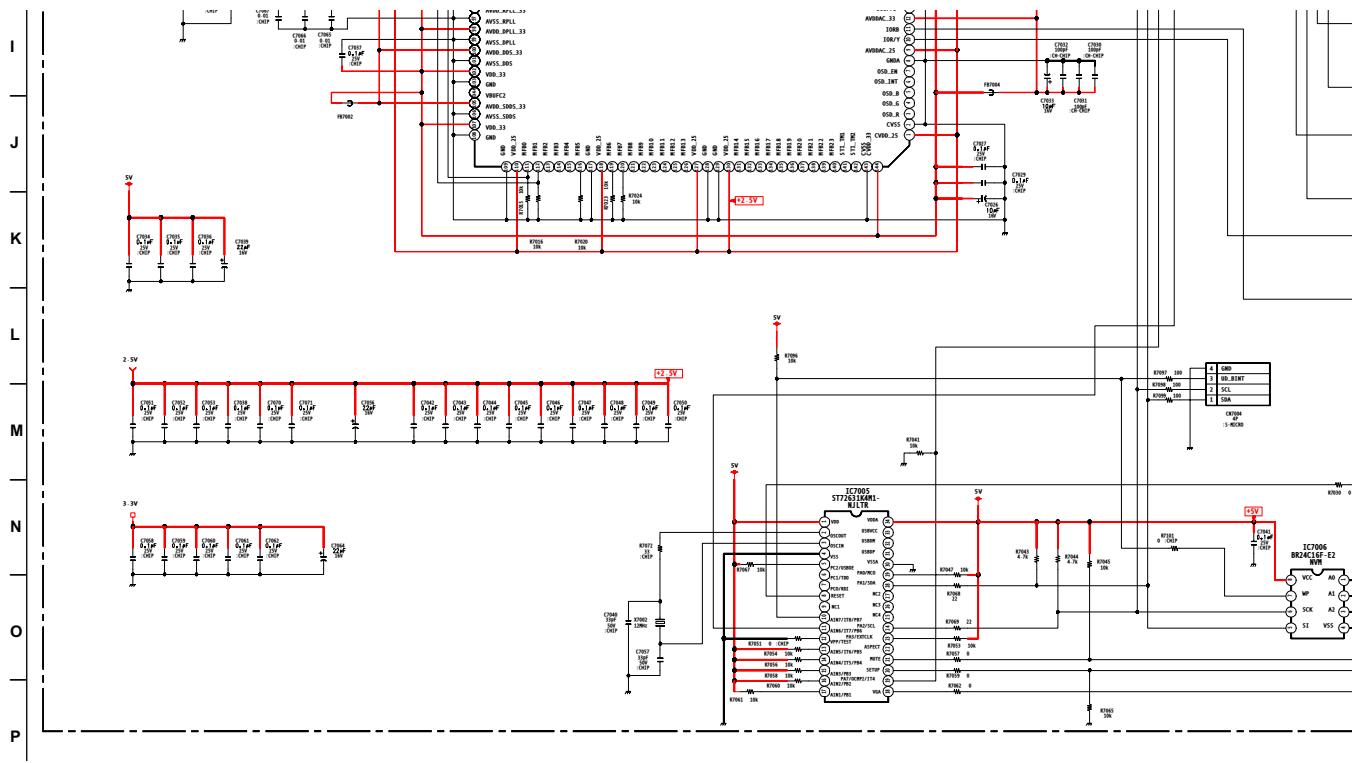
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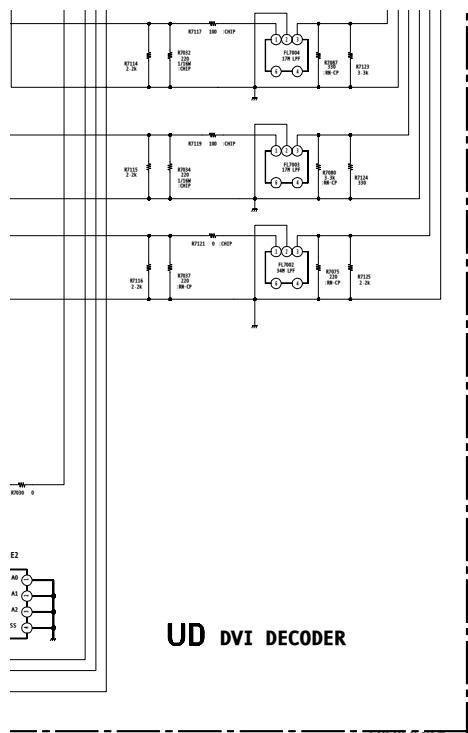
UD BOARD SCHEMATIC DIAGRAM The UD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1300-324-A UD Board, Complete



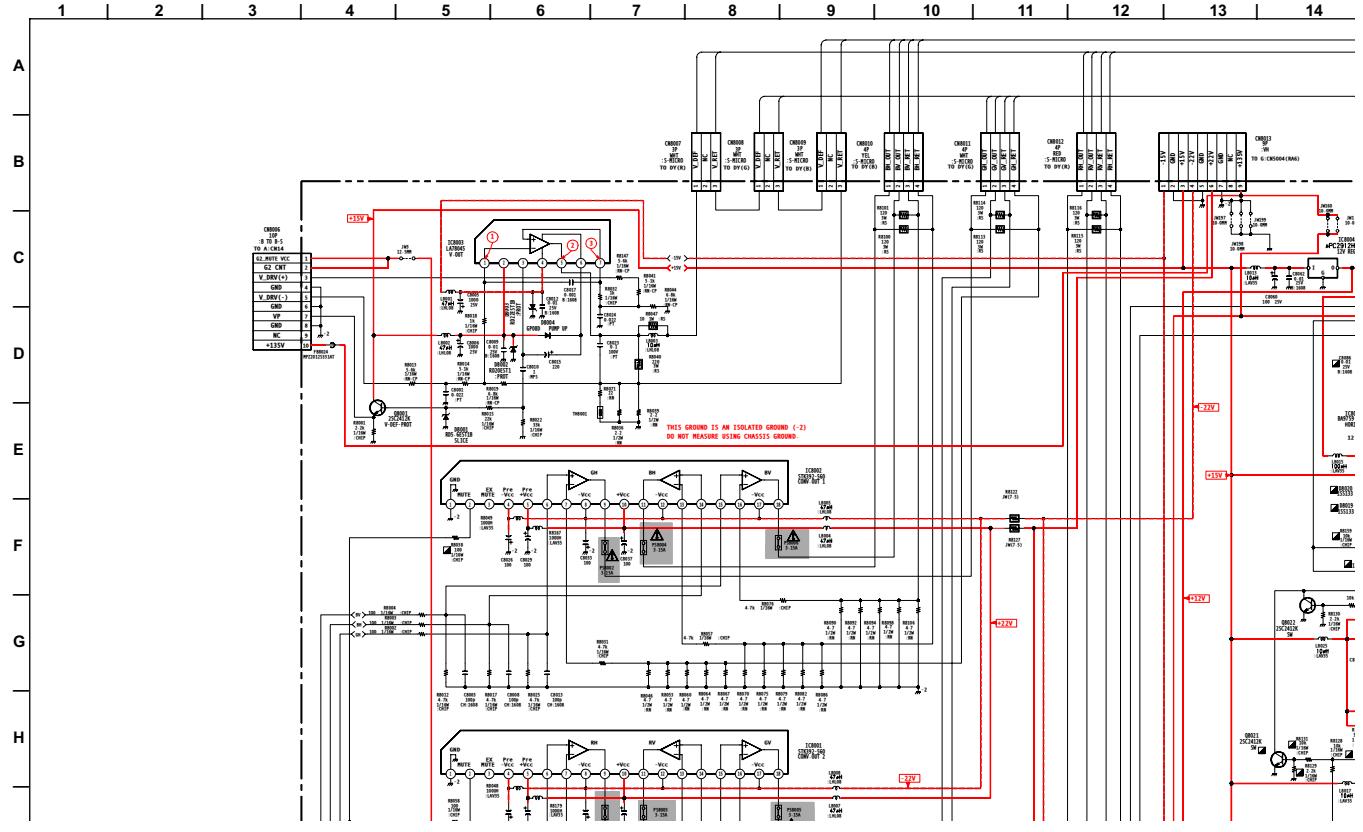
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**UD BOARD WAVEFORMS**

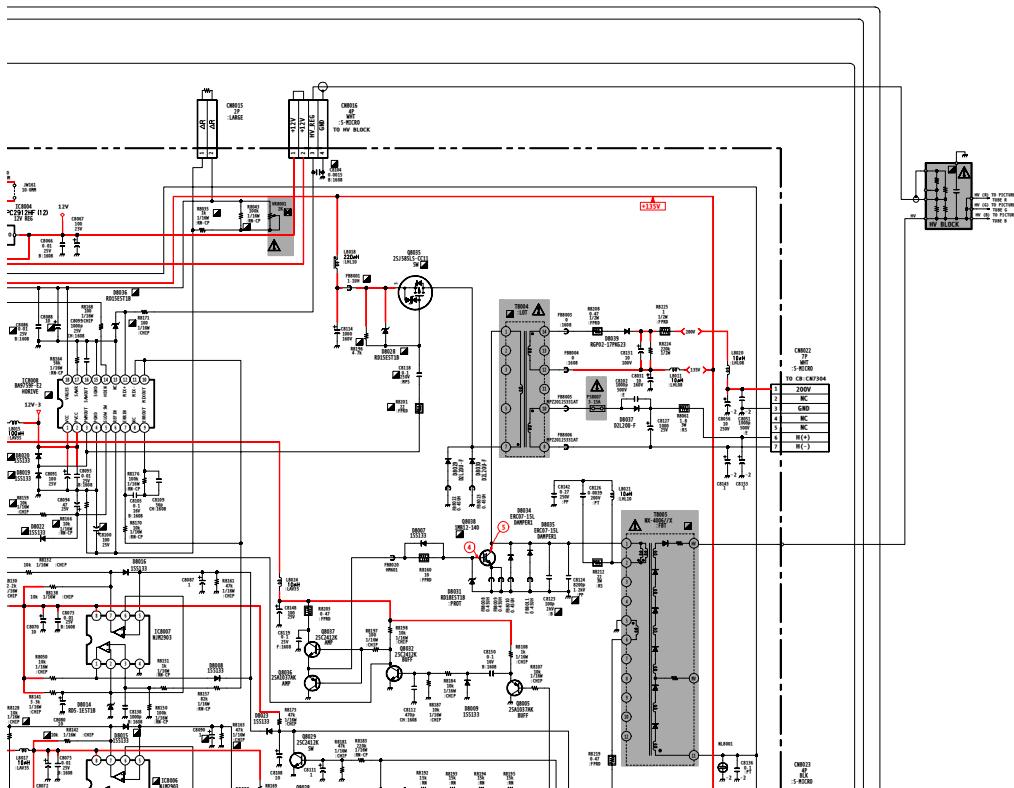


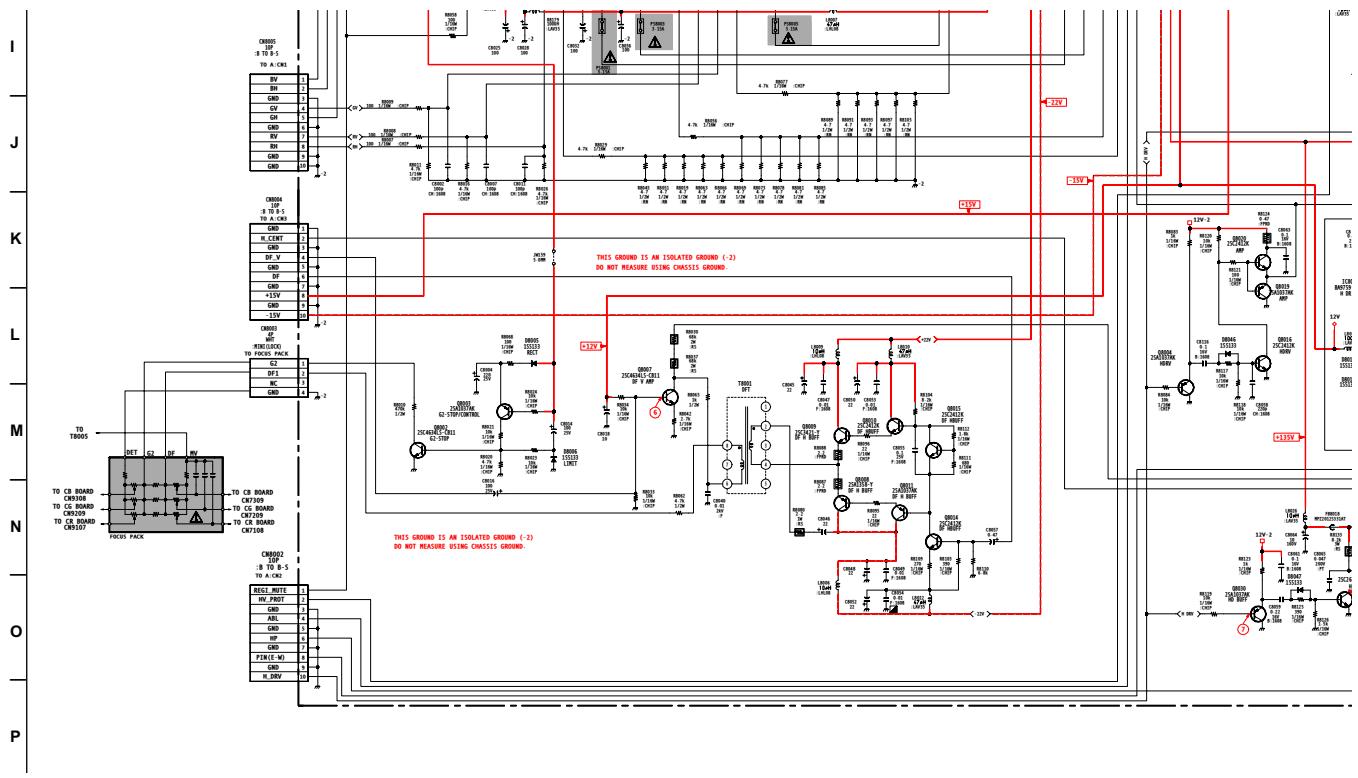


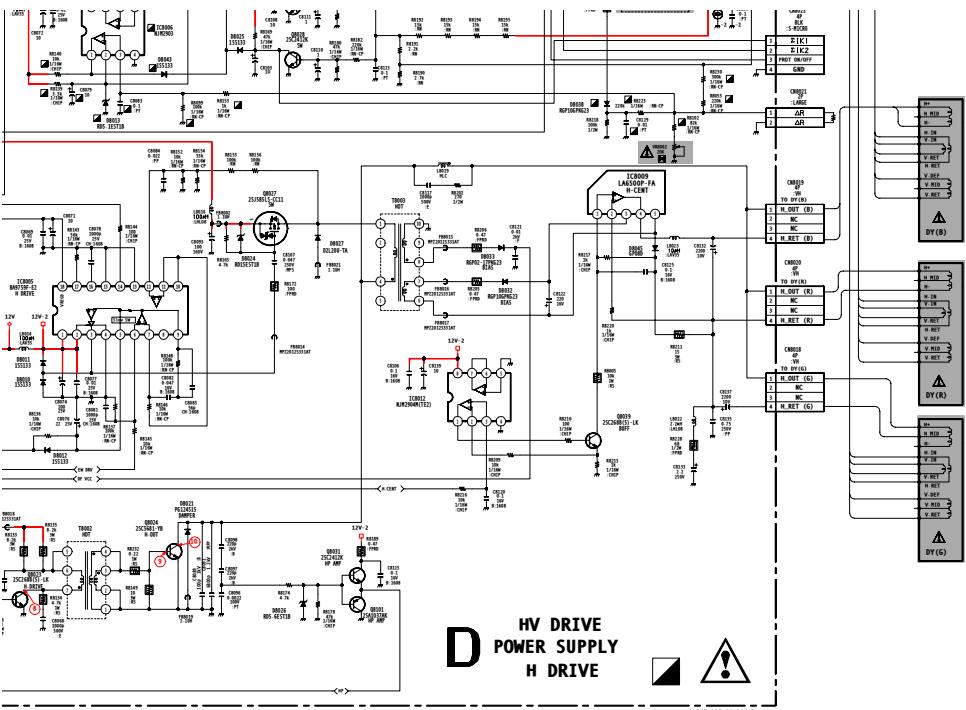
D BOARD SCHEMATIC DIAGRAM



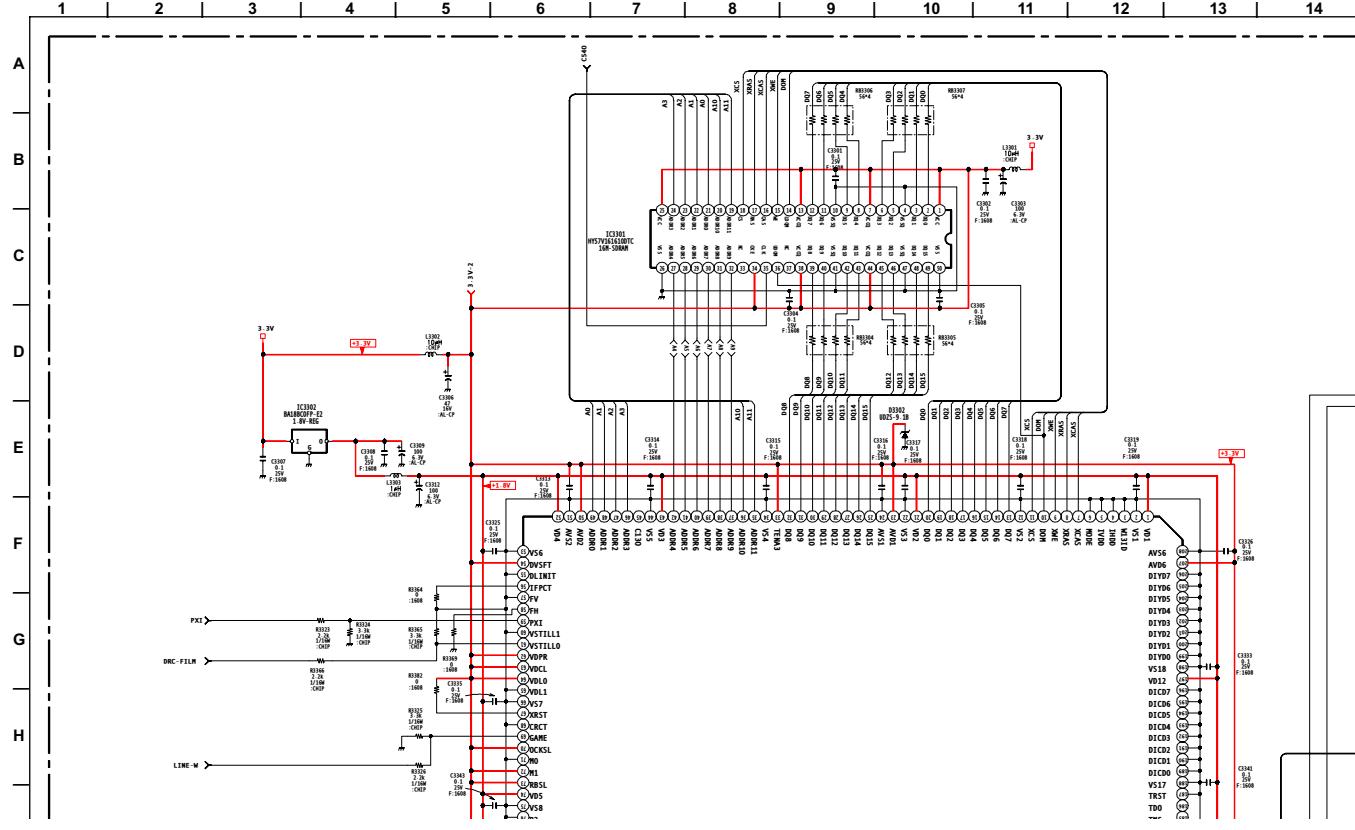
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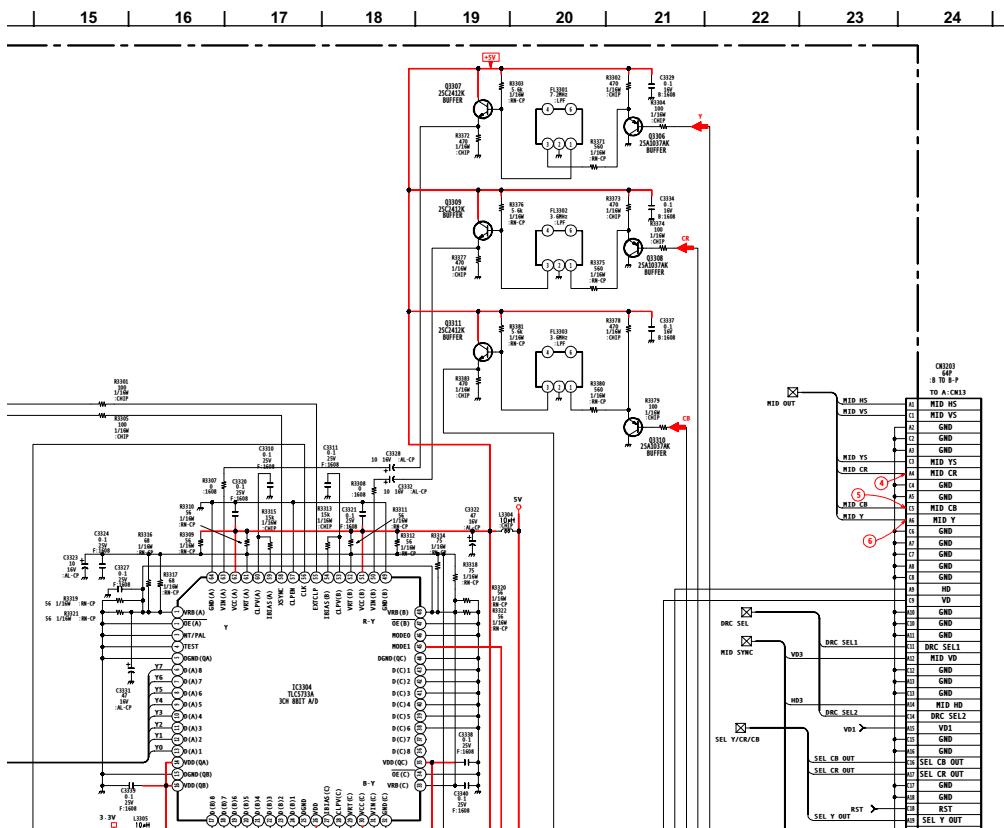
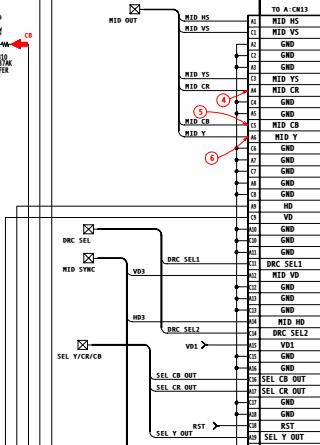
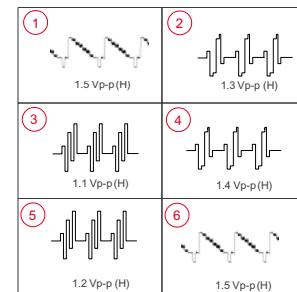


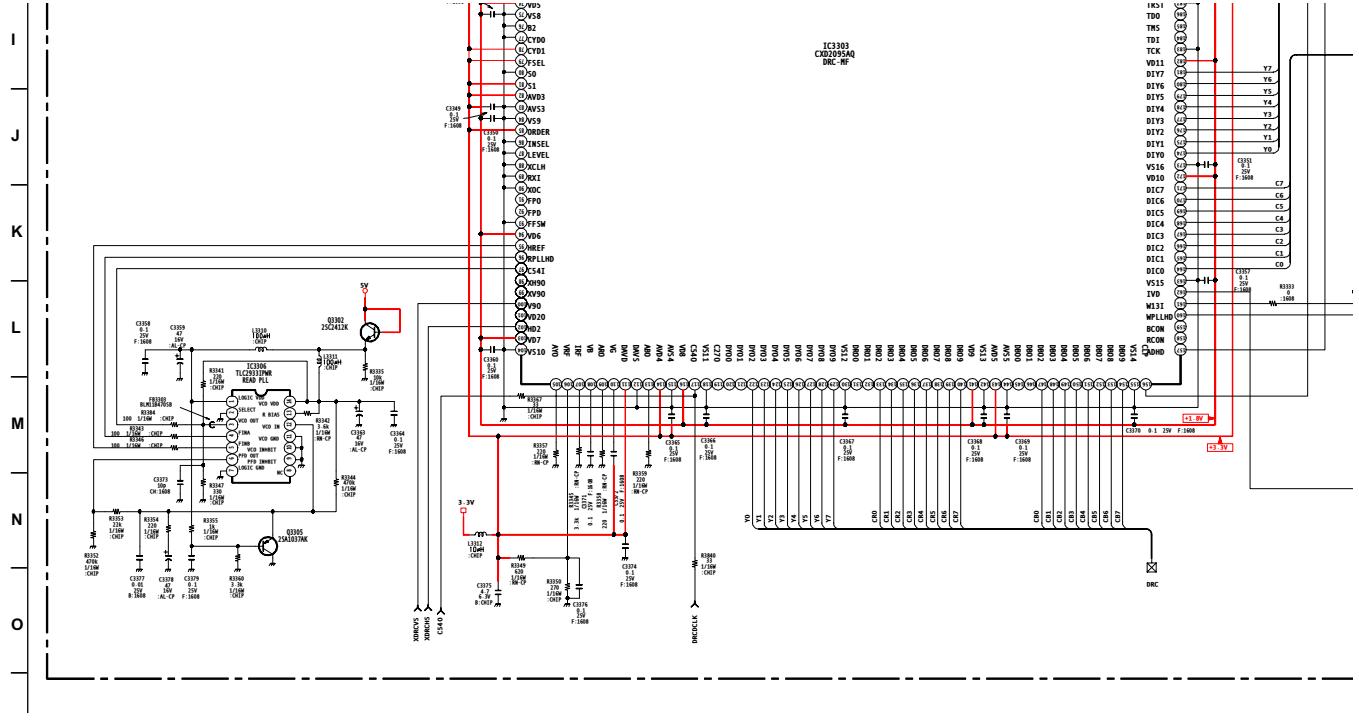


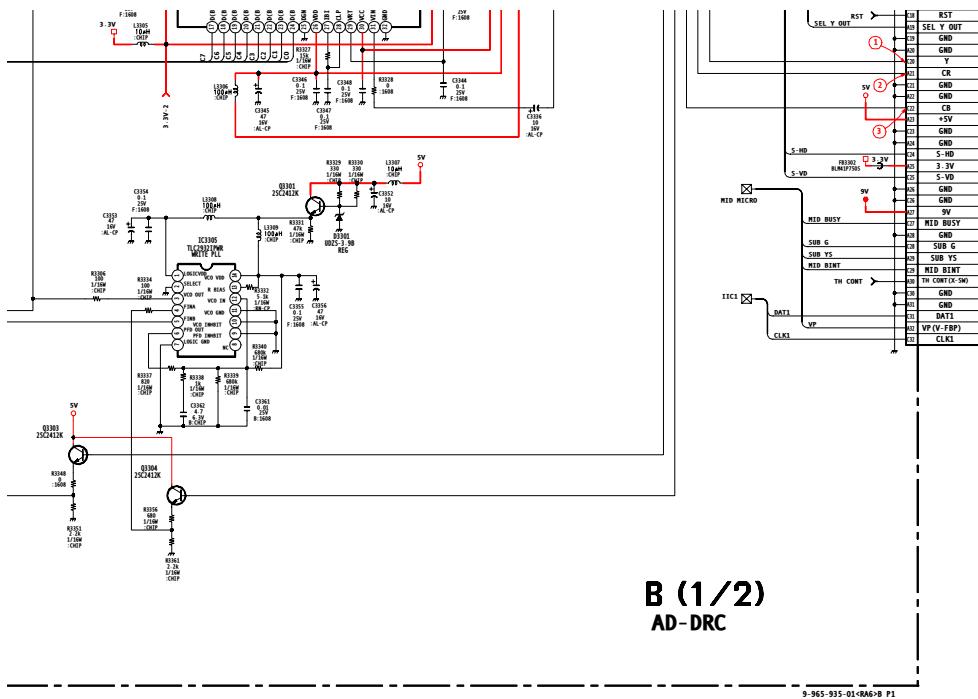


B BOARD SCHEMATIC DIAGRAM (1 OF 2) The B board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1136-271-A B Board, Complete



**B BOARD WAVEFORMS**

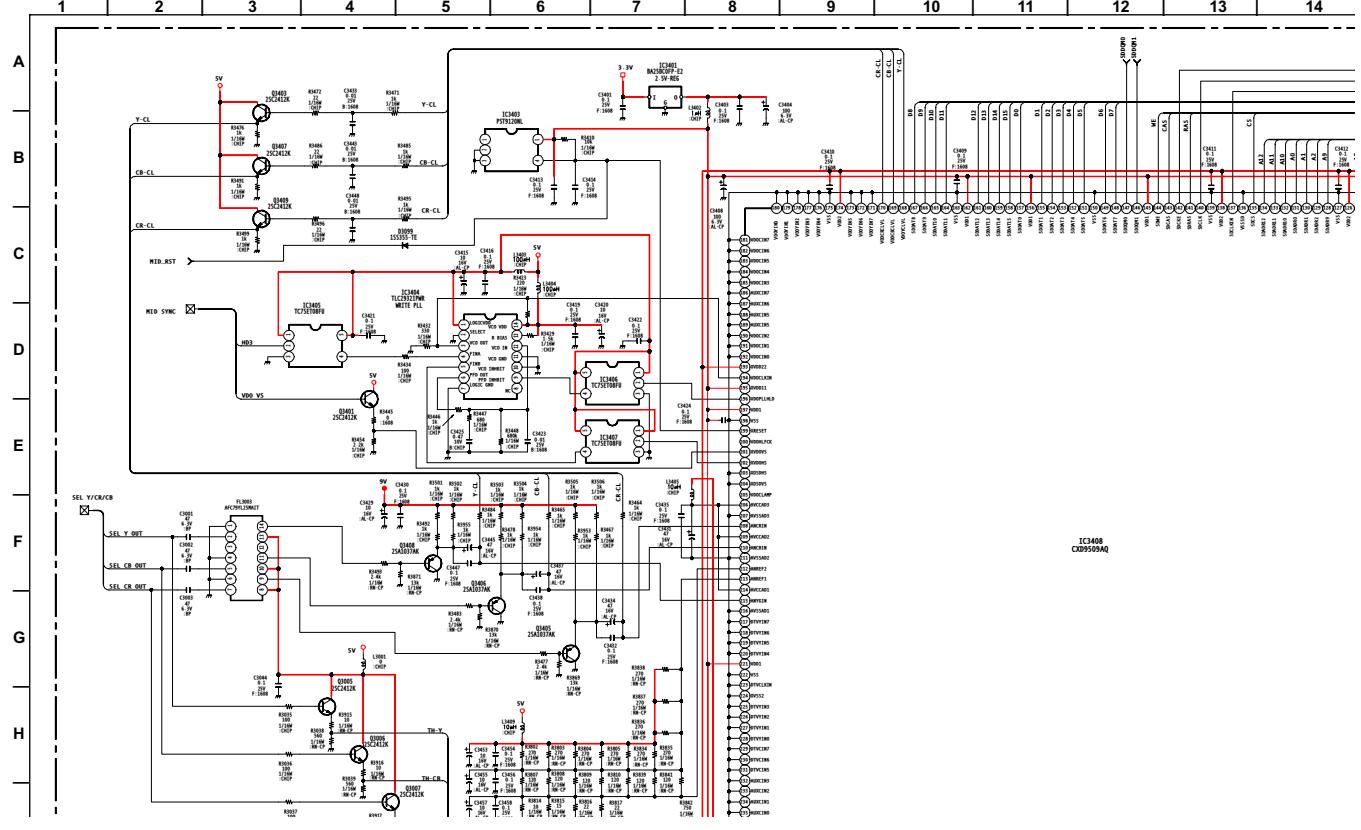


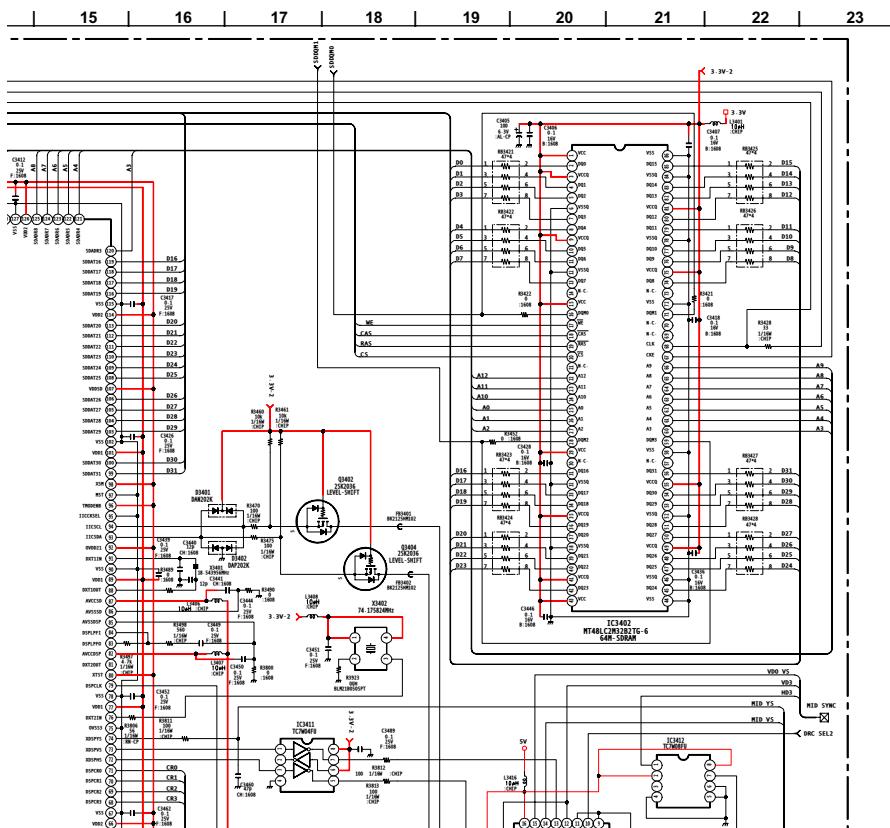


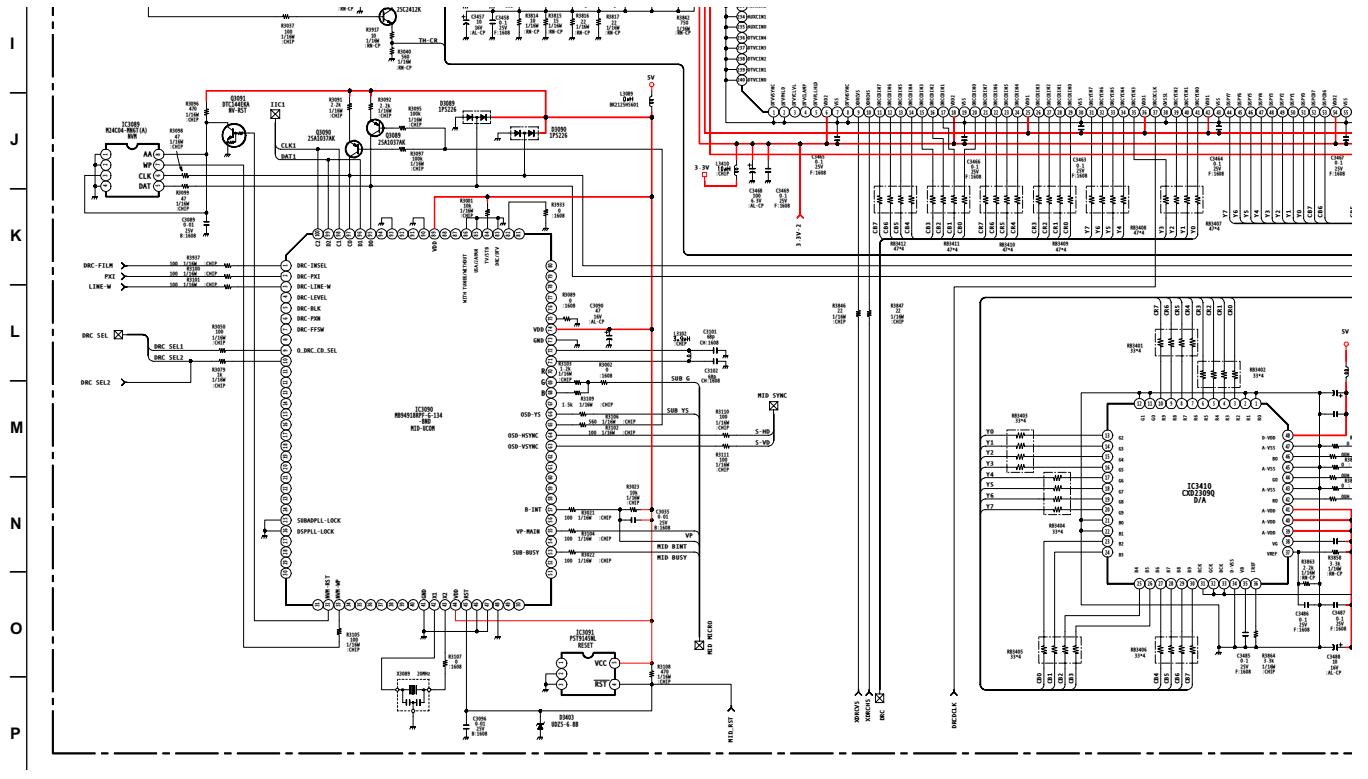
B (1/2)
AD-DRC

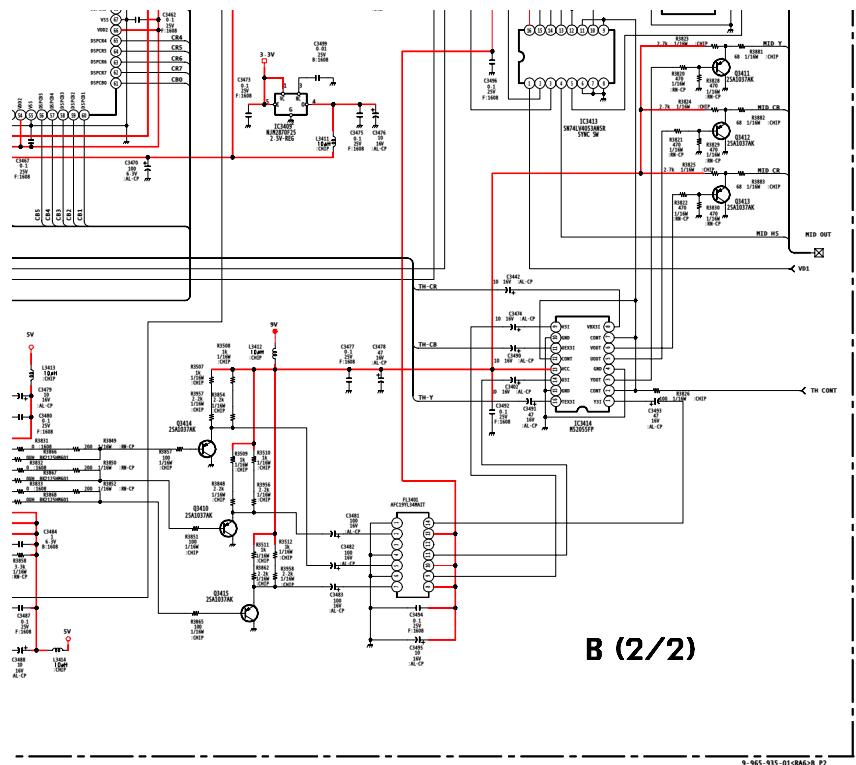
9-965-935-01-R&G-B P1

B BOARD SCHEMATIC DIAGRAM (2 OF 2)





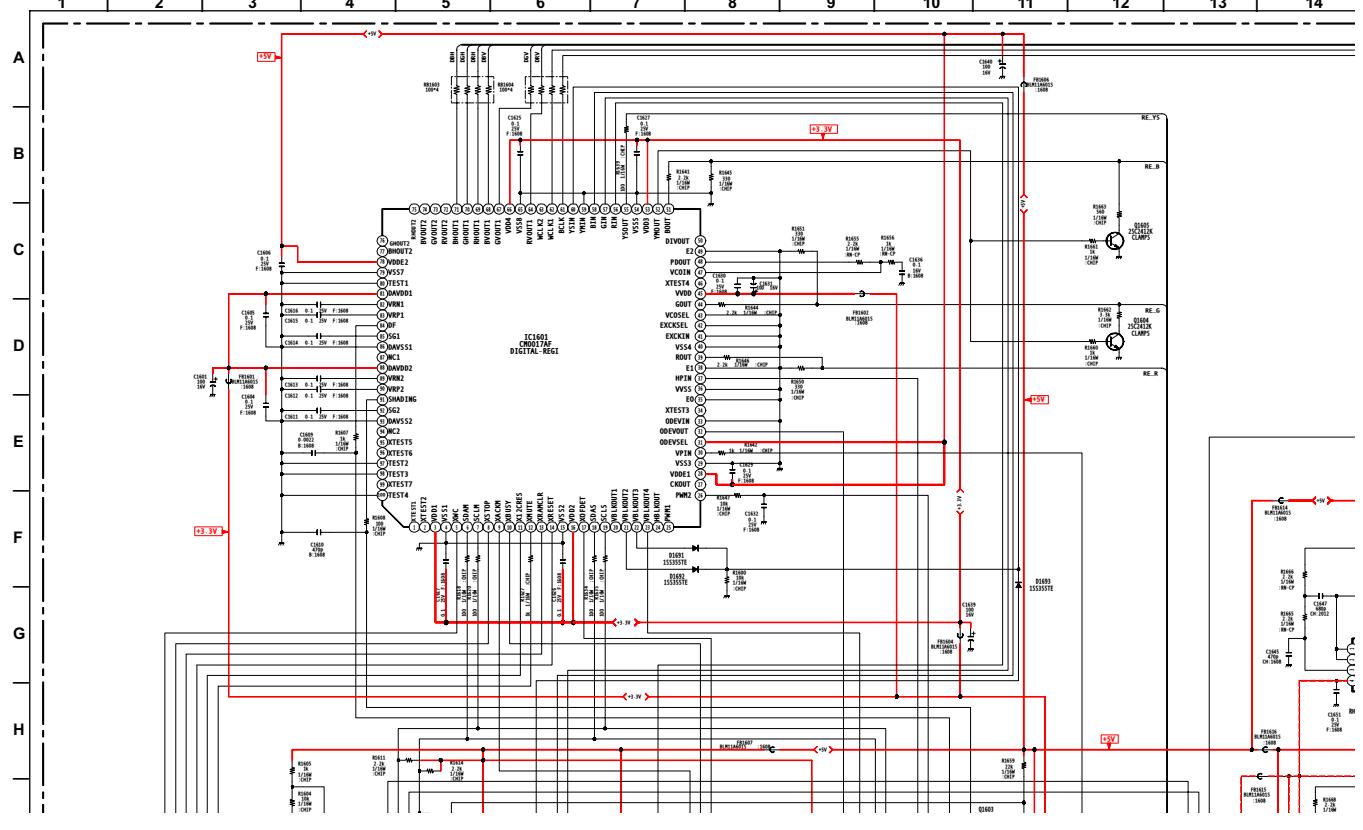


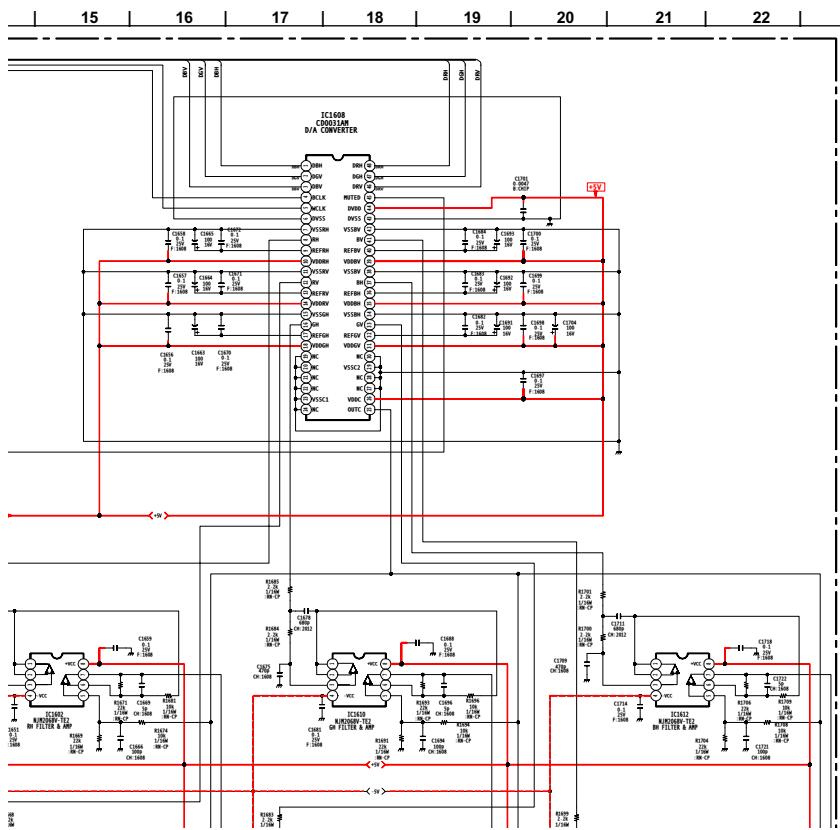


9-965-935-01-0A6-B F2

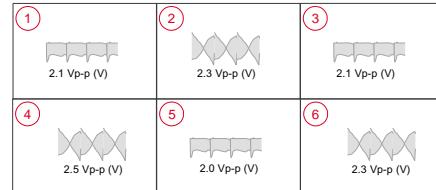
AD BOARD SCHEMATIC DIAGRAM

The AD board is not field repairable. If service is required, use the following part number to order a complete replacement board.
A-1299-523-A
AD Board, Complete

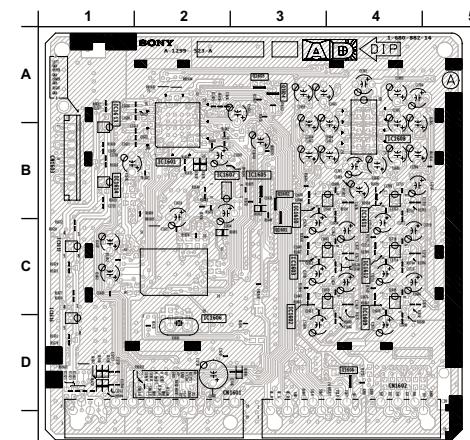


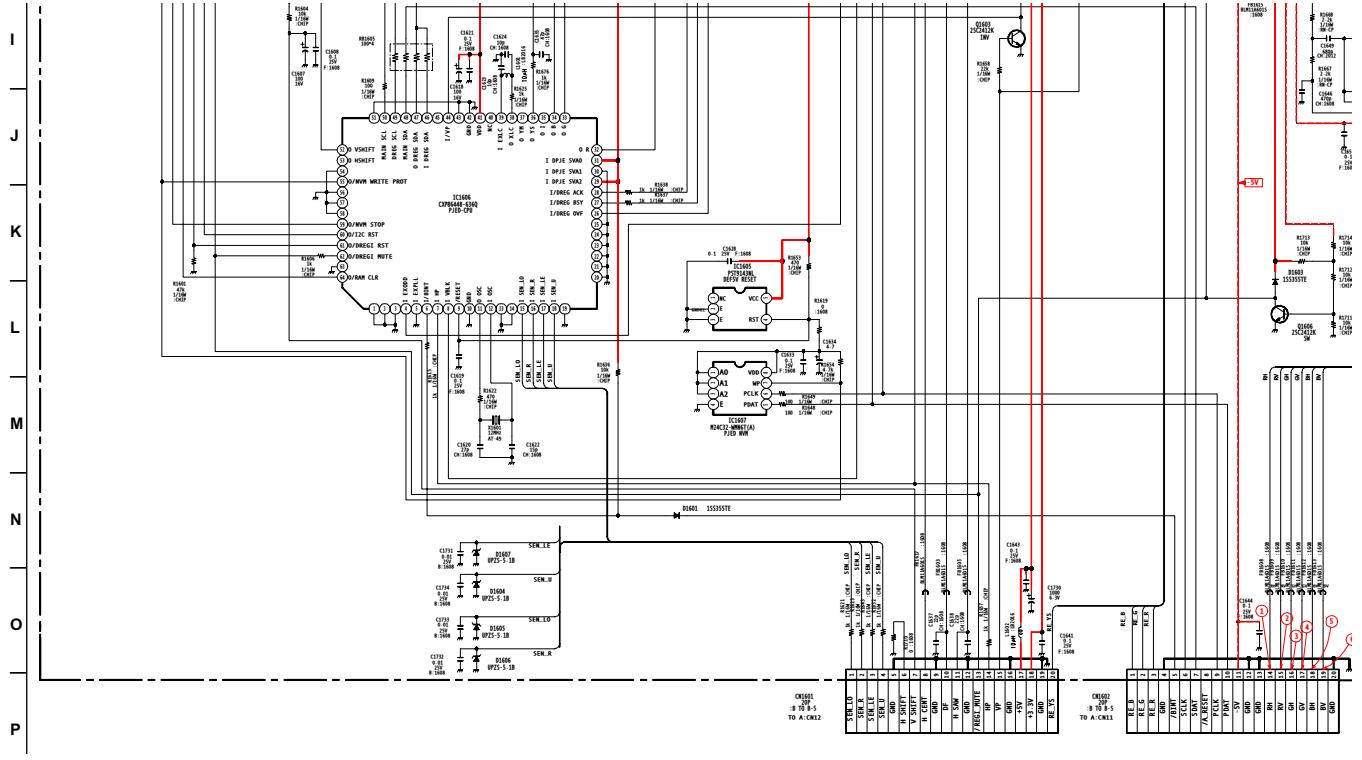


AD BOARD WAVEFORMS

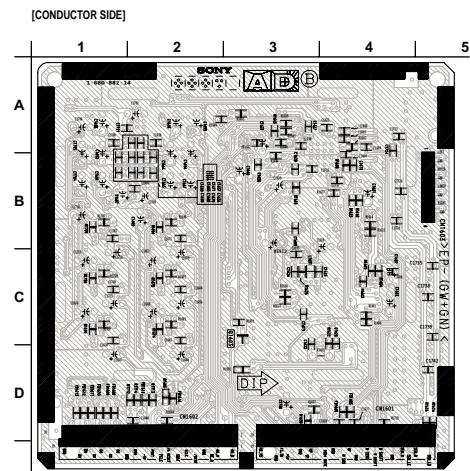
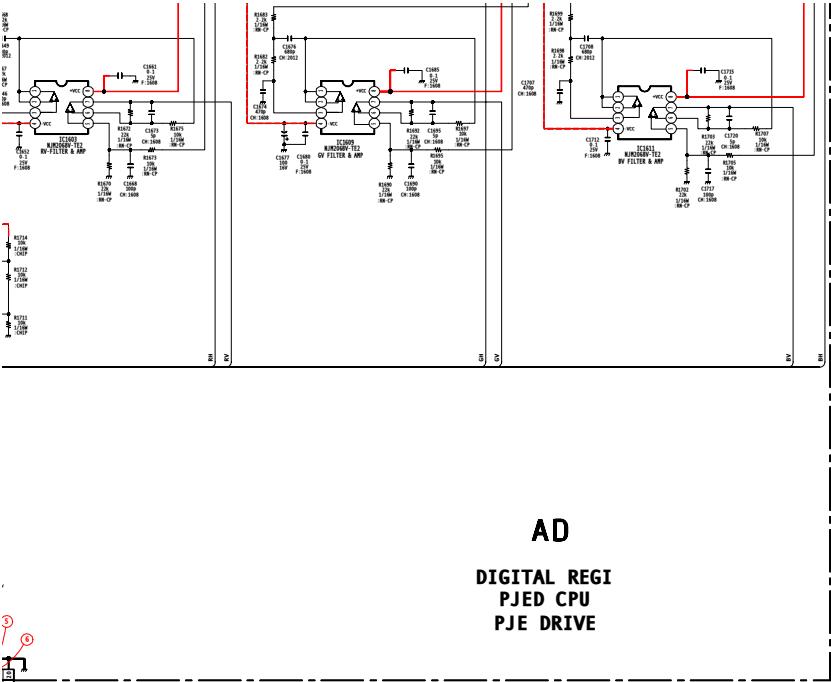


AD [DIGITAL REGI, PJED CPU, PJE DRIVE] [COMPONENT SIDE]

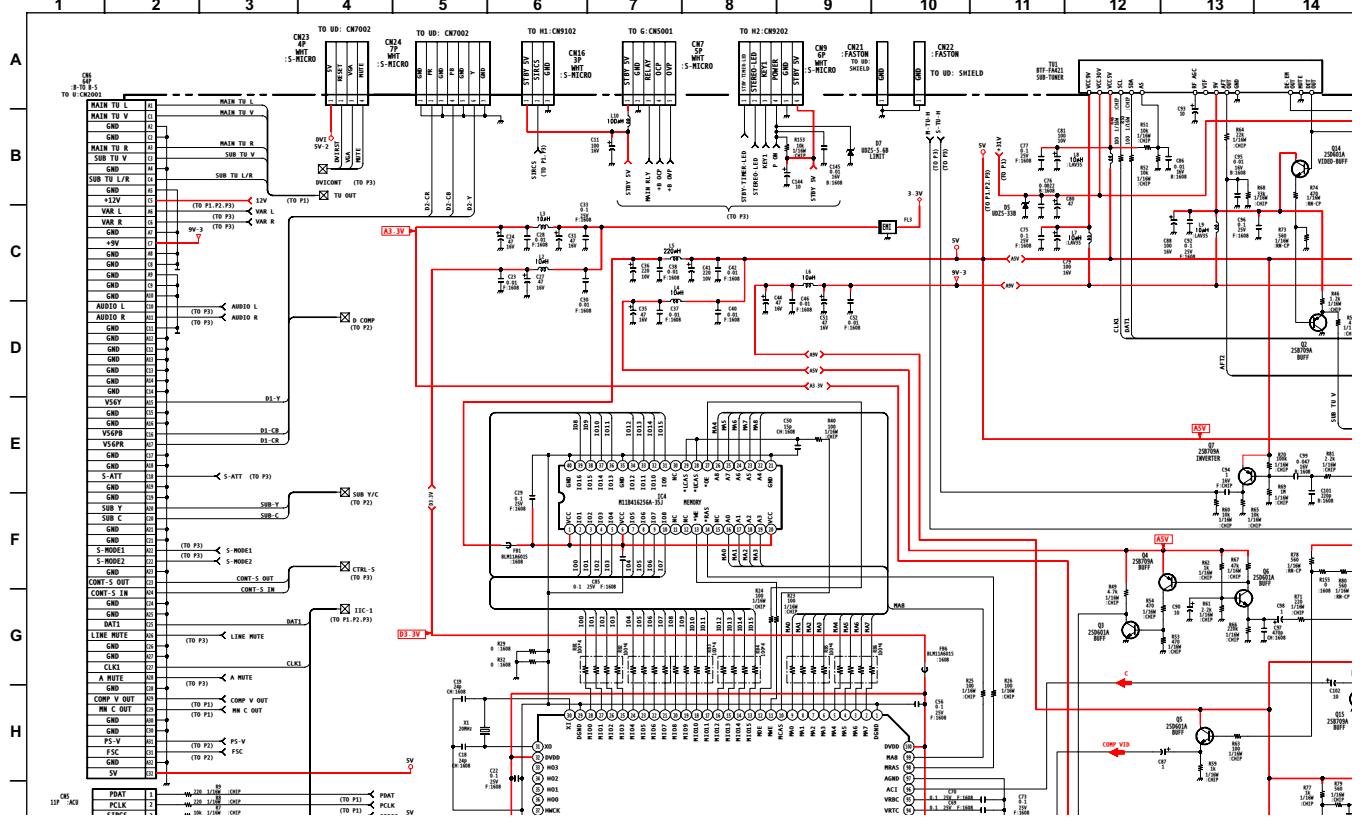


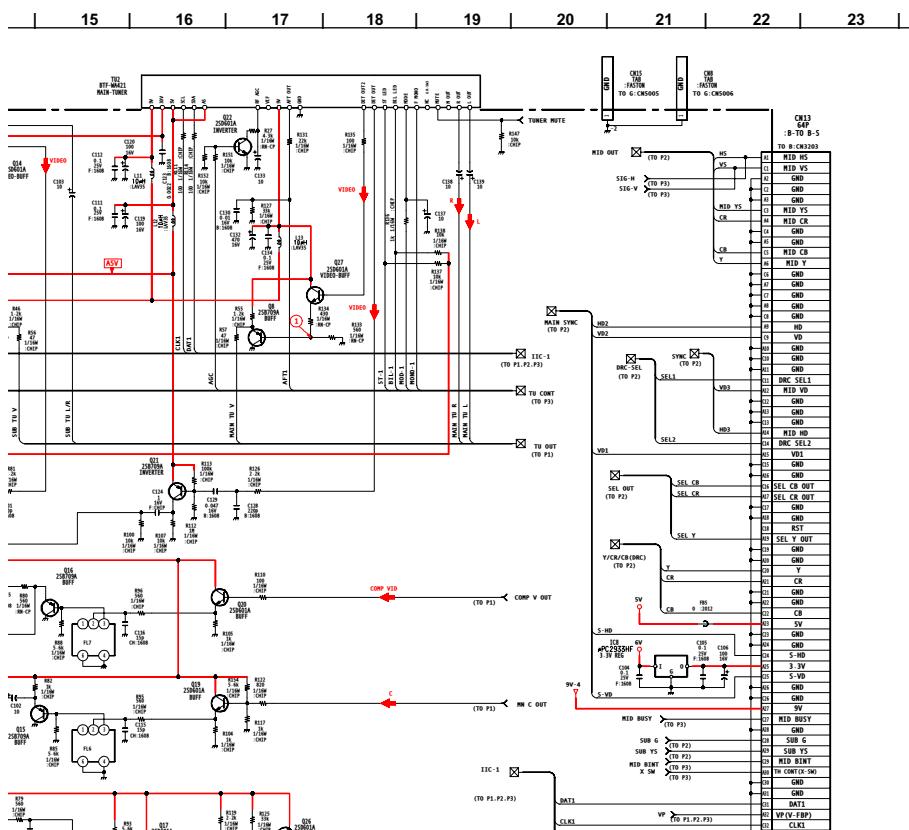


— 66 —

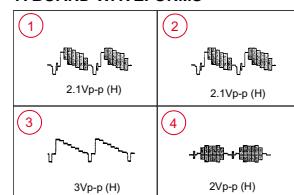


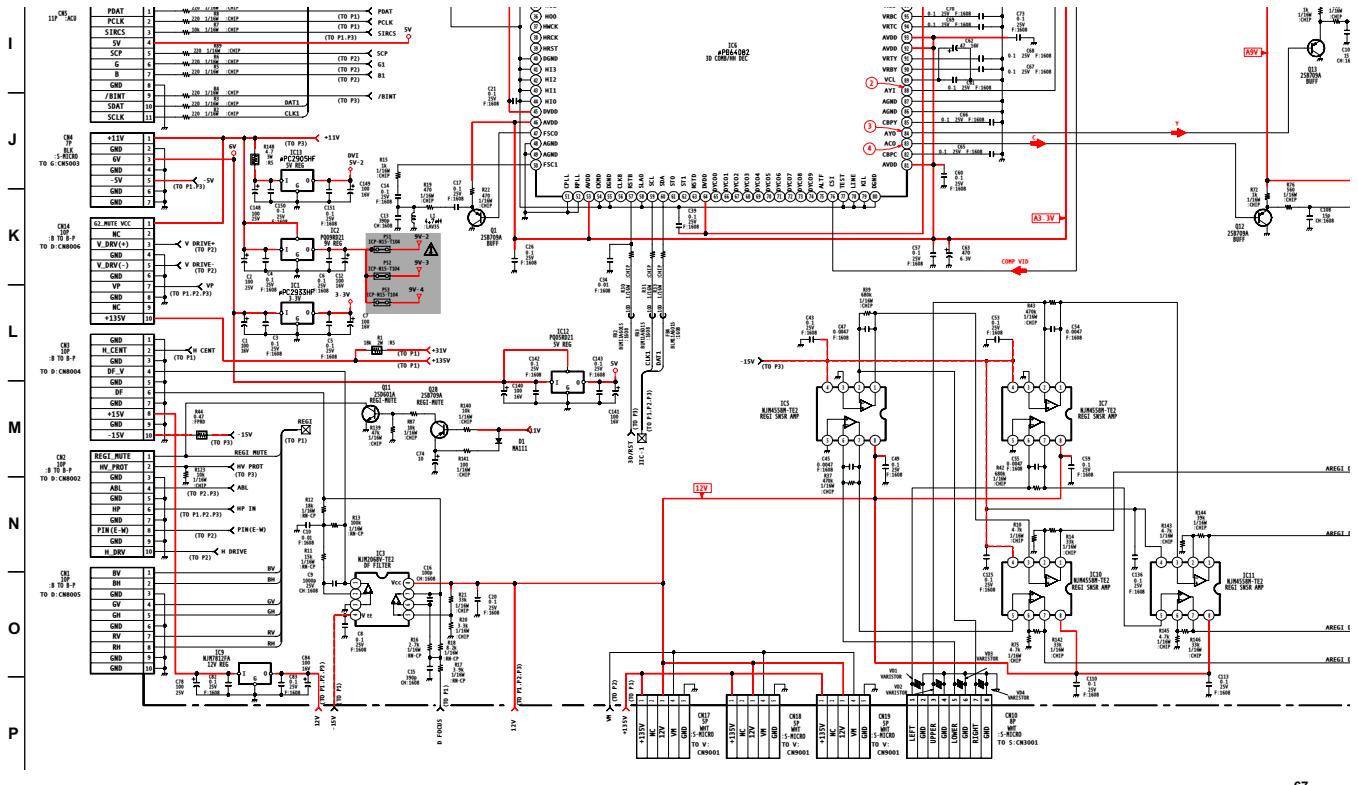
A BOARD SCHEMATIC DIAGRAM (1 OF 3)



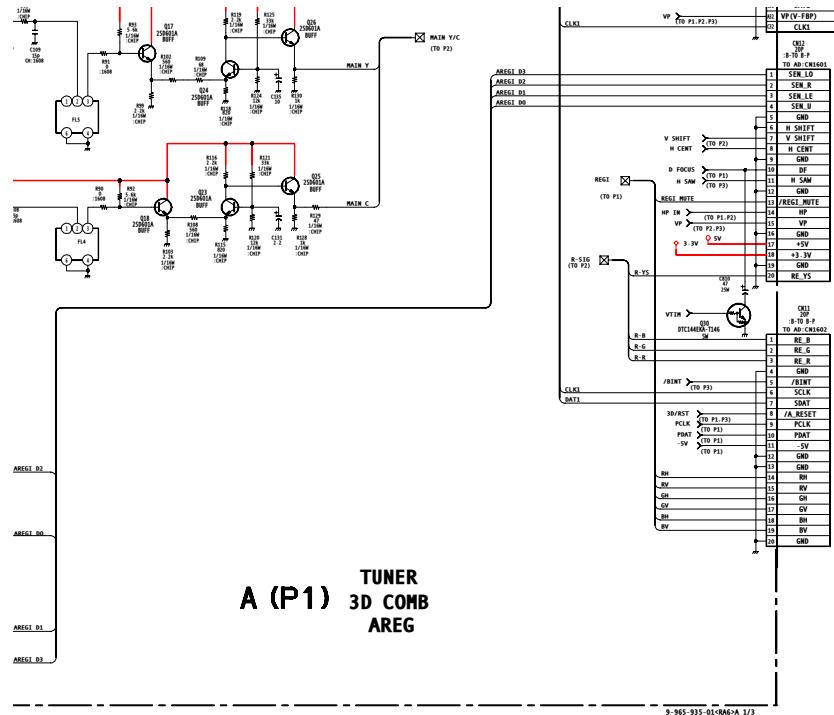


A BOARD WAVEFORMS

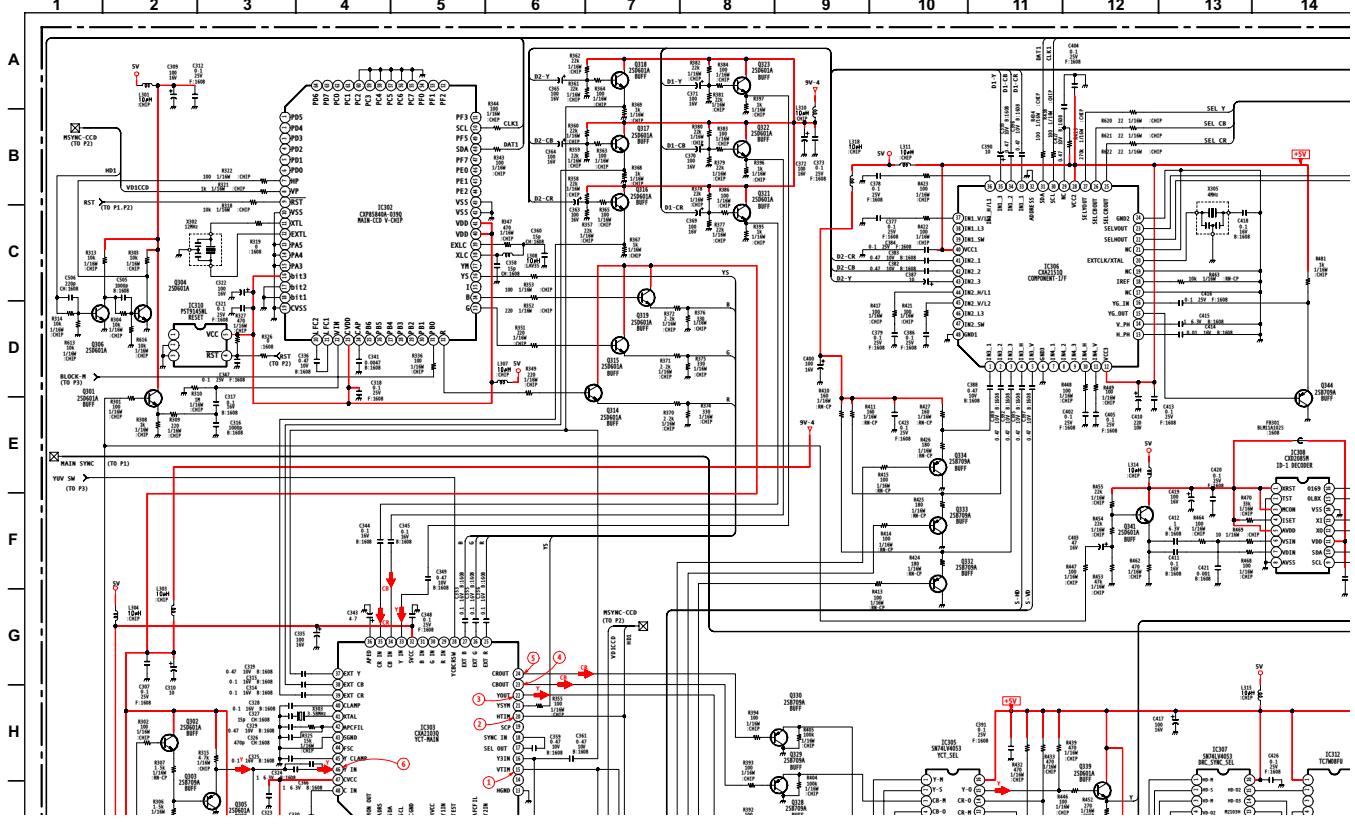


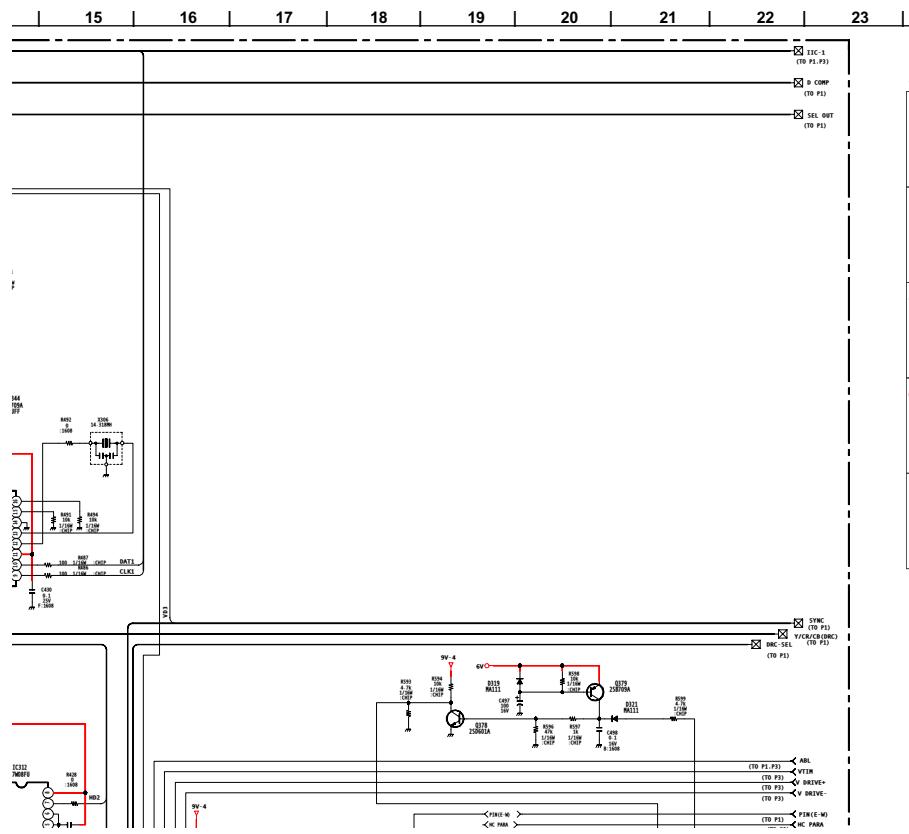
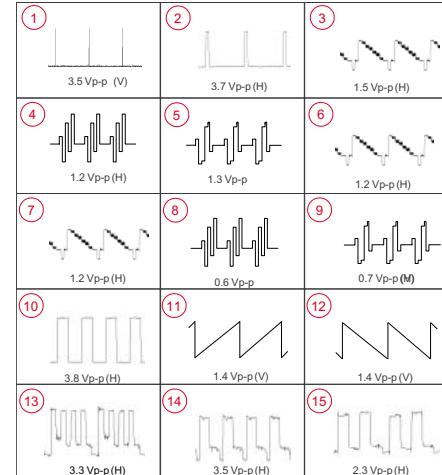


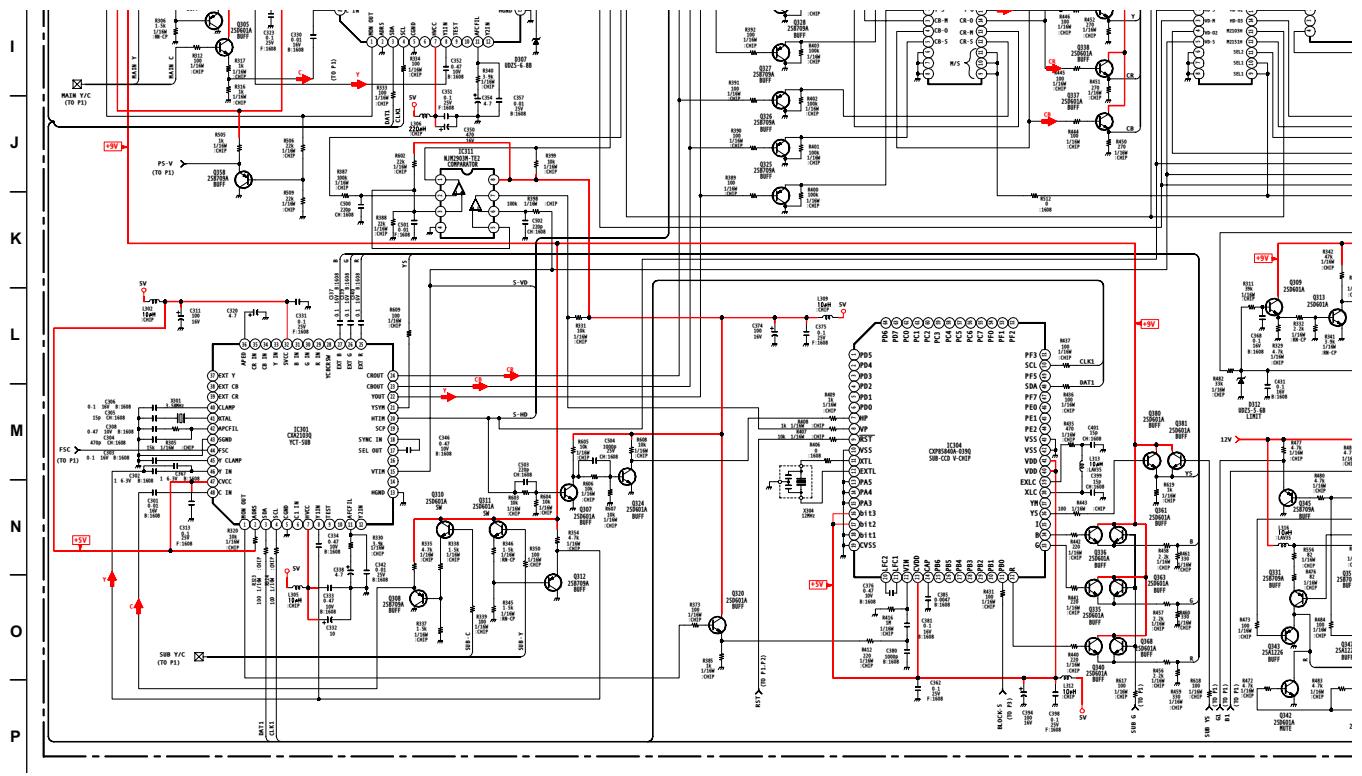
— 67 —

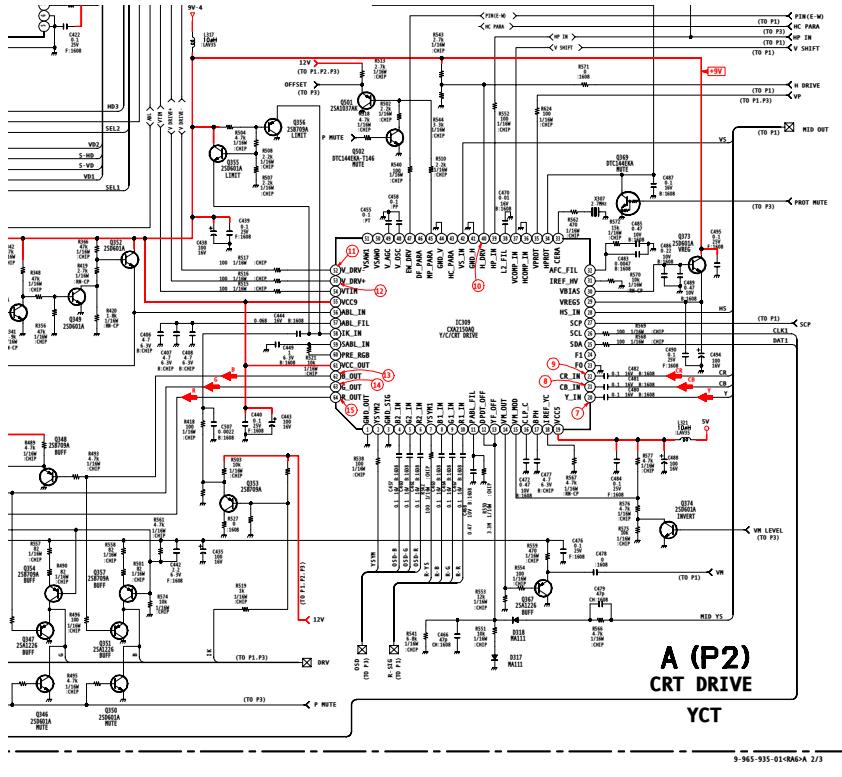


A BOARD SCHEMATIC DIAGRAM (2 OF 3)

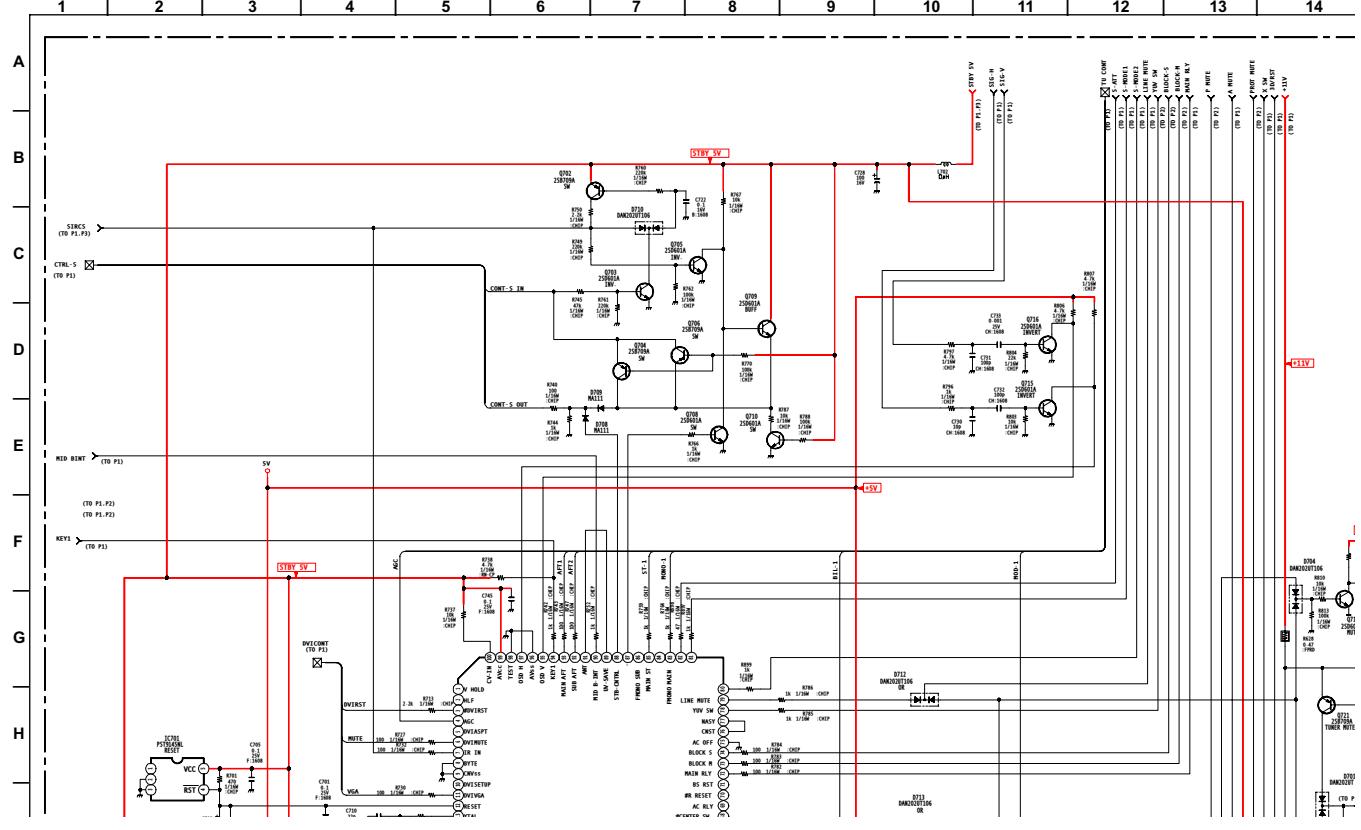


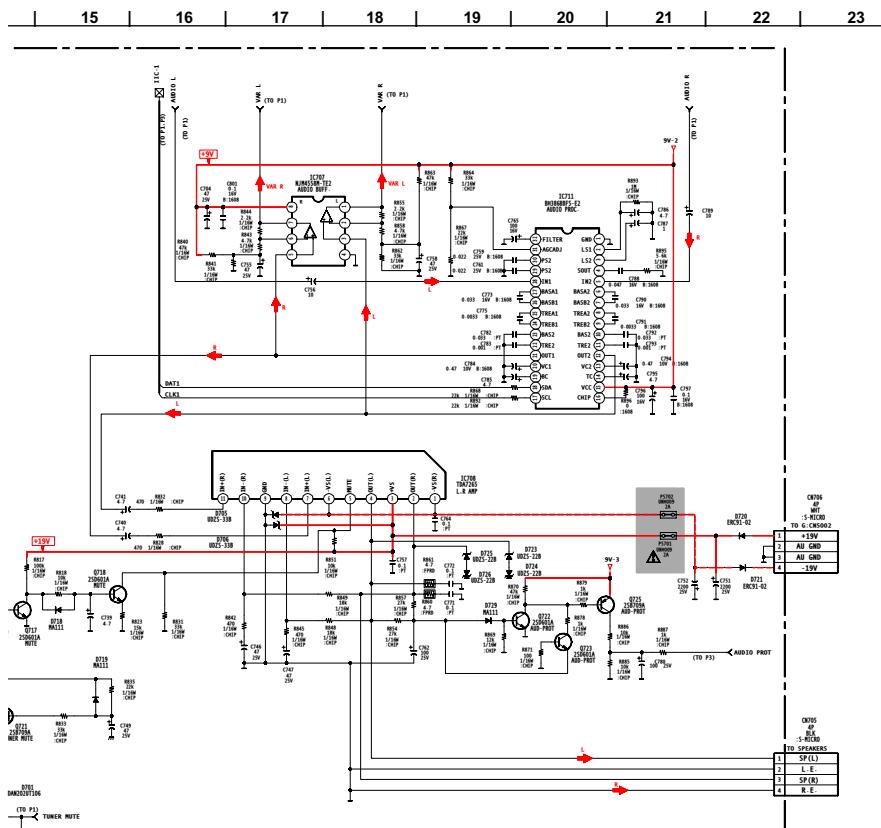
**A BOARD WAVEFORMS**

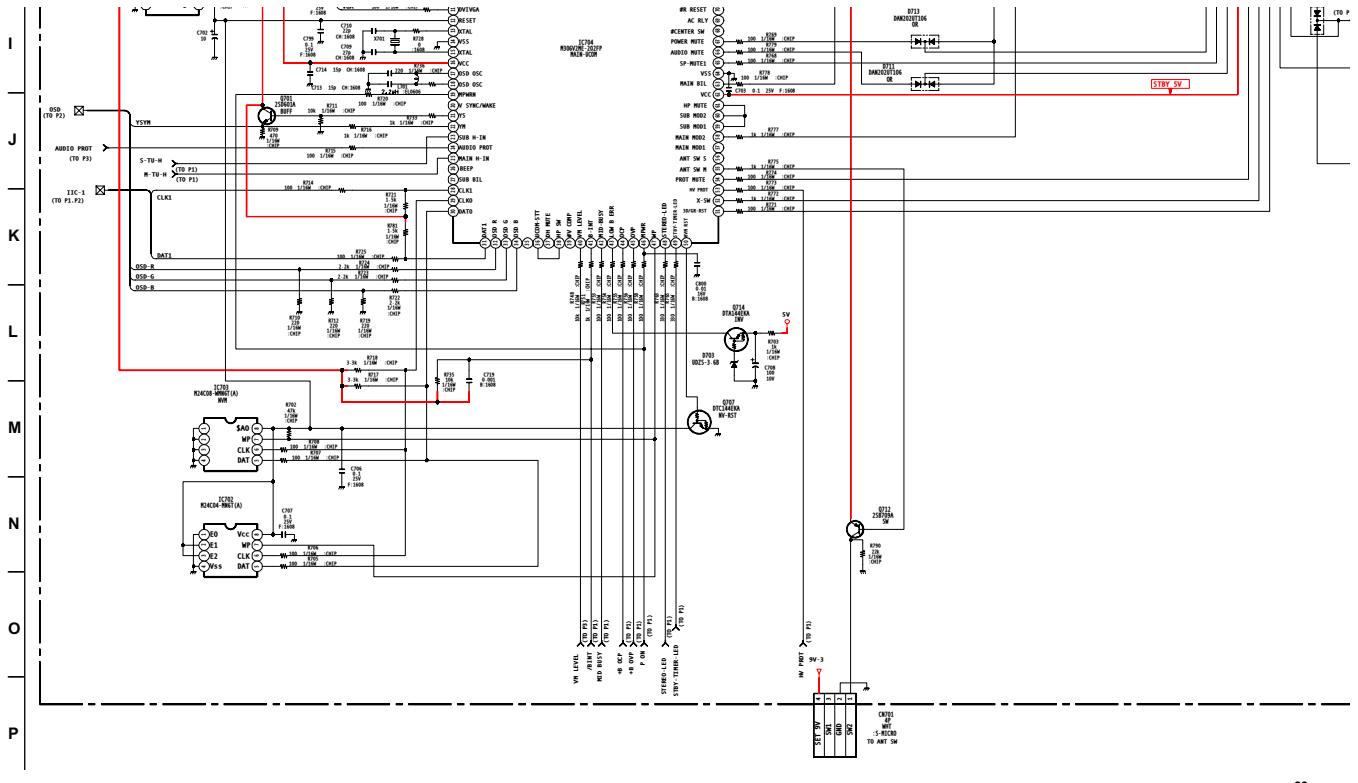




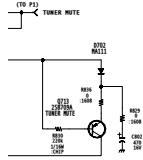
A BOARD SCHEMATIC DIAGRAM (3 OF 3)



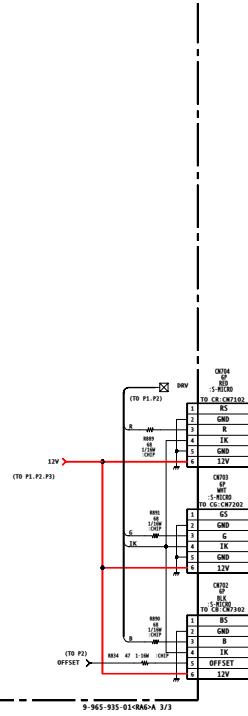




— 69 —

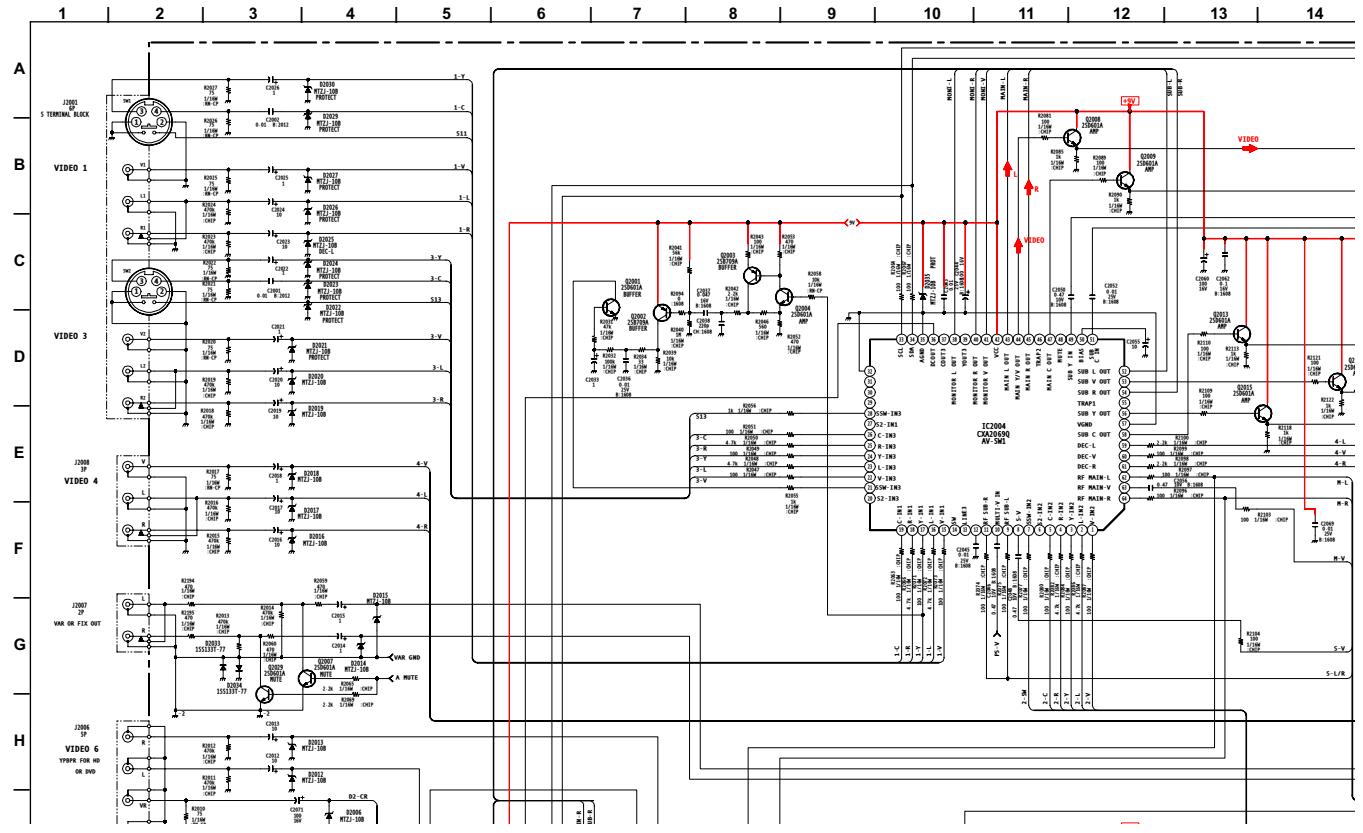


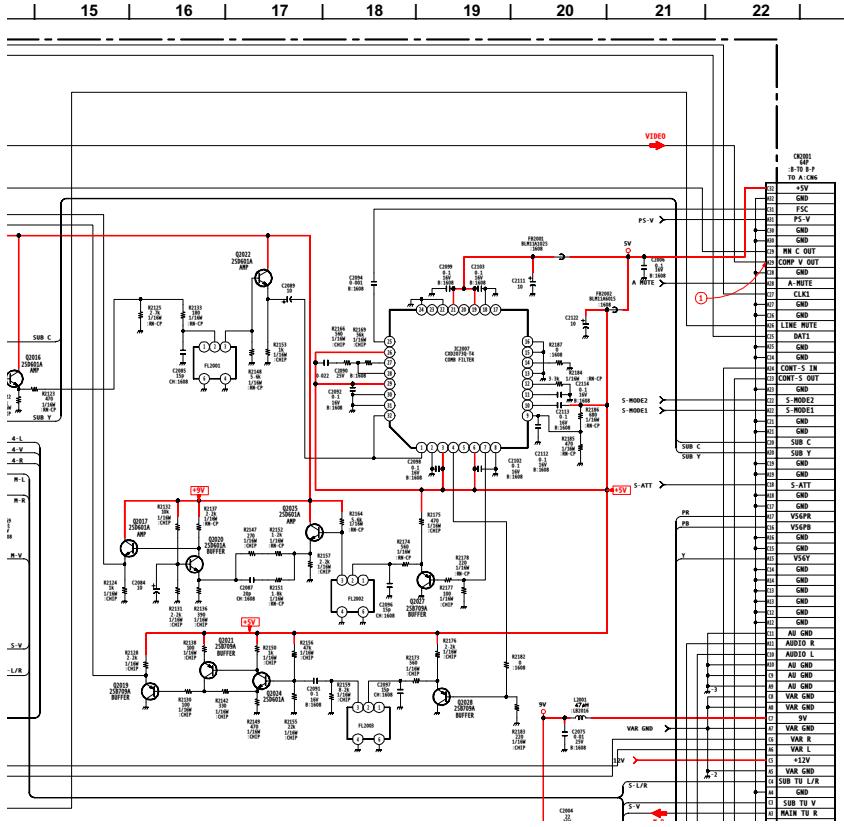
A (P3)
SYSTEM CONTROL
AUDIO OUTPUT



9-965-935-01-RAG-A 3/3

U BOARD SCHEMATIC DIAGRAM

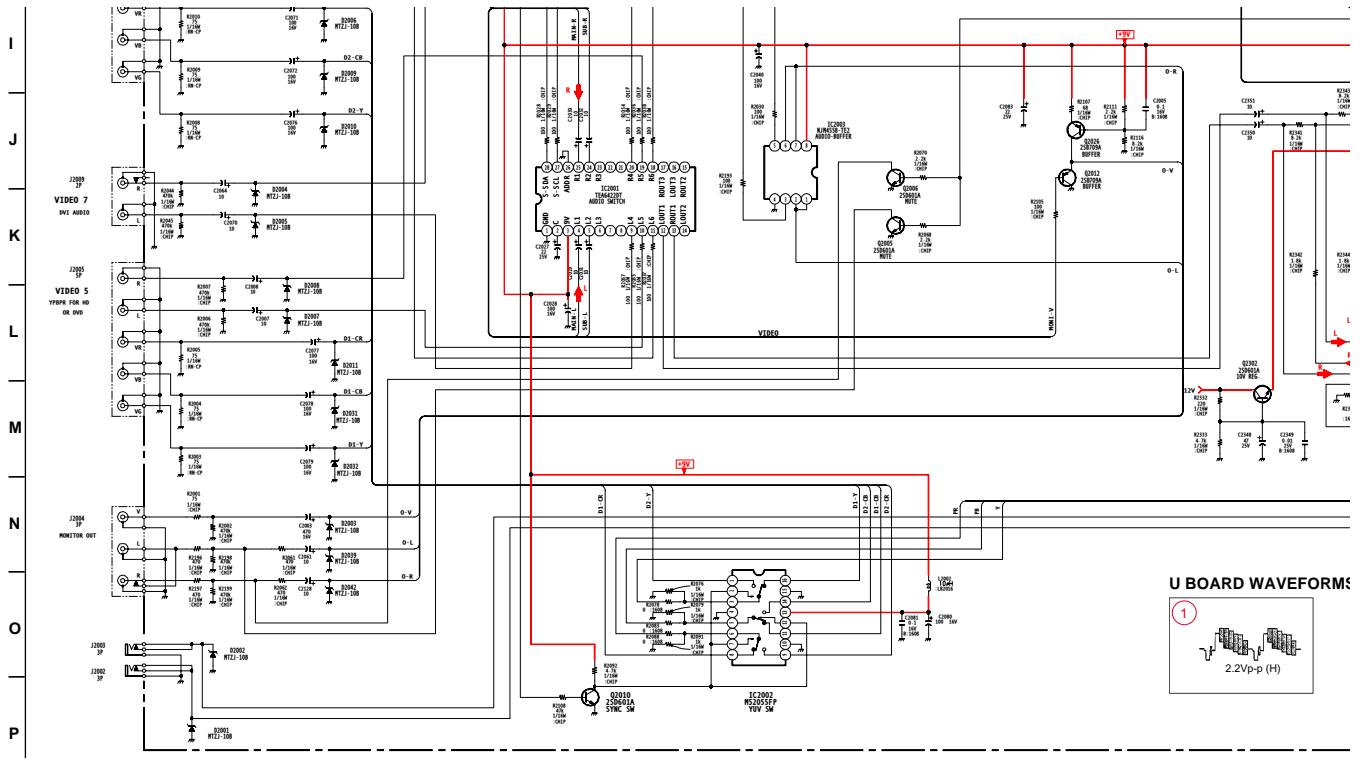


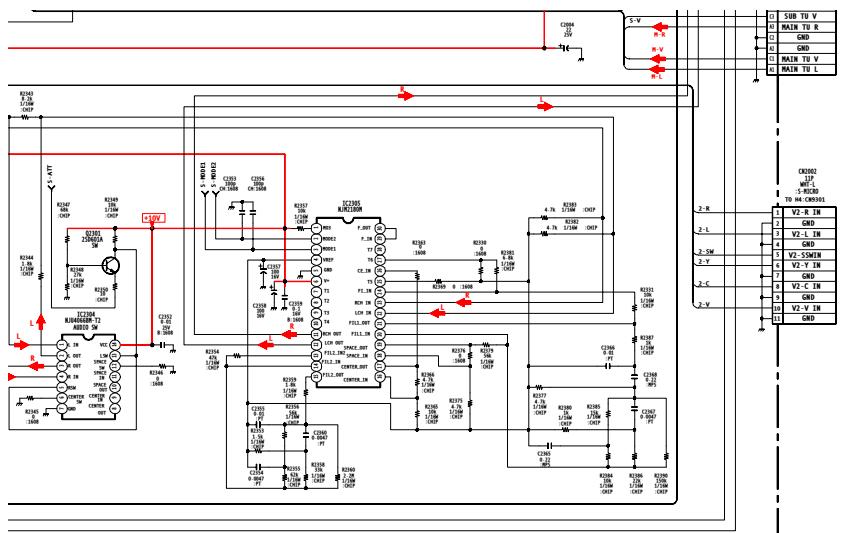


U BOARD IC VOLTAGE LIST

IC2001		IC2003		37	NC	19	5.0	17	6.0
PIN	VOLT	PIN	VOLT						
1	GND	1	4.5	39	NC	21	5.0	19	6.0
2	4.5	2	4.5	40	4.5	22	GND	20	6.0
3	9.0	3	4.4	41	4.4	23	NC	21	6.0
4	4.5	4	GND	42	9.0	24	GND	22	6.0
5	4.5	5	4.4	43	4.4	25	2.5	23	6.0
6	4.5	6	4.5	44	4.3	26	5.0	24	6.0
7	NC	7	4.5	45	4.5	27	2.2	25	6.0
8	NC	8	9.0	46	NC	28	2.2	26	6.0
9	NC	IC2004	47	4.4	29	5.0	27	6.0	
10	4.4	PIN	VOLT	48	NC	30	GND	28	NC
11	4.4	1	3.9	49	5.3	31	GND	29	6.0
12	4.5	2	4.4	50	4.5	32	1.8	30	6.0
13	4.5	3	3.9	51	4.4				
14	NC	4	4.4	52	4.5	PIN	VOLT		
15	NC	5	0.5	53	4.9	1	4.5		
16	NC	6	NC	54	4.5	2	4.5		
17	NC	7	4.9	55	NC	3	4.5		
18	4.4	8	4.5	56	4.5	4	4.5		
19	4.4	9	4.4	57	GND	5	8.6		
20	NC	10	4.3	58	4.3	6	0.3		
21	NC	11	4.4	59	4.4	7	GND		
22	NC	12	4.4	60	3.9	8	4.5		
23	4.4	13	NC	61	4.4	9	4.5		
24	4.5	14	NC	62	4.4	10	4.5		
25	4.4	15	3.9	63	4.3	11	4.5		
26	GND	16	4.4	64	4.5	12	0.3		
27	4.4	17	3.9	IC2007		13	8.6		
28	4.4	18	4.4	PIN	VOLT	14	9.0		
19	4.4							IC2305	
PIN	VOLT	20	NC	2	GND	PIN	VOLT		
1	4.6	21	4.9	3	5.0	1	11.1		
2	5.0	22	3.9	4	1.1	2	0.0		
3	3.1	23	3.9	5	NC	3	0.0		
4	GND	24	4.4	6	5.0	4	6.0		
5	3.1	25	3.9	7	1.3	5	GND		
6	3.1	26	4.4	8	GND	6	10.0		
7	5.0	27	NC	9	2.0	7	NC		
8	4.6	28	0.1	10	2.7	8	NC		
9	4.6	29	NC	11	1.0	9	NC		
10	GND	30	NC	12	2.0	10	NC		
11	4.6	31	NC	13	GND	11	6.0		
12	5.0	32	GND	14	0.0	12	6.0		
13	9.0	33	4.4	15	GND	13	6.0		

All voltages are in V.





	I _E	V _{CE}	V _C	V _{CD}	I _T	V _E	I _E	V _{CE}
13	9.0	33	4.4	15	GND	13	6.0	
14	4.6	34	4.4	16	GND	14	6.0	
15	GND	35	GND	17	NC	15	6.0	

U BOARD TRANSISTOR TABLE

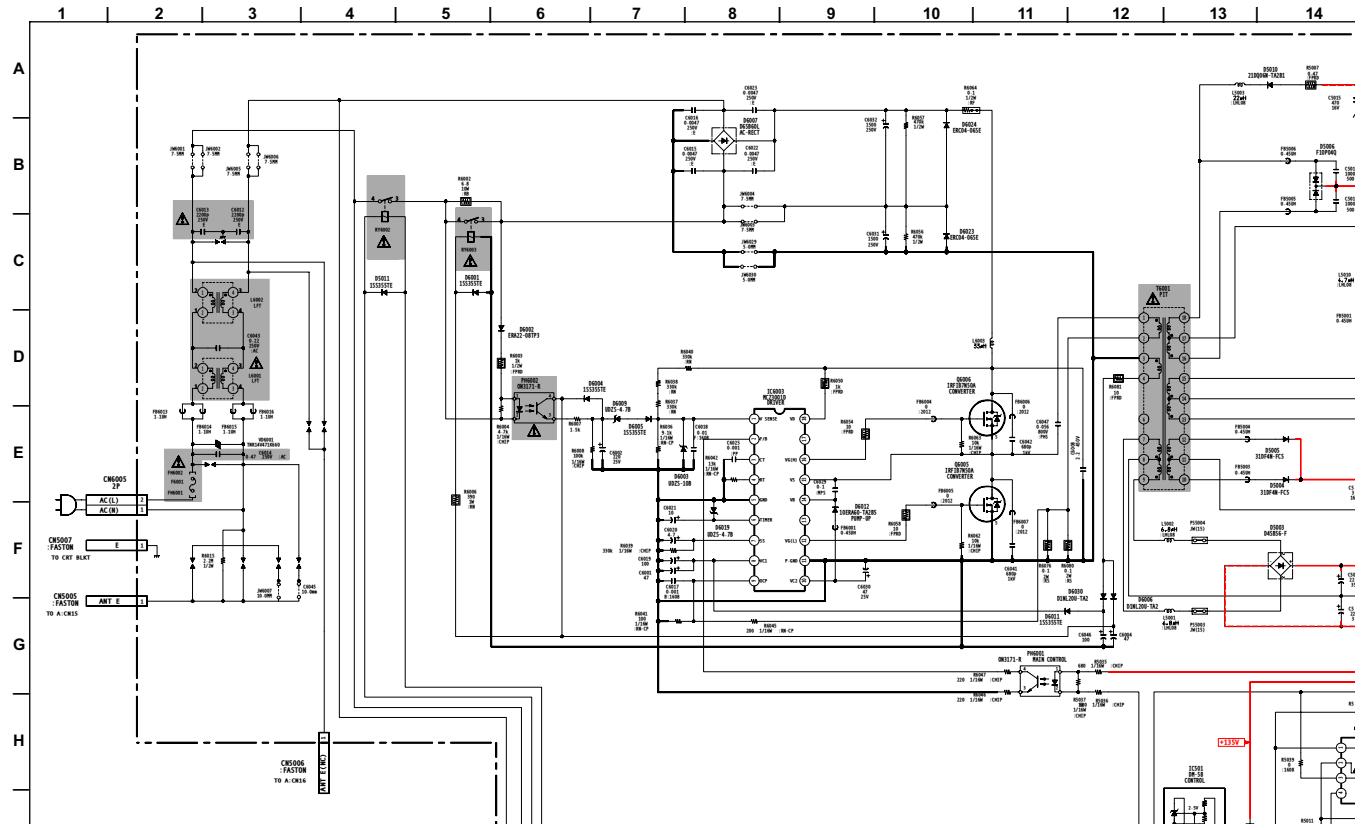
	B	C	E
Q2001	0.1	4.9	GND
Q2002	8.4	0.1	9.0
Q2003	7.8	5.6	8.5
Q2004	3.8	7.8	3.2
Q2005	0.3	0.0	GND
Q2006	0.3	0.0	GND
Q2007	0.4	0.0	0.0
Q2008	4.3	9.0	3.7
Q2009	4.4	9.0	3.7
Q2010	0.0	5.0	GND
Q2012	4.5	GND	5.1
Q2013	4.3	9.0	3.7
Q2015	4.5	9.0	3.9
Q2016	4.7	9.0	8.7
Q2017	5.0	9.0	4.4
Q2019	1.3	GND	2.0
Q2020	1.6	5.0	1.0
Q2021	4.2	1.3	4.8
Q2022	3.3	9.0	2.7
Q2024	1.5	4.2	0.9
Q2025	2.6	9.0	2.0
Q2026	7.2	5.1	7.9
Q2027	1.3	GND	2.0
Q2028	1.1	GND	1.7
Q2029	0.4	0.0	GND
Q2301	3.4	11.9	5.0
Q2302	0.0	12.0	12.0

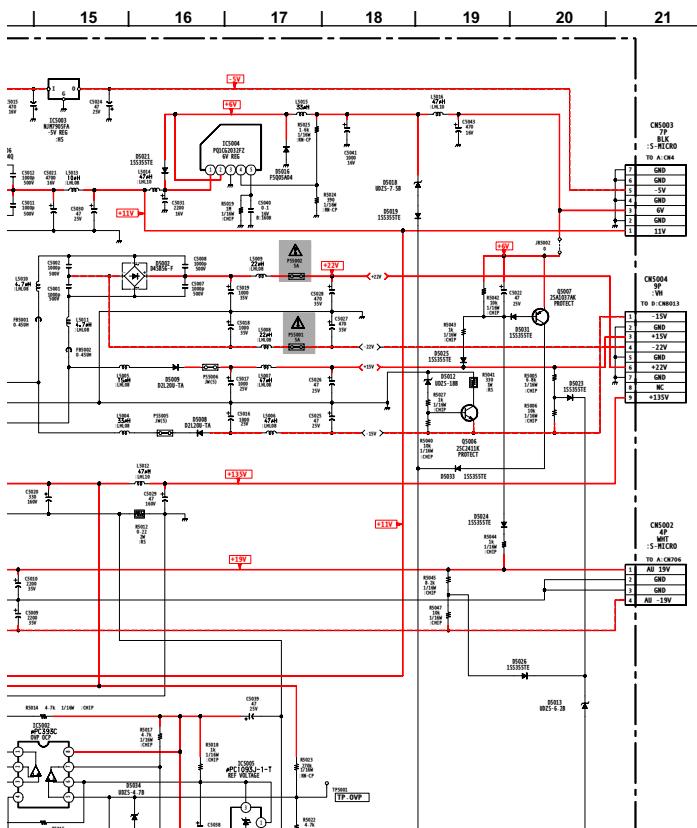
All voltages are in V.

U
A/V SWITCH
TERMINAL BLOCK
AUDIO PROCESSOR

9-945-935-01-BAG-U

G BOARD SCHEMATIC DIAGRAM





G BOARD IC VOLTAGE LIST

IC501		IC5004		IC6003	
PIN	VOLT	PIN	VOLT	PIN	VOLT
1	134.4	1	10.4	1	-0.3
3	2.5	2	6.5	2	-0.3
4	7.3	3	GND	3	-0.3
5	GND	4	1.2	4	-0.2

IC5002			IC5005		
PIN	VOLT	TO A-CM4	PIN	VOLT	TO A-CM1
1	-0.1		1	0.0	
2	0.1		2	2.3	8
3	0.0		3	0.0	9
4	-0.1		4	2.3	10
5	2.2		5	6.7	5

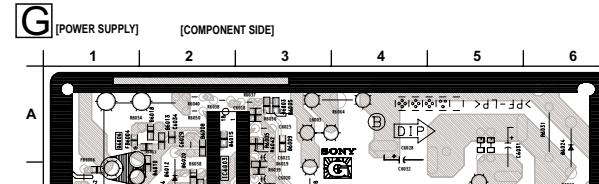
IC5006			IC5007		
PIN	VOLT	TO A-CM1	PIN	VOLT	TO A-CM2
1	-15V		1	12	0.0
2	GND		2	-0.1	
3	+15V		3	9.8	13
4	GND		4	5.0	14
5	+22V		5	0.0	0.3
6	GND		6	5.0	0.2
7	+15V		7	GND	
8	0		8	15	0.3

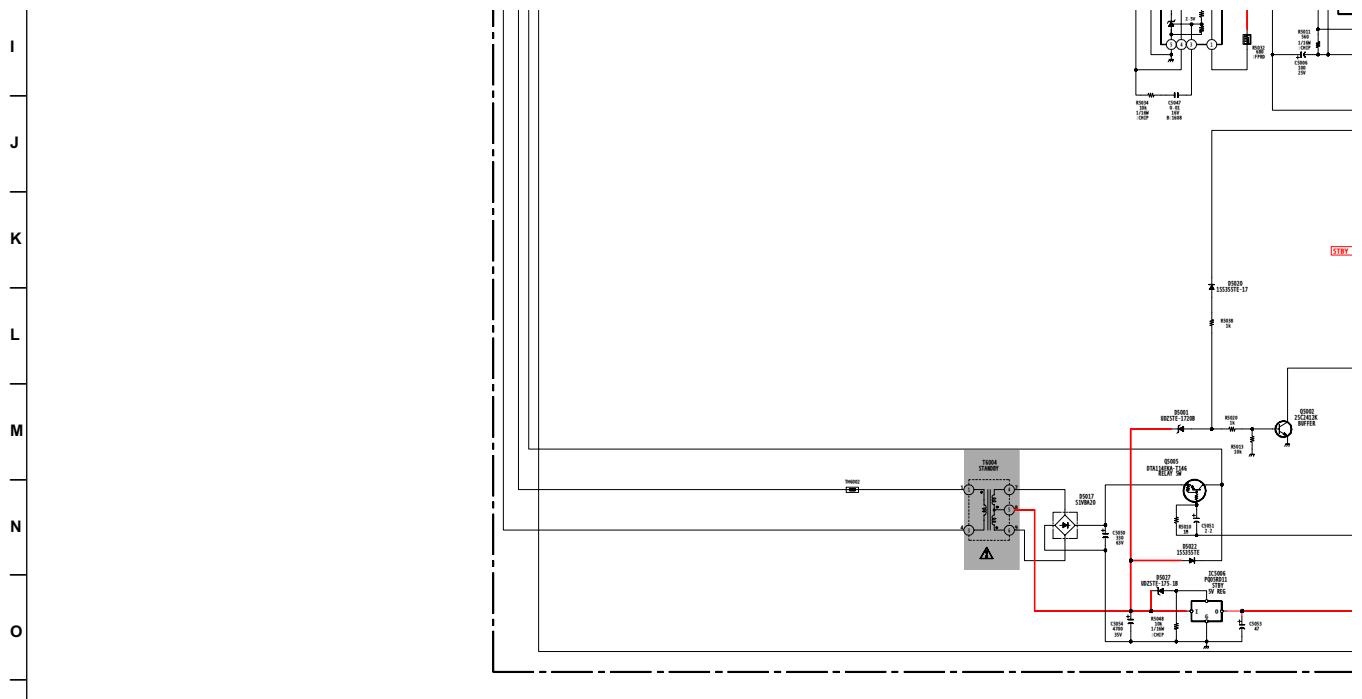
G BOARD TRANSISTOR VOLTAGE LIST

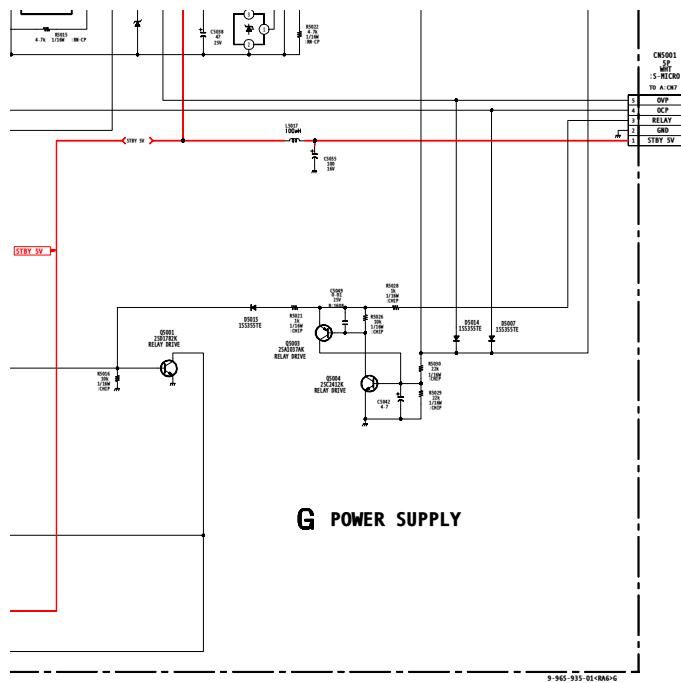
	B	C	E
Q5001	0.7	0	GND
Q5002	0.0	0.7	GND
Q5003	3.0	0.0	3.0
Q5004	0.0	3.0	GND
Q5005	22.3	9.1	22.8
Q5006	-15.0	0.0	-15.0
Q5007	6.2	0.1	6.2

	D	G	S
Q6005	0.3	-0.1	GND
Q6006	0.3	0.3	0.3

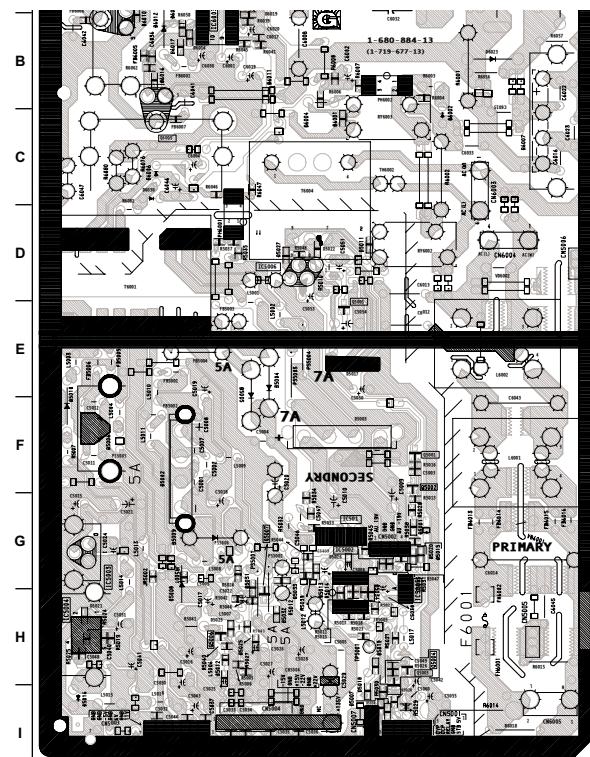
All voltages are in V.







9-965-935-01-0KA-G





Wide Screen Projection TV

Operating Instructions

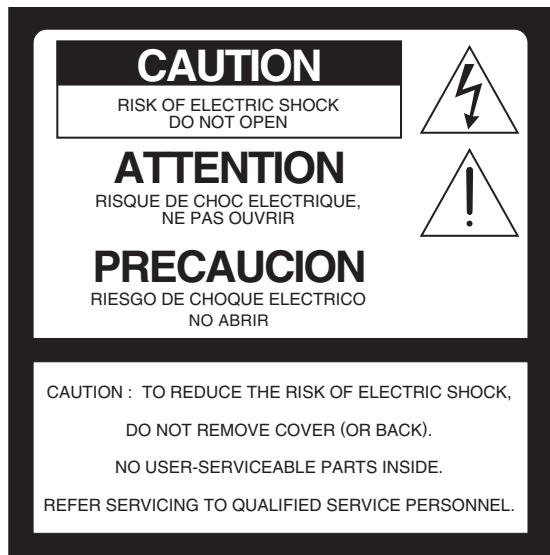
© 2002 Sony Corporation

**KP-46WT500
KP-57WS500**

**KP-51WS500
KP-65WS500**

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 warranty and your authority to operate this equipment.

CAUTION

How to reduce the risk of “Image Retention” on your Projection TV

Bright, stationary images such as TV station logos displayed on your TV can cause permanent damage to your TV, resulting in retention of the image in the picture.

Please take the following steps to reduce the risk of causing image retention:

View a variety of program sources or programming material.

Image retention can occur when bright stationary images such as TV station logos are viewed. Changing the program material viewed reduces the possibility that a single image will become imprinted on the picture tubes in your TV.

When viewing programs with stationary images, adjust the picture setting to reduce the “Picture” and “Brightness” levels. Image retention is accelerated by higher “Brightness” and higher “Picture” settings.

Please refer to your instruction manual for instructions on adjusting picture settings.

This will help you reduce the risk of causing image retention.

IMAGE RETENTION IS NOT COVERED BY YOUR WARRANTY

This document is for the remote control RM-Y909.

MODELS: KP-46WT500, KP-51WS500, KP-57WS500, and KP-65WS500.

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 temperatures 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 due to moisture condensation. 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.



As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Trademark Information

TruSurround and the (●)® symbol are trademarks of SRS Labs, Inc. TruSurround technology is incorporated under license from SRS Labs, Inc.

BBE and BBE Symbol are trademarks of BBE Sound, Inc. and are licensed by BBE Sound, Inc. under U.S. Patent No. 4,638,258 and 4,482,866.

Steady Sound, Digital Reality Creation, Caption Vision, CineMotion, Memory Stick, and Twin View are registered trademarks of Sony Corporation. ClearEdge VM and HD Detailer are trademarks of Sony Corporation.

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.

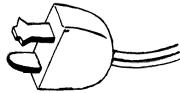


Grounding or Polarization

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:

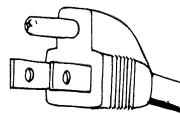
For the set with a polarized AC power cord plug

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.



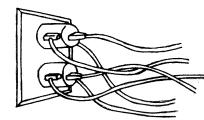
For the set with a three-wire grounding type AC plug

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

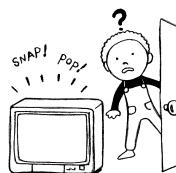
Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.



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.



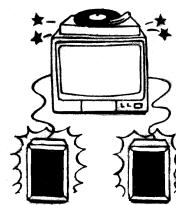
Object and Liquid Entry

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 benzine 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 Sony for the specific model of TV. No part of the TV set should overhang any edge of the TV cart or stand; any overhanging edge is a safety hazard. 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

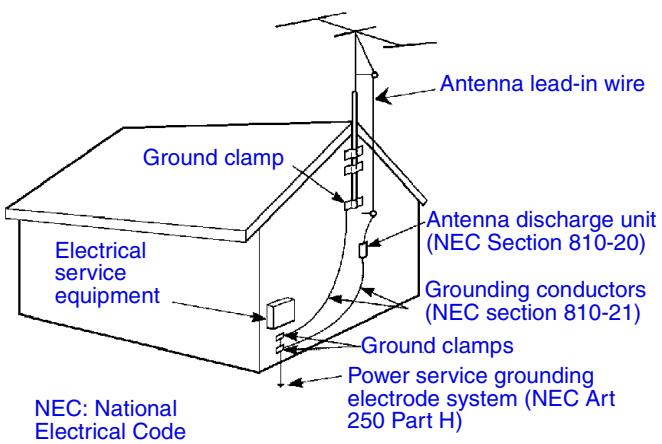
If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits.

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 National Electrical Code, ANSI/NFPA 70



Lightning

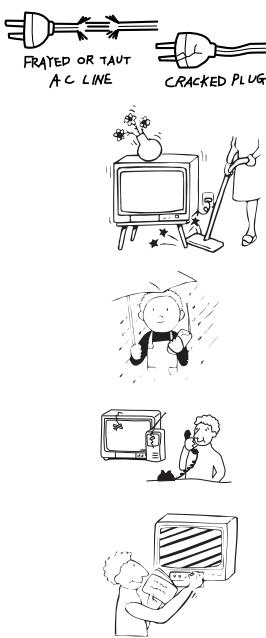
For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.

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.



Servicing

Do not attempt to service the set by 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.

Safety Check

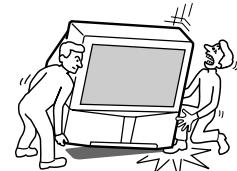
Upon completion of any service or repairs to the set, ask the service technician to perform routine safety checks (as specified by the manufacturer) to determine that the set is in safe operating condition, and to so certify. When the set reaches the end of its useful life, improper disposal could result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



For Safety

Be careful when moving the projection TV

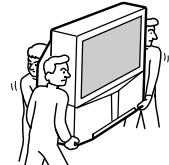
When you place the projection TV in position, be careful not to drop it on your foot or fingers.



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 11)
- Do not carry the projection TV holding the speaker grill.
- Hold the projection TV tightly when carrying it.
- Model KP-65WS500 has handles that you can use to carry the unit.

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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-46WT500, KP-51WS500, KP-57WS500, and KP-65WS500. KP-51WS500 is used for illustration purposes, unless indicated otherwise.

Features

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

- Hi Scan 1080TM:** Enables you to receive the 1080i, 720p, 480p and 480i digital TV formats. By using the VIDEO 5/6/7 IN jacks, you can connect a DTV (digital television) receiver to view DTV programs.
- DRCTM 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.
- CineMotionTM:** 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 ViewTM:** Using Multi-Image Driver (MID-X), Twin View allows you to watch two programs side by side with the ability to zoom in on one picture and listen to the program in the selected window. You can watch pictures from two different sources (1080i, 720p, 480p or 480i) simultaneously.
- Steady SoundTM:** 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.
- Scrolling Channel Index:** Allows you to view and choose channels from scrolling pictures without leaving the current channel.

- Wide Screen Mode:** Allows you to watch 4:3 normal broadcasts in wide screen mode (16:9 aspect ratio).
- Auto Wide:** Allows you to select the wide screen mode automatically.
- Flash Focus™:** Allows you to adjust convergence automatically.
- Digital Visual Interface (DVI):** Can accommodate a copyprotected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.

Using this manual

We recommend that you carefully review the contents of the following three sections in the order shown 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 also 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 are also found on the projection TV console.

* High-bandwidth Digital Content Protection

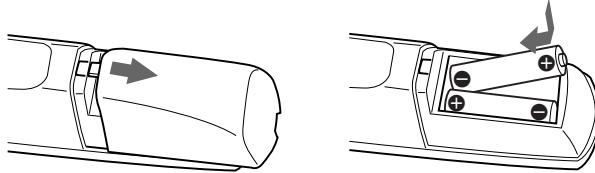
Installing and Connecting the Projection TV

Contents

The 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 into the Remote Control

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

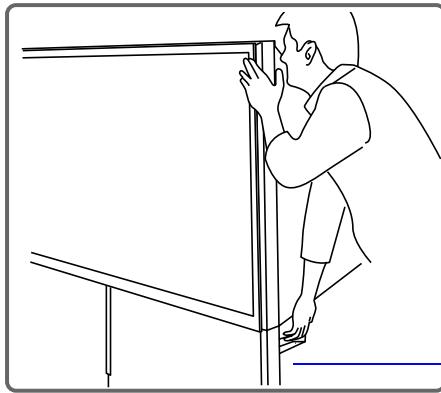


- ☞ Remove the batteries to avoid damage from possible battery leakage whenever you anticipate that the remote control will not be used for an extended period.
- ☞ Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.
- ☞ Your remote control can be programmed to operate most video equipment. (See “Programming the Remote Control” on page 68.)

Carrying Your Projection TV

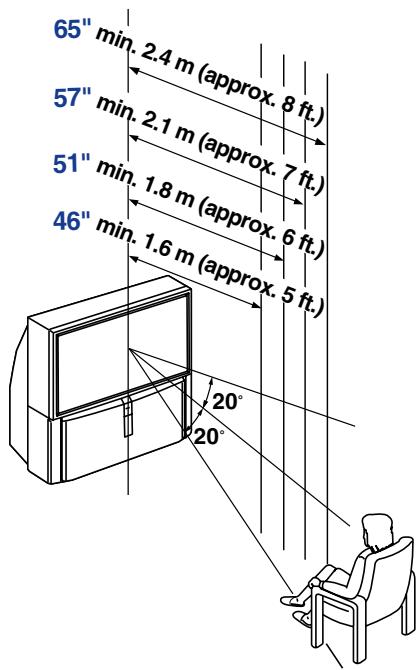
Carrying the projection TV requires four (4) or more people.

The projection TV has been equipped with casters for easy movement on a hard surface. Please move your projection TV using the casters.
(KP-51WS500, KP-57WS500, and KP-65WS500 only)

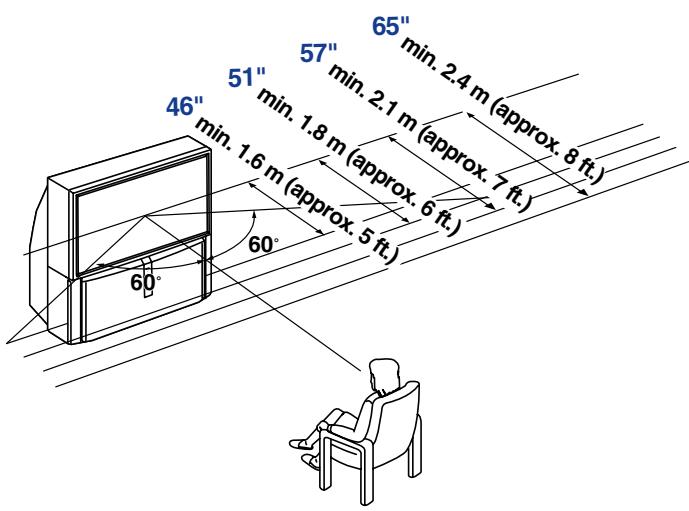


**Handle (one on each side)
(KP-65WS500 only)**

Installing the Projection TV



Recommended viewing area (Vertical)



Recommended viewing area (Horizontal)

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.



DVI cable

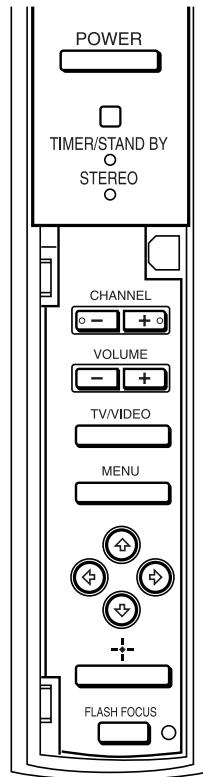
DVI connection for a high-bandwidth copy-protected signal



Projection TV Controls and Connectors

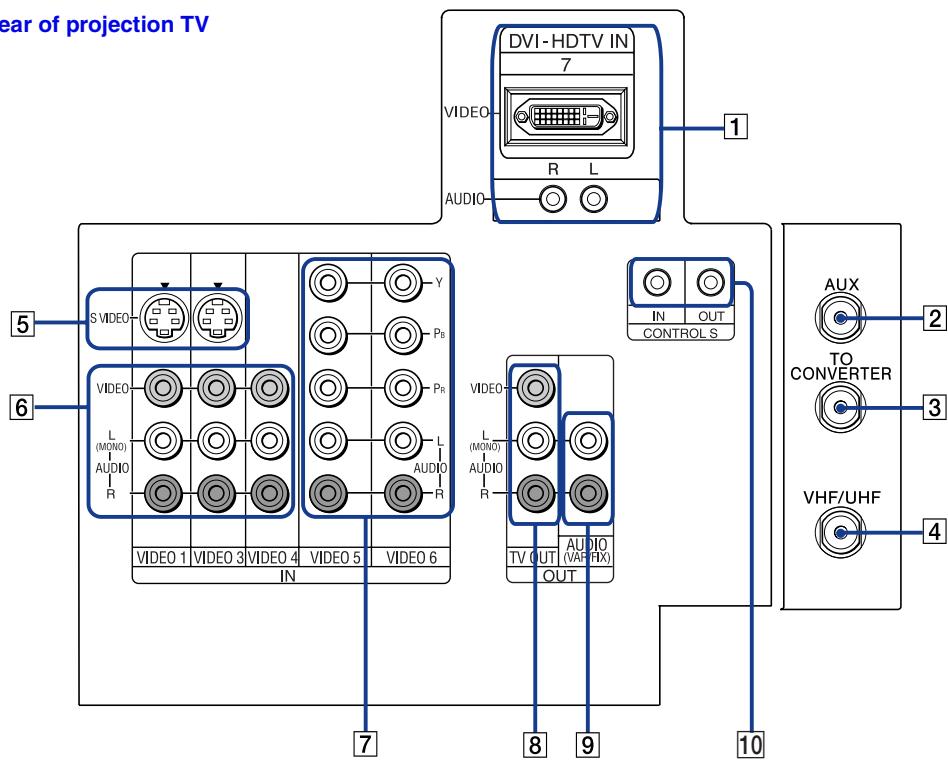
Front Panel Menu Controls

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 by pressing the Select button (-+) selects the menu item.



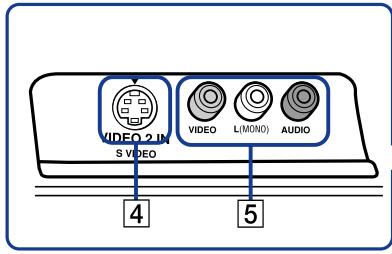
Projection TV Rear and Front Panel Connectors

Rear of projection TV

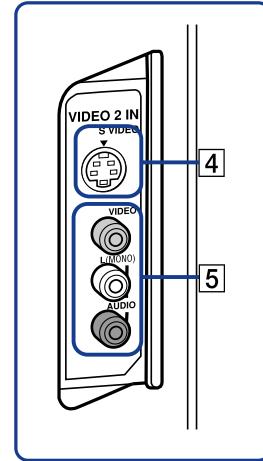


Front of projection TV

Front of projection TV



KP-46WT500



KP-51WS500,
KP-57WS500, and
KP-65WS500

Connection	Description
[1] DVI-HDTV VIDEO AUDIO R/L (VIDEO 7 IN)	Can accommodate a copy-protected digital connection (HDCP*) to other devices (such as digital set-top boxes) that have compatible interfaces. The DVI-HDTV input terminal is compliant with the EIA-861 standard, and is not intended for use with personal computers. See the instruction manual that came with your equipment for details about connecting and using it with the TV.
[2] 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.
[3] 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.
[4] VHF/UHF	Connects to your VHF/UHF antenna or cable.
[5] S VIDEO (Rear and front)	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.
[6] VIDEO (L/R)/AUDIO (Rear and front)	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 front panel of the projection TV.
[7] 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.
[8] TV OUT	Outputs the signal that the TV is tuned to (regardless of the picture displayed on the screen).
[9] AUDIO OUT (VAR/FIX) L (MONO)/R	Connects to the left and right audio inputs of your audio or video component.
[10] CONTROL S IN/OUT	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. 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.

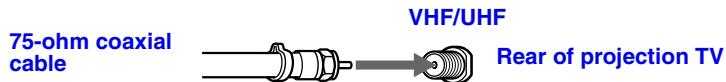
* High-bandwidth Digital Content Protection.

Basic Connections (Connecting Cable TV or Antenna)

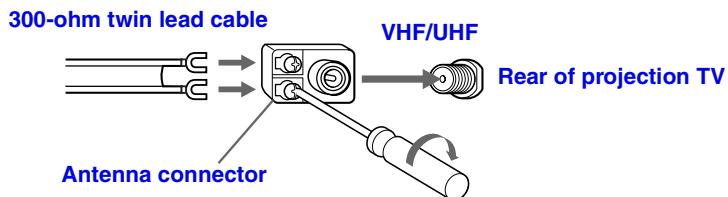
Connecting Directly to Cable or an Antenna

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**).

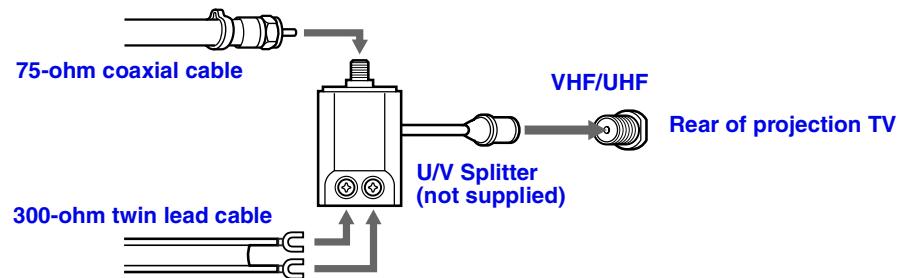
A VHF Only or VHF/UHF or Cable



B VHF Only or UHF Only or VHF/UHF

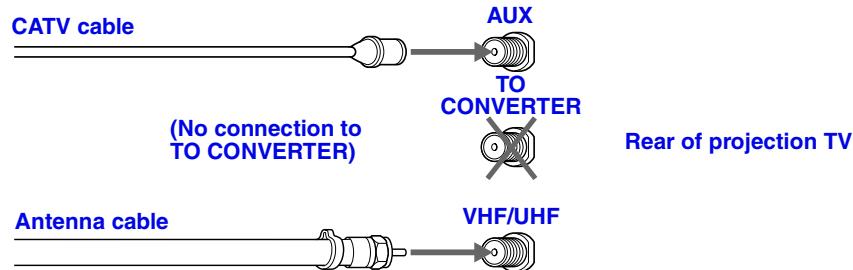


C VHF and UHF



Cable and Antenna

If your cable provider does not feature local channels, you may find this setup 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 53) and perform the Auto Program function (see page 54).

Cable Box Connections

Cable Box and Cable

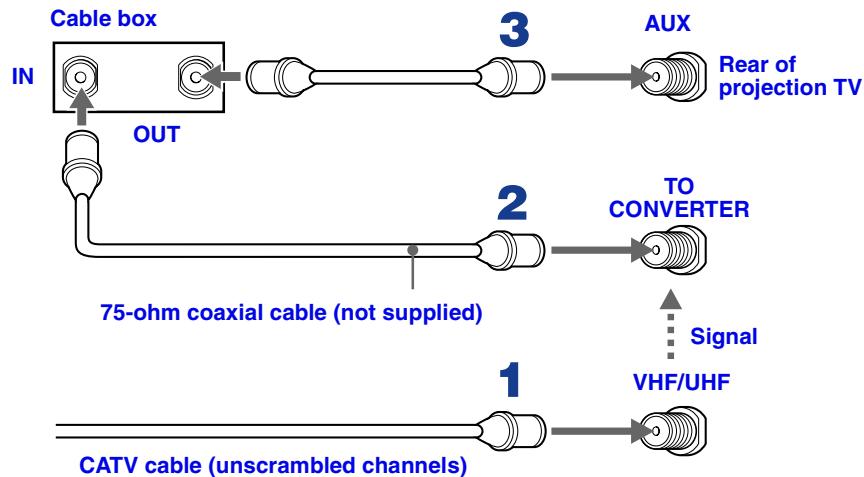
This is the preferred basic cable TV hookup to use if:

- 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).

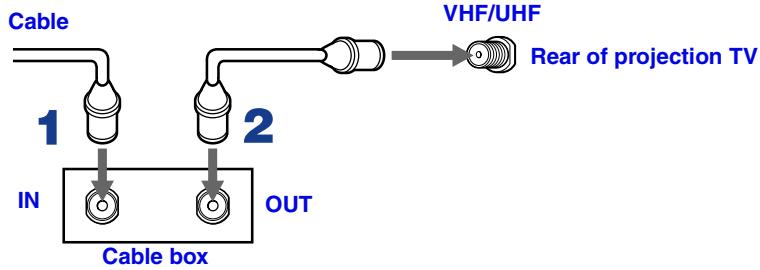
Cable Box Only

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 53).

 Setting the Channel Fix feature in the Channel menu (see "Using the Channel Menu" on page 53), ensures that you do not accidentally switch the channels using your projection TV.

-  Your Sony remote control can be programmed to operate your cable box (see "Programming the Remote Control" on page 68).
-  To change channels using the cable box, set your projection TV to channel 3 or 4 depending on the cable box channel output. 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 54).

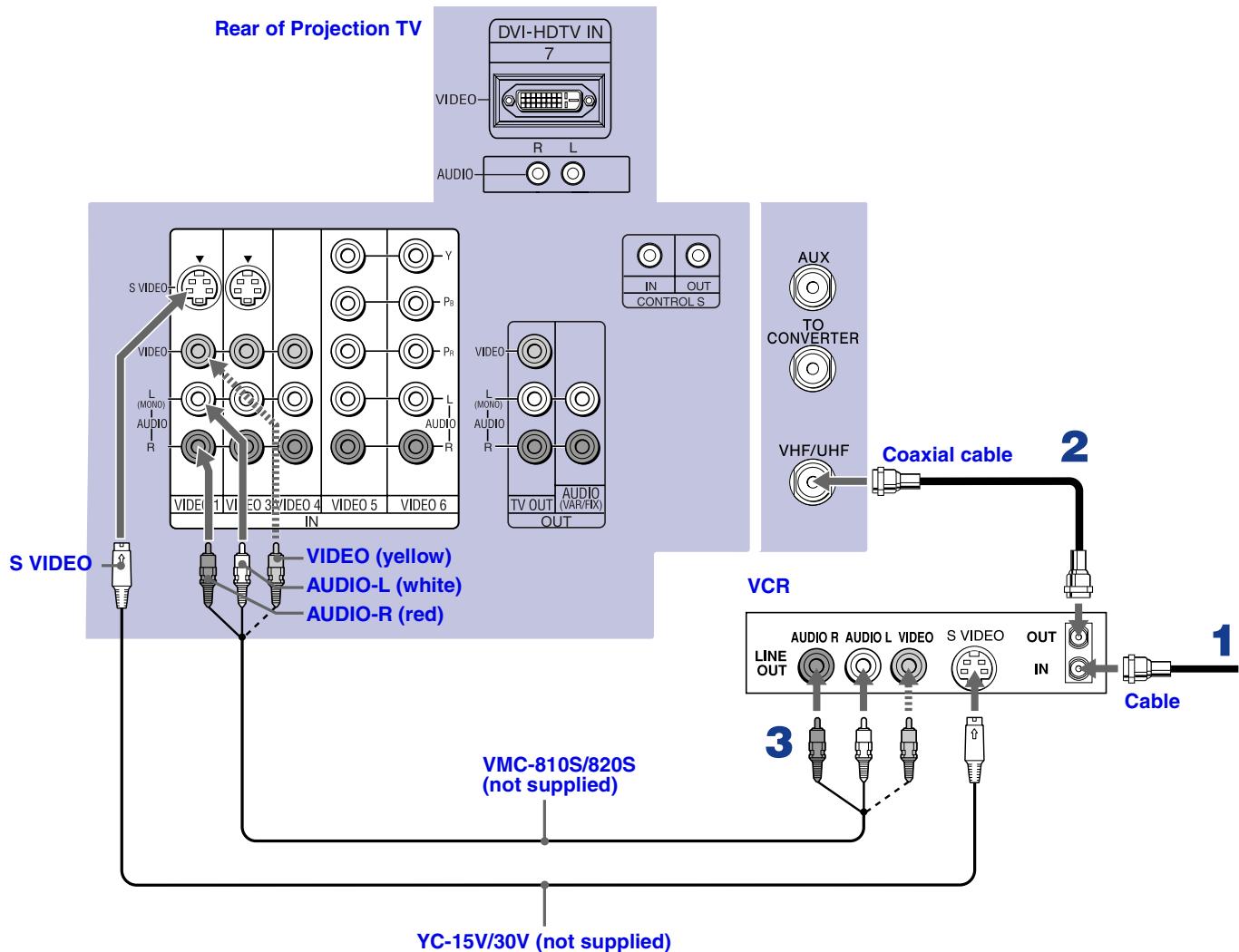
Connecting a VCR and Cable

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 S Video OUT jacks to the projection TV's AUDIO and S VIDEO IN jacks.



Note: 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:

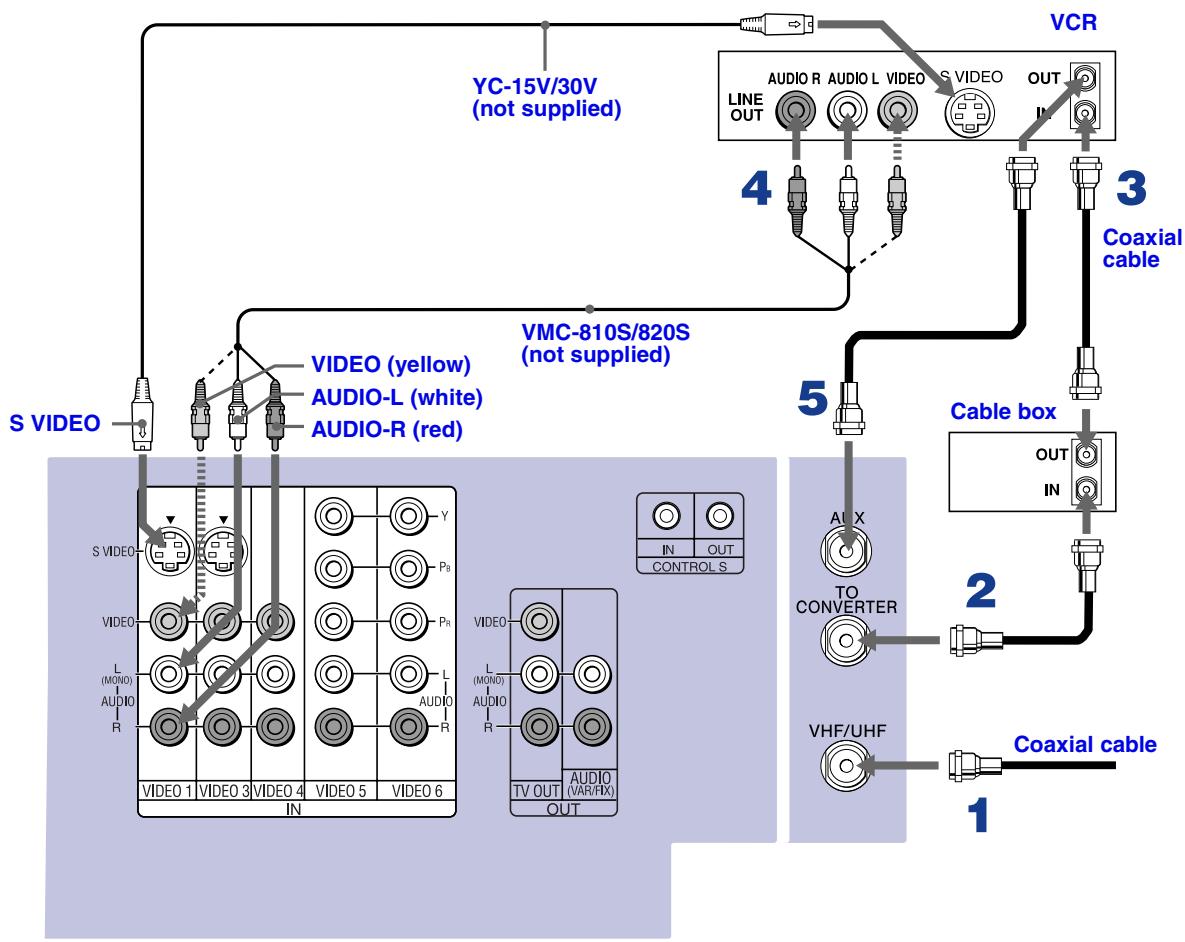
- Use the projection TV remote control to change channels on your cable box when the signal is scrambled. To program your Sony remote control to operate your cable box, see “Programming the Remote Control” on page 68.
- Use the projection TV remote control to change channels using your projection TV 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.



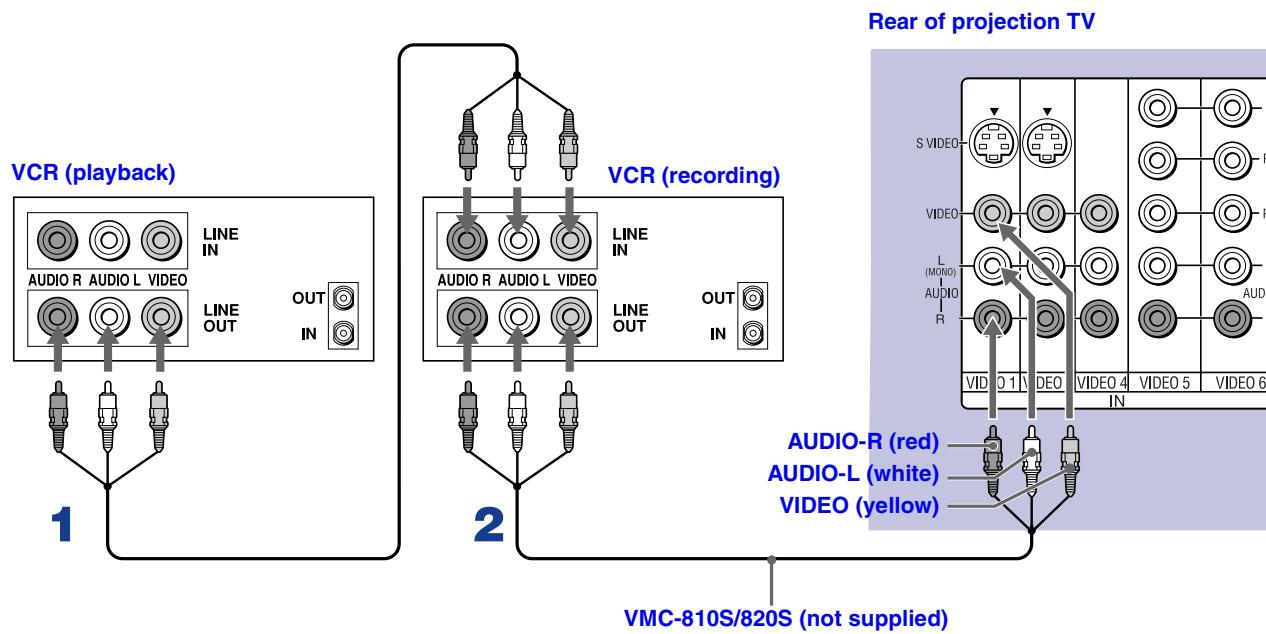
- ☞ If your VCR is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.
- ☞ You will not be able to change channels on the VCR. Set your projection TV and VCR to channel 3 or 4, depending on your cable box channel output.
- ☞ Pressing ANT on the remote control switches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

If you connect two VCRs, you can record from one VCR to the other while using your projection TV to monitor what is being recorded.

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 be connected to provide sound.
- ☞ You cannot record signals from equipment connected to the Y, P_B, P_R input.

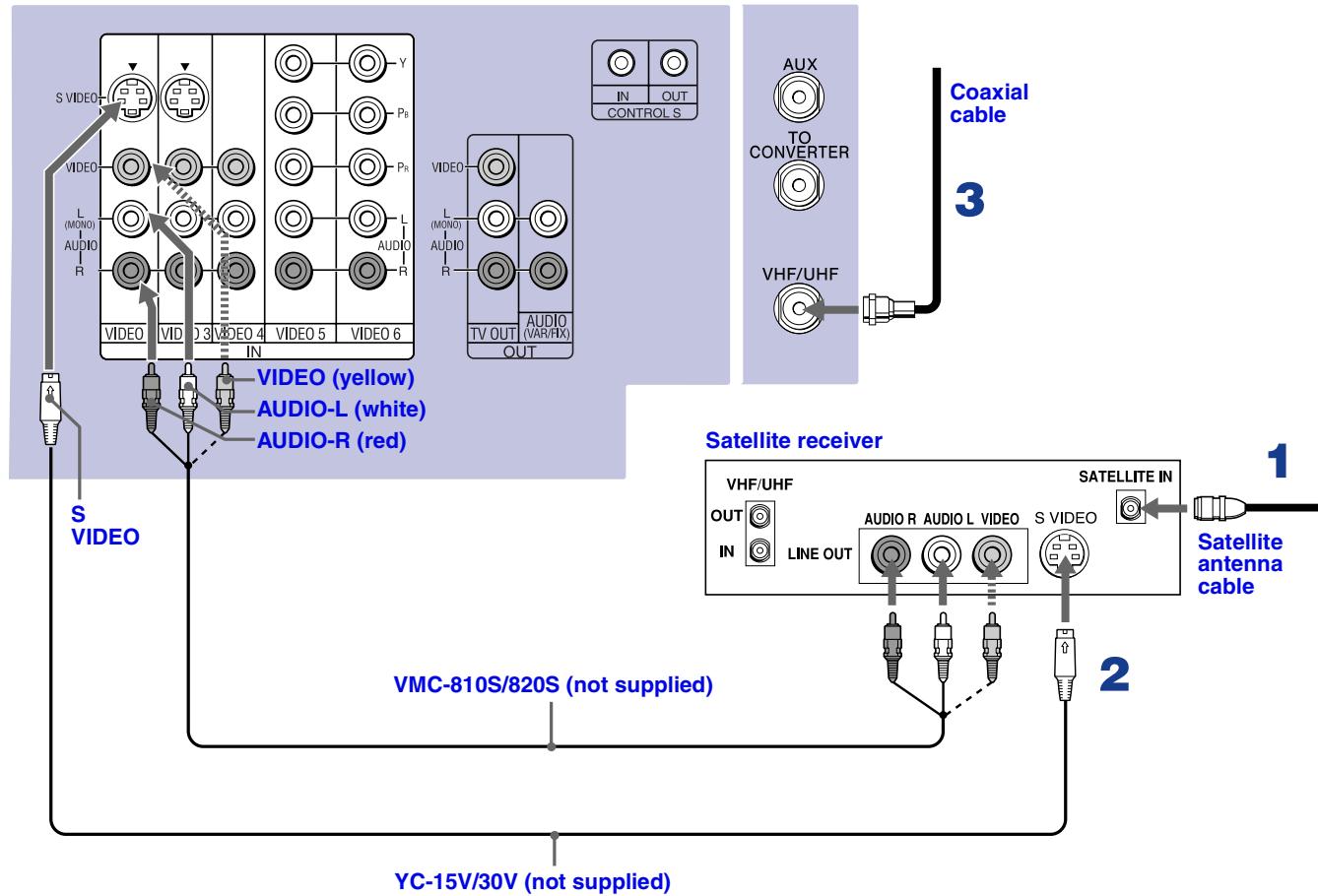
Connecting a Satellite Receiver

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.

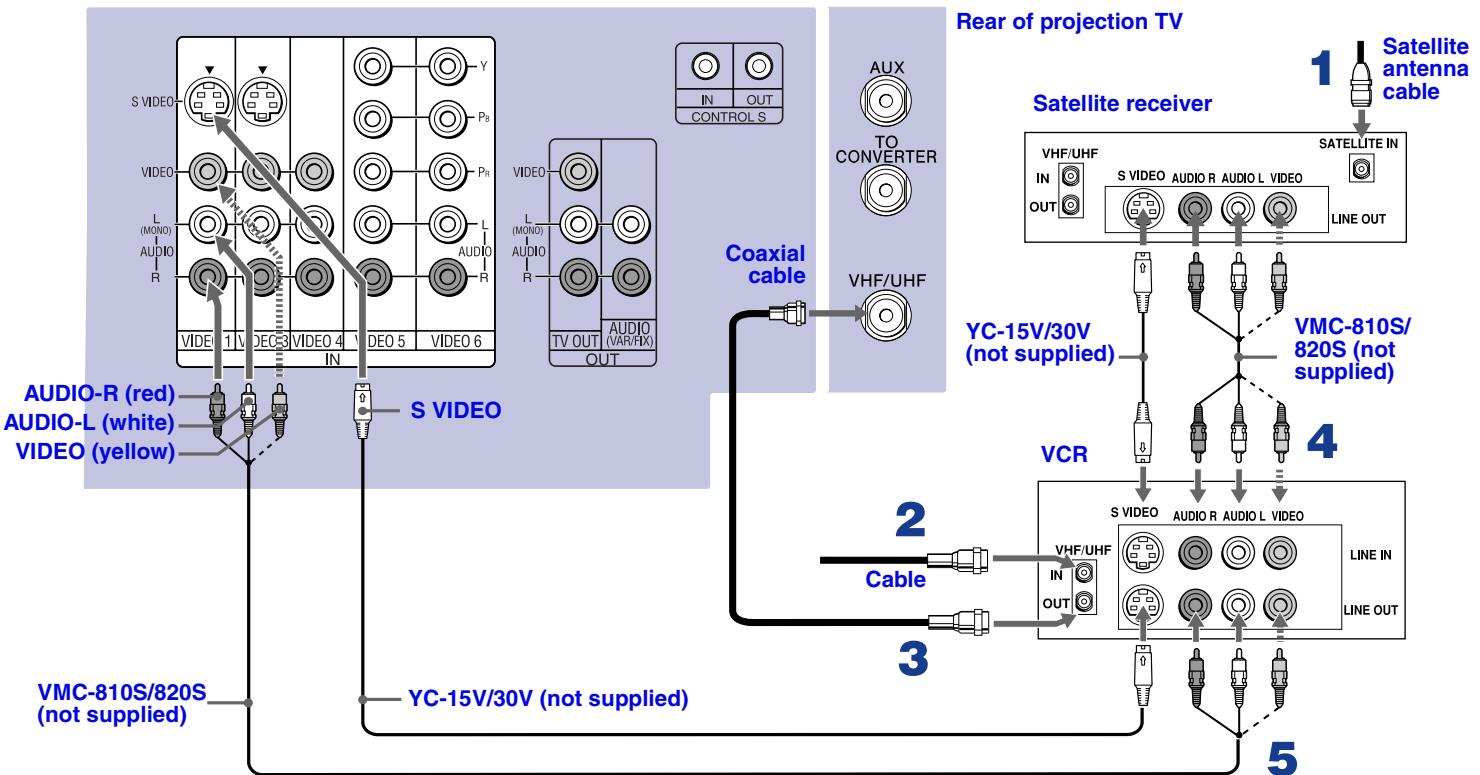
Rear of projection TV



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.

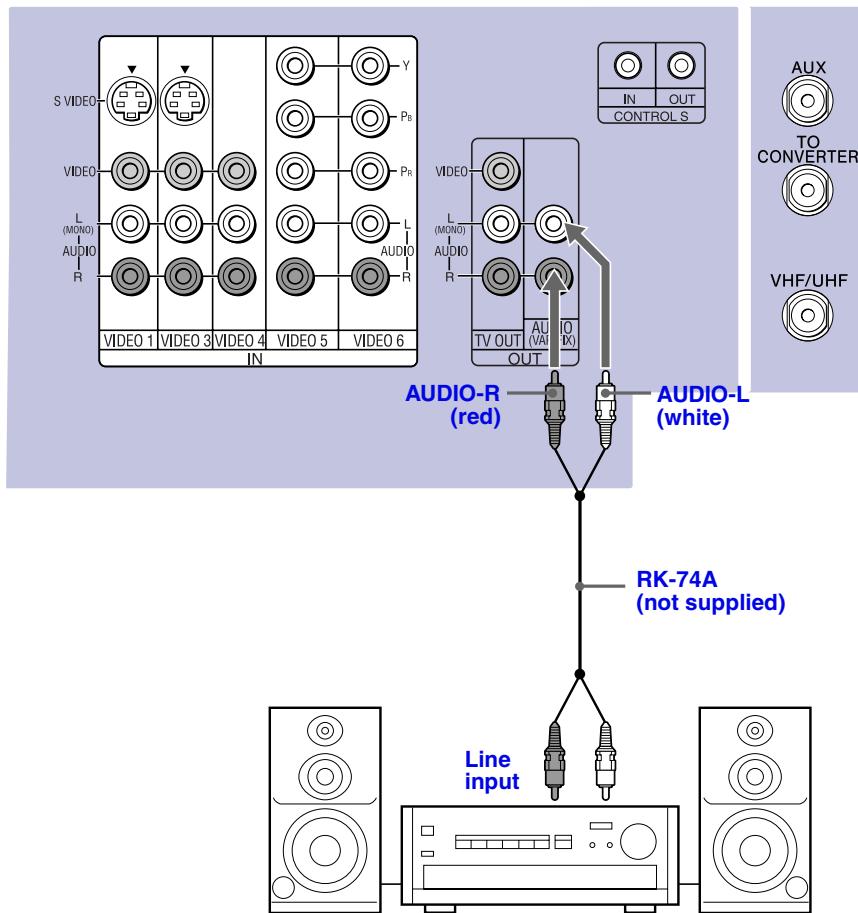
If your VCR or satellite receiver is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.

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:

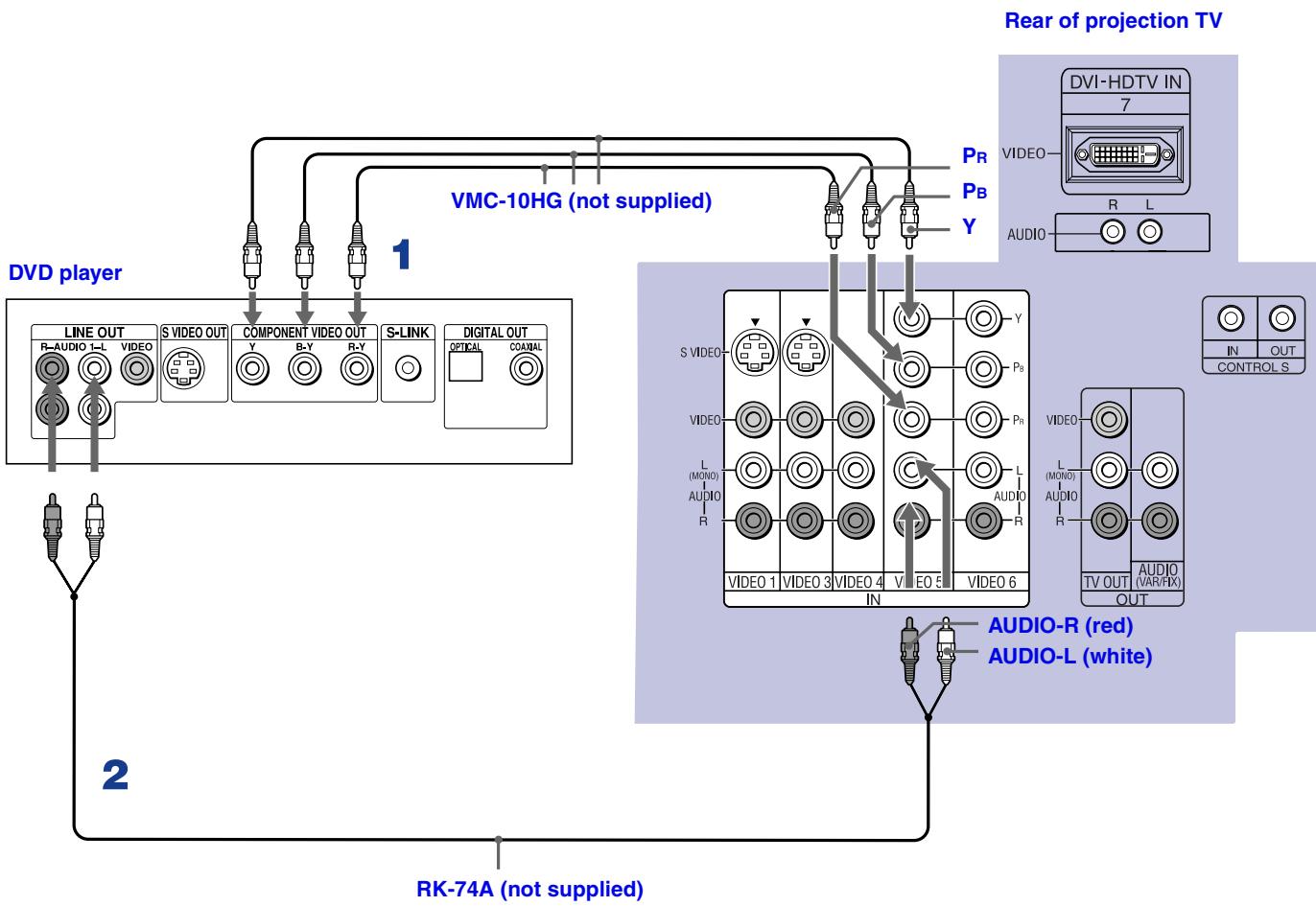
- Your DVD player has component (Y, B-Y, R-Y) jacks.

Disconnect all power sources before making any connections.

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

 The Y, B-Y and R-Y jacks on your DVD player are sometimes labeled Y, C_B and C_R, or Y, P_B and P_R. 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).



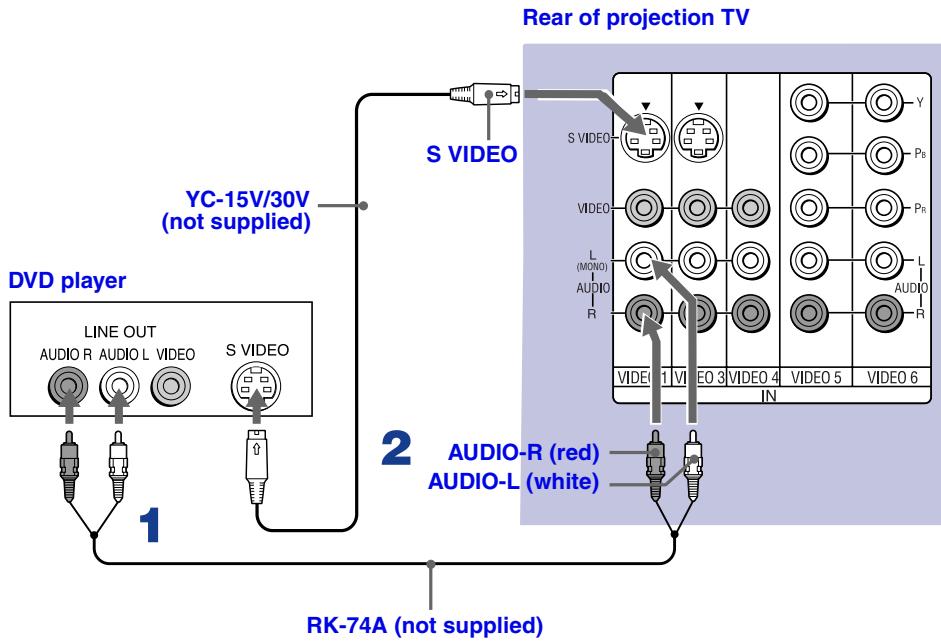
Connecting a DVD Player with A/V Connectors

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

Connecting a Digital TV Receiver

 Be sure to read the Set-top box manual.

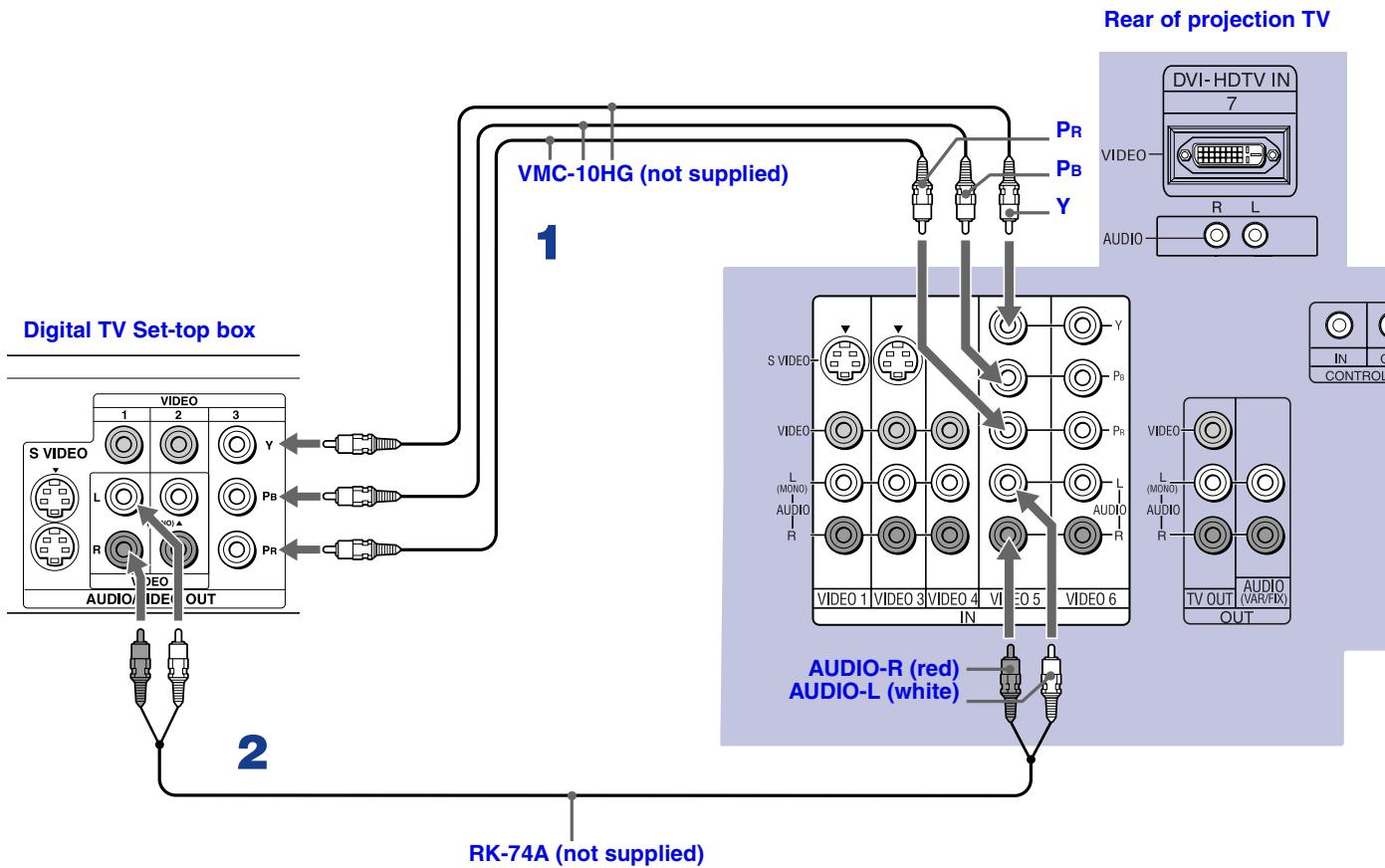
 Some Digital TV Receivers are equipped with a DVI connection. Refer to your Digital TV Receiver manual for setup instructions using this connection.

Disconnect all power sources before making any connections.

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

 The Y, Pb and Pr jacks do not provide audio, so audio cables must be connected to provide sound.
 Component video connection is necessary to view 480p, 720p, and 1080i formats. You may also use the S VIDEO or Composite Video connections, however, component video (Y, Pb, Pr) will provide the best picture quality for all format types.

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



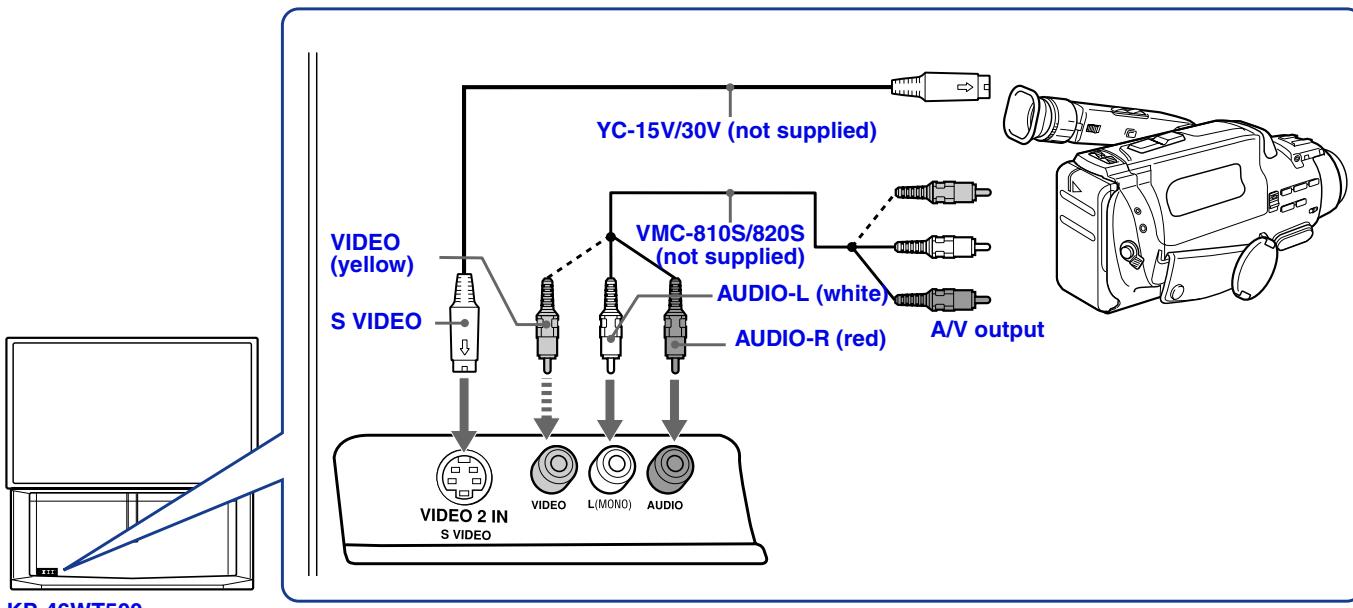
 You cannot record the signal from any equipment connected into the Y, Pb and Pr connectors.
 This projection TV is not compatible with digital TV receivers configured with RGB or VGA output connectors.
 The DVI connection is compliant with the EIA-861 standard and is not intended for use with personal computers.

Connecting a Camcorder

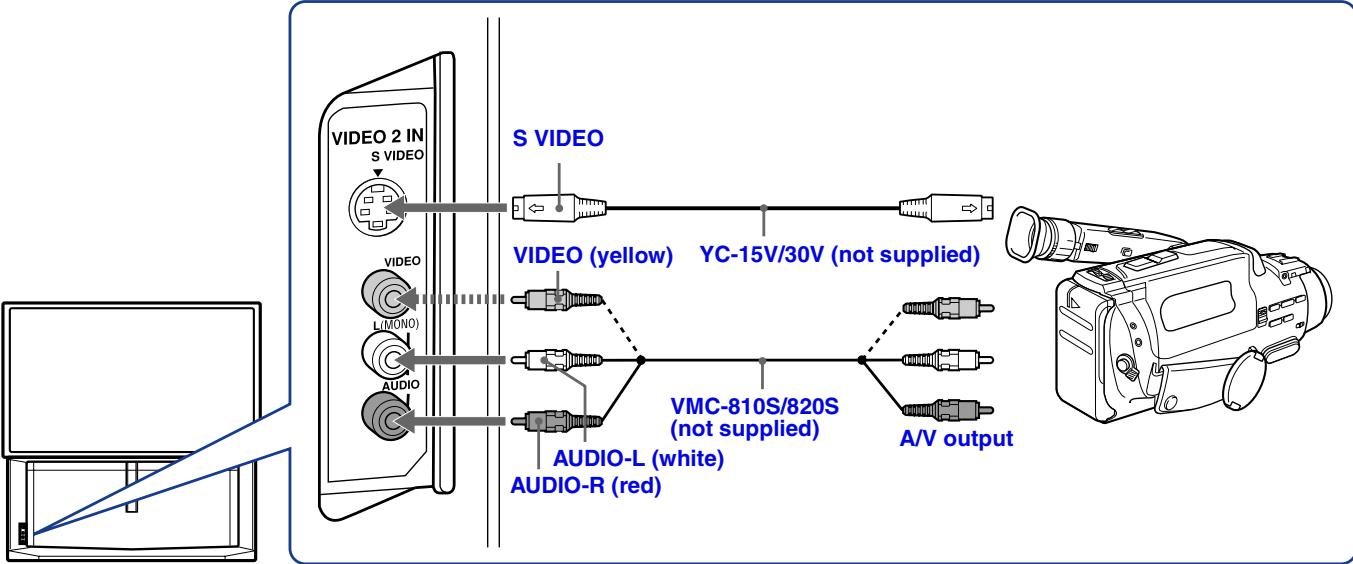
For easy connection of the camcorder, the projection TV has front Audio and Video inputs (shown below). However, if you prefer, you can also connect the camcorder to the projection TV's rear Audio and Video IN jacks.

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 (MONO) jack.
- ☞ If your camcorder is not equipped with S VIDEO, use a VIDEO cable (yellow) instead of the S VIDEO cable.



KP-46WT500

KP-51WS500,
KP-57WS500, and KP-65WS500

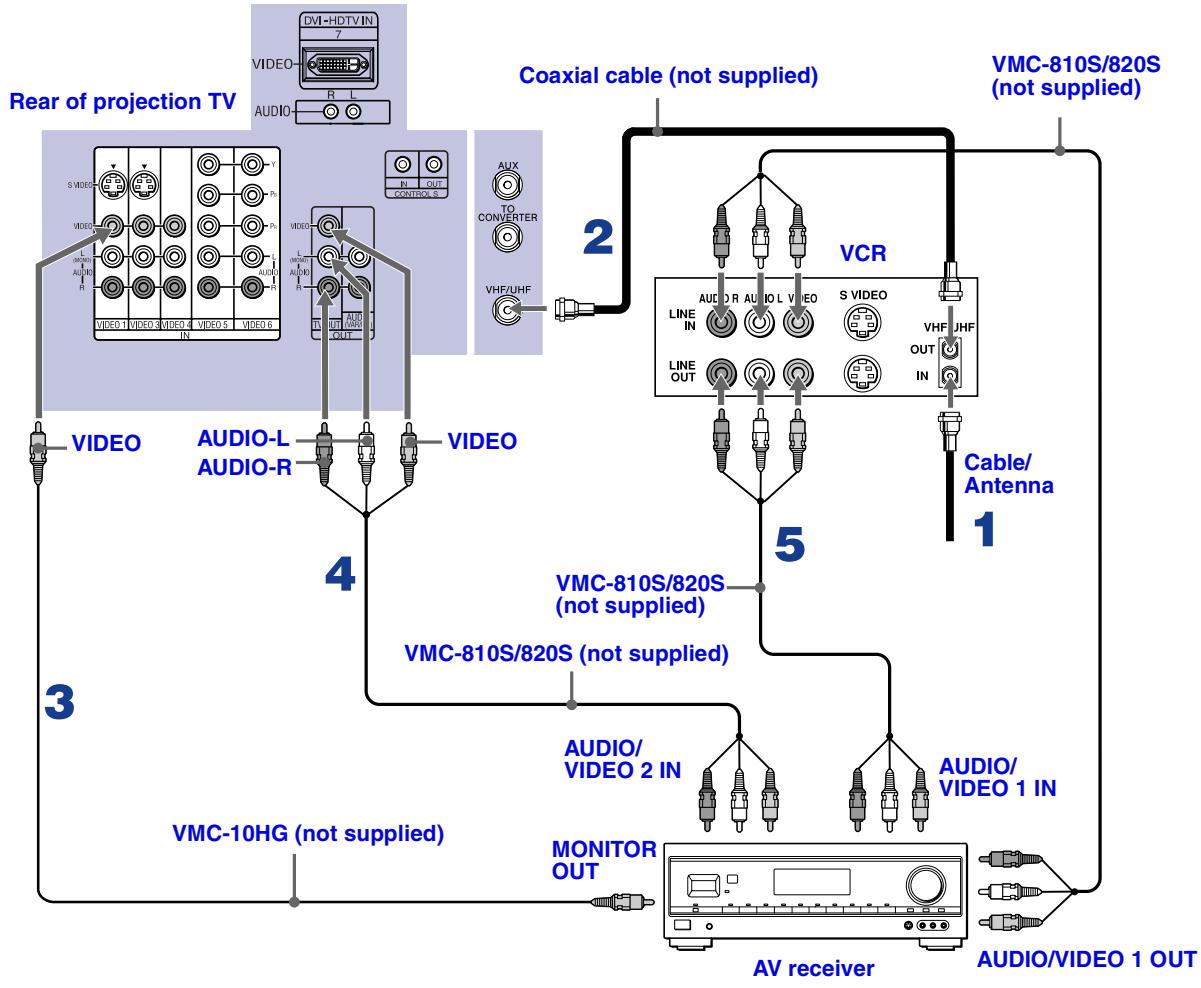
Connecting an AV Receiver

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 59).

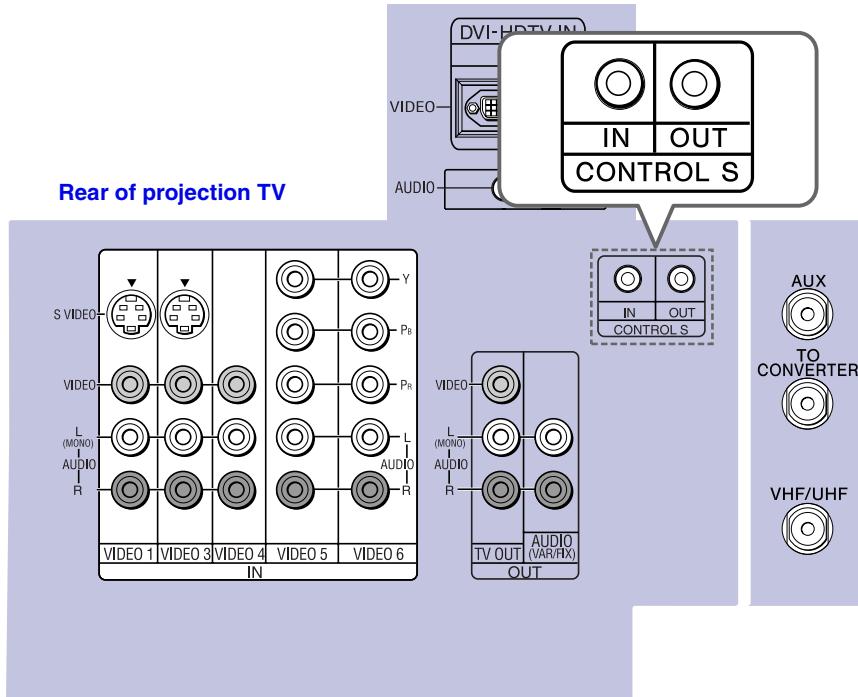
Disconnect all power sources before making any connections.

- 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 59).



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

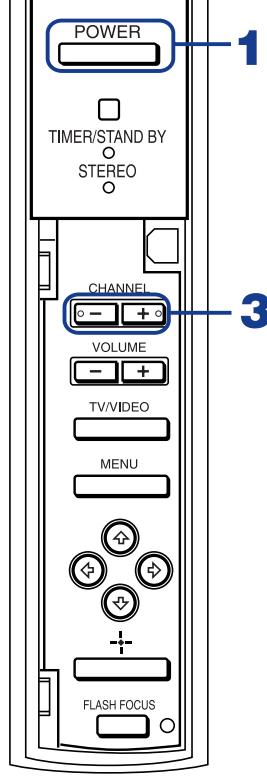
After you finish connecting your projection TV, you can run Auto Setup to set up your channels. The Auto Setup screen appears when you turn your projection TV on for the first time after installing it. If you do not want to set up the channels at this time, you can do it later by using the Auto Program feature in the Channel menu (see page 54).

 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 54.

Adjusting the Convergence Automatically – FLASH FOCUS™ –

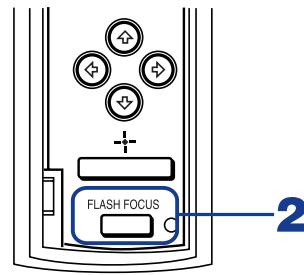
The projection tube image appears on the screen in three colors (red, green and blue). If they do not converge, the color is poor and the picture blurs.

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

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

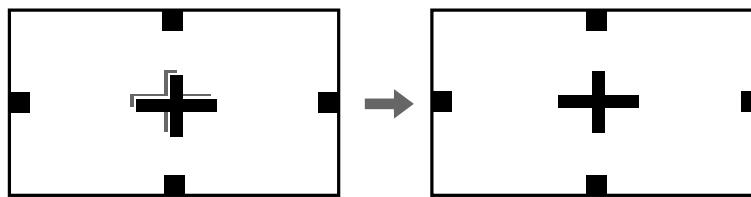
 It is recommended to perform FLASH FOCUS about 30 minutes after the projection TV is first turned on.

Projection TV
front panel



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

The cross pattern shown below appears and FLASH FOCUS begins to work. The adjustment is completed when the cross pattern becomes white and you are returned to the program you were watching.



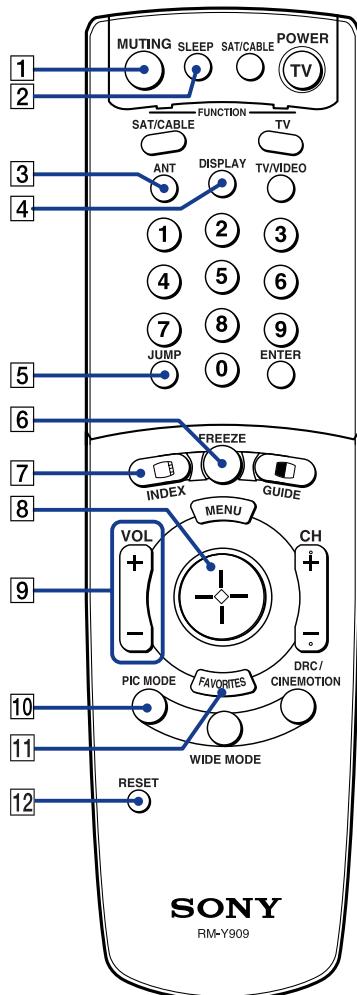
-  You cannot perform any other functions until FLASH FOCUS has completed its cycle.
-  If you perform any other operation while FLASH FOCUS is in progress, FLASH FOCUS operation is canceled.
-  Unshielded speakers or other metallic objects can cause picture distortion if placed close to the projection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

Using the Features

Using the Remote Control

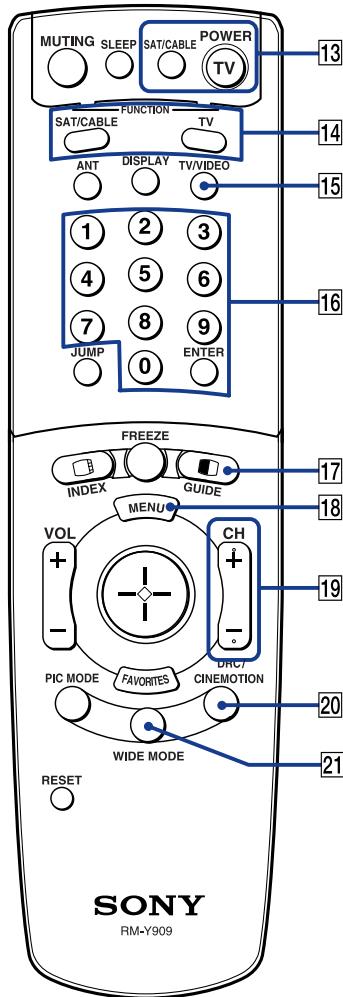
The following table describes the buttons on the remote control that are for more advanced functions.

Button Descriptions



Outside Panel

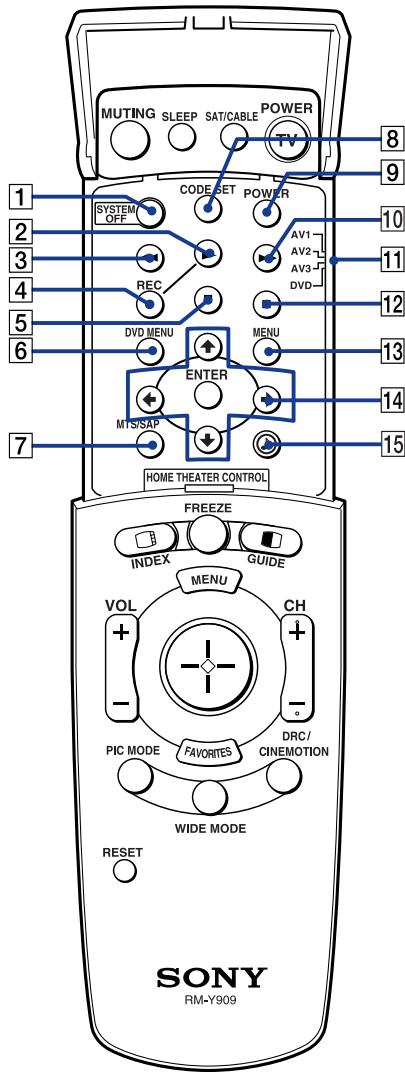
Button	Description
1 MUTING	Press to mute the sound. Press again or press VOL + to restore the sound.
2 SLEEP	Press repeatedly until the projection TV displays the time in minutes (15, 30, 45, 60, or 90) that you want the projection TV to remain on before shutting off automatically. Cancel by pressing until SLEEP OFF appears or turning the power off. While the Sleep feature is set, press once to view the remaining time.
3 ANT	Changes between the VHF/UHF input and 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 57 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 Scrolling Channel Index mode. You can view and select from all receivable channels scrolling on the screen without leaving the current one.
8	The 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 49.
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 68.
[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, VIDEO 6 and VIDEO 7.
[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 menu.
[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 49.
[21] WIDE MODE	Press to step through the wide screen modes: Wide Zoom, Normal, Full and Zoom. For details, see “Using Wide Screen Mode” on page 47.

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

Using the Features



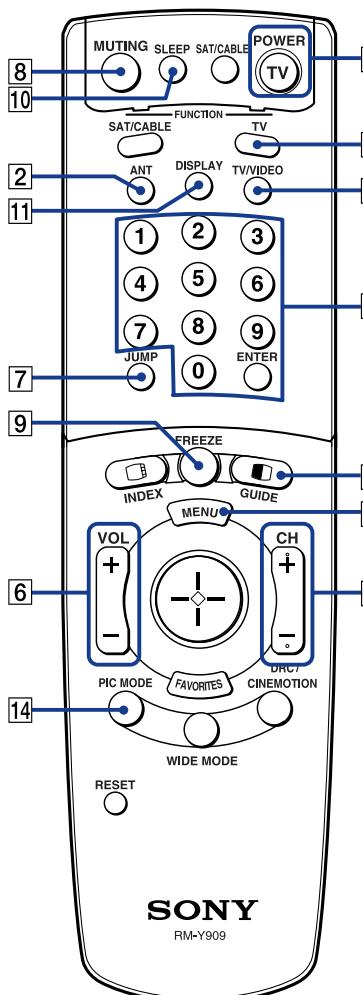
Inside Panel

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 68.
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 68.
10 ►►	Fast-forward
11 AV1 AV2 AV3 DVD	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 68.
12 □	Pause (Press again to resume normal playback)
13 MENU	Displays the Video equipment menu.
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 of the 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.

[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 the sound, press again or press VOL +.

[9] FREEZE — (yellow labeled button)

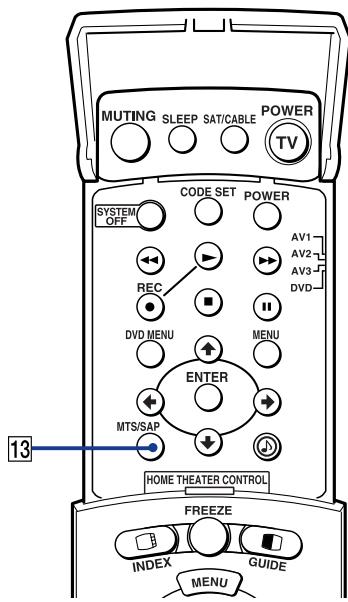
This is useful when you need to copy down information that appears on the TV’s screen (see “Using the Freeze Function” on page 44).

[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 or turning the power off.

(Continued)



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 VIDEO 6, and VIDEO 7.

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 59).

13 MTS/SAP

Press to scroll through the Multi-channel TV Sound (MTS) options (see “MTS” on page 51).

14 PIC MODE

Press PIC MODE repeatedly to directly choose one of four 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 49.

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 a 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, 6 or 7 IN on the projection TV. (for details, see page 28)
- 2** Press TV/VIDEO to select VIDEO 5, 6 or 7.
- 3** Select a digital channel on the DTV receiver. For details, see the Operating Manual of the DTV receiver.
- 4** Adjust the volume of the projection TV as necessary.

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 53.

- 1** Press FAVORITES.

The Favorite Channel options appear.



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

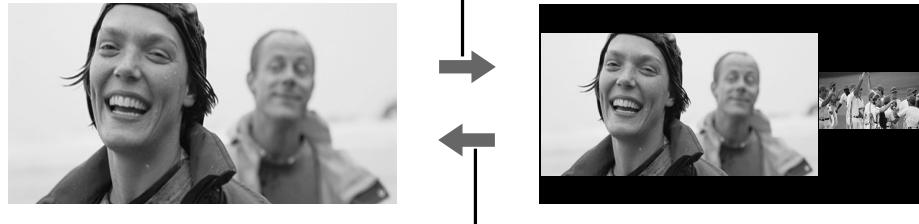
Using Twin View™

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.

Activating 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 ).

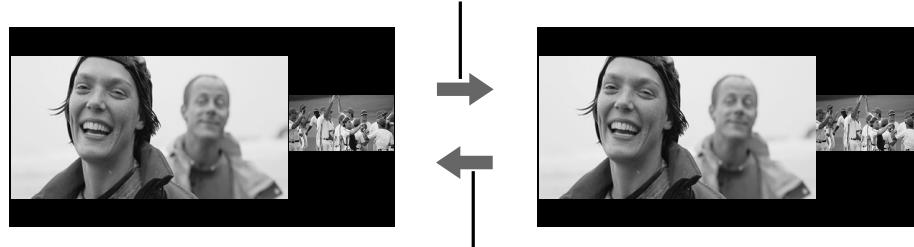
Activating the Picture

Although two pictures appear on the screen at the same time, only one picture is active. 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.
When the picture on the right is activated, the input sources cannot be switched to VIDEO 5, 6, 7, or AUX by pressing ANT.
- 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)

 Factors Affecting Twin View:

- If you use a cable box to view all channels, the same channel appears in both windows because the cable box unscrambles only one channel at a time.
- If you use a cable box, you can view the cable box output in one window and view a different source (such as a VCR or DVD player) in the second window by using the TV/VIDEO button.
- Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right.
- If you are viewing a 4:3 source and a 16:9 enhanced source (such as a DVD) side by side, the 4:3 source appears larger.
- Twin View does not display channels that are blocked by Parental settings (page 60).

 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.

 **Note:** Freeze feature is not available if you are already in Twin View™ or Index mode.

Using Scrolling Channel Index

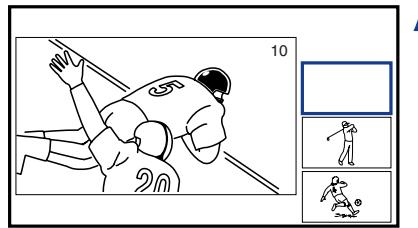
Scrolling Channel Index allows you to view and select from all receivable channels scrolling on the screen without leaving the current channel.

 Scrolling Channel Index will not function when parental Lock is activated.

To use the Scrolling Channel Index function

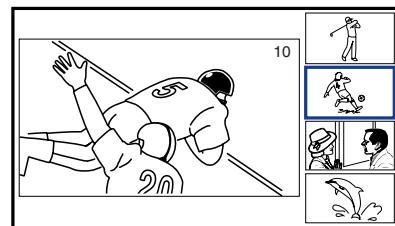
- 1 Press .

The current channel will be reduced in size and displayed on the left in normal motion picture format. The first channel is briefly displayed on the bottom-right side of the screen, then frozen. It scrolls up and the next channel appears on the bottom-right, and the process is repeated with the other channels.

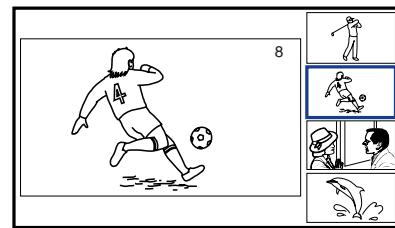


- 2 Move the joystick up and down so that the channel you wish to view is displayed in the cyan frame, and press .

To return to scrolling, move the joystick up and down again.



- 3 To enlarge the selected channel into the left frame, press  again. The selected channel will be displayed in normal motion picture, and the sound also switches to this channel.



(Continued)

4 Press  .

The selected channel will be enlarged for normal viewing.



To cancel Scrolling Channel Index

Press  again to resume normal viewing.

-  Sound will only be heard from the center picture.
-  If one of the pictures received through Scrolling Channel Index is snowy, the entire screen may become unstable. In this case, erase the snowy channel. (see "Channel Skip/Add" on page 54)
-  If you leave the Scrolling Channel Index screen displayed for an hour without any additional operation, Scrolling Channel Index is canceled and the normal picture reappears.
-  The Scrolling Channel Index cannot be used in combination with set-top boxes, DBS receivers, or cable boxes.
-  Scrolling Index feature does not function if you use a cable box to view all channels.
-  Sources connected to the AUX, VIDEO 5, VIDEO 6, and VIDEO 7 inputs display in the left window, but not the right windows.
-  Scrolling Index does not display channels that are blocked by Parental settings (page 60).

Using Wide Screen Mode

Wide Screen Mode lets you watch 4:3 normal broadcasts in several Wide Screen modes (16:9 aspect ratio).

 You can also access the Wide Mode settings in the Wide menu. For details, see page 55.

- Press WIDE MODE repeatedly to toggle through the following Wide Mode settings.



Wide Zoom enlarges the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the 16:9 screen.

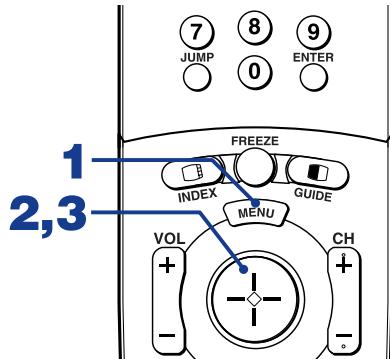
Normal returns the 4:3 picture to its original size.

Full Mode stretches the 4:3 picture horizontally only, to fill the 16:9 screen.

Zoom Mode enlarges the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the 16:9 screen. Useful for watching Letterbox movies.

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:

Menu Icon	Description	Page
	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.	49
	Offers enhanced audio options such as listening to second audio programming (SAP), or customizing the Effect of the sound on your projection TV.	51
	Allows you to set up a Favorite Channel list, run the Auto Program function, and more.	53
	Allows you to set the wide screen mode, adjust the vertical center in wide mode, and set the 4:3 Default mode.	55
	Lets you set the clock on your projection TV and allows you to program your projection TV for scheduled viewing using the Timers.	57
	Provides several options for setting up your channels, labeling your Video inputs, and selecting the language of the on-screen menus.	58

To end a menu session:

Press MENU again.

To end one menu session and move to another:

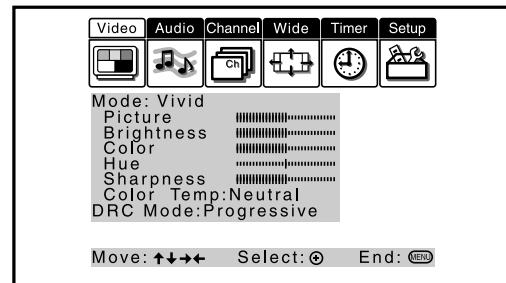
Press the joystick to return to the menu icons. Move the joystick or to choose the next menu icon and press to select it.



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.



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 <i>Customized picture viewing</i>	Vivid Select for enhanced picture contrast and sharpness. 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 <i>White intensity adjustment</i>	Choose from three color temperatures: 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).

(Continued)

Using the Menus

Option	Description
DRC Mode	Creates a high-resolution picture with 4x density, for high quality sources (i.e., DVD player, Satellite receiver).
<i>Digital Reality Creation</i>	
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	<table border="0"> <tr> <td>ON</td><td>Select to stabilize the volume.</td></tr> <tr> <td>OFF</td><td>Select to turn off Steady Sound.</td></tr> </table>	ON	Select to stabilize the volume.	OFF	Select to turn off Steady Sound.				
ON	Select to stabilize the volume.								
OFF	Select to turn off Steady Sound.								
Effect	<table border="0"> <tr> <td>TruSurround</td><td>Select for surround sound (for stereo programs only).</td></tr> <tr> <td>Simulated</td><td>Adds a surround-like effect to mono programs.</td></tr> <tr> <td>OFF</td><td>Normal stereo or mono reception.</td></tr> </table>	TruSurround	Select for surround sound (for stereo programs only).	Simulated	Adds a surround-like effect to mono programs.	OFF	Normal stereo or mono reception.		
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	<table border="0"> <tr> <td>Stereo</td><td>Select for stereo reception when viewing a program broadcast in stereo.</td></tr> <tr> <td><i>Enjoy stereo, bilingual and mono programs</i></td><td></td></tr> <tr> <td>Auto-SAP</td><td>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.)</td></tr> <tr> <td>Mono</td><td>Select for mono reception. (Use to reduce noise during weak stereo broadcasts.)</td></tr> </table>	Stereo	Select for stereo reception when viewing a program broadcast in stereo.	<i>Enjoy stereo, bilingual and mono programs</i>		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.)
Stereo	Select for stereo reception when viewing a program broadcast in stereo.								
<i>Enjoy stereo, bilingual and mono programs</i>									
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.)								

(Continued)

Using the Menus

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.
<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 Auto	Select if you want Favorite Channel options to be set automatically to the last eight channels selected with the 0-9 buttons.				
Manual	Select if you want to input your own selections as Favorite Channel options. <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	<table border="0"> <tr> <td>ON</td> <td>Select if you are receiving cable channels with a CATV cable.</td> </tr> <tr> <td>OFF</td> <td>Select if you are using an antenna.</td> </tr> </table> <p> You should run Auto Program after changing the Cable setting.</p>	ON	Select if you are receiving cable channels with a CATV cable.	OFF	Select if you are using an antenna.
ON	Select if you are receiving cable channels with a CATV cable.				
OFF	Select if you are using an antenna.				

(Continued)

Using the Menus

Option	Description
Channel Fix <i>Useful when you have a cable box or satellite receiver connected</i>	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.
	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)
	VIDEO 1 Use when connecting a cable box to control external video sources. TV output should be connected through the cable box.
Auto Program	Automatically programs the projection TV for all receivable channels.
Channel Skip/Add	Removes and adds viewable channels. 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.

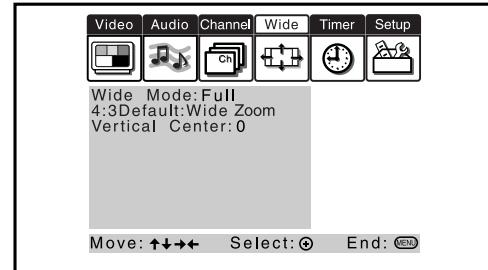
Wide



Using the Wide Menu

To select the Wide menu

- 1** Press MENU.
- 2** Use the joystick to move to the Wide icon  and press .
- 3** Move 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 Wide Options

 To change from one Wide Mode to another, use the WIDE MODE button on the remote control.

 Wide Mode is unavailable while in Twin View, Index or Freeze mode.

 The 4:3 Default functions only when the projection TV receives 480i signals.

The Wide menu includes the following options:

Option	Description
Wide Mode <i>Select a Wide Mode to use for 4:3 sources.</i>	<p>Wide Zoom Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen.</p> <p>Normal Select to return the 4:3 picture to normal mode.</p> <p>Full Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.</p> <p>Zoom Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.</p>
4:3 Default <i>Select the default Screen Mode to use for 4:3 sources.</i>	<p>Wide Zoom Select to enlarge the 4:3 picture, while the upper and lower parts of the picture are condensed to fit the wide screen.</p> <p>Normal Select to return the 4:3 picture to normal mode.</p> <p>Full Select to enlarge the 4:3 picture horizontally only, to fill the wide screen.</p> <p>Zoom Select to enlarge the 4:3 picture horizontally and vertically to an equal aspect ratio that fills the wide screen.</p> <p>Off Select to continue using the current Wide Mode setting when the channel or input is changed.</p>

(Continued)

Using the Menus

 If 4:3 Default is set to anything but Off, the Wide Mode setting changes only for the current channel. When you change channels (or inputs), Wide Mode is automatically replaced with the 4:3 Default setting. To retain the current Wide Mode setting as channels and inputs are changed, set 4:3 Default to Off.

<i>Option</i>	<i>Description</i>
Vertical Center	Allows you to move the position of the picture up and down in the window. (Available only in Wide Zoom and Zoom modes.) Move the joystick up or down to choose a position and press  .

 Some wide-screen programs (particularly certain theatrical releases) will be shown in aspect ratios that require the display of black bands at the top and bottom of your 16:9 screen. For more details, check the documentation that came with your DVD, or contact your content provider.



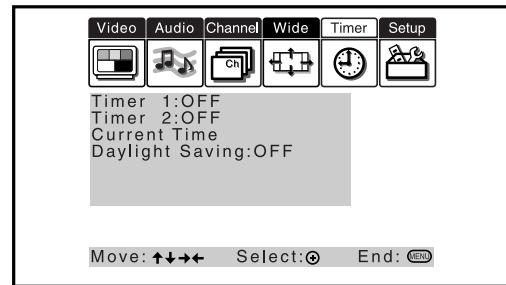
Using the Timer Menu

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, channel, and timer duration 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	Select to set the Timer by day, time, duration, and channel.
Timer 2	OFF	Select to turn off the Timer. (Your previous settings will be saved.)
Current Time	Set the current time.	
Daylight Saving	ON	Select in the Spring to adjust the time during Daylight Saving Time.
	OFF	Select in the Fall to adjust the time at the end of Daylight Saving Time.



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
Parental Control	Allows you to set up the TV to block programs according to their content and rating levels. For details about setting, see "Using the Parent Menu" on page 60.
Caption Vision	Allows you to select from three closed caption modes (for programs that are broadcast with closed captioning).
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 (<i>Extended Data Service</i>)	Displays a network name, program name, program length, and time of the show if the broadcaster offers this service.

Option	Description
Video Label	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.
VIDEO 1/2/3/4	VHS, DVD, Receiver, Satellite, Cable Box, 8 mm, DTV, Game, LD, Web, Beta, Skip
VIDEO 5/6/7	DVD, Satellite, Cable Box, DTV, HD, Skip
Language	If you select "Skip", your projection TV skips this connection when you press TV/VIDEO. When you select "Receiver" on Video Label, your projection TV's input is fixed.
	Select to display all on-screen menus in your language of choice: English, Español, Français.

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.

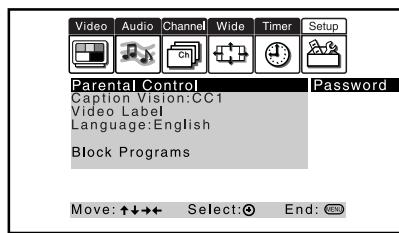
 Scrolling Channel Index will not function when Parental Lock is activated.

To select the rating

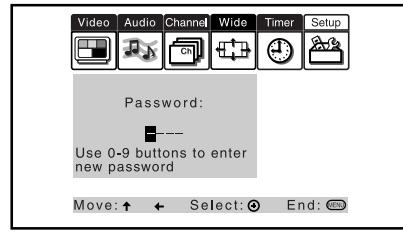
First, set a password, then select the country you reside in (U.S.A. or Canada) and your desired rating.

1 Press MENU.

2 Move the joystick to the Setup icon  and press .



3 Make sure that “Parental Control” is selected, and press .



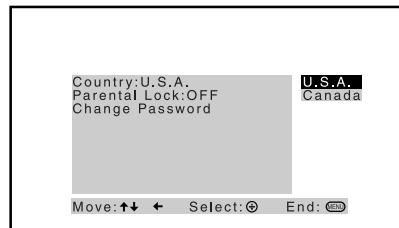
4 Use the 0-9 buttons on the remote control to enter your four-digit password.

5 Confirm your password by entering it again. Your password is stored and the Parent menu options appear.

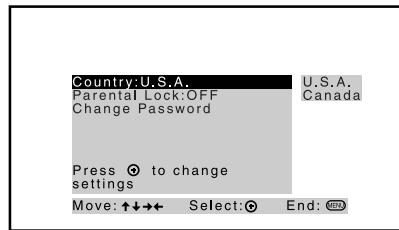
 You need the password entered here for any future access into the Parent menu. If you lose your password, see “Lost password” on page 74.

 If you want to change the password, see page 62.

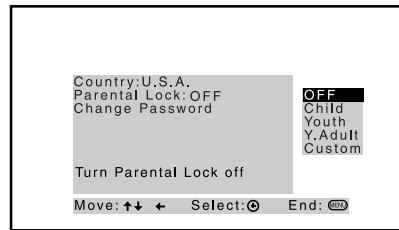
- 6** Make sure that “Country” is selected, and press .



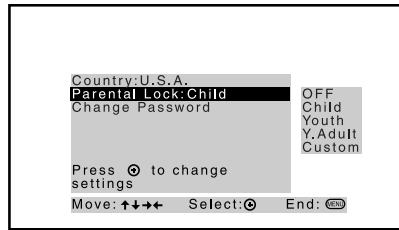
- 7** Move the joystick up or down to select U.S.A. or Canada according to the country you reside in, and press .



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



- 9** 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 63.

- 10** 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 66 and 67.

The Parent menu includes the following options.

Option	Description
Parental Lock <i>Turn ratings on/off and select a rating system</i>	OFF Parental lock is off. No programs are blocked from viewing. 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 66 for details. <input type="checkbox"/> Canada: See page 67 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.

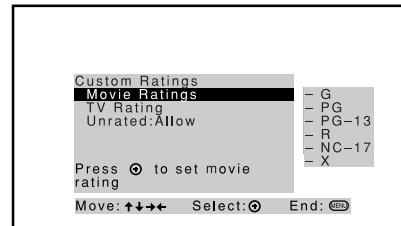
- 1** Press ENTER when tuned to a blocked program.
- 2** Enter your password using the 0-9 buttons.

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

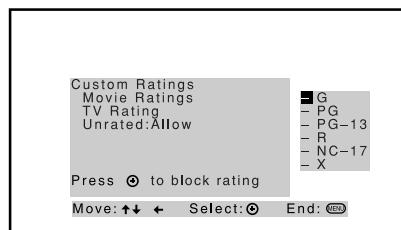
Using Custom Rating Options

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

- 1** Perform the steps 1 to 8 in “To select the rating” on page 60 to display the Parental Lock options.
- 2** Move the joystick up or down to select “Custom,” and press .

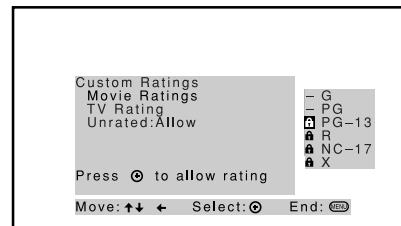


- 3** Make sure that “Movie Ratings” is selected, and press .



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

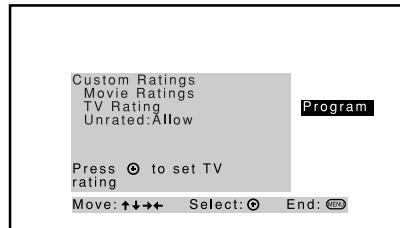
The  indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



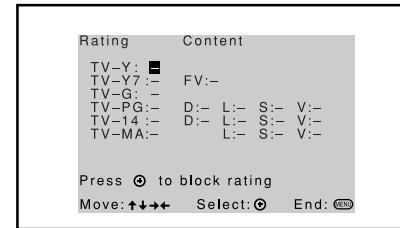
To unblock a rating, select it by moving the joystick up or down, then press . The indicator  changes into “-” and all “lower” ratings are unblocked.

(Continued)

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

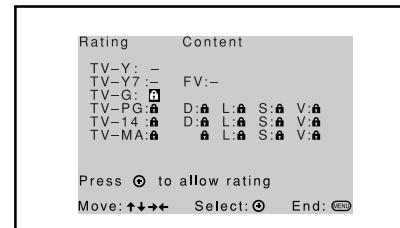


- 6** The “TV Rating” setting menu appears.



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

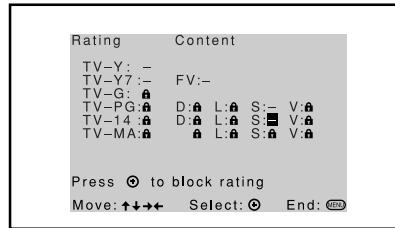
The  indicator automatically appears beside the selected rating and all “higher” ratings, indicating that the programs that match the ratings will be blocked.



To unblock a rating, select it by moving the joystick up or down, then press  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 60, the Custom Rating Menu includes the following options. (If you selected Canada, see page 67.)

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

 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 60, the Custom Rating Menu includes the following options. (If you selected U.S.A., see page 66.)

<i>Option</i>	<i>Description</i>
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 66 for details.

Other Information

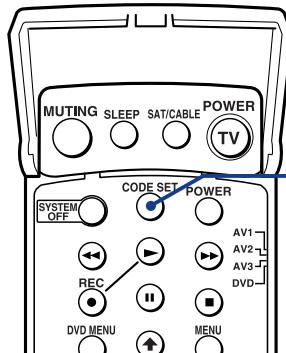
Programming the Remote Control

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.

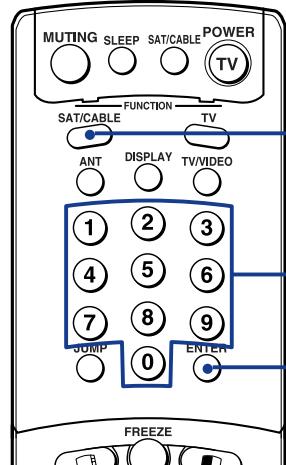


2

From the "Manufacturer's Codes" listed on page 70, 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.

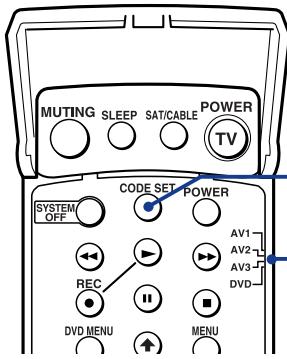


3

4

5

To program video equipment



1 Open the panel of the remote control.

2 Move the slide switch to the desired component type.

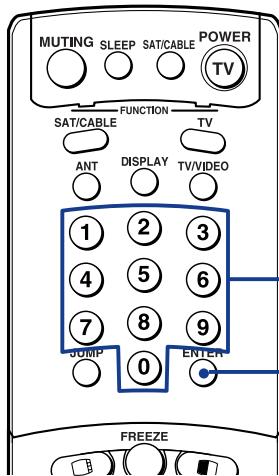
3 Press CODE SET inside the panel.

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.

Other Information

Manufacturer's Codes

VCRs

Manufacturer **Code**

Sony	301
Admiral	327
(M. Ward)	
Aiwa	338, 344
Audio Dynamic	314, 337
Broksonic	319, 317
Canon	309, 308
Citizen	332
Craig	302, 332
Criterion	315
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Tashiro	332
Tatung	314, 336, 337
Teac	314, 336, 338, 337
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Manufacturer **Code**

Wards	327, 328, 335, 331, 332
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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	209, 210, 211
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Satellite Receivers

Manufacturer **Code**

Sony	801
General	802
Electric	
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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.

To Do This ...	Press
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.

To Do This ...	Press
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
Display the menu (Setup)	MENU
Operate the DVD menu	↑, ↓, ←, →, ENTER

(Continued)

Operating a Cable Box

To Do This ...	Press
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

To Do This ...	Press
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	<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, 6 or 7. <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 60). <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	<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	<input type="checkbox"/> Adjust the Picture setting in the Video menu (see page 49). <input type="checkbox"/> Adjust the Brightness setting in the Video menu (see page 49). <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	<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 52). <input type="checkbox"/> Check the MTS setting in the Audio menu (see " MTS " on page 51).
Cannot receive digital channels (when a DTV receiver is connected)	<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	<input type="checkbox"/> Change Cable to OFF (see page 53). <input type="checkbox"/> Use Auto Program in the Channel menu to add receivable channels that are not presently in TV memory (see page 54).
No color	<input type="checkbox"/> Adjust the Color settings in the Video menu (see page 49).
Only snow and noise appear on the screen	<input type="checkbox"/> Check the Cable setting in the Channel menu (see " Cable " on page 53). <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	<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.

(Continued)

Other Information

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 54).<input type="checkbox"/> Check your Channel Fix settings (see page 54).
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 54).<input type="checkbox"/> Check your cable settings.<input type="checkbox"/> Make sure Cable is set to ON in the Channel menu (see page 53).
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 53).<input type="checkbox"/> Use Auto Program in the Channel menu to add receivable TV channels that are not presently in TV memory (see page 54).
Cannot receive channels	<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 54).
Unable to select a channel	
Lost password	<ul style="list-style-type: none"><input type="checkbox"/> In the password screen (see page 60), 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 59).
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 58 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.

Problem	Possible Remedies
You get the same program in the window picture as in the main picture	<ul style="list-style-type: none"> <input type="checkbox"/> Both may be set to the same channel. Try changing channels in either the main picture or the window picture. <input type="checkbox"/> 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.)
You cannot get anything but TV channels in your second picture	<ul style="list-style-type: none"> <input type="checkbox"/> Be sure the video label has not been set to skip your video inputs. See the Setup menu on page 59.
Favorite Channel does not display your choices	<ul style="list-style-type: none"> <input type="checkbox"/> Verify that Favorite Channel is set to Manual in the Channel menu (see "Favorite Channel" on page 53).
Some video sources do not appear when you press TV/VIDEO	<ul style="list-style-type: none"> <input type="checkbox"/> Ensure that Video Label is not set to SKIP (see "Video Label" on page 59).

Other Information

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)	46 inches (116.84 cm) (KP-46WT500) 51 inches (129.54 cm) (KP-51WS500) 57 inches (144.78 cm) (KP-57WS500) 65 inches (165 cm) (KP-65WS500)	
Channel Coverage		
VHF	2-13	
UHF	14-69	
CATV	1-125	
Power Requirements	120V, 60 Hz	
Number of Inputs / Outputs		
DVI-HDTV	1 terminal, 3.3V T.M.D.S., 50 ohms The DVI input terminal is compliant with the EIA-861 standard and is not intended for use with personal computers.	
Video (IN)	4	1 Vp-p, 75 ohms unbalanced, sync negative
S Video (IN)	3	Y: 1 Vp-p, 75 ohms unbalanced, sync negative C: 0.286 Vp-p (Burst signal), 75 ohms
Audio (IN)	6	500 mVrms (100% modulation) Impedance: 47 kilohms
AUDIO (VAR/FIX)	1	500 mVrms at the maximum volume setting (Variable) 500 mVrms (Fixed) Impedance (output): 1 kilohm
TV Out	1	Video: 1 Vp-p 75 ohms unbalanced, Sync negative Audio: 500 mVrms (100% modulation) Impedance (output): 1 kilohm
CONTROL S (IN/OUT)	1	minijacks
Component Video Input	2 (Y, P _B , P _R)	Y: 1.0 Vp-p, 75 ohms unbalanced, sync negative P _B : 0.7 Vp-p, 75 ohms P _R : 0.7 Vp-p, 75 ohms
RF Inputs	2	
Converter	1	
Speaker Output	20 W × 2	
Dimensions (W × H × D)	42 3/4 × 40 × 24 inches (1,086 × 1,017 × 609 mm) (KP-46WT500) 47 1/8 × 51 5/8 × 24 7/8 inches (1,194 × 1,310 × 630 mm) (KP-51WS500) 52 1/4 × 54 1/4 × 27 1/4 inches (1,326 × 1,377 × 690 mm) (KP-57WS500) 61 × 57 × 29 inches (1,542 × 1,452 × 735 mm) (KP-65WS500)	

Mass	135 lb (61.3 kg) (KP-46WT500) 167 lb 9oz (76 kg) (KP-51WS500) 196 lb 3oz (89 kg) (KP-57WS500) 275 lb 8 oz (125 kg) (KP-65WS500)
Power Consumption	
In Use	230 W
In Standby	Under 1 W
Supplied Accessories	
Remote Control	RM-Y909
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 or equivalent
TV Stand	SU-46WT5

Design and specifications are subject to change without notice.

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<http://www.world.sony.com/>

Sony Corporation

Printed in U.S.A.

PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5" x 11" and 18" x 30" depending upon each individual diagram size. Those diagrams that are LARGER than 11" x 17" in full-size mode have been tiled for your convenience and can be printed on standard 11" x 17" (tabloid-size) paper, and reassembled.

TO PRINT FULL SIZE SCHEMATIC DIAGRAMS

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

- 1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.
- 2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.
- 3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT TILED VERSION OF SCHEMATICS

Schematic pages that are larger than 11" x 17" full-size are provided in a 11" x 17" printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11" x 17") paper, then output the tiled version of the diagram as follows:

- 1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.
- 2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11" x 17", or tabloid size paper in landscape () mode.
- 3) Close the Print Set Up screen and return to the File menu. Select "Print..." Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

- 1) To view the Graphics Select Tool, press and HOLD the mouse button over the Text Select Tool which looks like:  This tool will expand to reveal to additional tools.
Choose the Graphics Select tool by placing the cursor over the button on the far right that looks like: 
- 2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.
- 3) With the marquee in place, go to the file menu and select the "Print..." option. When the print window appears, choose the option under the section called "Print Range" which says "Selected Graphic".

Select OK and the output will print only the area that you outlined with the marquee. 

(continued >)

ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

- 1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.
- 2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click your mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool
- 3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The "Find" window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the "Find" button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select "Find Again."

SERVICE MANUAL

RA-6 CHASSIS

MODEL NAME

REMOTE COMMANDER

DESTINATION

CHASSIS NO.

KP-46WT500

RM-Y909

US/CND

SCC-P65LA

CORRECTION - 1

SUBJECT: ADDED LOCATOR LISTS

Correct the service manual as shown.

File this Correction with the service manual.

 : Corrected Item

Section 5: Diagrams (Page 62, 72 & 73)

5-4. Schematics and Supporting Information

Added Locator Lists to D and A PWBS

COLOR REAR VIDEO PROJECTOR

SONY®

Sony Corporation

Sony Technology Center

Technical Services

Service Promotion Department

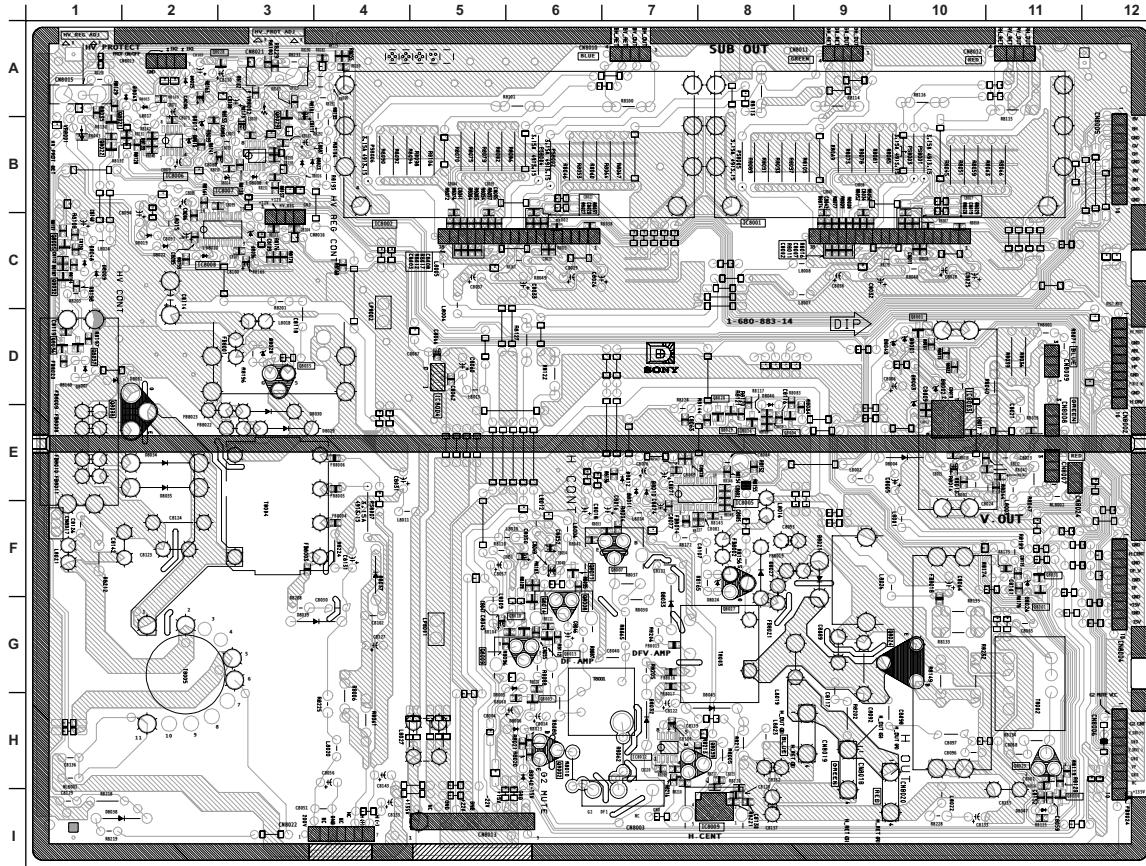
English

2002JJ74WEB-1

Printed in USA

© 2002.10

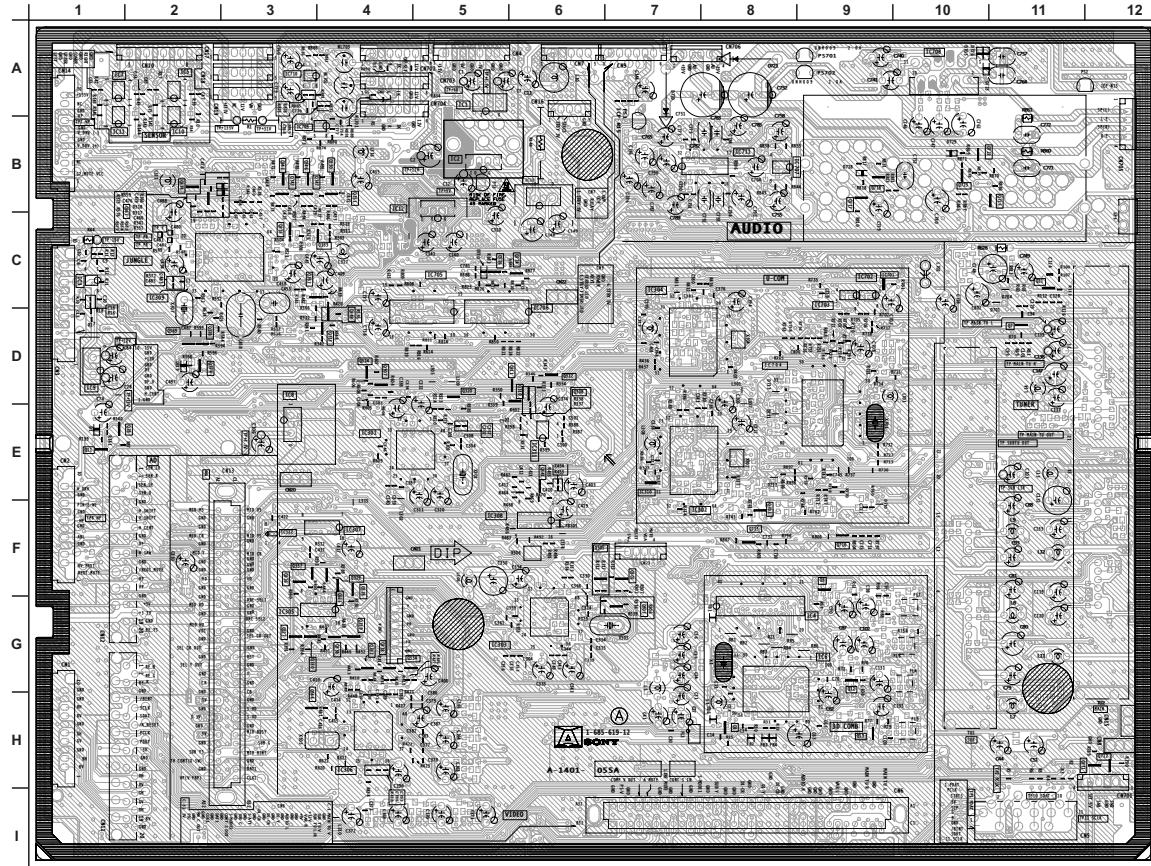
D [HV DRIVE, POWER SUPPLY, H DRIVE] [COMPONENT SIDE]



D BOARD LOCATOR LIST

DIODE	IC	IC
D8001	D-10	IC8001 C-8
D8002	D-10	IC8002 C-4
D8003	D-10	IC8003 E-10
D8004	E-10	IC8004 E-5
D8005	H-6	IC8005 F-8
D8006	H-6	IC8006 B-2
D8007	D-10	IC8007 B-3
D8008	B-3	IC8008 C-2
D8009	C-1	IC8009 I-8
D8010	E-11	IC8012 H-7
D8011	E-11	TRANSISTOR
D8012	E-11	Q8001 D-10
D8013	B-2	Q8002 H-6
D8014	B-3	Q8003 H-6
D8015	A-2	Q8004 E-9
D8016	B-3	Q8005 C-1
D8019	C-2	Q8007 F-7
D8020	C-2	Q8008 G-6
D8021	F-9	Q8009 G-5
D8022	C-2	Q8010 G-6
D8023	B-3	Q8011 F-6
D8024	G-7	Q8014 G-6
D8025	A-2	Q8015 G-6
D8026	G-11	Q8016 E-8
D8027	F-8	Q8019 E-8
D8028	D-3	Q8020 D-8
D8029	E-4	Q8021 B-1
D8030	E-4	Q8022 B-1
D8031	D-2	Q8023 H-11
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D8035	E-2	Q8029 B-3
D8036	C-3	Q8030 I-11
D8037	G-4	Q8031 F-11
D8038	I-2	Q8032 C-1
D8039	G-4	Q8035 D-3
D8043	B-1	Q8036 D-1
D8045	H-8	Q8037 D-1
D8046	D-8	Q8038 D-1
D8047	I-11	Q8039 H-8
		Q8101 G-11

A [TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT] [COMPONENT SIDE]



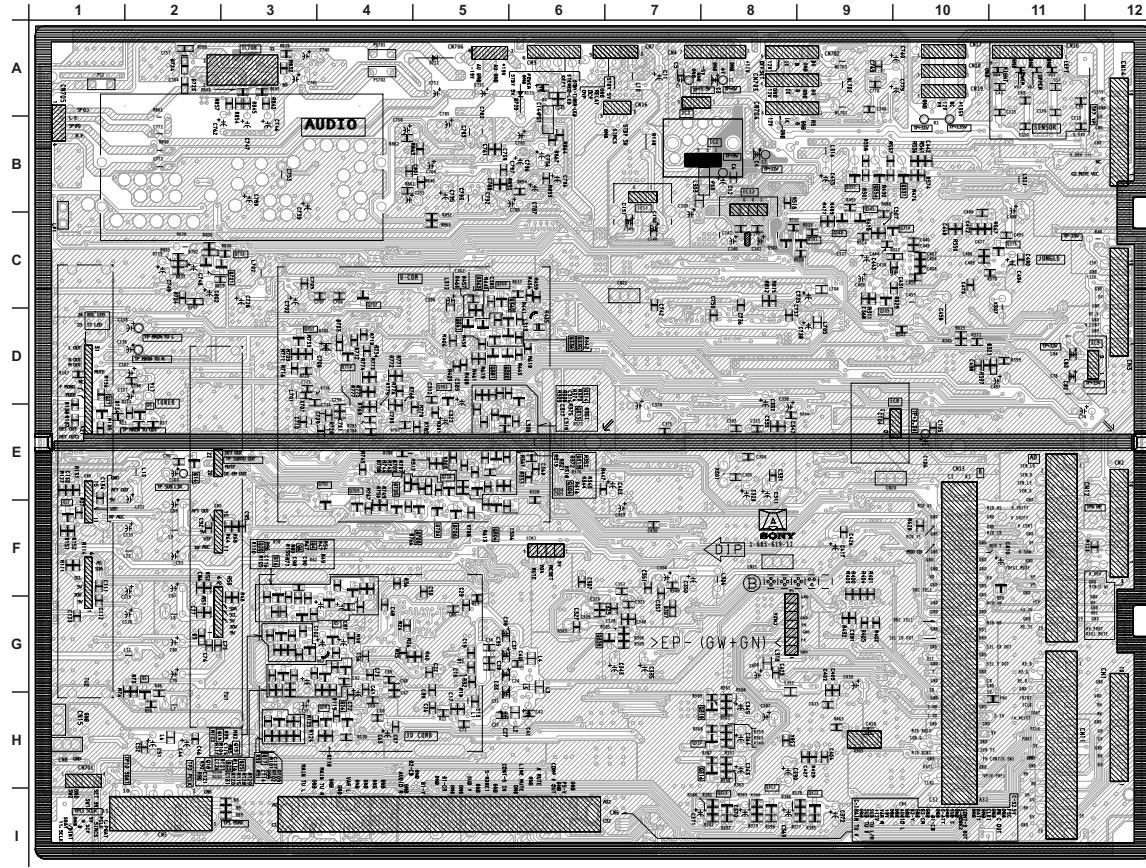
A BOARD LOCATOR LIST

DIODE	TRANSISTOR
D1	E-1 Q11 E-1
D317	C-2 Q12 G-9
D318	C-2 Q13 H-9
D319	D-2 Q21 C-11
D701	C-11 Q302 F-7
D704	C-11 Q303 F-7
D705	A-10 Q305 F-6
D710	F-9 Q307 D-4
D711	E-8 Q308 B-6
D712	E-8 Q310 D-5
D713	D-8 Q311 D-5
D718	B-9 Q312 D-6
D725	A-10 Q313 D-4
D726	A-10 Q320 D-5
D729	B-10 Q324 D-4
IC	Q325 F-4
IC1	A-5 Q326 F-4
IC2	B-5 Q327 G-3
IC3	C-1 Q328 F-4
IC4	G-9 Q329 F-4
IC5	A-2 Q330 G-3
IC6	G-9 Q332 G-4
IC7	A-2 Q333 G-4
IC8	D-3 Q334 G-4
IC9	D-1 Q337 F-3
IC10	B-2 Q338 G-4
IC11	B-1 Q339 G-4
IC12	B-4 Q341 E-6
IC13	B-6 Q342 B-3
IC301	E-4 Q343 B-3
IC302	F-7 Q344 G-3
IC303	G-5 Q346 B-3
IC304	C-7 Q347 B-3
IC305	G-3 Q349 D-4
IC306	H-4 Q350 B-4
IC307	F-4 Q351 B-4
IC308	F-5 Q352 C-3
IC309	C-2 Q353 C-4
IC310	E-7 Q355 C-3
IC311	E-6 Q367 C-1
IC312	F-3 Q369 D-2
IC701	C-9 Q374 B-2
IC702	C-9 Q378 D-2
IC703	C-9 Q379 D-2
IC704	D-8 Q703 F-8
IC707	B-8 Q712 H-12
IC708	A-10 Q715 F-8
IC711	B-8 Q716 F-9
TRANSISTOR	Q717 B-9
Q1	H-8 Q718 B-9
Q3	F-9 Q722 B-10
Q7	D-11 Q723 B-10
	Q725 B-11

A

[TUNER, 3D COMB, AREG, CRT DRIVE, YCT, SYSTEM CONTROL, AUDIO OUTPUT]

[CONDUCTOR SIDE]

**A BOARD LOCATOR LIST**

DIODE	TRANSISTOR
D5	G-2 Q321 I-9
D7	A-6 Q322 I-9
D307	G-7 Q323 I-8
D312	C-9 Q331 B-9
D321	D-10 Q335 D-5
D702	C-2 Q336 D-5
D703	D-4 Q340 C-5
D706	A-2 Q345 B-9
D708	E-4 Q348 C-9
D709	E-4 Q354 B-9
D719	C-2 Q356 B-10
D720	B-6 Q357 B-9
D721	A-5 Q358 G-6
D723	A-2 Q361 C-5
D724	A-2 Q363 C-5
TRANSISTOR	C-5
Q2	G-2 Q373 C-11
Q4	F-3 Q380 D-5
Q5	G-4 Q381 D-5
Q6	F-3 Q501 C-9
Q8	E-2 Q502 C-8
Q14	E-2 Q701 D-3
Q15	F-3 Q702 E-3
Q16	F-3 Q704 F-5
Q17	H-3 Q705 F-5
Q18	F-3 Q706 F-5
Q19	F-3 Q707 C-4
Q20	F-3 Q708 F-4
Q22	F-1 Q709 E-4
Q23	G-4 Q710 E-5
Q24	H-4 Q713 C-3
Q25	G-4 Q714 D-4
Q26	H-4 Q721 C-3
Q27	D-11
Q28	G-4
Q30	F-11
Q301	D-5
Q304	E-6
Q306	F-5
Q309	C-9
Q314	E-5
Q315	E-5
Q316	H-7
Q317	H-7
Q318	H-7
Q319	E-6

SERVICE MANUAL

RA-6 CHASSIS

MODEL NAME

REMOTE COMMANDER

DESTINATION

CHASSIS NO.

KP-46WT500

RM-Y909

US/CND

SCC-P65LA

SUPPLEMENT - 1

**SUBJECT: NEW CRT'S INTRODUCED
AFFECTS S/N'S 9,700,001 AND UP**

Correct the service manual as shown.
File this Supplement with the service manual.

Section 6: Exploded Views
6-3. Picture Tube

When replacing CRT's for models with S/N 9,700,001 and up, please use the following P/N's:

A-1604-407-A	Coupler (R) Assy., CRT
A-1502-025-A	Coupler (G) Assy., CRT
A-1604-408-A	Coupler (B) Assy., CRT

COLOR REAR VIDEO PROJECTOR
SONY®

9-965-935-81

Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

English
2003AJ74WEB-1
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SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-46WT500	RM-Y909	US/CND	SCC-P65LA

SUPPLEMENT - 2

**SUBJECT: ADDITIONAL INFORMATION ADDED TO
SUPPLEMENT -1. D AND C BOARD P/N'S ADDED.**

Correct the service manual as shown.
File this Supplement with the service manual.

Section 6: Exploded Views

6-4. Picture Tube

When replacing CRT's for models with S/N 9,700,001 and up, please use the following P/N's:

- | | |
|--------------|------------------------|
| A-1604-407-A | Coupler (R) Assy., CRT |
| A-1502-025-A | Coupler (G) Assy., CRT |
| A-1604-408-A | Coupler (B) Assy., CRT |

If it is necessary to replace a D or C Board for models with S/N 9,700,001 and up, please order the following:

- | | |
|--------------------|--------------|
| D Board, Complete | A-1302-119-A |
| CR Board, Complete | A-1302-120-A |
| CG Board, Complete | A-1302-122-A |
| CB Board, Complete | A-1302-121-A |

COLOR REAR VIDEO PROJECTOR
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Sony Corporation
Sony Technology Center
Technical Services
Service Promotion Department

9-965-935-82

English
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SERVICE MANUAL

RA-6 CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
KP-46WT500	RM-Y909	US/CND	SCC-P65LA

CORRECTION - 2

SUBJECT: UPDATED DATA RELATING TO CR, CG AND CB BOARDS

Correct the service manual as shown.
File this Correction with the service manual.

( : Corrected Item

Section 5: Diagrams

- 5-4. Schematics and Supporting Information
New CR, CG and CB Boards (Pages 55-57)

Section 6: Exploded Views

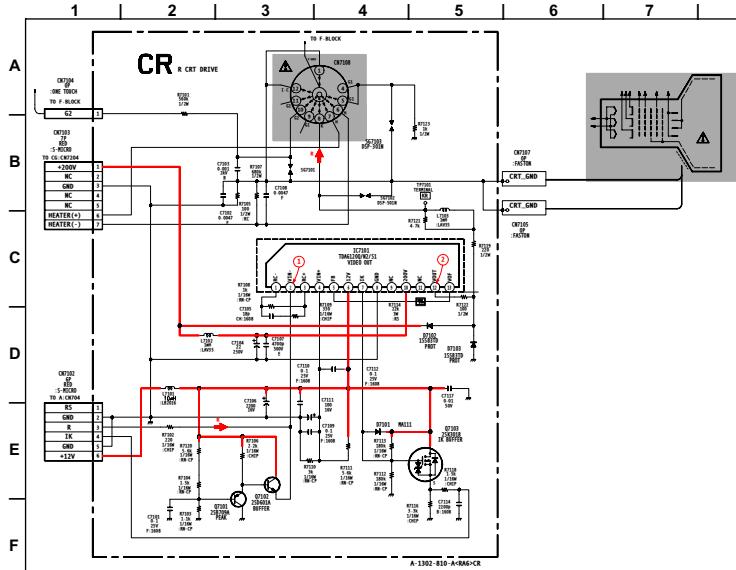
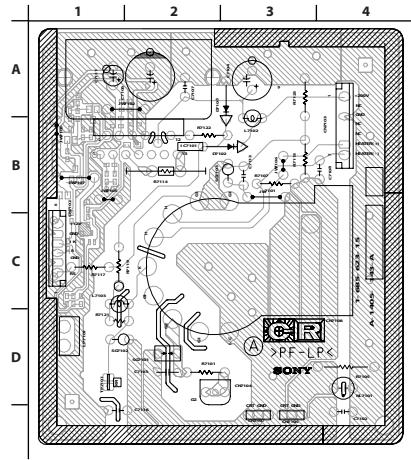
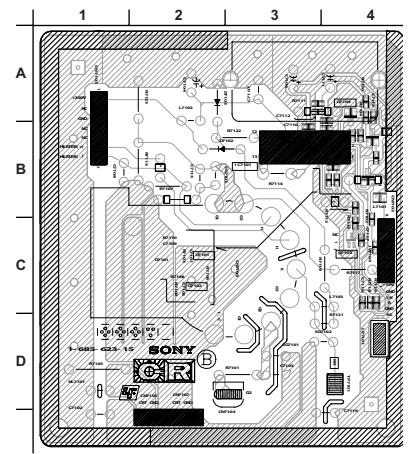
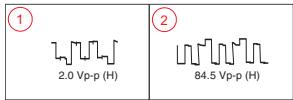
- 6-3. Picture Tube
New CR, CG and CB Board Part Numbers (Page 87)

Section 7: Electrical Parts List

- New Parts Lists for CR, CG and CB Boards (Pages 89-92)

COLOR REAR VIDEO PROJECTOR
SONY®

9-965-935-92

CR BOARD SCHEMATIC DIAGRAM**CR [R CRT DRIVE] COMPONENT SIDE****CR [R CRT DRIVE] CONDUCTOR SIDE****CR BOARD WAVEFORMS****CR BOARD IC VOLTAGE LIST**

IC7101			
PIN	VOLT	PIN	VOLT
1	2.0	8	GND
2	2.7	9	N/C
3	3.4	10	200.0
4	4.1	11	N/C
5	2.6	12	157.7
6	12.0	13	158.2
7	7.0		

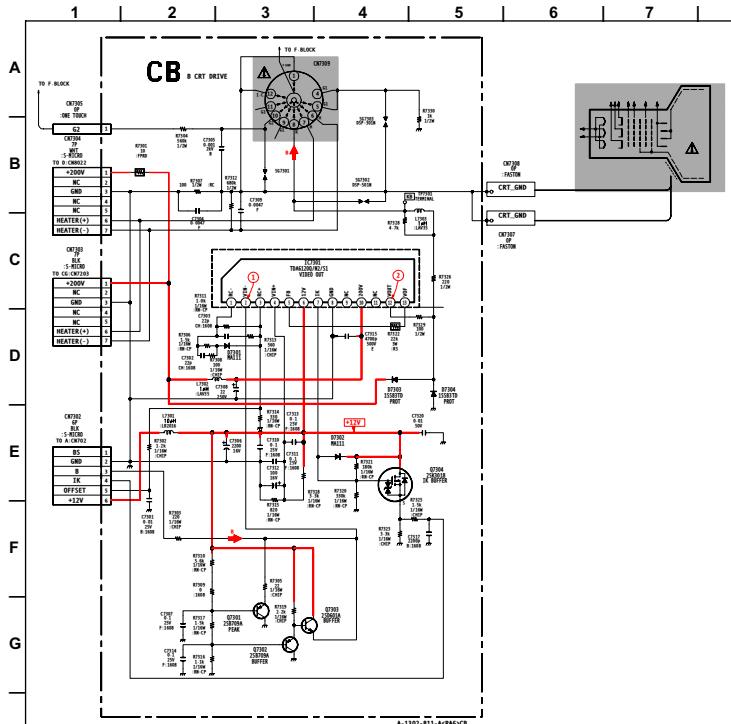
All voltages are in V.

CR BOARD TRANSISTOR LIST

	B	C	E
Q7101	1.7	GND	2.3
Q7102	2.3	12.0	2.7
Q7103	7.0	12.0	5.7

All voltages are in V.

CB BOARD SCHEMATIC DIAGRAM



CB BOARD WAVEFORMS



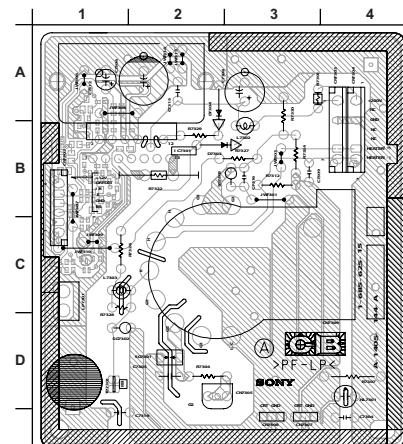
A-1302-811-A-BM-CB

CB BOARD IC VOLTAGE LIST

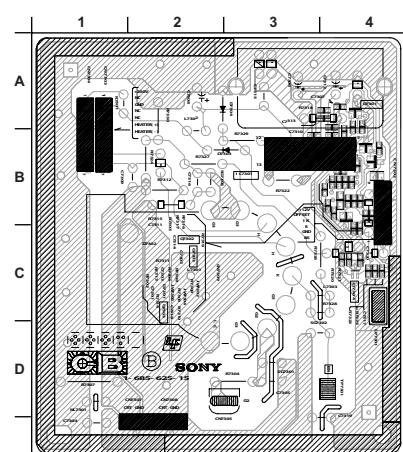
IC7301			
PIN	VOLT	PIN	VOLT
1	2.1	8	GND
2	2.9	9	N/C
3	1.6	10	200.0
4	2.9	11	N/C
5	2.5	12	161.8
6	12.0	13	144.5
7	7.3		

All voltages are in V.

CB [B CRT DRIVE]
COMPONENT SIDE



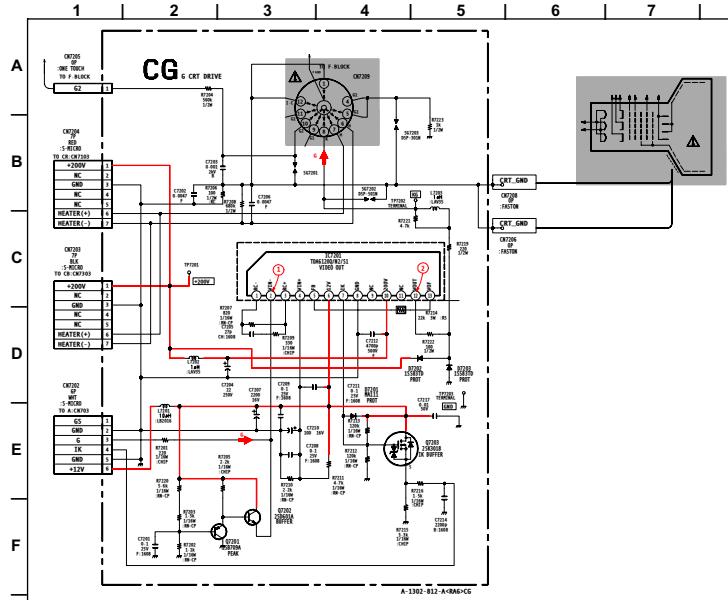
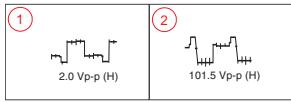
CB [B CRT DRIVE]
CONDUCTOR SIDE



CB BOARD TRANSISTOR LIST

	B	C	E
Q7301	3.9	GND	3.0
Q7302	1.7	GND	2.4
Q7303	2.4	12.0	2.9
	G	D	S
Q7304	7.3	12.0	6.0

All voltages are in V.

CG BOARD SCHEMATIC DIAGRAM**CG BOARD WAVEFORMS****CG BOARD IC VOLTAGE LIST**

IC7201			
PIN	VOLT	PIN	VOLT
1	1.9	8	GND
2	2.6	9	N/C
3	3.1	10	200.0
4	3.8	11	N/C
5	2.5	12	155.1
6	12.0	13	159.2
7	7.6		

All voltages are in V.

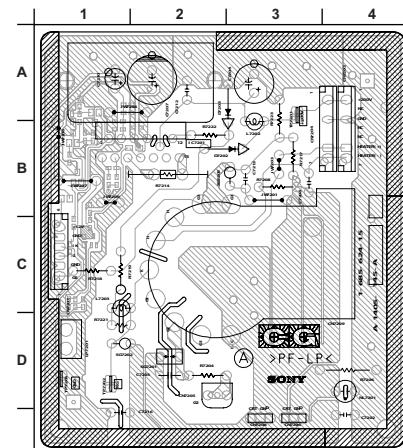
CG BOARD TRANSISTOR LIST

	B	C	E
Q7201	1.7	GND	2.3
Q7202	2.3	12.0	2.6

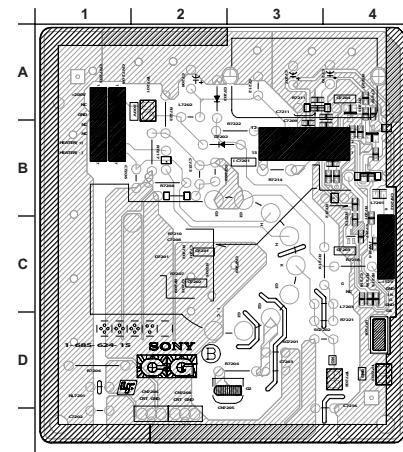
	G	D	S
Q7203	7.6	12.0	6.3

All voltages are in V.

CG [G CRT DRIVE]
COMPONENT SIDE



CG [G CRT DRIVE]
CONDUCTOR SIDE

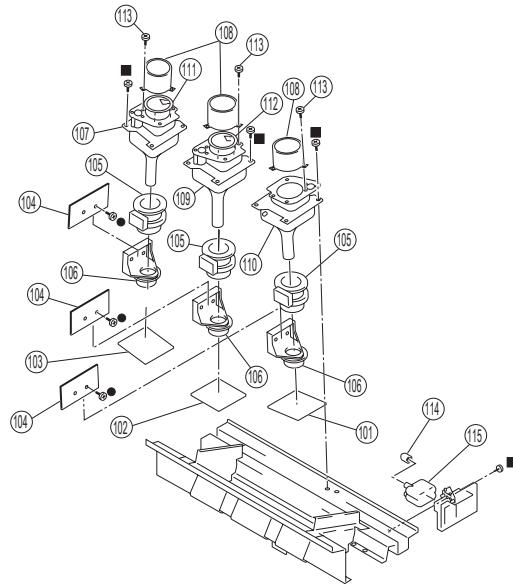


NOTE: The components identified by shading and \triangle mark are critical for safety.
Replace only with part number specified.

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

6-3. PICTURE TUBE

■ 7-685-663-71 SCREW +BVTP 4X16 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
101	A-1302-811-A	CB BOARD, MOUNTED	109	8-733-652-15	CRT 07MVC21(G)-L(FL)
102	A-1302-812-A	CG BOARD, MOUNTED	110	8-733-656-25	CRT 07MVC21(B)-L(FLG)
103	A-1302-810-A	CR BOARD, MOUNTED	111	4-092-690-01	SHADE (R)
104	A-1342-586-A	V BOARD, MOUNTED	112	4-092-691-01	SHADE (G)
105	1-451-537-22	DEFLECTION YOKE	113	4-081-063-01	SCREW, DOME WASHER HEX TAP 4X20
106	1-452-790-31	NECK ASSY	114	4-373-137-01	CAP (Z), RUBBER
107	8-733-657-15	CRT 07MVC21(R)-L(FL)	115	8-598-955-32	BLOCK ASSY HV HVH-1031
108	4-083-751-01	LENS (DELTA 250)			

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

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



REF.NO.	PART NO.	DESCRIPTION	VALUES			REF.NO.	PART NO.	DESCRIPTION	VALUES		
R9023	1-249-421-11	CARBON	2.2K	5%	1/4W			DIODE			
R9024	1-249-405-11	CARBON	100	5%	1/4W	D7101	8-719-404-50	DIODE	MA111-TX		
R9025	1-249-385-11	CARBON	2.2	5%	1/4W	D7102	8-719-901-83	DIODE	1SS83		
R9027	1-249-385-11	CARBON	2.2	5%	1/4W	D7103	8-719-901-83	DIODE	1SS83		
R9028	1-249-405-11	CARBON	100	5%	1/4W			IC			
R9029	1-215-913-11	METAL OXIDE	220	5%	3W	IC7101	8-759-680-01	IC	TDA6120Q/N2/S1		
R9030	1-249-377-11	CARBON	0.47	5%	1/4W			JUMPER WIRE			
R9031	1-249-385-11	CARBON	2.2	5%	1/4W	JW7104	1-216-864-11	SHORT CHIP			
R9032	1-249-385-11	CARBON	2.2	5%	1/4W			COIL			
R9033	1-249-436-11	CARBON	39K	5%	1/4W	L7101	1-469-555-21	INDUCTOR	10µH		
R9034	1-249-436-11	CARBON	39K	5%	1/4W	L7102	1-414-855-31	INDUCTOR	1µH		
						L7103	1-414-855-31	INDUCTOR	1µH		
*	A-1302-810-A	CR BOARD, COMPLETE						TRANSISTOR			
	4-382-854-11	SCREW (M3X10), P, SW (+)				Q7101	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
*	7-651-000-50	GREASE,SILICON (G-746) 200G				Q7102	8-729-422-27	TRANSISTOR	2SD601A-Q		
		CAPACITOR				Q7103	8-729-048-50	TRANSISTOR	2SK3018-T106		
C7101	1-164-156-11	CERAMIC CHIP	0.1µF		25V			RESISTOR			
C7102	1-101-003-00	CERAMIC	0.0047µF		50V	R7101	1-260-132-11	CARBON	560K	5%	1/2W
C7103	1-104-570-11	CERAMIC	0.001µF	10%	2KV	R7102	1-216-813-11	METAL CHIP	220	5%	1/10W
C7104	1-107-662-11	ELECT	22µF	20%	350V	R7103	1-218-693-11	METAL CHIP	1.1K	0.50%	1/10W
C7105	1-162-918-11	CERAMIC CHIP	18pF	5%	50V	R7104	1-218-696-11	METAL CHIP	1.5K	0.50%	1/10W
C7106	1-126-768-11	ELECT	2200µF	20%	16V	R7105	1-219-743-11	METAL	100	5%	1/2W
C7107	1-161-830-00	CERAMIC	0.0047µF		500V			RESISTOR			
C7108	1-101-003-00	CERAMIC	0.0047µF		50V	R7106	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
C7109	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7107	1-260-133-11	CARBON	680K	5%	1/2W
C7110	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7108	1-218-692-11	METAL CHIP	1K	0.50%	1/10W
C7111	1-126-933-11	ELECT	100µF	20%	16V	R7109	1-216-815-11	METAL CHIP	330	5%	1/10W
C7112	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7110	1-218-703-11	METAL CHIP	3K	0.50%	1/10W
C7114	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V			RESISTOR			
C7117	1-164-096-11	CERAMIC	0.01µF		50V	R7111	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
		CONNECTOR				R7112	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
*	CN7102	1-564-509-11	PLUG, CONNECTOR 6P			R7113	1-218-746-11	METAL CHIP	180K	0.50%	1/10W
*	CN7103	1-564-510-11	PLUG, CONNECTOR 7P			R7114	1-215-925-11	METAL OXIDE	22K	5%	3W
	CN7104	1-785-879-11	CONNECTOR, ONE TOUCH			R7116	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
	CN7105	1-695-915-11	TAB (CONTACT)			R7118	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
	CN7107	1-695-915-11	TAB (CONTACT)			R7119	1-260-320-11	CARBON	220	5%	1/2W
	 CN7108	1-251-182-11	SOCKET, CRT			R7120	1-218-710-11	METAL CHIP	5.6K	0.50%	1/10W
						R7121	1-249-425-11	CARBON	4.7K	5%	1/4W
						R7122	1-260-087-11	CARBON	100	5%	1/2W
						R7123	1-260-328-11	CARBON	1K	5%	1/2W

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

NOTE: Les composants identifiés par un trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numero spécifie.



REF.NO.	PART NO.	DESCRIPTION	VALUES	REF.NO.	PART NO.	DESCRIPTION	VALUES
SPARK GAP				JUMPER WIRE			
SG7101	1-519-422-11	GAP, SPARK		JW7214	1-216-864-11	SHORT CHIP	
SG7102	1-517-729-31	GAP, SPARK		L7201	1-469-555-21	INDUCTOR	10µH
SG7103	1-519-421-11	GAP, DISCHARGE		L7202	1-414-855-31	INDUCTOR	1µH
A-1302-812-A CG BOARD, COMPLETE				L7203	1-414-855-31	INDUCTOR	1µH
*	4-382-854-11	SCREW (M3X10), P, SW (+)		COIL			
*	7-651-000-50	GREASE,SILICON (G-746) 200G		L7201	1-469-555-21	INDUCTOR	10µH
CAPACITOR				L7202	1-414-855-31	INDUCTOR	1µH
C7201	1-164-156-11	CERAMIC CHIP	0.1µF	Q7201	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX
C7202	1-101-003-00	CERAMIC	0.0047µF	Q7202	8-729-422-27	TRANSISTOR	2SD601A-Q
C7203	1-104-570-11	CERAMIC	0.001µF	Q7203	8-729-048-50	TRANSISTOR	2SK3018-T106
C7204	1-107-662-11	ELECT	22µF	TRANSISTOR			
C7205	1-162-920-11	CERAMIC CHIP	27pF	R7201	1-216-813-11	METAL CHIP	220
			5%	R7202	1-218-693-11	METAL CHIP	1.1K
			50V	R7203	1-218-696-11	METAL CHIP	1.5K
				R7204	1-260-132-11	CARBON	560K
C7206	1-101-003-00	CERAMIC	0.0047µF	R7205	1-216-825-11	METAL CHIP	2.2K
C7207	1-126-768-11	ELECT	2200µF	R7206	1-219-743-11	METAL	100
C7208	1-164-156-11	CERAMIC CHIP	0.1µF	R7207	1-218-690-11	METAL CHIP	820
C7209	1-164-156-11	CERAMIC CHIP	0.1µF	R7208	1-260-133-11	CARBON	680K
C7210	1-126-933-11	ELECT	100µF	R7209	1-216-815-11	METAL CHIP	330
			20%	R7210	1-218-700-11	METAL CHIP	2.2K
			16V	R7211	1-218-708-11	METAL CHIP	4.7K
				R7212	1-218-742-11	METAL CHIP	120K
				R7213	1-218-742-11	METAL CHIP	120K
				R7214	1-215-925-11	METAL OXIDE	22K
				R7215	1-216-827-11	METAL CHIP	3.3K
*	CN7202	1-564-509-11	PLUG, CONNECTOR 6P	R7216	1-216-823-11	METAL CHIP	1.5K
*	CN7203	1-564-510-11	PLUG, CONNECTOR 7P	R7219	1-260-320-11	CARBON	220
*	CN7204	1-564-510-11	PLUG, CONNECTOR 7P	R7220	1-218-710-11	METAL CHIP	5.6K
CN7205	1-785-879-11	CONNECTOR, ONE TOUCH		R7221	1-249-425-11	CARBON	4.7K
CN7206	1-695-915-11	TAB (CONTACT)		R7222	1-260-087-11	CARBON	100
CN7208	1-695-915-11	TAB (CONTACT)		R7223	1-260-328-11	CARBON	1K
⚠ CN7209	1-251-182-11	SOCKET, CRT		SPARK GAP			
DIODE				SG7201	1-519-422-11	GAP, SPARK	
D7201	8-719-404-50	DIODE	MA111-TX	SG7202	1-517-729-31	GAP, SPARK	
D7202	8-719-901-83	DIODE	1SS83	SG7203	1-519-421-11	GAP, DISCHARGE	
D7203	8-719-901-83	DIODE	1SS83				
IC							
IC7201	8-759-680-01	IC	TDA6120Q/N2/S1				

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

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




REF.NO.	PART NO.	DESCRIPTION	VALUES	REF.NO.	PART NO.	DESCRIPTION	VALUES
						JUMPER WIRE	
				JW7302	1-216-864-11	SHORT CHIP	
				JW7304	1-216-864-11	SHORT CHIP	
				JW7305	1-216-864-11	SHORT CHIP	
*	A-1302-811-A	CB BOARD, COMPLETE				COIL	
	4-382-854-11	SCREW (M3X10), P, SW (+)		L7301	1-469-555-21	INDUCTOR	10µH
*	7-651-000-50	GREASE,SILICON (G-746) 200G		L7302	1-414-855-31	INDUCTOR	1µH
				L7303	1-414-855-31	INDUCTOR	1µH
						TRANSISTOR	
	C7301	1-162-970-11	CERAMIC CHIP	0.01µF	10%	25V	Q7301 8-729-424-02 TRANSISTOR 2SB709A-QRS-TX
	C7302	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	Q7302 8-729-424-02 TRANSISTOR 2SB709A-QRS-TX
	C7303	1-162-919-11	CERAMIC CHIP	22pF	5%	50V	Q7303 8-729-422-27 TRANSISTOR 2SD601A-Q
	C7304	1-101-003-00	CERAMIC	0.0047µF		50V	Q7304 8-729-048-50 TRANSISTOR 2SK3018-T106
	C7305	1-104-570-11	CERAMIC	0.001µF	10%	2KV	
	C7306	1-126-768-11	ELECT	2200µF	20%	16V	
	C7307	1-164-156-11	CERAMIC CHIP	0.1µF		25V	
	C7308	1-107-662-11	ELECT	22pF	20%	350V	
	C7309	1-101-003-00	CERAMIC	0.0047µF		50V	
	C7310	1-164-156-11	CERAMIC CHIP	0.1µF		25V	
						RESISTOR	
	C7311	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7301 1-249-393-11 CARBON 10 5% 1/4W
	C7312	1-126-933-11	ELECT	100µF	20%	16V	R7302 1-216-822-11 METAL CHIP 1.2K 5% 1/10W
	C7313	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7303 1-216-813-11 METAL CHIP 220 5% 1/10W
	C7314	1-164-156-11	CERAMIC CHIP	0.1µF		25V	R7304 1-260-132-11 CARBON 560K 5% 1/2W
	C7315	1-161-830-00	CERAMIC	0.0047µF		500V	R7305 1-216-801-11 METAL CHIP 22 5% 1/10W
	C7317	1-162-966-11	CERAMIC CHIP	0.0022µF	10%	50V	R7306 1-218-696-11 METAL CHIP 1.5K 0.50% 1/10W
	C7320	1-164-096-11	CERAMIC	0.01µF		50V	R7307 1-219-743-11 METAL 100 5% 1/2W
				R7308 1-216-809-11 METAL CHIP 100 5% 1/10W			
				R7309 1-216-864-11 SHORT CHIP 100 5% 1/10W			
				R7310 1-218-710-11 METAL CHIP 5.6K 0.50% 1/10W			
						CONNECTOR	
*	CN7302	1-564-509-11	PLUG, CONNECTOR	6P			
*	CN7303	1-564-510-11	PLUG, CONNECTOR	7P	R7311	1-218-692-11 METAL CHIP 1K 0.50% 1/10W	
*	CN7304	1-564-510-11	PLUG, CONNECTOR	7P	R7312	1-260-133-11 CARBON 680K 5% 1/2W	
	CN7305	1-785-879-11	CONNECTOR, ONE TOUCH		R7313	1-216-818-11 METAL CHIP 560 5% 1/10W	
	CN7307	1-695-915-11	TAB (CONTACT)		R7314	1-218-680-11 METAL CHIP 330 0.50% 1/10W	
	CN7308	1-695-915-11	TAB (CONTACT)		R7315	1-218-690-11 METAL CHIP 820 0.50% 1/10W	
	CN7309	1-251-182-11	SOCKET, CRT				
				R7316	1-218-693-11 METAL CHIP 1.1K 0.50% 1/10W		
				R7317	1-218-696-11 METAL CHIP 1.5K 0.50% 1/10W		
				R7318	1-218-704-11 METAL CHIP 3.3K 0.50% 1/10W		
				R7319	1-216-825-11 METAL CHIP 2.2K 5% 1/10W		
				R7320	1-218-752-11 METAL CHIP 330K 0.50% 1/10W		
				R7321	1-218-746-11 METAL CHIP 180K 0.50% 1/10W		
				R7322	1-215-925-11 METAL OXIDE 22K 5% 3W		
				R7323	1-216-827-11 METAL CHIP 3.3K 5% 1/10W		
				R7325	1-216-823-11 METAL CHIP 1.5K 5% 1/10W		
				R7326	1-260-320-11 CARBON 220 5% 1/2W		
	IC7301	8-759-680-01	IC	TDA6120Q/N2/S1			

REF.NO.	PART NO.	DESCRIPTION	VALUES			REF.NO.	PART NO.	DESCRIPTION	VALUES
R7328	1-249-425-11	CARBON	4.7K	5%	1/4W				
R7329	1-260-087-11	CARBON	100	5%	1/2W				
R7330	1-260-328-11	CARBON	1K	5%	1/2W				
<u>SPARK GAP</u>									
SG7301	1-519-422-11	GAP, SPARK							
SG7302	1-517-729-31	GAP, SPARK							
SG7303	1-519-421-11	GAP, DISCHARGE							

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