

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

# SERVICE MANUAL

# BA-4D CHASSIS

<u>MODEL NAME</u>	<u>REMOTE COMMANDER</u>	<u>DESTINATION</u>	<u>CHASSIS NO.</u>
<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A
<b>KV-29SL43</b>	RM-Y165	E	SCC-S55C-A
<b>KV-29SL43C</b>	RM-Y165	E	SCC-S55D-A

**ORIGINAL MANUAL ISSUE DATE: 4/1999**

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

<u>REVISION DATE</u>	<u>REVISION TYPE</u>	<u>SUBJECT</u>
6/1999	CORRECTION-1	CRT PART NUMBER CORRECTION FOR KV-27S66
9/1999	CORRECTION-2	DY PART NUMBER CORRECTION
5/2001	SUPPLEMENT-1	NEW MODEL ADDED: KV-29SL43
8/2001	SUPPLEMENT-2	NEW MODEL ADDED: KV-29SL43C
8/2001	CORRECTION-3	Q550 PART NUMBER CORRECTION-PAGE 55

**TRINITRON® COLOR TELEVISION**

# SONY®

# SERVICE MANUAL

# BA-4D CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST</u>	<u>CHASSIS NO.</u>
<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A



KV-29AL66



RM-Y167



MICROFILM

TRINITRON® COLOR TV  
**SONY®**

## SPECIFICATIONS

	KV-27S42	KV-27S46 KV-27S66	KV-29AL42 KV-29AL42C	KV-29AL66C KV-29AL66	KV-29SL46 KV-29XL42M KV-29SL42 KV-29SL42C
<b>Power Requirements</b>	120V,60Hz	120V,60Hz	120-220V 50/60Hz	120-220V 50/60Hz	120-220V 50/60Hz
<b>Number of input/outputs</b>					
<b>Video<sup>1)</sup></b>	1	2	2	3	1, 2(KV-29SL46)
<b>S Video<sup>2)</sup></b>	1	1	1	1	1
<b>Audio<sup>3)</sup></b>	1	2	2	3	1, 2(KV-29SL46)
<b>Audio Out<sup>4)</sup></b>	1	1	1	1	1
<b>Monitor Out</b>	-	-	-	1	-
<b>Speaker Output(W)</b>	5WX2	5WX2	10WX2	10WX2	5WX2
<b>Power Consumption(W)</b>		150W (KV-27S66)			
<b>In Use (Max)</b>	140W	140W (KV-27S46)	170W	180W	140W
<b>In Standby</b>	2W	2W	3W	3W	3W
<b>Dimensions(W/H/D)</b>					
<b>(mm)</b>	660.4X598 X505.5mm	660.4X598 X505.5mm	767.4X579.7 X547.7mm	767.4X579.7 X547.7mm	660.4X598 X505.5mm
<b>(in.)</b>	26x23 <sup>9/16</sup> x20in	26x23 <sup>9/16</sup> x20in	30 <sup>1/4</sup> X22 <sup>7/8</sup> x21 <sup>5/8</sup> in	30 <sup>1/4</sup> X22 <sup>7/8</sup> x21 <sup>5/8</sup> in	26x23 <sup>9/16</sup> x20in
<b>Mass (Kg)</b>	39kg	39kg	42kg	42kg	39kg
<b>(lbs)</b>	86lbs	86lbs	93lbs	93lbs	86lbs

### Television system

American TV standard/NTSC

### Channel coverage

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

### Picture tube

Trinitron® tube

### Visible screen size

27-inch picture measured diagonally  
29-inch picture measured diagonally

### Antenna

75 ohm external antenna terminal for VHF/UHF

### Supplied accessories

Remote Commander with 2 size AA (R6) batteries  
RM-Y167 (KV-29AL66/29AL66C/29SL46/27S46/27S66)  
RM-Y165 (KV-29AL42/29AL42C/27S42/29XL42M/29SL42/29SL42C)

### Optional accessories

Connecting  
Cables: VMC-810S/820S, VMC-720M.  
YC-15V/20V, RK-74A

TV Stand: SU-27A4  
U/V Mixer: EAC-66

- <sup>1)</sup> 1 Vp-p 75 ohms unbalanced, sync negative  
<sup>2)</sup> Y: 1 Vp-p 75 ohms unbalanced, sync negative  
C: 0.286 Vp-p (Burst signal), 75 ohms  
<sup>3)</sup> 500 mVrms (100% modulation), Impedance: 47 kilohms  
<sup>4)</sup> More than 408 mVrms at the maximum volume setting (variable)  
More than 408 mVrms (fix); Impedance: 5 kilohms

### (●) SRS (SOUND RETRIEVAL SYSTEM)

The (●) SRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

The word 'SRS' and the SRS symbol (●) are registered trademarks of 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.

<b>TABLE OF CONTENTS</b>
--------------------------

<i>Section</i>	<i>Title</i>	<i>Page</i>
	Warnings and Cautions .....	4
	Self-Diagnostic Function .....	4
	Safety Check-Out Instructions .....	7
<b>1.</b>	<b>GENERAL</b> .....	<b>8</b>
<b>2.</b>	<b>DISASSEMBLY</b>	
2-1.	Rear Cover Removal (KV-27S46/27S66) .....	11
2-2.	Rear Cover Removal (KV-29SL42/29C/29SL46/29XL42M) .....	11
2-3.	Rear Cover Removal (KV-29AL42/42C/29AL66/66C) .....	11
2-4.	Control Switch Removal (KV-29AL42/42C/29AL66/66C) .....	11
2-5.	Chassis Assembly Removal (KV-27S46/27S66/29SL42/29C/29SL46/29XL42M) .....	12
2-6.	Chassis Assembly Removal (KV-29AL42/42C/29AL66/66C) .....	12
2-7.	Service Position .....	12
2-8.	Picture Tube Removal .....	13
<b>3.</b>	<b>SET-UP ADJUSTMENTS</b>	
3-1.	Beam Landing .....	14
3-2.	Convergence .....	15
3-3.	Focus .....	16
3-4.	Screen (G2) .....	16
3-5.	Method of Setting the Service Adjustment Mode .....	16
3-6.	White Balance Adjustments .....	16
<b>4.</b>	<b>SAFETY RELATED ADJUSTMENTS</b>	
4-1.	<input checked="" type="checkbox"/> R582 and R584 Confirmation Method (HV Hold-Down Confirmation and Readjustments) .....	17
4-2.	B+ Voltage Confirmation and Adjustment .....	17
<b>5.</b>	<b>CIRCUIT ADJUSTMENTS</b>	
5-1.	Setting the Service Adjustment Mode .....	19
5-2.	Memory Write Confirmation Method .....	19
5-3.	Adjust Buttons and Indicators .....	19
5-4.	A Board Adjustments .....	21
<b>6.</b>	<b>DIAGRAMS</b>	
6-1.	Block Diagram .....	23
6-2.	Circuit Board Location .....	26
6-3.	Printed Wiring Boards and Schematic Diagrams .....	26
	• A Board .....	27
	• P Board .....	35
	• K Board .....	37
	• HT Board .....	37
	• C Board .....	39
	• CV Board .....	40
	• E Board .....	42
	• HV Board .....	43
6-4.	Semiconductors .....	45
<b>7.</b>	<b>EXPLODED VIEW</b>	
7-1.	Chassis (KV-27S66) .....	46
7-2.	Chassis (KV-27S42/27S46/27SL42/42C/29SL46/29XL42M) .....	47
7-3.	Chassis (KV-29AL42/29AL42C) .....	48
7-4.	Chassis (KV-29AL66/66C) .....	49
<b>8.</b>	<b>ELECTRICAL PARTS LIST</b> .....	<b>50</b>

## 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  $\Delta$  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

### ATTENTION!!

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

### ATTENTION!!

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

### ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  $\Delta$  SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT SUSPECTE.

## 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.

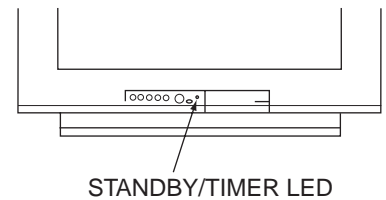
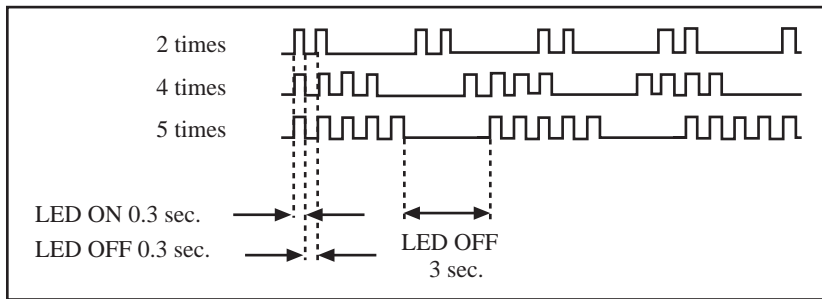
Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Display/ Diagnostic result	Probable Cause Location	Detected Symptoms
* Power does not turn on	Does not light		* Power cord is not plugged in. * Fuse is burned out (F5050) (E Board)	* Power does not come on. * No power is supplied to the TV. * AC power supply is faulty.
* +B overcurrent (OCP)	2 times	2:0 or 2:1	* H.OUT (Q502) is shorted. (A board) * IC1751 is shorted. (C board) * IC1701 is shorted. (CV board)	* Power does not come on. * Load on power line is shorted.
* Vertical deflection stopped*	4 times	4:0 or 4:1	* +13V is not supplied. (A board) * IC 541 is faulty (A board)	* Has entered standby state after horizontal raster. * Vertical deflection pulse is stopped. * Power line is shorted or power supply is stopped.
* White balance failure (not balanced)	5 times	5:0 or 5:1	* Video OUT (Q306 to 308) is faulty.(A bd) * IC301 is faulty. (A board) * G2 is improperly adjusted**.	* No raster is generated. * CRT cathode current detection reference pulse output is small.

\* 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) Adjustment in Section 3-4 of this manual.

## Display of Standby/Timer LED Flash Count



<u>Diagnostic Item</u>	<u>Flash Count*</u>
+B overcurrent	2 times
Vertical deflection stopped	4 times
White balance failure	5 times

\*One flash count is not used for self-diagnostic.

## Stopping the Standby/Timer LED Flash

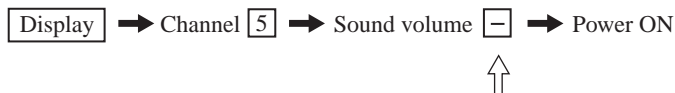
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

## Self-Diagnostic Screen Display

For errors with symptoms such as “power sometimes shuts off” or “screen sometimes goes out” that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

### To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:



Note that this differs from entering the service mode (sound volume  $\boxed{+}$ ).

## Self Diagnostic Screen Display

SELF DIAGNOSTIC			
2:		0	← Numeral “0” means that no fault was detected.
3:	N/A	0	
4:		0	
5:		1	← Numeral “1” means a fault was detected one time only.
101:	N/A	0	

## Handling of Self-diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to “0”.

Unless the result display is cleared to “0”, the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

### Clearing the Result Display

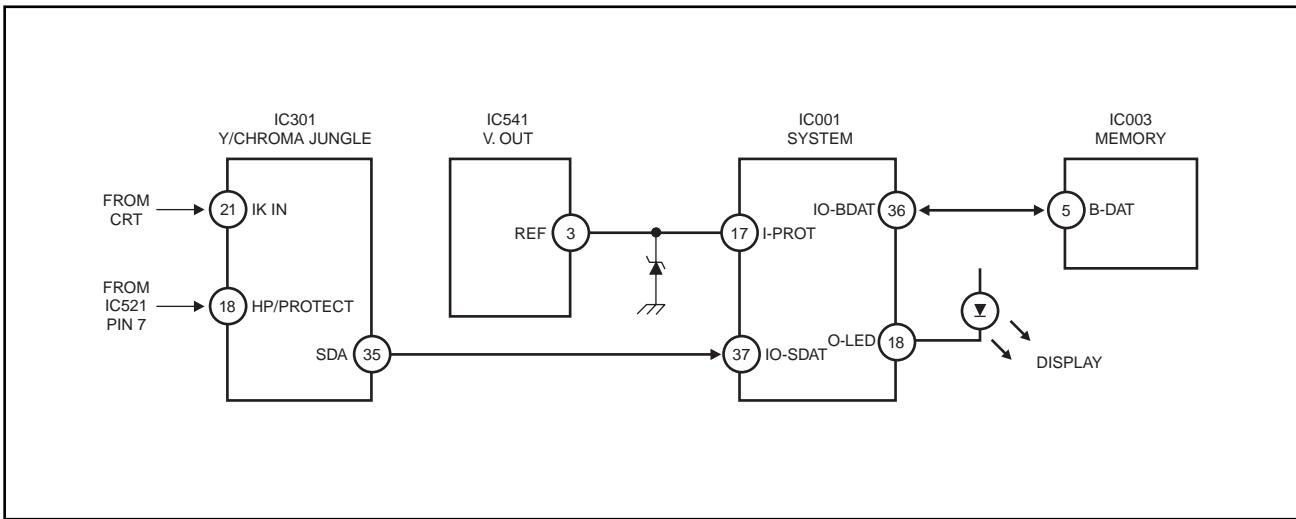
To clear the result display to “0”, press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:



## Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

## Self-diagnostic Circuit



### **+B overcurrent (OCP)**

Occurs when an overcurrent on the +B (115V) line is detected by pin 18 of IC301. If the voltage of pin 18 of IC 301 is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

### **Vertical deflection stopped**

Occurs when an absence of the vertical deflection pulse is detected by pin 17 of IC001. Power supply will shut down when waveform interval exceeds 2 seconds.

### **White balance failure**

If the RGB levels\* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301. TV will stay on, but there will be no picture.

\*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K.)

## 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 microampere). 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 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).

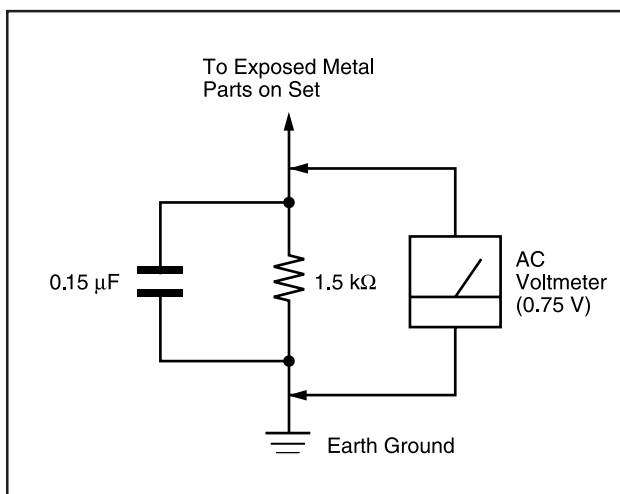


Figure A. Using an AC voltmeter to check AC leakage.

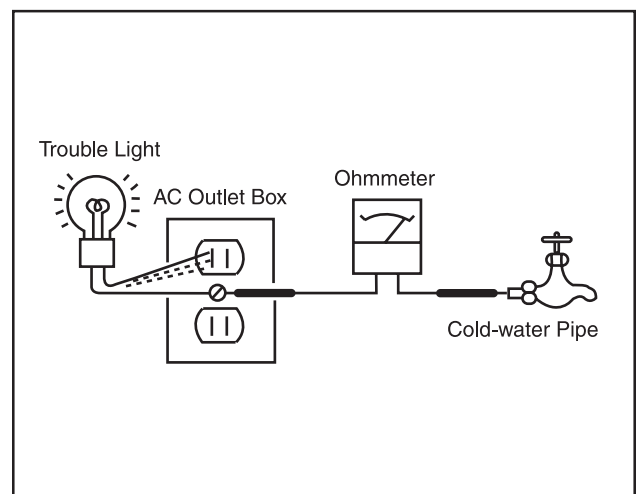


Figure B. Checking for earth ground.



## SECTION 1 GENERAL

The following are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

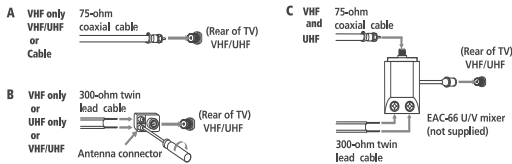
### Connecting Your TV

This section covers basic connections in addition to any optional equipment you may be connecting.

#### Basic Connections

##### TV with indoor or outdoor antenna, or CATV cable

Depending on the cable available in your home, choose one of the connections below:

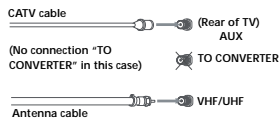


If you are connecting to an indoor or outdoor antenna, it will be necessary to adjust the orientation of the antenna for best reception.

#### Cable and antenna

KV-27S66, 27V66 only

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



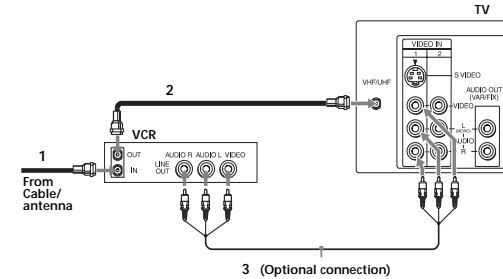
Select CABLE or ANT mode by pressing **ANT** on the remote control.

3

#### User Guide

### Connecting Additional Equipment

#### TV and VCR



! VCR must be connected and turned on to operate PIP. (KV-27S46 only)

- 1 Connect the coaxial cable from your TV antenna or cable TV to the IN jack on your VCR.
- 2 Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF IN jack on the TV.

To watch video programs from your VCR, tune your TV to channel 3 or 4 (as set on the rear of your VCR).

#### (Optional connection)

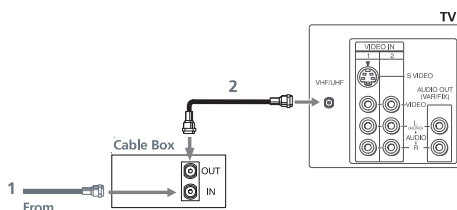
- 3 If your VCR is equipped with video inputs, for better picture quality you should connect A/V cables to AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV. You can use the **TV/VIDEO** button to switch between the TV and VCR inputs.

For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.

4

#### Connecting Your TV

#### TV and Cable Box



- 1 Connect the coaxial cable from the wall to the IN jack on your cable box.
- 2 Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the VHF/UHF IN jack on the TV.

To view channels from your cable box, tune your TV to channel 3 or 4 (as set on the rear panel of your cable box).

If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature on page 24.

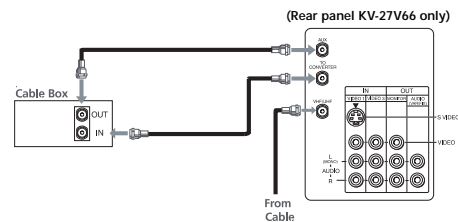
5

#### User Guide

#### TV, Cable box and Cable

KV-27S66, 27V66 only

For this set up, you can switch between scrambled channels (through your cable box), and normal (CATV) channels by pressing **ANT** on your remote control.

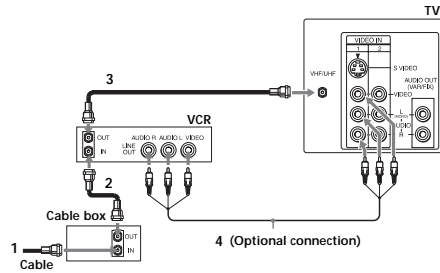


When using PIP, the AUX input cannot be viewed in the window picture.

6

Connecting Your TV

TV, VCR, and Cable box



- 1 Connect the coaxial cable from the wall to the IN jack on your cable box.
- 2 Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the IN jack on your VCR.
- 3 Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF IN jack on the TV.

If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature on page 24.

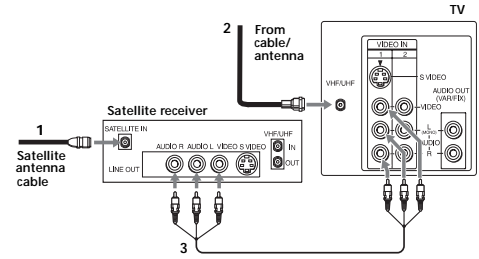
(Optional connection)

- 4 If your VCR is equipped with video inputs, for better picture quality you should connect A/V cables to AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV. You can use the TV/VIDEO button to switch between the TV and VCR inputs.

For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.

User Guide

TV and Digital Satellite Receiver

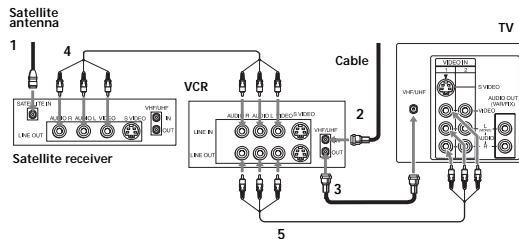


- 1 Connect the cable from your satellite antenna to SATELLITE IN on the satellite receiver.
- 2 Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your TV.
- 3 Using A/V connectors, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your TV. You can use the TV/VIDEO button to switch between the satellite receiver and the TV.

For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, your audio connectors must still be connected.

Connecting Your TV

TV, Digital Satellite Receiver and VCR



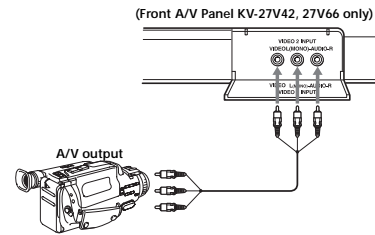
- 1 Connect the cable from your satellite antenna to SATELLITE IN on the satellite receiver.
- 2 Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your VCR.
- 3 Using a coaxial cable, connect VHF/UHF OUT on your VCR to VHF/UHF IN on your TV.
- 4 Using A/V connectors, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your VCR.
- 5 Using A/V connectors, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.

To view from the satellite or VCR, select the video input to which your satellite receiver or VCR is connected by pressing TV/VIDEO on the remote control.

User Guide

Connecting a Camcorder

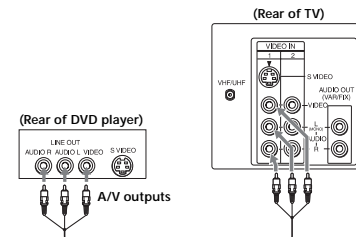
Using A/V cables, connect AUDIO and VIDEO OUT on your camcorder to AUDIO and VIDEO IN on your TV.



Connection can also be made to the rear A/V panel of your TV.

Connecting a DVD Player

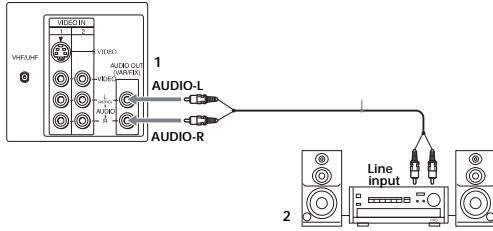
Using A/V connectors, connect LINE OUT on your DVD to VIDEO IN on your TV.



For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, your audio connectors must still be connected.

### Connecting an audio system

Using audio connectors, connect AUDIO OUT on your TV to one of the unused line inputs (e.g. TV, AUX, TAPE 2) on your stereo.



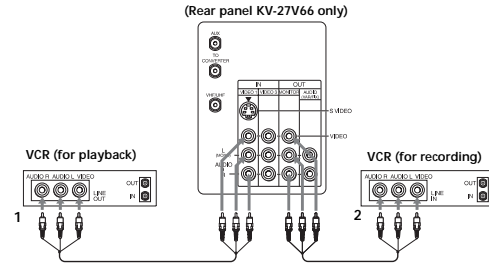
Set your stereo to the chosen line input. (See page 20 for additional audio setup instructions.)

11

### Connecting two VCRs for Tape Editing

KV-27V42, 27V66 only

MONITOR OUT gives you the ability to use a second VCR to record a program being played by the primary VCR to perform tape editing.



- 1 Connect the VCR intended for playback using the setup instructions on page 4 of this manual.
- 2 Using A/V connectors, connect AUDIO and VIDEO IN on your VCR intended for recording to MONITOR AUDIO and VIDEO OUT on your TV.

To perform tape editing; set the TV to the video input intended for playback by pressing **TV/VIDEO** on the remote control.

12

## Troubleshooting

If you are having a problem with your TV, try the suggestions below. If the problem persists, contact your nearest Sony dealer.

- |   |   |
|---|---|
| <b>Cannot operate single tuner PIP (KV-27S46)</b> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Make sure the VCR is connected correctly (see page 4).</li> <li><input type="checkbox"/> Check to see if the VCR is on.</li> <li><input type="checkbox"/> Make sure your remote control is programmed to operate your VCR (see page 31).</li> </ul>   |
| <b>No picture, no sound</b>                       | <ul style="list-style-type: none"> <li><input type="checkbox"/> Make sure the power cord is plugged in.</li> <li><input type="checkbox"/> If a red light is flashing on the front of your TV for more than a few minutes, call your local service center.</li> <li><input type="checkbox"/> Check the TV/VIDEO settings: when watching TV, set to TV; when watching video equipment, set to VIDEO (page 19).</li> <li><input type="checkbox"/> Make sure the batteries have been inserted correctly into the remote control.</li> <li><input type="checkbox"/> Check your PARENTAL CONTROL settings (pages 28-29).</li> <li><input type="checkbox"/> Try another channel, it could be station trouble.</li> </ul> |
| <b>Poor or no picture, good sound</b>             | <ul style="list-style-type: none"> <li><input type="checkbox"/> Adjust PICTURE in the VIDEO menu (page 19).</li> <li><input type="checkbox"/> Adjust BRIGHTNESS in the VIDEO menu (page 19).</li> <li><input type="checkbox"/> Check the antenna and/or cable connections (page 3).</li> </ul>  |
| <b>Good picture, no sound</b>                     | <ul style="list-style-type: none"> <li><input type="checkbox"/> Press <b>MUTING</b> so that MUTING disappears from the screen (page 13).</li> <li><input type="checkbox"/> Check your AUDIO settings. Your TV may be set to SAP (page 21).</li> </ul>   |
| <b>No color</b>                                   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Adjust COLOR in the VIDEO menu (page 19).</li> </ul>  |
| <b>Only snow appears on the screen</b>            | <ul style="list-style-type: none"> <li><input type="checkbox"/> Check the CABLE setting in the CHANNEL SET UP menu (page 24).</li> <li><input type="checkbox"/> Check the antenna and/or cable connections (page 3).</li> <li><input type="checkbox"/> Make sure the channel selected is currently broadcasting.</li> <li><input type="checkbox"/> Press the <b>AV</b> button on the remote control.</li> </ul>   |

34

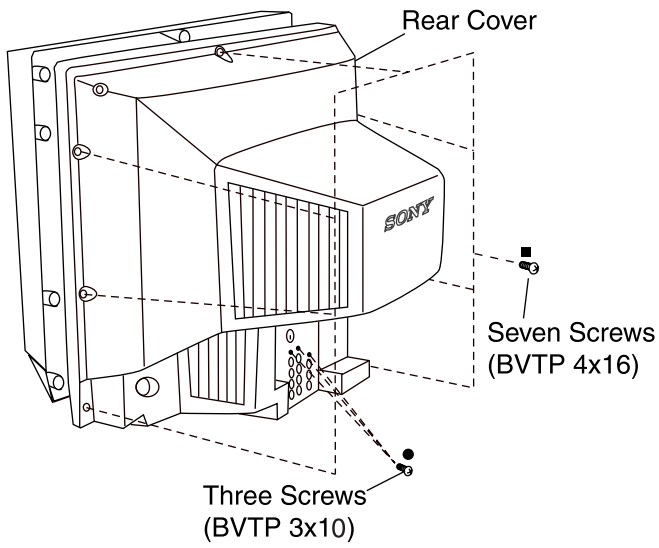
- |  |  |
|--|--|
| <b>Dotted lines or stripes</b>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Adjust the antenna.</li> <li><input type="checkbox"/> Move the TV away from other electronic equipment. Some electronic equipment can create electrical noise, which can interfere with TV reception.</li> </ul> |
| <b>Double images or ghosts</b>   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Check your outdoor antenna or call your cable service.</li> </ul>  |
| <b>Cannot receive higher number channels (UHF) when using an antenna</b> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Make sure CABLE is set to OFF in the CHANNEL SET UP menu (page 24).</li> <li><input type="checkbox"/> Use AUTO PROGRAM to add channels that are not presently in the memory (page 24).</li> </ul>                |
| <b>Cable stations don't seem to work</b>                                 | <ul style="list-style-type: none"> <li><input type="checkbox"/> Make sure CABLE is set to ON in the CHANNEL SET UP menu (page 24).</li> <li><input type="checkbox"/> Use AUTO PROGRAM to add channels that are not presently in the memory (page 24).</li> </ul>                 |
| <b>Remote Control does not operate</b>                                   | <ul style="list-style-type: none"> <li><input type="checkbox"/> Batteries could be weak. Replace them (page 2).</li> <li><input type="checkbox"/> Move the TV 3-4 feet away from fluorescent lights.</li> </ul>  |
| <b>The TV needs to be cleaned</b>  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzene, which might damage the finish of the cabinet.</li> </ul>   |
| <b>Lost password for PARENTAL CONTROL</b>                                | <ul style="list-style-type: none"> <li><input type="checkbox"/> In the password screen, enter the following master password: 4357. After using the master password, you must create a new password. It cannot be used to unlock currently blocked channels.</li> </ul>           |

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

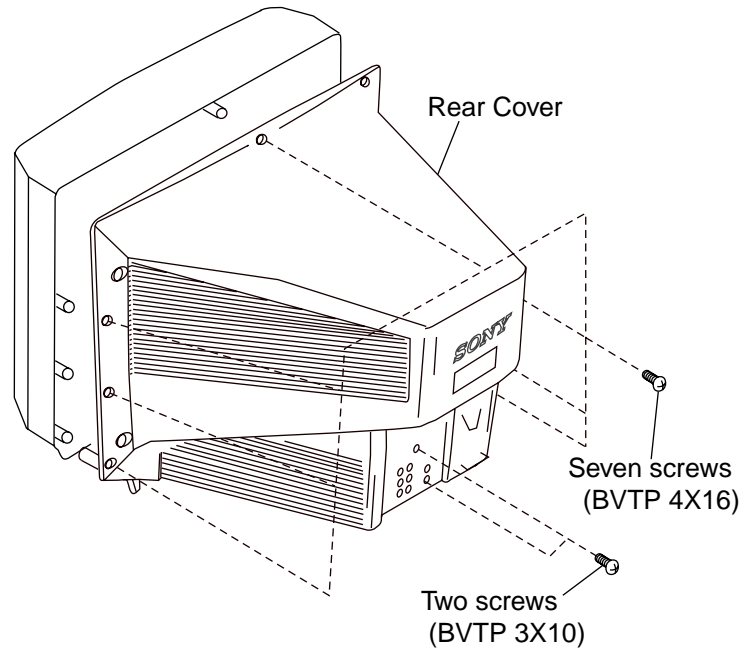
35

## SECTION 2 DISASSEMBLY

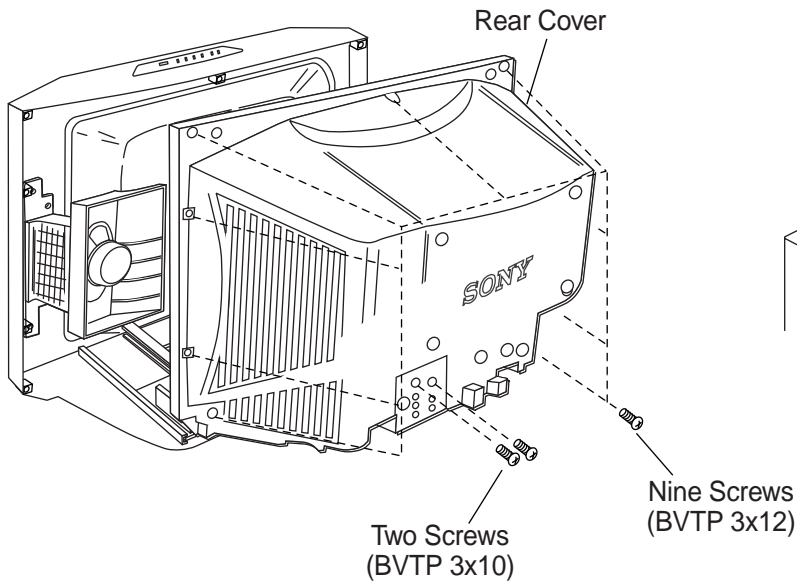
### 2-1. REAR COVER REMOVAL (KV-27S46/27S66)



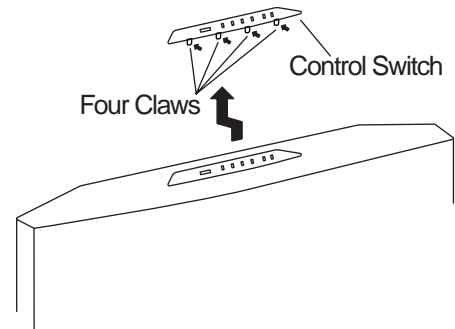
### 2-2. REAR COVER REMOVAL (KV-29SL42/29SL42C/29SL46/29XL42M)



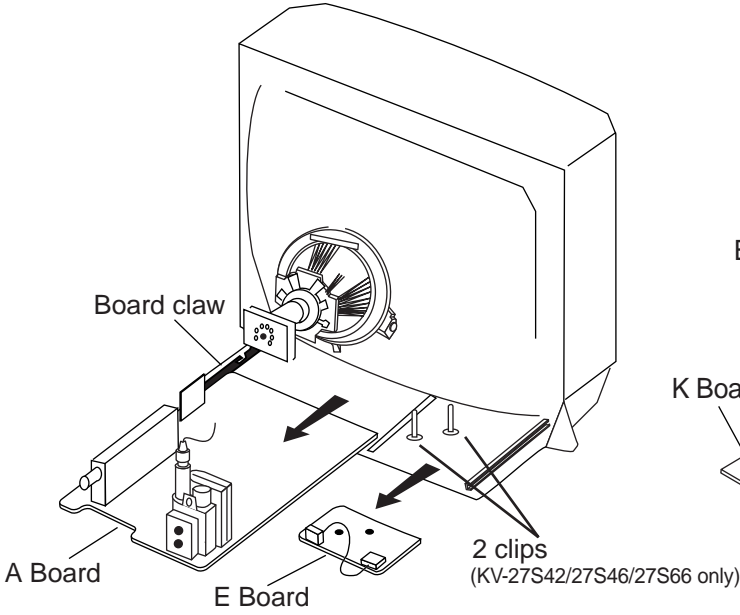
### 2-3. REAR COVER REMOVAL (KV-29AL42/29AL42C/29AL66/29AL66C)



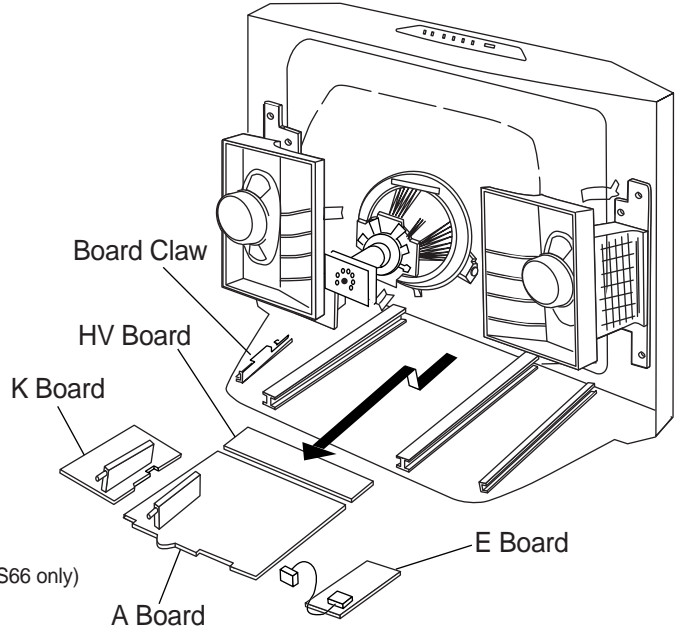
### 2-4. CONTROL SWITCH REMOVAL (KV-29AL42/29AL42C/29AL66/29AL66C)



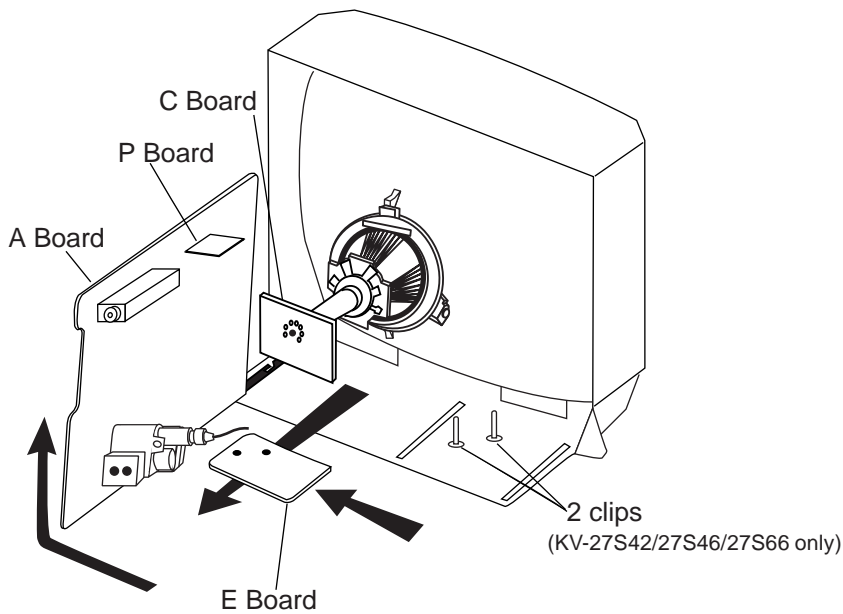
### 2-5. CHASSIS ASSEMBLY REMOVAL (KV-27S46/27S66/29SL42/29SL42C/29SL46/29XL42M)



### 2-6. CHASSIS ASSEMBLY REMOVAL (KV-29AL42/29AL42C/29AL66/29AL66C)



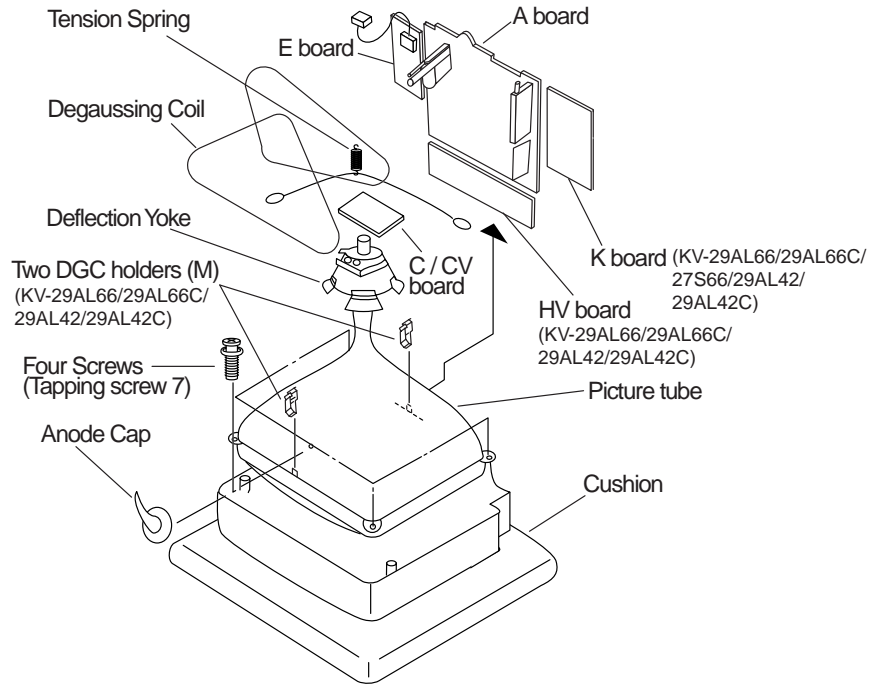
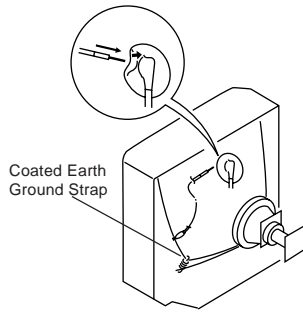
### 2-7. SERVICE POSITION



## 2-8. PICTURE TUBE REMOVAL

### WARNING: BEFORE REMOVING THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

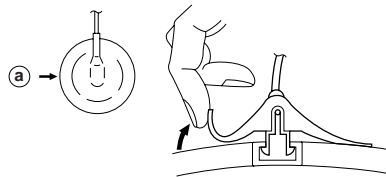


## ANODE CAP REMOVAL

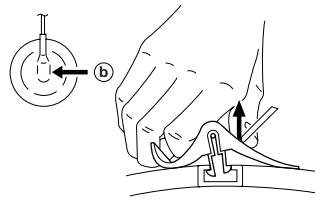
**WARNING:** High voltage remains in the CRT even after the power is disconnected. To avoid electrical shock, discharge the CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

**NOTE:** After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

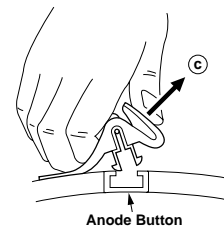
### REMOVAL PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by arrow a.



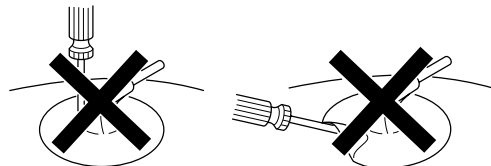
② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow b.



③ When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow c.

### HOW TO HANDLE AN ANODE CAP

- ① Do not use sharp objects which may cause damage to the surface of the anode cap.
- ② To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
- ③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



## SECTION 3 SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or when a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Set the controls as follows unless otherwise noted.

VIDEO MODE: STANDARD

PICTURE control: ..... Normal

BRIGHTNESS control ..... Normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G2)
5. White Balance

**Note:** Test equipment required:

- Color bar pattern generator
- Degausser
- DC power supply
- Digital multimeter

### 3-1. BEAM LANDING

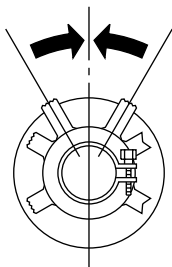
Before beginning adjustment procedure:

1. Degauss the entire screen.
2. Feed in the white pattern signal.

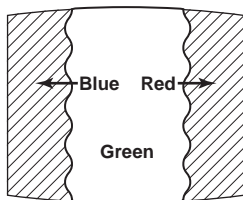
#### Adjustment Procedure

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw and set the purity control to the center as shown below.

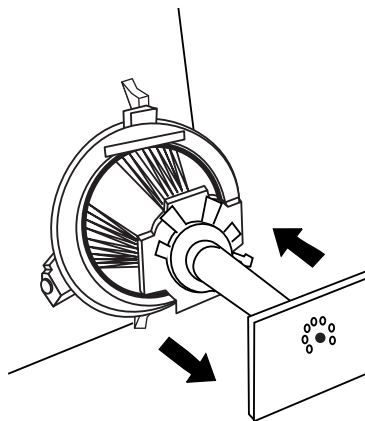
Purity Control



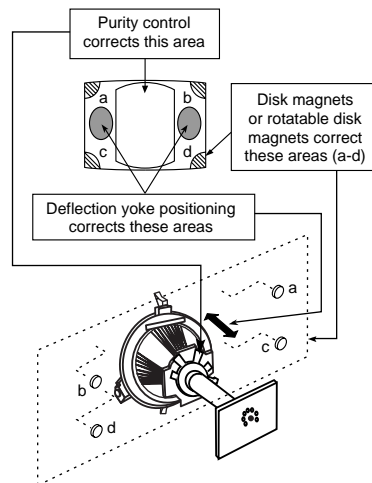
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward and adjust the purity control so that green is in the center and red and blue are at the sides evenly.



5. Move the deflection yoke forward and adjust so that the entire screen becomes green.



6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. If landing at the corner is not right, adjust by using the disk magnets.



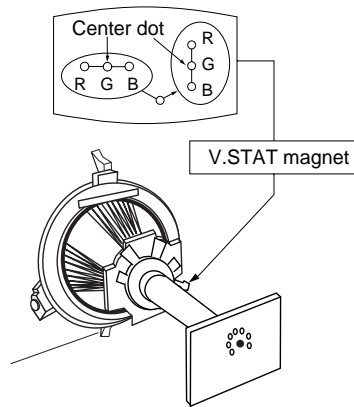
### 3-2. CONVERGENCE

Before starting convergence adjustments:

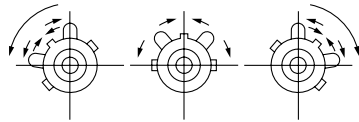
1. Perform FOCUS, V.LIN AND V.SIZE adjustments.
2. Set BRIGHTNESS control to minimum.
3. Feed in dot pattern.

#### Vertical Static Convergence

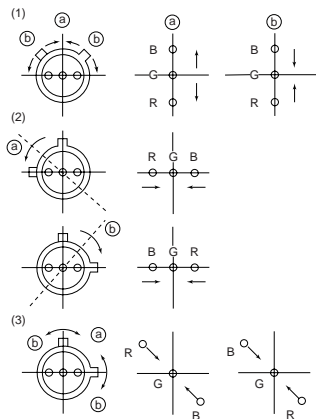
1. Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)



2. Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



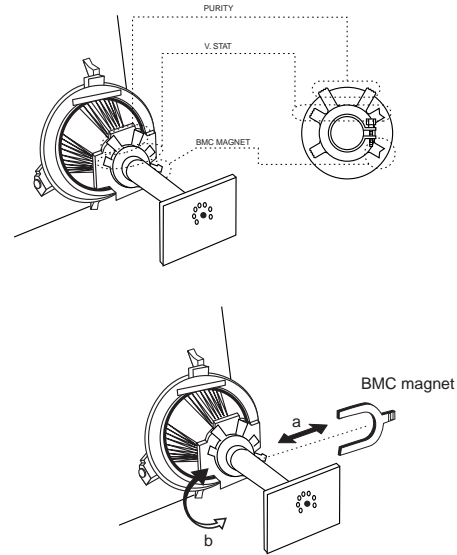
When the V.STAT magnet is moved in the direction of arrows (a) and (b), red, green, and blue dots move as shown below:



#### Horizontal Static Convergence

If the blue dot does not converge with the red and green dots, perform the following:

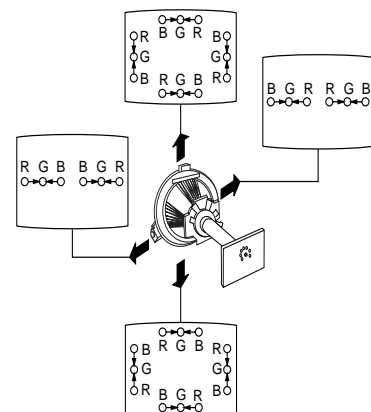
1. Move BMC magnet (a) to correct insufficient H. Static convergence.
2. Rotate BMC magnet (b) to correct insufficient V. Static convergence.
3. After adjusting the BMC magnet, repeat Beam Landing Adjustment.



#### Dynamic Convergence Adjustment

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence, as shown below:

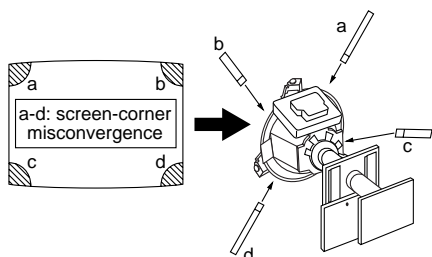


4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



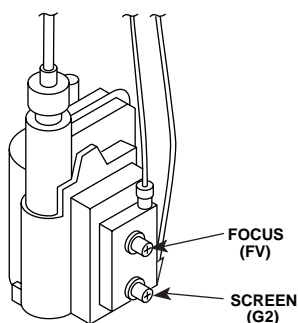
### Screen-Corner Convergence

1. Affix a permalloy assembly corresponding to the misconverged areas.



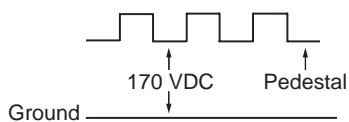
### 3-3. FOCUS

1. Adjust FOCUS control for best picture.



### 3-4. SCREEN (G2)

1. Input a dots pattern.
2. Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are 170 VDC.



4. Observe the screen and adjust SCREEN (G2) VR in FBT to obtain the faintly visible background of dot signal.

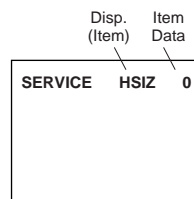
## 3-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

### Service Mode Procedure

1. Standby mode (power off).
2. **Display** → Channel **5** → Sound volume **+** → Power on the Remote Commander (press each button within a second).

### Service Adjustment Mode In

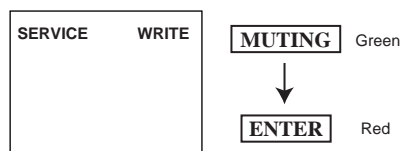
1. The CRT displays the item being adjusted.



2. Press **1** or **4** on the Remote Commander to select the item.
3. Press **3** or **6** on the Remote Commander to change the data.
4. Press **MUTING** then **ENTER** to save into the memory.

### Service Adjustment Mode Memory

Turn set off then on to exit service adjustment mode.



### 3-6. WHITE BALANCE ADJUSTMENTS

1. Input an entire white signal with burst.
2. Set to Service Adjustment Mode.
3. Set DCOL to "0".
4. Set the PICTURE and BRIGHTNESS to minimum.
5. Adjust with SBRT if necessary.
6. Select GCUT and BCUT with **1** and **4**.
7. Adjust with **3** and **6** for the best white balance.
8. Set PICTURE and BRIGHTNESS to maximum.
9. Select GDRV and BDRV with **1** and **4**.
10. Adjust with **3** and **6** for the best white balance.
11. Reset DCOL to "1".
12. To write into memory, press **MUTING** then **ENTER**.

## SECTION 4

### SAFETY RELATED ADJUSTMENTS

#### 4-1. X R584 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components which are marked with X on the schematic diagram:

DY, C508, C505, C507, C509, C511, C515, C520, C573, C574, C575, D572, D573, D574, IC301, IC521, IC602, L591, L501, R582, R583, R585, R578, R586, R625, R626, T504

#### Preparation Before Confirmation

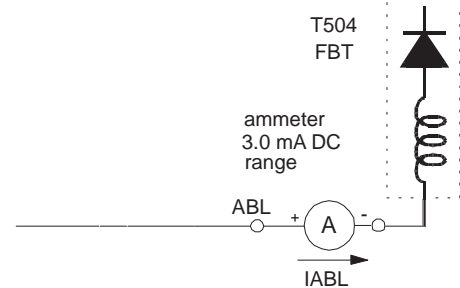
1. Using a Variac, apply AC input voltage:  $120 \pm 2$  VAC (or  $120-220 \pm 2$  VAC for KV-29AL42/29AL42C/29AL66/29AL66C/29SL42/29SL42C/29SL46/29XL42M only.)
2. Turn the POWER switch ON.
3. Input a white signal and set the PICTURE and BRIGHTNESS controls to maximum.
4. Confirm that the voltage between C574 (+) or TP503 and ground is more than 105 VDC.

#### Hold-down Operation Confirmation

1. Connect the current meter between Pin 11 of the FBT (T505) and the PWB land where Pin 11 would normally attach. (See Figure 1 on the next page.)
2. Input a dot signal and set PICTURE and BRIGHTNESS to minimum:  $IABL = 100 + 100/-95 \mu A$ .
3. Confirm the voltage of A Board TP-600 is  $135 \pm 3$  VDC.
4. Connect the digital voltmeter and the DC power supply via diode 1SS119 to C574 (+) and ground. (See Figure 1 on the next page.)
5. Increase the DC power voltage gradually until the picture blanks out.
6. Turn DC power source off immediately.
7. Read the digital voltmeter indication (Standard: less than or equal to 141.3 VDC).
8. Input a white signal and set PICTURE and BRIGHTNESS to maximum.
9. Repeat steps 4 to 7.

#### Hold-down Readjustment

If the setting indicated in step 2 of Hold-down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R584, components marked with X.



#### 4-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Note: The following adjustments should always be performed when replacing the following components, which are marked with X on the schematic diagram on schematic diagram.

IC601, IC602

1. Using a Variac, apply AC input voltage:  $130 \pm 2$  VAC (or  $120-220 \pm 2$  for KV-29AL42/29AL42C/29AL66/29AL66C/29SL42/29SL42C/29SL46/29XL42M only.)
2. Input a dot signal.
3. Set the PICTURE and BRIGHTNESS controls to minimum.
4. Set to service adjustment mode.
5. Select PADJ with 1 and 4.
6. Adjust with 6 to the 0 level.
7. Confirm that the voltage of A Board TP-600 is less than 138 VDC.
8. If step 7 is not satisfied, replace the components listed above, then repeat the above steps.
9. Adjust with 3 and 6 for:  $135 \pm 3$  VDC
10. Write into the memory by pressing MUTING then ENTER.

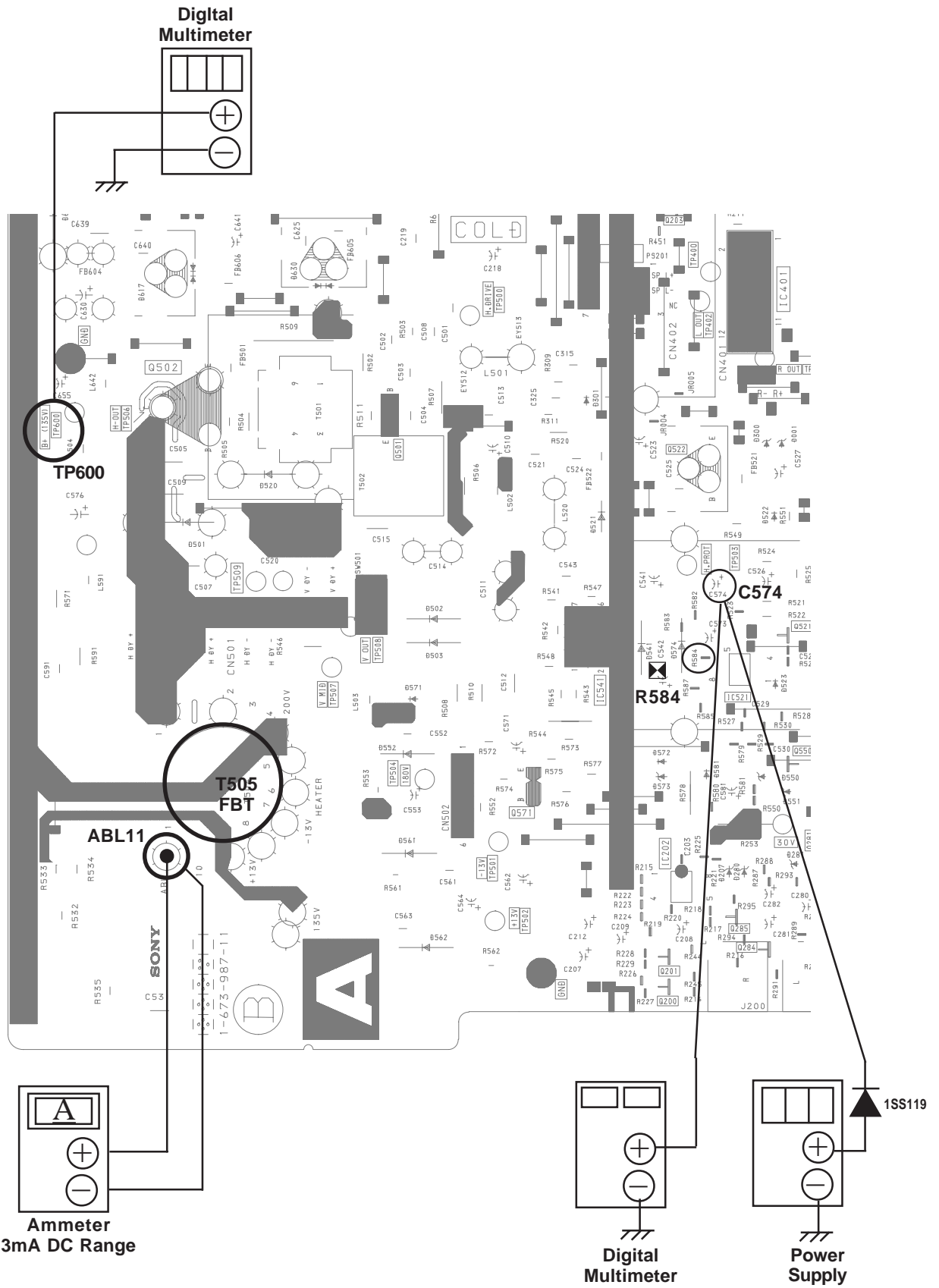


Figure 1

## SECTION 5 CIRCUIT ADJUSTMENTS

Use the Remote Commander (RM-Y168) to perform the circuit adjustments in this section.

NOTE: Test Equipment Required:

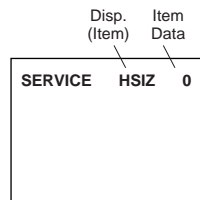
- Pattern generator
- Frequency counter
- Digital multimeter
- Audio oscillator

### 5-1. Setting the Service Adjustment Mode

- Standby mode (power off).
- Display** → Channel **5** → Sound volume **+** → Power ON  
on the Remote Commander (press each button within a second).

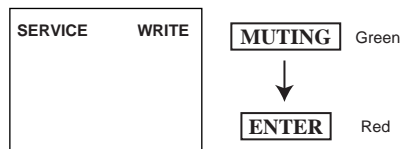
### Service Adjustment Mode On

- The CRT displays the item being adjusted.



- Press **1** or **4** on the Remote Commander to select an item.
- Press **3** or **6** on the Remote Commander to change the data.
- Press **MUTING** then **ENTER** to save into the memory.

### Service Adjustment Mode Memory



- Press **8** then **ENTER** on the Remote Commander to initialize.



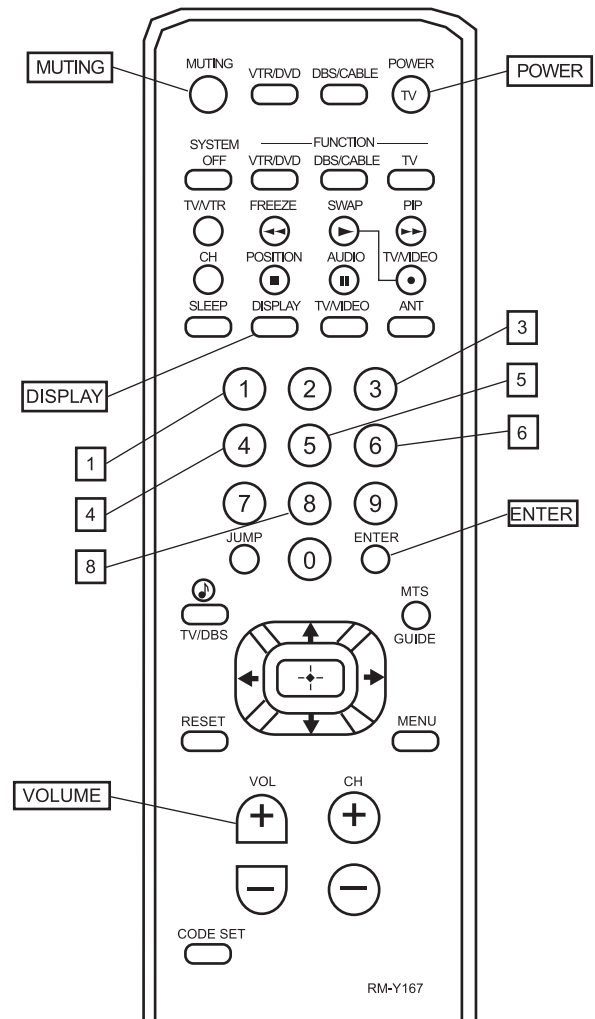
Carry out step 1 when adjusting IDs 0-4 and when replacing and adjusting IC003.

- Turn set off then on to exit service adjustment mode.

### 5-2. Memory Write Confirmation Method

- After adjustment, remove the power plug from the AC outlet, then plug it in again.
- Turn the power switch ON and set to service mode.
- Call the adjusted items again to confirm they were adjusted.

### 5-3. Adjust Buttons and Indicators



## Adjustment Items

Item	Service Name	Name	Data Range	Initial Value	Average Data
1	HSIZ	A_HSIZ	0-63	31	42
2	HPOS	A_HPOS	0-63	31	22
3	VBOW	A_AFCB	0-15	7	6
4	VANG	A_AFCB	0-15	7	6
5	TRAP	A_TRAP	0-15	7	7
6	PAMP	A_PAMP	0-63	31	16
7	CPIN	A_CPIN	0-63	31	34
8	VSIZ	A_VSIZ	0-63	31	33
9	VPOS	A_VPOS	0-63	31	38
10	VLIN	A_SCOR	0-15	7	6
11	SCOR	A_SCOR	0-15	7	7
12	VZOM	A_SCROLL	0-1	0	0
13	EHT	A_TRAP	0-15	7	4
14	ASP	A_ASPECT	0-63	63	48
15	SCRL	A_SCROLL	0-63	31	31
16	HBLK	A_ASPECT	0-1	0	1
17	LBLK	A_HBLK	0-15	7	15
18	RBLK	A_HBLK	0-15	7	3
19	VUSN	A_ASPECT	0-1	0	0
20	HDW	A_PON	0-1	0	0
21	EWDC	A_HSIZ	0-1	0	0
22	LVLN	A_VLIN	0-15	0	0
23	UVLN	A_VLIN	0-15	0	0
24	RDRV	A_RDRIVE	0-63	31	14
25	GDRV	A_GDRIVE	0-63	31	10
26	BDRV	A_BDRIVE	0-63	31	8
27	RCUT	A_RCUT	0-15	7	8
28	GCUT	A_GCUT	0-15	7	4
29	BCUT	A_GCUT	0-15	7	5
30	DCOL	A_GDRIVE	0-1	0	1
31	SHUE	A1_SUBHUE	0-31	14	9
32	SCOL	A1_SUBCOL	0-31	14	23
33	SBRT	A1_SUBBRT	0-31	14	10
34	RON	A_VIDSEL	0-1	0	1
35	GON	A_VIDSEL	0-1	0	1
36	BON	A_VIDSEL	0-1	0	1
37	AXPL	A_PON	0-1	0	0
38	AXNT	A_SHPF0	0-1	0	0
39	CBPF	A_XTAL	0-1	0	1
40	CTRP	A_XTAL	0-1	0	1
41	COFF	A_COFF	0-1	0	0
42	KOFF	A_COFF	0-1	0	0
43	SSHP	A1_SUBSHP	0-15	8	6
44	SHPF	A_SHPF0	0-1	0 / 0 *2	1
45	PREL	A_DCTAN	0-1	0	1
46	Y-DC	A_DCTAN	0-1	0	1
47	GAMM	A_BDRIVE	0-3	0	0
48	ABLM	A_RDRIVE	0-1	1	1
49	VTH	A_RDRIVE	0-1	0	1
50	YDEL	A_HOSC	0-15	7	7
51	NCOL	A_PIC	0-1	0	1
52	FSC	A_PIC	0-1	0	1
53	K-ID	A_KID	0-1	0	0
54	HOSC	A_HOSC	0-15	7	7
55	VSS	A_FFREQ	0-1	0	0
56	HSS	A_FFREQ	0-1	0	0
57	HMSK	A_VSIZ	0-1	0	1
58	VTMS	A_TVOFF	0-3	0	0
59	CDMD	A_FFREQ	0-3	0 / 1 *2	0
60	AFC	A_VPOS	0-3	0 / 0 *2	0
61	FIFR	A_FFREQ	0-3	0	3

	Service Name	Name	Data Range	Initial Value	Average Data
62	SBAS		0-15	7	8
63	STRE		0-15	7	9
64	SBAL	A1_SUBBAL	0-31	14	13
65	DISP	A_OSDPOS	0-127	0	11
66	PADJ	A_PADJ	0-63	3	51
67	HCHM	A6_HCHM	0-255	69	69
68	HCLM	A6_HCLM	0-255	16	16
69	HCHS		0-255	69	69
70	HCLS		0-255	16	16
71	PFRN		0-1	0	0
72	PRVS		0-1	0	0
73	PCON		0-127	32	70
74	PUCO		0-127	75	63
75	PVCO		0-127	40	63
76	PHUE		0-31	15	15
77	PKIL		0-1	0	0
78	PSEP		0-3	2	2
79	PDCO		0-3	0	0
80	PEXP		0-3	2	2
81	PBGS		0-63	14	14
82	PYDL		0-15	3	7
83	PBRT		0-31	0	25
84	PVPE		0-16	0	0
85	PUPE		0-16	0	0
86	PACS		0-1	0	1
87	PSDL		0-3	0	0
88	PMVP		0-3	0	0
89	PCGA		0-1	0	1
90	PBIT		0-1	0	0
91	PAFC		0-1	0	0
92	PACC		0-63	21	20
93	PBUR		0-1	0	0
94	PEVE		0-1	0	0
95	PINW		0-1	0	0
96	PINR		0-1	0	0
97	PREF		0-1	0	0
98	PARE		0-1	1	1
99	PAVE		0-1	0	0
100	PFRA		0-15	0	0
101	PPAL		0-255	0	0
102	PHPO		0-31	31	2
103	PVPO		0-31	21	22
104	PHTI		0-15	10	10
105	PHAJ		0-15	2	2
106	PBGY		0-15	0	0
107	PCRO		0-1	0	0
108	PPAR		0-63	2	2
109	PHPF		0-1	0	1
110	PVCH		0-1	0	0
111	PVON		0-1	0	1
112	PVLN		0-31	17	17
113	PVSB		0-255	64	64
114	PVLV		0-255	130	130
115	ID0	A_NVMI0	0-255	23	See ID map
116	ID1	A_NVMI1	0-255	3	See ID map
117	ID2	A_NVMI2	0-255	11	See ID map
118	ID3	A_NVMI3	0-255	1	See ID map
119	ID4	A_NVMI4	0-255	23	See ID map
120	ID5	A_NVMI5	0-255	0	See ID map
121	ID6	A6_NVMI6	0-255	0	See ID map
122	ID7	A6_NVMI7	0-255	64	See ID map

\*2: TV/VIDEO

SERVICE ID0 25

Notes:

Item numbers 1-122 show the sequence of adjustments that may be selected while in service mode.  
Data Range indicates the range of possible settings for each adjustment mode.  
Initial Data indicates the standard settings for each adjustment mode.

## Feature ID Map

	KV-	Destination	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6	ID-7
1	27S42	US	25	145	15	235	11	3	0	64
2	27S42	CND	89	145	15	135	11	3	0	64
3	27S46	US	25	155	15	235	11	3	1	64
4	27S66	US	25	155	79	235	11	3	7	64
5	27S66	CND	89	155	79	155	11	3	7	64
6	29AL42	E	17	147	173	203	123	3	0	64
7	29AL42C	E	17	147	173	203	123	3	0	64
8	29AL66	E	17	151	237	203	123	3	7	64
9	29AL66C	E	17	151	237	203	123	3	7	64
10	29SL42	E	17	145	143	203	123	3	0	64
11	29SL42C	E	17	145	143	203	123	3	0	64
12	29SL46	E	17	155	143	203	123	3	1	64
13	29XL42M	MX	17	145	143	203	123	3	0	64

## 5-4. A BOARD ADJUSTMENTS

### H. Frequency (Free Run) Check

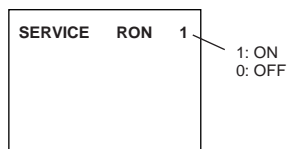
1. Input a TV mode (RF) with no signal.
2. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE).
3. Check H. Frequency for  $15735 \pm 200$  Hz.

### V. Frequency (Free Run) Check

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter on the A board to TP-508 (V OUT) or CN 501 pin ⑥ (V DY+) and ground.
4. Check that V. Frequency shows  $60 \pm 4$  Hz.

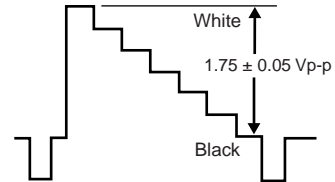
### Sub Contrast Adjustment (RDRV)

1. Input a color-bar signal and set the level to 75%.
2. In Standard mode, set PICTURE to maximum, COLOR to minimum, and BRIGHTNESS to center.
3. Activate the Service Adjustment Mode.
4. Set both GON and BON items. Using [3] and [6]; set each to the following values. Leave RON set to 1.



R ON: ON (1)  
G ON: OFF (0)  
B ON: OFF (0)

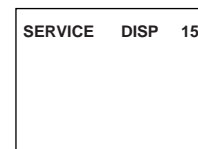
5. Select the item DCOL item and set it to 0.
6. Connect an oscilloscope probe to CN301 pin ⑤ (RED OUT).
7. Select RDRV with [1] and [4].
8. Adjust the value of RDRV with [3] and [6] for  $1.75 \pm 0.05$  Vp-p.



9. Reset the item DCOL to 1.
10. Reset GON and BON values to 1.
  - R ON: ON (1)
  - G ON: ON (1)
  - B ON: ON (1)
11. Reset Picture, Color, and Bright to normal values:
  - PICTURE: MAX
  - COLOR: CENTER
  - BRIGHT: CENTER
12. Press [MUTING] then [ENTER] to save into the memory.

### Display Position Adjustment (DISP)

1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select DISP with [1] and [4].
4. Adjust values of DISP with [3] and [6] to adjust characters to the center.
5. Write to memory by pressing [MUTING] then [ENTER].
6. Check to see if the text is displayed on the screen.

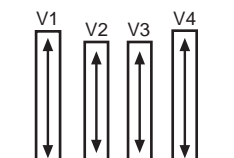


### Sub Bright Adjustment (SBRT)

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with [1] and [4].
5. Adjust the values of SBRT with [3] and [6] to obtain a faintly visible crosshatch.
6. Press [MUTING] then [ENTER] to save into the memory.

## Sub Hue, Sub Color Adjustment (SHUE, SCOL)

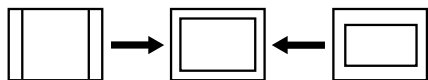
1. Input a color-bar signal.
2. Activate the Service Adjustment Mode.
3. Select the DCOL item and set the value to 0.
4. Connect an oscilloscope probe to CN301 Pin ⑦ (BLUE OUT).
5. Select the SHUE and SCOL item with [1] and [4].
6. While showing the SHUE item, adjust the waveform with [3] and [6] until the second and third bars show the same level ( $V2 = V3 \pm 0.15 V_{p-p}$ ).
7. While showing the SCOL item, adjust the waveform with [3] and [6] until the first and fourth bars show the same level ( $V1 = V4 \pm 0.15 V_{p-p}$ ).



8. Select the DCOL item and reset to 1.
9. Press [MUTING] then [ENTER] to save into the memory.

## V. Size Adjustment (VSIZ)

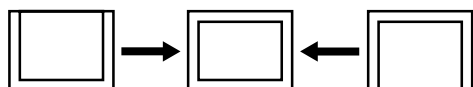
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VSIZ item with [1] and [4].
4. Adjust value of VPOS with [3] and [6] for the best vertical center.
5. Press [MUTING] then [ENTER] to save into the memory.



## V. Center Adjustment (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) check.

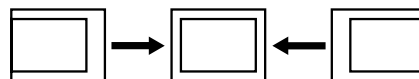
1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the VPOS item with [1] and [4].
4. Adjust value of VPOS with [3] and [6] for the best vertical center.
5. Press [MUTING] then [ENTER] to save into the memory.



## H. Center Adjustment (HPOS)

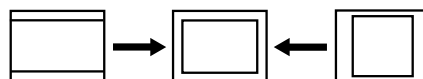
Perform this adjustment after performing H. Frequency (Free Run) check.

1. Input a crosshatch signal.
2. Activate the Service Adjustment Mode.
3. Select the HPOS item with [1] and [4].
4. Adjust the value of HPOS with [3] and [6] for the best horizontal center.
5. Press [MUTING] then [ENTER] to save into the memory.



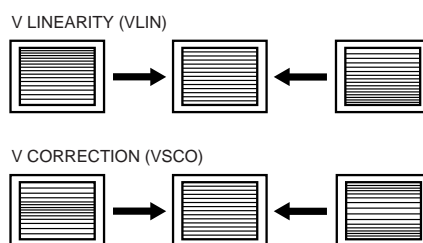
## H.Size Adjustment (HSIZ)

1. Input a cross hatch signal.
2. Activate the Service Adjustment Mode.
3. Select HSIZ with [1] and [4].
4. Adjust with [3] and [6] for the best Horizontal size.
5. Press [MUTING] then [ENTER] to save into the memory.



## V. Linearity (VLIN), V Correction (VSCO)

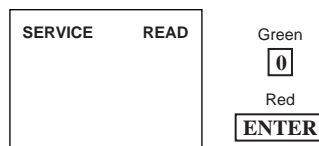
1. Input a crosshatch signal.
2. V. Correction is automatically adjusted from the circuit and should satisfy the conditions below:



## Service Adjustment Mode Memory

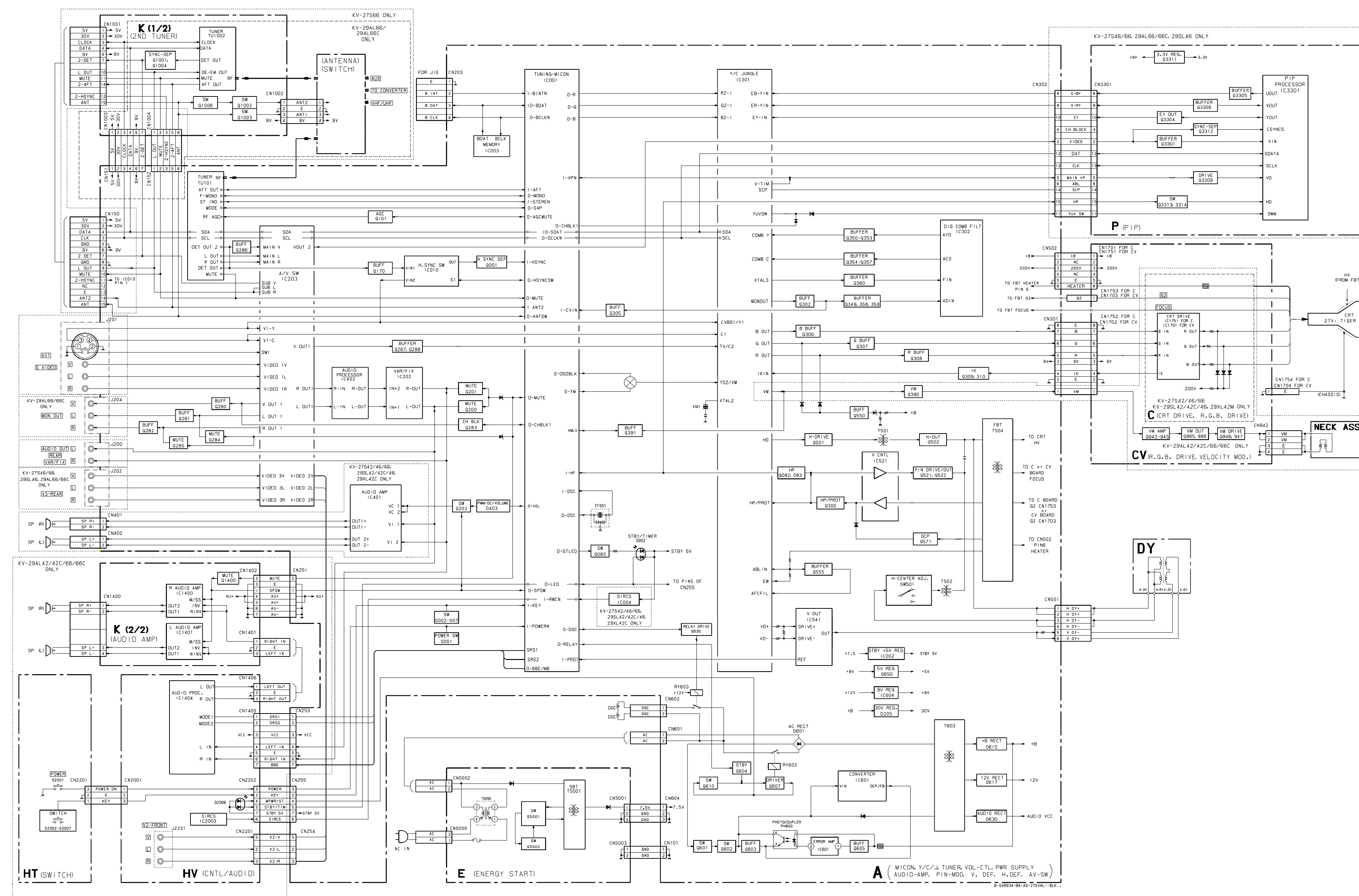
1. Change the value of the DCOL item to 1.
2. After completing all adjustments, press [0] then [ENTER].

Read From Memory

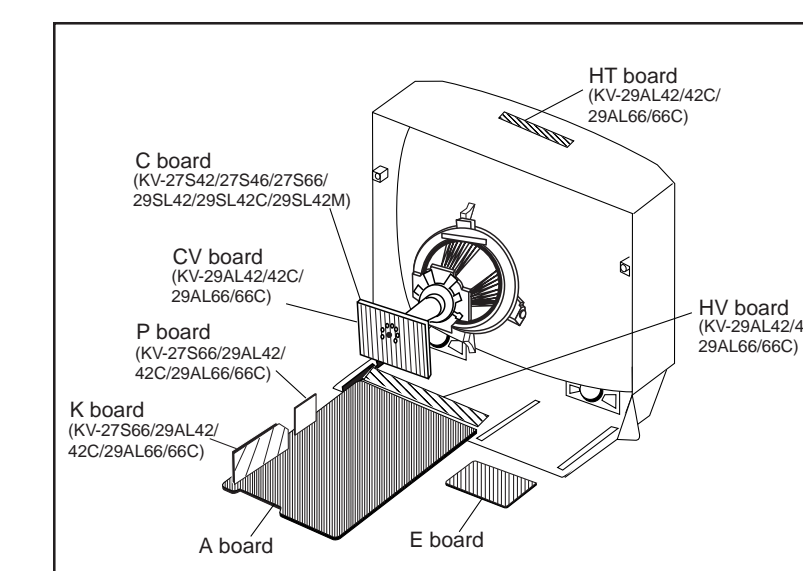


SECTION 6  
DIAGRAMS

6.1 BLOCK DIAGRAM



6-2. CIRCUIT BOARD LOCATION



Part Replaced (☑)	Adjustment (⊠)
DY, C508, C505, C507, C509, C511, C515, C520, C573, C574, C575, D572, D573, D574, IC301, IC521, IC602, L591, L501, R502, R503, R585, R578, R586, R625, R626, T504	HV HOLD-DOWN (R584)
IC601, IC602	B+ VOLTAGE CONFIRMATION

- All voltages are in Volts
- Voltage is DC with respect to ground unless otherwise noted.
- Readings are taken with a 10MV digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.
- \* : cannot be measured
- : B + Line
- - - : B - Line
- : Signal path

6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50 WV or less are not indicated except for electrolytic and tantalum.
- All electrolytics are 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows:  
Pitch: 5mm  
Rating electrical power 1/4W (CHIP: 1/10W)
- All resistors are in ohms.
- $K\Omega = 1000\Omega$   $M\Omega = 1000K\Omega$
- ☐ : nonflammable resistor
- ⊠ : fusible resistor
- ⊠ : panel designation and adjustment for repair
- ⊥ : earth-ground
- ⊥ : earth-chassis
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ☑, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⊠ and repeat the adjustment until the specified value is achieved (refer to Safety Related Adjustments on page 17).
- When replacing parts shown in the table below, be sure to perform the related adjustments.

Reference Information

RESISTOR	RN	METAL FILM
	RC	SOLID
	FRPD	NON FLAMMABLE CARBON
	FUSE	NON FLAMMABLE FUSE
	RW	NON FLAMMABLE WIREWOUND
	RS	NON FLAMMABLE METAL OXIDE
	RB	NON FLAMMABLE CEMENT
	⊠	ADJUSTMENT RESISTOR
COIL	LF-BL	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

Note:

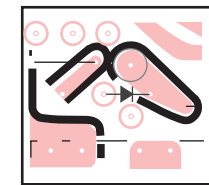
The components identified by shading and ⊠ mark are critical for safety. Replace only with the part number specified. The symbol ☑ (displayed on component side of the circuit board) indicates fast operating fuse. Replace only with fuse of the same rating as marked.

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 marqué.



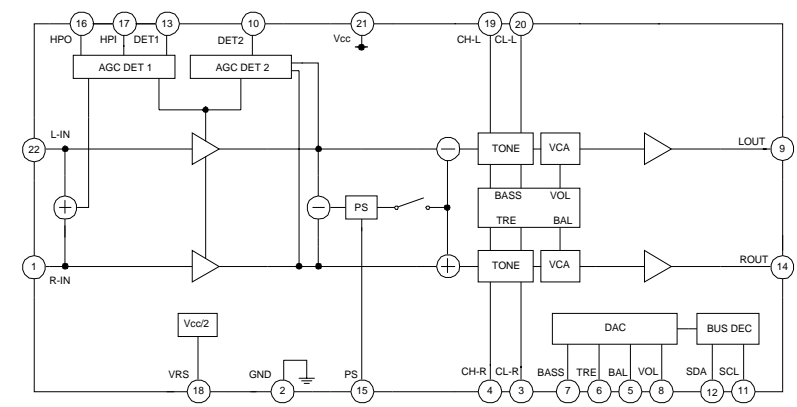
A BOARD LOCATION LIST

DIODE		D306	I-11	D605	A-12	IC301	I-10	Q285	G-2	Q361	I-6
D001	H-6	D388	H-10	D606	C-13	IC302	J-7	Q286	J-3	Q390	H-10
D002	I-14	D403	H-12	D607	D-13	IC401	G-8	Q287	J-4	Q391	H-10
D003	K-14	D501	B-5	D608	A-10	IC402	G-13	Q288	J-4	Q501	D-6
D004	J-11	D502	E-4	D609	A-10	IC521	G-4	Q300	H-10	Q502	B-6
D005	K-14	D503	E-4	D610	C-11	IC541	F-4	Q302	J-9	Q521	H-4
D201	I-2	D520	C-6	D611	D-11	IC601	C-10	Q305	H-9	Q522	G-6
D202	I-2	D521	F-5	D612	D-14	IC602	F-10	Q306	I-11	Q550	H-3
D204	I-2	D522	G-6	D613	D-10	IC604	F-10	Q307	I-11	Q555	G-9
D205	K-3	D523	H-4	D614	D-10	TRANSISTOR		Q308	I-11	Q571	E-3
D207	G-2	D541	F-4	D615	A-8	Q001	I-12	Q309	I-11	Q601	D-13
D208	G-8	D550	H-3	D617	B-8	Q080	I-15	Q310	I-11	Q602	E-12
D250	I-2	D551	H-3	D620	F-13	Q082	I-12	Q349	H-6	Q603	E-13
D251	I-2	D552	D-3	D630	C-8	Q083	I-12	Q350	H-8	Q604	F-13
D252	I-2	D561	D-3	D640	B-15	Q101	K-4	Q351	I-7	Q605	F-12
D253	J-2	D562	E-2	D650	D-10	Q170	K-5	Q352	I-7	Q607	F-13
D254	J-2	D571	D-4	IC		Q200	G-1	Q353	H-8	Q610	F-13
D255	J-2	D572	G-3	IC001	J-13	Q201	G-1	Q354	I-7	Q630	B-15
D280	J-2	D573	G-3	IC002	J-14	Q203	G-8	Q355	I-6	Q630	H-8
D281	H-2	D574	G-4	IC003	K-14	Q280	H-3	Q356	H-6	CRYSTAL	
D302	G-10	D581	G-3	IC004	H-15	Q281	H-3	Q357	H-6	X001	J-13
D303	J-12	D602	C-14	IC010	K-9	Q282	H-3	Q358	H-9	X301	J-9
D304	I-10	D603	D-13	IC202	G-2	Q283	H-2	Q359	H-9		
D305	I-11	D604	D-13	IC203	I-4	Q284	G-2	Q360	J-8		

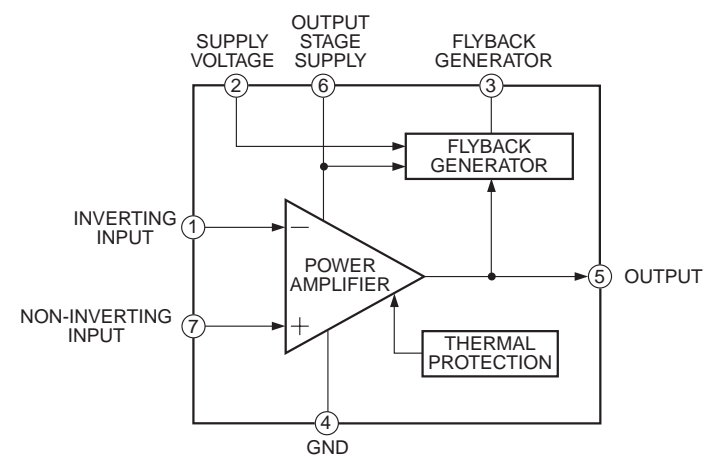


NOTE:  
Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

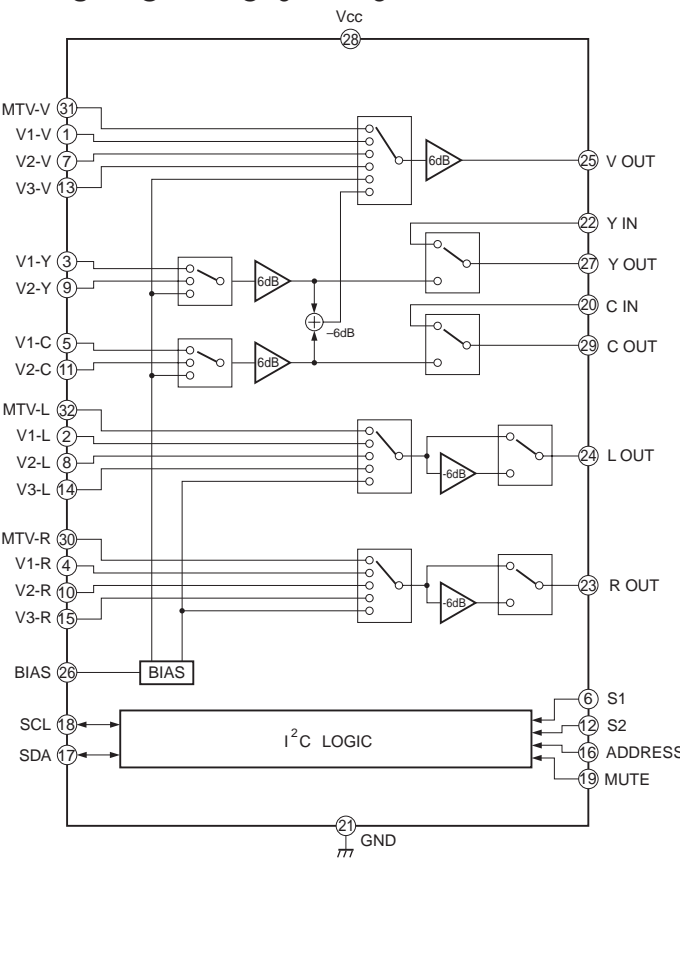
A BOARD: IC402 CXA2021S



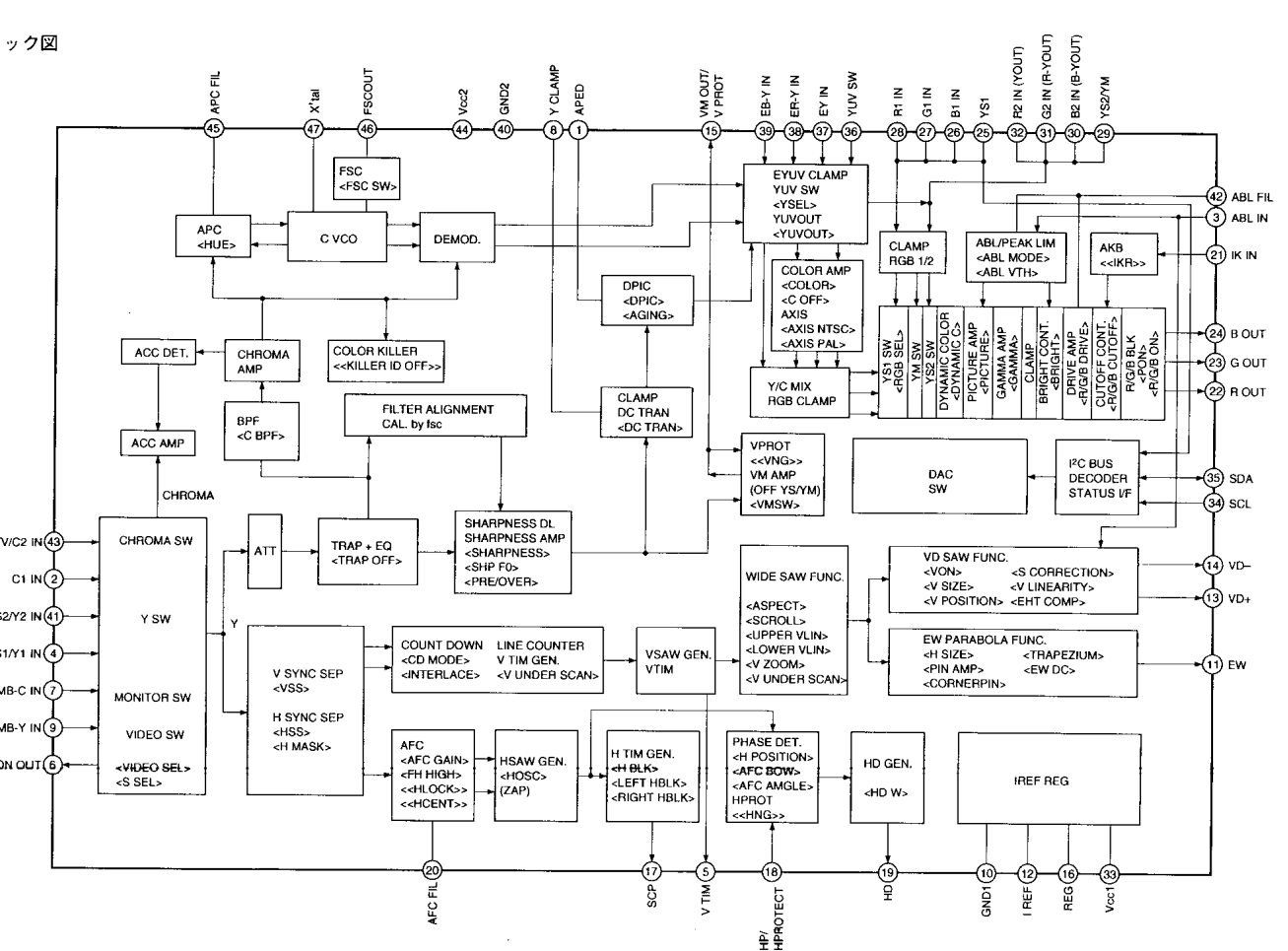
A BOARD: IC541 TDA8172



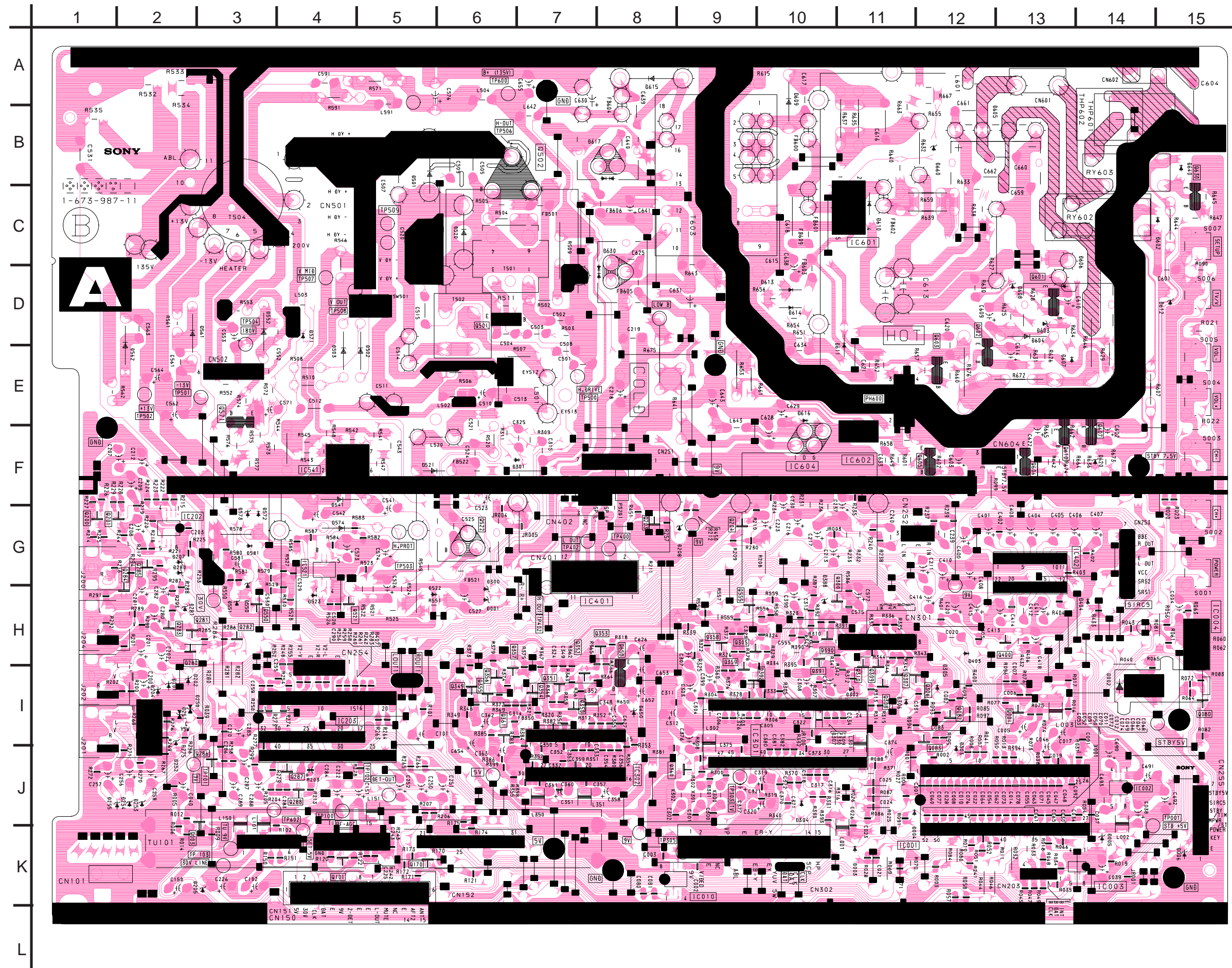
A BOARD: IC203 MM1311AD



A BOARD: IC301 CXA2133S



A [TUNING CONTROL, Y/C/I, DEFLECTION, TUNER/IF, AUDIO, MTS]



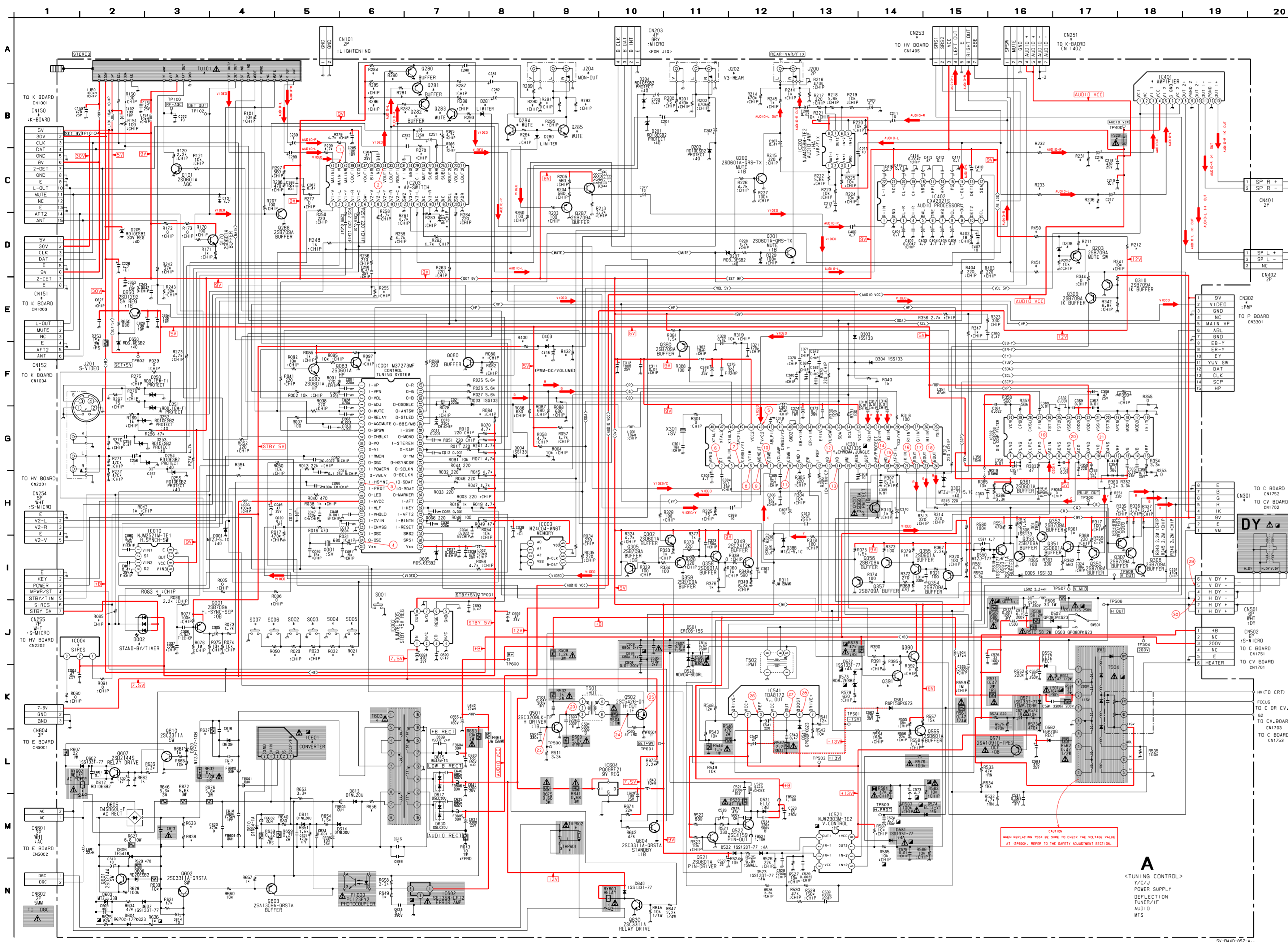
A BOARD (\*) MARK VARIANT LIST

REF NO.	LOC.	KV-27S42	KV-29XL42M KV-29SL42C	KV-27S46	KV-29SL46	KV-27S66	KV-29AL42 KV-29AL42C	KV-29AL66 KV-29AL66C
C216	C17	0.47MF	0.47MF	0.47MF	0.47MF	0.47MF	0.47MF	0.47MF
C217	C17	0.47MF	0.47MF	0.47MF	0.47MF	0.47MF	0.47MF	0.47MF
C250	B7	#	#	#	#	1	#	1
C251	B7	#	#	#	#	1	#	1
C252	B6	#	#	#	#	0.47MF	#	0.47MF
C280	A7	#	#	#	#	470.25V	#	470.25V
C281	A8	#	#	#	#	0.47MF	#	0.47MF
C282	B8	#	#	#	#	0.47MF	#	0.47MF
C370	F13	#	#	0.01MF	0.01MF	0.01MF	#	0.01MF
C371	F13	#	#	0.01MF	0.01MF	0.01MF	#	0.01MF
C372	F13	#	#	0.01MF	0.01MF	0.01MF	#	0.01MF
C380	F13	0.01MF	0.01MF	#	#	#	0.01MF	#
C381	F13	0.01MF	0.01MF	#	#	#	0.01MF	#
C382	F13	0.01MF	0.01MF	#	#	#	0.01MF	#
C418	F9	10MF	10MF	10MF	10MF	10MF	#	#
C613	M3	680MF 250V	560MF 400V	680MF 250V	560MF 400V	680MF 250V	560MF 400V	560 400V
C615	M6	0.0022MF	0.0047MF	0.0022MF	0.0047MF	0.0022MF	0.0047MF	0.0047MF
C616	L4	#	0.022 400V	#	0.022 400V	#	0.022 400V	0.022 400V
C617	L4	#	220p	#	220p	#	220p	220p
C627	E2	#	0.1MF	#	0.1MF	#	0.1MF	0.1MF
C699	M6	#	0.0047MF	#	0.0047MF	#	0.0047MF	0.0047MF
CN150	B1	#	#	#	#	15P	#	#
CN151	E1	#	#	#	#	#	#	8P
CN152	F13	#	#	#	#	#	#	6P
CN251	A16	#	#	#	#	7P	#	7P
CN253	A15	#	#	#	#	7P	#	7P
CN301	H20	5P	5P	5P	5P	5P	8P	8P
CN302	E20	#	15P	#	15P	#	#	15P
D002	J2	LNK0120022G	LNK0120022G	LNK0120022G	LNK0120022G	LNK0120022G	#	#
D208	D17	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-10B	MTZJ-T-77-2.2A	MTZJ-T-77-2.2A
D280	B8	#	#	#	#	#	#	MTZJ-T-77-3.3
D281	B8	#	#	#	#	#	#	MTZJ-T-77-3.3
D403	E9	1SS133T-77	1SS133T-77	1SS133T-77	1SS133T-77	1SS133T-77	#	#
D609	L4	#	RU-1P	#	RU-1P	#	RU-1P	RU-1P
IC004	I1	IC SBX1981-51	IC SBX1981-51	IC SBX1981-51	IC SBX1981-51	IC SBX1981-51	#	#
IC203	C6	MM1311AD	MM1311AD	MM1311AD	MM1311AD	MM1311AD	MM1311AD	MM1311AD
IC401	B18	TDA7057AQ	TDA7057AQ	TDA7057AQ	TDA7057AQ	TDA7057AQ	#	#
IC601	L5	IC SRTF6626	IC SRTF6626	IC SRTF6626	IC SRTF6626	IC SRTF6626	IC SRTF6626	IC SRTF6626
J202	A11	#	3P	#	3P	#	3P	3P
J204	A9	#	0.1MF	#	0.1MF	#	0.1MF	0.1MF
PS201	F7	2A/90V	2A/90V	2A/90V	2A/90V	2A/90V	#	#
Q080	A7	#	#	#	#	#	#	2SD601A
Q280	B7	#	#	#	#	#	#	2SB709A
Q281	B7	#	#	#	#	#	#	2SB709A
Q282	B7	#	#	#	#	#	#	2SB709A
Q283	B8	#	#	#	#	#	#	2SD601A
Q284	B9	#	#	#	#	#	#	2SD601A
Q285	J14	#	#	#	#	#	#	2SD601A
Q300	K14	#	#	#	#	#	#	2SD601A
Q301	B17	#	#	#	#	#	#	2SD601A
R020	J5	6.8K	6.8K	6.8K	6.8K	6.8K	#	#
R021	J6	680	680	680	680	680	#	#
R022	J5	820	820	820	820	820	#	#
R023	J5	2.2K	2.2K	2.2K	2.2K	2.2K	#	#

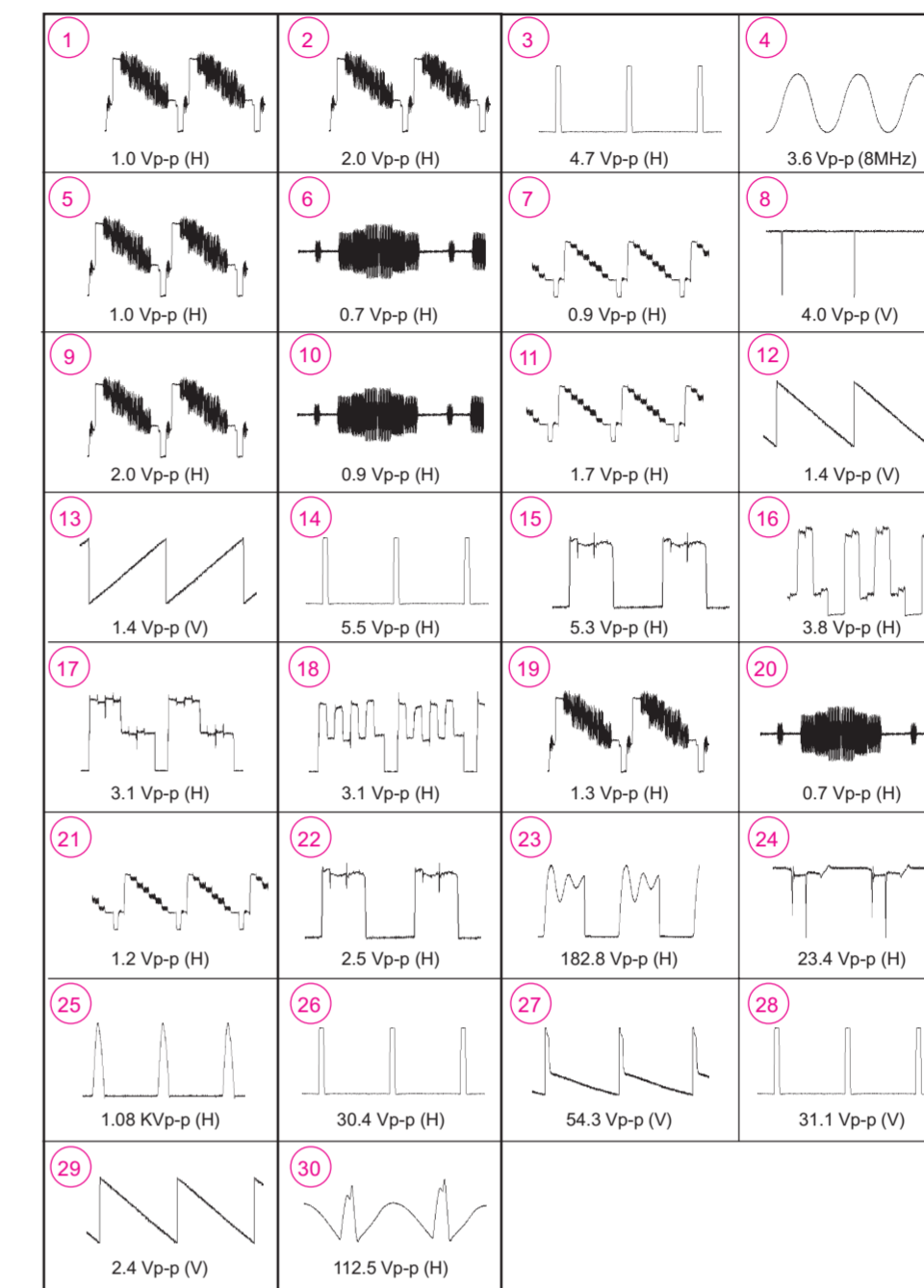
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R080	F8	#	#	#	#	#	#	22K
R082	F8	#	#	#	#	#	#	10K
R083	I3	#	#	#	#	#	#	470
R084	G8	#	#	#	#	#	#	10K
R090	J4	10K	10K	10K	10K	10K	#	10K
R211	D17	100 1/6W	100 1/6W	100 1/6W	100 1/6W	100 1/6W	#	#
R212	D18	4.7 1/4W	4.7 1/4W	4.7 1/4W	4.7 1/4W	4.7 1/4W	#	#
R231	C17	2.2K	2.2K	2.2K	2.2K	2.2K	#	2.2K
R232	C18	10K	10K	10K	10K	10K	#	10K
R233	C18	10K	10K	10K	10K	10K	#	10K
R236	C17	2.2K	2.2K	2.2K	2.2K	2.2K	#	2.2K
R255	E6	#	#	#	#	#	#	75
R278	C7	#	#	#	#	0	#	0
R280	AG	#	#	#	#	#	#	100
R281	B6	#	#	#	#	#	#	100
R282	B6	#	#	#	#	#	#	100
R283	E7	#	#	0	0	0	#	0
R284	AG	#	#	#	#	#	#	220
R285	AG	#	#	#	#	#	#	4.7K
R286	B6	#	#	#	#	#	#	4.7K
R287	B7	#	#	#	#	#	#	4.7K
R288	B7	#	#	#	#	#	#	4.7K
R289	B8	#	#	#	#	#	#	68
R290	B8	#	#	#	#	#	#	470K
R291	B9	#	#	#	#	#	#	470K
R292	B9	#	#	#	#	#	#	470K
R293	B7	#	#	#	#	#	#	6.8K
R294	B8	#	#	#	#	#	#	6.8K
R295	B9	#	#	#	#	#	#	6.8K
R380	J14	#	#	#	#	#	#	1K
R391	J14	#	#	#	#	#	#	10K
R392	K14	#	#	#	#	#	#	1K
R404	G4	#	#	#	#	#	#	220
R405	J14	#	#	#	#	#	#	1K
R407	E7	22K	22K	22K	22K	22K	#	22K
R408	D7	0	0	0	0	0	#	0
R432	F9	8.2K	8.2K	8.2K	8.2K	8.2K	#	8.2K
R450	D16	#	#	#	#	#	#	0
R451	D16	#	#	#	#	#	#	0
R633	M3	390K	270K	390K	270K	390K	270K	270K
R637	L3	#	100K	#	100K	#	100K	100K
R638	M3	JW(5MM)	270K	JW(5MM)	270K	JW(5MM)	270K	270K
R656	M6	56	56	56	56	56	#	56
S001	J5	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
S002	J5	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
S003	J5	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
S004	J5	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
S005	J6	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
S006	J4	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
S007	J4	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	1-692-431-21	#	#
T603	E6	1-433-806-11	1-433-806-11	1-433-806-11	1-433-806-11	1-433-806-11	1-433-807-11	1-433-807-11
THP601	M9	#	1-803-540-11	#	1-803-540-11	#	1-803-540-11	1-803-540-11
THP602	M9	1-809-539-11	#	1-809-539-11	#	1-809-539-11	#	#

# NOT MOUNTED

A BOARD SCHEMATIC DIAGRAM



A BOARD WAVEFORMS



A BOARD IC VOLTAGE LIST

IC001	IC002	8	4.2	18	3.5	23	5.1	6	10.2
pin volt	pin volt	9	5.1	19	3.1	24	0.0	7	0.1
1 0.6	1 7.1	10 4.2	20 2.5	25 1.1	8 13.8	IC541			
2 4.8	2 GND	11 NC	21 1.6	26 0.0	IC541				
3 0.0	3 5.4	12 GND	22 1.8	27 2.5	pin volt				
4 0.0	4 GND	13 4.9	23 1.8	28 5.1	1 1.6				
5 4.8	5 GND	14 4.3	24 1.8	29 2.3	2 13.8				
6 0.0	6 4.9	15 4.3	25 NC	30 2.3	3 -13.4				
7 0.0	7 GND	16 4.3	26 NC	31 2.3	4 -15.3				
8 0.2	8 GND	17 GND	27 NC	pin volt	5 0.7				
9 0.0	9 IC003	18 GND	28 NC	pin volt	6 14.6				
10 NC	pin volt	19 4.9	29 0.0	2 NC	7 1.6				
11 NC	1 pin volt	20 4.9	30 4.6	3 2.3	IC601				
12 3.3	2 GND	21 GND	31 4.6	4 14.3	pin volt				
13 0.0	3 GND	22 NC	32 4.8	5 2.3	1 1.8				
14 4.9	4 GND	23 5.0	33 8.9	6 GND	2 0.2				
15 0.0	5 4.9	24 NC	34 4.9	7 0.3	3 151.7				
16 0.0	6 4.9	25 4.2	35 4.9	8 6.9	4 17.3				
17 -0.3	7 GND	26 4.2	36 0.0	9 GND	5 GND				
18 4.9	8 4.9	27 5.0	37 4.4	10 6.9	IC602				
19 4.9	IC004	28 NC	38 5.2	11 6.9	pin volt				
20 1.8	pin volt	29 NC	39 5.2	12 GND	1 135				
21 0.0	1 2.9	30 GND	40 GND	13 6.9	2 121				
22 2.2	2 4.9	31 NC	41 NC	IC402	3 GND				
23 GND	3 GND	32 4.2	42 8.9	pin volt	IC603				
24 2.3	IC016	33 4.2	43 5.2	1 4.4	pin volt				
25 2.3	pin volt	34 5.0	44 9.0	2 GND	IN 11.7				
26 GND	1 0.0	35 0.0	45 4.9	3 4.4	OUT 9.0				
27 4.9	2 0.5	36 4.3	46 4.7	4 4.4	IC300				
28 0.0	3 0.0	37 NC	47 1.9	5 4.4	pin volt				
29 0.0	4 GND	38 9.0	48 NC	6 4.4	IC302				
30 4.9	5 NC	39 NC	49 NC	7 4.4	pin volt				
31 4.9	6 9.0	40 4.2	1 5.1	8 4.4	1 135				
32 2.8	1 7.6	41 5.1	2 4.4	9 4.4	2 121				
33 4.9	2 7.6	42 4.2	3 0.0	10 1.5	3 GND				
34 2.5	IC202	43 4.2	4 11.4	11 4.9	IC604				
35 NC	pin volt	44 4.2	5 1.2	12 4.9	pin volt				
36 4.9	1 7.6	45 4.2	6 1.4	13 5.8	1 135				
37 4.9	2 7.6	46 4.2	7 5.1	14 4.4	2 121				
38 4.9	3 7.6	47 4.2	8 1.1	15 4.4	3 GND				
39 4.9	4 GND	48 4.2	9 5.1	16 4.4	IC605				
40 0.5	5 7.6	49 4.2	10 0.7	17 4.4	pin volt				
41 0.0	6 7.6	50 4.2	11 0.0	18 4.4	1 135				
42 0.0	7 7.6	51 4.2	12 2.0	19 4.4	2 121				
43 4.9	8 15.3	52 4.2	13 2.8	20 4.4	3 GND				
44 0.1	IC018	53 4.2	14 1.0	21 9.0	IC606				
45 NC	pin volt	54 4.2	15 2.2	22 4.4	pin volt				
46 4.9	1 4.9	55 4.2	16 0.0	23 4.4	1 135				
47 0.0	2 4.2	56 4.2	17 0.0	24 5.8	2 121				
48 0.0	3 4.9	57 4.2	18 0	25 5.8	3 GND				
49 0.0	4 4.2	58 4.2	19 0	26 3.8	IC607				
50 0.0	5 4.9	59 4.2	20 NC	3 2.5	pin volt				
51 0.0	6 6.1	60 4.2	21 0	4 GND	1 135				
52 0.0	7 4.9	61 4.2	22 5.1	5 9.1	2 121				

A BOARD IC VOLTAGE LIST

IC001	B	C	E	Q351	B	C	E
Q001	4.3	4.8	4.9	Q351	1.4	8.3	0.8
Q080	0.0	3.9	GND	Q352	8.3	1.2	8.9
Q082	0.2	4.6	GND	Q353	1.2	GND	1.8
Q083	0.0	0.6	GND	Q354	1.1	GND	1.7
Q101	0.0	4.6	GND	Q355	1.7	8.2	1.1
Q170	4.4	9.0	0.0	Q356	8.2	1.5	8.8
Q200	0.0	0.0	GND	Q357	1.5	GND	2.2
Q201	0.6	0.0	GND	Q358	5.9	9.0	5.2
Q203	2.4	GND	0.7	Q359	3.8	GND	4.4
Q280	5.2	GND	5.9	Q360	4.7	GND	5.3
Q281	4.1	GND	4.7	Q361	1.3	5.1	1.2
Q282	4.1	GND	4.7	Q362	5.0	9.0	4.4
Q283	0.0	5.9	GND	Q363	0.0	5.0	GND
Q284	0.6	0.0	GND	Q364	-0.1	97.3	GND
Q285	0.6	0.0	GND	Q365	0.1	4.2	GND
Q286	4.4	GND	4.9	Q366	0.4	11.2	GND
Q287	5.0	GND	5.7	Q367	0.7	0.1	GND
Q288	7.3	9.0	6.7	Q368	2.1	4.0	1.5
Q300	0.2	3.5	GND	Q371	134.0	0.8	134.6
Q302	4.4	9.0	3.8	Q601	-0.1	0.2	0.0
Q305	3.8	GND	4.4	Q602	0.0	17.0	0.0
Q306	1.7	GND	2.4	Q603	17.0	2.9	17.3
Q307	1.8	GND	2.4	Q604	0.1	3.9	GND
Q308	1.8	GND	2.4	Q607	0.7	0.1	GND
Q309	3.6	1.6	3.8	Q610	0.0	0.7	GND
Q310	3.6	GND	3.8	Q630	0.0	135.0	GND
Q349	5.2	9.0	4.6	Q650	5.7	9.0	5.1
Q350	0.7	GND	1.4				

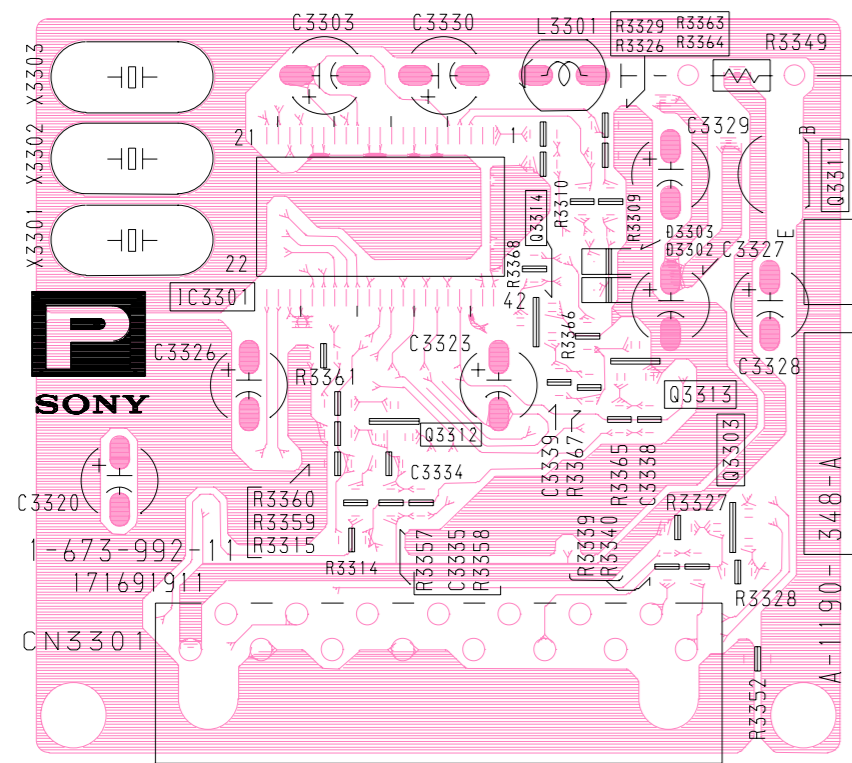
All voltages are in V

All voltages are in V

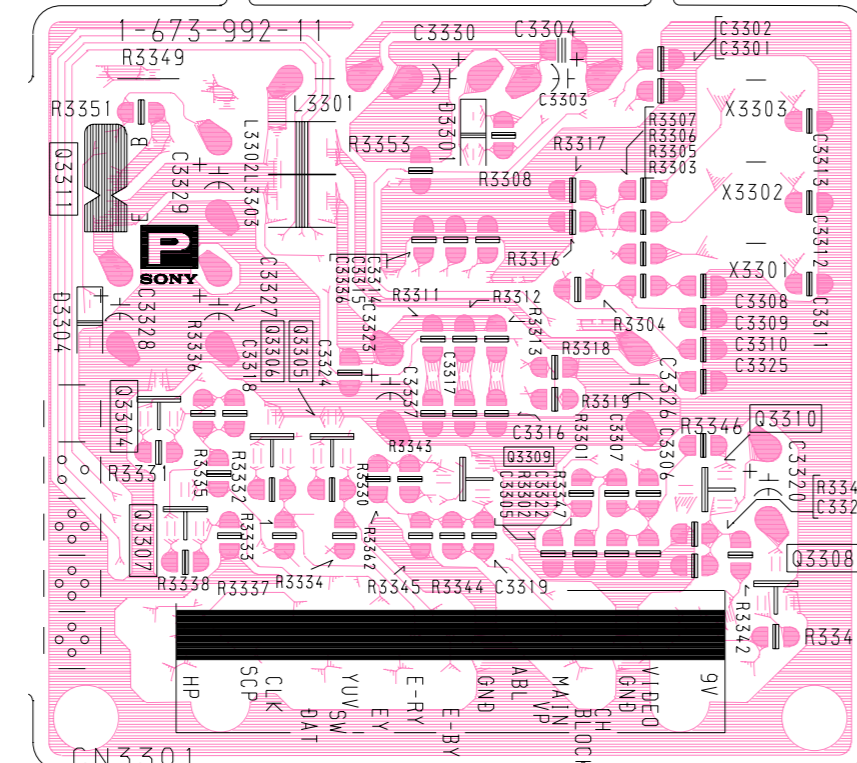
**P** [P in P]

(KV-27S46/29AL42/29AL42C/29AL66/29AL66C ONLY)

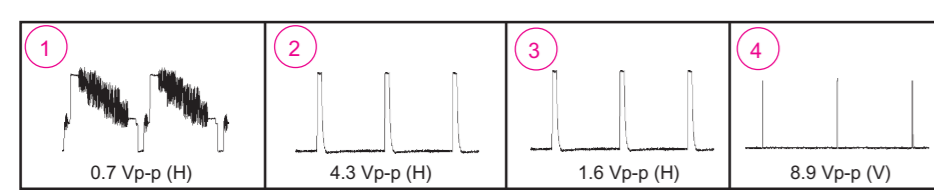
COMPONENT SIDE



CONDUCTOR SIDE



P BOARD WAVEFORMS

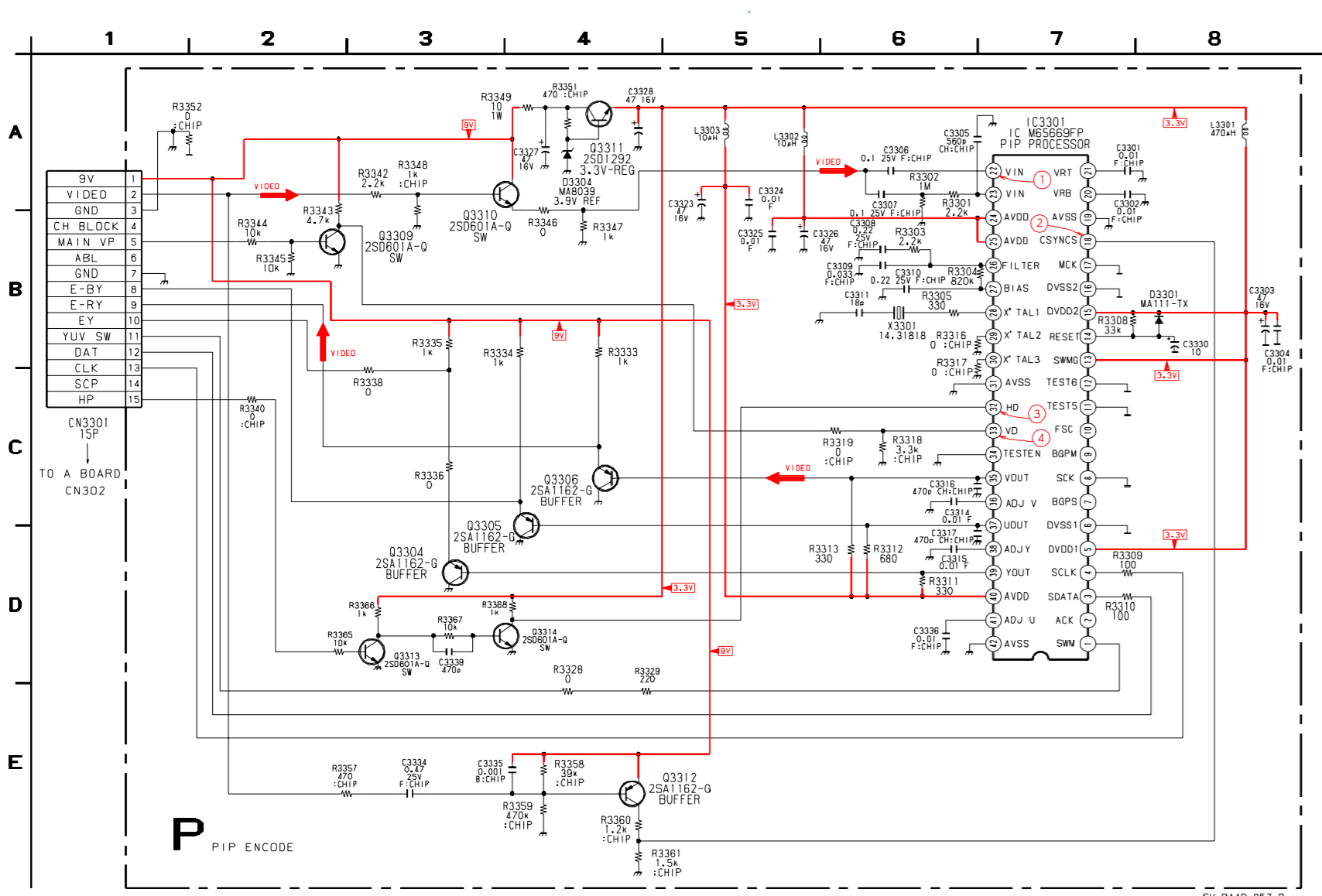


P BOARD TRANSISTOR VOLTAGE LIST

Q	B	C	E
Q3304	2.3	GND	2.9
Q3305	3.0	GND	3.7
Q3306	3.0	GND	3.7
Q3309	0.7	0.0	GND
Q3310	0.3	8.9	1.8
Q3311	3.9	7.4	3.3
Q3312	8.2	0.1	8.9
Q3313	0.2	3.3	GND
Q3314	3.1	0.6	GND

All voltages are in V

P BOARD SCHEMATIC DIAGRAM



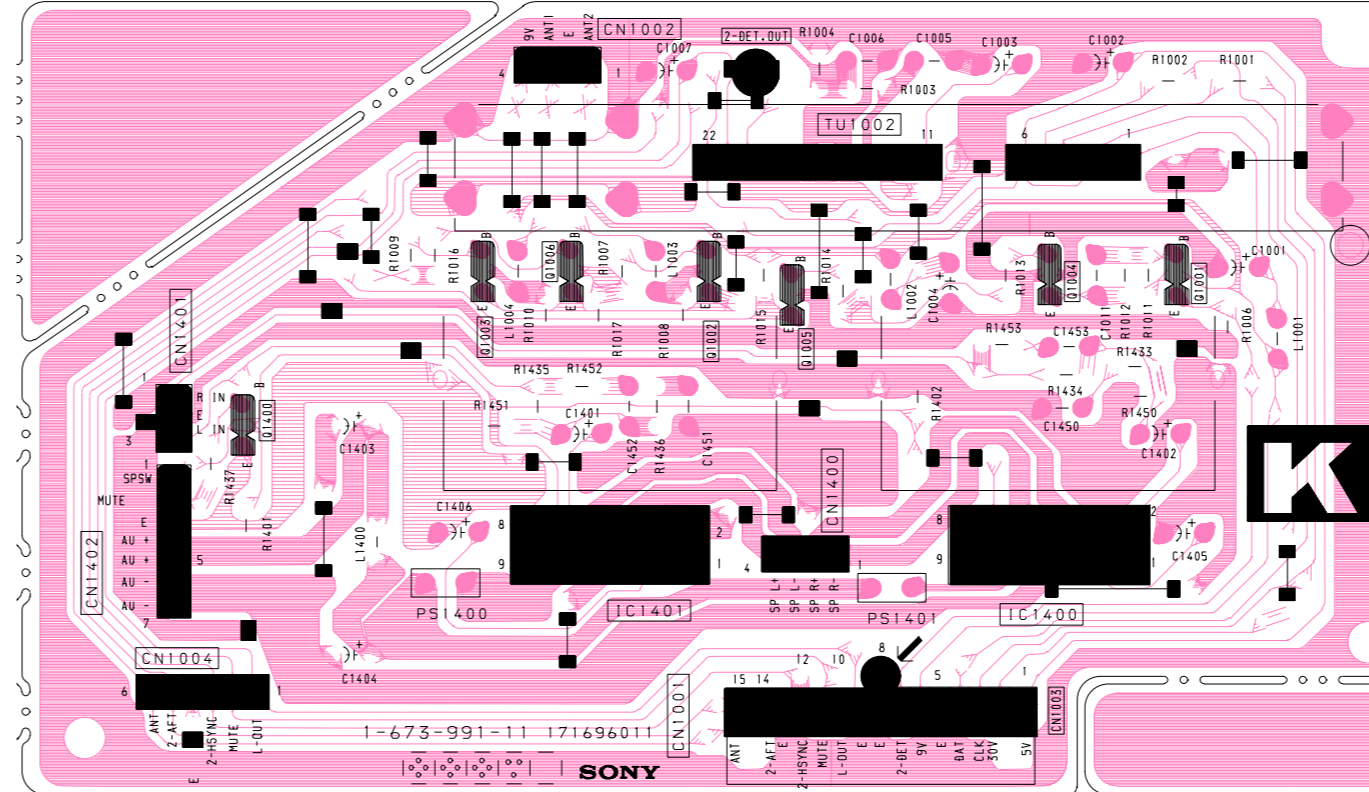
P BOARD IC VOLTAGE LIST

IC	pin	volt
IC3301	22	0.8
	23	0.7
	1	0.0
	2	0.0
	3	4.9
	4	4.9
	5	3.3
	6	NC
	7	0.0
	8	0.0
	9	NC
	10	NC
	11	0.0
	12	0.0
	13	3.3
	14	3.3
	15	3.3
	16	0.0
	17	0.0
	18	0.4
	19	GND
20	0.5	
21	1.5	

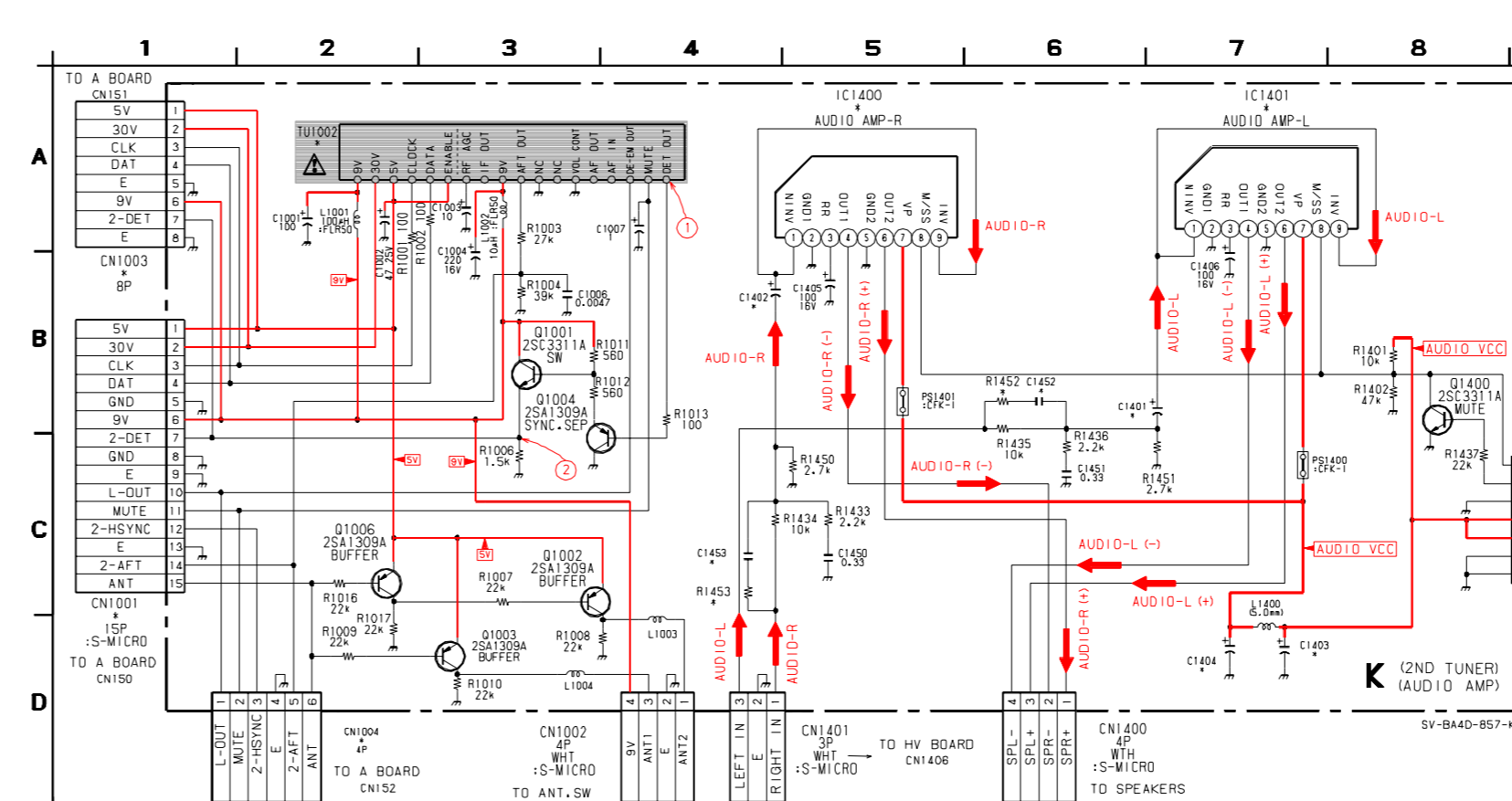
All voltages are in V

**K** [SECOND TUNER, AUDIO AMP]

(KV-27S66/29AL42/29AL42C/29AL66/29AL66C ONLY)



K BOARD SCHEMATIC DIAGRAM



K BOARD (\*) MARK VARIANT LIST

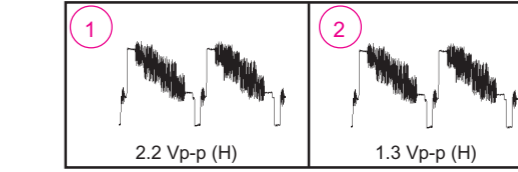
REF. NO.	KV-27S66	KV29AL42	KV-29AL66
C1401	#	0.47MF	0.22MF
C1402	#	0.47MF	0.22MF
C1403	#	2200MF	2200MF
C1404	#	2200MF	2200MF
C1452	#	0.0033MF	0.0033MF
C1453	#	0.0033MF	0.0033MF
CN1001	15P	#	#
CN1003	#	8P	8P
CN1004	#	#	6P
CN1402	#	7P	7P
IC1400	#	TDA1519	TDA1519
IC1401	#	TDA1519	TDA1519
R1452	#	10K	8.2K
R1453	#	10K	8.2K
TU1002	FSS BTF-FA401	#	FSS BTF-FA401

K BOARD IC VOLTAGE LIST

IC	pin	volt
IC1400	1	0.0
	2	GND
	3	0.0
	4	0.0
	5	GND
	6	0.0
	7	16.9
	8	0.0
	9	0.0
IC1401	1	0.0
	2	GND
	3	0.0
	4	0.0
	5	GND
	6	0.0
	7	16.9
	8	0.0
	9	0.0

All voltages are in V

K BOARD WAVEFORMS

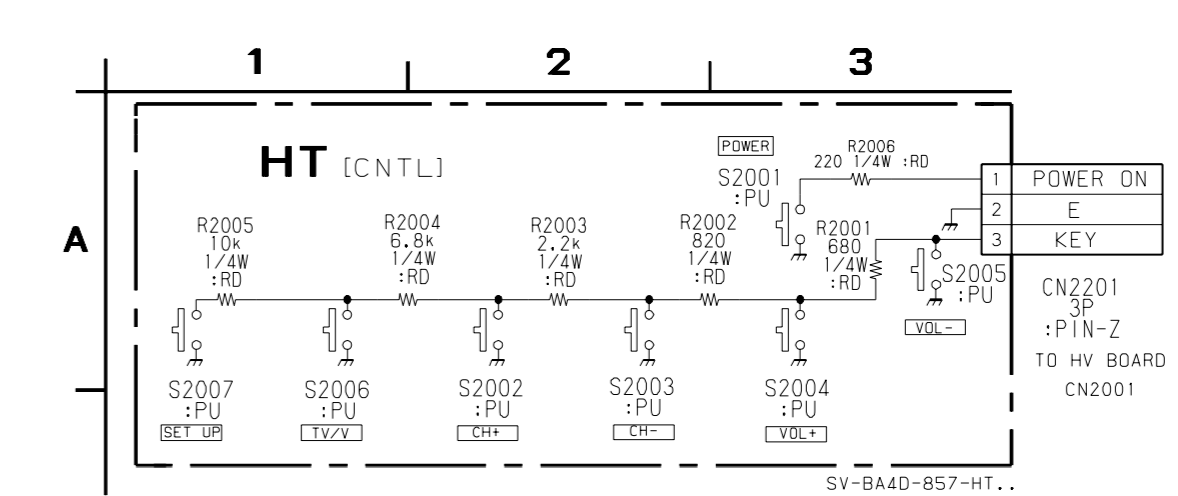


K BOARD TRANSISTOR VOLTAGE LIST

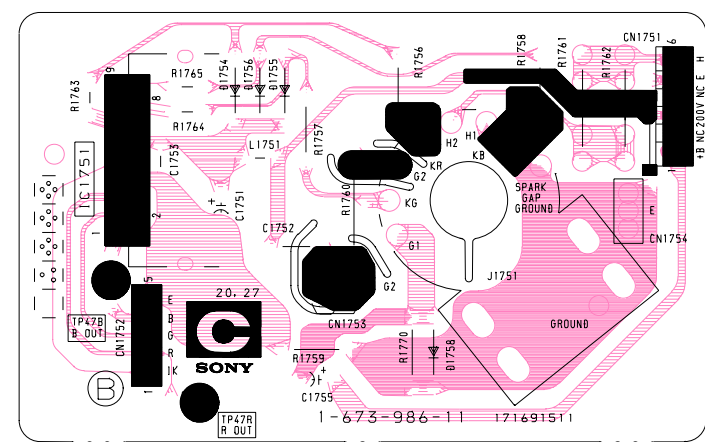
Q	B	C	E
Q1001	7.0	8.9	6.4
Q1002	5.1	0.0	5.1
Q1003	4.4	5.0	5.1
Q1004	4.5	GND	5.2
Q1006	4.5	5.1	5.1
Q1400	0.7	0.0	GND

All voltages are in V

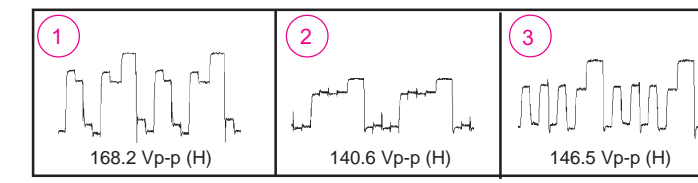
HT BOARD SCHEMATIC DIAGRAM



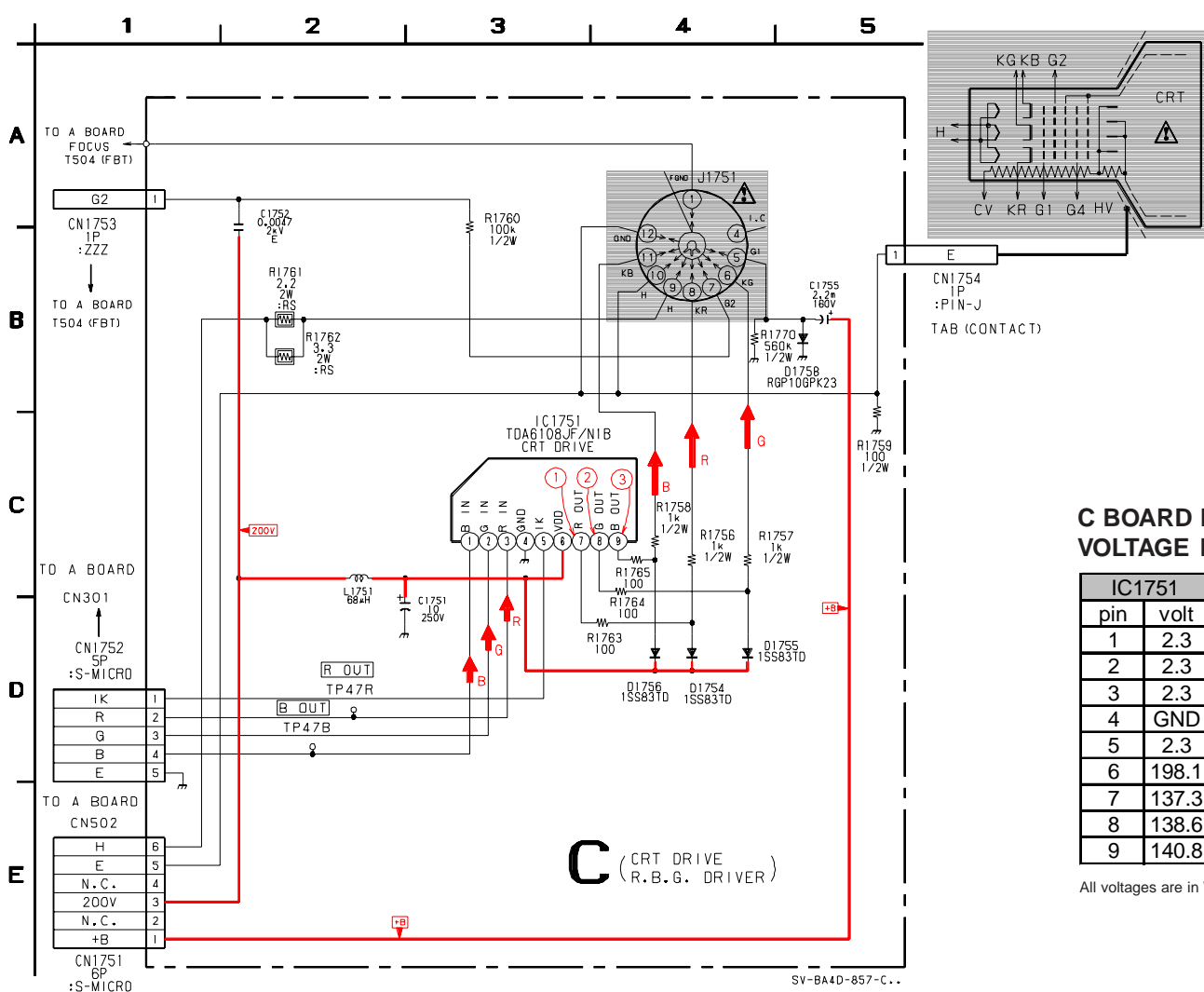
**C** [RGB DRIVE, CRT DRIVE]  
(KV-27S42/27S46/27S66/29SL42/29SL42C/29XL42M ONLY)



**C BOARD WAVEFORMS**



**C BOARD SCHEMATIC DIAGRAM**

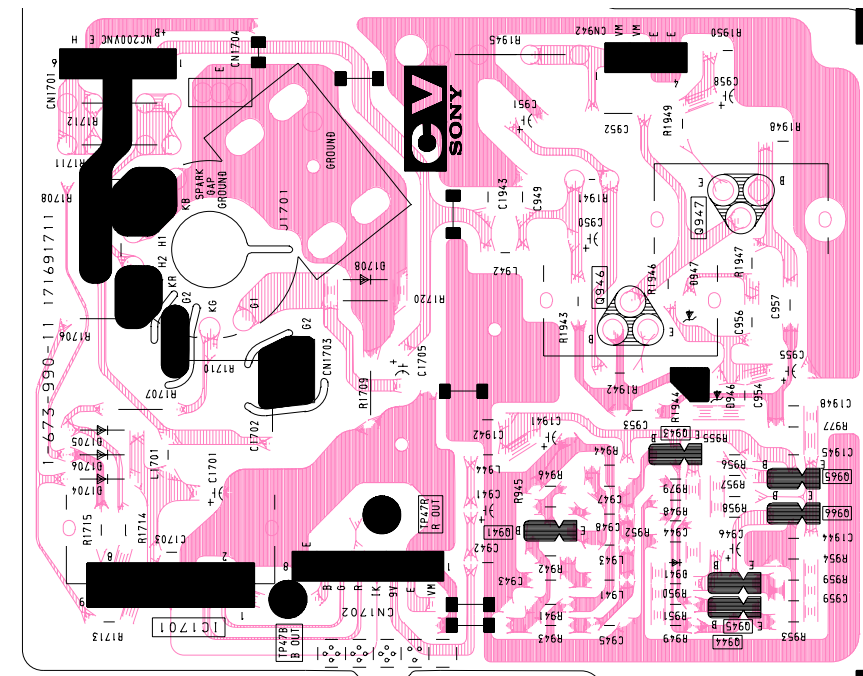


**C BOARD IC VOLTAGE LIST**

pin	volt
1	2.3
2	2.3
3	2.3
4	GND
5	2.3
6	198.1
7	137.3
8	138.6
9	140.8

All voltages are in V

**CV** [RGB DRIVE, VELOCITY MOD.]  
(KV-29AL42/29AL42C/29AL66/29AL66C ONLY)



**CV BOARD TRANSISTOR VOLTAGE LIST**

	B	C	E
Q943	4.5	8.9	3.7
Q944	2.1	8.9	1.5
Q945	2.1	6.0	1.5
Q946	133.2	67.1	134.7
Q947	0.9	67.1	0.3
Q965	6.5	8.9	6.2
Q966	6.0	0.0	6.2

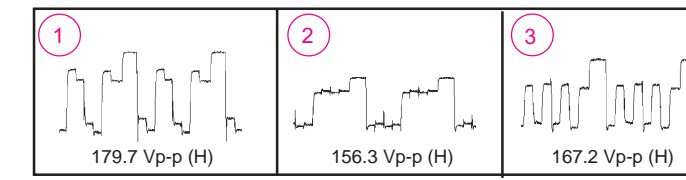
All voltages are in V

**CV BOARD IC VOLTAGE LIST**

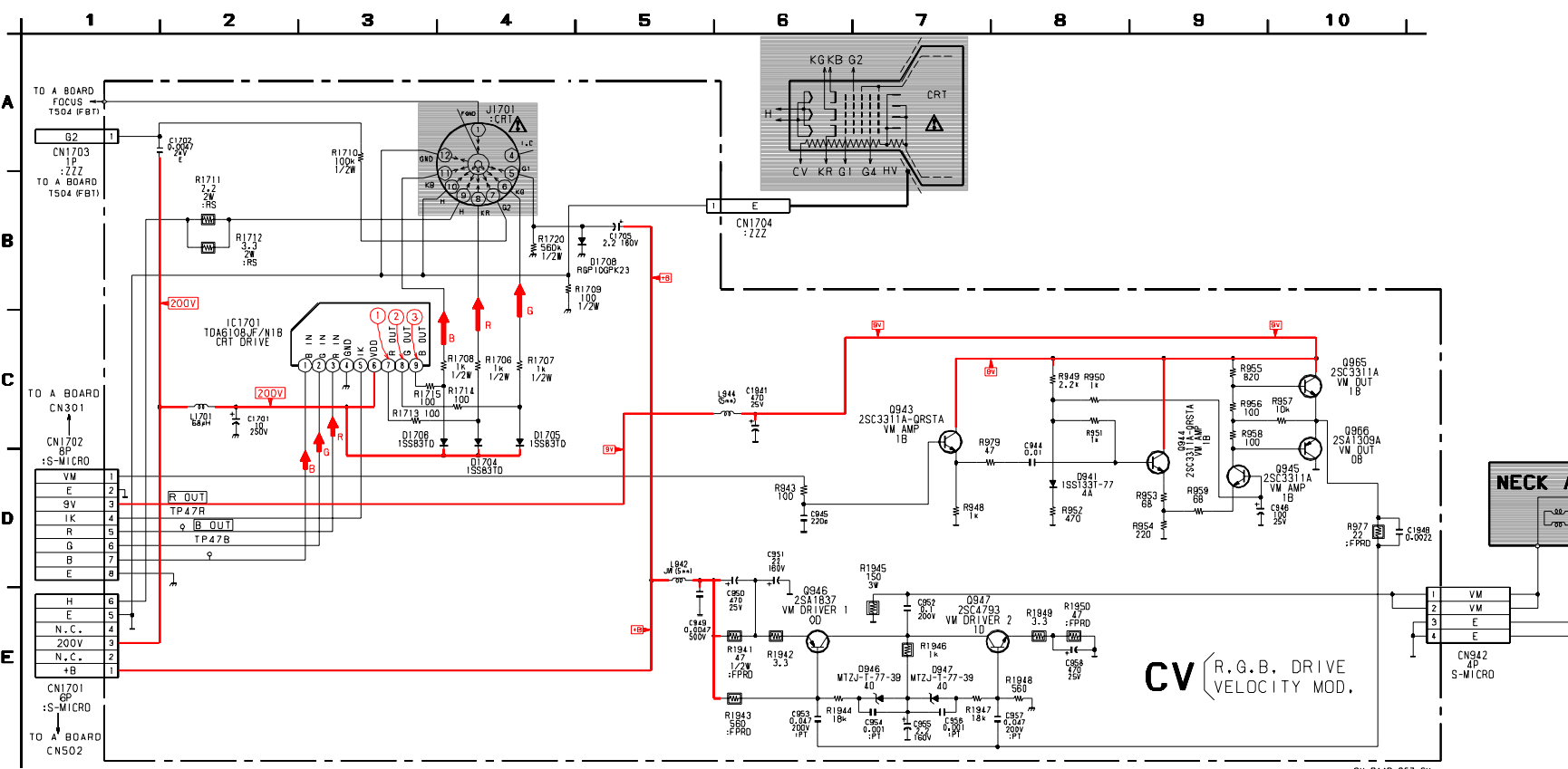
IC1701	pin	volt
	1	2.3
	2	2.3
	3	2.3
	4	GND
	5	3.7
	6	203.6
	7	129.0
	8	126.0
	9	127.0

All voltages are in V

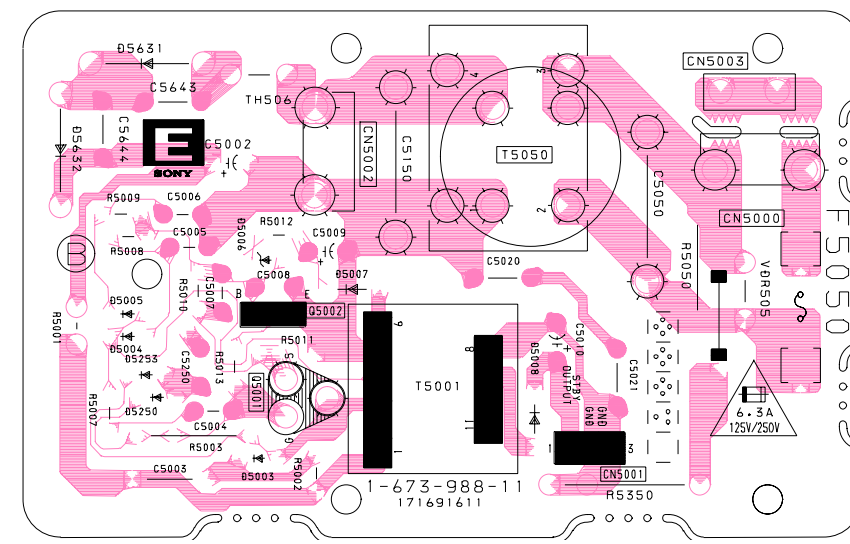
**CV BOARD WAVEFORMS**



**CV BOARD SCHEMATIC DIAGRAM**



**E** [ENERGY START]

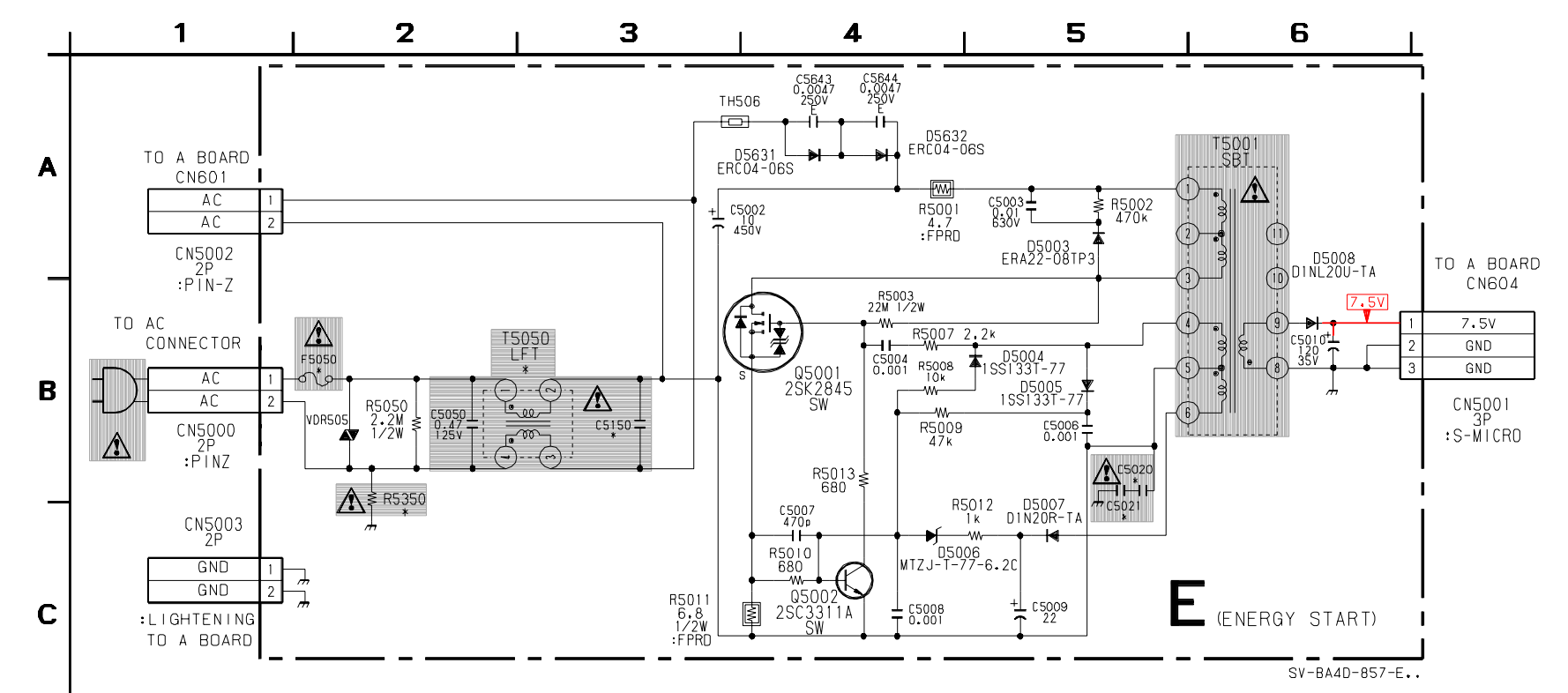


**E BOARD TRANSISTOR VOLTAGE LIST**

	B	C	E	G	S	D
Q5002	0.4	1.5	0.0			
Q5001				1.5	0.1	157.6

All voltages are in V

**E BOARD SCHEMATIC DIAGRAM**



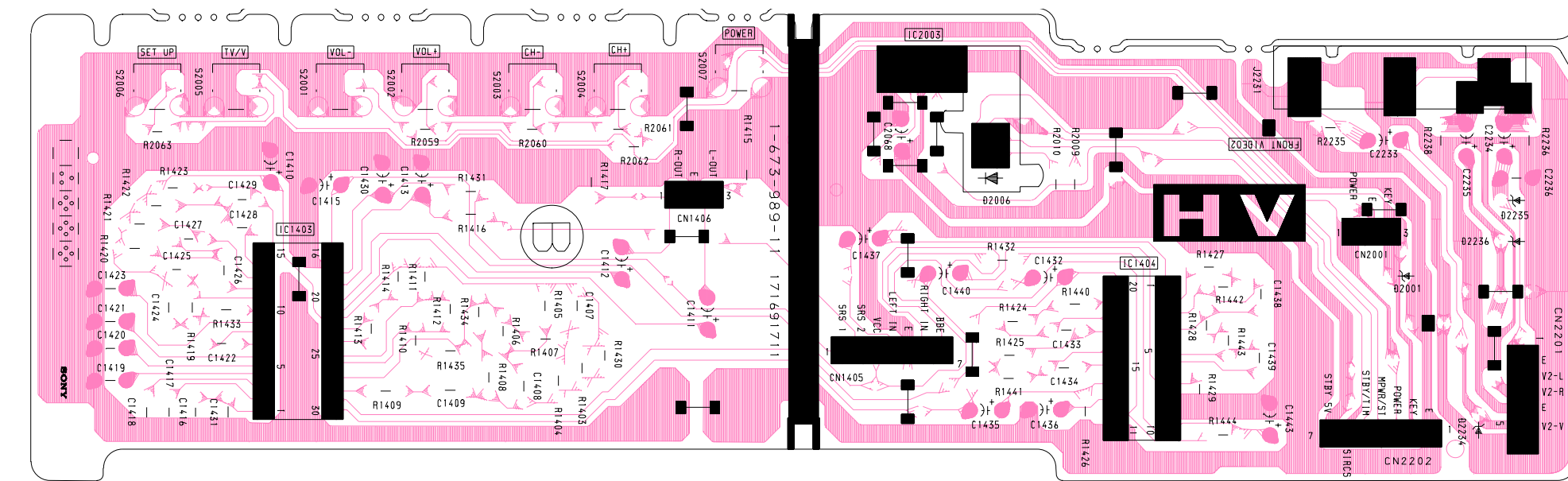
**E BOARD (\*) MARK VARIANT LIST**

REF. NO.	KV-27S42 KV-27S66	KV-29AL66 KV-29AL42C KV-29SL42C KV-29XL42M	KV-29AL66 KV-29AL66C KV-29AL42C KV-29SL42C KV-29XL42M
C5020	0.002MF	#	0.0047MF
C5021	#	#	0.0047MF
C5150	0.47MF	#	#
F5050	6.3A/25V	6.3A/250V	#
RS350	4.7M	8.2M	#
T5050	1-431-838-11	1-426-717-11	#
VDR505	1-803-585-11	1-803-587-11	#

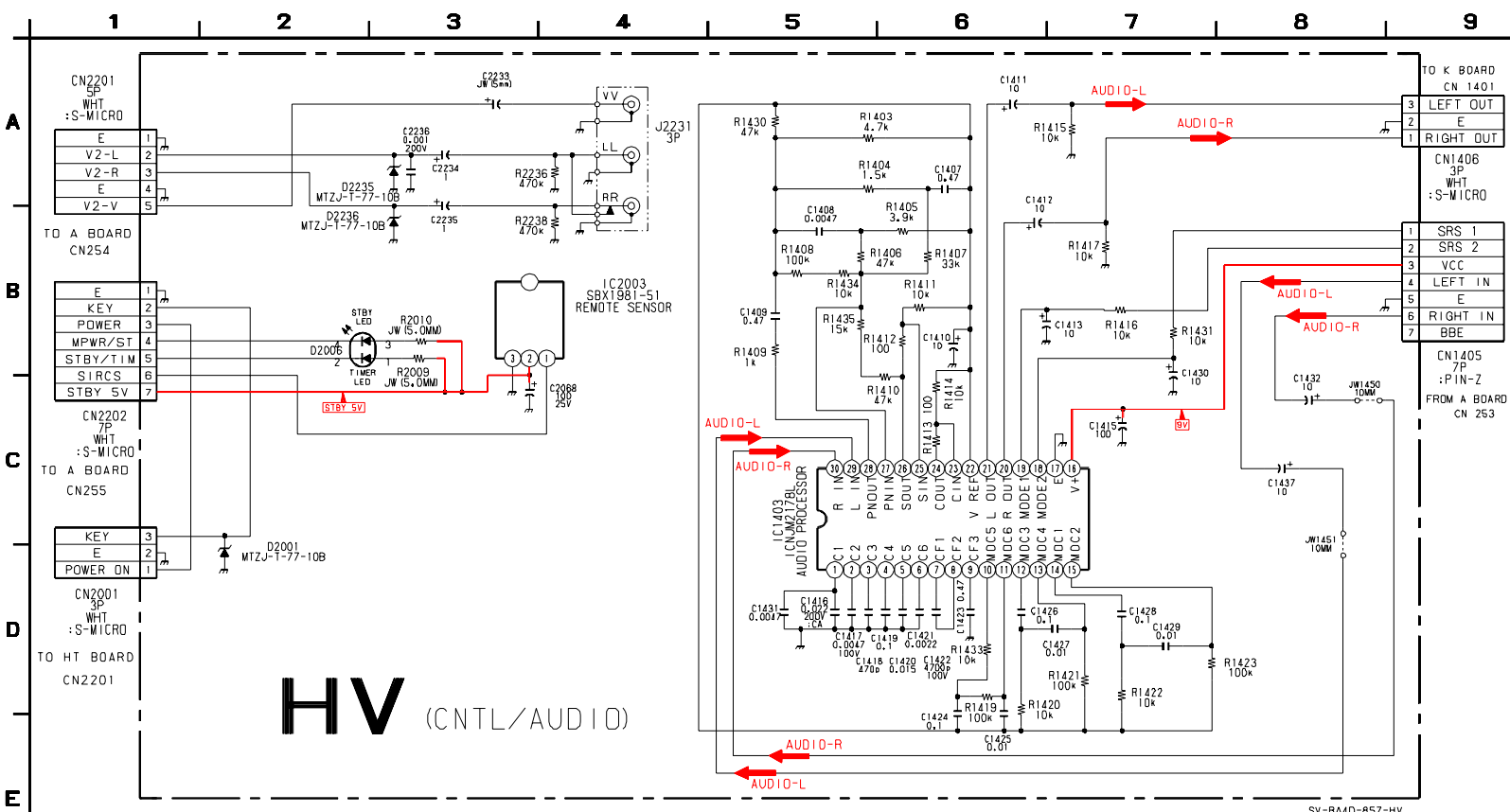
# : NOT MOUNTED

**HV**  
[CNTL/AUDIO]

(KV-29AL42/29AL42C/29AL66/29AL66C ONLY)

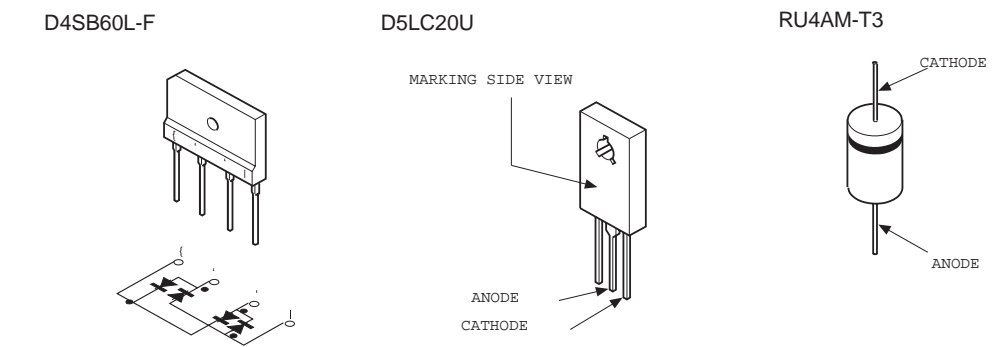
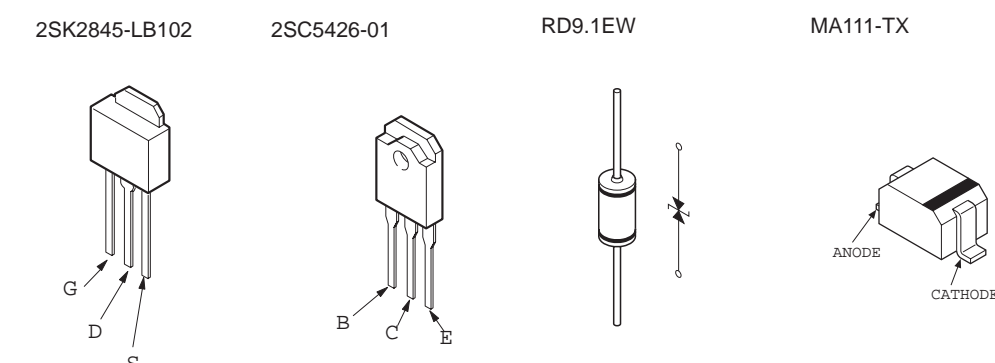
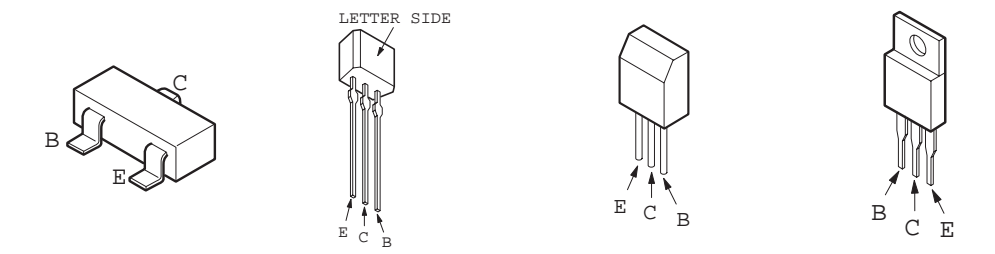


HV BOARD SCHEMATIC DIAGRAM

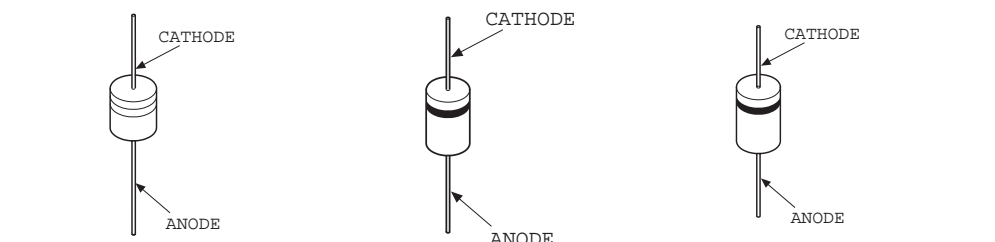


6.4 SEMICONDUCTORS

- 2SA1162-G  
2SD601A-Q
- 2SD2144S  
2SA1175-HFE  
2SC2785-HFE  
2SA833AS-QT
- 2SC3209LK  
2SD1312-K
- 2SC4159-E



- D1N20R  
MTZJ-33  
MTZJ-30D  
MTZJ-5.1C  
RD3.3ESB2  
RD6.6ESB2  
RD8.2ESB2  
RD10ESB2
- U05G  
MTZJ-T-77-2.2A  
ERAZ2-08  
LNK0120022G  
1S133T-77  
ERC06-15S  
MDV04-600  
RU-1P
- D1N120-U  
EGP20G  
ELIZ  
1SS83  
RGP02-17EL  
GP08D



SECTION 6  
EXPLODED VIEWS

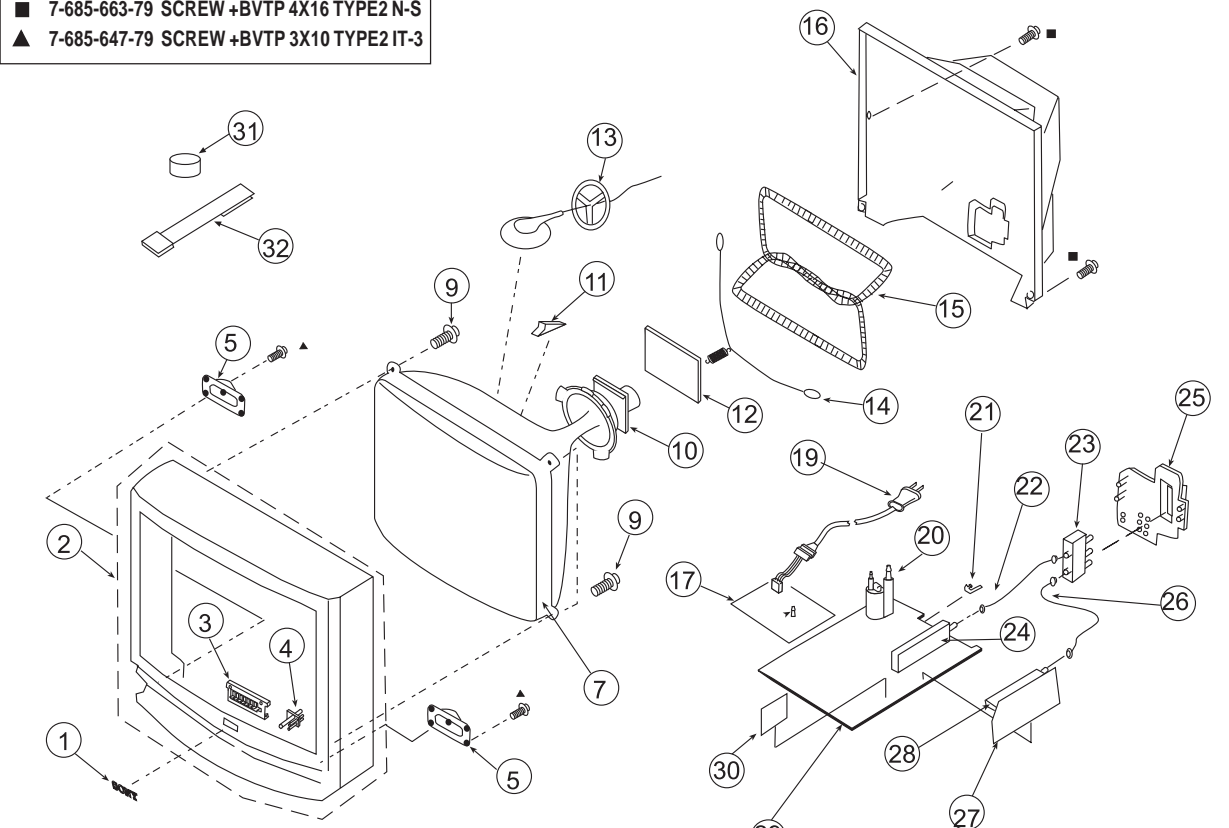
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The component parts of an assembly are indicated by the reference numbers in the remarks column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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 spécifique.

7-1. CHASSIS (KV-27S66)

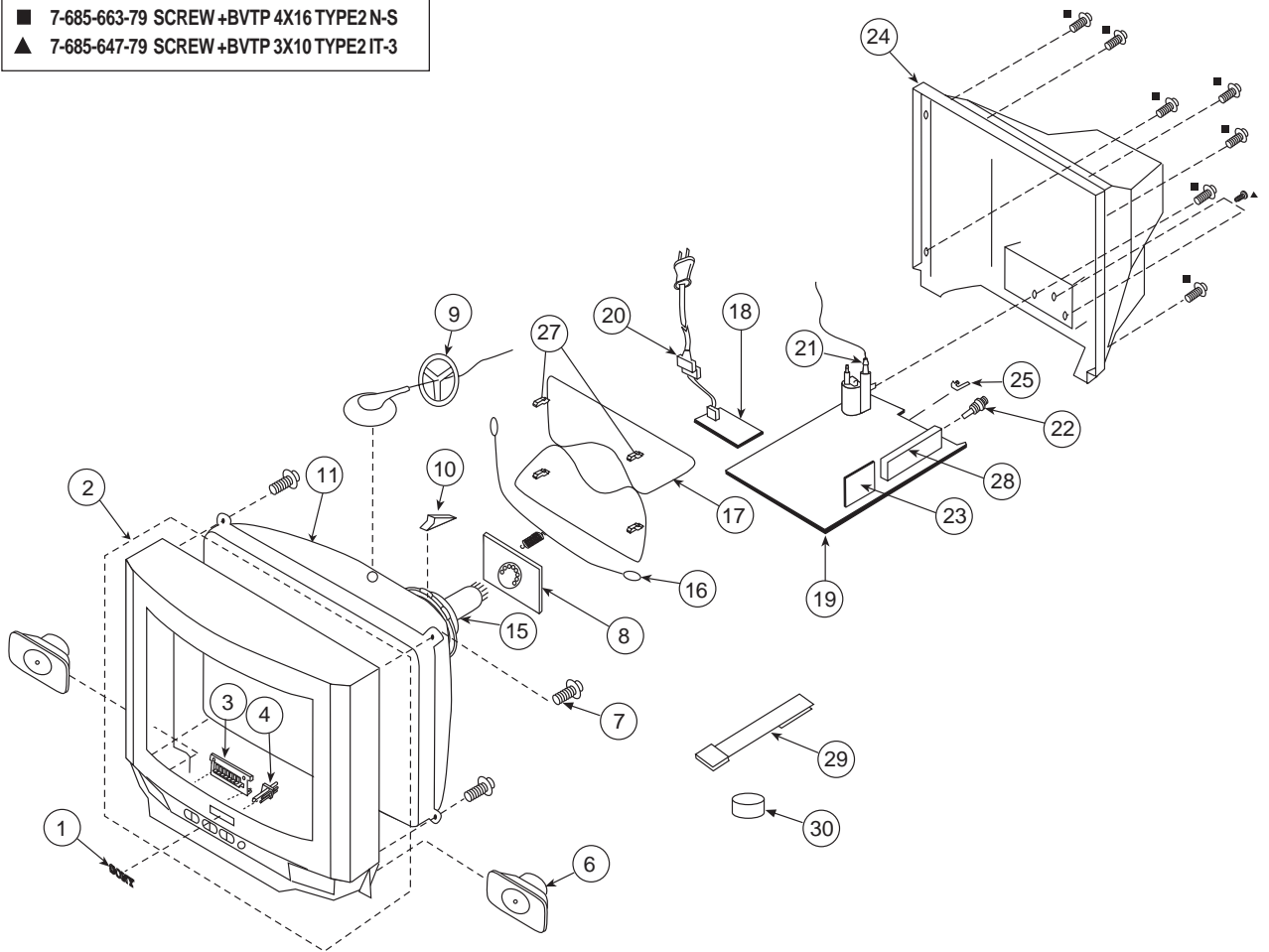
- 7-685-663-79 SCREW +BVTP 4X16 TYPE2 N-S
- ▲ 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-160-11	EMBLEM (NO.9), SONY		19	1-790-130-21	CORD, AC	
2	X-4035-917-1	BEZNET ASSY		20	1-453-268-21	FBT ASSY, NX-4005/1X4J4	
3	4-063-673-01	MULTI BUTTON		21	4-064-646-01	CHASSIS, CLIP	
4	4-063-670-01	GUIDE, LED		22	1-557-056-31	CABLE, P-P	
5	1-504-631-11	SPEAKER (13.1X6.2CM)		23	8-598-414-00	ANTENNA SWITCH	
7	△ 8-733-874-05	CRT 29NX		24	△ 8-598-431-00	TUNER, FSS BTF-WA411	
9	4-041-268-01	SCREW (7), TAPPING	3, 4	25	4-064-176-01	BRACKET, ANTENNA	
10	△ 8-451-846-21	DYI29NKA-V2		26	1-783-800-11	CABLE, PIN	
11	4-053-005-01	SPACER, DY		27	* A-1380-611-A	K (VAR) MOUNTED PC BOARD	
12	* A-1331-920-A	C MOUNTED PC BOARD		28	△ 8-598-430-00	TUNER, FSS BTF-FA401	
13	3-704-372-31	HOLDER, HV CABLE		29	* A-1298-902-A	A COMPLETE PC BOARD	
14	4-036-329-01	SPRING (B), TENSION		30	* A-1195-154-A	P COMPLETE PC BOARD	
15	△ 1-416-588-1	COIL, DEMAGNETIC		31	1-452-032-00	MAGNET, DISC	
16	4-063-672-21	COVER, REAR		32	4-062-047-01	PIECE A(110), CONV CORRECT	
17	* A-1343-654-A	E (VAR) MOUNTED PC BOARD					

## 7-2. CHASSIS (KV-27S46/27S42/29SL42/29SL42C/29SL46/29XL42M)

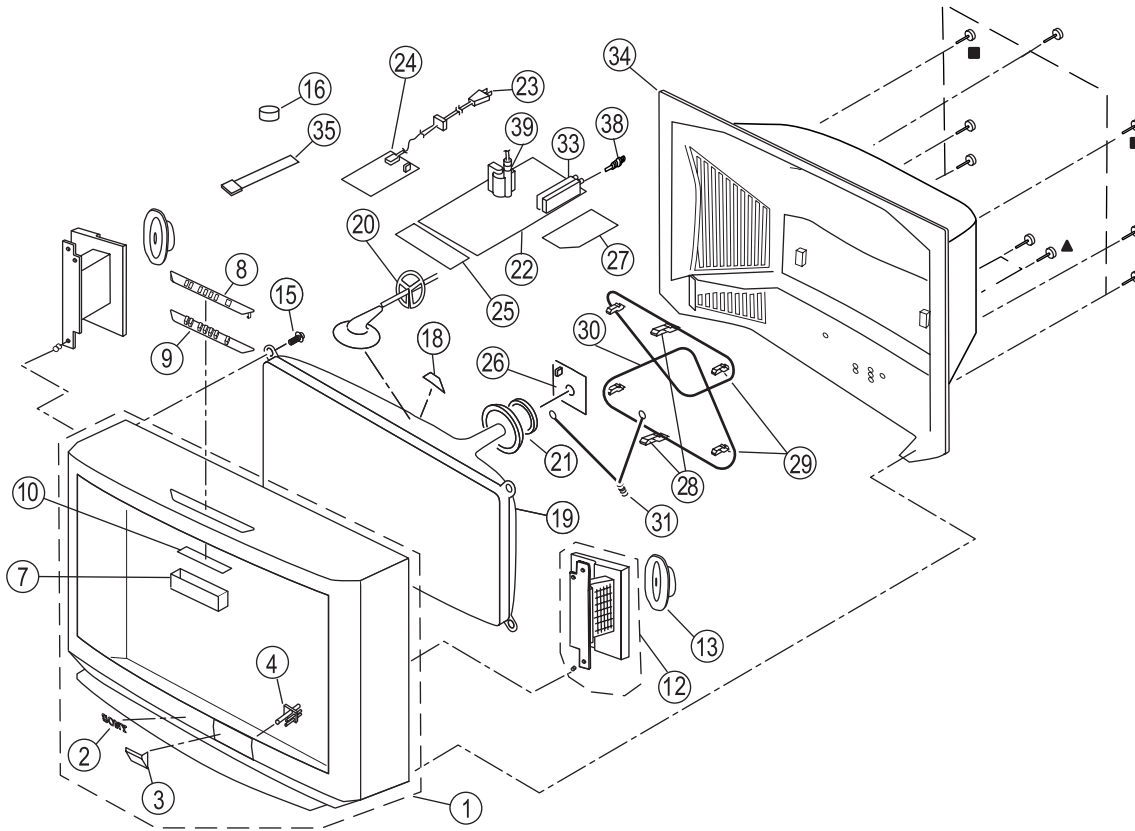
- 7-685-663-79 SCREW +BVTP 4X16 TYPE2N-S
- ▲ 7-685-647-79 SCREW +BVTP 3X10 TYPE2IT-3



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-160-11	EMBLEM (NO.9), SONY		18 *	A-1343-654-A	E (VAR) MOUNTED PC BOARD (KV-27S42/27S46)	
2	X-4035-816-1	BEZNET ASSY (KV-27S46/29SL46)	3-4	19 *	A-1298-900-A	A COMPLETE PC BOARD (KV-27S46)	
2	X-4035-818-1	BEZNET ASSY (KV-29XL42M)	3-4	19 *	A-1298-904-A	A COMPLETE PC BOARD (KV-29XL42M/29SL42/29SL42C)	
2	X-4035-815-1	BEZNET ASSY (KV-27S42/29SL42/42C)	3-4	19 *	A-1298-911-A	A COMPLETE PC BOARD (KV-29SL46)	
3	4-063-573-01	MULTI BUTTON		19 *	A-1298-840-A	A COMPLETE PC BOARD (KV-27S42)	
4	4-063-570-01	GUIDE, LED		20 ▲	1-790-130-21	CORD, AC (KV-27S42/27S46)	
6	1-504-531011	SPEAKER (13.1 x 6.2CM)		20 ▲	1-751-057-11	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29SL42/29XL42M/29SL46)	
7	4-041-268-01	SCREW (7), TAPPING		20 ▲	1-769-796-31	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29SL42C)	
8 *	A-1331-920-A	C MOUNTED PC BOARD		21 ▲	1-453-268-21	FBT ASSY NX-4005//X4J4	
9	3-704-372-31	HOLDER, HV CABLE		22	1-766-374-11	PLUG, F-PIN	
10	4-053-005-01	SPACER, DY		23 *	A-1195-154-A	P COMPLETE PC BOARD (KV-27S46/29SL46)	
11 ▲	8-733-873-05	CRT 29NX (EXCEPT KV-29SL42C)		24	4-063-572-02	COVER, REAR	
11 ▲	8-733-874-05	CRT 29NX (KV-29SL42C only)		25	4-064-646-01	CHASSIS, CLIP	
15 ▲	8-451-846-21	DYY29NXA-V2		27	4-040-388-01	HOLDER (S), DGC (EXCEPT KV-29SL46)	
16	4-036-329-01	SPRING (B), TENSION		28 ▲	8-598-431-00	TUNER, FSS BTF-WA411	
17 ▲	1-416-952-11	COIL, DEGAUSSING (KV-29SL42/29XL42M/29SL42C/29SL46)		29	4-062-047-01	PIECE A(110), CONV CORRECT	
17 ▲	1-416-588-11	COIL, DEMAGNETIC (KV-27S42/27S46)		30	1-452-032-00	MAGNET, DISC	
18 *	A-1343-656-A	E (VAR) MOUNTED PC BOARD (KV-29SL42/29XL42M/29SL46)					

### 7-3. CHASSIS (KV-29AL42/29AL42C)

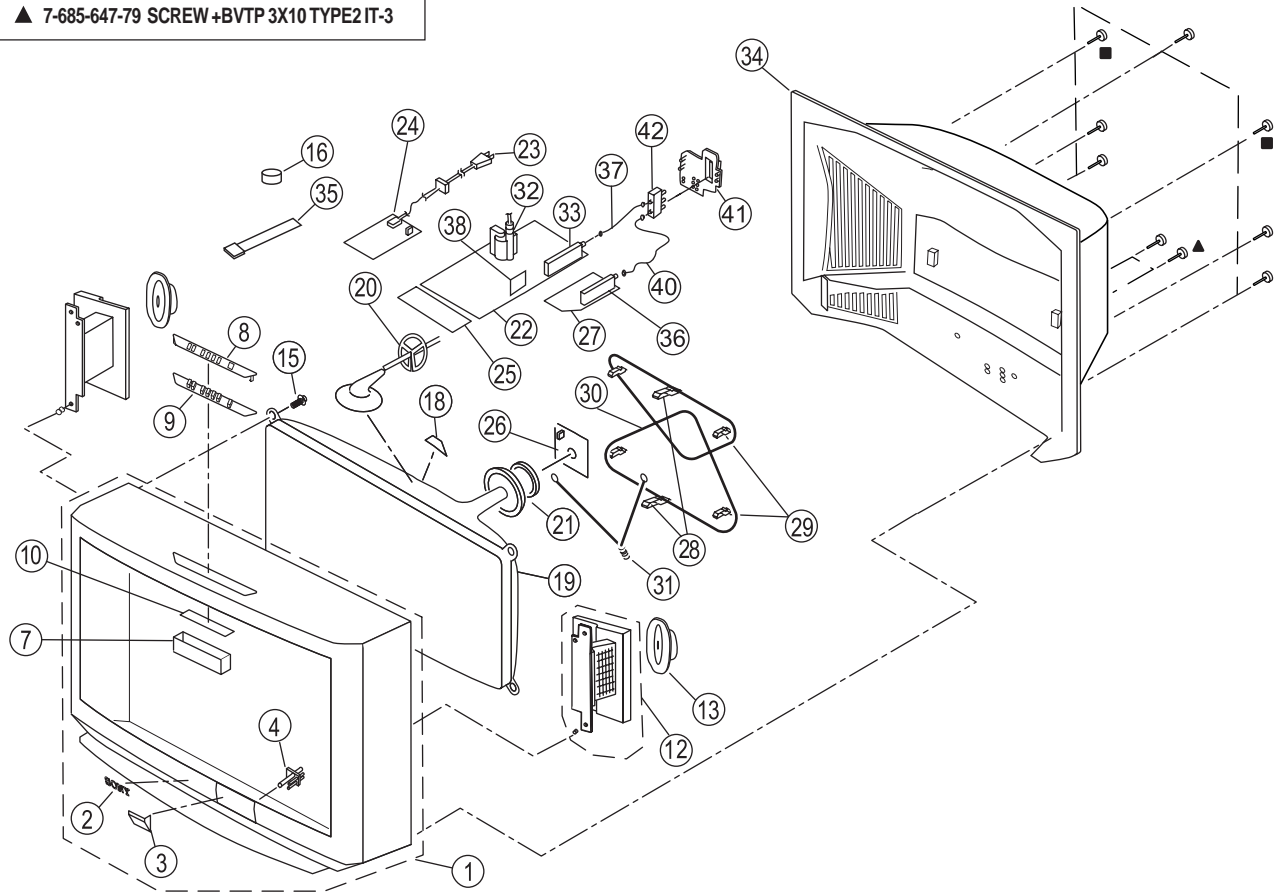
- 7-685-663-79 SCREW +BVTP 4X16 TYPE2 N-S  
▲ 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3



REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
1	X-4035-965-1	BEZNET ASSY	2-4	21	▲ 8-451-486-11	DY Y29NXA-V	
2	4-046-160-01	EMBLEM (NO.9), SONY		22	* A-1298-903-A	A COMPLETE PC BOARD (KV-29AL42/42C)	
3	4-064-768-01	DOOR		23	▲ 1-751-057-11	CORD, POWER (WITH CONNECTOR) 10A/125V	
4	4-064-767-01	GUIDE, LED		24	* A-1343-656-A	E (VAR) MOUNTED PC BOARD	
7	4-064-764-01	BRACKET, TOP CONTROL		25	* A-1372-617-A	HV (VAR) MOUNTED PC BOARD	
8	4-064-763-01	PANEL, TOP CONTROL		26	* A-1331-921-A	CV MOUNTED PC BOARD	
9	4-064-765-01	BUTTON, TOP CONTROL		27	* A-1380-612-A	K (VAR) MOUNTED PC BOARD	
10	* 1-1372-616-A	HT MOUNTED PC BOARD		28	4-040-387-01	HOLDER (M), DGC	
12	X-4035-964-1	BAFFLE ASSY, SPEAKER		29	4-040-388-01	HOLDER (S), DGC	
13	1-505-993-11	SPEAKER (8X13CM)		30	▲ 1-416-952-11	COIL, DEGAUSSING	
15	4-041-268-01	SCREW (7), TAPPING		31	4-036-329-01	SPRING (B), TENSION	
16	1-452-032-00	MAGNET, DISC		33	▲ 8-598-431-00	TUNER, FSS BTF-A411	
18	4-053-005-01	SPACER, DY		34	4-064-762-11	COVER, REAR	
19	▲ 8-733-873-05	CRT 29NX (KV-29AL42)		35	4-062-047-01	PIECE A (110), CONV CORRECT	
19	▲ 8-733-874-05	CRT 29NX (KV-29AL42C)		38	1-766-374-11	PLUG, F-PIN	
20	3-704-372-31	HOLDER, HV CABLE		39	▲ 1-453-268-21	TRANSFORMER, FBT ASSY NX-4005//X4J4	

## 7-4. CHASSIS (KV-29AL66/29AL66C)

- 7-685-663-79 SCREW +BVTP 4X16 TYPE2 N-S  
▲ 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4036-607-1	BEZNET ASSY	2-4	23 ▲	1-751-057-11	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29AL66)	
2	4-046-160-01	EMBLEM (NO.9), SONY		24 *	A-1343-656-A	E (VAR) MOUNTED PC BOARD	
3	4-064-768-01	DOOR		25	A-1372-617-A	HV (VAR) MOUNTED PC BOARD	
4	4-064-767-01	GUIDE, LED		26 *	A-1331-921-A	CV MOUNTED PC BOARD	
7	4-064-764-01	BRACKET, TOP CONTROL		27 *	A-1380-608-A	K (VAR) MOUNTED PC BOARD	
8	4-064-763-01	PANEL, TOP CONTROL		28	4-040-387-01	HOLDER (M), DGC	
9	4-064-765-01	BUTTON, TOP CONTROL		29	4-040-388-01	HOLDER (S), DGC	
10 *	1-1372-616-A	HT MOUNTED PC BOARD		30 ▲	1-416-952-11	COIL, DEGAUSSING	
12	X-4035-964-1	BAFFLE ASSY, SPEAKER		31	4-036-329-01	SPRING (B), TENSION	
13	1-505-993-11	SPEAKER (8X13CM)		32 ▲	1-453-268-21	TRANSFORMER, FBT ASSY NX-4005//X4J4	
15	4-041-268-01	SCREW (7), TAPPING		33 ▲	8-598-431-00	TUNER, FSS BTF-A411	
16	1-452-032-00	MAGNET, DISC		34	4-064-762-11	COVER, REAR	
18	4-053-005-01	SPACER, DY		35	4-062-047-01	PIECE A (110), CONV CORRECT	
19 ▲	8-733-874-05	CRT 29NX (KV-29AL66C)		36 ▲	8-598-430-00	TUNER, BTF-FA401	
19 ▲	8-733-873-05	CRT 29NX (KV-29AL66)		37	1-557-056-31	CABLE, P-P	
20	3-704-372-31	HOLDER, HV CABLE		38 *	A-1195-154-A	P COMPLETE PC BOARD	
21 ▲	8-451-486-11	DY Y29NXA-V		40	1-783-800-11	CABLE, PIN	
22 *	A-1298-842-A	A COMPLETE PC BOARD		41	4-064-176-11	BRACKET, ANTENNA	
23 ▲	1-751-057-11	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29AL66)		42	8-598-414-00	ANTENNA SWITCH AS-2F	



## SECTION 8 ELECTRICAL PARTS LIST

<b>PARTS LISTING TABLE OF CONTENTS</b>
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	<u>Page</u>
<b>A BOARD <u>COMMON</u> PARTS LIST:</b> Parts common to <u>all</u> models listed in this manual.....	51
<b>A BOARD <u>VARIANT</u> PARTS LIST:</b> Parts that belong <u>only</u> to the model specified.....	60

Refer to the designated variant parts list when seeking a part indicated by an asterisk (\*) on the A board schematic or by the word "variant" on the common parts list.

<u>Model</u>	<u>Page</u>
KV-27S42.....	60
KV-29SL42/29SL42C/29XL42M.....	61
KV-27S46 .....	62
KV-29SL46 .....	63
KV-27S66 .....	64
KV-29AL42/29AL42C.....	65
KV-29AL66/29AL66C .....	66

<b>C BOARD <u>COMPLETE</u> PARTS LIST</b> (KV-27S42, 27S46, 27S66, 29SL42, 29SL42C, 29SL46, 29XL42M, only) .....	67
<b>CV BOARD <u>COMPLETE</u> PARTS LIST</b> (KV-29AL42, 29AL42C, 29AL66, 29AL66C, only).....	67
<b>E BOARD <u>COMPLETE</u> PARTS LIST</b> (All Models).....	68
<b>HT BOARD <u>COMPLETE</u> PARTS LIST</b> (KV-29AL42, 29AL42C, 29AL66, 29AL66C, only) .....	69
<b>HV BOARD <u>COMPLETE</u> PARTS LIST</b> (KV-29AL42, 29AL42C, 29AL66, 29AL66C only) .....	70
<b>K BOARD <u>COMPLETE</u> PARTS LIST</b> (KV-27S66, 29AL42, 29AL42C, 29AL66, 29AL66C only) .....	70
<b>P BOARD <u>COMPLETE</u> PARTS LIST</b> (KV-27S46, 27S66, 29AL66, 29AL66C, 29SL46 only) .....	72
<b>ACCESSORIES AND PACKAGING</b> .....	73

## COMMON PARTS LISTING

A

## Note:

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

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

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

## RESISTORS

- All resistors are in ohms
- F : nonflammable

## 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.

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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A</b>							
* A-1298-840-A		A BOARD, COMPLETE (KV-27S42)		C062	1-164-161-11	CERAMIC	0.0022 $\mu$ F 10% 50V
* A-1298-842-A		A BOARD, COMPLETE (KV-29AL66/29AL66C)		C065	1-163-009-11	CERAMIC	0.001 $\mu$ F 10% 50V
* A-1298-900-A		A BOARD, COMPLETE (KV-27S46)		C070	1-163-259-91	CERAMIC	220pF 5% 50V
* A-1298-902-A		A BOARD, COMPLETE (KV-27S66)		C080	1-164-005-11	CERAMIC	0.47 $\mu$ F 25V
* A-1298-903-A		A BOARD, COMPLETE (KV-29AL42/29AL42C)		C081	1-164-005-11	CERAMIC	0.47 $\mu$ F 25V
* A-1298-904-A		A BOARD, COMPLETE (KV-29SL42/29SL42C/29XL42M)		C091	1-163-231-11	CERAMIC	15pF 5% 50V
* A-1298-911-A		A BOARD, COMPLETE (KV-29SL46)		C092	1-163-231-11	CERAMIC	15pF 5% 50V
4-382-854-11		SCREW (M3X10), P, SW (+)		C101	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
				C102	1-126-933-11	ELECT	100 $\mu$ F 20% 16V
				C150	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
				C151	1-104-664-11	ELECT	47 $\mu$ F 20% 25V
				C200	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
				C201	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
				C202	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
				C207	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
				C208	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
				C209	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
				C211	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
				C212	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
				C213	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
				C216		VARIANT (SEE VARIANT PARTS LIST)	
				C217		VARIANT (SEE VARIANT PARTS LIST)	
				C218	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
				C219	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
				C222	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
				C226	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
				C243	1-163-017-00	CERAMIC	0.0047 $\mu$ F 10% 50V
				C250		VARIANT (SEE VARIANT PARTS LIST)	
				C251		VARIANT (SEE VARIANT PARTS LIST)	
				C252		VARIANT (SEE VARIANT PARTS LIST)	
				C255	1-104-760-11	CERAMIC	0.047 $\mu$ F 10% 50V
				C256	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
				C257	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
				C258	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
				C259	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
				C280		VARIANT (SEE VARIANT PARTS LIST)	
				C281		VARIANT (SEE VARIANT PARTS LIST)	
				C282		VARIANT (SEE VARIANT PARTS LIST)	
				C284	1-104-664-11	ELECT	47 $\mu$ F 20% 25V
				C285	1-126-933-11	ELECT	100 $\mu$ F 20% 16V
				C286	1-163-251-11	CERAMIC	100pF 5% 50V

## CAPACITOR

C001	1-163-259-91	CERAMIC	220pF	5%	50V
C004	1-104-664-11	ELECT	47 $\mu$ F	20%	25V
C005	1-126-960-11	ELECT	1 $\mu$ F	20%	50V
C006	1-163-035-00	CERAMIC	0.047 $\mu$ F		50V
C007	1-163-259-91	CERAMIC	220pF	5%	50V
C008	1-163-009-11	CERAMIC	0.001 $\mu$ F	10%	50V
C010	1-163-009-11	CERAMIC	0.001 $\mu$ F	10%	50V
C011	1-163-009-11	CERAMIC	0.001 $\mu$ F	10%	50V
C012	1-163-009-11	CERAMIC	0.001 $\mu$ F	10%	50V
C014	1-164-004-11	CERAMIC	0.1 $\mu$ F	10%	25V
C017	1-126-960-11	ELECT	1 $\mu$ F	20%	50V
C019	1-163-135-00	CERAMIC	560pF	5%	50V
C020	1-130-495-00	FILM	0.1 $\mu$ F	5%	50V
C021	1-163-259-91	CERAMIC	220pF	5%	50V
C028	1-163-005-11	CERAMIC	470pF	10%	50V
C030	1-163-259-91	CERAMIC	220pF	5%	50V
C034	1-163-037-11	CERAMIC	0.022 $\mu$ F	10%	50V
C037	1-164-161-11	CERAMIC	0.0022 $\mu$ F	10%	50V
C038	1-126-941-11	ELECT	470 $\mu$ F	20%	25V
C039	1-126-964-11	ELECT	10 $\mu$ F	20%	50V
C046	1-104-664-11	ELECT	47 $\mu$ F	20%	25V
C047	1-163-259-91	CERAMIC	220pF	5%	50V
C048	1-163-009-11	CERAMIC	0.001 $\mu$ F	10%	50V
C055	1-163-251-11	CERAMIC	100pF	5%	50V
C060	1-163-005-11	CERAMIC	470pF	10%	50V



**COMMON PARTS LISTING**

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

Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C287	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V	C400	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C288	1-126-960-11	ELECT	1 $\mu$ F 20% 50V	C401	1-126-956-91	ELECT	0.1 $\mu$ F 20% 50V
C289	1-126-960-11	ELECT	1 $\mu$ F 20% 50V	C402	1-163-017-00	CERAMIC	0.0047 $\mu$ F 10% 50V
C290	1-164-005-11	CERAMIC	0.47 $\mu$ F 25V	C403	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C301	1-163-233-11	CERAMIC	18pF 5% 50V	C404	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C303	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	C405	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C304	1-163-038-91	CERAMIC	0.1 $\mu$ F 25V	C406	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C305	1-164-004-11	CERAMIC	0.1 $\mu$ F 10% 25V	C407	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
C306	1-164-004-11	CERAMIC	0.1 $\mu$ F 10% 25V	C410	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C307	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C411	1-126-956-91	ELECT	0.1 $\mu$ F 20% 50V
C308	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C412	1-130-495-00	FILM	0.1 $\mu$ F 5% 50V
C309	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C413	1-126-967-11	ELECT	47 $\mu$ F 20% 50V
C310	1-126-960-11	ELECT	1 $\mu$ F 20% 50V	C414	1-163-017-00	CERAMIC	0.0047 $\mu$ F 10% 50V
C311	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C415	1-126-956-91	ELECT	0.1 $\mu$ F 20% 50V
C312	1-126-942-61	ELECT	1000 $\mu$ F 20% 25V	C416	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C313	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C418		VARIANT (SEE VARIANT PARTS LIST)	
C314	1-163-003-11	CERAMIC	330pF 10% 50V	C501	1-102-112-00	CERAMIC	330pF 10% 50V
C316	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C502	1-106-383-00	MYLAR	0.047 $\mu$ F 10% 200V
C317	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C503	1-102-212-00	CERAMIC	820pF 10% 500V
C318	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C504	1-102-002-00	CERAMIC	680pF 10% 500V
C319	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V	C505 $\Delta$	1-162-134-11	CERAMIC	470pF 10% 2KV
C320	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V	C507 $\Delta$	1-119-969-11	MYLAR	14000pF 3% 1.5KV
C321	1-163-133-00	CERAMIC	470pF 5% 50V	C508 $\Delta$	1-107-364-11	MYLAR	0.01 $\mu$ F 10% 200V
C323	1-163-121-00	CERAMIC	150pF 5% 50V	C509 $\Delta$	1-162-116-00	CERAMIC	680pF 10% 2KV
C324	1-163-251-11	CERAMIC	100pF 5% 50V	C510	1-107-649-11	ELECT	2.2 $\mu$ F 20% 250V
C331	1-163-005-11	CERAMIC	470pF 10% 50V	C511 $\Delta$	1-117-673-11	FILM	1.5 $\mu$ F 5% 250V
C332	1-163-009-11	CERAMIC	0.001 $\mu$ F 10% 50V	C512	1-106-395-00	MYLAR	0.15 $\mu$ F 10% 200V
C350	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C513	1-106-343-00	MYLAR	0.001 $\mu$ F 10% 100V
C351	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C514	1-117-891-11	FILM	0.62 $\mu$ F 5% 250V
C352	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C515 $\Delta$	1-162-116-00	CERAMIC	680pF 10% 2KV
C353	1-163-038-91	CERAMIC	0.1 $\mu$ F 25V	C520 $\Delta$	1-129-722-00	FILM	0.047 $\mu$ F 5% 630V
C354	1-163-038-91	CERAMIC	0.1 $\mu$ F 25V	C521	1-164-646-11	CERAMIC	2200pF 10% 500V
C355	1-164-222-11	CERAMIC	0.22 $\mu$ F 25V	C523	1-107-652-11	ELECT	10 $\mu$ F 20% 250V
C356	1-163-038-91	CERAMIC	0.1 $\mu$ F 25V	C524	1-102-244-00	CERAMIC	220pF 10% 500V
C357	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C525	1-162-815-11	CERAMIC	47pF 5% 500V
C358	1-104-664-11	ELECT	47 $\mu$ F 20% 25V	C526	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
C359	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C527	1-126-965-11	ELECT	22 $\mu$ F 20% 50V
C360	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V	C528	1-164-690-91	CERAMIC	0.0022 $\mu$ F 5% 50V
C361	1-163-037-11	CERAMIC	0.022 $\mu$ F 10% 50V	C529	1-164-161-11	CERAMIC	0.0022 $\mu$ F 10% 50V
C362	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C530	1-163-009-11	CERAMIC	0.001 $\mu$ F 10% 50V
C363	1-126-960-11	ELECT	1 $\mu$ F 20% 50V	C531	1-106-387-00	MYLAR	0.068 $\mu$ F 10% 200V
C370		VARIANT (SEE VARIANT PARTS LIST)		C541	1-126-969-11	ELECT	220 $\mu$ F 20% 50V
C371		VARIANT (SEE VARIANT PARTS LIST)		C542	1-126-967-11	ELECT	47 $\mu$ F 20% 50V
C372		VARIANT (SEE VARIANT PARTS LIST)		C543	1-137-194-81	FILM	0.47 $\mu$ F 5% 50V
C373	1-163-038-91	CERAMIC	0.1 $\mu$ F 25V	C553	1-107-662-11	ELECT	22 $\mu$ F 20% 250V
C374	1-126-935-11	ELECT	470 $\mu$ F 20% 16V	C555	1-164-161-11	CERAMIC	0.0022 $\mu$ F 10% 50V
C375	1-163-038-91	CERAMIC	0.1 $\mu$ F 25V	C562	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C376	1-104-664-11	ELECT	47 $\mu$ F 20% 25V	C564	1-126-941-11	ELECT	470 $\mu$ F 20% 25V
C377	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C571 $\Delta$	1-126-964-11	ELECT	10 $\mu$ F 20% 50V
C380		VARIANT (SEE VARIANT PARTS LIST)		C573	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V
C381		VARIANT (SEE VARIANT PARTS LIST)		C574	1-107-635-11	ELECT	4.7 $\mu$ F 20% 160V
C382		VARIANT (SEE VARIANT PARTS LIST)		C575 $\Delta$	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C390	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V	C576	1-123-024-21	ELECT	33 $\mu$ F 160V
C399	1-126-964-11	ELECT	10 $\mu$ F 20% 50V	C581	1-126-963-11	ELECT	4.7 $\mu$ F 20% 50V

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## COMMON PARTS LISTING



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C591	1-106-355-12	MYLAR	0.0033 $\mu$ F 10%	200V			
C601	1-130-495-00	MYLAR	0.1 $\mu$ F 5%	50V			
C602	1-126-967-11	ELECT	47 $\mu$ F 20%	50V			
C609	1-126-968-11	ELECT	100 $\mu$ F 20%	50V			
C610	1-126-964-11	ELECT	10 $\mu$ F 20%	50V			
C613		VARIANT (SEE VARIANT PARTS LIST)					
C614	1-126-964-11	ELECT	10 $\mu$ F 20%	50V			
C615		VARIANT (SEE VARIANT PARTS LIST)					
C616		VARIANT (SEE VARIANT PARTS LIST)					
C617		VARIANT (SEE VARIANT PARTS LIST)					
C618	1-125-893-11	FILM	680pF 3%	1.5KV			
C620	1-164-081-11	CERAMIC	470pF 10%	50V			
C621	1-136-356-11	FILM	470pF 5%	50V			
C625	1-164-625-11	CERAMIC	680pF 10%	500V			
C626	1-126-933-11	ELECT	100 $\mu$ F 20%	16V			
C627		VARIANT (SEE VARIANT PARTS LIST)					
C629	1-104-665-11	ELECT	100 $\mu$ F 20%	25V			
C630	1-124-347-00	ELECT	100 $\mu$ F 20%	160V			
C631	1-126-944-11	ELECT	3300 $\mu$ F 20%	25V			
C633	1-104-341-11	FILM	0.1 $\mu$ F 10%	250V			
C634	1-130-471-00	MYLAR	0.001 $\mu$ F 5%	50V			
C638	1-104-665-11	ELECT	100 $\mu$ F 20%	25V			
C639	1-125-772-91	CERAMIC	1500pF 10%	2KV			
C640	1-164-625-11	CERAMIC	680pF 10%	500V			
C641	1-126-943-11	ELECT	2200 $\mu$ F 20%	25V			
C653	1-104-664-11	ELECT	47 $\mu$ F 20%	25V			
C654	1-126-933-11	ELECT	100 $\mu$ F 20%	16V			
C655	1-107-636-11	ELECT	10 $\mu$ F 20%	160V			
C690	1-126-959-11	ELECT	0.47 $\mu$ F 20%	50V			
C691	1-126-941-11	ELECT	470 $\mu$ F 20%	25V			
C692	1-104-664-11	ELECT	47 $\mu$ F 20%	25V			
C693	1-137-194-81	FILM	0.47 $\mu$ F 5%	50V			
C699		VARIANT (SEE VARIANT PARTS LIST)					
<b>CONNECTOR</b>							
CN101	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P					
CN150		VARIANT (SEE VARIANT PARTS LIST)					
CN151		VARIANT (SEE VARIANT PARTS LIST)					
CN152		VARIANT (SEE VARIANT PARTS LIST)					
CN203	1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P					
CN251		VARIANT (SEE VARIANT PARTS LIST)					
CN253		VARIANT (SEE VARIANT PARTS LIST)					
CN254	1-564-508-11	PLUG, CONNECTOR 5P					
CN255	1-564-510-11	PLUG, CONNECTOR 7P					
CN301		VARIANT (SEE VARIANT PARTS LIST)					
CN302		VARIANT (SEE VARIANT PARTS LIST)					
CN401	1-564-505-11	PLUG, CONNECTOR 2P					
CN402	1-564-505-11	PLUG, CONNECTOR 2P					
CN501	1-580-798-11	CONNECTOR PIN (DY) 6P					
CN502	1-564-509-11	PLUG, CONNECTOR 6P					
CN601	1-580-843-11	PIN, CONNECTOR (POWER) 2P					
CN602	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P					
CN604	1-564-506-11	PLUG, CONNECTOR 3P					
<b>DIODE</b>							
D001	8-719-921-44	DIODE MTZJ-5.1C					
D002		VARIANT (SEE VARIANT PARTS LIST)					
D003	8-719-991-33	DIODE 1SS133T-77					
D004	8-719-991-33	DIODE 1SS133T-77					
D005	8-719-109-89	DIODE RD5.6ESB2					
D201	8-719-110-17	DIODE RD10ESB2					
D202	8-719-110-17	DIODE RD10ESB2					
D204	8-719-110-17	DIODE RD10ESB2					
D205	8-719-982-22	DIODE MTZJ-30D					
D207	8-719-109-66	DIODE RD3.3ESB2					
D208		VARIANT (SEE VARIANT PARTS LIST)					
D250	8-719-108-12	DIODE RD9.1EW					
D251	8-719-108-12	DIODE RD9.1EW					
D252	8-719-110-17	DIODE RD10ESB2					
D253	8-719-110-17	DIODE RD10ESB2					
D254	8-719-110-17	DIODE RD10ESB2					
D255	8-719-110-17	DIODE RD10ESB2					
D280		VARIANT (SEE VARIANT PARTS LIST)					
D281		VARIANT (SEE VARIANT PARTS LIST)					
D302	8-719-921-44	DIODE MTZJ-5.1C					
D303	8-719-991-33	DIODE 1SS133T-77					
D304	8-719-991-33	DIODE 1SS133T-77					
D305	8-719-991-33	DIODE 1SS133T-77					
D306	8-719-991-33	DIODE 1SS133T-77					
D388	8-719-921-44	DIODE MTZJ-5.1C					
D403		VARIANT (SEE VARIANT PARTS LIST)					
D501	8-719-945-80	DIODE ERC06-15S					
D502	8-719-908-03	DIODE GP08D					
D503	8-719-908-03	DIODE GP08D					
D520	8-719-067-63	DIODE MDV04-600RL					
D521	8-719-302-43	DIODE EL1Z					
D522	8-719-991-33	DIODE 1SS133T-77					
D523	8-719-991-33	DIODE 1SS133T-77					
D541	8-719-908-03	DIODE GP08D					
D550	8-719-110-08	DIODE RD8.2ESB2					
D551	8-719-991-33	DIODE 1SS133T-77					
D552	8-719-302-43	DIODE EL1Z					
D561	8-719-979-85	DIODE EGP20G					
D562	8-719-979-85	DIODE EGP20G					
D571 $\triangle$	8-719-991-33	DIODE 1SS133T-77					
D572	8-719-991-33	DIODE 1SS133T-77					
D573	8-719-110-08	DIODE RD8.2ESB2					
D574	8-719-302-43	DIODE EL1Z					
D581 $\triangle$	8-719-991-33	DIODE 1SS133T-77					
D602	8-719-991-33	DIODE 1SS133T-77					
D603	8-719-982-26	DIODE MTZJ-33B					
D604	8-719-028-72	DIODE RGP02-17EL-6433					
D605	8-719-510-53	DIODE D4SB60L					
D606	8-719-108-18	THYRISTOR 5P6M					
D607	8-719-991-33	DIODE 1SS133T-77					
D608	8-719-110-53	DIODE RD20ESB2					
D609		VARIANT (SEE VARIANT PARTS LIST)					



**COMMON PARTS LISTING**

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D610	8-719-510-02	DIODE D1NS4	
D611	8-719-063-70	DIODE D1NL20U	
D612	8-719-110-17	DIODE RD10ESB2	
D613	8-719-063-70	DIODE D1NL20U	
D614	8-719-063-70	DIODE D1NL20U	
D615	8-719-312-10	DIODE RU4AM-T3	
D617	8-719-510-37	DIODE D5LC20U	
D620	8-719-110-17	DIODE RD10ESB2	
D630	8-719-510-37	DIODE D5LC20U	
D640	8-719-991-33	DIODE 1SS133T-77	
D650	8-719-109-89	DIODE RD5.6ESB2	

**FERRITE BEAD**

FB350	1-216-295-91	SHORT	
FB501	1-410-396-41	FERRITE	0.45 $\mu$ H
FB521	1-410-397-21	FERRITE	1.1 $\mu$ H
FB522	1-410-397-21	FERRITE	1.1 $\mu$ H
FB600	1-412-911-11	FERRITE	
FB601	1-412-911-11	FERRITE	
FB602	1-412-911-11	FERRITE	
FB603	1-412-911-11	FERRITE	
FB604	1-412-911-11	FERRITE	
FB605	1-412-911-11	FERRITE	
FB606	1-412-911-11	FERRITE	
FB609	1-412-911-11	FERRITE	

**IC**

IC001	8-759-562-90	IC M37273 $\mu$ F-251SP	
IC002	8-759-575-47	IC NJM78LR05BM-TE2	
IC003	8-759-527-75	IC M24C04-MN6T	
IC004		VARIANT (SEE VARIANT PARTS LIST)	
IC010	8-759-450-93	IC NJM2521M-TE1	
IC202	8-759-100-96	IC UPC4558G2	
IC203		VARIANT (SEE VARIANT PARTS LIST)	
IC301	8-752-090-39	IC CXA2133S	
IC302	8-752-385-80	IC CXD2073S	
IC401		VARIANT (SEE VARIANT PARTS LIST)	
IC402	8-752-072-39	IC CXA2021S	
IC521	8-759-700-07	IC NJM2903M	
IC541	8-759-980-58	IC TDA8172	
IC601		VARIANT (SEE VARIANT PARTS LIST)	
IC602 $\triangle$	8-749-920-61	IC SE-135N	
IC604	8-759-198-03	IC PQ09RF21	

**JACK**

J200	1-774-750-21	JACK BLOCK, PIN 2P	
J201	1-774-751-11	TERMINAL BLOCK, S	
J202		VARIANT (SEE VARIANT PARTS LIST)	
J204		VARIANT (SEE VARIANT PARTS LIST)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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**CHIP CONDUCTOR**

JR003	1-216-295-91	SHORT	
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**COIL**

L001	1-414-267-11	INDUCTOR	10 $\mu$ H
L002	1-414-273-11	INDUCTOR	100 $\mu$ H
L003	1-414-273-11	INDUCTOR	100 $\mu$ H
L101	1-414-267-11	INDUCTOR	10 $\mu$ H
L150	1-414-273-11	INDUCTOR	100 $\mu$ H
L151	1-414-267-11	INDUCTOR	10 $\mu$ H
L301	1-414-271-11	INDUCTOR	47 $\mu$ H
L302	1-414-267-11	INDUCTOR	10 $\mu$ H
L350	1-414-267-11	INDUCTOR	10 $\mu$ H
L351	1-414-271-11	INDUCTOR	47 $\mu$ H

L501 $\triangle$	1-411-976-11	COIL, HORIZONTAL LINEARITY	
L502	1-412-552-11	INDUCTOR	2.2mH
L503	1-406-677-11	INDUCTOR	10mH
L504	1-412-533-21	INDUCTOR	47 $\mu$ H
L520	1-409-955-11	INDUCTOR	8mH

L591 $\triangle$	1-412-528-61	INDUCTOR	18 $\mu$ H
L601	1-412-529-11	INDUCTOR	22 $\mu$ H
L642	1-412-529-11	INDUCTOR	22 $\mu$ H
L643	1-412-525-31	INDUCTOR	10 $\mu$ H

**PHOTO COUPLER**

PH600 $\triangle$	8-749-010-64	PHOTO COUPLER PC123F2	
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**IC LINK**

PS201		VARIANT (SEE VARIANT PARTS LIST)	
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**TRANSISTOR**

Q001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q080		VARIANT (SEE VARIANT PARTS LIST)	
Q082	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q083	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q101	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q170	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q200	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q201	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q203	8-729-216-22	TRANSISTOR 2SA1162-G	
Q280		VARIANT (SEE VARIANT PARTS LIST)	
Q281		VARIANT (SEE VARIANT PARTS LIST)	
Q282		VARIANT (SEE VARIANT PARTS LIST)	
Q283		VARIANT (SEE VARIANT PARTS LIST)	
Q284		VARIANT (SEE VARIANT PARTS LIST)	
Q285		VARIANT (SEE VARIANT PARTS LIST)	

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

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.

## COMMON PARTS LISTING



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q286	8-729-216-22	TRANSISTOR 2SA1162-G		R013	1-216-081-00	RES, CHIP 22K	5% 1/10W
Q287	8-729-216-22	TRANSISTOR 2SA1162-G		R016	1-216-041-00	RES, CHIP 470	5% 1/10W
Q288	8-729-422-27	TRANSISTOR 2SD601A-Q		R017	1-216-113-00	RES, CHIP 470K	5% 1/10W
Q300 $\triangle$	8-729-422-27	TRANSISTOR 2SD601A-Q		R018	1-216-049-91	RES, CHIP 1K	5% 1/10W
Q302	8-729-422-27	TRANSISTOR 2SD601A-Q		R019	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
Q305	8-729-216-22	TRANSISTOR 2SA1162-G		R020		VARIANT (SEE VARIANT PARTS LIST)	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G		R021		VARIANT (SEE VARIANT PARTS LIST)	
Q307	8-729-216-22	TRANSISTOR 2SA1162-G		R022		VARIANT (SEE VARIANT PARTS LIST)	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G		R023		VARIANT (SEE VARIANT PARTS LIST)	
Q309	8-729-216-22	TRANSISTOR 2SA1162-G		R025	1-249-426-11	CARBON 5.6K	5% 1/4W
Q310	8-729-216-22	TRANSISTOR 2SA1162-G		R026	1-249-426-11	CARBON 5.6K	5% 1/4W
Q349	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R027	1-249-426-11	CARBON 5.6K	5% 1/4W
Q350	8-729-216-22	TRANSISTOR 2SA1162-G		R028	1-216-049-91	RES, CHIP 1K	5% 1/10W
Q351	8-729-422-27	TRANSISTOR 2SD601A-Q		R031	1-216-045-00	RES, CHIP 680	5% 1/10W
Q352	8-729-216-22	TRANSISTOR 2SA1162-G		R032	1-247-815-91	CARBON 220	5% 1/4W
Q353	8-729-216-22	TRANSISTOR 2SA1162-G		R033	1-247-815-91	CARBON 220	5% 1/4W
Q354	8-729-216-22	TRANSISTOR 2SA1162-G		R034	1-216-033-00	RES, CHIP 220	5% 1/10W
Q355	8-729-422-27	TRANSISTOR 2SD601A-Q		R035	1-216-033-00	RES, CHIP 220	5% 1/10W
Q356	8-729-216-22	TRANSISTOR 2SA1162-G		R038	1-216-049-91	RES, CHIP 1K	5% 1/10W
Q357	8-729-216-22	TRANSISTOR 2SA1162-G		R039	1-216-295-91	SHORT	
Q358	8-729-422-27	TRANSISTOR 2SD601A-Q		R040	1-249-413-11	CARBON 470	5% 1/4W
Q359	8-729-216-22	TRANSISTOR 2SA1162-G		R041	1-216-033-00	RES, CHIP 220	5% 1/10W
Q360	8-729-216-22	TRANSISTOR 2SA1162-G		R043	1-216-049-91	RES, CHIP 1K	5% 1/10W
Q361	8-729-422-27	TRANSISTOR 2SD601A-Q		R044	1-247-815-91	CARBON 220	5% 1/4W
Q390		VARIANT (SEE VARIANT PARTS LIST)		R045	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
Q391		VARIANT (SEE VARIANT PARTS LIST)		R046	1-247-815-91	CARBON 220	5% 1/4W
Q501	8-729-140-50	TRANSISTOR 2SC3209LK		R047	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
Q502	8-729-043-43	TRANSISTOR 2SC5426-01		R048	1-216-025-91	RES, CHIP 100	5% 1/10W
Q521	8-729-422-27	TRANSISTOR 2SD601A-Q		R049	1-216-089-91	RES, CHIP 47K	5% 1/10W
Q522	8-729-809-29	TRANSISTOR 2SC4159-E		R050	1-216-073-00	RES, CHIP 10K	5% 1/10W
Q550	8-729-119-78	TRANSISTOR 2SC2785-HFE		R051	1-216-033-00	RES, CHIP 220	5% 1/10W
Q555	8-729-422-27	TRANSISTOR 2SD601A-Q		R052	1-216-033-00	RES, CHIP 220	5% 1/10W
Q571 $\triangle$	8-729-200-17	TRANSISTOR 2SA1091-O		R054	1-216-073-00	RES, CHIP 10K	5% 1/10W
Q601	8-729-922-37	TRANSISTOR 2SD2144S-UVW		R056	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
Q602	8-729-119-78	TRANSISTOR 2SC2785-HFE		R057	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
Q603	8-729-119-76	TRANSISTOR 2SA1175-HFE		R058	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE		R060	1-216-295-91	SHORT	
Q607	8-729-922-37	TRANSISTOR 2SD2144S-UVW		R061	1-216-295-91	SHORT	
Q610	8-729-119-78	TRANSISTOR 2SC2785-HFE		R065		VARIANT (SEE VARIANT PARTS LIST)	
Q630	8-729-119-78	TRANSISTOR 2SC2785-HFE		R066	1-216-033-00	RES, CHIP 220	5% 1/10W
Q650	8-729-111-55	TRANSISTOR 2SD1312-K		R069	1-247-815-91	CARBON 220	5% 1/4W
				R070	1-249-425-11	CARBON 4.7K	5% 1/4W
				R071	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
				R073	1-249-425-11	CARBON 4.7K	5% 1/4W
				R074	1-216-073-00	RES, CHIP 10K	5% 1/10W
				R075	1-216-073-00	RES, CHIP 10K	5% 1/10W
				R076	1-216-121-91	RES, CHIP 1M	5% 1/10W
				R077	1-216-097-91	RES, CHIP 100K	5% 1/10W
				R080		VARIANT (SEE VARIANT PARTS LIST)	
				R082		VARIANT (SEE VARIANT PARTS LIST)	
				R083		VARIANT (SEE VARIANT PARTS LIST)	
				R084		VARIANT (SEE VARIANT PARTS LIST)	
				R085	1-216-049-91	RES, CHIP 1K	5% 1/10W
				R086	1-216-045-00	RES, CHIP 680	5% 1/10W

**RESISTOR**

R001	1-216-033-00	RES, CHIP 220	5%	1/10W
R002	1-216-073-00	RES, CHIP 10K	5%	1/10W
R003	1-216-033-00	RES, CHIP 220	5%	1/10W
R004	1-216-073-00	RES, CHIP 10K	5%	1/10W
R005	1-216-295-91	SHORT		
R006	1-216-295-91	SHORT		
R007	1-216-025-91	RES, CHIP 100	5%	1/10W
R008	1-216-033-00	RES, CHIP 220	5%	1/10W
R010	1-216-033-00	RES, CHIP 220	5%	1/10W
R011	1-216-033-00	RES, CHIP 220	5%	1/10W



COMMON PARTS LISTING

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R087	1-216-045-00	RES, CHIP 680	5% 1/10W	R253	1-215-899-11	METAL 15K	5% 2W
R088	1-216-045-00	RES, CHIP 680	5% 1/10W	R254	1-216-033-00	RES, CHIP 220	5% 1/10W
R090		VARIANT (SEE VARIANT PARTS LIST)		R255		VARIANT (SEE VARIANT PARTS LIST)	
R091	1-216-073-00	RES, CHIP 10K	5% 1/10W	R256	1-216-033-00	RES, CHIP 220	5% 1/10W
R092	1-216-073-00	RES, CHIP 10K	5% 1/10W	R257	1-216-073-00	RES, CHIP 10K	5% 1/10W
R095	1-216-073-00	RES, CHIP 10K	5% 1/10W	R258	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R096	1-216-057-00	RES, CHIP 2.2K	5% 1/10W	R259	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R097	1-216-049-91	RES, CHIP 1K	5% 1/10W	R260	1-216-025-91	RES, CHIP 100	5% 1/10W
R101	1-216-073-00	RES, CHIP 10K	5% 1/10W	R261	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R120	1-216-057-00	RES, CHIP 2.2K	5% 1/10W	R262	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R121	1-216-073-00	RES, CHIP 10K	5% 1/10W	R263	1-216-033-00	RES, CHIP 220	5% 1/10W
R150	1-216-025-91	RES, CHIP 100	5% 1/10W	R264	1-216-033-00	RES, CHIP 220	5% 1/10W
R151	1-216-025-91	RES, CHIP 100	5% 1/10W	R265	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R170	1-216-025-91	RES, CHIP 100	5% 1/10W	R266	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R171	1-216-049-91	RES, CHIP 1K	5% 1/10W	R267	1-216-022-00	RES, CHIP 75	5% 1/10W
R172	1-216-295-91	SHORT		R269	1-216-049-91	RES, CHIP 1K	5% 1/10W
R173	1-216-295-91	SHORT		R270	1-216-022-00	RES, CHIP 75	5% 1/10W
R200	1-216-022-00	RES, CHIP 75	5% 1/10W	R271	1-216-113-00	RES, CHIP 470K	5% 1/10W
R201	1-216-113-00	RES, CHIP 470K	5% 1/10W	R272	1-216-113-00	RES, CHIP 470K	5% 1/10W
R202	1-216-113-00	RES, CHIP 470K	5% 1/10W	R273	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R203	1-216-025-91	RES, CHIP 100	5% 1/10W	R274	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R204	1-216-043-91	RES, CHIP 560	5% 1/10W	R275	1-216-295-91	SHORT	
R205	1-216-043-91	RES, CHIP 560	5% 1/10W	R276	1-216-295-91	SHORT	
R207	1-216-025-91	RES, CHIP 100	5% 1/10W	R277	1-216-295-91	SHORT	
R211		VARIANT (SEE VARIANT PARTS LIST)		R278		VARIANT (SEE VARIANT PARTS LIST)	
R212		VARIANT (SEE VARIANT PARTS LIST)		R279	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R213	1-216-057-00	RES, CHIP 2.2K	5% 1/10W	R280		VARIANT (SEE VARIANT PARTS LIST)	
R214	1-216-113-00	RES, CHIP 470K	5% 1/10W	R281		VARIANT (SEE VARIANT PARTS LIST)	
R215	1-216-033-00	RES, CHIP 220	5% 1/10W	R282		VARIANT (SEE VARIANT PARTS LIST)	
R216	1-216-113-00	RES, CHIP 470K	5% 1/10W	R283		VARIANT (SEE VARIANT PARTS LIST)	
R217	1-216-033-00	RES, CHIP 220	5% 1/10W	R284		VARIANT (SEE VARIANT PARTS LIST)	
R218	1-216-067-00	RES, CHIP 5.6K	5% 1/10W	R285		VARIANT (SEE VARIANT PARTS LIST)	
R219	1-216-073-00	RES, CHIP 10K	5% 1/10W	R286		VARIANT (SEE VARIANT PARTS LIST)	
R220	1-216-073-00	RES, CHIP 10K	5% 1/10W	R287		VARIANT (SEE VARIANT PARTS LIST)	
R221	1-216-073-00	RES, CHIP 10K	5% 1/10W	R288		VARIANT (SEE VARIANT PARTS LIST)	
R222	1-216-067-00	RES, CHIP 5.6K	5% 1/10W	R289		VARIANT (SEE VARIANT PARTS LIST)	
R223	1-216-073-00	RES, CHIP 10K	5% 1/10W	R290		VARIANT (SEE VARIANT PARTS LIST)	
R224	1-216-073-00	RES, CHIP 10K	5% 1/10W	R291		VARIANT (SEE VARIANT PARTS LIST)	
R225	1-216-073-00	RES, CHIP 10K	5% 1/10W	R292		VARIANT (SEE VARIANT PARTS LIST)	
R226	1-216-065-91	RES, CHIP 4.7K	5% 1/10W	R293		VARIANT (SEE VARIANT PARTS LIST)	
R227	1-216-097-91	RES, CHIP 100K	5% 1/10W	R294		VARIANT (SEE VARIANT PARTS LIST)	
R228	1-216-065-91	RES, CHIP 4.7K	5% 1/10W	R295		VARIANT (SEE VARIANT PARTS LIST)	
R229	1-216-097-91	RES, CHIP 100K	5% 1/10W	R296	1-249-437-11	CARBON 47K	5% 1/4W
R231		VARIANT (SEE VARIANT PARTS LIST)		R297	1-216-043-91	RES, CHIP 560	5% 1/10W
R232		VARIANT (SEE VARIANT PARTS LIST)		R298	1-216-041-00	RES, CHIP 470	5% 1/10W
R233		VARIANT (SEE VARIANT PARTS LIST)		R299	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R236		VARIANT (SEE VARIANT PARTS LIST)		R301	1-216-295-91	SHORT	
R241	1-216-065-91	RES, CHIP 4.7K	5% 1/10W	R304	1-216-073-00	RES, CHIP 10K	5% 1/10W
R242	1-216-083-00	RES, CHIP 27K	5% 1/10W	R305	1-216-033-00	RES, CHIP 220	5% 1/10W
R243	1-216-689-11	RES, CHIP 39K	5% 1/10W	R306	1-208-806-11	RES, CHIP 10K	0.50% 1/10W
R244	1-216-049-91	RES, CHIP 1K	5% 1/10W	R307	1-216-071-00	RES, CHIP 8.2K	5% 1/10W
R245	1-216-049-91	RES, CHIP 1K	5% 1/10W	R308	1-216-025-91	RES, CHIP 100	5% 1/10W
R248	1-216-049-91	RES, CHIP 1K	5% 1/10W	R310	1-216-049-91	RES, CHIP 1K	5% 1/10W
R250	1-216-033-00	RES, CHIP 220	5% 1/10W	R312	1-216-033-00	RES, CHIP 220	5% 1/10W
R252	1-216-033-00	RES, CHIP 220	5% 1/10W	R313	1-216-033-00	RES, CHIP 220	5% 1/10W

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

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

## COMMON PARTS LISTING



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R314	1-216-033-00	RES, CHIP	220 5% 1/10W	R373	1-216-025-91	RES, CHIP	100 5% 1/10W
R315	1-216-033-00	RES, CHIP	220 5% 1/10W	R374	1-216-025-91	RES, CHIP	100 5% 1/10W
R316	1-247-807-31	CARBON	100 5% 1/4W	R375	1-216-053-00	RES, CHIP	1.5K 5% 1/10W
R317	1-216-025-91	RES, CHIP	100 5% 1/10W	R376	1-216-049-91	RES, CHIP	1K 5% 1/10W
R318	1-216-025-91	RES, CHIP	100 5% 1/10W	R377	1-216-049-91	RES, CHIP	1K 5% 1/10W
R319	1-216-073-00	RES, CHIP	10K 5% 1/10W	R378	1-216-033-00	RES, CHIP	220 5% 1/10W
R320	1-216-025-91	RES, CHIP	100 5% 1/10W	R379	1-216-049-91	RES, CHIP	1K 5% 1/10W
R321	1-216-025-91	RES, CHIP	100 5% 1/10W	R380	1-208-790-11	RES, CHIP	2.2K 0.50% 1/10W
R322	1-216-025-91	RES, CHIP	100 5% 1/10W	R381	1-216-053-00	RES, CHIP	1.5K 5% 1/10W
R323	1-216-037-00	RES, CHIP	330 5% 1/10W	R383	1-216-017-91	RES, CHIP	47 5% 1/10W
R324	1-216-065-91	RES, CHIP	4.7K 5% 1/10W	R384	1-216-097-91	RES, CHIP	100K 5% 1/10W
R325	1-216-022-00	RES, CHIP	75 5% 1/10W	R385	1-216-073-00	RES, CHIP	10K 5% 1/10W
R326	1-216-033-00	RES, CHIP	220 5% 1/10W	R386	1-216-061-00	RES, CHIP	3.3K 5% 1/10W
R328	1-216-025-91	RES, CHIP	100 5% 1/10W	R387	1-216-067-00	RES, CHIP	5.6K 5% 1/10W
R329	1-216-025-91	RES, CHIP	100 5% 1/10W	R390		VARIANT (SEE VARIANT PARTS LIST)	
R330	1-216-025-91	RES, CHIP	100 5% 1/10W	R391		VARIANT (SEE VARIANT PARTS LIST)	
R331	1-216-025-91	RES, CHIP	100 5% 1/10W	R392		VARIANT (SEE VARIANT PARTS LIST)	
R333	1-216-049-91	RES, CHIP	1K 5% 1/10W	R394		VARIANT (SEE VARIANT PARTS LIST)	
R334	1-216-025-91	RES, CHIP	100 5% 1/10W	R395		VARIANT (SEE VARIANT PARTS LIST)	
R335	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	R399	1-216-295-91	SHORT	
R336	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	R400		VARIANT (SEE VARIANT PARTS LIST)	
R337	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	R402	1-216-121-91	RES, CHIP	1M 5% 1/10W
R339	1-216-295-91	SHORT		R403	1-216-033-00	RES, CHIP	220 5% 1/10W
R340	1-249-417-11	CARBON	1K 5% 1/4W	R404	1-216-033-00	RES, CHIP	220 5% 1/10W
R341	1-216-073-00	RES, CHIP	10K 5% 1/10W	R407		VARIANT (SEE VARIANT PARTS LIST)	
R342	1-216-069-00	RES, CHIP	6.8K 5% 1/10W	R42		VARIANT (SEE VARIANT PARTS LIST)	
R343	1-216-129-00	RES, CHIP	2.2M 5% 1/10W	R450		VARIANT (SEE VARIANT PARTS LIST)	
R344	1-216-295-91	SHORT		R451		VARIANT (SEE VARIANT PARTS LIST)	
R345	1-216-129-00	RES, CHIP	2.2M 5% 1/10W	R502 $\triangle$	1-215-892-11	METAL	1K 5% 2W
R346	1-216-129-00	RES, CHIP	2.2M 5% 1/10W	R503 $\triangle$	1-249-426-11	CARBON	5.6K 5% 1/4W
R347	1-216-049-91	RES, CHIP	1K 5% 1/10W	R504 $\triangle$	1-216-349-00	METAL	1 5% 1W
R348	1-216-043-91	RES, CHIP	560 5% 1/10W	R505	1-249-401-11	CARBON	47 5% 1/4W
R349	1-216-069-00	RES, CHIP	6.8K 5% 1/10W	R506	1-215-860-11	METAL	33 5% 1W
R350	1-208-766-11	RES, CHIP	220 0.50% 1/10W	R507 $\triangle$	1-260-097-11	CARBON	680 5% 1/2W
R351	1-208-766-11	RES, CHIP	220 0.50% 1/10W	R508 $\triangle$	1-216-449-11	METAL	56 5% 2W
R352	1-208-794-11	RES, CHIP	3.3K 0.50% 1/10W	R509 $\triangle$	1-216-481-11	METAL	1.2K 5% 3W
R353	1-216-295-91	SHORT		R510 $\triangle$	1-216-449-11	METAL	56 5% 2W
R354	1-208-794-11	RES, CHIP	3.3K 0.50% 1/10W	R511	1-247-843-11	CARBON	3.3K 5% 1/4W
R355	1-216-295-91	SHORT		R520 $\triangle$	1-215-861-00	METAL	47 5% 1W
R356	1-216-059-00	RES, CHIP	2.7K 5% 1/10W	R521	1-249-411-11	CARBON	330 5% 1/4W
R357	1-216-091-00	RES, CHIP	56K 5% 1/10W	R522	1-249-415-11	CARBON	680 5% 1/4W
R358	1-216-043-91	RES, CHIP	560 5% 1/10W	R523	1-216-073-00	RES, CHIP	10K 5% 1/10W
R359	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	R524	1-249-429-11	CARBON	10K 5% 1/4W
R360	1-216-049-91	RES, CHIP	1K 5% 1/10W	R525	1-249-427-11	CARBON	6.8K 5% 1/4W
R361	1-216-049-91	RES, CHIP	1K 5% 1/10W	R526	1-216-081-00	RES, CHIP	22K 5% 1/10W
R362	1-216-043-91	RES, CHIP	560 5% 1/10W	R527	1-216-079-00	RES, CHIP	18K 5% 1/10W
R363	1-216-037-00	RES, CHIP	330 5% 1/10W	R528	1-216-057-00	RES, CHIP	2.2K 5% 1/10W
R364	1-216-025-91	RES, CHIP	100 5% 1/10W	R529	1-216-101-00	RES, CHIP	150K 5% 1/10W
R365	1-216-025-91	RES, CHIP	100 5% 1/10W	R530	1-216-089-91	RES, CHIP	47K 5% 1/10W
R366	1-216-053-00	RES, CHIP	1.5K 5% 1/10W	R532	1-215-437-00	METAL	4.7K 1% 1/4W
R367	1-216-057-00	RES, CHIP	2.2K 5% 1/10W	R533	1-215-461-00	METAL	47K 1% 1/4W
R368	1-216-033-00	RES, CHIP	220 5% 1/10W	R534	1-215-451-00	METAL	18K 1% 1/4W
R369	1-216-041-00	RES, CHIP	470 5% 1/10W	R535	1-249-441-11	CARBON	100K 5% 1/4W
R370	1-216-033-00	RES, CHIP	220 5% 1/10W	R541	1-249-430-11	CARBON	12K 5% 1/4W
R372	1-216-035-00	RES, CHIP	270 5% 1/10W				



# A COMMON PARTS LISTING

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

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
R542	1-249-429-11	CARBON 10K	5% 1/4W
R543	1-249-429-11	CARBON 10K	5% 1/4W
R544△	1-216-351-00	METAL 1.5	5% 1W
R546△	1-215-890-11	METAL 470	5% 2W
R547△	1-249-385-11	CARBON 2.2	5% 1/4W
R548	1-249-430-11	CARBON 12K	5% 1/4W
R549	1-249-429-11	CARBON 10K	5% 1/4W
R550	1-216-061-00	RES, CHIP 3.3K	5% 1/10W
R551	1-249-413-11	CARBON 470	5% 1/4W
R552	1-247-887-00	CARBON 220K	5% 1/4W
R553△	1-260-312-11	CARBON 47	5% 1/2W
R554	1-216-101-00	RES, CHIP 150K	5% 1/10W
R555	1-216-093-91	RES, CHIP 68K	5% 1/10W
R556	1-216-081-00	RES, CHIP 22K	5% 1/10W
R557	1-249-431-11	CARBON 15K	5% 1/4W
R558	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R559	1-216-121-91	RES, CHIP 1M	5% 1/10W
R561△	1-249-377-11	CARBON 0.47	5% 1/4W
R562△	1-260-288-11	CARBON 0.47	5% 1/2W
R571△	1-216-365-00	METAL 0.47	5% 2W
R572△	1-249-429-11	CARBON 10K	5% 1/4W
R573△	1-247-895-91	CARBON 470K	5% 1/4W
R574△	1-249-416-11	CARBON 820	5% 1/4W
R575△	1-247-895-91	CARBON 470K	5% 1/4W
R576△	1-249-441-11	CARBON 100K	5% 1/4W
R578△	1-215-902-11	METAL 47K	5% 1W
R579	1-208-777-11	RES, CHIP 620	0.50% 1/10W
R580	1-215-469-00	METAL 100K	1% 1/4W
R581	1-216-065-91	RES, CHIP 4.7K	5% 1/10W
R582△	1-208-806-11	RES, CHIP 10K	0.50% 1/10W
R583△	1-208-830-11	RES, CHIP 100K	0.50% 1/10W
☒ R584△	1-208-822-11	RES, CHIP 47K	0.50% 1/10W
R585	1-216-073-00	RES, CHIP 10K	5% 1/10W
R586△	1-216-073-00	RES, CHIP 10K	5% 1/10W
R587	1-216-073-00	RES, CHIP 10K	5% 1/10W
R591△	1-215-882-00	METAL 22	5% 2W
R607	1-215-859-00	METAL 22	5% 1W
R625	1-249-440-11	CARBON 82K	5% 1/4W
R626	1-249-417-11	CARBON 1K	5% 1/4W
R627	1-240-251-11	CMT,MELF 6.8	5% 10W
R628	1-249-441-11	CARBON 100K	5% 1/4W
R629	1-260-324-11	CARBON 470	5% 1/2W
R630	1-249-429-11	CARBON 10K	5% 1/4W
R631	1-249-437-11	CARBON 47K	5% 1/4W
R632△	1-202-933-61	FUSIBLE 0.1	10% 1/2W
R633		VARIANT (SEE VARIANT PARTS LIST)	
R634	1-249-437-11	CARBON 47K	5% 1/4W
R636	1-249-421-11	CARBON 2.2K	5% 1/4W
R637		VARIANT (SEE VARIANT PARTS LIST)	
R638		VARIANT (SEE VARIANT PARTS LIST)	
R639	1-216-361-21	METAL 0.22	5% 2W
R640	1-249-415-11	CARBON 680	5% 1/4W
R641△	1-216-387-11	METAL 0.68	5% 3W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R642	1-249-437-11	CARBON 47K	5% 1/4W
R643	1-215-857-11	METAL 10	5% 1W
R645	1-249-429-11	CARBON 10K	5% 1/4W
R646	1-216-485-11	METAL 5.6K	5% 3W
R647	1-249-421-11	CARBON 2.2K	5% 1/4W
R649	1-249-417-11	CARBON 1K	5% 1/4W
R650	1-249-415-11	CARBON 680	5% 1/4W
R651	1-249-419-11	CARBON 1.5K	5% 1/4W
R652	1-247-843-11	CARBON 3.3K	5% 1/4W
R653△	1-215-898-11	METAL 10K	5% 2W
R654	1-249-419-11	CARBON 1.5K	5% 1/4W
R656		VARIANT (SEE VARIANT PARTS LIST)	
R657	1-249-417-11	CARBON 1K	5% 1/4W
R658	1-249-421-11	CARBON 2.2K	5% 1/4W
R659	1-216-362-11	METAL 0.27	5% 2W
R660	1-249-429-11	CARBON 10K	5% 1/4W
R662	1-1249-417-11	CARBON 1K	5% 1/4W
R664	1-249-417-11	CARBON 1K	5% 1/4W
R665	1-249-429-11	CARBON 10K	5% 1/4W
R672	1-216-485-11	METAL 5.6K	5% 3W
R673	1-249-421-11	CARBON 2.2K	5% 1/4W
R674	1-247-863-91	CARBON 22K	5% 1/4W
R675△	1-216-387-11	METAL 0.68	5% 3W
R676	1-216-485-11	METAL 5.6K	5% 3W

## RELAY

RY602△	1-755-266-11	RELAY, AC POWER
RY603△	1-755-018-11	RELAY

## SWITCH

S001		VARIANT (SEE VARIANT PARTS LIST)
S002		VARIANT (SEE VARIANT PARTS LIST)
S003		VARIANT (SEE VARIANT PARTS LIST)
S004		VARIANT (SEE VARIANT PARTS LIST)
S005		VARIANT (SEE VARIANT PARTS LIST)
S006		VARIANT (SEE VARIANT PARTS LIST)
S007		VARIANT (SEE VARIANT PARTS LIST)

## SWITCH

SW501	1-572-707-11	SWITCH, LEVER
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## TRANSFORMER

T501	1-437-210-11	TRANSFORMER, HORIZONTAL DRIVE
T502	1-431-731-11	TRANSFORMER, MODULATION
T504△	1-453-268-21	TRANSFORMER, FBT ASSY, NX-4005//X4J4
T603		VARIANT (SEE VARIANT PARTS LIST)

COMMON PARTS LISTING



<u>REF.NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
<b><u>THERMISTOR</u></b>			
THP601		VARIANT (SEE VARIANT PARTS LIST)	
THP602		VARIANT (SEE VARIANT PARTS LIST)	
<b><u>TUNER</u></b>			
TU101	8-598-431-00	TUNER, FSS BTF-WA411	
<b><u>CRYSTAL</u></b>			
X001	1-767-487-11	VIBRATOR, CRYSTAL	
X301	1-567-505-11	OSCILLATOR CRYSTAL	

REF.NO. PART NO. DESCRIPTION REMARK

# A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

**KV-27S42**

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

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.

**REF.NO. PART NO. DESCRIPTION REMARK**

**A BOARD VARIANT LIST: KV-27S42**

**CAPACITOR**

C216	1-126-959-11	ELECT	0.47 $\mu$ F	50V	20%
C217	1-126-959-11	ELECT	0.47 $\mu$ F	50V	20%
C380	1-163-021-91	CERAMIC	0.01 $\mu$ F	50V	10%
C381	1-163-021-91	CERAMIC	0.01 $\mu$ F	50V	10%
C382	1-163-021-91	CERAMIC	0.01 $\mu$ F	50V	10%
C418	1-126-964-11	ELECT	10 $\mu$ F	50V	20%
C613 $\triangle$	1-128-717-11	ELECT	680 $\mu$ F	250V	20%
C615	1-113-920-11	CERAMIC	0.0022 $\mu$ F	250V	20%

**CONNECTOR**

CN301	1-564-508-11	PLUG, CONNECTOR		5P	
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**DIODE**

D002	8-719-070-80	DIODE LNK0120022G			
D208	8-719-110-17	DIODE RD10ESB2			
D403	8-719-991-33	DIODE 1SS133T-77			

**IC**

IC004	8-742-014-11	HYB IC SBX1981-51			
IC203	8-759-366-77	IC MM1311AD			
IC401	8-759-490-17	IC TDA7057AQ/N2			
IC601 $\triangle$	8-749-015-61	IC STR-F6626			

**IC LINK**

PS201 $\triangle$	1-532-984-11	LINK, IC	2A/90V		
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**RESISTOR**

R020	1-216-069-00	RES,CHIP	6.8K	1/10W	5%
R021	1-249-415-11	CARBON	680	1/4W	5%
R022	1-249-416-11	CARBON	820	1/4W	5%
R023	1-216-057-00	RES,CHIP	2.2K	1/10W	5%
R065	1-216-295-91	SHORT			
R090	1-249-429-11	CARBON	10K	1/4W	5%
R211	1-247-807-31	CARBON	100	1/4W	5%
R212	1-216-065-91	RES,CHIP	4.7K	1/10W	5%
R231	1-249-421-11	CARBON	2.2K	1/4W	5%
R232	1-249-429-11	CARBON	10K	1/4W	5%
R233	1-249-429-11	CARBON	10K	1/4W	5%
R236	1-249-421-11	CARBON	2.2K	1/4W	5%
R400	1-216-081-00	RES,CHIP	22K	1/10W	5%
R407	1-216-295-91	SHORT			
R432	1-249-428-11	CARBON	8.2K	1/4W	5%

**REF.NO. PART NO. DESCRIPTION REMARK**

R633	1-215-483-00	METAL	390K	1/4W	1%
R656	1-249-399-11	CARBON	33	1/4W	5%

**SWITCH**

S001	1-692-431-21	SWITCH, TACTILE			
S002	1-692-431-21	SWITCH, TACTILE			
S003	1-692-431-21	SWITCH, TACTILE			
S004	1-692-431-21	SWITCH, TACTILE			
S005	1-692-431-21	SWITCH, TACTILE			
S006	1-692-431-21	SWITCH, TACTILE			
S007	1-692-431-21	SWITCH, TACTILE			

**TRANSFORMER**

T603 $\triangle$	1-433-806-11	TRANSFORMER, REGULATOR			
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**THERMISTOR**

THP602 $\triangle$	1-809-539-11	THERMISTOR, POSITIVE			
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The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

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.

**A**

**BOARD VARIANT PARTS LIST**

The parts on this page belong to the following model(s) only:

**KV-29SL42/29SL42C/29XL42M**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A BOARD VARIANT LIST: KV-29SL42/29SL42C/29XL42M</b>							
<b><u>CAPACITOR</u></b>							
C216	1-126-959-11	ELECT	0.47 $\mu$ F	20%	50V		
C217	1-126-959-11	ELECT	0.47 $\mu$ F	20%	50V		
C380	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		
C381	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		
C382	1-163-021-91	CERAMIC	0.01 $\mu$ F	10%	50V		
C418	1-126-964-11	ELECT	10 $\mu$ F	20%	50V		
C613 $\triangle$	1-128-718-11	ELECT	560 $\mu$ F	20%	400V		
C615	1-113-924-11	CERAMIC	0.0047 $\mu$ F	20%	250V		
C616	1-130-202-00	FILM	0.022 $\mu$ F	10%	400V		
C617	1-107-824-11	CERAMIC	220pF	5%	1KV		
C699	1-113-924-11	CERAMIC	0.0047 $\mu$ F	20%	250V		
<b><u>CONNECTOR</u></b>							
CN301	1-564-508-11	PLUG, CONNECTOR			5P		
<b><u>DIODE</u></b>							
D002	8-719-070-80	DIODE LNK0120022G					
D208	8-719-110-17	DIODE RD10ESB2					
D403	8-719-991-33	DIODE 1SS133T-77					
D609	8-719-311-31	DIODE RU-1P					
<b><u>IC</u></b>							
IC004	8-742-014-11	HYB IC SBX1981-51					
IC203	8-759-366-77	IC MM1311AD					
IC401	8-759-490-17	IC TDA7057AQ/N2					
IC601 $\triangle$	8-749-014-48	IC STR-F6656					
<b><u>IC LINK</u></b>							
PS201 $\triangle$	1-532-984-11	LINK, IC			2A/90V		
<b><u>RESISTOR</u></b>							
R020	1-216-069-00	RES,CHIP	6.8K	5%	1/10W		
R021	1-249-415-11	CARBON	680	5%	1/4W		
R022	1-249-416-11	CARBON	820	5%	1/4W		
R023	1-216-057-00	RES,CHIP	2.2K	5%	1/10W		
R065	1-216-295-91	SHORT					
R090	1-249-429-11	CARBON	10K	5%	1/4W		
R211	1-247-807-31	CARBON	100	5%	1/4W		
R212	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		
R231	1-249-421-11	CARBON	2.2K	5%	1/4W		
R232	1-249-429-11	CARBON	10K	5%	1/4W		
R233	1-249-429-11	CARBON	10K	5%	1/4W		
R236	1-249-421-11	CARBON	2.2K	5%	1/4W		
R400	1-216-081-00	RES,CHIP	22K	5%	1/10W		
R407	1-216-295-91	SHORT					
R432	1-249-428-11	CARBON	8.2K	5%	1/4W		
R633	1-215-479-00	METAL	270K	1%	1/4W		
R637	1-215-929-11	METAL	100K	5%	3W		
R638	1-215-479-00	METAL	270K	1%	1/4W		
R656	1-249-402-11	CARBON	56	5%	1/4W		
<b><u>SWITCH</u></b>							
S001	1-692-431-21	SWITCH, TACTILE					
S002	1-692-431-21	SWITCH, TACTILE					
S003	1-692-431-21	SWITCH, TACTILE					
S004	1-692-431-21	SWITCH, TACTILE					
S005	1-692-431-21	SWITCH, TACTILE					
S006	1-692-431-21	SWITCH, TACTILE					
S007	1-692-431-21	SWITCH, TACTILE					
<b><u>TRANSFORMER</u></b>							
T603 $\triangle$	1-433-807-11	TRANSFORMER, REGULATOR					
<b><u>THERMISTOR</u></b>							
THP601 $\triangle$	1-803-540-11	THERMISTOR					

# A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

**KV-27S46**

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

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.

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A BOARD VARIANT LIST: KV-27S46</b>			
<b><u>CAPACITOR</u></b>			
C216	1-126-959-11	ELECT 0.47 $\mu$ F	20% 50V
C217	1-126-959-11	ELECT 0.47 $\mu$ F	20% 50V
C370	1-163-021-91	CERAMIC 0.01 $\mu$ F	10% 50V
C371	1-163-021-91	CERAMIC 0.01 $\mu$ F	10% 50V
C372	1-163-021-91	CERAMIC 0.01 $\mu$ F	10% 50V
C418	1-126-964-11	ELECT 10 $\mu$ F	20% 50V
C613 $\triangle$	1-128-717-11	ELECT 680 $\mu$ F	20% 250V
C615	1-113-920-11	CERAMIC 0.0022 $\mu$ F	20% 250V
<b><u>CONNECTOR</u></b>			
CN301	1-564-508-11	PLUG, CONNECTOR	5P
CN302	1-691-616-11	CONNECTOR, BOARD TO BOARD	
<b><u>DIODE</u></b>			
D002	8-719-070-80	DIODE LNK0120022G	
D208	8-719-110-17	DIODE RD10ESB2	
D403	8-719-991-33	DIODE 1SS133T-77	
<b><u>IC</u></b>			
IC004	8-742-014-11	HYB IC SBX1981-51	
IC203	8-759-534-81	IC MM1313AD/	
IC401	8-759-490-17	IC TDA7057AQ/N2	
IC601 $\triangle$	8-749-015-61	IC STR-F6626	
<b><u>JACK</u></b>			
J202	1-774-749-11	JACK BLOCK, PIN	
<b><u>IC LINK</u></b>			
PS201 $\triangle$	1-532-984-11	LINK, IC	2A/90V
<b><u>RESISTOR</u></b>			
R020	1-216-069-00	RES,CHIP 6.8K	5% 1/10W
R021	1-249-415-11	CARBON 680	5% 1/4W
R022	1-249-416-11	CARBON 820	5% 1/4W
R023	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
R065	1-216-295-91	SHORT	
R090	1-249-429-11	CARBON 10K	5% 1/4W
R211	1-247-807-31	CARBON 100	5% 1/4W
R212	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R231	1-249-421-11	CARBON 2.2K	5% 1/4W
R232	1-249-429-11	CARBON 10K	5% 1/4W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R233	1-249-429-11	CARBON 10K	5% 1/4W
R236	1-249-421-11	CARBON 2.2K	5% 1/4W
R283	1-216-295-91	SHORT	
R400	1-216-081-00	RES,CHIP 22K	5% 1/10W
R432	1-249-428-11	CARBON 8.2K	5% 1/4W
R633	1-215-483-00	METAL 390K	1% 1/4W
R656	1-249-399-11	CARBON 33	5% 1/4W
<b><u>SWITCH</u></b>			
S001	1-692-431-21	SWITCH, TACTILE	
S002	1-692-431-21	SWITCH, TACTILE	
S003	1-692-431-21	SWITCH, TACTILE	
S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S007	1-692-431-21	SWITCH, TACTILE	

## **TRANSFORMER**

T603 $\triangle$  1-433-806-11 TRANSFORMER, REGULATOR

## **THERMISTOR**

THP602 $\triangle$  1-809-539-11 THERMISTOR, POSITIVE

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

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.



# BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

**KV-29SL46**

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A BOARD VARIANT LIST: KV-29SL46</b>			
<b>CAPACITOR</b>			
C216	1-126-959-11	ELECT 0.47 $\mu$ F	20% 50V
C217	1-126-959-11	ELECT 0.47 $\mu$ F	20% 50V
C370	1-163-021-91	CERAMIC 0.01 $\mu$ F	10% 50V
C371	1-163-021-91	CERAMIC 0.01 $\mu$ F	10% 50V
C372	1-163-021-91	CERAMIC 0.01 $\mu$ F	10% 50V
C418	1-126-964-11	ELECT 10 $\mu$ F	20% 50V
C613 $\triangle$	1-128-718-11	ELECT 560 $\mu$ F	20% 400V
C615	1-113-924-11	CERAMIC 0.0047 $\mu$ F	20% 250V
C616	1-130-202-00	FILM 0.022 $\mu$ F	10% 400V
C617	1-107-824-11	CERAMIC 220pF	5% 1KV
C699	1-113-924-11	CERAMIC 0.0047 $\mu$ F	20% 250V
<b>CONNECTOR</b>			
CN301	1-564-508-11	PLUG, CONNECTOR	5P
<b>DIODE</b>			
D002	8-719-070-80	DIODE LNK0120022G	
D208	8-719-110-17	DIODE RD10ESB2	
D403	8-719-991-33	DIODE 1SS133T-77	
D609	8-719-311-31	DIODE RU-1P	
<b>IC</b>			
IC004	8-742-014-11	HYB IC SBX1981-51	
IC203	8-759-534-81	IC MM1313AD/	
IC401	8-759-490-17	IC TDA7057AQ/N2	
IC601 $\triangle$	8-749-014-48	IC STR-F6656	
<b>JACK</b>			
J202	1-774-749-11	JACK BLOCK,	PIN
<b>IC LINK</b>			
PS201 $\triangle$	1-532-984-11	LINK, IC	2A/90V
<b>RESISTOR</b>			
R020	1-216-069-00	RES,CHIP 6.8K	5% 1/10W
R021	1-249-415-11	CARBON 680	5% 1/4W
R022	1-249-416-11	CARBON 820	5% 1/4W
R023	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
R065	1-216-295-91	SHORT	
REF.NO.	PART NO.	DESCRIPTION	REMARK
R090	1-249-429-11	CARBON 10K	5% 1/4W
R211	1-247-807-31	CARBON 100	5% 1/4W
R212	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R231	1-249-421-11	CARBON 2.2K	5% 1/4W
R232	1-249-429-11	CARBON 10K	5% 1/4W
R233	1-249-429-11	CARBON 10K	5% 1/4W
R236	1-249-421-11	CARBON 2.2K	5% 1/4W
R283	1-216-295-91	SHORT	
R400	1-216-081-00	RES,CHIP 22K	5% 1/10W
R432	1-249-428-11	CARBON 8.2K	5% 1/4W
R633	1-215-479-00	METAL 270K	1% 1/4W
R637	1-215-929-11	METAL 100K	5% 3W
R638	1-215-479-00	METAL 270K	1% 1/4W
R656	1-249-402-11	CARBON 56	5% 1/4W
<b>SWITCH</b>			
S001	1-692-431-21	SWITCH, TACTILE	
S002	1-692-431-21	SWITCH, TACTILE	
S003	1-692-431-21	SWITCH, TACTILE	
S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S007	1-692-431-21	SWITCH, TACTILE	
<b>TRANSFORMER</b>			
T603 $\triangle$	1-433-807-11	TRANSFORMER, REGULATOR	
<b>THERMISTOR</b>			
THP601 $\triangle$	1-803-540-11	THERMISTOR	

# A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

**KV-27S66**

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

Les composants identifiés per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## A BOARD VARIANT LIST: KV-27S66

### CAPACITOR

REF.NO.	PART NO.	DESCRIPTION	REMARK
C216	1-126-959-11	ELECT 0.47 $\mu$ F 20% 50V	
C217	1-126-959-11	ELECT 0.47 $\mu$ F 20% 50V	
C250	1-126-960-11	ELECT 1 $\mu$ F 20% 50V	
C251	1-126-960-11	ELECT 1 $\mu$ F 20% 50V	
C252	1-126-959-11	ELECT 0.47 $\mu$ F 20% 50V	
C370	1-163-021-91	CERAMIC 0.01 $\mu$ F 10% 50V	
C371	1-163-021-91	CERAMIC 0.01 $\mu$ F 10% 50V	
C372	1-163-021-91	CERAMIC 0.01 $\mu$ F 10% 50V	
C418	1-126-964-11	ELECT 10 $\mu$ F 20% 50V	
C613 $\triangle$	1-128-717-11	ELECT 680 $\mu$ F 20% 250V	
C615	1-113-920-11	CERAMIC 0.0022 $\mu$ F 20% 250V	
C627	1-164-004-11	CERAMIC 10 $\mu$ F 10% 25V	

### CONNECTOR

CN150	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P	
CN301	1-564-508-11	PLUG, CONNECTOR 5P	
CN302	1-691-616-11	CONNECTOR, BOARD TO BOARD	

### DIODE

D002	8-719-070-80	DIODE LNK0120022G	
D208	8-719-110-17	DIODE RD10ESB2	
D403	8-719-991-33	DIODE 1SS133T-77	

### IC

IC004	8-742-014-11	HYB IC SBX1981-51	
IC203	8-759-534-81	IC MM1313AD/	
IC401	8-759-490-17	IC TDA7057AQ/N2	
IC601 $\triangle$	8-749-015-61	IC STR-F6626	

### JACK

J202	1-774-749-11	JACK BLOCK, PIN	
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### IC LINK

PS201 $\triangle$	1-532-984-11	LINK, IC 2A/90V	
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### RESISTOR

R020	1-216-069-00	RES,CHIP 6.8K 5% 1/10W	
R021	1-249-415-11	CARBON 680 5% 1/4W	
R022	1-249-416-11	CARBON 820 5% 1/4W	
R023	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R065	1-216-295-91	SHORT	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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R090	1-249-429-11	CARBON 10K 5% 1/4W	
R211	1-247-807-31	CARBON 100 5% 1/4W	
R212	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R231	1-249-421-11	CARBON 2.2K 5% 1/4W	
R232	1-249-429-11	CARBON 10K 5% 1/4W	
R233	1-249-429-11	CARBON 10K 5% 1/4W	
R236	1-249-421-11	CARBON 2.2K 5% 1/4W	
R278	1-216-295-91	SHORT	
R283	1-216-295-91	SHORT	
R400	1-216-081-00	RES,CHIP 22K 5% 1/10W	
R432	1-249-428-11	CARBON 8.2K 5% 1/4W	
R633	1-215-483-00	METAL 390K 1% 1/4W	
R656	1-249-399-11	CARBON 33 5% 1/4W	

### SWITCH

S001	1-692-431-21	SWITCH, TACTILE	
S002	1-692-431-21	SWITCH, TACTILE	
S003	1-692-431-21	SWITCH, TACTILE	
S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S007	1-692-431-21	SWITCH, TACTILE	

### TRANSFORMER

T603 $\triangle$	1-433-806-11	TRANSFORMER, REGULATOR	
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### THERMISTOR

THP602 $\triangle$	1-809-539-11	THERMISTOR, POSITIVE	
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The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

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

The parts on this page belong to the following model(s) only:  
**KV-29AL42/29AL42C**

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A BOARD VARIANT LIST: KV-29AL42/29AL42C</b>			
<b>CAPACITOR</b>			
C380	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C381	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C382	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C613 $\Delta$	1-128-718-11	ELECT	560 $\mu$ F 20% 400V
C615	1-113-924-11	CERAMIC	0.0047 $\mu$ F 20% 250V
C616	1-130-202-00	FILM	0.022 $\mu$ F 10% 400V
C617	1-107-824-11	CERAMIC	220pF 5% 1KV
C699	1-113-924-11	CERAMIC	0.0047 $\mu$ F 20% 250V
<b>CONNECTOR</b>			
CN251	1-564-510-11	PLUG, CONNECTOR	7P
CN253	1-564-510-11	PLUG, CONNECTOR	7P
CN301	1-564-511-11	PLUG, CONNECTOR	8P
<b>DIODE</b>			
D208	8-719-982-96	DIODE MTZJ-T-77-2.2A	
D609	8-719-311-31	DIODE RU-1P	
<b>IC</b>			
IC203	8-759-366-77	IC MM1311AD	
IC601 $\Delta$	8-749-014-48	IC STR-F6656	
<b>TRANSISTOR</b>			
Q390	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q391	8-729-422-27	TRANSISTOR 2SD601A-Q	
<b>RESISTOR</b>			
R255	1-216-022-00	RES,CHIP	75 5% 1/10W
R390	1-249-417-11	CARBON	1K 5% 1/4W
R391 $\Delta$	1-216-073-00	RES,CHIP	10K 5% 1/10W
R392	1-216-049-91	RES,CHIP	1K 5% 1/10W
R394	1-216-033-00	RES,CHIP	220 5% 1/10W
R395	1-216-049-91	RES,CHIP	1K 5% 1/10W
R407	1-216-295-91	SHORT	
R450	1-216-295-91	SHORT	
R451	1-216-295-91	SHORT	
R633	1-215-479-00	METAL	270K 1% 1/4W
R637	1-215-929-11	METAL	100K 5% 3W
R638	1-215-479-00	METAL	270K 1% 1/4W
R656	1-249-402-11	CARBON	56 5% 1/4W

REF.NO. PART NO. DESCRIPTION REMARK

**TRANSFORMER**

T603 $\Delta$  1-433-807-11 TRANSFORMER, REGULATOR

**THERMISTOR**

THP601 $\Delta$  1-803-540-11 THERMISTOR



# A BOARD VARIANT PARTS LIST

The parts on this page belong to the following model(s) only:

**KV-29AL66/29AL66C**

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

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.

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## A BOARD VARIANT LIST: KV-29AL66/29AL66C

### CAPACITOR

REF.NO.	PART NO.	DESCRIPTION	REMARK
C250	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
C251	1-126-960-11	ELECT	1 $\mu$ F 20% 50V
C252	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
C280	1-126-935-11	ELECT	470 $\mu$ F 20% 16V
C281	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
C282	1-126-959-11	ELECT	0.47 $\mu$ F 20% 50V
C370	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C371	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C372	1-163-021-91	CERAMIC	0.01 $\mu$ F 10% 50V
C613 $\triangle$	1-128-718-11	ELECT	560 $\mu$ F 20% 400V
C615	1-113-924-11	CERAMIC	0.0047 $\mu$ F 20% 250V
C616	1-130-202-00	FILM	0.022 $\mu$ F 10% 400V
C617	1-107-824-11	CERAMIC	220pF 5% 1KV
C627	1-164-004-11	CERAMIC	0.1 $\mu$ F 10% 25V
C699	1-113-924-11	CERAMIC	0.0047 $\mu$ F 20% 250V

### CONNECTOR

CN151	1-564-511-11	PLUG, CONNECTOR	8P
CN152	1-564-509-11	PLUG, CONNECTOR	6P
CN251	1-564-510-11	PLUG, CONNECTOR	7P
CN253	1-564-510-11	PLUG, CONNECTOR	7P
CN301	1-564-511-11	PLUG, CONNECTOR	8P
CN302	1-691-616-11	CONNECTOR, BOARD TO BOARD	

### DIODE

D208	8-719-982-96	DIODE MTZJ-T-77-2.2A	
D280	8-719-981-99	DIODE MTZJ-3.3	
D281	8-719-981-99	DIODE MTZJ-3.3	
D609	8-719-311-31	DIODE RU-1P	

### IC

IC203	8-759-534-81	IC MM1313AD/	
IC601 $\triangle$	8-749-014-48	IC STR-F6656	

### JACK

J202	1-774-749-11	JACK BLOCK, PIN	
J204	1-774-749-11	JACK BLOCK, PIN	

### TRANSISTOR

Q080	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q280	8-729-216-22	TRANSISTOR 2SA1162-G	
Q281	8-729-216-22	TRANSISTOR 2SA1162-G	
Q282	8-729-216-22	TRANSISTOR 2SA1162-G	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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Q283	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q284	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q285	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q390	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q391	8-729-422-27	TRANSISTOR 2SD601A-Q	

### RESISTOR

R080	1-247-863-91	CARBON	22K	5%	1/4W
R082	1-216-073-00	RES,CHIP	10K	5%	1/10W
R083	1-216-041-00	RES,CHIP	470	5%	1/10W
R084	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-216-022-00	RES,CHIP	75	5%	1/10W
R278	1-216-295-91	SHORT			
R280	1-247-807-31	CARBON	100	5%	1/4W
R281	1-247-807-31	CARBON	100	5%	1/4W
R282	1-247-807-31	CARBON	100	5%	1/4W
R283	1-216-295-91	SHORT			
R284	1-260-091-11	CARBON	220	5%	1/2W
R285	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R286	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R287	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R288	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R289	1-216-021-00	RES,CHIP	68	5%	1/10W
R290	1-216-113-00	RES,CHIP	470K	5%	1/10W
R291	1-216-113-00	RES,CHIP	470K	5%	1/10W
R292	1-216-113-00	RES,CHIP	470K	5%	1/10W
R293	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R294	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R295	1-216-069-00	RES,CHIP	6.8K	5%	1/10W
R390	1-249-417-11	CARBON	1K	5%	1/4W
R391 $\triangle$	1-216-073-00	RES,CHIP	10K	5%	1/10W
R392	1-216-049-91	RES,CHIP	1K	5%	1/10W
R394	1-216-033-00	RES,CHIP	220	5%	1/10W
R395	1-216-049-91	RES,CHIP	1K	5%	1/10W
R450	1-216-295-91	SHORT			
R451	1-216-295-91	SHORT			
R633	1-215-479-00	METAL	270K	1%	1/4W
R637	1-215-929-11	METAL	100K	5%	3W
R638	1-215-479-00	METAL	270K	1%	1/4W
R656	1-249-402-11	CARBON	56	5%	1/4W

### TRANSFORMER

T603 $\triangle$	1-433-807-11	TRANSFORMER, REGULATOR	
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### THERMISTOR

THP601 $\triangle$	1-803-540-11	THERMISTOR	
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The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

Les composants identifiés per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>C</b>			
*	<b>A-1331-920-A C BOARD, COMPLETE</b> (KV-27S42/27S46/27S66/29SL42/29SL42C/29SL46/29XL42M only)		
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<b>CAPACITOR</b>			
C1751	1-107-652-11	ELECT 10 $\mu$ F	20% 250V
C1752	1-162-114-00	CERAMIC 0.0047 $\mu$ F	2KV
C1755	1-107-667-11	ELECT 2.2 $\mu$ F	20% 160V
<b>CONNECTOR</b>			
CN1751*	1-564-509-11	PLUG, CONNECTOR 6P	
CN1752*	1-564-508-11	PLUG, CONNECTOR 5P	
CN1754	1-695-915-11	TAB (CONTACT)	
<b>DIODE</b>			
D1754	8-719-901-83	DIODE 1SS83	
D1755	8-719-901-83	DIODE 1SS83	
D1756	8-719-901-83	DIODE 1SS83	
D1758	8-719-302-43	DIODE EL1Z	
<b>IC</b>			
IC1751	8-759-562-43	IC TDA6108JF/N1B	
<b>JACK</b>			
J1751 $\triangle$	1-251-688-11	SOCKET, CRT	
<b>COIL</b>			
L1751	1-408-613-31	INDUCTOR 68 $\mu$ H	
<b>RESISTOR</b>			
R1756	1-260-099-11	CARBON 1K	5% 1/2W
R1757	1-260-099-11	CARBON 1K	5% 1/2W
R1758	1-260-099-11	CARBON 1K	5% 1/2W
R1759	1-260-087-11	CARBON 100	5% 1/2W
R1760	1-260-123-11	CARBON 100K	5% 1/2W
R1761	1-216-373-11	METAL OXIDE 2.2	5% 2W F
R1762	1-216-375-00	METAL OXIDE 3.3	5% 2W F
R1763	1-247-807-31	CARBON 100	5% 1/4W
R1764	1-247-807-31	CARBON 100	5% 1/4W
R1765	1-247-807-31	CARBON 100	5% 1/4W
R1770	1-260-132-11	CARBON 560K	5% 1/2W

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>CV</b>			
*	<b>A-1331-921-A CV BOARD, COMPLETE</b> (KV-29AL42/29AL42C/29AL66/29AL66C only)		
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<b>CAPACITOR</b>			
C944	1-102-129-00	CERAMIC 0.01 $\mu$ F	10% 50V
C945	1-102-110-00	CERAMIC 220pF	10% 50V
C946	1-104-665-11	ELECT 100 $\mu$ F	20% 25V
C949	1-161-830-00	CERAMIC 0.0047 $\mu$ F	500V
C950	1-126-941-11	ELECT 470 $\mu$ F	20% 25V
C951	1-107-645-11	ELECT 22 $\mu$ F	20% 160V
C952	1-104-999-11	MYLAR 0.1 $\mu$ F	10% 200V
C953	1-106-383-00	MYLAR 0.047 $\mu$ F	10% 200V
C954	1-130-471-00	FILM 0.001 $\mu$ F	5% 50V
C955	1-107-667-11	ELECT 2.2 $\mu$ F	20% 160V
C956	1-130-471-00	FILM 0.001 $\mu$ F	5% 50V
C957	1-106-383-00	MYLAR 0.047 $\mu$ F	10% 200V
C958	1-126-941-11	ELECT 470 $\mu$ F	20% 25V
C1701	1-107-652-11	ELECT 10 $\mu$ F	20% 250V
C1702	1-162-114-00	CERAMIC 0.0047 $\mu$ F	2KV
C1705	1-107-667-11	ELECT 2.2 $\mu$ F	20% 160V
C1941	1-126-941-11	ELECT 470 $\mu$ F	20% 25V
C1948	1-102-121-00	CERAMIC 0.0022 $\mu$ F	10% 50V
<b>CONNECTOR</b>			
CN942*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1701*	1-564-509-11	PLUG, CONNECTOR 6P	
CN1702*	1-564-511-11	PLUG, CONNECTOR 8P	
CN1704	1-695-915-11	TAB (CONTACT)	
<b>DIODE</b>			
D941	8-719-991-33	DIODE 1SS133T-77	
D946	8-719-110-88	DIODE RD39ESB2	
D947	8-719-110-88	DIODE RD39ESB2	
D1704	8-719-901-83	DIODE 1SS83	
D1705	8-719-901-83	DIODE 1SS83	
D1706	8-719-901-83	DIODE 1SS83	
D1708	8-719-302-43	DIODE EL1Z	
<b>IC</b>			
IC1701	8-759-562-43	IC TDA6108JF/N1B	



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Les composants identifiés par un trame et une marque  $\Delta$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>JACK</b>			
J1701	$\Delta$ 1-251-688-11	SOCKET, CRT	
<b>COIL</b>			
L1701	1-408-613-31	INDUCTOR 68 $\mu$ H	
<b>TRANSISTOR</b>			
Q943	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q944	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q945	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q946	8-729-017-05	TRANSISTOR 2SA1837	
Q947	8-729-017-06	TRANSISTOR 2SC4793	
Q965	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q966	8-729-119-76	TRANSISTOR 2SA1175-HFE	
<b>RESISTOR</b>			
R943	1-247-807-31	CARBON 100 5% 1/4W	
R948	1-249-417-11	CARBON 1K 5% 1/4W	
R949	1-249-421-11	CARBON 2.2K 5% 1/4W	
R950	1-249-417-11	CARBON 1K 5% 1/4W	
R951	1-249-417-11	CARBON 1K 5% 1/4W	
R952	1-249-413-11	CARBON 470 5% 1/4W	
R953	1-249-403-11	CARBON 68 5% 1/4W	
R954	1-247-815-91	CARBON 220 5% 1/4W	
R955	1-249-416-11	CARBON 820 5% 1/4W	
R956	1-247-807-31	CARBON 100 5% 1/4W	
R957	1-249-429-11	CARBON 10K 5% 1/4W	
R958	1-247-807-31	CARBON 100 5% 1/4W	
R959	1-249-403-11	CARBON 68 5% 1/4W	
R977	1-249-397-11	CARBON 22 5% 1/4W F	
R979	1-249-401-11	CARBON 47 5% 1/4W	
R1706	1-260-099-11	CARBON 1K 5% 1/2W	
R1707	1-260-099-11	CARBON 1K 5% 1/2W	
R1708	1-260-099-11	CARBON 1K 5% 1/2W	
R1709	1-260-087-11	CARBON 100 5% 1/2W	
R1710	1-260-123-11	CARBON 100K 5% 1/2W	
R1711	1-216-373-11	METAL OXIDE 2.2 5% 2W F	
R1712	1-216-375-00	METAL OXIDE 3.3 5% 2W F	
R1713	1-247-807-31	CARBON 100 5% 1/4W	
R1714	1-247-807-31	CARBON 100 5% 1/4W	
R1715	1-247-807-31	CARBON 100 5% 1/4W	
R1720	1-260-132-11	CARBON 560K 5% 1/2W	
R1941	1-260-312-11	CARBON 47 5% 1/2W	
R1942	1-249-387-11	CARBON 3.3 5% 1/4W F	
R1943	1-249-414-11	CARBON 560 5% 1/4W F	
R1944	1-249-432-11	CARBON 18K 5% 1/4W	
R1945	1-215-912-11	METAL OXIDE 150 5% 3W F	
R1946	1-249-417-11	CARBON 1K 5% 1/4W F	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1947	1-249-432-11	CARBON 18K 5% 1/4W	
R1948	1-249-414-11	CARBON 560 5% 1/4W	
R1949	1-249-387-11	CARBON 3.3 5% 1/4W F	
R1950	1-249-401-11	CARBON 47 5% 1/4W F	
<b>E</b>			
*A-1343-654-A E BOARD, COMPLETE (KV-27S42, 27S46, 27S66 only)			
*A-1343-656-A E BOARD, COMPLETE (KV-29AL42, 29AL42C, 29AL66, 29AL66C, 29SL42, 29SL42C, 29SL46, 29XL42M, only)			
1-533-223-11 HOLDER, FUSE			
* 4-374-846-01 COVER, CAPACITOR, CAP TYPE			
<b>CAPACITOR</b>			
C5002	1-107-679-91	ELECT 10 $\mu$ F 20% 450V	
C5003	1-136-601-11	FILM 0.01 $\mu$ F 10% 630V	
C5004	1-130-471-00	MYLAR 0.001 $\mu$ F 5% 50V	
C5006	1-130-471-00	MYLAR 0.001 $\mu$ F 5% 50V	
C5007	1-130-467-00	MYLAR 470pF 5% 50V	
C5008	1-130-471-00	MYLAR 0.001 $\mu$ F 5% 50V	
C5009	1-126-965-11	ELECT 22 $\mu$ F 20% 50V	
C5010	1-115-804-91	ELECT 120 $\mu$ F 20% 35V	
C5020	$\Delta$ 1-113-920-11	CERAMIC 0.0022 $\mu$ F 20% 125V	
(KV-27S42/27S46/27S66 only)			
C5020	$\Delta$ 1-113-924-11	CERAMIC 0.0047 $\mu$ F 20% 250V	
(KV-29AL66/29AL66C/29AL42/29AL42C/29SL42/29SL42C/29XL42M/29SL46 only)			
C5021	$\Delta$ 1-113-924-11	CERAMIC 0.0047 $\mu$ F 20% 250V	
(KV-29AL66/29AL66C/29AL42/29AL42C/29SL42/29SL42C/29XL42M/29SL46 only)			
C5050	$\Delta$ 1-136-311-11	FILM 0.47 $\mu$ F 20% 125V	
C5150	$\Delta$ 1-136-311-11	FILM 0.47 $\mu$ F 20% 125V	
(KV-27S42/27S46/27S66 only)			
C5643	1-113-924-11	CERAMIC 0.0047 $\mu$ F 20% 250V	
C5644	1-113-924-11	CERAMIC 0.0047 $\mu$ F 20% 250V	
<b>CONNECTOR</b>			
CN5000*	1-580-843-11	PIN, CONNECTOR (POWER) 2P	
CN5001*	1-564-506-11	PLUG, CONNECTOR 3P	
CN5002*	1-580-843-11	PIN, CONNECTOR (POWER) 2P	
CN5003*	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
<b>DIODE</b>			
D5003	8-719-948-45	DIODE ERA22-08	
D5004	8-719-991-33	DIODE 1SS133T-77	
D5005	8-719-991-33	DIODE 1SS133T-77	
D5006	8-719-109-93	DIODE RD6.2ESB2	
D5007	8-719-510-48	DIODE D1N20R	
D5008	8-719-063-70	DIODE D1NL20U	
D5631	8-719-911-55	DIODE U05G	
D5632	8-719-911-55	DIODE U05G	

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

Les composants identifiés per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REF.NO.	PART NO.	DESCRIPTION	REMARK
<b><u>FUSE</u></b>			
F5050	$\triangle$ 1-576-193-11	FUSE 6.3A/125V (KV-27S42/27S46/27S66 only)	
F5050	$\triangle$ 1-532-506-51	FUSE 6.3A/250V (KV-29AL66/29AL66C/29AL42/29AL42C/29SL42/29SL42C/29XL42M/29SL46 only)	
<b><u>TRANSISTOR</u></b>			
Q5001	8-729-044-30	TRANSISTOR 2SK2845-LB102	
Q5002	8-729-119-78	TRANSISTOR 2SC2785-HFE	
<b><u>RESISTOR</u></b>			
R5001	1-249-389-11	CARBON 4.7 5% 1/4W F	
R5002	1-215-485-00	METAL 470K 1% 1/4W	
R5003	1-240-205-91	CARBON 22M 5% 1/2W	
R5007	1-249-421-11	CARBON 2.2K 5% 1/4W	
R5008	1-249-429-11	CARBON 10K 5% 1/4W	
R5009	1-249-437-11	CARBON 47K 5% 1/4W	
R5010	1-249-415-11	CARBON 680 5% 1/4W	
R5011	1-260-302-51	CARBON 6.8 5% 1/2W	
R5012	1-249-417-11	CARBON 1K 5% 1/4W	
R5013	1-249-415-11	CARBON 680 5% 1/4W	
R5050	1-219-512-11	CARBON 2.2M 5% 1/2W	
R5350	$\triangle$ 1-219-513-11	CARBON 4.7M 5% 1/2W (KV-27S42/27S46/27S66 only)	
R5350	$\triangle$ 1-247-289-00	CARBON 8.2M 5% 1W (KV-29AL66/29AL66C/29AL42/29AL42C/29SL42/29SL42C/29XL42M/29SL46 only)	
<b><u>TRANSFORMER</u></b>			
T5001	$\triangle$ 1-431-852-11	TRANSFORMER, CONVERTER (SRT)	
T5050	$\triangle$ 1-431-838-11	TRANSFORMER, LINE FILTER (KV-27S42/27S46/27S66 only)	
T5050	$\triangle$ 1-426-717-11	TRANSFORMER, LINE FILTER (KV-29AL66/29AL66C/29AL42/29AL42C/29SL42/29SL42C/29XL42M/29SL46 only)	
<b><u>THERMISTOR</u></b>			
TH506	1-803-586-11	THERMISTOR	
<b><u>VARISTOR</u></b>			
VDR505	1-803-585-11	VARISTOR (KV-27S42/27S46/27S66 only)	
VDR505	1-803-587-11	VARISTOR (KV-29AL66/29AL66C/29AL42/29AL42C/29SL42/29SL42C/29XL42M/29SL46 only)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b><u>HT</u></b>			
*	A-1372-616-A	HT BOARD, COMPLETE (KV-29AL42/29AL42C/29AL66/29AL66C only)	
<b><u>CONNECTOR</u></b>			
CN2201*	1-564-518-11	PLUG, CONNECTOR 3P	
<b><u>RESISTOR</u></b>			
R2001	1-249-415-11	CARBON 680 5% 1/4W	
R2002	1-249-416-11	CARBON 820 5% 1/4W	
R2003	1-249-421-11	CARBON 2.2K 5% 1/4W	
R2004	1-249-427-11	CARBON 6.8K 5% 1/4W	
R2005	1-249-429-11	CARBON 10K 5% 1/4W	
R2006	1-247-815-91	CARBON 220 5% 1/4W	
<b><u>SWITCH</u></b>			
S2001	1-572-198-11	SWITCH, KEYBOARD	
S2002	1-572-198-11	SWITCH, KEYBOARD	
S2003	1-572-198-11	SWITCH, KEYBOARD	
S2004	1-572-198-11	SWITCH, KEYBOARD	
S2005	1-572-198-11	SWITCH, KEYBOARD	
S2006	1-572-198-11	SWITCH, KEYBOARD	
S2007	1-572-198-11	SWITCH, KEYBOARD	



REF.NO. PART NO. DESCRIPTION REMARK



\* **A-1372-617-A HV BOARD, COMPLETE**  
(KV-29AL42/29AL42C/29AL66/29AL66C only)

**CAPACITOR**

C1407	1-137-194-91	FILM	0.47µF	5%	50V
C1408	1-136-287-11	FILM	0.0047µF	5%	50V
C1409	1-137-194-81	FILM	0.47µF	5%	50V
C1410	1-126-964-11	ELECT	10µF	20%	50V
C1411	1-126-964-11	ELECT	10µF	20%	50V
C1412	1-126-964-11	ELECT	10µF	20%	50V
C1413	1-126-964-11	ELECT	10µF	20%	50V
C1415	1-126-968-11	ELECT	100µF	20%	50V
C1416	1-106-375-12	MYLAR	0.022µF	20%	200V
C1417	1-137-414-11	FILM	0.0047µF	10%	100V
C1418	1-102-114-00	CERAMIC	470pF	10%	50V
C1419	1-130-495-00	FILM	0.1µF	5%	50V
C1420	1-137-371-11	FILM	0.015µF	5%	50V
C1421	1-102-121-00	CERAMIC	0.0022µF	10%	50V
C1422	1-137-414-11	FILM	0.0047µF	10%	100V
C1423	1-137-194-91	FILM	0.47µF	5%	50V
C1424	1-130-495-00	FILM	0.1µF	5%	50V
C1425	1-137-370-11	FILM	0.01µF	5%	50V
C1426	1-130-495-00	FILM	0.1µF	5%	50V
C1427	1-137-370-11	FILM	0.01µF	5%	50V
C1428	1-130-495-00	FILM	0.1µF	5%	50V
C1429	1-137-370-11	FILM	0.01µF	5%	50V
C1430	1-126-964-11	ELECT	10µF	20%	50V
C1431	1-136-287-11	FILM	0.0047µF	5%	50V
C1432	1-126-964-11	ELECT	10µF	20%	50V
C1437	1-126-964-11	ELECT	10µF	20%	50V
C2068	1-104-665-11	ELECT	100µF	20%	25V
C2234	1-126-960-11	ELECT	1µF	20%	50V
C2235	1-126-960-11	ELECT	1µF	20%	50V
C2236	1-106-343-00	MYLAR	0.001µF	10%	200V

**CONNECTOR**

CN1405*1-564-510-11	PLUG, CONNECTOR	7P
CN1406*1-564-506-11	PLUG, CONNECTOR	3P
CN2001*1-564-506-11	PLUG, CONNECTOR	3P
CN2201*1-564-508-11	PLUG, CONNECTOR	5P
CN2202*1-564-510-11	PLUG, CONNECTOR	7P

**DIODE**

D2001	8-719-110-17	DIODE RD10ESB2
D2006	1-810-039-21	LED UNIT
D2235	8-719-110-17	DIODE RD10ESB2
D2236	8-719-110-17	DIODE RD10ESB2

REF.NO. PART NO. DESCRIPTION REMARK

**IC**

IC1403	8-759-496-03	IC NJM2178L
IC2003	8-742-014-11	HYB IC SBX1981-51

**JACK**

J2231	1-691-110-11	JACK, PIN 3P
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**RESISTOR**

R1403	1-215-437-00	METAL	4.7K	1%	1/4W
R1404	1-249-419-11	CARBON	1.5K	5%	1/4W
R1405	1-249-424-11	CARBON	3.9K	5%	1/4W
R1406	1-249-437-11	CARBON	47K	5%	1/4W
R1407	1-249-435-11	CARBON	33K	5%	1/4W
R1408	1-215-469-00	METAL	100K	1%	1/4W
R1409	1-249-417-11	CARBON	1K	5%	1/4W
R1410	1-215-461-00	METAL	47K	1%	1/4W
R1411	1-249-429-11	CARBON	10K	5%	1/4W
R1412	1-247-807-31	CARBON	100	5%	1/4W
R1413	1-247-807-31	CARBON	100	5%	1/4W
R1414	1-249-429-11	CARBON	10K	5%	1/4W
R1415	1-249-429-11	CARBON	10K	5%	1/4W
R1416	1-249-429-11	CARBON	10K	5%	1/4W
R1417	1-249-429-11	CARBON	10K	5%	1/4W
R1419	1-249-441-11	CARBON	100K	5%	1/4W
R1420	1-249-429-11	CARBON	10K	5%	1/4W
R1421	1-249-441-11	CARBON	100K	5%	1/4W
R1422	1-249-429-11	CARBON	10K	5%	1/4W
R1423	1-249-441-11	CARBON	100K	5%	1/4W
R1430	1-215-461-00	METAL	47K	1%	1/4W
R1431	1-249-429-11	CARBON	10K	5%	1/4W
R1433	1-249-429-11	CARBON	10K	5%	1/4W
R1434	1-215-445-00	METAL	10K	1%	1/4W
R1435	1-249-431-11	CARBON	15K	5%	1/4W
R2236	1-247-895-91	CARBON	470K	5%	1/4W
R2238	1-247-895-91	CARBON	470K	5%	1/4W



\* **A-1380-608-A K BOARD, COMPLETE**  
(KV-27S66/29AL42/29AL42C/29AL66/29AL66C only)

\* **A-1380-611-A K BOARD, COMPLETE**  
(KV-27S66 only)

\* **A-1380-612-A K BOARD, COMPLETE**  
(KV-29AL42/29AL42C only)

4-382-854-11 SCREW (M3X10), P, SW (+)

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

Les composants identifiés per un trame et une marque  $\triangle$  sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>CAPACITOR</b>				<b>IC LINK</b>			
C1001	1-126-968-11	ELECT	100µF 20% 50V	PS1400	1-532-984-11	LINK, IC 2A/90V	
C1002	1-104-664-11	ELECT	47µF 20% 25V	PS1401	1-532-984-11	LINK, IC 2A/90V	
C1003	1-126-964-11	ELECT	10µF 20% 50V	<b>TRANSISTOR</b>			
C1004	1-126-934-11	ELECT	220µF 20% 16V	Q1001	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C1006	1-137-368-11	FILM	0.0047µF 5% 50V	Q1002	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C1007	1-126-960-11	ELECT	1µF 20% 50V	Q1003	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C1401	1-126-957-11	ELECT (KV-29AL66/29AL66C only)	0.22µF 20% 50V	Q1004	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C1401	1-126-959-11	ELECT (KV-29AL42/29AL42C only)	0.47µF 20% 50V	Q1006	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C1402	1-126-957-11	ELECT (KV-29AL66/29AL66C only)	0.22µF 20% 50V	Q1400	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C1402	1-126-959-11	ELECT (KV-29AL42/29AL42C only)	0.47µF 20% 50V	<b>RESISTOR</b>			
C1403	1-126-943-11	ELECT (KV-29AL42/29AL42C/29AL66/29AL66C only)	2200µF 20% 25V	R1001	1-247-807-31	CARBON 100 5% 1/4W	
C1404	1-126-943-11	ELECT (KV-29AL42/29AL42C/29AL66/29AL66C only)	2200µF 20% 25V	R1002	1-247-807-31	CARBON 100 5% 1/4W	
C1405	1-126-382-11	ELECT	100µF 20% 16V	R1003	1-249-434-11	CARBON 27K 5% 1/4W	
C1406	1-126-382-11	ELECT	100µF 20% 16V	R1004	1-249-436-11	CARBON 39K 5% 1/4W	
C1450	1-136-171-00	FILM	0.33µF 5% 50V	R1006	1-249-419-11	CARBON 1.5K 5% 1/4W	
C1451	1-136-171-00	FILM	0.33µF 5% 50V	R1007	1-247-863-91	CARBON 22K 5% 1/4W	
C1452	1-137-367-11	FILM (KV-29AL42/29AL42C/29AL66/29AL66C only)	0.0033µF 5% 50V	R1008	1-247-863-91	CARBON 22K 5% 1/4W	
C1453	1-137-367-11	FILM (KV-29AL42/29AL42C/29AL66/29AL66C only)	0.0033µF 5% 50V	R1009	1-247-863-91	CARBON 22K 5% 1/4W	
<b>CONNECTOR</b>				R1010	1-247-863-91	CARBON 22K 5% 1/4W	
CN1001*	1-691-632-21	CONNECTOR, BOARD TO BOARD 15P (KV-27S66 only)		R1011	1-249-414-11	CARBON 560 5% 1/4W	
CN1002*	1-564-507-11	PLUG, CONNECTOR 4P		R1012	1-249-414-11	CARBON 560 5% 1/4W	
CN1003*	1-564-511-11	PLUG, CONNECTOR 8P (KV-29AL42/29AL42C/29AL66/29AL66C only)		R1013	1-247-807-31	CARBON 100 5% 1/4W	
CN1004*	1-564-509-11	PLUG, CONNECTOR 6P (KV-29AL66/29AL66C only)		R1016	1-247-863-91	CARBON 22K 5% 1/4W	
CN1400*	1-564-507-11	PLUG, CONNECTOR 4P		R1017	1-247-863-91	CARBON 22K 5% 1/4W	
CN1401*	1-564-506-11	PLUG, CONNECTOR 3P		R1401	1-249-429-11	CARBON 10K 5% 1/4W	
CN1402*	1-564-510-11	PLUG, CONNECTOR 7P (KV-29AL42/29AL42C/29AL66/29AL66C only)		R1402	1-249-437-11	CARBON 47K 5% 1/4W	
<b>IC</b>				R1433	1-249-421-11	CARBON 2.2K 5% 1/4W	
IC1400	8-759-498-09	IC TDA1519AQU (KV-29AL42/29AL42C/29AL66/29AL66C only)		R1434	1-249-429-11	CARBON 10K 5% 1/4W	
IC1401	8-759-498-09	IC TDA1519AQU (KV-29AL42/29AL42C/29AL66/29AL66C only)		R1435	1-249-429-11	CARBON 10K 5% 1/4W	
<b>COIL</b>				R1436	1-249-421-11	CARBON 2.2K 5% 1/4W	
L1001	1-408-421-00	INDUCTOR 100µH		R1437	1-247-863-91	CARBON 22K 5% 1/4W	
L1002	1-410-470-11	INDUCTOR 10µH		R1450	1-249-422-11	CARBON 2.7K 5% 1/4W	
				R1451	1-249-422-11	CARBON 2.7K 5% 1/4W	
				R1452	1-249-428-11	CARBON 8.2K 5% 1/4W (KV-29AL66/29AL66C only)	
				R1452	1-249-429-11	CARBON 10K 5% 1/4W (KV-29AL42/29AL42C only)	
				R1453	1-249-428-11	CARBON 8.2K 5% 1/4W (KV-29AL66/29AL66C only)	
				R1453	1-249-429-11	CARBON 10K 5% 1/4W (KV-29AL42/29AL42C only)	
				<b>TUNER</b>			
				TU1002	$\triangle$ 8-598-430-00	TUNER, FSS BTF-FA401 (KV-27S66/29AL66/29AL66C only)	

**P**

**REF.NO. PART NO. DESCRIPTION REMARK**

**P**

\* A-1195-154-A P BOARD, COMPLETE  
(KV-29AL66/29AL66C/27S46/27S66/29SL46 only)

**CAPACITOR**

C3301	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3302	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3303	1-104-664-11	ELECT	47µF	20%	16V
C3304	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3305	1-163-135-00	CERAMIC CHIP	560pF	5%	50V
C3306	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C3307	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C3308	1-164-222-11	CERAMIC CHIP	0.22µF		25V
C3309	1-163-034-00	CERAMIC CHIP	0.033µF		50V
C3310	1-164-222-11	CERAMIC CHIP	0.22µF		25V
C3311	1-163-233-11	CERAMIC CHIP	18pF	5%	50V
C3314	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3315	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3316	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C3317	1-163-133-00	CERAMIC CHIP	470pF	5%	50V
C3323	1-104-664-11	ELECT	47µF	20%	16V
C3324	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3325	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3326	1-104-664-11	ELECT	47µF	20%	16V
C3327	1-104-664-11	ELECT	47µF	20%	16V
C3328	1-104-664-11	ELECT	47µF	20%	16V
C3330	1-126-964-11	ELECT	10µF	20%	50V
C3334	1-164-005-11	CERAMIC CHIP	0.47µF		25V
C3335	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C3336	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3339	1-163-005-11	CERAMIC CHIP	470pF	10%	50V

**CONNECTOR**

CN3301\* 1-691-632-21 CONNECTOR, BOARD TO BOARD 15P

**DIODE**

D3301 8-719-404-50 DIODE MA111-TX  
D3304 8-719-422-12 DIODE MA8039

**IC**

IC3301 8-759-575-99 IC M65669FP

**COIL**

L3301 1-410-682-31 INDUCTOR 470µH  
L3302 1-414-267-11 INDUCTOR 10µH  
L3303 1-414-267-11 INDUCTOR 10µH

**REF.NO. PART NO. DESCRIPTION REMARK**

**TRANSISTOR**

Q3304 8-729-216-22 TRANSISTOR 2SA1162-G  
Q3305 8-729-216-22 TRANSISTOR 2SA1162-G  
Q3306 8-729-216-22 TRANSISTOR 2SA1162-G  
Q3309 8-729-422-27 TRANSISTOR 2SD601A-Q  
Q3310 8-729-422-27 TRANSISTOR 2SD601A-Q

Q3311 8-729-111-55 TRANSISTOR 2SD1312-K  
Q3312 8-729-216-22 TRANSISTOR 2SA1162-G  
Q3313 8-729-422-27 TRANSISTOR 2SD601A-Q  
Q3314 8-729-422-27 TRANSISTOR 2SD601A-Q

**RESISTOR**

R3301	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3302	1-216-121-91	RES,CHIP	1M	5%	1/10W
R3303	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3304	1-216-119-00	RES,CHIP	820K	5%	1/10W
R3305	1-216-037-00	RES,CHIP	330	5%	1/10W
R3308	1-216-085-00	RES,CHIP	33K	5%	1/10W
R3309	1-216-025-91	RES,CHIP	100	5%	1/10W
R3310	1-216-025-91	RES,CHIP	100	5%	1/10W
R3311	1-216-037-00	RES,CHIP	330	5%	1/10W
R3312	1-216-045-00	RES,CHIP	680	5%	1/10W
R3313	1-216-037-00	RES,CHIP	330	5%	1/10W
R3316	1-216-295-91	SHORT			
R3317	1-216-295-91	SHORT			
R3318	1-216-061-00	RES,CHIP	3.3K	5%	1/10W
R3319	1-216-295-91	SHORT			
R3328	1-216-295-91	SHORT			
R3329	1-216-033-00	RES,CHIP	220	5%	1/10W
R3333	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3334	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3335	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3336	1-216-295-91	SHORT			
R3338	1-216-295-91	SHORT			
R3340	1-216-295-91	SHORT			
R3342	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R3343	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R3344	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3345	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3346	1-216-295-91	SHORT			
R3347	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3348	1-216-049-91	RES,CHIP	1K	5%	1/10W
R3349	1-215-857-11	METAL OXIDE	10	5%	1W F
R3351	1-216-041-00	RES,CHIP	470	5%	1/10W
R3352	1-216-295-91	SHORT			
R3357	1-216-041-00	RES,CHIP	470	5%	1/10W
R3358	1-216-689-11	RES,CHIP	39K	5%	1/10W
R3359	1-216-113-00	RES,CHIP	470K	5%	1/10W
R3360	1-216-051-00	RES,CHIP	1.2K	5%	1/10W
R3361	1-216-053-00	RES,CHIP	1.5K	5%	1/10W
R3365	1-216-073-00	RES,CHIP	10K	5%	1/10W
R3366	1-216-049-91	RES,CHIP	1K	5%	1/10W



<u>REF.NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF.NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
R3367	1-216-073-00	RES,CHIP	10K	5%	1/10W		
R3368	1-216-049-91	RES,CHIP	1K	5%	1/10W		
<b><u>CRYSTAL</u></b>							
X3301	1-781-377-11	OSCILLATOR, CRYSTAL					

### **ACCESSORIES AND PACKING MATERIAL**

- 3-866-074-21 MANUAL, INSTRUCTION  
(KV-27S42/27S46/27S66 only)
- 3-866-074-31 MANUAL, INSTRUCTION  
(KV-27S42 (CND)/27S66 (CND) only)
- 3-866-074-41 MANUAL, INSTRUCTION  
(KV-29SL42/29XL42M/29SL42C/29SL46/29AL42/29AL42C/29AL66/  
29AL66C only)
- \* 4-041-255-01 PROTECTION BAG (all models)
- \* 4-064-062-11 CARTON, INDIVIDUAL  
(KV-29SL42/29XL42M/29SL42C/29SL46 only)
- \* 4-064-065-01 CARTON, INDIVIDUAL  
(KV-27S42/27S46/27S66 only)
- \* 4-064-241-11 CARTON, INDIVIDUAL  
(KV-29AL42/29AL42C/29AL66/29AL66C only)
- \* 4-064-029-01 CUSHION ASSY, UPPER  
(KV-29AL42/29AL42C/29AL66/29AL66C only)
- \* 4-064-069-01 CUSHION ASSY, UPPER  
(KV-27S42/29SL42/29XL42M/29SL42C/27S46/29SL46/27S66 only)
- \* 4-064-032-01 CUSHION ASSY, LOWER  
(KV-29AL42/29AL42C/29AL66/29AL66C only)
- \* 4-064-071-01 CUSHION ASSY, LOWER  
(KV-27S42/29SL42/29XL42M/29SL42C/27S46/29SL46/27S66 only)

### **REMOTE COMMANDER**

- 1-475-801-11 REMOTE COMMANDER (RM-Y165)  
(KV-29SL42/29XL42M/29SL42C/29AL42/29AL42C only)
- 1-475-801-21 REMOTE COMMANDER (RM-Y165)  
(KV-27S42 only)
- 1-475-802-11 REMOTE COMMANDER (RM-Y167)  
(KV-29SL46/29AL66/29AL66C only)
- 1-475-802-21 REMOTE COMMANDER (RM-Y167)  
(KV-27S46/27S66 only)
- 4-978-977-01 BATTERY COVER  
(for remote RM-Y165/RM-Y167)







9-965-857-01

**SONY CORPORATION**  
Sony Technology Center  
Product Quality Division  
Service Promotion Dept.

English  
99DJ74405-1  
Printed in U.S.A.  
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# SERVICE MANUAL

# BA-4D CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST</u>	<u>CHASSIS NO.</u>
<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A

## CORRECTION-1

**SUBJECT: Incorrect Part Number for CRT (KV-2766 only)**

**Correct the service manual as shown.  
File this correction with the service manual.**






**TRINITRON® COLOR TV**  
**SONY®**

## Section 7-1: Chassis (KV-27S66) page 46

 : Corrected item

### Incorrect

### Correct

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
7	 8-733-874-05	CRT 29NX		7	 8-733-873-05	CRT 29NX	

# SERVICE MANUAL

# BA-4D CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST</u>	<u>CHASSIS NO.</u>
<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A







## CORRECTION-2

SUBJECT: DY P/N Correction

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

### : Corrected Items

#### Section 7: Exploded Views(Page 46 and 47)

INCORRECT			CORRECT		
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
10 	8-451-846-21	DYY29VXA-V2	 10 	8-451-486-21	DYY29NXA-V2
15 	8-451-846-21	DYY29VXA-V2	 15 	8-451-486-21	DYY29NXA-V2

TRINITRON® COLOR TV  
**SONY**®

# SERVICE MANUAL

# BA-4D CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST</u>	<u>CHASSIS NO.</u>
<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A
 <b>KV-29SL43</b>	RM-Y165	E	SCC-S55C-A

## SUPPLEMENT-1

Subject: New model added. New parts added to Exploded View.

Correct the service manual as shown below.  
File this correction with the service manual.

 : Modified Item

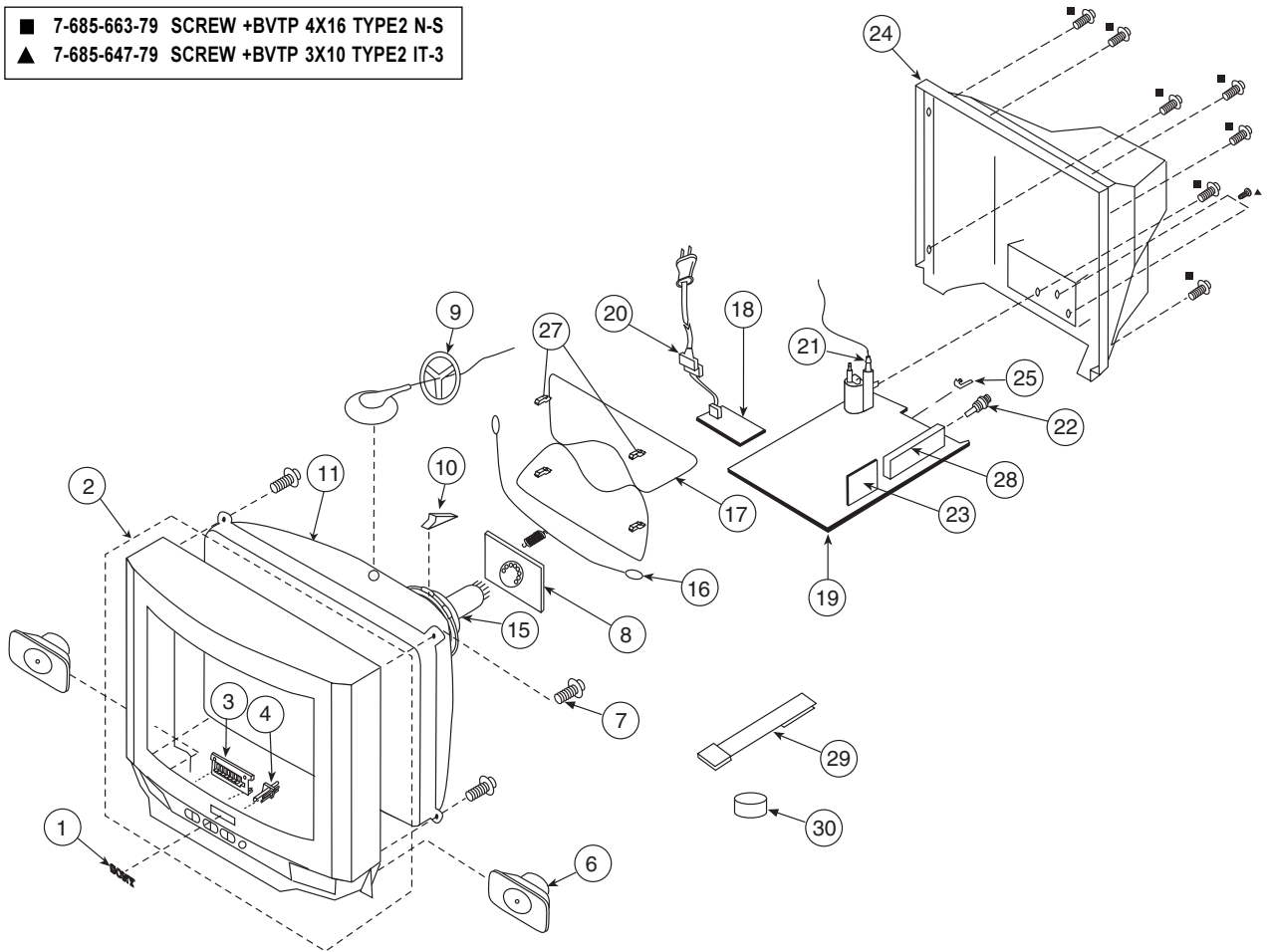
Section 7: Exploded View (Page 47)

7-2. Chassis (KV-27S46/27S42/29SL42/29SL42C/29SL46/29XL42M)

**TRINITRON® COLOR TV**  
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**7-2. CHASSIS (KV-27S46/27S42/29SL42/29SL42C/29SL46/29XL42M/29SL43)**


- 7-685-663-79 SCREW +BVTP 4X16 TYPE2 N-S
- ▲ 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-160-11	EMBLEM (NO.9), SONY	
2	X-4035-816-1	BEZNET ASSY (KV-27S46/29SL46)	3-4
2	X-4035-818-1	BEZNET ASSY (KV-29XL42M)	3-4
2	X-4035-815-1	BEZNET ASSY (KV-27S42/29SL42/42C)	3-4
2	X-4039-334-1	BEZNET ASSY (KV-29SL43)	3-4
3	4-063-573-01	MULTI BUTTON(KV-27S42/27S46/29SL42/ 29SL42C/29SL46/29XL42M)	
3	4-063-573-11	MULTI BUTTON (KV-29SL43)	
4	4-063-570-01	GUIDE, LED	
6	1-504-531011	SPEAKER (13.1 x 6.2CM)	
7	4-041-268-01	SCREW (7), TAPPING	
8 *	A-1331-920-A	C MOUNTED PC BOARD	
9	3-704-372-31	HOLDER, HV CABLE	
10	4-053-005-01	SPACER, DY	
11	8-733-873-05	CRT 29NX (EXCEPT KV-29SL42C)	
11	8-733-874-05	CRT 29NX (KV-29SL42C only)	
15	8-451-846-21	DYY29NXA-V2	
16	4-036-329-01	SPRING (B), TENSION	
17	1-416-952-11	COIL, DEGAUSSING (KV-29SL42/29XL42M/29SL42C/29SL46)	
17	1-416-588-11	COIL, DEMAGNETIC (KV-27S42/27S46)	
18 *	A-1343-656-A	E (VAR) MOUNTED PC BOARD (KV-29SL42/29XL42M/29SL46)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
18 *	A-1343-654-A	E (VAR) MOUNTED PC BOARD (KV-27S42/27S46)	
19 *	A-1298-900-A	A COMPLETE PC BOARD (KV-27S46)	
19 *	A-1298-904-A	A COMPLETE PC BOARD (KV-29XL42M/29SL42/29SL42C)	
19 *	A-1298-911-A	A COMPLETE PC BOARD (KV-29SL46)	
19 *	A-1298-840-A	A COMPLETE PC BOARD (KV-27S42)	
20	1-790-130-21	CORD, AC (KV-27S42/27S46)	
20	1-751-057-11	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29SL42/29XL42M/29SL46)	
20	1-769-796-31	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29SL42C)	
21	1-453-268-21	FBT ASSY NX-4005//X4J4	
22	1-766-374-11	PLUG, F-PIN	
23 *	A-1195-154-A	P COMPLETE PC BOARD (KV-27S46/29SL46)	
24	4-063-572-02	COVER, REAR	
25	4-064-646-01	CHASSIS, CLIP	
27	4-040-388-01	HOLDER (S), DGC (EXCEPT KV-29SL46)	
28	8-598-431-00	TUNER, FSS BTF-WA411	
29	4-062-047-01	PIECE A(110), CONV CORRECT	
30	1-452-032-00	MAGNET,DISC	



<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A
<b>KV-29SL43</b>	RM-Y165	E	SCC-S55C-A
 <b>KV-29SL43C</b>	RM-Y165	E	SCC-S55D-A

## SUPPLEMENT-2

Subject: New model added. New parts added to Exploded View.

Correct the service manual as shown below.  
File this correction with the service manual.

 : Modified Item

Section 7: Exploded View (Page 47)

7-2. Chassis (KV-27S46/27S42/29SL42/29SL42C/29SL46/29XL42M/29SL43/29SL43C)

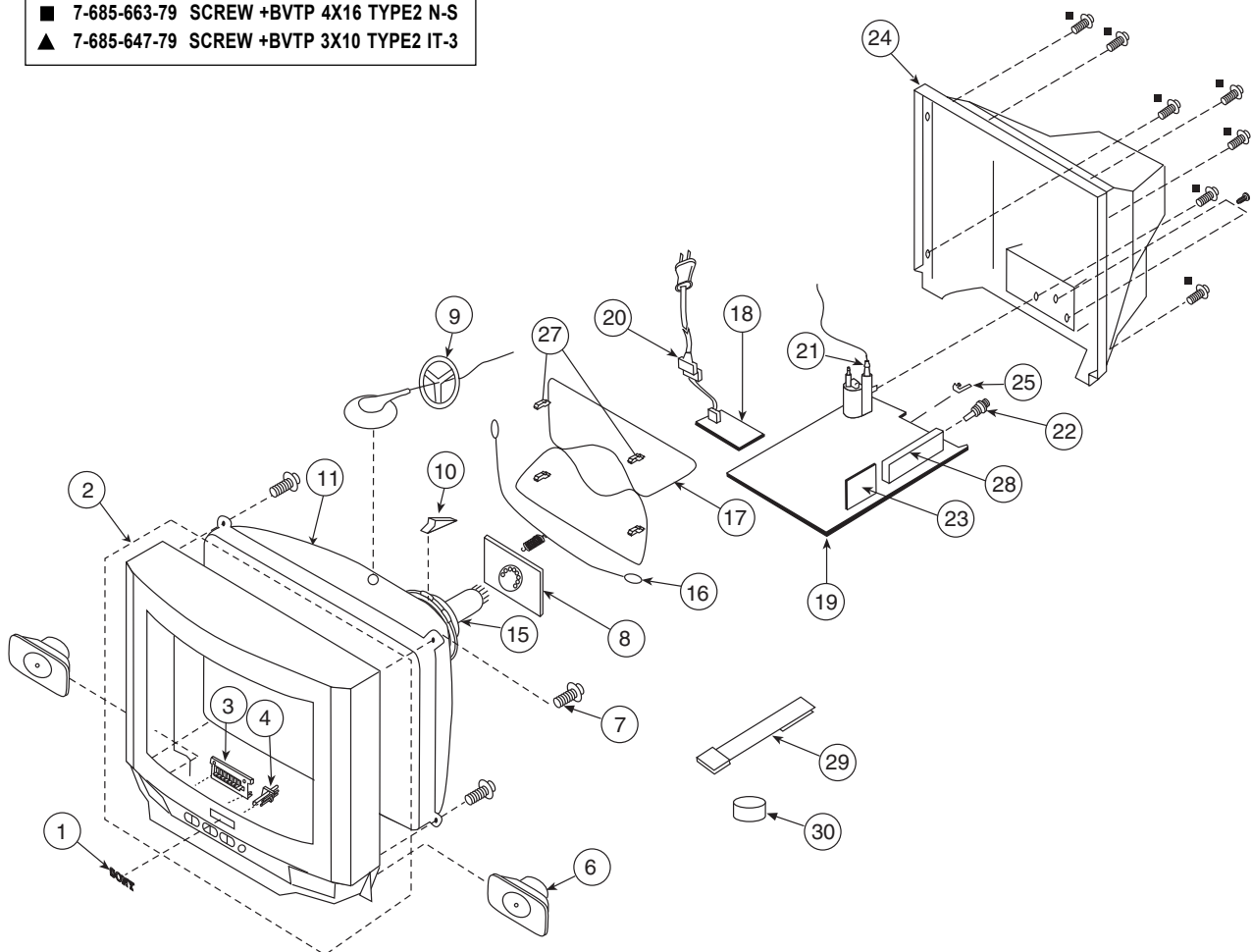
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**SONY®**

Sony Corporation  
Sony Technology Center  
Technical Services  
Service Promotion Department

English  
2001HJ74405-1  
Printed in U.S.A.  
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**7-2. CHASSIS (KV-27S46/27S42/29SL42/29SL42C/29SL46/29XL42M/29SL43/29SL43C)**

- 7-685-663-79 SCREW +BVTP 4X16 TYPE2 N-S
- ▲ 7-685-647-79 SCREW +BVTP 3X10 TYPE2 IT-3



REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-160-11	EMBLEM (NO.9), SONY		18 *	A-1343-654-A	E (VAR) MOUNTED PC BOARD (KV-27S42/27S46)	
2	X-4035-816-1	BEZNET ASSY (KV-27S46/29SL46)	3-4	19 *	A-1298-900-A	A COMPLETE PC BOARD (KV-27S46)	
2	X-4035-818-1	BEZNET ASSY (KV-29XL42M)	3-4	19 *	A-1298-904-A	A COMPLETE PC BOARD (KV-29XL42M/29SL42/29SL42C)	
2	X-4035-815-1	BEZNET ASSY (KV-27S42/29SL42/42C)	3-4	19 *	A-1298-911-A	A COMPLETE PC BOARD (KV-29SL46)	
2	X-4039-334-1	BEZNET ASSY (KV-29SL43/29SL43C)	3-4	19 *	A-1298-840-A	A COMPLETE PC BOARD (KV-27S42)	
3	4-063-573-01	MULTI BUTTON(KV-27S42/27S46/29SL42/29SL42C/29SL46/29XL42M)		20	1-790-130-21	CORD, AC (KV-27S42/27S46)	
3	4-063-573-11	MULTI BUTTON (KV-29SL43/29SL43C)		20	1-751-057-11	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29SL42/29XL42M/29SL46)	
4	4-063-570-01	GUIDE, LED		20	1-769-796-31	CORD, POWER (WITH CONNECTOR) 10A/125V (KV-29SL42C)	
6	1-504-531011	SPEAKER (13.1 x 6.2CM)		21	1-453-268-21	FBT ASSY NX-4005//X4J4	
7	4-041-268-01	SCREW (7), TAPPING		22	1-766-374-11	PLUG, F-PIN	
8 *	A-1331-920-A	C MOUNTED PC BOARD		23 *	A-1195-154-A	P COMPLETE PC BOARD (KV-27S46/29SL46)	
9	3-704-372-31	HOLDER, HV CABLE		24	4-063-572-02	COVER, REAR	
10	4-053-005-01	SPACER, DY		25	4-064-646-01	CHASSIS, CLIP	
11	8-733-873-05	CRT 29NX (EXCEPT KV-29SL42C)		27	4-040-388-01	HOLDER (S), DGC (EXCEPT KV-29SL46)	
11	8-733-874-05	CRT 29NX (KV-29SL42C only)		28	8-598-431-00	TUNER, FSS BTF-WA411	
15	8-451-846-21	DYY29NXA-V2		29	4-062-047-01	PIECE A(110), CONV CORRECT	
16	4-036-329-01	SPRING (B), TENSION		30	1-452-032-00	MAGNET,DISC	
17	1-416-952-11	COIL, DEGAUSSING (KV-29SL42/29XL42M/29SL42C/29SL46)					
17	1-416-588-11	COIL, DEMAGNETIC (KV-27S42/27S46)					
18 *	A-1343-656-A	E (VAR) MOUNTED PC BOARD (KV-29SL42/29XL42M/29SL46)					

<b>KV-27S42</b>	RM-Y165	US	SCC-S27H-A
<b>KV-27S42</b>	RM-Y165	CND	SCC-S28F-A
<b>KV-27S46</b>	RM-Y167	US	SCC-S27K-A
<b>KV-27S66</b>	RM-Y167	US	SCC-S27L-A
<b>KV-27S66</b>	RM-Y167	CND	SCC-S28G-A
<b>KV-29AL42</b>	RM-Y165	E	SCC-S25U-A
<b>KV-29AL42C</b>	RM-Y165	E	SCC-S25Y-A
<b>KV-29AL66</b>	RM-Y167	E	SCC-S25T-A
<b>KV-29AL66C</b>	RM-Y167	E	SCC-S25V-A
<b>KV-29SL42</b>	RM-Y165	E	SCC-S25W-A
<b>KV-29SL42C</b>	RM-Y165	E	SCC-S25S-A
<b>KV-29SL46</b>	RM-Y167	E	SCC-S25X-A
<b>KV-29XL42M</b>	RM-Y165	MX	SCC-S26C-A
<b>KV-29SL43</b>	RM-Y165	E	SCC-S55C-A
<b>KV-29SL43C</b>	RM-Y165	E	SCC-S55D-A


## CORRECTION - 3

Subject: Q550 P/N Correction

Correct the service manual as shown below.  
File this correction with the service manual.

 : Modified Item

### Section 8: Electrical Parts List (Page 55)

INCORRECT				CORRECT			
REF NO.	PART NO.	DESCRIPTION	REMARK	REF NO.	PART NO.	DESCRIPTION	REMARK
Q550	8-729-119-78	TRANSISTOR 2SC2785-HFE		Q550	8-729-422-27	TRANSISTOR 2SD601A-Q	

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English  
2001HJ74405-1  
Printed in U.S.A.  
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