

# SERVICE MANUAL

# BA-4D CHASSIS

*Self Diagnosis*  
Supported model

| <u>MODEL</u>      | <u>COMMANDER</u> | <u>DEST</u> | <u>CHASSIS NO.</u> |
|-------------------|------------------|-------------|--------------------|
| <b>KV-27V42</b>   | RM-Y165          | US          | SCC-S27M-A         |
| <b>KV-27V66</b>   | RM-Y167          | US          | SCC-S27J-A         |
| <b>KV-27V66</b>   | RM-Y167          | CND         | SCC-S28H-A         |
| <b>KV-29SL42K</b> | RM-Y149A         | KOREA       | SCC-S29A-A         |
| <b>KV-29SL42T</b> | RM-Y165          | TAIWAN      | SCC-S30A-A         |
| <b>KV-29VL42T</b> | RM-Y165          | TAIWAN      | SCC-S30B-A         |
| <b>KV-29XL42T</b> | RM-Y165          | TAIWAN      | SCC-S30C-A         |



KV-29SL42K



RM-Y149A



TRINITRON® COLOR TV  
**SONY®**

## SPECIFICATIONS

|                             | KV-27V42,<br>KV-29SL42T                                                                              | KV-27V66                                                                                             | KV-29SL42K                                                                                           | KV-29VL42T,<br>KV-29XL42T                                                                            |
|-----------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Power Requirements          | 120V, 60Hz                                                                                           | 120V, 60Hz                                                                                           | AUTO VOLT<br>120-220V,<br>50-60Hz                                                                    | 120V, 60Hz                                                                                           |
| Number of inputs/outputs    |                                                                                                      |                                                                                                      |                                                                                                      |                                                                                                      |
| Video <sup>1)</sup>         | 3                                                                                                    | 3                                                                                                    | 2                                                                                                    | 2                                                                                                    |
| S-Video Input <sup>2)</sup> | 1                                                                                                    | 1                                                                                                    | 1                                                                                                    | 1                                                                                                    |
| Audio Input <sup>3)</sup>   | 3                                                                                                    | 3                                                                                                    | 2                                                                                                    | 2                                                                                                    |
| Audio Out <sup>4)</sup>     | 1                                                                                                    | 1                                                                                                    | 1                                                                                                    | 1                                                                                                    |
| Speaker Output (W)          | 5WX2                                                                                                 | 10WX2                                                                                                | 5WX2                                                                                                 | 5WX2                                                                                                 |
| Power Consumption (W)       |                                                                                                      |                                                                                                      |                                                                                                      |                                                                                                      |
| In Use (Max)                | 140W                                                                                                 | 180W                                                                                                 | 140W                                                                                                 | 140W                                                                                                 |
| In Standby                  | 2W                                                                                                   | 2W                                                                                                   | 2W                                                                                                   | 2W                                                                                                   |
| Dimensions (W/H/D)          |                                                                                                      |                                                                                                      |                                                                                                      |                                                                                                      |
| (mm)                        | 690 x 575.4 x 503.4 mm                                                                               | 690 x 575.4 x 503.4 mm                                                                               | 690 x 575.4 x 503.4 mm                                                                               | 690 x 575.4 x 503.4 mm                                                                               |
| (in)                        | 27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in. | 27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in. | 27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in. | 27 <sup>1</sup> / <sub>4</sub> x 22 <sup>3</sup> / <sub>4</sub> x 19 <sup>7</sup> / <sub>8</sub> in. |
| Mass                        |                                                                                                      |                                                                                                      |                                                                                                      |                                                                                                      |
| (kg)                        | 42.4 kg                                                                                              | 42.4 kg                                                                                              | 42.4 kg                                                                                              | 42.4 kg                                                                                              |
| (lbs)                       | 93 lbs. 8oz                                                                                          | 93 lbs. 8oz                                                                                          | 93 lbs. 8oz                                                                                          | 93 lbs. 8oz                                                                                          |

**Television system**

American TV standard/NTSC

**Picture Tube**

Trinitron® tube

**Channel coverage**

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

**Visible screen size**

27" picture measured diagonally

**Actual screen size**

29" picture measured diagonally

**Antenna**

75 ohm external terminal for VHF/UHF

**Supplied Accessories**

Remote Commander (RM-Y165) (KV-27V42/29SL42T/29VL42T/29XL42T)

Remote Commander (RM-Y167) (KV-27V66)

Remote Commander (RM-Y149A) (KV-29SL42K)

Size AA (R6) batteries (2)

**Optional Accessories**

Dipole antenna

Connecting cables VMC-810S/820S, VMC-720M,

YC-15V/30V, RK74A

U/V mixer EAC-66

<sup>1)</sup> 1 Vp-p 75 ohms unbalanced, sync negative<sup>2)</sup> Y: 1Vp-p 75 ohms unbalanced, sync negative.  
C: 0.286 Vp-p (Burst signal), 75 ohms<sup>3)</sup> 500mVrms (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.

*Design and specifications are subject to change without notice.*

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## 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

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".

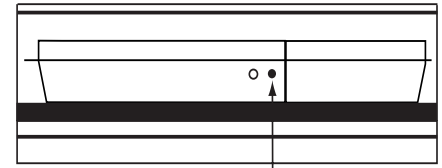
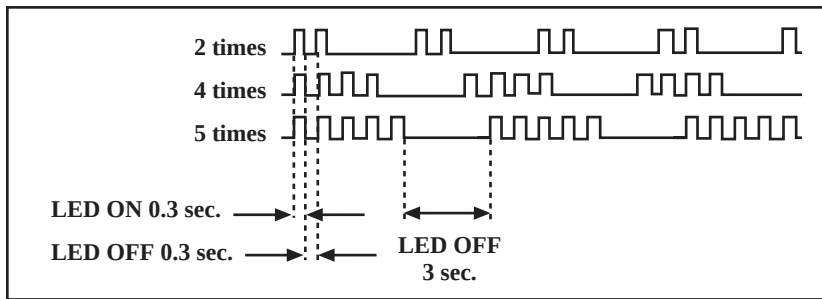
| Diagnostic Item Description          | No. of Times STANDBY/TIMER LED Flashes | Self-diagnostic Display/ Diagnostic Result | Probable Cause Location                                                                                                                                                           | Detected Symptoms                                                                                                                                                                                              |
|--------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power does not turn on               | Does not light                         | _____                                      | <ul style="list-style-type: none"> <li>Power cord is not plugged in.</li> <li>Fuse F5050 is burned out (E board).</li> </ul>                                                      | <ul style="list-style-type: none"> <li>Power does not come on.</li> <li>No power is supplied to the TV.</li> <li>AC power supply is faulty.</li> </ul>                                                         |
| +B overcurrent (OCP)*                | 2 times                                | 2:0 or 2:1                                 | <ul style="list-style-type: none"> <li>H.OUT (Q502) is shorted (A Board)</li> <li>IC1751 (C board) or IC 1701(CV Board) are shorted.</li> </ul>                                   | <ul style="list-style-type: none"> <li>Power does not come on.</li> <li>Load on power line is shorted.</li> </ul>                                                                                              |
| Vertical deflection stopped*         | 4 times                                | 4:0 or 4:1                                 | <ul style="list-style-type: none"> <li>+13V is not supplied. (A Board)</li> <li>IC541 is faulty. (A Board)</li> </ul>                                                             | <ul style="list-style-type: none"> <li>Has entered standby state after horizontal raster.</li> <li>Vertical deflection pulse is stopped.</li> <li>Power line is shorted or power supply is stopped.</li> </ul> |
| White balance failure (not balanced) | 5 times                                | 5:0 or 5:1                                 | <ul style="list-style-type: none"> <li>Video OUT (Q306 to 308) is faulty. (A Board)</li> <li>IC301 is faulty. (A Board)</li> <li>Screen (G2) is improperly adjusted.**</li> </ul> | <ul style="list-style-type: none"> <li>No raster is generated.</li> <li>CRT cathode current detection reference pulse output is small.</li> </ul>                                                              |

\* If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.

The symptom that is diagnosed first by the microcontroller is displayed on the screen.

\*\* Refer to Screen (G2) Adjustments in Section 3-4 of this manual.

## Display of Standby/Timer LED Flash Count



STANDBY/TIMER LED

| <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

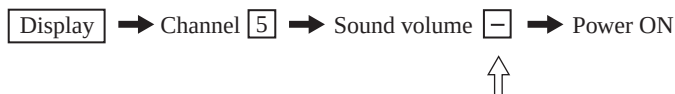
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LED from flashing.

## 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 ).

### 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

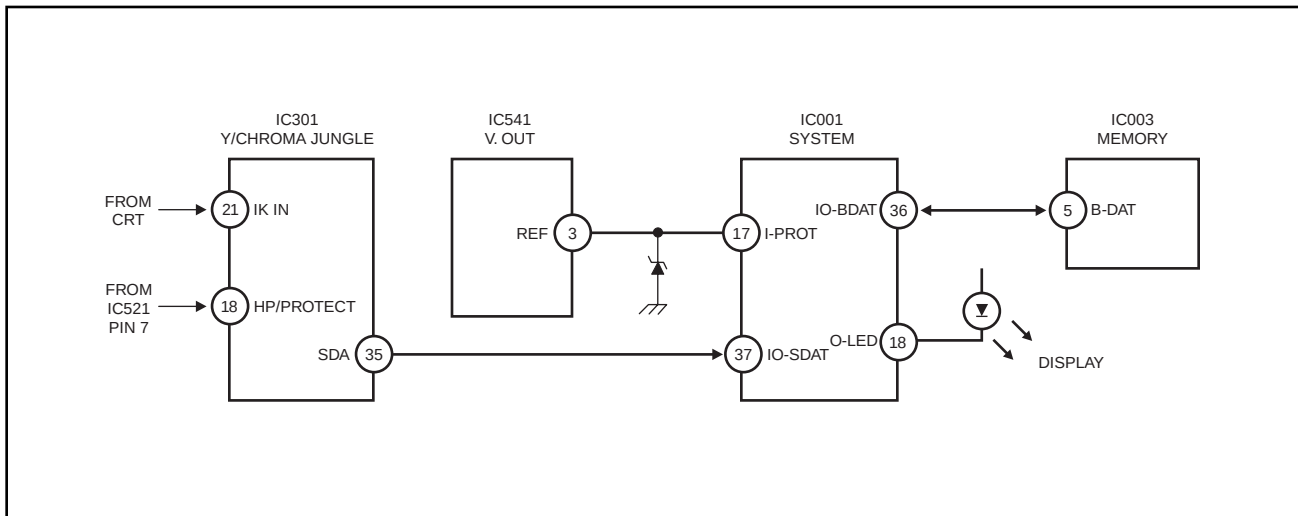
To clear the result display to "0", press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel **8** → **ENTER**

### 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 IC301 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 a guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

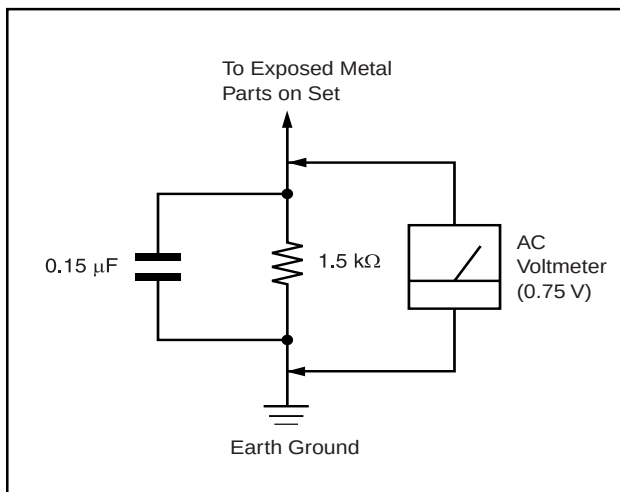


Figure A. Using an AC voltmeter to check AC leakage.

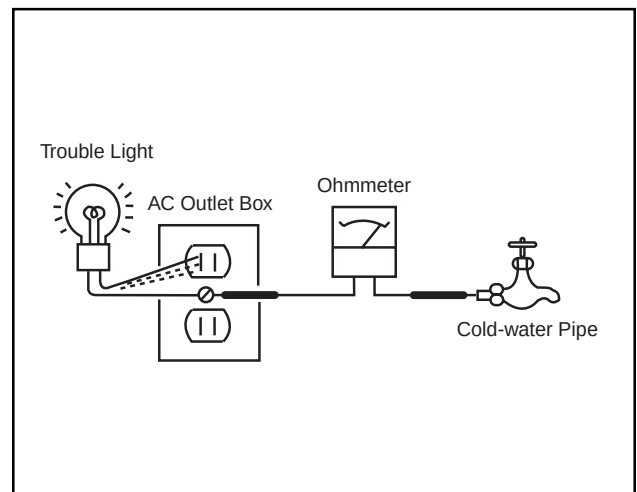


Figure B. Checking for earth ground.

SECTION 1  
GENERAL

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

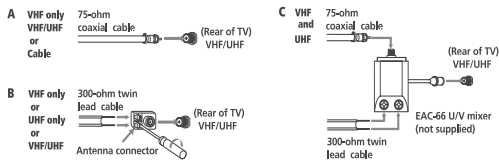
Connecting Your TV

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

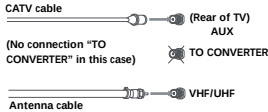
Depending on the cable available in your home, choose one of the connections below:



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.

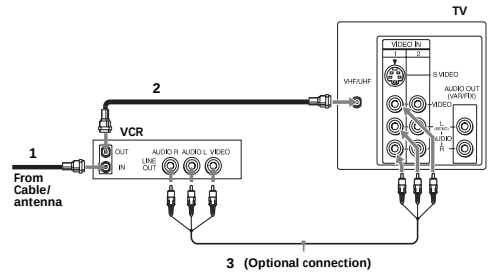


Select CABLE or ANT mode by pressing **ANT** on the remote control.

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).

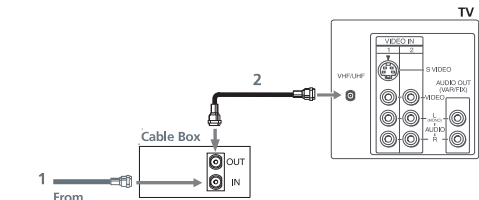
(Optional connection)

- 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.

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.

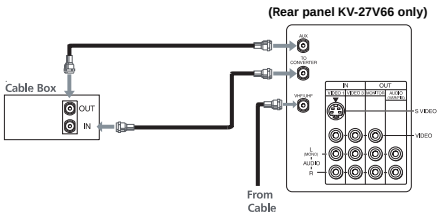
To view channels from your cable box, tune your TV to channel 3 or 4 (as set on the rear panel of your cable box).

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

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.

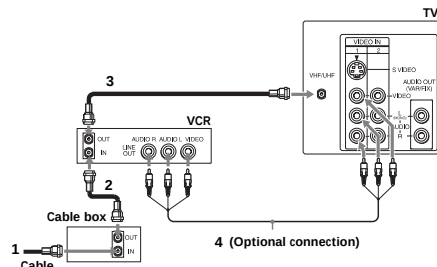


When using PIP, the AUX input cannot be viewed in the window picture.



## 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)

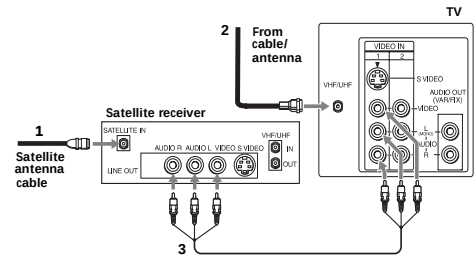
- 4 If your VCR is equipped with video inputs, for better picture quality you should connect A/V cables to AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV. You can use the **TV/VIDEO** button to switch between the TV and VCR inputs.

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.

7

## User Guide

## TV and Digital Satellite Receiver



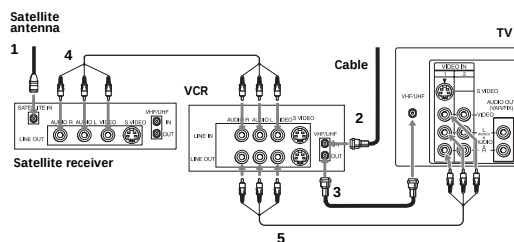
- 1 Connect the cable from your satellite antenna to SATELLITE IN on the satellite receiver.
- 2 Attach the coaxial connector from your cable or antenna to VHF/UHF IN on your TV.
- 3 Using A/V connectors, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your TV. You can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

8

## 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.

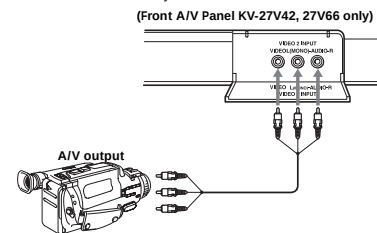
To view from the satellite or VCR, select the video input to which your satellite receiver or VCR is connected by pressing **TV/VIDEO** on the remote control.

9

## User Guide

## Connecting a Camcorder

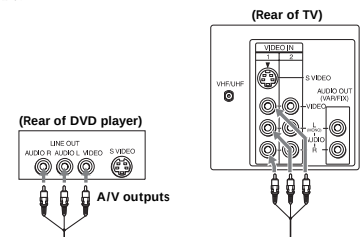
Using A/V cables, connect AUDIO and VIDEO OUT on your camcorder to AUDIO and VIDEO IN on your TV.



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.

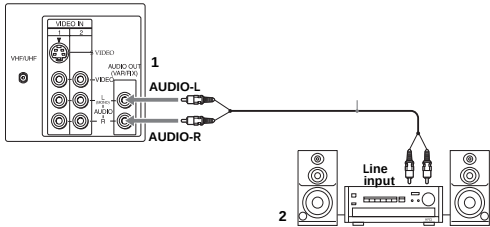


For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, your audio connectors must still be connected.

10

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.

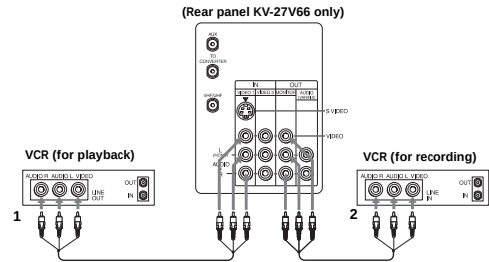


Set your stereo to the chosen line input. (See page 20 for additional audio setup instructions.)

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.

Troubleshooting

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

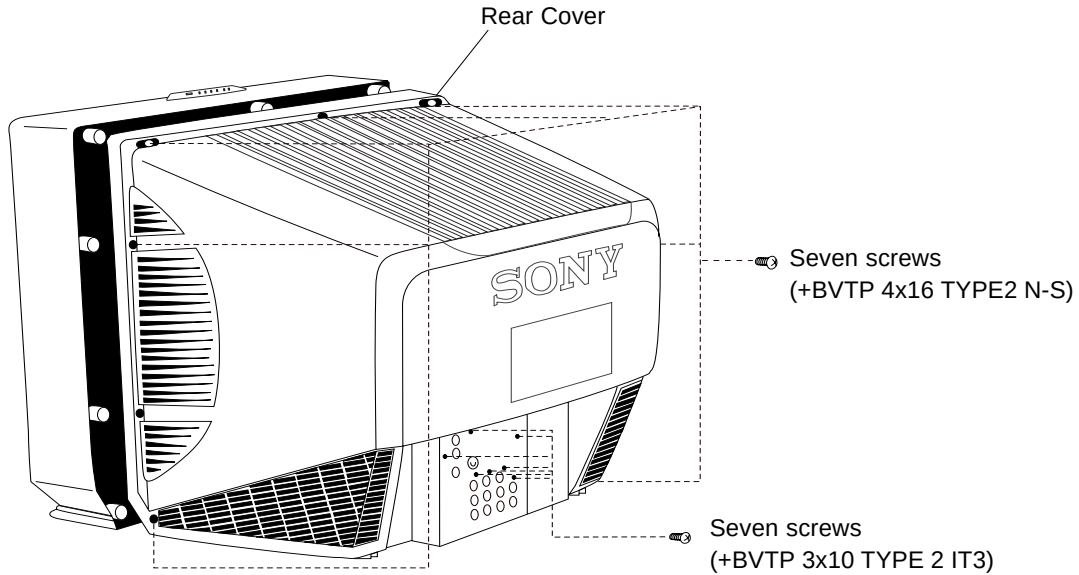
|                                                   |                                                                                                                                           |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cannot operate single tuner PIP (KV-27S46)</b> | <input type="checkbox"/> Make sure the VCR is connected correctly (see page 4).                                                           |
|                                                   | <input type="checkbox"/> Check to see if the VCR is on.                                                                                   |
| <b>No picture, no sound</b>                       | <input type="checkbox"/> Make sure your remote control is programmed to operate your VCR (see page 31).                                   |
|                                                   | <input type="checkbox"/> Make sure the power cord is plugged in.                                                                          |
|                                                   | <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.  |
|                                                   | <input type="checkbox"/> Check the TV/VIDEO settings: when watching TV, set to TV; when watching video equipment, set to VIDEO (page 19). |
|                                                   | <input type="checkbox"/> Make sure the batteries have been inserted correctly into the remote control.                                    |
| <b>Poor or no picture, good sound</b>             | <input type="checkbox"/> Check your PARENTAL CONTROL settings (pages 28-29).                                                              |
|                                                   | <input type="checkbox"/> Try another channel, it could be station trouble.                                                                |
|                                                   | <input type="checkbox"/> Adjust PICTURE in the VIDEO menu (page 19).                                                                      |
|                                                   | <input type="checkbox"/> Adjust BRIGHTNESS in the VIDEO menu (page 19).                                                                   |
|                                                   | <input type="checkbox"/> Check the antenna and/or cable connections (page 3).                                                             |
| <b>Good picture, no sound</b>                     | <input type="checkbox"/> Press <b>MUTE</b> so that MUTING disappears from the screen (page 13).                                           |
|                                                   | <input type="checkbox"/> Check your AUDIO settings. Your TV may be set to SAP (page 21).                                                  |
| <b>No color</b>                                   | <input type="checkbox"/> Adjust COLOR in the VIDEO menu (page 19).                                                                        |
|                                                   | <input type="checkbox"/> Check the CABLE setting in the CHANNEL SET UP menu (page 24).                                                    |
|                                                   | <input type="checkbox"/> Check the antenna and/or cable connections (page 3).                                                             |
|                                                   | <input type="checkbox"/> Make sure the channel selected is currently broadcasting.                                                        |
|                                                   | <input type="checkbox"/> Press the <b>ANTI</b> button on the remote control.                                                              |

|                                                                          |                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dotted lines or stripes</b>                                           | <input type="checkbox"/> Adjust the antenna.                                                                                                                                                                         |
|                                                                          | <input type="checkbox"/> Move the TV away from other electronic equipment. Some electronic equipment can create electrical noise, which can interfere with TV reception.                                             |
| <b>Double images or ghosts</b>                                           | <input type="checkbox"/> Check your outdoor antenna or call your cable service.                                                                                                                                      |
| <b>Cannot receive higher number channels (UHF) when using an antenna</b> | <input type="checkbox"/> Make sure CABLE is set to OFF in the CHANNEL SET UP menu (page 24).                                                                                                                         |
|                                                                          | <input type="checkbox"/> Use AUTO PROGRAM to add channels that are not presently in the memory (page 24).                                                                                                            |
| <b>Cable stations don't seem to work</b>                                 | <input type="checkbox"/> Make sure CABLE is set to ON in the CHANNEL SET UP menu (page 24).                                                                                                                          |
|                                                                          | <input type="checkbox"/> Use AUTO PROGRAM to add channels that are not presently in the memory (page 24).                                                                                                            |
| <b>Remote Control does not operate</b>                                   | <input type="checkbox"/> Batteries could be weak. Replace them (page 2).                                                                                                                                             |
|                                                                          | <input type="checkbox"/> Move the TV 3-4 feet away from fluorescent lights.                                                                                                                                          |
| <b>The TV needs to be cleaned</b>                                        | <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.                                                     |
| <b>Lost password for PARENTAL CONTROL</b>                                | <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. |

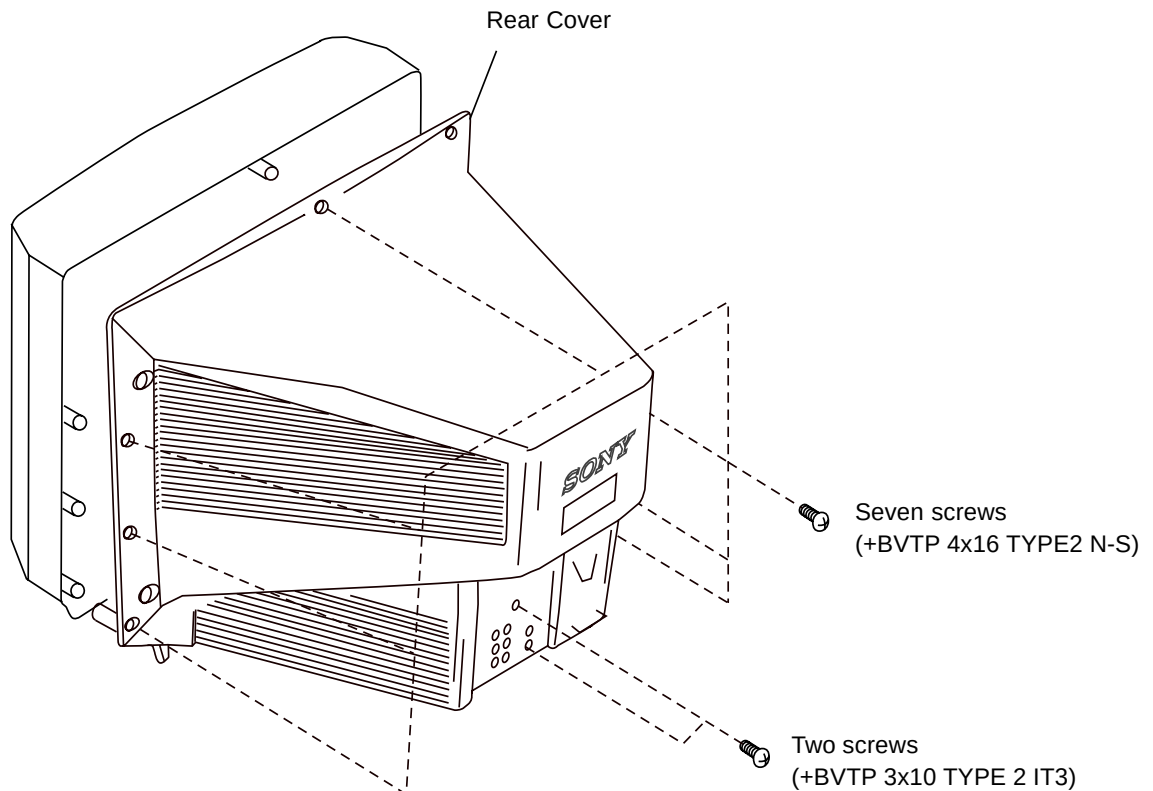
If, after reading these operating instructions, you have additional questions related to the use of your Sony television, please call our Direct Response Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

## SECTION 2 DISASSEMBLY

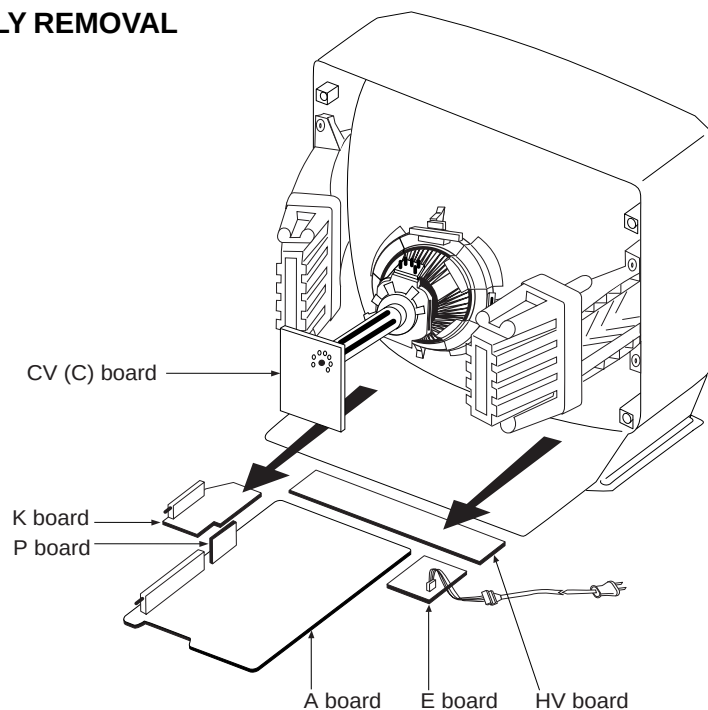
### 2-1. REAR COVER REMOVAL (KV-27V42/66/29VL42T)



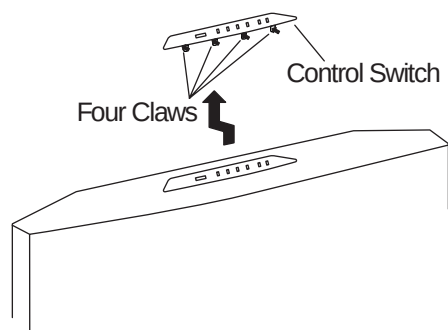
### 2-2. REAR COVER REMOVAL (KV-29SL42K/42T/29XL42T)



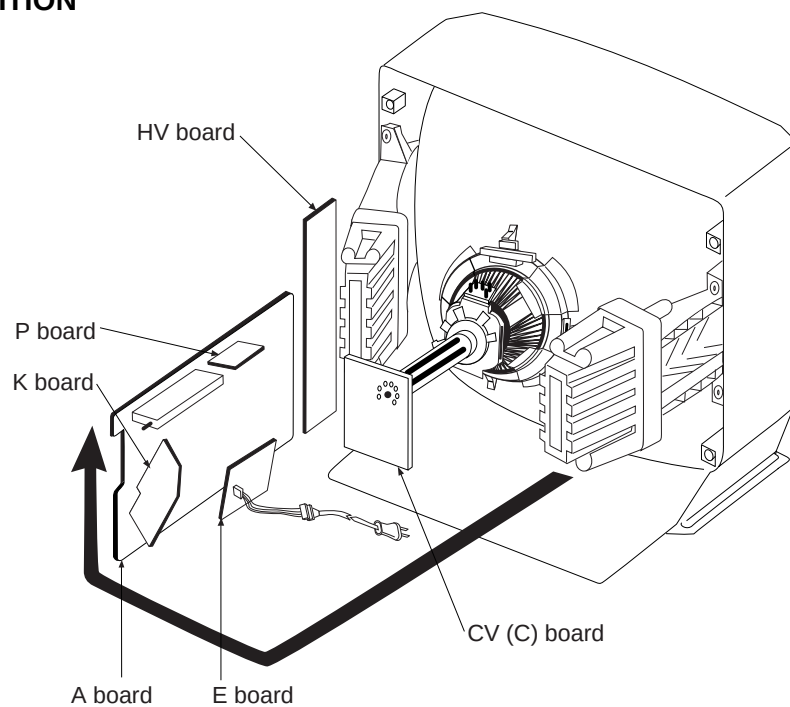
## 2-3. CHASSIS ASSEMBLY REMOVAL



## 2-4. CONTROL SWITCH REMOVAL (KV-27V42/66/29VL42T)



## 2-5. SERVICE POSITION

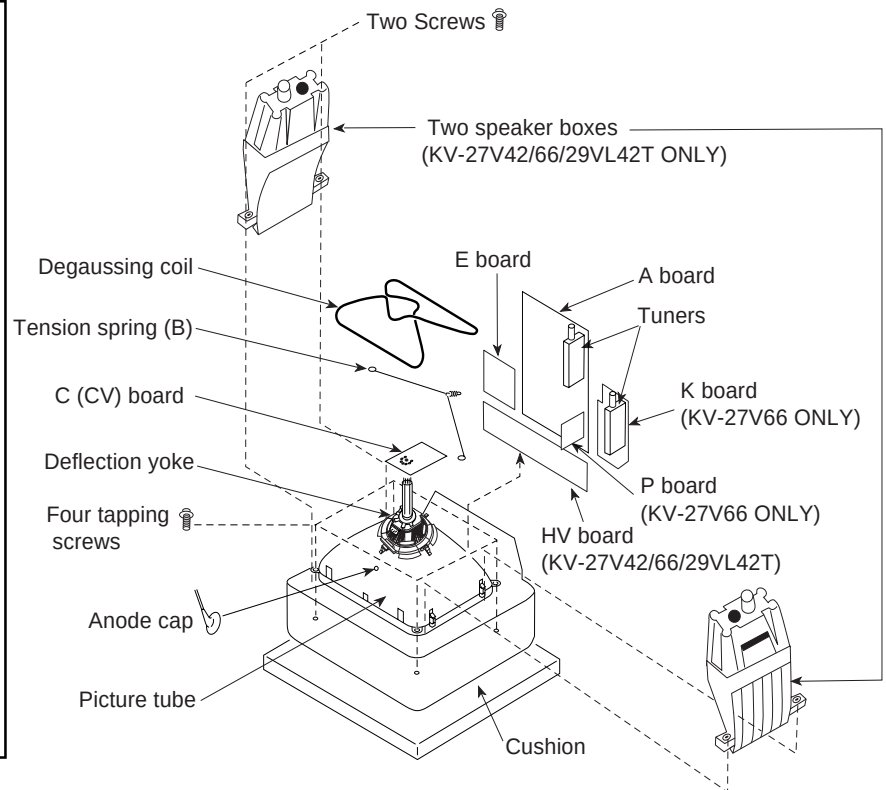
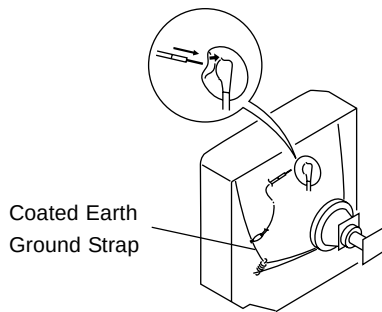


## 2-6. PICTURE TUBE REMOVAL

### 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.

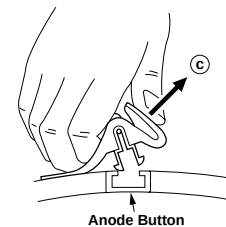
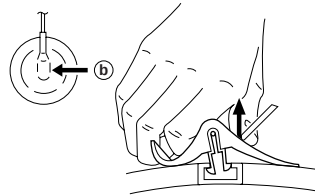
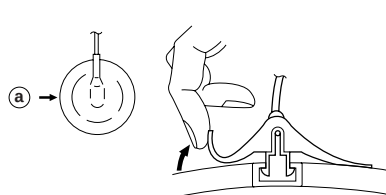


## ANODE CAP REMOVAL

**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.

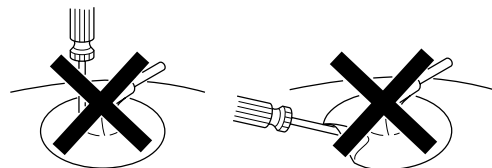
**NOTE:** After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

### REMOVAL PROCEDURES



### 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 and switch as follows unless otherwise noted.

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

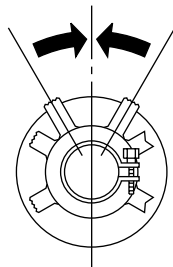
Before beginning adjustment procedure:

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

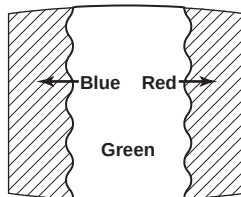
#### Adjustment Procedure

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.

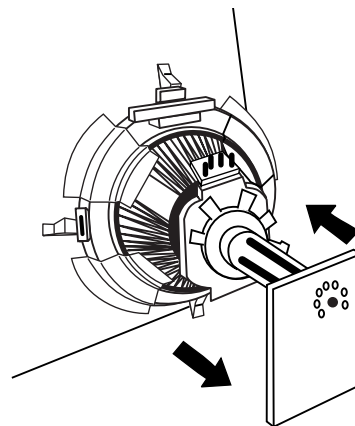
Purity Control



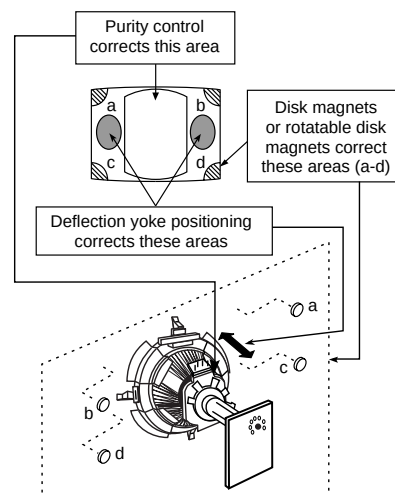
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward and adjust the purity control so that green is in the center and red and blue are at the sides evenly.



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 then 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.



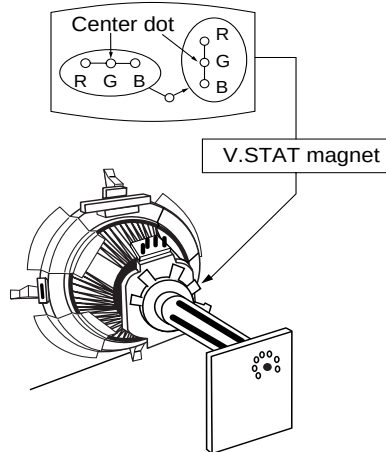
### 3-2. CONVERGENCE

Before starting convergence adjustments:

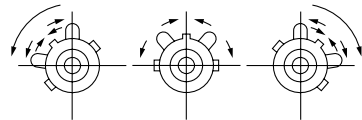
1. Perform FOCUS, V.LIN AND V.SIZE adjustments.
2. Set BRIGHTNESS control to minimum.
3. Feed in dot pattern.

#### Vertical Static Convergence

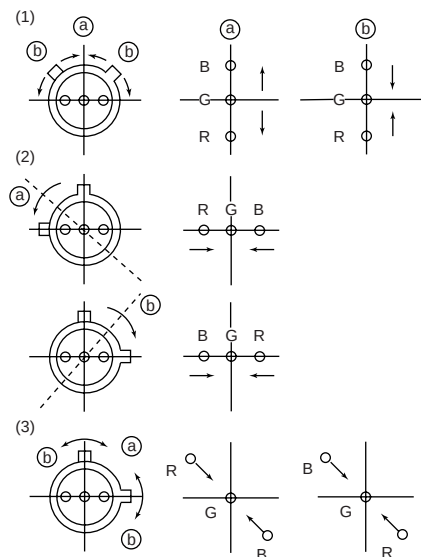
1. Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen (vertical movement).



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

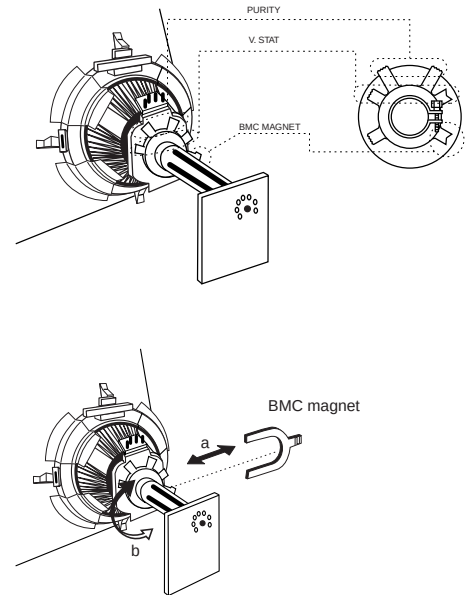


When the V.STAT magnet is moved in the direction of arrows (a) and (b), red, green, and blue dots move as shown below:



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

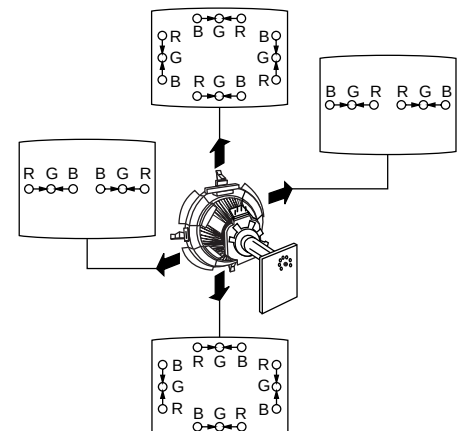
1. Move BMC magnet (a) to correct insufficient H. Static convergence.
2. Rotate BMC magnet (b) to correct insufficient V. Static convergence.
3. In either case, repeat Beam Landing Adjustment.



#### Dynamic Convergence Adjustment

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

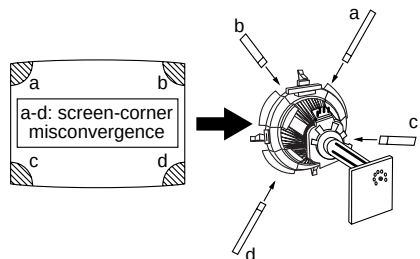
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence, as shown below:



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

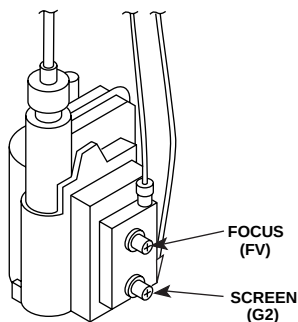
### Screen-Corner Convergence

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



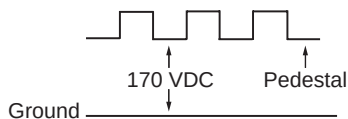
### 3-3. FOCUS

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 on the FBT to obtain the faintly visible background of dot signal.

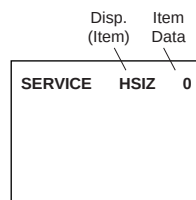
### 3-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

#### Service Mode Procedure

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

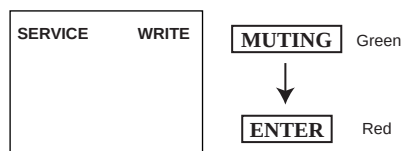
#### Activating Service Adjustment Mode

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.
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. 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  on the schematic diagram.

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

#### Preparation Before Confirmation

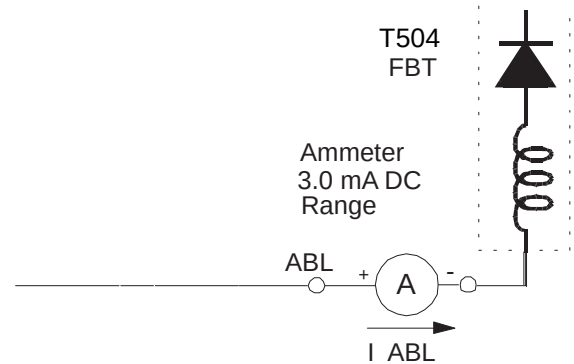
1. Using a Variac, apply AC input voltage:  $120 \pm 2$  VAC (or  $120-220 \pm 2$  VAC for KV-29SL42K).
2. Turn the POWER switch ON.
3. Input an entirely white signal and set the PICTURE and BRIGHTNESS controls to maximum.
4. Confirm that the voltage between C574 (+) or TP503 and ground is more than 105 VDC.

#### Hold-down Operation Confirmation

1. Connect the current meter between Pin 11 of the FBT (T504) and the PCB land where Pin 11 would normally attach. (See Figure 1 on the following 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 following page.)
5. Increase the DC power voltage gradually until the picture blanks out.
6. Read the digital voltmeter indication. (standard: less than or equal to 141.3 VDC).
7. Turn DC power source off immediately
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, a component marked with .



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

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

IC601, IC602

1. Using a Variac, apply AC input voltage:  $130 \pm 2$  VAC (or  $120-220 \pm 2$  VAC for KV-29SL42K).
2. Input a dot signal.
3. Set the PICTURE and BRIGHTNESS controls to minimum.
4. Set to Service Adjustment Mode.
5. Select PADJ with  and .
6. Adjust with  to the 0 level.
7. Confirm the voltage of A board TP-600 is less than 138 VDC.
8. If step 7 is not satisfied, replace the components and repeat the above steps.
9. Supply  $120 \pm 2$  VAC (or  $120-220 \pm 2$  VAC for KV-29SL42K) to the set with a variable auto transformer.
10. Adjust with  and  for  $135 \pm 3$  VDC.
11. Press  then  to save into the memory.

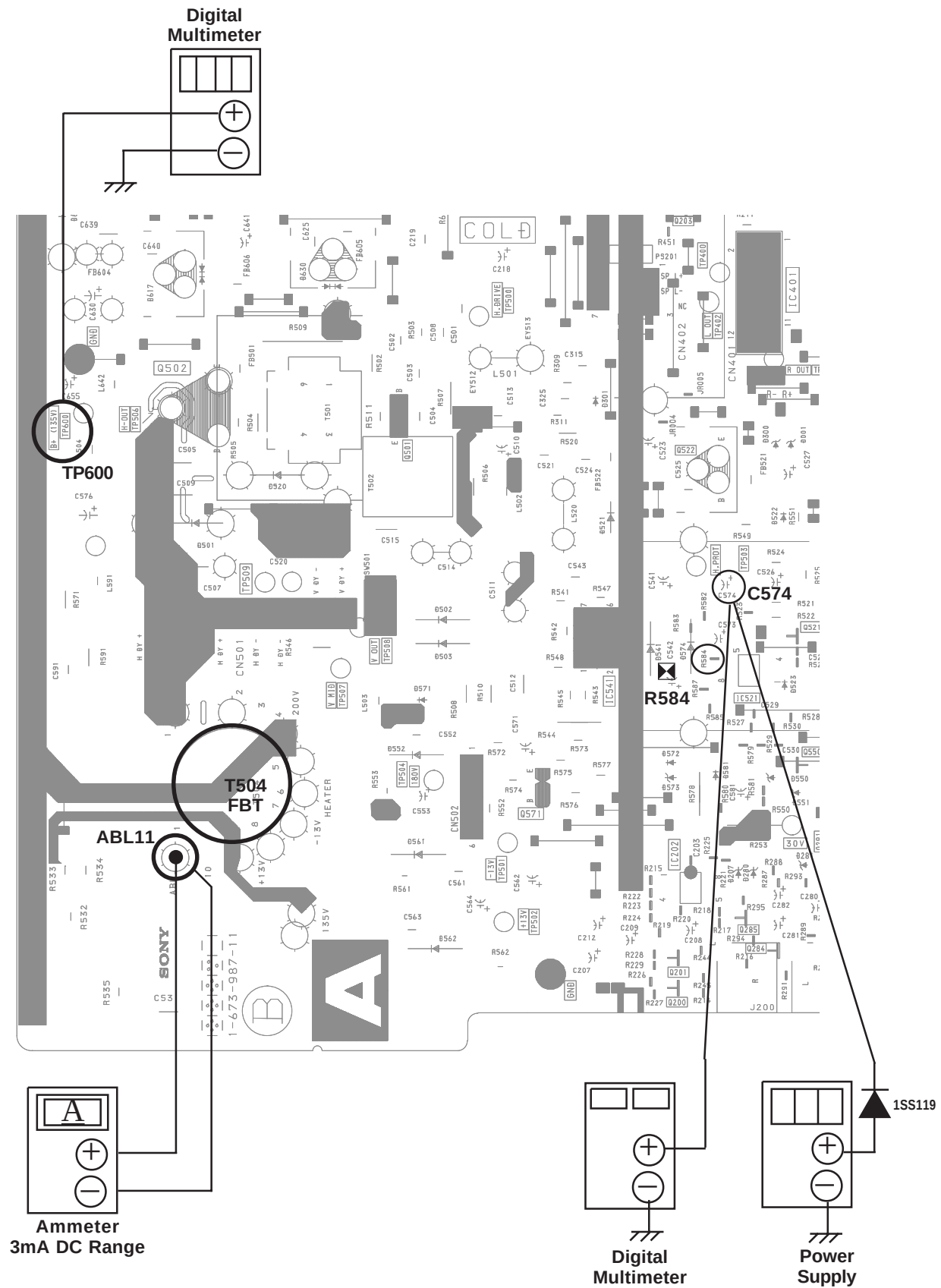


Figure 1

## SECTION 5

### CIRCUIT ADJUSTMENTS

#### Electrical Adjustment by Remote Commander

Use the Remote Commander (RM-Y165, RM-Y167 or RM-Y149A) to perform the circuit adjustments in this section.

NOTE: Test Equipment Required:

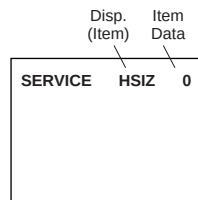
- Pattern generator
- Frequency counter
- Digital multimeter
- Audio oscillator

#### 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).

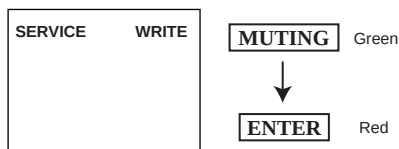
#### Service Adjustment Mode On

- The CRT displays the item being adjusted.

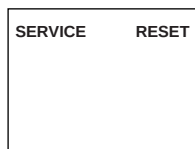


- Press **1** or **4** on the Remote Commander to select an item.
- Press **3** or **6** on the Remote Commander to change the data.
- Press **MUTING** then **ENTER** to save into the memory.

#### Service Adjustment Mode Memory



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



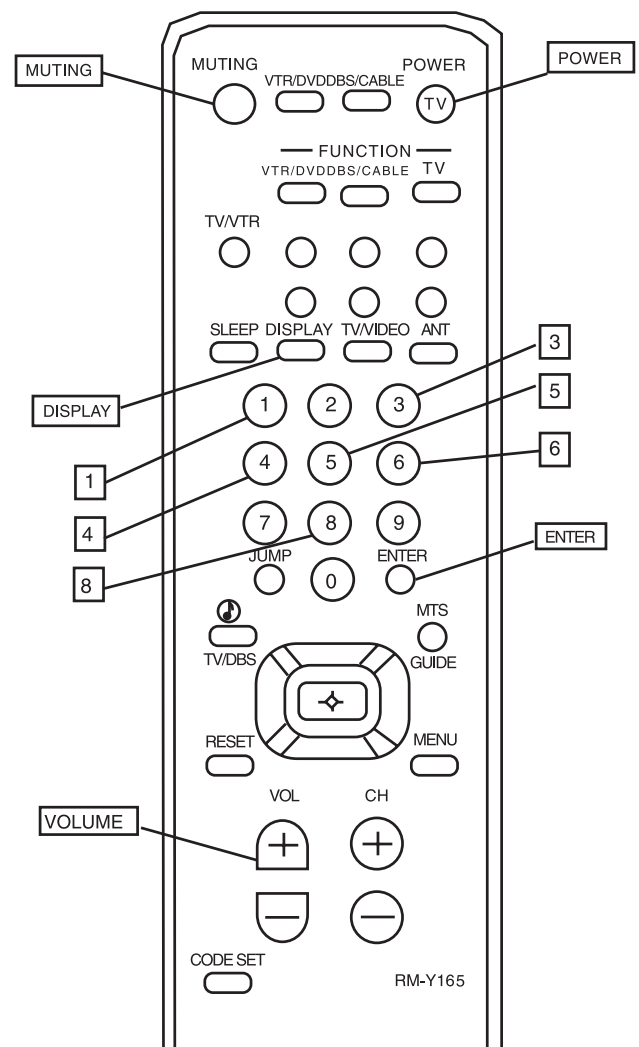
Carry out step 1 when adjusting IDs 0–4 and when replacing and adjusting IC003.

- 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



RM-Y165

## Adjustment Items

| Item | Service Name | Name      | Data Range | Initial Value | Average Data |
|------|--------------|-----------|------------|---------------|--------------|
| 1    | HSIZ         | A_HSIZE   | 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_HSIZE   | 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_DCTRAN  | 0-1        | 0             | 1            |
| 46   | Y-DC         | A_DCTRAN  | 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            |

| Item | 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_NVMID0  | 0-255      | 23            | See ID map   |
| 116  | ID1          | A_NVMID1  | 0-255      | 3             | See ID map   |
| 117  | ID2          | A_NVMID2  | 0-255      | 11            | See ID map   |
| 118  | ID3          | A_NVMID3  | 0-255      | 1             | See ID map   |
| 119  | ID4          | A_NVMID4  | 0-255      | 23            | See ID map   |
| 120  | ID5          | A_NVMID5  | 0-255      | 0             | See ID map   |
| 121  | ID6          | A6_NVMID6 | 0-255      | 0             | See ID map   |
| 122  | ID7          | A6_NVMID7 | 0-255      | 64            | See ID map   |

\*2: TV/VIDEO

## Notes:

No. 1–122 show the order that each adjustment mode may be selected while in service mode.

Data Range shows the range of possible settings for each adjustment mode.

Initial Data shows the standard settings for each adjustment mode.

|         |     |    |
|---------|-----|----|
| SERVICE | ID0 | 25 |
|---------|-----|----|

## Feature ID Map

| MODEL      | DEST.  | ID-0 | ID-1 | ID-2 | ID-3 | ID-4 | ID-5 | ID-6 | ID-7 |
|------------|--------|------|------|------|------|------|------|------|------|
| KV-27V42   | US     | 25   | 151  | 175  | 234  | 11   | 3    | 0    | 64   |
| KV-27V66   | US     | 25   | 151  | 237  | 234  | 11   | 3    | 7    | 64   |
| KV-27V66   | CND    | 89   | 151  | 237  | 154  | 11   | 3    | 7    | 64   |
| KV-29SL42K | KOREA  | 137  | 145  | 15   | 203  | 27   | 3    | 0    | 64   |
| KV-29SL42T | TAIWAN | 9    | 145  | 15   | 203  | 27   | 3    | 0    | 64   |
| KV-29VL42T | TAIWAN | 9    | 151  | 175  | 202  | 27   | 3    | 0    | 64   |
| KV-29XL42T | TAIWAN | 9    | 145  | 15   | 203  | 27   | 3    | 0    | 64   |

## 5-4. A BOARD ADJUSTMENTS

### H. Frequency Adjustment

1. Input a monoscope signal.
2. Set to Service Adjustment Mode.
3. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE).
4. Select the item of AFC, set to 3 level (free run).
5. Check H. Frequency for the  $15735 \pm 200$  Hz.
6. Select the AFC item again and adjust level to 0.
7. Press **MUTING** then **ENTER** to save into the memory.

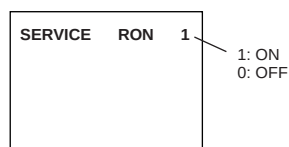
### V. Frequency Adjustment

1. Select video 1 with no signal input.
2. Set the conditions for a standard setting.
3. Connect the frequency counter across TP-508 or CN501 VDY (+) pin **6** connector and ground.
4. Check that V. Frequency shows  $60 \pm 4$  Hz.

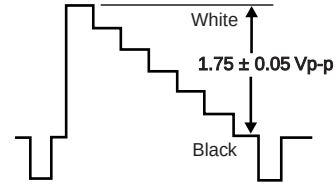
### Sub Contrast Adjustment (RDRV)

1. Input a color-bar signal.
2. Set the red color.
3. Set to Service Adjustment Mode.
4. Select the item DCOL level to 0.
5. Set the conditions as follows:

PICTURE: MAX  
 COLOR: MIN  
 BRIGHT: CENTER  
 R ON: ON (1)  
 G ON: OFF (0)  
 B ON: OFF (0)



6. Connect an oscilloscope probe to CN301 pin **5** (R OUT) and ground.
7. Select RDRV with **1** and **4**.
8. Adjust with **3** and **6** for  $1.75 \pm 0.05$  Vp-p

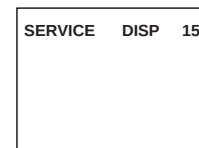


9. Reset the item DCOL to 1.
10. Return the following back to normal after adjustment.
11. Press **MUTING** then **ENTER** to save into the memory.

PICTURE: MAX  
 COLOR: CENTER  
 BRIGHT: CENTER  
 R ON: ON (1)  
 G ON: ON (1)  
 B ON: ON (1)

### 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 with **3** and **6** to adjust characters to the center.
5. Press **MUTING** then **ENTER** to save into the memory.
6. Check to see if the text is displayed on the screen.

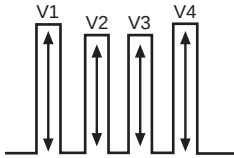


### Sub Bright Adjustment (SBRT)

1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Set the PICTURE and BRIGHTNESS to minimum.
4. Select the SBRT item with **1** and **4**.
5. Adjust 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)

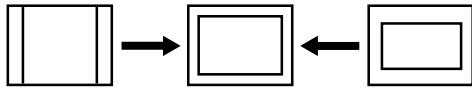
1. Input a color-bar signal.
2. Set to Service Adjustment Mode.
3. Select the DCOL item and set the value to 0.
4. Connect an oscilloscope probe to CN702 Pin ⑤ (BLUE OUT) of the C Board and ground.
5. Select SHUE and SCOL with [1] and [4] .
6. Adjust with [3] and [6] for the  $V1 = V4 \pm 0.15 \text{ Vp-p}$  (SCOL) and  $V2 = V3 \pm 0.15 \text{ Vp-p}$  (SHUE).



7. Reset the DCOL level to 1.
8. Press [MUTING] then [ENTER] to save into memory.

## V. Size Adjustment (VSIZ)

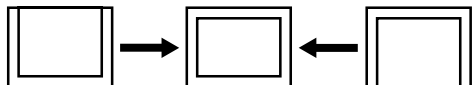
1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Select the VSIZ item with [1] and [4] .
4. Adjust value of VPOS with [3] and [6] for the best vertical center.



5. Press [MUTING] then [ENTER] to save into the memory.

## V. Center Adjustment (VPOS)

1. Input a crosshatch signal.
2. Set to 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.

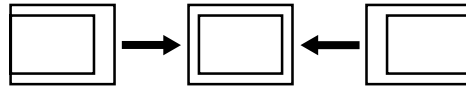


5. Press [MUTING] then [ENTER] to save into the memory.

## H. Center Adjustment (HPOS)

Perform this adjustment after checking H. Frequency.

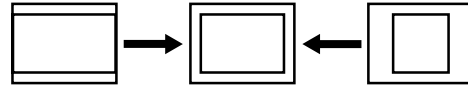
1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Select the HPOS item with [1] and [4] .
4. Adjust the value of HPOS with [3] and [6] for the best horizontal center.



5. Press [MUTING] then [ENTER] to save into the memory.

## H. Size Adjustment (HSIZ)

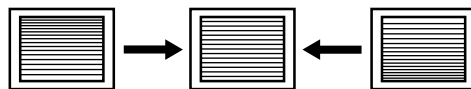
1. Input a crosshatch signal.
2. Set to Service Adjustment Mode.
3. Select HSIZ with [1] and [4] .
4. Adjust with [3] and [6] for the best horizontal size.
5. Press [MUTING] then [ENTER] to save into the memory.



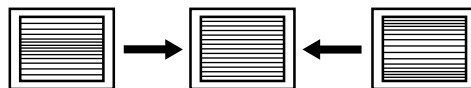
## V. Linearity (VLIN), V Correction

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

V LINEARITY (VLIN)



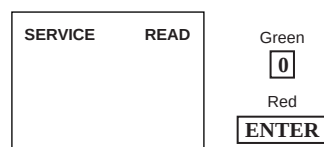
V CORRECTION



## 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



CV board  
(CV27V2402099.427)  
(CV27V2402099.427)  
(CV27V2402099.427)

K board  
(CV27V2402099.427)

P board  
(CV27V2402099.427)

P board  
(CV27V2402099.427)

K board  
(CV27V2402099.427)

CV board  
(CV27V2402099.427)

- When replacing parts shown in the table below, be sure to perform the required adjustments.
- | Part Description (Fig.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Adjustment (Ref.) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| D1, C511, C573, C574, C575, D372, D573, C574, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000, R1001, R1002, R1003, R1004, R1005, R1006, R1007, R1008, R1009, R1010, R1011, R1012, R1013, R1014, R1015, R1016, R1017, R1018, R1019, R1020, R1021, R1022, R1023, R1024, R1025, R1026, R1027, R1028, R1029, R1030, R1031, R1032, R1033, R1034, R1035, R1036, R1037, R1038, R1039, R1040, R1041, R1042, R1043, R1044, R1045, R1046, R1047, R1048, R1049, R1050, R1051, R1052, R1053, R1054, R1055, R1056, R1057, R1058, R1059, R1060, R1061, R1062, R1063, R1064, R1065, R1066, R1067, R1068, R1069, R1070, R1071, R1072, R1073, R1074, R1075, R1076, R1077, R1078, R1079, R1080, R1081, R1082, R1083, R1084, R1085, R1086, R1087, R1088, R1089, R1090, R1091, R1092, R1093, R1094, R1095, R1096, R1097, R1098, R1099, R1100, R1101, R1102, R1103, R1104, R1105, R1106, R1107, R1108, R1109, R1110, R1111, R1112, R1113, R1114, R1115, R1116, R1117, R1118, R1119, R1120, R1121, R1122, R1123, R1124, R1125, R1126, R1127, R1128, R1129, R1130, R1131, R1132, R1133, R1134, R1135, R1136, R1137, R1138, R1139, R1140, R1141, R1142, R1143, R1144, R1145, R1146, R1147, R1148, R1149, R1150, R1151, R1152, R1153, R1154, R1155, R1156, R1157, R1158, R1159, R1160, R1161, R1162, R1163, R1164, R1165, R1166, R1167, R1168, R1169, R1170, R1171, R1172, R1173, R1174, R1175, R1176, R1177, R1178, R1179, R1180, R1181, R1182, R1183, R1184, R1185, R1186, R1187, R1188, R1189, R1190, R1191, R1192, R1193, R1194, R1195, R1196, R1197, R1198, R1199, R1200, R1201, R1202, R1203, R1204, R1205, R1206, R1207, R1208, R1209, R1210, R1211, R1212, R1213, R1214, R1215, R1216, R1217, R1218, R1219, R1220, R1221, R1222, R1223, R1224, R1225, R1226, R1227, R1228, R1229, R1230, R1231, R1232, R1233, R1234, R1235, R1236, R1237, R1238, R1239, R1240, R1241, R1242, R1243, R1244, R1245, R1246, R1247, R1248, R1249, R1250, R1251, R1252, R1253, R1254, R1255, R1256, R1257, R1258, R1259, R1260, R1261, R1262, R1263, R1264, R1265, R1266, R1267, R1268, R1269, R1270, R1271, R1272, R1273, R1274, R1275, R1276, R1277, R1278, R1279, R1280, R1281, R1282, R1283, R1284, R1285, R1286, R1287, R1288, R1289, R1290, R1291, R1292, R1293, R1294, R1295, R1296, R1297, R1298, R1299, R1300, R1301, R1302, R1303, R1304, R1305, R1306, R1307, R1308, R1309, R1310, R1311, R1312, R1313, R1314, R1315, R |                   |

### 6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.
    - $\mu\text{F}$ :  $10^6$   $\text{mV}$  or less are not indicated except for electrolytic and tantalum.
  - All electrolytics are  $\geq 50\%$  unless otherwise specified.
  - Indication of resistance, which does not have one for rating electrical power, is as follows:
    - Pitch: 5mm
    - Rating electrical power  $1/4\text{W}$  (ChIP:  $1/20\text{W}$ )
  - All resistors are in ohms.
- $K12 = 100K12 \quad M2 = 1000K12$
- : nonflammable resistor
  - : fusible resistor
  - : internal component
  - : panel designation and adjustment for repair
  - : earth-ground
  - : earth-ground

### Reference Information

|           |                                                                                       |                            |
|-----------|---------------------------------------------------------------------------------------|----------------------------|
| RESISTOR  | RN                                                                                    | METAL FILM                 |
|           | RC                                                                                    | SOLID                      |
|           | FPFD                                                                                  | NON FLAMMABLE CARBON       |
|           | RUSE                                                                                  | NON FLAMMABLE FUSIBLE      |
|           | RW                                                                                    | NON FLAMMABLE WIREWOUND    |
|           | RS                                                                                    | NON INHIBITING METAL OXIDE |
|           | RB                                                                                    | NON FLAMMABLE CEMENT       |
|           |  | ADJUSTMENT RESISTOR        |
| COIL      | LF-4L                                                                                 | MICRO INDUCTOR             |
| CAPACITOR | TA                                                                                    | TANTALUM                   |
|           | PS                                                                                    | STYROL                     |
|           | PP                                                                                    | POLYPROPYLENE              |
|           | PT                                                                                    | MYLAR                      |
|           | MPG                                                                                   | METALIZED POLYESTER        |
|           | MPP                                                                                   | METALIZED POLYPROPYLENE    |
|           | ALB                                                                                   | BIPOLAR                    |
|           | ALH                                                                                   | HIGH TEMPERATURE           |
|           | ALR                                                                                   | HIGH RIPPLE                |

### Notes

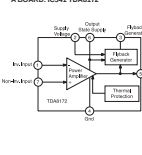
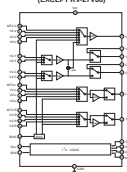
**Note:**

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

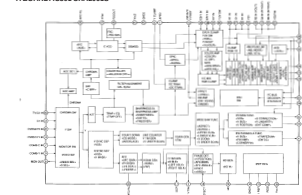
The symbol  (displayed on component side of the circuit board) indicates fast operating fuse. Replace only with fuse of the same rating as marked.

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

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

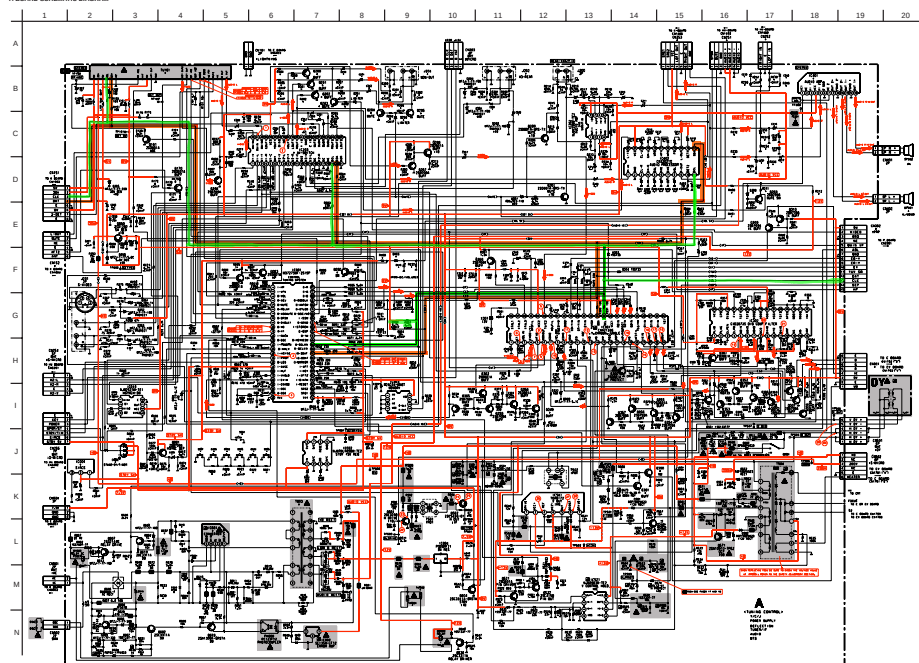


| REF NO. | LOC. | HW-DRUG-LEFT | HW-DRUG-LEFT | HW-DRUG-LEFT | HW-DRUG-LEFT |
|---------|------|--------------|--------------|--------------|--------------|
| REF NO. | LOC. | HW-DRUG-LEFT | HW-DRUG-LEFT | HW-DRUG-LEFT | HW-DRUG-LEFT |
| 0000    | 0    | 0            | 0            | 0            | 0            |
| 0001    | 0    | 0            | 0            | 0            | 0            |
| 0002    | 0    | 0            | 0            | 0            | 0            |
| 0003    | 0    | 0            | 0            | 0            | 0            |
| 0004    | 0    | 0            | 0            | 0            | 0            |
| 0005    | 0    | 0            | 0            | 0            | 0            |
| 0006    | 0    | 0            | 0            | 0            | 0            |
| 0007    | 0    | 0            | 0            | 0            | 0            |
| 0008    | 0    | 0            | 0            | 0            | 0            |
| 0009    | 0    | 0            | 0            | 0            | 0            |
| 0010    | 0    | 0            | 0            | 0            | 0            |
| 0011    | 0    | 0            | 0            | 0            | 0            |
| 0012    | 0    | 0            | 0            | 0            | 0            |
| 0013    | 0    | 0            | 0            | 0            | 0            |
| 0014    | 0    | 0            | 0            | 0            | 0            |
| 0015    | 0    | 0            | 0            | 0            | 0            |
| 0016    | 0    | 0            | 0            | 0            | 0            |
| 0017    | 0    | 0            | 0            | 0            | 0            |
| 0018    | 0    | 0            | 0            | 0            | 0            |
| 0019    | 0    | 0            | 0            | 0            | 0            |
| 0020    | 0    | 0            | 0            | 0            | 0            |
| 0021    | 0    | 0            | 0            | 0            | 0            |
| 0022    | 0    | 0            | 0            | 0            | 0            |
| 0023    | 0    | 0            | 0            | 0            | 0            |
| 0024    | 0    | 0            | 0            | 0            | 0            |
| 0025    | 0    | 0            | 0            | 0            | 0            |
| 0026    | 0    | 0            | 0            | 0            | 0            |
| 0027    | 0    | 0            | 0            | 0            | 0            |
| 0028    | 0    | 0            | 0            | 0            | 0            |
| 0029    | 0    | 0            | 0            | 0            | 0            |
| 0030    | 0    | 0            | 0            | 0            | 0            |
| 0031    | 0    | 0            | 0            | 0            | 0            |
| 0032    | 0    | 0            | 0            | 0            | 0            |
| 0033    | 0    | 0            | 0            | 0            | 0            |
| 0034    | 0    | 0            | 0            | 0            | 0            |
| 0035    | 0    | 0            | 0            | 0            | 0            |
| 0036    | 0    | 0            | 0            | 0            | 0            |
| 0037    | 0    | 0            | 0            | 0            | 0            |
| 0038    | 0    | 0            | 0            | 0            | 0            |
| 0039    | 0    | 0            | 0            | 0            | 0            |
| 0040    | 0    | 0            | 0            | 0            | 0            |
| 0041    | 0    | 0            | 0            | 0            | 0            |
| 0042    | 0    | 0            | 0            | 0            | 0            |
| 0043    | 0    | 0            | 0            | 0            | 0            |
| 0044    | 0    | 0            | 0            | 0            | 0            |
| 0045    | 0    | 0            | 0            | 0            | 0            |
| 0046    | 0    | 0            | 0            | 0            | 0            |
| 0047    | 0    | 0            | 0            | 0            | 0            |
| 0048    | 0    | 0            | 0            | 0            | 0            |
| 0049    | 0    | 0            | 0            | 0            | 0            |
| 0050    | 0    | 0            | 0            | 0            | 0            |
| 0051    | 0    | 0            | 0            | 0            | 0            |
| 0052    | 0    | 0            | 0            | 0            | 0            |
| 0053    | 0    | 0            | 0            | 0            | 0            |
| 0054    | 0    | 0            | 0            | 0            | 0            |
| 0055    | 0    | 0            | 0            | 0            | 0            |
| 0056    | 0    | 0            | 0            | 0            | 0            |
| 0057    | 0    | 0            | 0            | 0            | 0            |
| 0058    | 0    | 0            | 0            | 0            | 0            |
| 0059    | 0    | 0            | 0            | 0            | 0            |
| 0060    | 0    | 0            | 0            | 0            | 0            |
| 0061    | 0    | 0            | 0            | 0            | 0            |
| 0062    | 0    | 0            | 0            | 0            | 0            |
| 0063    | 0    | 0            | 0            | 0            | 0            |
| 0064    | 0    | 0            | 0            | 0            | 0            |
| 0065    | 0    | 0            | 0            | 0            | 0            |
| 0066    | 0    | 0            | 0            | 0            | 0            |
| 0067    | 0    | 0            | 0            | 0            | 0            |
| 0068    | 0    | 0            | 0            | 0            | 0            |
| 0069    | 0    | 0            | 0            | 0            | 0            |
| 0070    | 0    | 0            | 0            | 0            | 0            |
| 0071    | 0    | 0            | 0            | 0            | 0            |
| 0072    | 0    | 0            | 0            | 0            | 0            |
| 0073    | 0    | 0            | 0            | 0            | 0            |
| 0074    | 0    | 0            | 0            | 0            | 0            |
| 0075    | 0    | 0            | 0            | 0            | 0            |
| 0076    | 0    | 0            | 0            | 0            | 0            |
| 0077    | 0    | 0            | 0            | 0            | 0            |
| 0078    | 0    | 0            | 0            | 0            | 0            |
| 0079    | 0    | 0            | 0            | 0            | 0            |
| 0080    | 0    | 0            | 0            | 0            | 0            |
| 0081    | 0    | 0            | 0            | 0            | 0            |
| 0082    | 0    | 0            | 0            | 0            | 0            |
| 0083    | 0    | 0            | 0            | 0            | 0            |
| 0084    | 0    | 0            | 0            | 0            | 0            |
| 0085    | 0    | 0            | 0            | 0            | 0            |
| 0086    | 0    | 0            | 0            | 0            | 0            |
| 0087    | 0    | 0            | 0            | 0            | 0            |

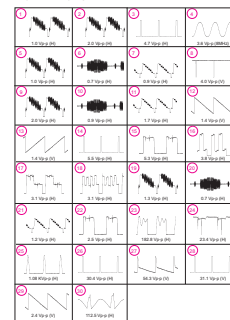




A BOARD SCHEMATIC DIAGRAM



A BOARD WAVEFORMS

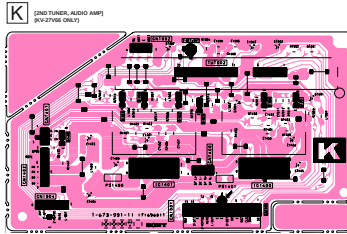


A BOARD IC VOLTAGE LIST

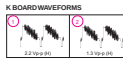
| IC | V1 | V2 | V3 | V4 | V5 | V6 | V7 | V8 | V9 | V10 | V11 | V12 | V13 | V14 | V15 | V16 | V17 | V18 | V19 | V20 | V21 | V22 | V23 | V24 | V25 | V26 | V27 | V28 | V29 | V30 | V31 | V32 | V33 | V34 | V35 | V36 | V37 | V38 | V39 | V40 | V41 | V42 | V43 | V44 | V45 | V46 | V47 | V48 | V49 | V50 | V51 | V52 | V53 | V54 | V55 | V56 | V57 | V58 | V59 | V60 | V61 | V62 | V63 | V64 | V65 | V66 | V67 | V68 | V69 | V70 | V71 | V72 | V73 | V74 | V75 | V76 | V77 | V78 | V79 | V80 | V81 | V82 | V83 | V84 | V85 | V86 | V87 | V88 | V89 | V90 | V91 | V92 | V93 | V94 | V95 | V96 | V97 | V98 | V99 | V100 |
|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  | 41  | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  | 61  | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  | 71  | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  | 81  | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | 91  | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100 |      |

A BOARD TRANSISTOR VOLTAGE LIST

| VOLTAGE LIST |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|
| TRANSISTOR   | V1   | V2   | V3   | V4   | V5   | V6   | V7   | V8   | V9   |
| 1            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9            | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 73           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 74           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 75           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 76           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 77           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 78           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 79           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 80           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 81           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 82           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 83           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 84           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 85           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 86           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 87           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 88           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 89           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 91           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 92           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 93           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 94           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 95           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 96           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 97           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 98           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 99           | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100          | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

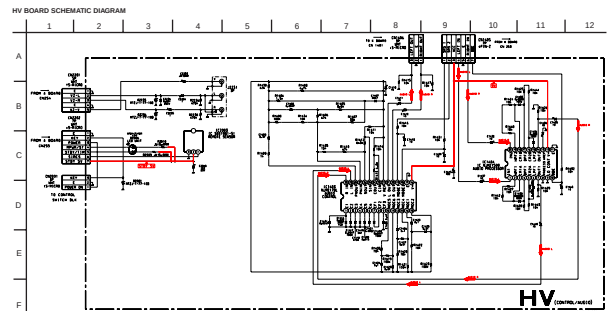
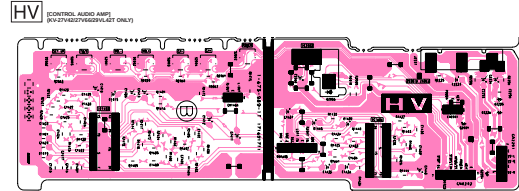
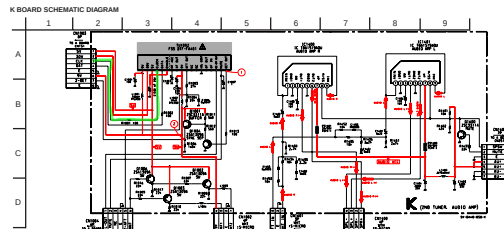


| Pin | Volts | Pin | Volts |
|-----|-------|-----|-------|
| 1   | 2.7   | 27  | 0.0   |
| 2   | 0.0   | 28  | 0.7   |
| 3   | 0.0   | 29  | 3.3   |
| 4   | 0.0   | 30  | 0.0   |
| 5   | 4.9   | 31  | 0.0   |
| 6   | 4.9   | 32  | 1.5   |
| 7   | 3.3   | 33  | 2.0   |
| 8   | NC    | 34  | 0.0   |
| 9   | 0.0   | 35  | 0.0   |
| 10  | 0.0   | 36  | 0.0   |
| 11  | 0.0   | 37  | 0.0   |
| 12  | 0.0   | 38  | 0.0   |
| 13  | 3.3   | 39  | 1.5   |
| 14  | 3.3   | 40  | 1.5   |
| 15  | 3.3   | 41  | 0.0   |
| 16  | 0.0   | 42  | 2.3   |
| 17  | 0.0   | 43  | 3.3   |
| 18  | 0.4   | 44  | 1.2   |
| 19  | 0.0   | 45  | 0.0   |
| 20  | 0.5   |     |       |
| 21  | 1.5   |     |       |



|       | 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 | 5.1 |
| Q1006 | 4.5 | 5.1 | 5.1 |
| Q1400 | 0.7 | 0.0 | GND |

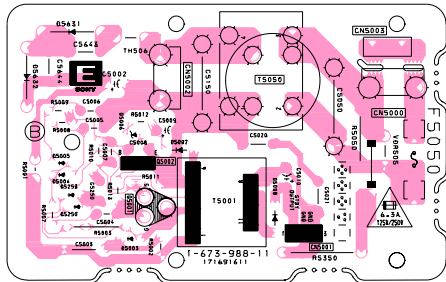
| K BOARD IC   |      |
|--------------|------|
| VOLTAGE LIST |      |
| IC1400       |      |
| pin          | volt |
| 1            | 0.0  |
| 2            | GND  |
| 3            | 0.0  |
| 4            | 0.0  |
| 5            | GND  |
| 6            | 0.0  |
| 7            | 16.9 |
| 8            | 0.0  |
| 9            | 0.0  |
| IC1401       |      |
| pin          | volt |
| 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  |



| IC14001 | V2  | 0.0 | IC14002 | V2  | 0.0 |
|---------|-----|-----|---------|-----|-----|
| 201     | V05 | 20  | 4.5     | 201 | V05 |
| 1       | 4.5 | 21  | 4.5     | 1   | 4.5 |
| 2       | 4.5 | 22  | 4.5     | 2   | 4.5 |
| 3       | 4.5 | 23  | 4.5     | 3   | 4.5 |
| 4       | 4.5 | 24  | 4.5     | 4   | 4.5 |
| 5       | 4.5 | 25  | 4.5     | 5   | 4.5 |
| 6       | 4.5 | 26  | 4.5     | 6   | 4.5 |
| 7       | 4.5 | 27  | 4.5     | 7   | 4.5 |
| 8       | 4.5 | 28  | 4.5     | 8   | 4.5 |
| 9       | 4.5 | 29  | 4.5     | 9   | 4.5 |
| 10      | 4.5 | 30  | 4.5     | 10  | 4.5 |
| 11      | 4.5 | 31  | 4.5     | 11  | 4.5 |
| 12      | 4.5 | 32  | 4.5     | 12  | 4.5 |
| 13      | 4.5 | 33  | 4.5     | 13  | 4.5 |
| 14      | 4.5 | 34  | 4.5     | 14  | 4.5 |
| 15      | 4.5 | 35  | 4.5     | 15  | 4.5 |
| 16      | 4.5 | 36  | 4.5     | 16  | 4.5 |
| 17      | 4.5 | 37  | 4.5     | 17  | 4.5 |
| 18      | 4.5 | 38  | 4.5     | 18  | 4.5 |
| 19      | 4.5 | 39  | 4.5     | 19  | 4.5 |
| 20      | 4.5 | 40  | 4.5     | 20  | 4.5 |

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

## E [ENERGY START]



### E BOARD TRANSISTOR VOLTAGE LIST

|       | B   | C   | E     |
|-------|-----|-----|-------|
| Q5002 | 0.4 | 1.5 | 0.0   |
| Q5001 | 1.5 | 0.1 | 157.6 |

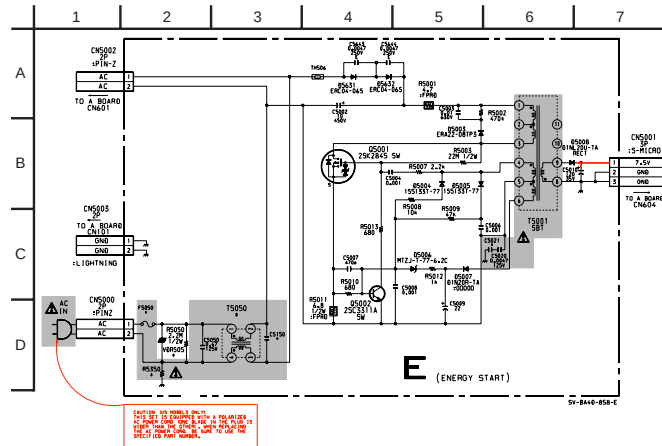
All voltages are in V

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

| REF. NO. | KV-29SL42K   | KV-27V42/V66/29SL42T/29VL42T/29XL42T |
|----------|--------------|--------------------------------------|
| C5002    | 0.0047 125V  | 3W (7.50A)                           |
| C5150    | 10           | 0.47                                 |
| F5050    | 6.3A 250V    | 6.3A 125V                            |
| R5350    | 8.2M         | 4.7M                                 |
| T5050    | 1-424-220-11 | 1-426-717-11                         |
| VDR505   | 1-803-587-11 | 1-803-585-11                         |

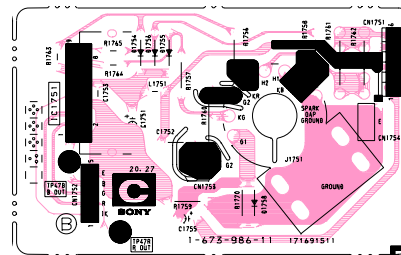
0: Not Mounted

### E BOARD SCHEMATIC DIAGRAM



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## C [CRT DRIVE, R.G.B. DRIVE] (KV-29XL42T/29SL42T/29VL42T/29XL42T)



### C BOARD IC VOLTAGE LIST

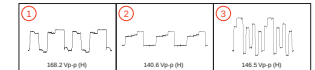
| IC1751 | pin | volt  |
|--------|-----|-------|
|        | 1   | 2.3   |
|        | 2   | 2.3   |
|        | 3   | 2.3   |
|        | 4   | GND   |
|        | 5   | 2.3   |
|        | 6   | 100.1 |
|        | 7   | 137.3 |
|        | 8   | 138.6 |
|        | 9   | 140.8 |

All voltages are in V

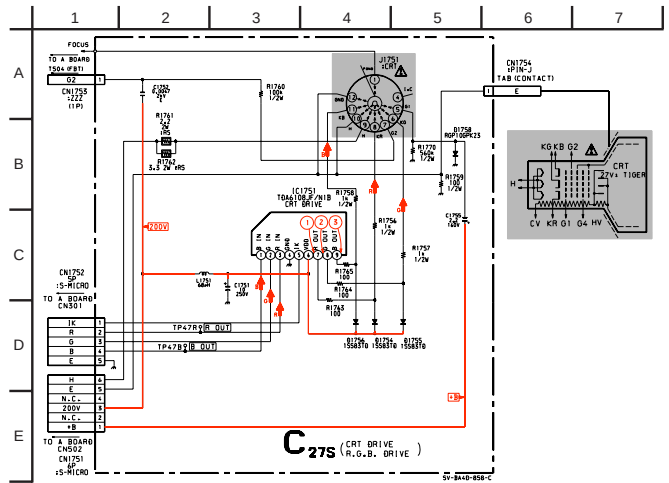


**NOTE:**  
Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

### C BOARD WAVEFORMS



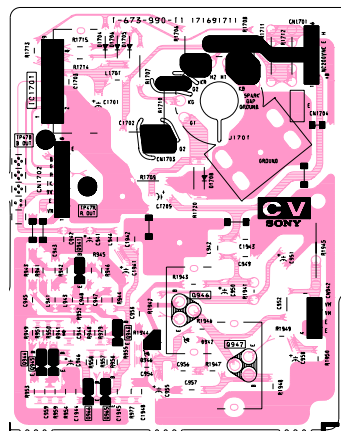
### C BOARD SCHEMATIC DIAGRAM



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KV-27V42I27V66/29SL42K/29SL42T/29VL42T/29XL42T

**CV** [CRT DRIVE, R.G.B. DRIVE, VELOCITY MODULATION]  
(KV-27V42I27V66/29VL42T 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 | VOLT  |
|--------|-------|
| 1      | 2.3   |
| 2      | 2.3   |
| 3      | 2.3   |
| 4      | 0.0   |
| 5      | 3.7   |
| 6      | 203.6 |
| 7      | 129.0 |
| 8      | 126.0 |
| 9      | 127.0 |

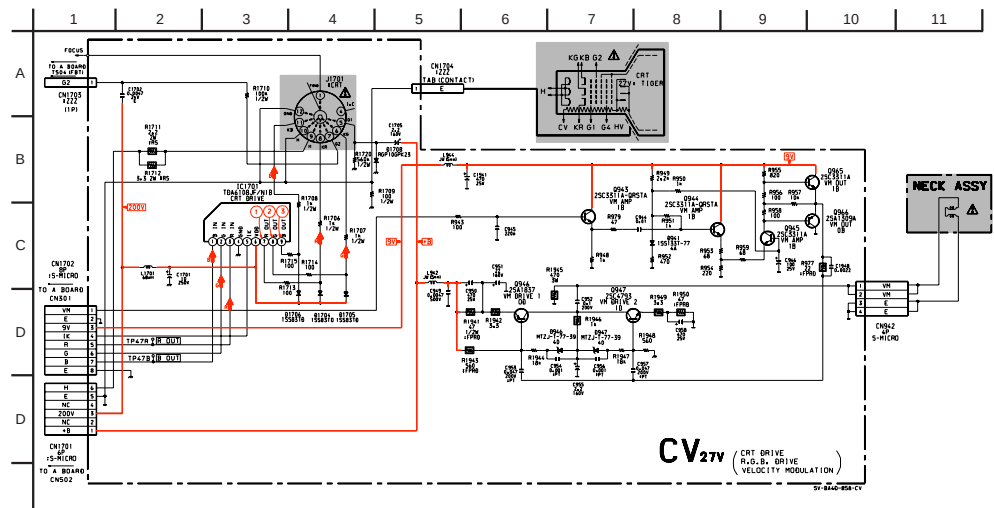
All voltages are in V

CV BOARD WAVEFORMS



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

CV BOARD SCHEMATIC DIAGRAM



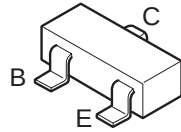
SCHEMATIC DIAGRAMS  
← E C Boards CV Board →

— 41 —

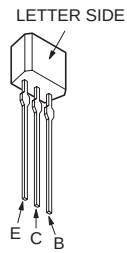
— 42 —

## 6-4. SEMICONDUCTORS

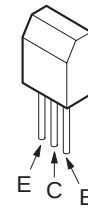
2SA1162-G  
2SD601A-Q



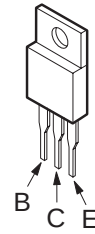
2SD2144S  
2SA1175-HFE  
2SC2785-HFE  
2SA933AS-QT



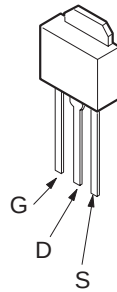
2SC3209LK  
2SD1312-K



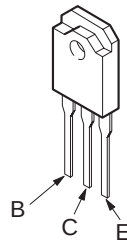
2SC4159-E



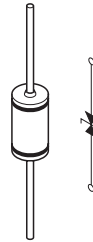
2SK2845-LB102



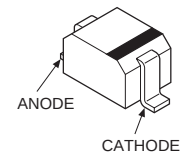
2SC5426-01



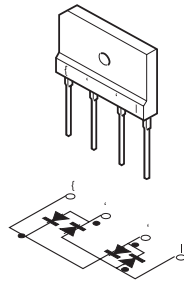
RD9.1EW



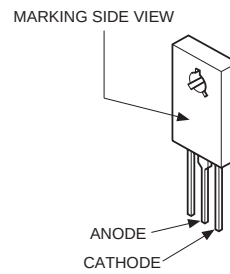
MA111-TX



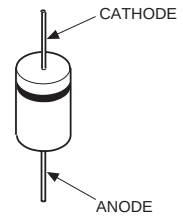
D4SB60L-F



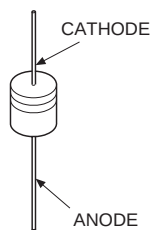
D5LC20U



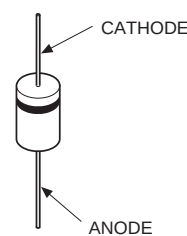
RU4AM-T3



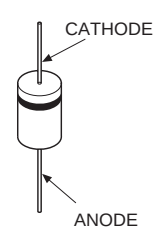
D1N20R  
MTZJ-33  
MTZJ-30D  
MTZJ-5.1C  
RD3.3ESB2  
RD5.6ESB2  
RD8.23SB2  
RD10ESB2



U05G  
MTZJ-T-77-2.2A  
ERA22-08  
LNK0120022G  
1SS133T-77  
ERC06-15S  
MDV04-600  
RU-1P



D1NL20-U  
EGP20G  
EL1Z  
1SS83  
RGP02-17EL  
GP08D



## SECTION 7

### EXPLODED VIEW

- 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:

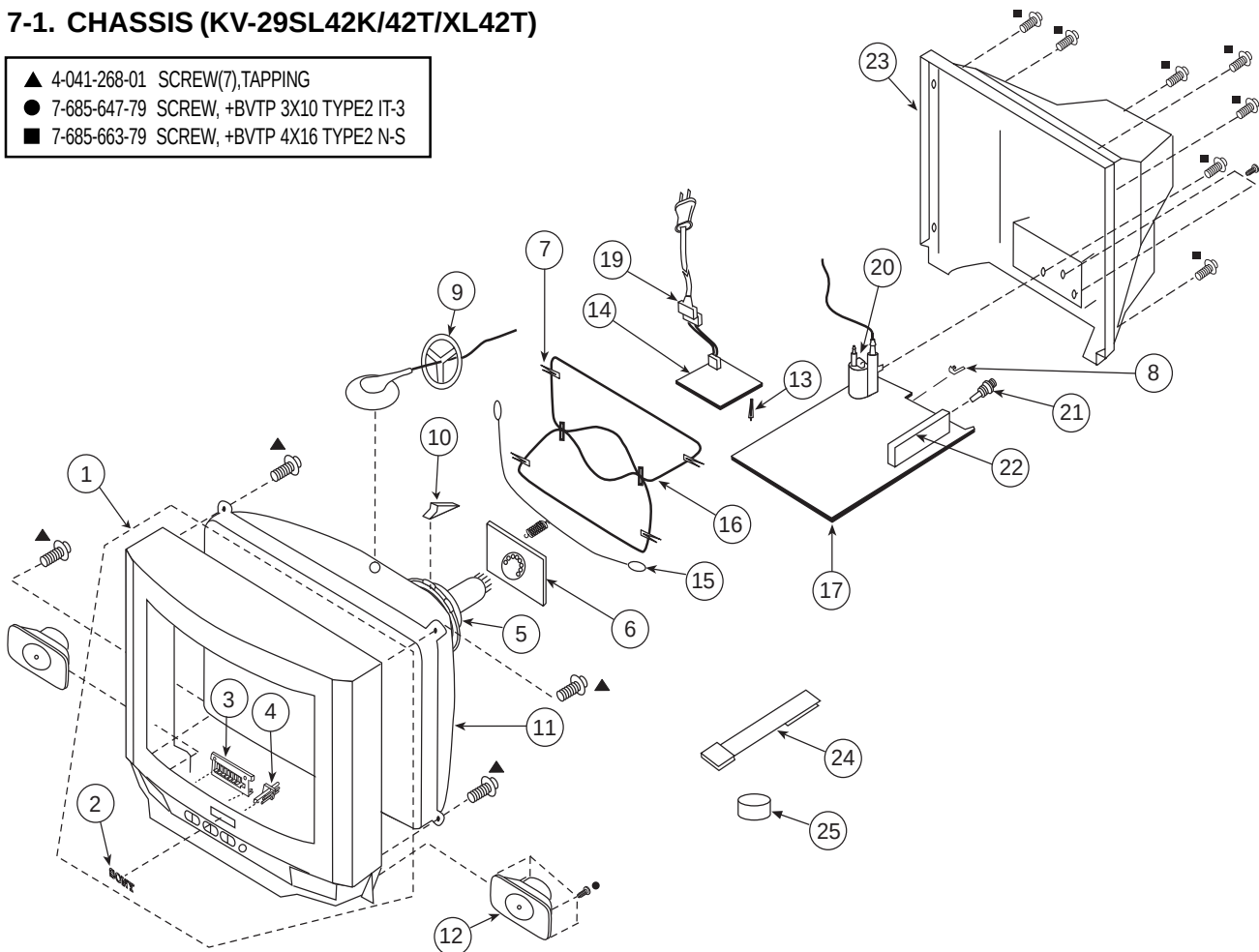
The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

#### Note:

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

### 7-1. CHASSIS (KV-29SL42K/42T/XL42T)

- ▲ 4-041-268-01 SCREW(7),TAPPING
- 7-685-647-79 SCREW, +BVTP 3X10 TYPE2 IT-3
- 7-685-663-79 SCREW, +BVTP 4X16 TYPE2 N-S



| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

|    |                          |                                               |     |
|----|--------------------------|-----------------------------------------------|-----|
| 1  | X-4035-815-1             | BEZNET ASSY (KV-29SL42T/29SL42K)              | 2-4 |
| 1  | X-4035-818-1             | BEZNET ASSY (KV-29XL42T ONLY)                 | 2-4 |
| 2  | 4-046-160-11             | EMBLEM(NO.9), SONY                            |     |
| 3  | 4-063-573-01             | BUTTON,MULTI                                  |     |
| 4  | * 4-063-570-01           | GUIDE,LED                                     |     |
| 5  | $\triangle$ 8-451-486-21 | DY, Y29NXA-V2                                 |     |
| 6  | * A-1331-920-A           | C MOUNTED PC BOARD                            |     |
| 7  | 4-040-388-01             | HOLDER(S),DGC                                 |     |
| 8  | * 4-064-646-01           | CLIP,CHASSIS                                  |     |
| 9  | 3-704-372-31             | HOLDER,HV CABLE                               |     |
| 10 | 4-053-005-01             | SPACER,DY                                     |     |
| 11 | $\triangle$ 8-733-873-05 | CRT, 29NX                                     |     |
| 12 | 1-504-531-11             | SPEAKER,(13.1X6.2CM)                          |     |
| 13 | * 3-703-353-05           | SUPPORT,PC BOARD                              |     |
| 14 | * A-1343-654-A           | E (VAR) MOUNTED PC BOARD (KV-29XL42T/29SL42T) |     |
| 14 | * A-1343-656-A           | E (VAR) MOUNTED PC BOARD (KV-29SL42K ONLY)    |     |

| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|----------|----------|-------------|--------|
|----------|----------|-------------|--------|

|    |                          |                                                 |  |
|----|--------------------------|-------------------------------------------------|--|
| 15 | 4-036-329-01             | SPRING(B),TENSION                               |  |
| 16 | $\triangle$ 1-416-952-11 | COIL, DEGAUSSING (KV-29SL42K ONLY)              |  |
| 16 | $\triangle$ 1-416-918-11 | COIL,DEMAGNETIC (KV-29XL42T/29SL42T)            |  |
| 17 | * A-1298-939-A           | A COMPLETE PC BOARD (KV-29SL42K ONLY)           |  |
| 17 | * A-1298-940-A           | A COMPLETE PC BOARD (KV-29XL42T/29SL42T)        |  |
| 19 | $\triangle$ 1-790-317-21 | CORD,AC POWER(WITH CONNECTOR) (KV-29SL42T ONLY) |  |
| 19 | $\triangle$ 1-751-057-21 | CORD,POWER (WITH CONNECTOR)                     |  |
| 20 | $\triangle$ 1-453-268-21 | FBT,NX-4005//X4J4                               |  |
| 21 | 1-766-374-11             | PLUG,F-PIN                                      |  |
| 22 | $\triangle$ 8-598-475-00 | TUNER,BTF-WL411 (KV-29SL42K ONLY)               |  |
| 22 | $\triangle$ 8-598-477-00 | TUNER,BTF-WG411 (KV-29SL42T/29XL42T)            |  |
| 23 | 4-063-572-32             | COVER,REAR (KV-29SL42K/29XL42T)                 |  |
| 23 | 4-063-572-02             | COVER,REAR (KV-29SL42T ONLY)                    |  |
| 24 | 4-062-047-01             | PIECE A(110),CONV CORRECT                       |  |
| 25 | 1-452-032-00             | MAGNET,DISC (KV-29XL42T/29SL42K ONLY)           |  |

**Note:**

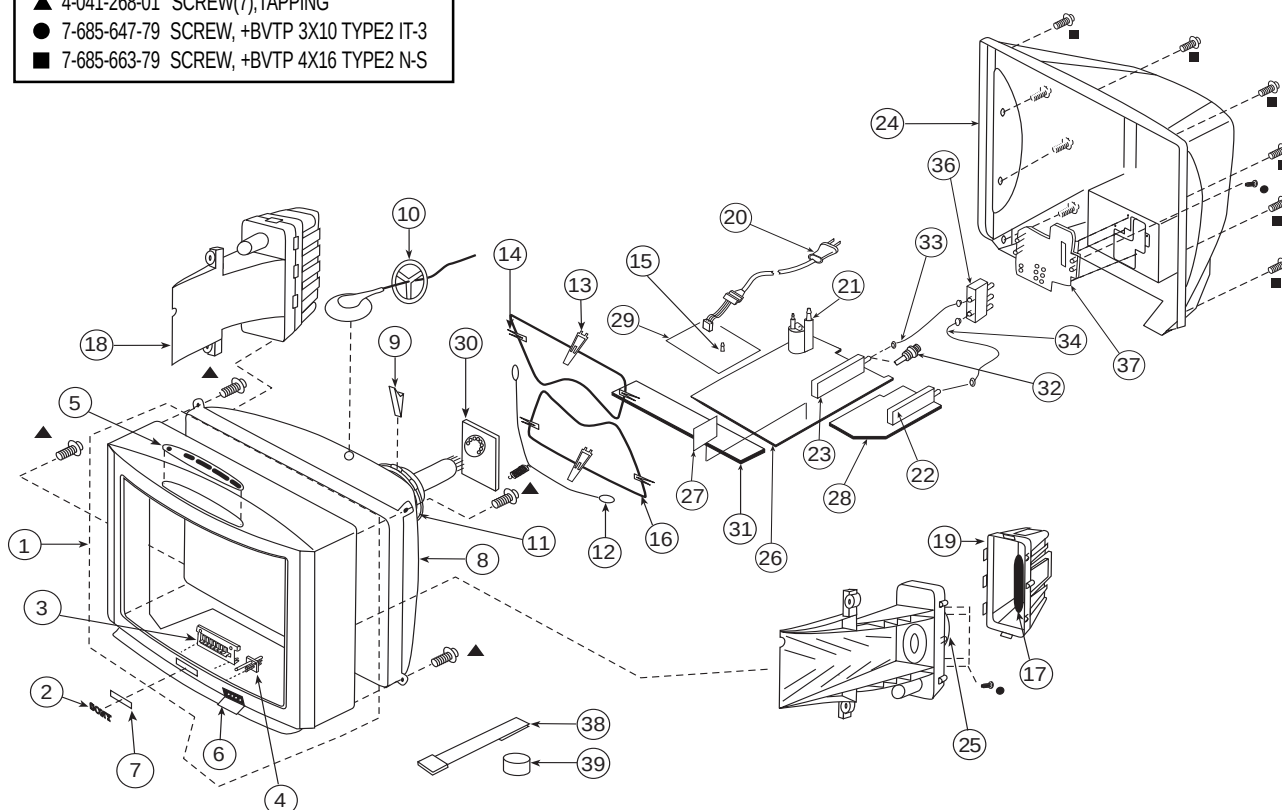
The components identified by shading and mark  $\triangle$  are critical for safety. Replace only with part number specified.

**Note:**

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

**7-2. CHASSIS (KV-27V42/V66/29VL42T)**

- ▲ 4-041-268-01 SCREW(7),TAPPING  
 ● 7-685-647-79 SCREW, +BVTP 3X10 TYPE2 IT-3  
 ■ 7-685-663-79 SCREW, +BVTP 4X16 TYPE2 N-S



| REF. NO. | PART NO.                 | DESCRIPTION                    | REMARK | REF. NO. | PART NO.                 | DESCRIPTION                              | REMARK |
|----------|--------------------------|--------------------------------|--------|----------|--------------------------|------------------------------------------|--------|
| 1        | X-4035-478-1             | BEZNET ASSY (KV-27V66 ONLY)    | 6      | 22       | $\triangle$ 8-598-430-00 | TUNER,BTF-FA401 (KV-27V66 ONLY)          |        |
| 1        | X-4036-606-1             | BEZNET ASSY (KV-29VL42T/27V42) | 6      | 23       | $\triangle$ 8-598-431-00 | TUNER,BTF-WA411 (KV-27V42/V66)           |        |
| 2        | 4-046-160-01             | EMBLEM(NO.9),SONY              |        | 23       | $\triangle$ 8-598-477-00 | TUNER,BTF-WG411 (KV-29VL42T ONLY)        |        |
| 3        | 4-052-907-11             | BUTTON,MULTI (KV-29VL42T ONLY) |        | 24       | 4-063-018-02             | COVER,REAR (KV-27V66 ONLY)               |        |
| 4        | * 4-052-897-01           | GUIDE,LED                      |        | 24       | 4-063-018-12             | COVER,REAR (KV-29VL42T/27V42)            |        |
| 5        | 1-473-549-21             | SWITCH BLOCK, CONTROL          |        | 25       | 1-505-893-11             | SPEAKER (8CM) (KV-27V66 ONLY)            |        |
| 6        | 4-052-906-01             | DOOR,CONTROL                   |        | 25       | 1-505-404-11             | SPEAKER (8CM) (KV-29VL42T/27V42)         |        |
| 7        | 4-031-698-01             | SHEET,ADHESIVE                 |        | 26       | * A-1298-901-A           | A COMPLETE PC BOARD (KV-27V42 ONLY)      |        |
| 8        | $\triangle$ 8-733-873-05 | CRT, 29NX                      |        | 26       | * A-1298-841-A           | A COMPLETE PC BOARD (KV-27V66 ONLY)      |        |
| 9        | 4-053-005-01             | SPACER,DY                      |        | 26       | * A-1298-941-A           | A COMPLETE PC BOARD (KV-29VL42T ONLY)    |        |
| 10       | 3-704-372-31             | HOLDER,HV CABLE                |        | 27       | * A-1195-154-A           | P COMPLETE PC BOARD (KV-27V66 ONLY)      |        |
| 11       | $\triangle$ 8-451-486-11 | DY, Y29NXA-V                   |        | 28       | * A-1380-608-A           | K (VAR) MOUNTED PC BOARD (KV-27V66 ONLY) |        |
| 12       | 4-036-329-01             | SPRING(B),TENSION              |        | 29       | * A-1343-654-A           | E (VAR) MOUNTED PC BOARD                 |        |
| 13       | 4-040-387-01             | HOLDER(M),DGC                  |        | 30       | * A-1331-921-A           | CV MOUNTED PC BOARD                      |        |
| 14       | 4-040-388-01             | HOLDER(S),DGC                  |        | 31       | * A-1372-614-A           | HV (VAR) MOUNTED PC BOARD                |        |
| 15       | 3-703-353-05             | SUPPORT,PC BOARD               |        | 32       | 1-766-374-11             | PLUG,F-PIN (KV-27V42/29VL42T ONLY)       |        |
| 16       | $\triangle$ 1-416-918-11 | COIL,DEMAGNETIC                |        | 33       | * 1-783-800-11           | CABLE,PIN (KV-27V66 ONLY)                |        |
| 17       | 4-374-745-31             | CUSHION (A)                    |        | 34       | * 1-557-056-31           | CABLE,P-P (KV-27V66 ONLY)                |        |
| 18       | X-4035-400-1             | BAFFLE ASSY, SPEAKER           |        | 36       | 8-598-414-00             | ANTENNA SWITCH AS-2F (KV-27V66 ONLY)     |        |
| 19       | X-4035-401-1             | COVER ASSY, SPEAKER            |        | 37       | 4-064-176-11             | BRACKET,ANTENNA (KV-27V66 ONLY)          |        |
| 20       | $\triangle$ 1-790-317-21 | CORD,AC POWER(WITH CONNECTOR)  |        | 38       | 4-062-047-01             | PIECE A(110),CONV CORRECT                |        |
| 21       | $\triangle$ 1-453-268-21 | FBT,NX-4005//X4J4              |        | 39       | 1-452-032-00             | MAGNET,DISC                              |        |



## SECTION 8 ELECTRICAL PARTS LIST

**Note:**

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

**Note:**

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

- The components 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.

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

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

A

**RESISTORS**

- All resistors are in ohms
- F : nonflammable

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

| REF. NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PART NO.     | DESCRIPTION | REMARK           | REF. NO.                             | PART NO.     | DESCRIPTION | REMARK           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------|------------------|--------------------------------------|--------------|-------------|------------------|
| <div style="border: 1px solid black; padding: 5px; display: inline-block; font-size: 2em; margin-bottom: 10px;">A</div> <ul style="list-style-type: none"> <li>* A-1298-901-A A BOARD, COMPLETE (KV-27V42)</li> <li>* A-1298-841-A A BOARD, COMPLETE (KV-27V66)</li> <li>* A-1298-939-A A BOARD, COMPLETE (KV-29SL42K)</li> <li>* A-1298-940-A A BOARD, COMPLETE (KV-29SL42T/XL42T)</li> <li>* A-1298-941-A A BOARD, COMPLETE (KV-29VL42T)</li> </ul> <p>4-382-854-11 SCREW (M3X10), P, SW (+)</p> <p>4-382-854-11 SCREW (M3X10), P, SW (+)</p> <p><b>CAPACITOR</b></p> |              |             |                  | C062                                 | 1-164-161-11 | CERAMIC     | 0.0022μF 10% 50V |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C065                                 | 1-163-009-11 | CERAMIC     | 0.001μF 10% 50V  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C070                                 | 1-163-259-91 | CERAMIC     | 220PF 5% 50V     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C080                                 | 1-164-005-11 | CERAMIC     | 0.47μF 25V       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C081                                 | 1-164-005-11 | CERAMIC     | 0.47μF 25V       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C091                                 | 1-163-231-11 | CERAMIC     | 15PF 5% 50V      |
| C001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1-163-259-91 | CERAMIC     | 220PF 5% 50V     | C092                                 | 1-163-231-11 | CERAMIC     | 15PF 5% 50V      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-104-664-11 | ELECT       | 47μF 20% 25V     | C101                                 | 1-126-963-11 | ELECT       | 4.7μF 20% 50V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-126-960-11 | ELECT       | 1μF 20% 50V      | C102                                 | 1-126-933-11 | ELECT       | 100μF 20% 16V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-035-00 | CERAMIC     | 0.047μF 50V      | C150                                 | 1-126-941-11 | ELECT       | 470μF 20% 25V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-259-91 | CERAMIC     | 220PF 5% 50V     | C151                                 | 1-104-664-11 | ELECT       | 47μF 20% 25V     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-009-11 | CERAMIC     | 0.001μF 10% 50V  | C200                                 | 1-126-959-11 | ELECT       | 0.47μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-009-11 | CERAMIC     | 0.001μF 10% 50V  | C201                                 | 1-126-960-11 | ELECT       | 1μF 20% 50V      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-009-11 | CERAMIC     | 0.001μF 10% 50V  | C202                                 | 1-126-960-11 | ELECT       | 1μF 20% 50V      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-164-004-11 | CERAMIC     | 0.1μF 10% 25V    | C207                                 | 1-126-959-11 | ELECT       | 0.47μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-126-960-11 | ELECT       | 1μF 20% 50V      | C208                                 | 1-126-959-11 | ELECT       | 0.47μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-135-00 | CERAMIC     | 560PF 5% 50V     | C209                                 | 1-126-963-11 | ELECT       | 4.7μF 20% 50V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-130-495-00 | FILM        | 0.1μF 5% 50V     | C211                                 | 1-126-964-11 | ELECT       | 10μF 20% 50V     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-259-91 | CERAMIC     | 220PF 5% 50V     | C212                                 | 1-126-963-11 | ELECT       | 4.7μF 20% 50V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-005-11 | CERAMIC     | 470PF 10% 50V    | C213                                 | 1-126-964-11 | ELECT       | 10μF 20% 50V     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-259-91 | CERAMIC     | 220PF 5% 50V     | C216                                 | 1-126-959-11 | ELECT       | 0.47μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-037-11 | CERAMIC     | 0.022μF 10% 50V  | (KV-29SL42K/42T/XL42T/VL42T/27V42)   |              |             |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-164-161-11 | CERAMIC     | 0.0022μF 10% 50V | C217                                 | 1-126-959-11 | ELECT       | 0.47μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-126-941-11 | ELECT       | 470μF 20% 25V    | (KV-29SL42K/SL42T/XL42T/VL42T/27V42) |              |             |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-126-964-11 | ELECT       | 10μF 20% 50V     | C218                                 | 1-126-941-11 | ELECT       | 470μF 20% 25V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-104-664-11 | ELECT       | 47μF 20% 25V     | C219                                 | 1-130-495-00 | FILM        | 0.1μF 5% 50V     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-259-91 | CERAMIC     | 220PF 5% 50V     | C222                                 | 1-126-964-11 | ELECT       | 10μF 20% 50V     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-009-11 | CERAMIC     | 0.001μF 10% 50V  | C226                                 | 1-126-963-11 | ELECT       | 4.7μF 20% 50V    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-251-11 | CERAMIC     | 100PF 5% 50V     | C230                                 | 1-126-957-11 | ELECT       | 0.22μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 1-163-005-11 | CERAMIC     | 470PF 10% 50V    | (KV-29VL42T/27V42)                   |              |             |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C237                                 | 1-126-957-11 | ELECT       | 0.22μF 20% 50V   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | (KV-29VL42T/27V42)                   |              |             |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C239                                 | 1-137-368-11 | FILM        | 0.0047μF 5% 50V  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | (KV-29VL42T/27V42)                   |              |             |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C240                                 | 1-137-368-11 | FILM        | 0.0047μF 5% 50V  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | (KV-29VL42T/27V42)                   |              |             |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C243                                 | 1-163-017-00 | CERAMIC     | 0.0047μF 10% 50V |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | C250                                 | 1-126-960-11 | ELECT       | 1μF 20% 50V      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |             |                  | (KV-27V66 ONLY)                      |              |             |                  |



**Note:**

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

**Note:**

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

A

| REF. NO. | PART NO.     | DESCRIPTION                                          | REMARK | REF. NO. | PART NO.     | DESCRIPTION                                                          | REMARK |
|----------|--------------|------------------------------------------------------|--------|----------|--------------|----------------------------------------------------------------------|--------|
| C251     | 1-126-960-11 | ELECT 1 $\mu$ F 20% 50V<br>(KV-27V66 ONLY)           |        | C355     | 1-164-222-11 | CERAMIC .22 $\mu$ F 25V                                              |        |
| C252     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V<br>(KV-27V66 ONLY)        |        | C356     | 1-163-038-91 | CERAMIC 0.1 $\mu$ F 25V                                              |        |
| C255     | 1-104-760-11 | CERAMIC 0.047 $\mu$ F 10% 50V                        |        | C357     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                                         |        |
| C256     | 1-126-960-11 | ELECT 1 $\mu$ F 20% 50V                              |        | C358     | 1-104-664-11 | ELECT 47 $\mu$ F 20% 25V                                             |        |
| C257     | 1-126-960-11 | ELECT 1 $\mu$ F 20% 50V                              |        | C359     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                                         |        |
| C258     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V                           |        | C360     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                                         |        |
| C259     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C361     | 1-163-037-11 | CERAMIC 0.022 $\mu$ F 10% 50V                                        |        |
| C280     | 1-126-935-11 | ELECT 470 $\mu$ F 20% 16V<br>(KV-29VL42T/27V42/V66)  |        | C362     | 1-126-965-11 | ELECT 10 $\mu$ F 20% 50V                                             |        |
| C281     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V<br>(KV-29VL42T/27V42/V66) |        | C363     | 1-126-960-11 | ELECT 1 $\mu$ F 20% 50V                                              |        |
| C282     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V<br>(KV-29VL42T/27V42/V66) |        | C370     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V<br>(KV-27V66 ONLY)                      |        |
| C284     | 1-104-664-11 | ELECT 47 $\mu$ F 20% 25V                             |        | C371     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V<br>(KV-27V66 ONLY)                      |        |
| C285     | 1-126-933-11 | ELECT 100 $\mu$ F 20% 16V                            |        | C372     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V<br>(KV-27V66 ONLY)                      |        |
| C286     | 1-163-251-11 | CERAMIC 100PF 5% 50V                                 |        | C373     | 1-163-038-91 | CERAMIC 0.1 $\mu$ F 25V                                              |        |
| C287     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V                           |        | C374     | 1-126-935-11 | ELECT 470 $\mu$ F 20% 16V                                            |        |
| C288     | 1-126-960-11 | ELECT 1 $\mu$ F 20% 50V                              |        | C375     | 1-163-038-91 | CERAMIC 0.1 $\mu$ F 25V                                              |        |
| C289     | 1-126-960-11 | ELECT 1 $\mu$ F 20% 50V                              |        | C376     | 1-104-664-11 | ELECT 47 $\mu$ F 20% 25V                                             |        |
| C290     | 1-164-005-11 | CERAMIC 0.47 $\mu$ F 25V                             |        | C377     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V                                             |        |
| C301     | 1-163-233-11 | CERAMIC 18PF 5% 50V                                  |        | C380     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V<br>(KV-29SL42K/SL42T/XL42T/VL42T/27V42) |        |
| C303     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                            |        | C381     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V<br>(KV-29SL42K/SL42T/XL42T/VL42T/27V42) |        |
| C304     | 1-163-038-91 | CERAMIC 0.1 $\mu$ F 25V                              |        | C382     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V<br>(KV-29SL42K/SL42T/XL42T/VL42T/27V42) |        |
| C305     | 1-164-004-11 | CERAMIC 0.1 $\mu$ F 10% 25V                          |        | C390     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V                                           |        |
| C306     | 1-164-004-11 | CERAMIC 0.1 $\mu$ F 10% 25V                          |        | C399     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V                                             |        |
| C307     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V                             |        | C400     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C308     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V                             |        | C401     | 1-126-956-91 | ELECT 0.1 $\mu$ F 20% 50V                                            |        |
| C309     | 1-163-017-00 | CERAMIC 0.0047 $\mu$ F 10% 50V                       |        | C402     | 1-163-017-00 | CERAMIC 0.0047 $\mu$ F 10% 50V                                       |        |
| C310     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                            |        | C403     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C311     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C404     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C312     | 1-126-942-61 | ELECT 1000 $\mu$ F 20% 25V                           |        | C405     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C313     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C406     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C314     | 1-163-003-11 | CERAMIC 330PF 10% 50V                                |        | C407     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V                                             |        |
| C316     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C410     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C317     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C411     | 1-126-956-91 | ELECT 0.1 $\mu$ F 20% 50V                                            |        |
| C318     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C412     | 1-130-495-00 | FILM 0.1 $\mu$ F 5% 50V                                              |        |
| C319     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                            |        | C413     | 1-126-967-11 | ELECT 47 $\mu$ F 20% 50V                                             |        |
| C320     | 1-126-959-11 | ELECT 0.47 $\mu$ F 20% 50V                           |        | C414     | 1-163-017-00 | CERAMIC 0.0047 $\mu$ F 50V                                           |        |
| C321     | 1-163-133-00 | CERAMIC 470PF 5% 50V                                 |        | C415     | 1-126-956-91 | ELECT 0.1 $\mu$ F 20% 50V                                            |        |
| C323     | 1-163-121-00 | CERAMIC 150PF 5% 50V                                 |        | C416     | 1-126-963-11 | ELECT 4.7 $\mu$ F 20% 50V                                            |        |
| C324     | 1-163-251-11 | CERAMIC 100PF 5% 50V                                 |        | C418     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V<br>(KV-29SL42K/SL42T/XL42T/VL42T/27V42)     |        |
| C331     | 1-163-009-11 | CERAMIC 0.001 $\mu$ F 10% 50V                        |        | C501     | 1-102-112-00 | CERAMIC 330PF 10% 50V                                                |        |
| C332     | 1-163-009-11 | CERAMIC 0.001 $\mu$ F 10% 50V                        |        | C502     | 1-106-383-00 | MYLAR 0.047 $\mu$ F 10% 200V                                         |        |
| C350     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        | C503     | 1-102-212-00 | CERAMIC 820PF 10% 500V                                               |        |
| C351     | 1-126-964-11 | ELECT 10 $\mu$ F 20% 50V                             |        | C504     | 1-102-002-00 | CERAMIC 680PF 10% 500V                                               |        |
| C352     | 1-163-021-91 | CERAMIC 0.01 $\mu$ F 10% 50V                         |        |          |              |                                                                      |        |
| C353     | 1-163-038-91 | CERAMIC 0.1 $\mu$ F 25V                              |        |          |              |                                                                      |        |
| C354     | 1-163-038-91 | CERAMIC 0.1 $\mu$ F 25V                              |        |          |              |                                                                      |        |

**A****Note:**

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

**Note:**

Les composants identifiés par un triangle 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                                                           |
|----------|--------------------------|-------------|------------------------------------------------------------------|
| C505     | $\triangle$ 1-162-134-11 | CERAMIC     | 470PF 10% 2KV                                                    |
| C507     | $\triangle$ 1-119-969-11 | MYLAR       | 14000PF 3% 1.5KV                                                 |
| C508     | $\triangle$ 1-107-364-11 | MYLAR       | 0.01 $\mu$ F 10% 200V                                            |
| C509     | $\triangle$ 1-162-116-00 | CERAMIC     | 680PF 10% 2KV                                                    |
| C510     | 1-107-649-11             | ELECT       | 2.2 $\mu$ F 20% 250V                                             |
| C511     | $\triangle$ 1-117-673-11 | FILM        | 1.5 $\mu$ F 5% 250V                                              |
| C512     | 1-106-395-00             | MYLAR       | 0.15 $\mu$ F 10% 200V                                            |
| C513     | 1-106-343-00             | MYLAR       | 0.001 $\mu$ F 10% 100V                                           |
| C514     | 1-117-891-11             | FILM        | 0.62 $\mu$ F 5% 250V                                             |
| C515     | $\triangle$ 1-162-116-00 | CERAMIC     | 680PF 10% 2KV                                                    |
| C520     | $\triangle$ 1-129-722-00 | FILM        | 0.047 $\mu$ F 5% 630V                                            |
| C521     | 1-164-646-11             | CERAMIC     | 2200PF 10% 500V                                                  |
| C523     | 1-107-652-11             | ELECT       | 10 $\mu$ F 20% 250V                                              |
| C524     | 1-102-244-00             | CERAMIC     | 220PF 10% 500V                                                   |
| C525     | 1-162-815-11             | CERAMIC     | 47PF 5% 500V                                                     |
| C526     | 1-126-960-11             | ELECT       | 1 $\mu$ F 20% 50V                                                |
| C527     | 1-126-965-11             | ELECT       | 22 $\mu$ F 20% 50V                                               |
| C528     | 1-164-690-91             | CERAMIC     | 0.0022 $\mu$ F 5% 50V                                            |
| C529     | 1-164-161-11             | CERAMIC     | 0.0022 $\mu$ F 10% 50V                                           |
| C530     | 1-163-009-11             | CERAMIC     | 0.001 $\mu$ F 10% 50V                                            |
| C531     | 1-106-387-00             | MYLAR       | 0.068 $\mu$ F 10% 200V                                           |
| C541     | 1-126-969-11             | ELECT       | 220 $\mu$ F 20% 50V                                              |
| C542     | 1-126-967-11             | ELECT       | 47 $\mu$ F 20% 50V                                               |
| C543     | 1-137-194-81             | FILM        | 0.47 $\mu$ F 5% 50V                                              |
| C553     | 1-107-662-11             | ELECT       | 22 $\mu$ F 20% 250V                                              |
| C555     | 1-163-017-00             | CERAMIC     | 0.0047 $\mu$ F 10% 50V                                           |
| C562     | 1-126-941-11             | ELECT       | 470 $\mu$ F 20% 25V                                              |
| C564     | 1-126-941-11             | ELECT       | 470 $\mu$ F 20% 25V                                              |
| C571     | $\triangle$ 1-126-964-11 | ELECT       | 10 $\mu$ F 20% 50V                                               |
| C573     | 1-126-963-11             | ELECT       | 4.7 $\mu$ F 20% 50V                                              |
| C574     | 1-107-635-11             | ELECT       | 4.7 $\mu$ F 20% 160V                                             |
| C575     | $\triangle$ 1-163-021-91 | CERAMIC     | 0.01 $\mu$ F 10% 50V                                             |
| C576     | 1-123-024-21             | ELECT       | 33 $\mu$ F 160V                                                  |
| C581     | 1-126-963-11             | ELECT       | 4.7 $\mu$ F 20% 50V                                              |
| C591     | 1-106-357-00             | MYLAR       | 0.0033 $\mu$ F 20% 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     | $\triangle$ 1-128-718-11 | ELECT       | 560 $\mu$ F 20% 400V<br>(KV-29SL42K/SL42T/XL42T/VL42T/27V42/V66) |
| C614     | 1-126-964-11             | ELECT       | 10 $\mu$ F 20% 50V                                               |
| C615     | 1-113-924-11             | CERAMIC     | 0.0047 $\mu$ F 20% 250V                                          |
| C616     | 1-130-202-00             | FILM        | 0.022 $\mu$ F 10% 400V<br>(KV-29SL42K ONLY)                      |
| C617     | 1-107-824-11             | CERAMIC     | 220PF 5% 1KV<br>(KV-29SL42K ONLY)                                |
| C618     | 1-125-893-11             | FILM        | 680PF 3% 1.5KV                                                   |
| C620     | 1-164-081-11             | CERAMIC     | 470PF 10% 50V                                                    |

| REF. NO. | PART NO.     | DESCRIPTION | REMARK                                 |
|----------|--------------|-------------|----------------------------------------|
| 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     | 1-164-004-11 | CERAMIC     | 0.1 $\mu$ F 10% 25V<br>(KV-27V66 ONLY) |
| 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     | 1-113-924-11 | CERAMIC     | 0.0047 $\mu$ F 20% 250V                |

**CONNECTOR**

|       |              |                                            |
|-------|--------------|--------------------------------------------|
| CN101 | 1-508-786-00 | PIN,CONNECTOR(5MMPITCH)                    |
| CN151 | 1-564-511-11 | PLUG,CONNECTOR 8P (KV-27V66 ONLY)          |
| CN152 | 1-564-509-11 | PLUG,CONNECTOR 6P (KV-27V66 ONLY)          |
| CN203 | 1-560-124-00 | PLUG,CONNECTOR(2.5MM)4P                    |
| CN251 | 1-564-510-11 | PLUG,CONNECTOR 7P (KV-27V66 ONLY)          |
| CN252 | 1-564-506-11 | PLUG,CONNECTOR 3P (KV-29VL42T/27V42)       |
| CN253 | 1-564-510-11 | PLUG,CONNECTOR 7P (KV-29VL42T/27V42/V66)   |
| CN254 | 1-564-508-11 | PLUG,CONNECTOR 5P                          |
| CN255 | 1-564-510-11 | PLUG,CONNECTOR 7P                          |
| CN301 | 1-564-508-11 | PLUG,CONNECTOR 5P (KV-29SL42K/SL42T/XL42T) |
| CN301 | 1-564-511-11 | PLUG,CONNECTOR 8P (KV-29VL42T/27V42/V66)   |
| CN302 | 1-691-616-11 | CONNECTOR,BOARDTO BOARD (KV-27V66 ONLY)    |
| CN401 | 1-564-505-11 | PLUG,CONNECTOR 2P                          |
| CN402 | 1-564-505-11 | PLUG,CONNECTOR 2P                          |
| CN501 | 1-580-798-11 | CONNECTORPIN(DY) 6P                        |
| CN502 | 1-564-509-11 | PLUG,CONNECTOR 6P                          |
| CN601 | 1-580-843-11 | PIN,CONNECTOR(POWER)                       |
| CN602 | 1-508-786-00 | PIN,CONNECTOR(5MMPITCH)                    |
| CN604 | 1-564-506-11 | PLUG,CONNECTOR 3P                          |

**DIODE**

|      |              |                                                 |
|------|--------------|-------------------------------------------------|
| D001 | 8-719-921-44 | DIODE MTZJ-5.1C                                 |
| D002 | 8-719-070-80 | DIODE LNK0120022G<br>(KV-29SL42K/29SL42T/XL42T) |
| D003 | 8-719-991-33 | DIODE 1SS133T-77                                |

**Note:**

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| REF. NO.         | PART NO.     | DESCRIPTION | REMARK                                                 | REF. NO.            | PART NO.     | DESCRIPTION                                                 | REMARK                     |
|------------------|--------------|-------------|--------------------------------------------------------|---------------------|--------------|-------------------------------------------------------------|----------------------------|
| D004             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | D606                | 8-719-108-18 | THYRISTOR                                                   | 5P6M                       |
| D005             | 8-719-109-89 | DIODE       | RD5.6ESB2                                              | D607                | 8-719-991-33 | DIODE                                                       | 1SS133T-77                 |
| D201             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D608                | 8-719-110-53 | DIODE                                                       | RD20ESB2                   |
| D202             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D609                | 8-719-311-31 | DIODE                                                       | RU-1P (KV-29SL42K/29VL42T) |
| D204             | 8-719-110-17 | DIODE       | RD10ESB2                                               |                     |              |                                                             |                            |
| D205             | 8-719-982-22 | DIODE       | MTZJ-30D                                               | D610                | 8-719-510-02 | DIODE                                                       | D1NS4                      |
| D207             | 8-719-109-66 | DIODE       | RD3.3ESB2                                              | D611                | 8-719-063-70 | DIODE                                                       | D1NL20U                    |
| D208             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D612                | 8-719-110-17 | DIODE                                                       | RD10ESB2                   |
|                  |              |             | (KV-29SL42K/SL42T/XL42T/VL42T/27V42)                   | D613                | 8-719-063-70 | DIODE                                                       | D1NL20U                    |
| D208             | 8-719-982-96 | DIODE       | MTZJ-T-77-2.2A (KV-27V66 ONLY)                         | D614                | 8-719-063-70 | DIODE                                                       | D1NL20U                    |
| D250             | 8-719-108-12 | DIODE       | RD9.1EW                                                | D615                | 8-719-312-10 | DIODE                                                       | RU4AM-T3                   |
| D251             | 8-719-108-12 | DIODE       | RD9.1EW                                                | D617                | 8-719-510-37 | DIODE                                                       | D5LC20U                    |
| D252             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D620                | 8-719-110-17 | DIODE                                                       | RD10ESB2                   |
| D253             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D630                | 8-719-510-37 | DIODE                                                       | D5LC20U                    |
| D254             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D640                | 8-719-991-33 | DIODE                                                       | 1SS133T-77                 |
| D255             | 8-719-110-17 | DIODE       | RD10ESB2                                               | D650                | 8-719-109-89 | DIODE                                                       | RD5.6ESB2                  |
| D280             | 8-719-981-99 | DIODE       | MTZJ-3.3<br>(KV-29VL42T/27V42/27V66)                   | <b>FERRITE BEAD</b> |              |                                                             |                            |
| D281             | 8-719-981-99 | DIODE       | MTZJ-3.3<br>(KV-29VL42T/27V42/27V66)                   | FB350               | 1-216-295-91 | SHORT                                                       |                            |
| D302             | 8-719-921-44 | DIODE       | MTZJ-5.1C                                              | FB501               | 1-410-396-41 | FERRITE                                                     | 0μH                        |
| D303             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | FB521               | 1-410-397-21 | FERRITE                                                     | 1.1μH                      |
| D304             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | FB522               | 1-410-397-21 | FERRITE                                                     | 1.1μH                      |
| D305             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | FB600               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D306             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | FB601               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D388             | 8-719-921-44 | DIODE       | MTZJ-5.1C                                              | FB602               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D403             | 8-719-991-33 | DIODE       | 1SS133T-77<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) | FB603               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D501             | 8-719-945-80 | DIODE       | ERC06-15S                                              | FB604               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D502             | 8-719-908-03 | DIODE       | GP08D                                                  | FB605               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D503             | 8-719-908-03 | DIODE       | GP08D                                                  | FB606               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D520             | 8-719-067-63 | DIODE       | MDV04-600RL                                            | FB609               | 1-412-911-11 | FERRITE                                                     | 0μH                        |
| D521             | 8-719-302-43 | DIODE       | EL1Z                                                   | <b>IC</b>           |              |                                                             |                            |
| D522             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC001               | 8-759-562-90 | IC M37273MF-251SP                                           |                            |
| D523             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC002               | 8-759-575-47 | IC NJM78LR05BM-TE2                                          |                            |
| D541             | 8-719-908-03 | DIODE       | GP08D                                                  | IC003               | 8-759-527-75 | IC M24C04-MN6T                                              |                            |
| D550             | 8-719-110-08 | DIODE       | RD8.2ESB2                                              | IC004               | 8-742-014-11 | HYB IC SBX1981-51 (KV-29SL42K/29SL42T/XL42T)                |                            |
| D551             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC010               | 8-759-450-93 | IC NJM2521M-TE1                                             |                            |
| D552             | 8-719-302-43 | DIODE       | EL1Z                                                   | IC202               | 8-759-100-96 | IC NJM4558M-TE2                                             |                            |
| D561             | 8-719-979-85 | DIODE       | EGP20G                                                 | IC203               | 8-759-366-77 | IC MM1311AD<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)     |                            |
| D562             | 8-719-979-85 | DIODE       | EGP20G                                                 | IC203               | 8-759-534-81 | IC MM1313AD (KV-27V66 ONLY)                                 |                            |
| D571 $\triangle$ | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC301               | 8-752-090-39 | IC CXA2133S                                                 |                            |
| D572             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC302               | 8-752-385-80 | IC CXD2073S                                                 |                            |
| D573             | 8-719-110-08 | DIODE       | RD8.2ESB2                                              | IC401               | 8-759-490-17 | IC TDA7057AQ/N2<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) |                            |
| D574             | 8-719-302-43 | DIODE       | EL1Z                                                   | IC402               | 8-752-072-39 | IC CXA2021S                                                 |                            |
| D581 $\triangle$ | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC521               | 8-759-700-07 | IC NJM2903M-TE2                                             |                            |
| D602             | 8-719-991-33 | DIODE       | 1SS133T-77                                             | IC541               | 8-759-980-58 | IC TDA8172                                                  |                            |
| D603             | 8-719-982-26 | DIODE       | MTZJ-33B                                               | IC601 $\triangle$   | 8-749-014-48 | IC STR-F6656 (KV-29SL42K ONLY)                              |                            |
| D604             | 8-719-028-72 | DIODE       | RGP02-17EL-6433                                        | IC601 $\triangle$   | 8-749-015-61 | IC STR-F6626<br>(KV-29SL42T/XL42T/29VL42T/27V42/27V66)      |                            |
| D605             | 8-719-510-53 | DIODE       | D4SB60L                                                |                     |              |                                                             |                            |

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**Note:**

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

**Note:**

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| REF. NO.        | PART NO.     | DESCRIPTION                | REMARK       | REF. NO. | PART NO.     | DESCRIPTION                | REMARK   |
|-----------------|--------------|----------------------------|--------------|----------|--------------|----------------------------|----------|
| Q501            | 8-729-140-50 | TRANSISTOR                 | 2SC3209LK    | R038     | 1-216-049-91 | RES,CHIP 1K                | 5% 1/10W |
| Q502            | 8-729-043-43 | TRANSISTOR                 | 2SC5426-01   | R039     | 1-216-295-91 | SHORT                      |          |
| Q521            | 8-729-422-27 | TRANSISTOR                 | 2SD601A-Q    | R040     | 1-249-413-11 | CARBON 470                 | 5% 1/4W  |
| Q522            | 8-729-809-29 | TRANSISTOR                 | 2SC4159-E    | R041     | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W |
| Q550            | 8-729-422-27 | TRANSISTOR                 | 2SD601A-Q    | R043     | 1-216-049-91 | RES,CHIP 1K                | 5% 1/10W |
| Q555            | 8-729-422-27 | TRANSISTOR                 | 2SD601A-Q    | R044     | 1-247-815-91 | CARBON 220                 | 5% 1/4W  |
| Q571 $\Delta$   | 8-729-200-17 | TRANSISTOR                 | 2SA1091-O    | R045     | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W |
| Q601            | 8-729-922-37 | TRANSISTOR                 | 2SD2144S-UVW | R046     | 1-247-815-91 | CARBON 220                 | 5% 1/4W  |
| Q602            | 8-729-119-78 | TRANSISTOR                 | 2SC2785-HFE  | R047     | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W |
| Q603            | 8-729-119-76 | TRANSISTOR                 | 2SA1175-HFE  | R048     | 1-216-025-91 | RES,CHIP 100               | 5% 1/10W |
| Q604            | 8-729-119-78 | TRANSISTOR                 | 2SC2785-HFE  | R049     | 1-216-089-91 | RES,CHIP 47K               | 5% 1/10W |
| Q607            | 8-729-922-37 | TRANSISTOR                 | 2SD2144S-UVW | R050     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
| Q610            | 8-729-119-78 | TRANSISTOR                 | 2SC2785-HFE  | R051     | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W |
| Q630            | 8-729-119-78 | TRANSISTOR                 | 2SC2785-HFE  | R052     | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W |
| Q650            | 8-729-111-55 | TRANSISTOR                 | 2SD1312-K    | R054     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
| <b>RESISTOR</b> |              |                            |              | R056     | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W |
| R001            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R057     | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W |
| R002            | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W     | R058     | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W |
| R003            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R060     | 1-216-295-91 | SHORT                      |          |
| R004            | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W     | R061     | 1-216-295-91 | SHORT                      |          |
| R005            | 1-216-295-91 | SHORT                      |              | R065     | 1-216-295-91 | SHORT                      |          |
| R006            | 1-216-295-91 | SHORT                      |              |          |              | (KV-29SL42K/29SL42T/XL42T) |          |
| R007            | 1-216-025-91 | RES,CHIP 100               | 5% 1/10W     | R066     | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W |
| R008            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R069     | 1-247-815-91 | CARBON 220                 | 5% 1/4W  |
| R010            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R070     | 1-249-425-11 | CARBON 4.7K                | 5% 1/4W  |
| R011            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R071     | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W |
| R013            | 1-216-081-00 | RES,CHIP 22K               | 5% 1/10W     | R073     | 1-249-425-11 | CARBON 4.7K                | 5% 1/4W  |
| R016            | 1-216-041-00 | RES,CHIP 470               | 5% 1/10W     | R074     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
| R017            | 1-216-113-00 | RES,CHIP 470K              | 5% 1/10W     | R075     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
| R018            | 1-216-049-91 | RES,CHIP 1K                | 5% 1/10W     | R076     | 1-216-121-91 | RES,CHIP 1M                | 5% 1/10W |
| R019            | 1-216-065-91 | RES,CHIP 4.7K              | 5% 1/10W     | R077     | 1-216-097-91 | RES,CHIP 100K              | 5% 1/10W |
| R020            | 1-216-069-00 | RES,CHIP 6.8K              | 5% 1/10W     | R080     | 1-247-863-91 | CARBON 22K                 | 5% 1/4W  |
|                 |              | (KV-29SL42K/29SL42T/XL42T) |              |          |              | (KV-29VL42T/27V42/27V66)   |          |
| R021            | 1-249-415-11 | CARBON 680                 | 5% 1/4W      | R082     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
|                 |              | (KV-29SL42K/29SL42T/XL42T) |              |          |              | (KV-29VL42T/27V42/27V66)   |          |
| R022            | 1-249-416-11 | CARBON 820                 | 5% 1/4W      | R083     | 1-216-041-00 | RES,CHIP 470               | 5% 1/10W |
|                 |              | (KV-29SL42K/29SL42T/XL42T) |              |          |              | (KV-29VL42T/27V42/27V66)   |          |
| R023            | 1-216-057-00 | RES,CHIP 2.2K              | 5% 1/10W     | R084     | 1-249-429-11 | CARBON 10K                 | 5% 1/4W  |
|                 |              | (KV-29SL42K/29SL42T/XL42T) |              |          |              | (KV-29VL42T/27V42/27V66)   |          |
| R025            | 1-249-426-11 | CARBON 5.6K                | 5% 1/4W      | R085     | 1-216-049-91 | RES,CHIP 1K                | 5% 1/10W |
| R026            | 1-249-426-11 | CARBON 5.6K                | 5% 1/4W      | R086     | 1-216-045-00 | RES,CHIP 680               | 5% 1/10W |
| R027            | 1-249-426-11 | CARBON 5.6K                | 5% 1/4W      | R087     | 1-216-045-00 | RES,CHIP 680               | 5% 1/10W |
| R028            | 1-216-049-91 | RES,CHIP 1K                | 5% 1/10W     | R088     | 1-216-045-00 | RES,CHIP 680               | 5% 1/10W |
| R031            | 1-216-045-00 | RES,CHIP 680               | 5% 1/10W     | R090     | 1-249-429-11 | CARBON 10K                 | 5% 1/4W  |
| R032            | 1-247-815-91 | CARBON 220                 | 5% 1/4W      |          |              | (KV-29SL42K/29SL42T/XL42T) |          |
| R033            | 1-247-815-91 | CARBON 220                 | 5% 1/4W      | R091     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
| R034            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R092     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
| R035            | 1-216-033-00 | RES,CHIP 220               | 5% 1/10W     | R095     | 1-216-073-00 | RES,CHIP 10K               | 5% 1/10W |
|                 |              |                            |              | R096     | 1-216-057-00 | RES,CHIP 2.2K              | 5% 1/10W |



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| REF. NO. | PART NO.     | DESCRIPTION                                                        | REMARK            | REF. NO. | PART NO.     | DESCRIPTION                                       | REMARK |
|----------|--------------|--------------------------------------------------------------------|-------------------|----------|--------------|---------------------------------------------------|--------|
| R097     | 1-216-049-91 | RES,CHIP                                                           | 1K 5% 1/10W       | R236     | 1-249-421-11 | CARBON 2.2K 5% 1/4W<br>(KV-29SL42K/29SL42T/XL42T) |        |
| R101     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R236     | 1-249-426-11 | CARBON 5.6K 5% 1/4W<br>(KV-29VL42T/27V42)         |        |
| R120     | 1-216-057-00 | RES,CHIP                                                           | 2.2K 5% 1/10W     | R237     | 1-216-069-00 | RES,CHIP 6.8K 5% 1/10W<br>(KV-29VL42T/27V42)      |        |
| R121     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R238     | 1-216-069-00 | RES,CHIP 6.8K 5% 1/10W<br>(KV-29VL42T/27V42)      |        |
| R150     | 1-216-025-91 | RES,CHIP                                                           | 100 5% 1/10W      | R239     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W<br>(KV-29VL42T/27V42)      |        |
| R151     | 1-216-025-91 | RES,CHIP                                                           | 100 5% 1/10W      | R240     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W<br>(KV-29VL42T/27V42)      |        |
| R170     | 1-216-025-91 | RES,CHIP                                                           | 100 5% 1/10W      | R241     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R171     | 1-216-049-91 | RES,CHIP                                                           | 1K 5% 1/10W       | R242     | 1-216-083-00 | RES,CHIP 27K 5% 1/10W                             |        |
| R172     | 1-216-295-91 | SHORT                                                              |                   | R243     | 1-216-689-11 | RES,CHIP 39K 5% 1/10W                             |        |
| R173     | 1-216-295-91 | SHORT                                                              |                   | R244     | 1-216-049-91 | RES,CHIP 1K 5% 1/10W                              |        |
| R174     | 1-216-295-91 | SHORT                                                              | (KV-29SL42K ONLY) | R245     | 1-216-049-91 | RES,CHIP 1K 5% 1/10W                              |        |
| R175     | 1-216-295-91 | SHORT                                                              | (KV-29SL42K ONLY) | R248     | 1-216-049-91 | RES,CHIP 1K 5% 1/10W                              |        |
| R200     | 1-216-022-00 | RES,CHIP                                                           | 75 5% 1/10W       | R250     | 1-216-033-00 | RES,CHIP 220 5% 1/10W                             |        |
| R201     | 1-216-113-00 | RES,CHIP                                                           | 470K 5% 1/10W     | R252     | 1-216-033-00 | RES,CHIP 220 5% 1/10W                             |        |
| R202     | 1-216-113-00 | RES,CHIP                                                           | 470K 5% 1/10W     | R253     | 1-215-899-11 | METAL 15K 5% 2W                                   |        |
| R203     | 1-216-025-91 | RES,CHIP                                                           | 100 5% 1/10W      | R254     | 1-216-033-00 | RES,CHIP 220 5% 1/10W                             |        |
| R204     | 1-216-043-91 | RES,CHIP                                                           | 560 5% 1/10W      | R255     | 1-216-022-00 | RES,CHIP 75 5% 1/10W<br>(KV-29VL42T/27V42/27V66)  |        |
| R205     | 1-216-043-91 | RES,CHIP                                                           | 560 5% 1/10W      | R256     | 1-216-033-00 | RES,CHIP 220 5% 1/10W                             |        |
| R207     | 1-216-025-91 | RES,CHIP                                                           | 100 5% 1/10W      | R257     | 1-216-073-00 | RES,CHIP 10K 5% 1/10W                             |        |
| R211     | 1-247-807-31 | CARBON 100 5% 1/4W<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)     |                   | R258     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R212     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) |                   | R259     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R213     | 1-216-057-00 | RES,CHIP                                                           | 2.2K 5% 1/10W     | R260     | 1-216-025-91 | RES,CHIP 100 5% 1/10W                             |        |
| R214     | 1-216-113-00 | RES,CHIP                                                           | 470K 5% 1/10W     | R261     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R215     | 1-216-033-00 | RES,CHIP                                                           | 220 5% 1/10W      | R262     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R216     | 1-216-113-00 | RES,CHIP                                                           | 470K 5% 1/10W     | R263     | 1-216-033-00 | RES,CHIP 220 5% 1/10W                             |        |
| R217     | 1-216-033-00 | RES,CHIP                                                           | 220 5% 1/10W      | R264     | 1-216-033-00 | RES,CHIP 220 5% 1/10W                             |        |
| R218     | 1-216-069-00 | RES,CHIP                                                           | 6.8K 5% 1/10W     | R265     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R219     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R266     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R220     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R267     | 1-216-022-00 | RES,CHIP 75 5% 1/10W                              |        |
| R221     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R269     | 1-216-049-91 | RES,CHIP 1K 5% 1/10W                              |        |
| R222     | 1-216-069-00 | RES,CHIP                                                           | 6.8K 5% 1/10W     | R270     | 1-216-022-00 | RES,CHIP 75 5% 1/10W                              |        |
| R223     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R271     | 1-216-113-00 | RES,CHIP 470K 5% 1/10W                            |        |
| R224     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R272     | 1-216-113-00 | RES,CHIP 470K 5% 1/10W                            |        |
| R225     | 1-216-073-00 | RES,CHIP                                                           | 10K 5% 1/10W      | R273     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R226     | 1-216-065-91 | RES,CHIP                                                           | 4.7K 5% 1/10W     | R274     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R228     | 1-216-065-91 | RES,CHIP                                                           | 4.7K 5% 1/10W     | R275     | 1-216-295-91 | SHORT                                             |        |
| R231     | 1-249-421-11 | CARBON 2.2K 5% 1/4W<br>(KV-29SL42K/29SL42T/XL42T)                  |                   | R276     | 1-216-295-91 | SHORT                                             |        |
| R231     | 1-249-426-11 | CARBON 5.6K 5% 1/4W<br>(KV-29VL42T/27V42)                          |                   | R277     | 1-216-295-91 | SHORT                                             |        |
| R232     | 1-249-429-11 | CARBON 10K 5% 1/4W<br>(KV-29SL42K/29SL42T/XL42T)                   |                   | R278     | 1-216-295-91 | SHORT (KV-27V66 ONLY)                             |        |
| R233     | 1-249-429-11 | CARBON 10K 5% 1/4W<br>(KV-29SL42K/29SL42T/XL42T)                   |                   | R279     | 1-216-065-91 | RES,CHIP 4.7K 5% 1/10W                            |        |
| R234     | 1-216-063-91 | RES,CHIP 3.9K 5% 1/10W<br>(KV-29VL42T/27V42)                       |                   | R280     | 1-247-807-31 | CARBON 100 5% 1/4W<br>(KV-29VL42T/27V42/27V66)    |        |
| R235     | 1-216-063-91 | RES,CHIP 3.9K 5% 1/10W<br>(KV-29VL42T/27V42)                       |                   | R281     | 1-247-807-31 | CARBON 100 5% 1/4W<br>(KV-29VL42T/27V42/27V66)    |        |

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| REF. NO. | PART NO.     | DESCRIPTION                               | REMARK      | REF. NO. | PART NO.     | DESCRIPTION   | REMARK      |
|----------|--------------|-------------------------------------------|-------------|----------|--------------|---------------|-------------|
| R282     | 1-247-807-31 | CARBON 100<br>(KV-29VL42T/27V42/27V66)    | 5% 1/4W     | R326     | 1-216-033-00 | RES,CHIP 220  | 5% 1/10W    |
| R283     | 1-216-295-91 | SHORT (KV-27V66 ONLY)                     |             | R328     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R284     | 1-260-091-11 | CARBON 220<br>(KV-29VL42T/27V42/27V66)    | 5% 1/2W     | R329     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R285     | 1-216-065-91 | RES,CHIP 4.7K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R330     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R286     | 1-216-065-91 | RES,CHIP 4.7K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R331     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R287     | 1-216-065-91 | RES,CHIP 4.7K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R333     | 1-216-049-91 | RES,CHIP 1K   | 5% 1/10W    |
| R288     | 1-216-065-91 | RES,CHIP 4.7K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R334     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R289     | 1-216-021-00 | RES,CHIP 68<br>(KV-29VL42T/27V42/27V66)   | 5% 1/10W    | R335     | 1-216-057-00 | RES,CHIP 2.2K | 5% 1/10W    |
| R290     | 1-216-113-00 | RES,CHIP 470K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R336     | 1-216-057-00 | RES,CHIP 2.2K | 5% 1/10W    |
| R291     | 1-216-113-00 | RES,CHIP 470K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R337     | 1-216-057-00 | RES,CHIP 2.2K | 5% 1/10W    |
| R292     | 1-216-113-00 | RES,CHIP 470K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R339     | 1-216-295-91 | SHORT         |             |
| R293     | 1-216-069-00 | RES,CHIP 6.8K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R340     | 1-249-417-11 | CARBON 1K     | 5% 1/4W     |
| R294     | 1-216-069-00 | RES,CHIP 6.8K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R341     | 1-216-073-00 | RES,CHIP 10K  | 5% 1/10W    |
| R295     | 1-216-069-00 | RES,CHIP 6.8K<br>(KV-29VL42T/27V42/27V66) | 5% 1/10W    | R342     | 1-216-069-00 | RES,CHIP 6.8K | 5% 1/10W    |
| R296     | 1-249-437-11 | CARBON 47K                                | 5% 1/4W     | R343     | 1-208-291-11 | RES,CHIP 4.7M | 5% 1/10W    |
| R297     | 1-216-043-91 | RES,CHIP 560                              | 5% 1/10W    | R344     | 1-216-295-91 | SHORT         |             |
| R298     | 1-216-041-00 | RES,CHIP 470                              | 5% 1/10W    | R345     | 1-208-291-11 | RES,CHIP 4.7M | 5% 1/10W    |
| R299     | 1-216-065-91 | RES,CHIP 4.7K                             | 5% 1/10W    | R346     | 1-208-291-11 | RES,CHIP 4.7M | 5% 1/10W    |
| R301     | 1-216-295-91 | SHORT                                     |             | R347     | 1-216-049-91 | RES,CHIP 1K   | 5% 1/10W    |
| R304     | 1-216-073-00 | RES,CHIP 10K                              | 5% 1/10W    | R348     | 1-216-031-00 | RES,CHIP 180  | 5% 1/10W    |
| R305     | 1-216-033-00 | RES,CHIP 220                              | 5% 1/10W    | R349     | 1-216-057-00 | RES,CHIP 2.2K | 5% 1/10W    |
| R306     | 1-208-806-11 | RES,CHIP 10K                              | 0.50% 1/10W | R350     | 1-208-766-11 | RES,CHIP 220  | 0.50% 1/10W |
| R307     | 1-216-065-91 | RES,CHIP 4.7K                             | 5% 1/10W    | R351     | 1-208-766-11 | RES,CHIP 220  | 0.50% 1/10W |
| R308     | 1-216-025-91 | RES,CHIP 100                              | 5% 1/10W    | R352     | 1-208-794-11 | RES,CHIP 3.3K | 0.50% 1/10W |
| R310     | 1-216-049-91 | RES,CHIP 1K                               | 5% 1/10W    | R353     | 1-216-295-91 | SHORT         |             |
| R312     | 1-216-033-00 | RES,CHIP 220                              | 5% 1/10W    | R354     | 1-208-794-11 | RES,CHIP 3.3K | 0.50% 1/10W |
| R313     | 1-216-033-00 | RES,CHIP 220                              | 5% 1/10W    | R355     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R314     | 1-216-033-00 | RES,CHIP 220                              | 5% 1/10W    | R356     | 1-216-059-00 | RES,CHIP 2.7K | 5% 1/10W    |
| R315     | 1-216-033-00 | RES,CHIP 220                              | 5% 1/10W    | R357     | 1-216-091-00 | RES,CHIP 56K  | 5% 1/10W    |
| R316     | 1-247-807-31 | CARBON 100                                | 5% 1/4W     | R358     | 1-216-043-91 | RES,CHIP 560  | 5% 1/10W    |
| R317     | 1-216-025-91 | RES,CHIP 100                              | 5% 1/10W    | R359     | 1-216-057-00 | RES,CHIP 2.2K | 5% 1/10W    |
| R318     | 1-216-025-91 | RES,CHIP 100                              | 5% 1/10W    | R360     | 1-216-049-91 | RES,CHIP 1K   | 5% 1/10W    |
| R319     | 1-216-073-00 | RES,CHIP 10K                              | 5% 1/10W    | R361     | 1-216-049-91 | RES,CHIP 1K   | 5% 1/10W    |
| R320     | 1-216-025-91 | RES,CHIP 100                              | 5% 1/10W    | R362     | 1-216-043-91 | RES,CHIP 560  | 5% 1/10W    |
| R321     | 1-216-025-91 | RES,CHIP 100                              | 5% 1/10W    | R363     | 1-216-037-00 | RES,CHIP 330  | 5% 1/10W    |
| R322     | 1-216-025-91 | RES,CHIP 100                              | 5% 1/10W    | R364     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R323     | 1-216-037-00 | RES,CHIP 330                              | 5% 1/10W    | R365     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
| R324     | 1-216-065-91 | RES,CHIP 4.7K                             | 5% 1/10W    | R366     | 1-216-053-00 | RES,CHIP 1.5K | 5% 1/10W    |
| R325     | 1-216-022-00 | RES,CHIP 75                               | 5% 1/10W    | R367     | 1-216-057-00 | RES,CHIP 2.2K | 5% 1/10W    |
|          |              |                                           |             | R368     | 1-216-033-00 | RES,CHIP 220  | 5% 1/10W    |
|          |              |                                           |             | R369     | 1-216-041-00 | RES,CHIP 470  | 5% 1/10W    |
|          |              |                                           |             | R370     | 1-216-033-00 | RES,CHIP 220  | 5% 1/10W    |
|          |              |                                           |             | R372     | 1-216-035-00 | RES,CHIP 270  | 5% 1/10W    |
|          |              |                                           |             | R373     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
|          |              |                                           |             | R374     | 1-216-025-91 | RES,CHIP 100  | 5% 1/10W    |
|          |              |                                           |             | R375     | 1-216-053-00 | RES,CHIP 1.5K | 5% 1/10W    |
|          |              |                                           |             | R376     | 1-216-049-91 | RES,CHIP 1K   | 5% 1/10W    |
|          |              |                                           |             | R377     | 1-216-049-91 | RES,CHIP 1K   | 5% 1/10W    |
|          |              |                                           |             | R378     | 1-216-033-00 | RES,CHIP 220  | 5% 1/10W    |

**A****Note:**

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

**Note:**

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

| REF. NO. | PART NO.                 | DESCRIPTION                                              | REMARK      | REF. NO.         | PART NO.                 | DESCRIPTION   | REMARK      |
|----------|--------------------------|----------------------------------------------------------|-------------|------------------|--------------------------|---------------|-------------|
| R379     | 1-216-049-91             | RES,CHIP 1K                                              | 5% 1/10W    | R530             | 1-216-089-91             | RES,CHIP 47K  | 5% 1/10W    |
| R380     | 1-208-790-11             | RES,CHIP 2.2K                                            | 0.50% 1/10W | R532             | 1-215-437-00             | METAL 4.7K    | 1% 1/4W     |
| R381     | 1-216-053-00             | RES,CHIP 1.5K                                            | 5% 1/10W    | R533             | 1-215-461-00             | METAL 47K     | 1% 1/4W     |
| R383     | 1-216-017-91             | RES,CHIP 47                                              | 5% 1/10W    | R534             | 1-215-451-00             | METAL 18K     | 1% 1/4W     |
| R384     | 1-216-097-91             | RES,CHIP 100K                                            | 5% 1/10W    | R535             | 1-249-441-11             | CARBON 100K   | 5% 1/4W     |
| R385     | 1-216-073-00             | RES,CHIP 10K                                             | 5% 1/10W    | R541             | 1-249-430-11             | CARBON 12K    | 5% 1/4W     |
| R386     | 1-216-061-00             | RES,CHIP 3.3K                                            | 5% 1/10W    | R542             | 1-249-429-11             | CARBON 10K    | 5% 1/4W     |
| R387     | 1-216-065-91             | RES,CHIP 4.7K                                            | 5% 1/10W    | R543             | 1-249-429-11             | CARBON 10K    | 5% 1/4W     |
| R390     | 1-249-417-11             | CARBON 1K<br>(KV-29VL42T/27V42/27V66)                    | 5% 1/4W     | R544             | $\triangle$ 1-216-351-00 | METAL 1.5     | 5% 1W       |
| R391     | 1-216-073-00             | RES,CHIP 10K<br>(KV-29VL42T/27V42/27V66)                 | 5% 1/10W    | R546             | $\triangle$ 1-215-890-11 | METAL 470     | 5% 2W       |
| R392     | 1-216-049-91             | RES,CHIP 1K<br>(KV-29VL42T/27V42/27V66)                  | 5% 1/10W    | R547             | $\triangle$ 1-249-385-11 | CARBON 2.2    | 5% 1/4W     |
| R394     | 1-216-033-00             | RES,CHIP 220<br>(KV-29VL42T/27V42/27V66)                 | 5% 1/10W    | R548             | 1-249-430-11             | CARBON 12K    | 5% 1/4W     |
| R395     | 1-216-049-91             | RES,CHIP 1K<br>(KV-29VL42T/27V42/27V66)                  | 5% 1/10W    | R549             | 1-249-429-11             | CARBON 10K    | 5% 1/4W     |
| R399     | 1-216-025-91             | RES,CHIP 100                                             | 5% 1/10W    | R550             | 1-216-061-00             | RES,CHIP 3.3K | 5% 1/10W    |
| R400     | 1-216-081-00             | RES,CHIP 22K<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42) | 5% 1/10W    | R551             | 1-249-413-11             | CARBON 470    | 5% 1/4W     |
| R402     | 1-216-121-91             | RES,CHIP 1M                                              | 5% 1/10W    | R552             | 1-247-887-00             | CARBON 220K   | 5% 1/4W     |
| R403     | 1-216-033-00             | RES,CHIP 220                                             | 5% 1/10W    | R553             | $\triangle$ 1-260-312-11 | CARBON 47     | 5% 1/2W     |
| R404     | 1-216-033-00             | RES,CHIP 220                                             | 5% 1/10W    | R554             | 1-216-101-00             | RES,CHIP 150K | 5% 1/10W    |
| R407     | 1-216-295-91             | SHORT<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)        |             | R555             | 1-216-093-91             | RES,CHIP 68K  | 5% 1/10W    |
| R432     | 1-249-428-11             | CARBON 8.2K<br>(KV-29SL42K/29SL42T/XL42T/29VL42T/27V42)  | 5% 1/4W     | R556             | 1-216-081-00             | RES,CHIP 22K  | 5% 1/10W    |
| R450     | 1-216-295-91             | SHORT (KV-27V66 ONLY)                                    |             | R557             | 1-249-431-11             | CARBON 15K    | 5% 1/4W     |
| R451     | 1-216-295-91             | SHORT (KV-27V66 ONLY)                                    |             | R558             | 1-216-065-91             | RES,CHIP 4.7K | 5% 1/10W    |
| R502     | $\triangle$ 1-215-892-11 | METAL 1K                                                 | 5% 2W       | R559             | 1-216-121-91             | RES,CHIP 1M   | 5% 1/10W    |
| R503     | $\triangle$ 1-249-426-11 | CARBON 5.6K                                              | 5% 1/4W     | R561             | $\triangle$ 1-249-377-11 | CARBON 0.47   | 5% 1/4W     |
| R504     | $\triangle$ 1-216-349-00 | METAL 1                                                  | 5% 1W       | R562             | $\triangle$ 1-260-288-11 | CARBON 0.47   | 5% 1/2W     |
| R505     | 1-249-401-11             | CARBON 47                                                | 5% 1/4W     | R571             | $\triangle$ 1-216-365-00 | METAL 0.47    | 5% 2W       |
| R506     | 1-215-860-11             | METAL 33                                                 | 5% 1W       | R572             | $\triangle$ 1-249-429-11 | CARBON 10K    | 5% 1/4W     |
| R507     | $\triangle$ 1-260-097-11 | CARBON 680                                               | 5% 1/2W     | R573             | $\triangle$ 1-247-895-91 | CARBON 470K   | 5% 1/4W     |
| R508     | $\triangle$ 1-216-449-11 | METAL 56                                                 | 5% 2W       | R574             | $\triangle$ 1-249-416-11 | CARBON 820    | 5% 1/4W     |
| R509     | $\triangle$ 1-216-481-11 | METAL 1.2K                                               | 5% 3W       | R575             | $\triangle$ 1-247-895-91 | CARBON 470K   | 5% 1/4W     |
| R510     | $\triangle$ 1-216-449-11 | METAL 56                                                 | 5% 2W       | R576             | $\triangle$ 1-249-441-11 | CARBON 100K   | 5% 1/4W     |
| R511     | 1-247-843-11             | CARBON 3.3K                                              | 5% 1/4W     | R578             | $\triangle$ 1-215-902-11 | METAL 47K     | 5% 1W       |
| R520     | $\triangle$ 1-215-861-00 | METAL 47                                                 | 5% 1W       | R579             | 1-208-777-11             | RES,CHIP 620  | 0.50% 1/10W |
| R521     | 1-249-411-11             | CARBON 330                                               | 5% 1/4W     | R580             | 1-216-097-91             | RES,CHIP 100K | 5% 1/10W    |
| R522     | 1-249-415-11             | CARBON 680                                               | 5% 1/4W     | R581             | 1-216-065-91             | RES,CHIP 4.7K | 5% 1/10W    |
| R523     | 1-216-073-00             | RES,CHIP 10K                                             | 5% 1/10W    | R582             | $\triangle$ 1-208-806-11 | RES,CHIP 10K  | 0.50% 1/10W |
| R524     | 1-249-429-11             | CARBON 10K                                               | 5% 1/4W     | R583             | $\triangle$ 1-208-830-11 | RES,CHIP 100K | 0.50% 1/10W |
| R525     | 1-249-427-11             | CARBON 6.8K                                              | 5% 1/4W     | $\triangle$ R584 | $\triangle$ 1-208-822-11 | RES,CHIP 47K  | 0.50% 1/10W |
| R526     | 1-216-081-00             | RES,CHIP 22K                                             | 5% 1/10W    | R585             | 1-216-073-00             | RES,CHIP 10K  | 5% 1/10W    |
| R527     | 1-216-079-00             | RES,CHIP 18K                                             | 5% 1/10W    | R586             | $\triangle$ 1-216-073-00 | RES,CHIP 10K  | 5% 1/10W    |
| R528     | 1-216-057-00             | RES,CHIP 2.2K                                            | 5% 1/10W    | R587             | 1-216-073-00             | RES,CHIP 10K  | 5% 1/10W    |
| R529     | 1-216-101-00             | RES,CHIP 150K                                            | 5% 1/10W    | R591             | $\triangle$ 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     |



**Note:**

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**Note:**

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A

| REF. NO.          | PART NO.     | DESCRIPTION                                          | REMARK   | REF. NO.           | PART NO.     | DESCRIPTION                                                     | REMARK |
|-------------------|--------------|------------------------------------------------------|----------|--------------------|--------------|-----------------------------------------------------------------|--------|
| R631              | 1-249-437-11 | CARBON 47K                                           | 5% 1/4W  | <b>SWITCH</b>      |              |                                                                 |        |
| R632 $\triangle$  | 1-202-933-61 | FUSIBLE                                              | 10% 1/2W | S001               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R633              | 1-215-479-00 | METAL 270K<br>(KV-29SL42K ONLY)                      | 1% 1/4W  | S002               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R633              | 1-215-483-00 | METAL 390K<br>(KV-29SL42T/XL42T/29VL42T/27V42/27V66) | 1% 1/4W  | S003               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R634              | 1-249-437-11 | CARBON 47K                                           | 5% 1/4W  | S004               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R636              | 1-249-421-11 | CARBON 2.2K                                          | 5% 1/4W  | S005               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R637              | 1-215-929-11 | METAL 100K<br>(KV-29SL42K/29VL42T)                   | 5% 3W    | S006               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R638              | 1-215-479-00 | METAL 270K<br>(KV-29SL42K ONLY)                      | 1% 1/4W  | S007               | 1-692-431-21 | SWITCH,TACTILE (KV-29SL42K/29SL42T/XL42T)                       |        |
| R639              | 1-216-361-21 | METAL 0.22                                           | 5% 2W    | <b>SWITCH</b>      |              |                                                                 |        |
| R640              | 1-249-415-11 | CARBON 680                                           | 5% 1/4W  | SW501              | 1-572-707-11 | SWITCH,LEVER                                                    |        |
| R641 $\triangle$  | 1-216-387-11 | METAL 0.68                                           | 5% 3W    | <b>TRANSFORMER</b> |              |                                                                 |        |
| R642              | 1-249-437-11 | CARBON 47K                                           | 5% 1/4W  | T501               | 1-437-210-11 | TRANSFORMER,HORIZONTAL DRIVE                                    |        |
| R643              | 1-215-857-11 | METAL 10                                             | 5% 1W    | T502               | 1-431-731-11 | TRANSFORMER,MODULATION                                          |        |
| R645              | 1-249-429-11 | CARBON 10K                                           | 5% 1/4W  | T504 $\triangle$   | 1-453-268-21 | FBT ASSY,NX-4005//X4J4                                          |        |
| R646              | 1-216-485-11 | METAL 5.6K                                           | 5% 3W    | T603 $\triangle$   | 1-433-807-11 | TRANSFORMER,REGULATOR (KV-29SL42K)                              |        |
| R647              | 1-249-421-11 | CARBON 2.2K                                          | 5% 1/4W  | T603 $\triangle$   | 1-433-806-11 | TRANSFORMER,REGULATOR<br>(KV-29SL42T/XL42T/29VL42T/27V42/27V66) |        |
| R649              | 1-249-417-11 | CARBON 1K                                            | 5% 1/4W  | <b>THERMISTOR</b>  |              |                                                                 |        |
| R650              | 1-249-415-11 | CARBON 680                                           | 5% 1/4W  | THP601 $\triangle$ | 1-803-540-11 | THERMISTOR (KV-29SL42K ONLY)                                    |        |
| R651              | 1-249-419-11 | CARBON 1.5K                                          | 5% 1/4W  | THP602 $\triangle$ | 1-809-539-11 | THERMISTOR,POSITIVE<br>(KV-29SL42T/XL42T/29VL42T/27V42/27V66)   |        |
| R652              | 1-247-843-11 | CARBON 3.3K                                          | 5% 1/4W  | <b>TUNER</b>       |              |                                                                 |        |
| R653 $\triangle$  | 1-215-898-11 | METAL 10K                                            | 5% 2W    | TU101 $\triangle$  | 8-598-475-00 | FSS TUNER BTF-WL411 (KV-29SL42K ONLY)                           |        |
| R654              | 1-249-419-11 | CARBON 1.5K                                          | 5% 1/4W  | TU101 $\triangle$  | 8-598-477-00 | FSS TUNER BTF-WG411<br>(KV-29SL42T/XL42T/29VL42T)               |        |
| R656              | 1-249-402-11 | CARBON 56<br>(KV-29SL42K)                            | 5% 1/4W  | TU101 $\triangle$  | 8-598-431-00 | TUNER,FSS BTF-WA411 (KV-27V42/27V66)                            |        |
| R656              | 1-249-399-11 | CARBON 33<br>(KV-29SL42T/XL42T/29VL42T/27V42/27V66)  | 5% 1/4W  | <b>CRYSTAL</b>     |              |                                                                 |        |
| R657              | 1-249-417-11 | CARBON 1K                                            | 5% 1/4W  | X001               | 1-767-487-11 | VIBRATOR,CRYSTAL                                                |        |
| R658              | 1-249-421-11 | CARBON 2.2K                                          | 5% 1/4W  | X301               | 1-567-505-11 | OSCILLATOR,CRYSTAL                                              |        |
| R659              | 1-216-362-11 | METAL 0.27                                           | 5% 2W    |                    |              |                                                                 |        |
| R660              | 1-249-429-11 | CARBON 10K                                           | 5% 1/4W  |                    |              |                                                                 |        |
| R662              | 1-249-417-11 | 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 $\triangle$  | 1-216-387-11 | METAL 0.68                                           | 5% 3W    |                    |              |                                                                 |        |
| R676              | 1-216-485-11 | METAL 5.6K                                           | 5% 3W    |                    |              |                                                                 |        |
| <b>RELAY</b>      |              |                                                      |          |                    |              |                                                                 |        |
| RY602 $\triangle$ | 1-755-266-11 | RELAY,AC POWER                                       |          |                    |              |                                                                 |        |
| RY603 $\triangle$ | 1-755-018-11 | RELAY                                                |          |                    |              |                                                                 |        |



Note:

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



- \* A-1331-920-A C BOARD, COMPLETE  
(KV-29SL42K/42T/29XL42T)  
4-382-854-11 SCREW(M3X10),P,SW(+)

**CAPACITOR**

|       |              |         |                |     |      |
|-------|--------------|---------|----------------|-----|------|
| 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 |

**CONNECTOR**

|        |                |                |    |
|--------|----------------|----------------|----|
| CN1751 | * 1-564-509-11 | PLUG,CONNECTOR | 6P |
| CN1752 | * 1-564-508-11 | PLUG,CONNECTOR | 5P |
| CN1753 | 1-784-281-11   | TAB(CONTACT)   |    |
| CN1754 | 1-695-915-11   | TAB(CONTACT)   |    |

**DIODE**

|       |              |             |  |
|-------|--------------|-------------|--|
| 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  |  |

**IC**

|        |              |                  |  |
|--------|--------------|------------------|--|
| IC1751 | 8-759-562-43 | IC TDA6108JF/N1B |  |
|--------|--------------|------------------|--|

**JACK**

|       |                          |            |  |
|-------|--------------------------|------------|--|
| J1751 | $\triangle$ 1-251-688-11 | SOCKET,CRT |  |
|-------|--------------------------|------------|--|

**COIL**

|       |              |          |            |
|-------|--------------|----------|------------|
| L1751 | 1-408-613-31 | INDUCTOR | 68 $\mu$ H |
|-------|--------------|----------|------------|

**RESISTOR**

|       |              |        |      |    |      |
|-------|--------------|--------|------|----|------|
| 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  | 2.2  | 5% | 2W F |

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

|       |              |        |      |    |      |
|-------|--------------|--------|------|----|------|
| R1762 | 1-216-375-00 | METAL  | 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 |



- \* A-1331-921-A CV BOARD, COMPLETE  
(KV-27V42/66/29VL42T)  
4-382-854-11 SCREW (M3X10),P,SW(+)

**CAPACITOR**

|       |              |         |                |     |      |
|-------|--------------|---------|----------------|-----|------|
| 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  |

**CONNECTOR**

|        |                |                   |  |
|--------|----------------|-------------------|--|
| CN942  | * 1-564-507-11 | PLUG,CONNECTOR 4P |  |
| CN1701 | * 1-564-509-11 | PLUG,CONNECTOR 6P |  |
| CN1702 | * 1-564-511-11 | PLUG,CONNECTOR 8P |  |
| CN1703 | 1-784-281-11   | TAB(CONTACT)      |  |
| CN1704 | 1-695-915-11   | TAB(CONTACT)      |  |

**DIODE**

|       |              |                  |  |
|-------|--------------|------------------|--|
| 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      |  |

**Note:**

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

**Note:**

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



| REF. NO.          | PART NO.       | DESCRIPTION      |             |    | REMARK |
|-------------------|----------------|------------------|-------------|----|--------|
| 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 |             |    |        |
| <b>JACK</b>       |                |                  |             |    |        |
| J1701             | △ 1-251-688-11 | SOCKET, CRT      |             |    |        |
| <b>COIL</b>       |                |                  |             |    |        |
| L1701             | 1-408-613-31   | INDUCTOR         | 68μH        |    |        |
| <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   |
| R979              | 1-249-401-11   | CARBON           | 47          | 5% | 1/4W   |
| R1706             | 1-260-099-11   | CARBON           | 1K          | 5% | 1/2W F |
| 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            | 2.2         | 5% | 2W     |
| R1712             | 1-216-375-00   | METAL            | 3.3         | 5% | 2W     |
| R1713             | 1-247-807-31   | CARBON           | 100         | 5% | 1/4W F |

| REF. NO. | PART NO.     | DESCRIPTION |      |    | REMARK |
|----------|--------------|-------------|------|----|--------|
| R1714    | 1-247-807-31 | CARBON      | 100  | 5% | 1/4W F |
| 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   |
| R1943    | 1-249-414-11 | CARBON      | 560  | 5% | 1/4W   |
| R1944    | 1-249-432-11 | CARBON      | 18K  | 5% | 1/4W F |
| R1945    | 1-215-915-11 | METAL       | 470  | 5% | 3W F   |
| R1946    | 1-249-417-11 | CARBON      | 1K   | 5% | 1/4W   |
| R1947    | 1-249-432-11 | CARBON      | 18K  | 5% | 1/4W F |
| R1948    | 1-249-414-11 | CARBON      | 560  | 5% | 1/4W F |
| R1949    | 1-249-387-11 | CARBON      | 3.3  | 5% | 1/4W   |
| R1950    | 1-249-401-11 | CARBON      | 47   | 5% | 1/4W   |

E

\* A-1343-654-A E BOARD, COMPLETE

\* A-1343-656-A E BOARD, COMPLETE

(KV-29SL42K ONLY)

1-533-223-11 HOLDER,FUSE

\* 4-374-846-11 COVER,CAPACITOR,CAP TYPE

|                         |                |         |          |     |      |
|-------------------------|----------------|---------|----------|-----|------|
| <b>CAPACITOR</b>        |                |         |          |     |      |
| C5002                   | 1-107-679-91   | ELECT   | 10μF     | 20% | 450V |
| C5003                   | 1-136-601-11   | FILM    | 0.01μF   | 10% | 630V |
| C5004                   | 1-130-471-00   | MYLAR   | 0.001μF  | 5%  | 50V  |
| C5006                   | 1-130-471-00   | MYLAR   | 0.001μF  | 5%  | 50V  |
| C5007                   | 1-130-467-00   | MYLAR   | 470PF    | 5%  | 50V  |
| C5008                   | 1-130-471-00   | MYLAR   | 0.001μF  | 5%  | 50V  |
| C5009                   | 1-126-965-11   | ELECT   | 22μF     | 20% | 50V  |
| C5010                   | 1-115-804-91   | ELECT   | 120μF    | 20% | 35V  |
| C5020                   | △ 1-113-941-11 | CERAMIC | 0.0047μF | 20% | 125V |
| C5021                   | △ 1-113-924-11 | CERAMIC | 0.0047μF | 20% | 250V |
| (KV-29SL42K ONLY)       |                |         |          |     |      |
| C5050                   | △ 1-136-311-11 | FILM    | 0.47μF   | 20% | 125V |
| C5150                   | △ 1-136-311-11 | FILM    | 0.47μF   | 20% | 125V |
| (ALL EXCEPT KV-29SL42K) |                |         |          |     |      |
| C5643                   | 1-113-924-11   | CERAMIC | 0.0047μF | 20% | 250V |
| C5644                   | 1-113-924-11   | CERAMIC | 0.0047μF | 20% | 250V |

|                  |                |                             |  |  |  |
|------------------|----------------|-----------------------------|--|--|--|
| <b>CONNECTOR</b> |                |                             |  |  |  |
| CN5000           | * 1-580-843-11 | PIN,CONNECTOR(POWER)        |  |  |  |
| CN5001           | * 1-564-506-11 | PLUG,CONNECTOR 3P           |  |  |  |
| CN5002           | * 1-580-843-11 | PIN,CONNECTOR(POWER)        |  |  |  |
| CN5003           | * 1-508-786-00 | PIN,CONNECTOR(5MM PITCH) 2P |  |  |  |

**Note:**

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

**Note:**

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| REF. NO.     | PART NO.     | DESCRIPTION      | REMARK |
|--------------|--------------|------------------|--------|
| <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 D1N120U    |        |
| D5631        | 8-719-911-55 | DIODE U05G       |        |
| D5632        | 8-719-911-55 | DIODE U05G       |        |

**FUSE**

|       |                          |                                  |  |
|-------|--------------------------|----------------------------------|--|
| F5050 | $\triangle$ 1-576-193-11 | FUSE 6.3A/125V                   |  |
| F5050 | $\triangle$ 1-532-506-51 | FUSE 6.3A/250V (KV-29SL42K ONLY) |  |

**TRANSISTOR**

|       |              |                          |  |
|-------|--------------|--------------------------|--|
| Q5001 | 8-729-044-30 | TRANSISTOR 2SK2845-LB102 |  |
| Q5002 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE   |  |

**RESISTOR**

|       |                          |        |      |    |      |   |
|-------|--------------------------|--------|------|----|------|---|
| 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 |   |
| R5350 | $\triangle$ 1-247-289-00 | CARBON | 8.2M | 5% | 1W   |   |

(KV-29SL42K ONLY)

**TRANSFORMER**

|       |                          |                                |  |
|-------|--------------------------|--------------------------------|--|
| T5001 | $\triangle$ 1-431-852-11 | TRANSFORMER, CONVERTER (SRT)   |  |
| T5050 | $\triangle$ 1-426-717-11 | TRANSFORMER, LINE FILTER (LFT) |  |
| T5050 | $\triangle$ 1-424-220-11 | TRANSFORMER, LINE FILTER (LFT) |  |

(KV-29SL42K ONLY)

**THERMISTOR**

|       |              |            |  |
|-------|--------------|------------|--|
| TH506 | 1-803-586-11 | THERMISTOR |  |
|-------|--------------|------------|--|

| REF. NO.        | PART NO.     | DESCRIPTION                | REMARK |
|-----------------|--------------|----------------------------|--------|
| <b>VARISTOR</b> |              |                            |        |
| VDR505          | 1-803-585-11 | VARISTOR                   |        |
| VDR505          | 1-803-587-11 | VARISTOR (KV-29SL42K ONLY) |        |



\* A-1372-614-A HV BOARD, COMPLETE  
(KV-27V42/66/29VL42T)

**CAPACITOR**

|       |              |         |                |     |      |
|-------|--------------|---------|----------------|-----|------|
| C1407 | 1-137-194-91 | FILM    | 0.47 $\mu$ F   | 5%  | 50V  |
| C1408 | 1-136-287-11 | FILM    | 0.0047 $\mu$ F | 5%  | 50V  |
| C1409 | 1-137-194-81 | FILM    | 0.47 $\mu$ F   | 5%  | 50V  |
| C1410 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1411 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1412 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1413 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1415 | 1-126-968-11 | ELECT   | 100 $\mu$ F    | 20% | 50V  |
| C1416 | 1-106-375-12 | MYLAR   | 0.022 $\mu$ F  | 20% | 200V |
| C1417 | 1-137-414-11 | FILM    | 0.0047 $\mu$ F | 10% | 100V |
| C1418 | 1-102-114-00 | CERAMIC | 470PF          | 10% | 50V  |
| C1419 | 1-130-495-00 | FILM    | 0.1 $\mu$ F    | 5%  | 50V  |
| C1420 | 1-137-371-11 | FILM    | 0.015 $\mu$ F  | 5%  | 50V  |
| C1421 | 1-102-121-00 | CERAMIC | 0.0022 $\mu$ F | 10% | 50V  |
| C1422 | 1-137-414-11 | FILM    | 0.0047 $\mu$ F | 10% | 100V |
| C1423 | 1-137-194-91 | FILM    | 0.47 $\mu$ F   | 5%  | 50V  |
| C1424 | 1-130-495-00 | FILM    | 0.1 $\mu$ F    | 5%  | 50V  |
| C1425 | 1-137-370-11 | FILM    | 0.01 $\mu$ F   | 5%  | 50V  |
| C1426 | 1-130-495-00 | FILM    | 0.1 $\mu$ F    | 5%  | 50V  |
| C1427 | 1-137-370-11 | FILM    | 0.01 $\mu$ F   | 5%  | 50V  |
| C1428 | 1-130-495-00 | FILM    | 0.1 $\mu$ F    | 5%  | 50V  |
| C1429 | 1-137-370-11 | FILM    | 0.01 $\mu$ F   | 5%  | 50V  |
| C1430 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1431 | 1-136-287-11 | FILM    | 0.0047 $\mu$ F | 5%  | 50V  |
| C1432 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1433 | 1-106-355-12 | MYLAR   | 0.0033 $\mu$ F | 10% | 100V |
| C1434 | 1-106-379-12 | MYLAR   | 0.033 $\mu$ F  | 10% | 100V |
| C1435 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1436 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1437 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1438 | 1-106-355-12 | MYLAR   | 0.0033 $\mu$ F | 10% | 100V |
| C1439 | 1-106-379-12 | MYLAR   | 0.033 $\mu$ F  | 10% | 100V |
| C1440 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C1443 | 1-126-964-11 | ELECT   | 10 $\mu$ F     | 20% | 50V  |
| C2068 | 1-104-665-11 | ELECT   | 100 $\mu$ F    | 20% | 25V  |
| C2234 | 1-126-960-11 | ELECT   | 1 $\mu$ F      | 20% | 50V  |

**Note:**

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

**Note:**

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



| REF. NO.         | PART NO.       | DESCRIPTION       | REMARK                 | REF. NO.                          | PART NO.       | DESCRIPTION    | REMARK                |
|------------------|----------------|-------------------|------------------------|-----------------------------------|----------------|----------------|-----------------------|
| C2235            | 1-126-960-11   | ELECT             | 1 $\mu$ F 20% 50V      | R1424                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| C2236            | 1-106-343-00   | MYLAR             | 0.001 $\mu$ F 10% 200V | R1425                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| <b>CONNECTOR</b> |                |                   |                        | R1426                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| CN1405           | * 1-564-510-11 | PLUG,CONNECTOR    | 7P                     | R1427                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| CN1406           | * 1-564-506-11 | PLUG,CONNECTOR    | 3P                     | R1428                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| CN2001           | * 1-564-506-11 | PLUG,CONNECTOR    | 3P                     | R1429                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| CN2201           | * 1-564-508-11 | PLUG,CONNECTOR    | 5P                     | R1430                             | 1-215-461-00   | METAL          | 47K 1% 1/4W           |
| CN2202           | * 1-564-510-11 | PLUG,CONNECTOR    | 7P                     | R1431                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| <b>DIODE</b>     |                |                   |                        | R1432                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| D2001            | 8-719-110-17   | DIODE RD10ESB2    |                        | R1433                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| D2006            | 1-810-039-11   | LED UNIT          |                        | R1434                             | 1-215-445-00   | METAL          | 10K 1% 1/4W           |
| D2235            | 8-719-110-17   | DIODE RD10ESB2    |                        | R1435                             | 1-249-431-11   | CARBON         | 15K 5% 1/4W           |
| D2236            | 8-719-110-17   | DIODE RD10ESB2    |                        | R1440                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| <b>IC</b>        |                |                   |                        | R1441                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| IC1403           | 8-759-496-03   | IC NJM2178L       |                        | R1442                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| IC1404           | 8-759-496-02   | IC NJM2150D       |                        | R1443                             | 1-249-429-11   | CARBON         | 10K 5% 1/4W           |
| IC2003           | 8-742-014-11   | HYB IC SBX1981-51 |                        | R2236                             | 1-247-895-91   | CARBON         | 470K 5% 1/4W          |
| <b>JACK</b>      |                |                   |                        | R2238                             | 1-247-895-91   | CARBON         | 470K 5% 1/4W          |
| J2231            | 1-691-110-11   | JACK,PIN 3P       |                        | <b>K</b>                          |                |                |                       |
| <b>RESISTOR</b>  |                |                   |                        | * A-1380-608-A K BOARD, COMPLETE  |                |                |                       |
| R1403            | 1-215-437-00   | METAL             | 4.7K 1% 1/4W           | (KV-27V66 ONLY)                   |                |                |                       |
| R1404            | 1-249-419-11   | CARBON            | 1.5K 5% 1/4W           | 4-382-854-11 SCREW(M3X10),P,SW(+) |                |                |                       |
| R1405            | 1-249-424-11   | CARBON            | 3.9K 5% 1/4W           | <b>CAPACITOR</b>                  |                |                |                       |
| R1406            | 1-249-437-11   | CARBON            | 47K 5% 1/4W            | C1001                             | 1-126-968-11   | ELECT          | 100 $\mu$ F 20% 50V   |
| R1407            | 1-249-435-11   | CARBON            | 33K 5% 1/4W            | C1002                             | 1-104-664-11   | ELECT          | 47 $\mu$ F 20% 25V    |
| R1408            | 1-215-469-00   | METAL             | 100K 1% 1/4W           | C1003                             | 1-126-964-11   | ELECT          | 10 $\mu$ F 20% 50V    |
| R1409            | 1-249-417-11   | CARBON            | 1K 5% 1/4W             | C1004                             | 1-126-934-11   | ELECT          | 220 $\mu$ F 20% 16V   |
| R1410            | 1-215-461-00   | METAL             | 47K 1% 1/4W            | C1006                             | 1-137-368-11   | FILM           | 0.0047 $\mu$ F 5% 50V |
| R1411            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1007                             | 1-126-960-11   | ELECT          | 1 $\mu$ F 20% 50V     |
| R1412            | 1-249-427-11   | CARBON            | 6.8K 5% 1/4W           | C1401                             | 1-126-957-11   | ELECT          | 0.22 $\mu$ F 20% 50V  |
| R1413            | 1-249-427-11   | CARBON            | 6.8K 5% 1/4W           | C1402                             | 1-126-957-11   | ELECT          | 0.22 $\mu$ F 20% 50V  |
| R1414            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1403                             | 1-126-943-11   | ELECT          | 2200 $\mu$ F 20% 25V  |
| R1415            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1404                             | 1-126-943-11   | ELECT          | 2200 $\mu$ F 20% 25V  |
| R1416            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1405                             | 1-126-382-11   | ELECT          | 100 $\mu$ F 20% 16V   |
| R1417            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1406                             | 1-126-382-11   | ELECT          | 100 $\mu$ F 20% 16V   |
| R1419            | 1-249-441-11   | CARBON            | 100K 5% 1/4W           | C1450                             | 1-136-171-00   | FILM           | 0.33 $\mu$ F 5% 50V   |
| R1420            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1451                             | 1-136-171-00   | FILM           | 0.33 $\mu$ F 5% 50V   |
| R1421            | 1-249-441-11   | CARBON            | 100K 5% 1/4W           | C1452                             | 1-137-367-11   | FILM           | 0.0033 $\mu$ F 5% 50V |
| R1422            | 1-249-429-11   | CARBON            | 10K 5% 1/4W            | C1453                             | 1-137-367-11   | FILM           | 0.0033 $\mu$ F 5% 50V |
| R1423            | 1-249-441-11   | CARBON            | 100K 5% 1/4W           | <b>CONNECTOR</b>                  |                |                |                       |
|                  |                |                   |                        | CN1002                            | * 1-564-507-11 | PLUG,CONNECTOR | 4P                    |
|                  |                |                   |                        | CN1003                            | * 1-564-511-11 | PLUG,CONNECTOR | 8P                    |
|                  |                |                   |                        | CN1004                            | * 1-564-509-11 | PLUG,CONNECTOR | 6P                    |

**Note:**

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**Note:**

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| REF. NO. | PART NO.       | DESCRIPTION    | REMARK |
|----------|----------------|----------------|--------|
| CN1400   | * 1-564-507-11 | PLUG,CONNECTOR | 4P     |
| CN1401   | * 1-564-506-11 | PLUG,CONNECTOR | 3P     |
| CN1402   | * 1-564-510-11 | PLUG,CONNECTOR | 7P     |

**IC**

|        |              |               |
|--------|--------------|---------------|
| IC1400 | 8-759-498-09 | IC TDA1519AQU |
| IC1401 | 8-759-498-09 | IC TDA1519AQU |

**COIL**

|       |              |          |             |
|-------|--------------|----------|-------------|
| L1001 | 1-408-421-00 | INDUCTOR | 100 $\mu$ H |
| L1002 | 1-410-470-11 | INDUCTOR | 10 $\mu$ H  |

**IC LINK**

|        |              |         |        |
|--------|--------------|---------|--------|
| PS1400 | 1-532-984-11 | LINK,IC | 2A/90V |
| PS1401 | 1-532-984-11 | LINK,IC | 2A/90V |

**TRANSISTOR**

|       |              |            |             |
|-------|--------------|------------|-------------|
| Q1001 | 8-729-119-78 | TRANSISTOR | 2SC2785-HFE |
| Q1002 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q1003 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q1004 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q1006 | 8-729-119-76 | TRANSISTOR | 2SA1175-HFE |
| Q1400 | 8-729-119-78 | TRANSISTOR | 2SC2785-HFE |

**RESISTOR**

|       |              |        |      |    |      |
|-------|--------------|--------|------|----|------|
| R1001 | 1-247-807-31 | CARBON | 100  | 5% | 1/4W |
| R1002 | 1-247-807-31 | CARBON | 100  | 5% | 1/4W |
| R1003 | 1-249-434-11 | CARBON | 27K  | 5% | 1/4W |
| R1004 | 1-249-436-11 | CARBON | 39K  | 5% | 1/4W |
| R1006 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |
| R1007 | 1-247-863-91 | CARBON | 22K  | 5% | 1/4W |
| R1008 | 1-247-863-91 | CARBON | 22K  | 5% | 1/4W |
| R1009 | 1-247-863-91 | CARBON | 22K  | 5% | 1/4W |
| R1010 | 1-247-863-91 | CARBON | 22K  | 5% | 1/4W |
| R1011 | 1-249-414-11 | CARBON | 560  | 5% | 1/4W |
| R1012 | 1-249-414-11 | CARBON | 560  | 5% | 1/4W |
| R1013 | 1-247-807-31 | CARBON | 100  | 5% | 1/4W |
| R1016 | 1-247-863-91 | CARBON | 22K  | 5% | 1/4W |
| R1017 | 1-247-863-91 | CARBON | 22K  | 5% | 1/4W |
| R1401 | 1-249-429-11 | CARBON | 10K  | 5% | 1/4W |
| R1402 | 1-249-437-11 | CARBON | 47K  | 5% | 1/4W |
| R1433 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R1434 | 1-249-429-11 | CARBON | 10K  | 5% | 1/4W |
| R1435 | 1-249-429-11 | CARBON | 10K  | 5% | 1/4W |
| R1436 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |

| REF. NO. | PART NO.     | DESCRIPTION | REMARK       |
|----------|--------------|-------------|--------------|
| R1437    | 1-247-863-91 | CARBON      | 22K 5% 1/4W  |
| R1450    | 1-249-422-11 | CARBON      | 2.7K 5% 1/4W |
| R1451    | 1-249-422-11 | CARBON      | 2.7K 5% 1/4W |
| R1452    | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |
| R1453    | 1-249-429-11 | CARBON      | 10K 5% 1/4W  |

**TUNER**

|                    |              |                     |
|--------------------|--------------|---------------------|
| TU1002 $\triangle$ | 8-598-430-00 | FSS TUNER BTF-FA401 |
|--------------------|--------------|---------------------|



\* A-1195-154-A P BOARD COMPLETE  
(KV-27V66 ONLY)

**CAPACITOR**

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

**CONNECTOR**

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



**Note:**

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**Note:**

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P

| REF. NO.          | PART NO.     | DESCRIPTION          | REMARK   | REF. NO.       | PART NO.     | DESCRIPTION        | REMARK   |
|-------------------|--------------|----------------------|----------|----------------|--------------|--------------------|----------|
| <b>DIODE</b>      |              |                      |          | R3342          | 1-216-057-00 | RES,CHIP 2.2K      | 5% 1/10W |
| D3301             | 8-719-404-50 | DIODE MA111-TX       |          | R3343          | 1-216-065-91 | RES,CHIP 4.7K      | 5% 1/10W |
| D3304             | 8-719-422-12 | DIODE MA8039         |          | R3344          | 1-216-073-00 | RES,CHIP 10K       | 5% 1/10W |
| <b>IC</b>         |              |                      |          | R3345          | 1-216-073-00 | RES,CHIP 10K       | 5% 1/10W |
| IC3301            | 8-759-575-99 | IC M65669FP-D60S     |          | R3346          | 1-216-295-91 | SHORT              |          |
| <b>COIL</b>       |              |                      |          | R3347          | 1-216-049-91 | RES,CHIP 1K        | 5% 1/10W |
| L3301             | 1-410-682-31 | INDUCTOR 470 $\mu$ H |          | R3348          | 1-216-049-91 | RES,CHIP 1K        | 5% 1/10W |
| L3302             | 1-414-267-11 | INDUCTOR 10 $\mu$ H  |          | R3349          | 1-215-857-11 | METAL 10           | 5% 1W F  |
| L3303             | 1-414-267-11 | INDUCTOR 10 $\mu$ H  |          | R3351          | 1-216-041-00 | RES,CHIP 470       | 5% 1/10W |
| <b>TRANSISTOR</b> |              |                      |          | R3352          | 1-216-295-91 | SHORT              |          |
| Q3304             | 8-729-216-22 | TRANSISTOR 2SA1162-G |          | R3357          | 1-216-041-00 | RES,CHIP 470       | 5% 1/10W |
| Q3305             | 8-729-216-22 | TRANSISTOR 2SA1162-G |          | R3358          | 1-216-689-11 | RES,CHIP 39K       | 5% 1/10W |
| Q3306             | 8-729-216-22 | TRANSISTOR 2SA1162-G |          | R3359          | 1-216-113-00 | RES,CHIP 470K      | 5% 1/10W |
| Q3309             | 8-729-422-27 | TRANSISTOR 2SD601A-Q |          | R3360          | 1-216-051-00 | RES,CHIP 1.2K      | 5% 1/10W |
| Q3310             | 8-729-422-27 | TRANSISTOR 2SD601A-Q |          | R3361          | 1-216-045-00 | RES,CHIP 1.5K      | 5% 1/10W |
| Q3311             | 8-729-111-55 | TRANSISTOR 2SD1312-K |          | R3365          | 1-216-073-00 | RES,CHIP 10K       | 5% 1/10W |
| Q3312             | 8-729-216-22 | TRANSISTOR 2SA1162-G |          | R3366          | 1-216-049-91 | RES,CHIP 1K        | 5% 1/10W |
| Q3313             | 8-729-422-27 | TRANSISTOR 2SD601A-Q |          | R3367          | 1-216-073-00 | RES,CHIP 10K       | 5% 1/10W |
| Q3314             | 8-729-422-27 | TRANSISTOR 2SD601A-Q |          | R3368          | 1-216-049-91 | RES,CHIP 1K        | 5% 1/10W |
| <b>RESISTOR</b>   |              |                      |          | <b>CRYSTAL</b> |              |                    |          |
| R3301             | 1-216-057-00 | RES,CHIP 2.2K        | 5% 1/10W | X3301          | 1-781-377-11 | OSCILLATOR,CRYSTAL |          |
| R3302             | 1-216-121-91 | RES,CHIP 1M          | 5% 1/10W |                |              |                    |          |
| R3303             | 1-216-057-00 | RES,CHIP 2.2K        | 5% 1/10W |                |              |                    |          |
| R3304             | 1-216-133-00 | 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             | 1-216-043-91 | RES,CHIP 680         | 5% 1/10W |                |              |                    |          |
| R3313             | 1-216-035-00 | 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                |          |                |              |                    |          |



**Note:**

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**Note:**

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| REF. NO.                         | PART NO. | DESCRIPTION                                                       | REMARK | REF. NO. | PART NO. | DESCRIPTION | REMARK |
|----------------------------------|----------|-------------------------------------------------------------------|--------|----------|----------|-------------|--------|
| <b>PACKAGING AND ACCESSORIES</b> |          |                                                                   |        |          |          |             |        |
| 4-041-255-01                     |          | BAG,PROTECTION                                                    |        |          |          |             |        |
| 4-065-733-02                     |          | CARTON,INDIVIDUAL<br>(KV-27V66CND/27V42/27V66/29VL42T)            |        |          |          |             |        |
| 4-064-065-01                     |          | CARTON,INDIVIDUAL<br>(KV-29XL42T/29SL42K/29SL42T)                 |        |          |          |             |        |
| 4-064-071-01                     |          | CUSHION ASSY, LOWER<br>(KV-29XL42T/29SL42T/29SL42K)               |        |          |          |             |        |
| 4-064-069-02                     |          | CUSHION ASSY, UPPER<br>(KV-29XL42T/29SL42K/29SL42T)               |        |          |          |             |        |
| 4-054-062-02                     |          | CUSHION(LOWER)(ASSY)<br>(KV-27V66 CND/27V42/29VL42T/27V66)        |        |          |          |             |        |
| 4-054-059-04                     |          | CUSHION(UPPER)(ASSY)<br>(KV-27V66/27V42/27V66CND/29VL42T)         |        |          |          |             |        |
| 1-475-069-21                     |          | REMOTE COMMANDER, (RM-Y149A) (KV-29SL42K)                         |        |          |          |             |        |
| 1-475-801-11                     |          | REMOTE COMMANDER, (RM-Y165)<br>(KV-27V42/29VL42T/29SL42T/29XL42T) |        |          |          |             |        |
| 1-475-802-11                     |          | REMOTE COMMANDER, (RM-Y167)<br>(KV-27V66)                         |        |          |          |             |        |
| 3-866-074-21                     |          | MANUAL,INSTRUCTION (KV-27V66 US/27V42)                            |        |          |          |             |        |
| 3-861-907-21                     |          | MANUAL,INSTRUCTION (KV-27V66 CND)                                 |        |          |          |             |        |
| 3-861-907-31                     |          | MANUAL,INSTRUCTION (KV-27V66 CND)                                 |        |          |          |             |        |
| 3-866-935-61                     |          | MANUAL,INSTRUCTION (KV-29SL42K)                                   |        |          |          |             |        |
| 3-866-524-71                     |          | MANUAL,INSTRUCTION<br>(KV-29VL42T/29XL42T/29SL42T)                |        |          |          |             |        |
| 4-978-977-01                     |          | BATTERY COVER, REMOTE                                             |        |          |          |             |        |
| 8-598-414-20                     |          | CHANGER,ANTENNAAS-2F (KV-27V66 ONLY)                              |        |          |          |             |        |

**9-965-858-01**

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Product Quality Division  
Service Promotion Department

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