# SAFETY CHECK-OUT (US Model Only)

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

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

## LEAKAGE TEST

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

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

## HOW TO FIND A GOOD EARTH GROUND

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

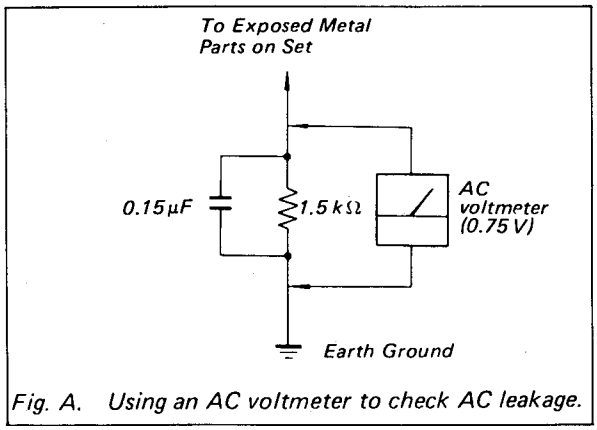



*Fig. A. Using an AC voltmeter to check AC leakage.*

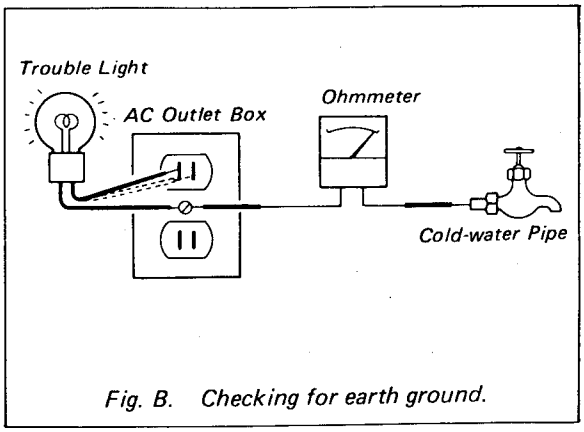



*Fig. B. Checking for earth ground.*

## TABLE OF CONTENTS

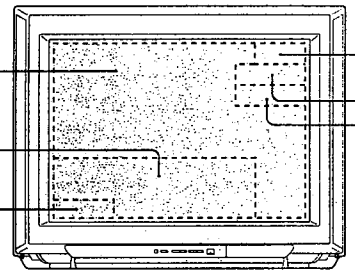
# SECTION 1
# GENERAL

**The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.**

## 1-1. LOCATING THE CONTROLS

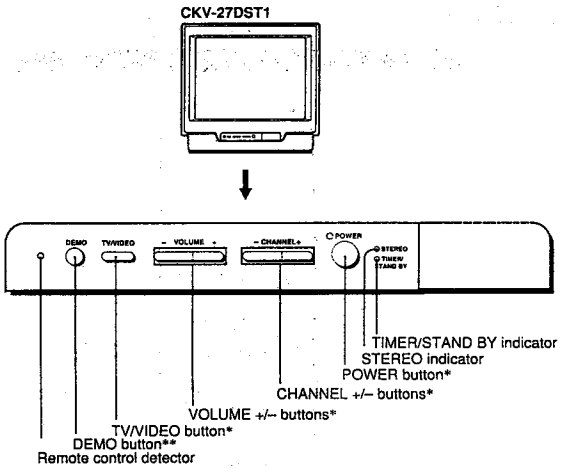
### Screen Displays

For details, see the pages indicated by the numbered black circles ●.

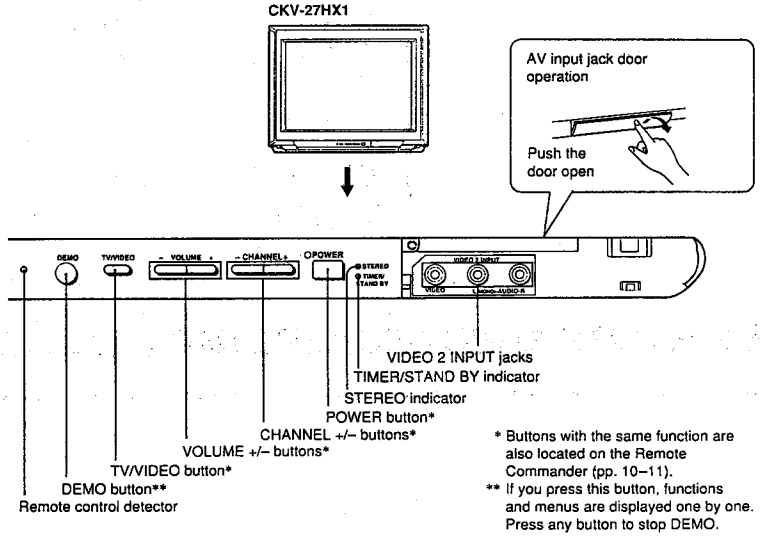



**CKV-27HX1**
(The screen displays, except for certain features as noted above, are the same for all models.)

**CKV-27DST1**



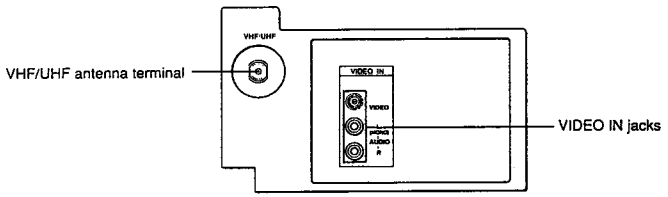

**CKV-27HX1**



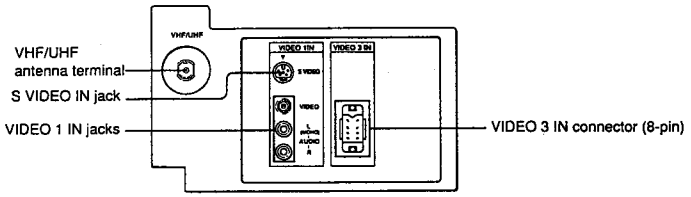

* Buttons with the same function are also located on the Remote Commander (pp. 10–11).
** If you press this button, functions and menus are displayed one by one. Press any button to stop DEMO.

## Rear Panel

CKV-27DST1



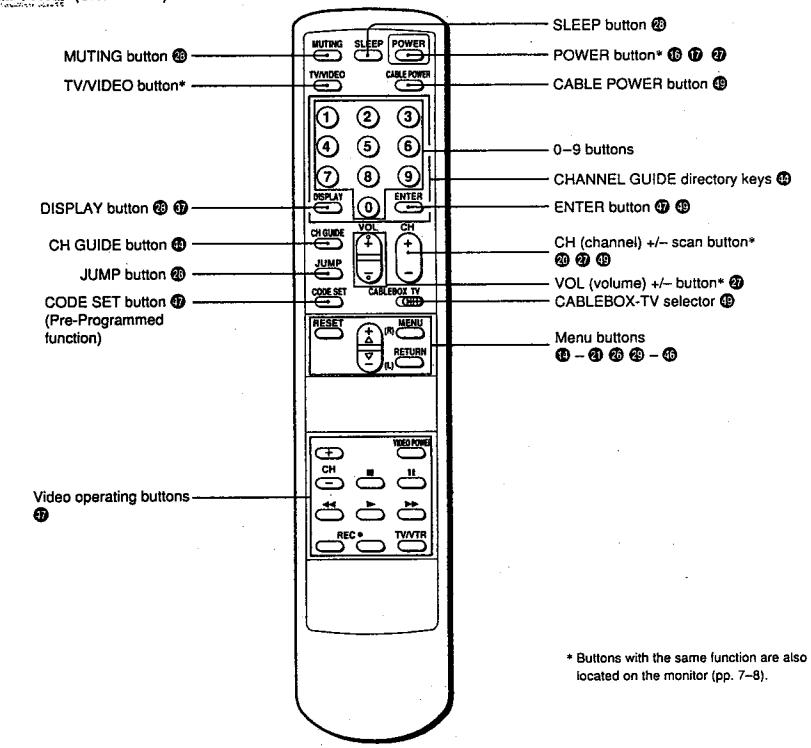

CKV-27HX1




## Remote Commander

For details, see the pages indicated by the numbered black circles ●.

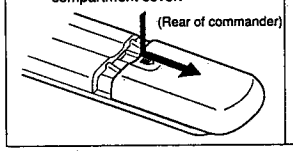
RM-Y117 (CKV-27HX1)



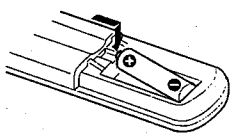

* Buttons with the same function are also located on the monitor (pp. 7–8).

### Installing Battery

**1** Remove the battery compartment cover.



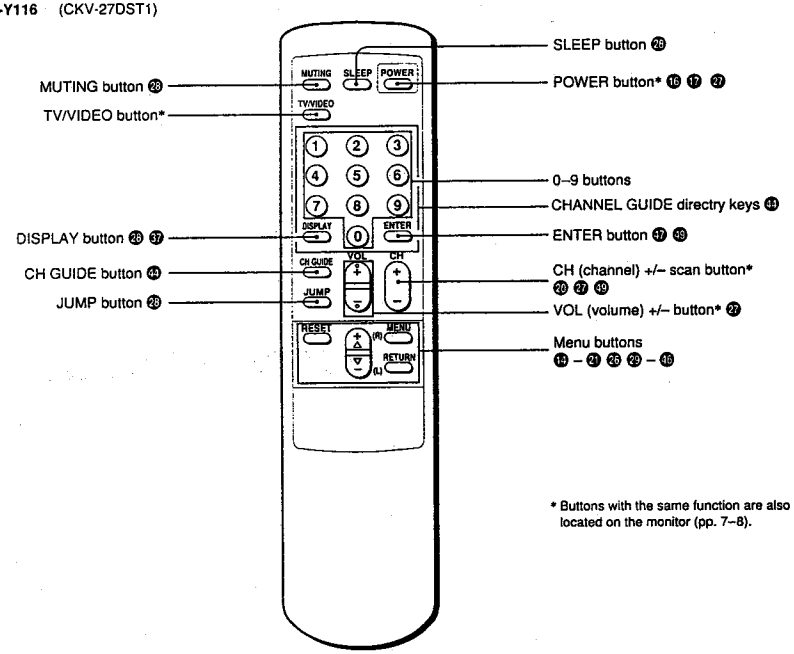

**2** Insert a size AA (R6) battery in correct polarity.



**Note**

If the CABLEBOX-TV selector is set to CABLEBOX, the Remote Commander is able to control a connected cable box, not the monitor. Set the selector to TV to control the monitor with the Remote Commander (You can use POWER button at any case).

**RM-Y116** (CKV-27DST1)

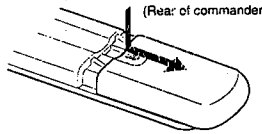



* Buttons with the same function are also located on the monitor (pp. 7–8).

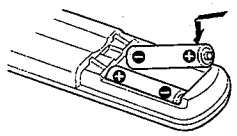
**Installing Batteries**

**1** Remove the battery compartment cover.

(Rear of commander)



**2** Insert two size AA (R6) batteries in correct polarity.



**WARNING**
Batteries may explode if mistreated. Do not recharge, disassemble, or dispose of in fire.

**Battery life**
With normal operation, batteries will last up to half a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace both of them with new ones.

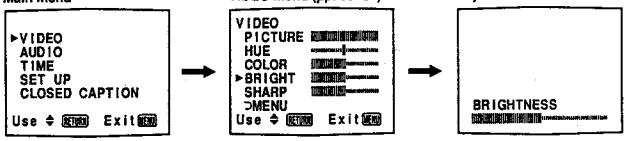
**To avoid damage from possible battery leakage**
Remove the batteries if you do not plan to use the Remote Commander for a fairly long time.



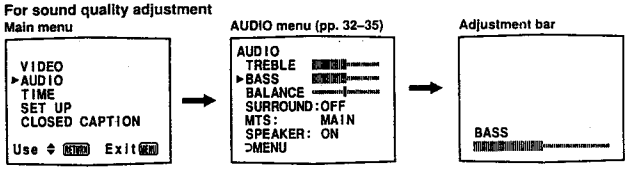
# 1-2. USING THE ON-SCREEN MENUS

The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.

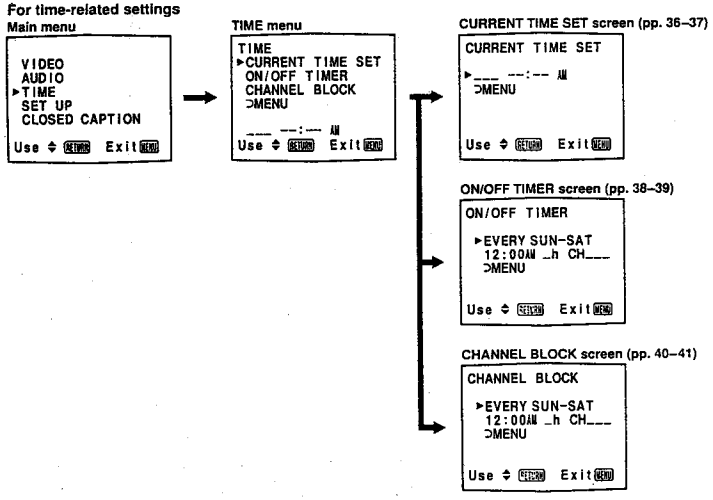
**For picture quality adjustment**




**For sound quality adjustment**




**For time-related settings**



For presetting and other functions

Main menu

```
VIDEO
AUDIO
TIME
►SET UP
CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

SET UP menu

```
SET UP
►CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
⊃MENU
```

CABLE ON/OFF screen (p. 16)

```
SET UP
►CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
⊃MENU
```

AUTO PROGRAM screen (pp. 17–18)

```
AUTO PROGRAM
```

For closed caption setting

Main menu

```
VIDEO
AUDIO
TIME
SET UP
►CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

CLOSED CAPTION screen (p. 29)

```
CLOSED CAPTION
►CC/TEXT OFF
CC1
CC2
TEXT1
TEXT2
⊃MENU
Use ≑ RETURN Exit MENU
```

CHANNEL ERASE/ADD screen (pp. 19–21)

```
CH ERASE/ADD
                10
►ERASE
ADD
⊃MENU
Select the channel
Use ≑ RETURN Exit MENU
```

CHANNEL CAPTION/GUIDE screen (pp. 42–43)

```
CH CAPTION/GUIDE
① ② ③   ► ----
④ ⑤ ⑥   ------
⑦ ⑧ ⑨   ⊃
DISP 0 ENT
Use ≑ RETURN Exit MENU
```

S VIDEO ON/OFF screen (p. 26)

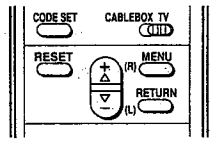
```
SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
►S VIDEO: ON
VIDEO LABEL
⊃MENU
```

VIDEO LABEL screen (pp. 45–46)

```
VIDEO LABEL
►VIDEO1: VIDEO1
VIDEO2: VIDEO2
VIDEO3: VIDEO3
⊃MENU
Use ≑ RETURN Exit MENU
```

## Navigating through the Menus

Remote Commander




**To display the main menu**
Press MENU.

**To return to the previous menu**
Press △+ or ▽– to select "⊃ MENU."
Then press RETURN.

**To return to the main menu**
Repeat the above, until you reach the main menu.

**To return to the normal screen**
Press MENU on the Remote Commander.

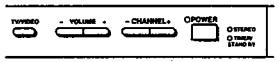
**Note**

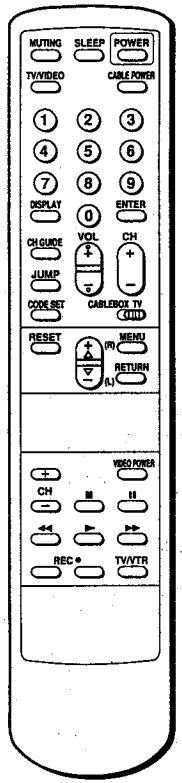
The menus disappear automatically if you do not press a button within 90 seconds.
The menu you cannot select appears in black.





## 1-3. TURNING THE CABLE MODE ON OR OFF

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**To return to the normal screen**
Press MENU.

If you have cable connected to your monitor (pp.12–13), follow the steps below to turn the cable connection on or off. CABLE is preset to ON when you use your monitor for the first time. Then turn CABLE to OFF to preset or watch VHF or UHF channels (pp. 17–21 and 27).

**1** Press POWER on the monitor or the Remote Commander to turn the monitor on.
*The TIMER/STAND BY indicator blinks until the picture appears.*

POWER or POWER

**2** Press MENU.
*The main menu appears.*

MENU

```
►VIDEO
AUDIO
TIME
SET UP
CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

**3** Press △+ or ▽– to select SET UP.

(R) (L)

```
VIDEO
AUDIO
TIME
►SET UP
CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

Press RETURN.
*The SET UP menu appears, and the cursor points to "CABLE"*

RETURN

```
SET UP
►CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
⊃MENU
```

**Note**

If the CABLE display appears in black, the monitor is in video mode and you cannot select CABLE. Press TV/VIDEO to change to TV mode.

**4** Press RETURN again.

RETURN

```
SET UP
►CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
⊃MENU
```

Press △+ or ▽– to select ON or OFF alternately.

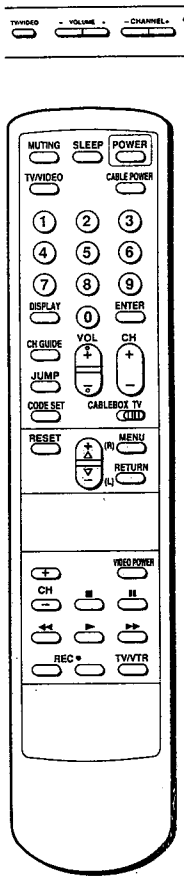
```
SET UP
CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
⊃MENU
```

↔

```
SET UP
CABLE: OFF
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION/GUIDE
S VIDEO
VIDEO LABEL
⊃MENU
```

Press RETURN.
*The setting is completed.*

## 1-4. PRESETTING TV CHANNELS

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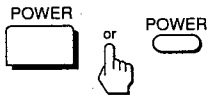
### Presetting TV Channels Automatically

**Note**

Perform auto programming during the day rather than late at night, when some channels may not be broadcasting.

**1** Press POWER on the monitor or the Remote Commander to turn the monitor on.

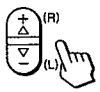



**2** Turn the cable connection on or off to select the type of channel you want to preset, VHF/UHF or cable TV.
(Follow the steps in "Turning the Cable Mode On or Off," p. 16)

**3** Press MENU.
*The main menu appears.*


```
▶VIDEO
 AUDIO
 TIME
 SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

**4** Press △+ or ▽– to select SET UP.




```
 VIDEO
 AUDIO
 TIME
▶SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

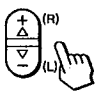
Press RETURN.
*The SET UP menu appears.*


```
SET UP
▶CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION/GUIDE
 S VIDEO
 VIDEO LABEL
▷MENU
```

**Note**

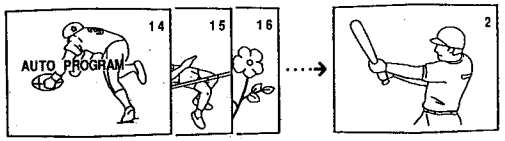
If the AUTO PROGRAM display appears in black, the monitor is in video mode and you cannot select AUTO PROGRAM. Press TV/VIDEO to change to TV mode.

**5** Press △+ or ▽– to select AUTO PROGRAM.




```
SET UP
 CABLE: ON
▶AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION/GUIDE
 S VIDEO
 VIDEO LABEL
▷MENU
```

Press RETURN.

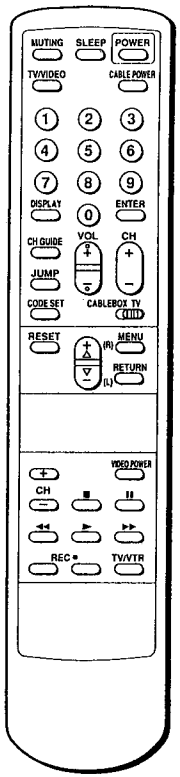

*"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the monitor's memory.*
*When no more channels can be found, the programming stops and the lowest numbered channel is displayed.*

**Receivable channels for this monitor**
VHF: 2–13
UHF: 14–69
Cable: 1–125

**To select TV channels without presetting**
Press 0–9 and ENTER.

**To return to the normal screen**
Press MENU.

**To erase unnecessary channels, or to add channels that could not be preset automatically** because their signal was too weak, follow the steps in "Erasing Unnecessary Channels — CHANNEL ERASE" (pp.19–20) and "Presetting Only Desired Channels — CHANNEL ADD" (p. 21).

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## Erasing Unnecessary Channels—CHANNEL ERASE

Use this feature to erase unnecessary TV channels, so that when you press CH +/–, the channel(s) are skipped.

**1** Press MENU.
*The main menu appears.*

MENU

```
▸VIDEO
 AUDIO
 TIME
 SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

**2** Press △+ or ▽– to select SET UP.

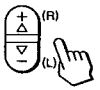
```
 VIDEO
 AUDIO
 TIME
▸SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

Press RETURN.
*The SET UP menu appears.*

RETURN

```
SET UP
▸CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION/GUIDE
 S VIDEO
 VIDEO LABEL
 ↱MENU
```

**3** Press △+ or ▽– to select CH ERASE/ADD.



```
SET UP
 CABLE: ON
 AUTO PROGRAM
▸CH ERASE/ADD
 CH CAPTION/GUIDE
 S VIDEO
 VIDEO LABEL
 ↱MENU
```

Press RETURN.
*The CH ERASE/ADD screen appears, and the cursor points to "ERASE".*

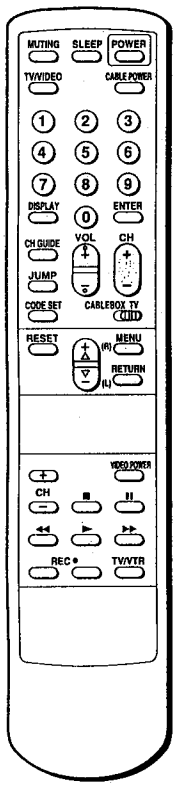
RETURN

```
CH ERASE/ADD
                10
  ▸ERASE
   ADD
   ↱MENU
Select the channel
Use ≑ RETURN Exit MENU
```

**Note**

If CH ERASE/ADD display appears in black, the monitor is in video mode and you cannot select CH ERASE/ADD. Press TV/VIDEO to change to TV mode.



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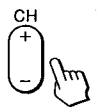
**To return to the normal screen**
Press MENU.

**Note**

When you erase a VHF or UHF channel, the cable TV channel with the same number is also erased, and vice versa.

**4** Press the CH +/– button to select the channel you want to erase.
For example, to erase channel 8, press CH +/– until 8 appears.

CH



```
CH ERASE/ADD
                8
  ▸ERASE
   ADD
   ↱MENU
Select the channel
Use ≑ RETURN Exit MENU
```

Press RETURN.
*A "–" sign appears in front of the channel number display, indicating that the channel is erased from the channel scan memory.*

RETURN

```
CH ERASE/ADD
               - 8
  ▸ERASE
   ADD
   ↱MENU
Use ≑ RETURN Exit MENU
```

*The next time you press the CH +/– buttons, channel 8 will be skipped.*

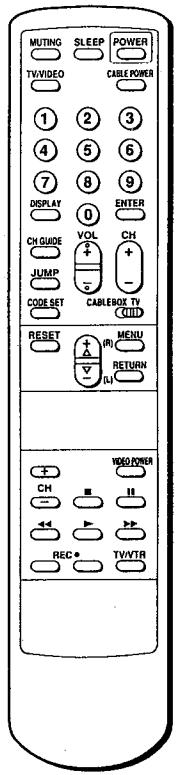
**To erase other channels**
Repeat step 4.

**Cable TV channel chart***
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

| Number on this TV | Corresponding cable TV channel |
|---|---|
| 1 | A-8 |
| 5 | A-7 |
| 6 | A-6 |
| 14 | A |
| 15 | B |
| 16 | C |
| 17 | D |
| 18 | E |
| 19 | F |
| 20 | G |
| 21 | H |
| 22 | I |
| 23 | J |
| 24 | K |
| 25 | L |
| 26 | M |
| 27 | N |
| 28 | O |
| 29 | P |
| 30 | Q |
| 31 | R |
| 32 | S |

| Number on this TV | Corresponding cable TV channel |
|---|---|
| 33 | T |
| 34 | U |
| 35 | V |
| 36 | W |
| 37 | W+1 |
| 38 | W+2 |
| 39 | W+3 |
| ⋮ | ⋮ |
| 93 | W+57 |
| 94 | W+58 |
| 95 | A-5 |
| 96 | A-4 |
| 97 | A-3 |
| 98 | A-2 |
| 99 | A-1 |
| 100 | W+59 |
| 101 | W+60 |
| 102 | W+61 |
| ⋮ | ⋮ |
| 123 | W+82 |
| 124 | W+83 |
| 125 | W+84 |

* This designation of cable TV channels conforms to the EIA/NCTA recommendation. Check with your local cable TV company for more complete information on the available channels.

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**To return to the normal screen**
Press MENU.

**Note**

If you add a VHF or UHF channel, the cable TV channel with the same number is also added, and vice versa.

## Presetting Only Desired Channels—CHANNEL ADD

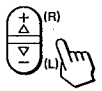
Use this feature to add channels one by one to the channel scan memory.

**1-3** (Follow steps 1–3 in "Erasing Unnecessary Channels—CHANNEL ERASE," p.19.)

**Note**

If the CH ERASE/ADD display appears in black, the monitor is in video mode and you cannot select CHANNEL ERASE/ADD.
Press TV/VIDEO to change to TV mode.

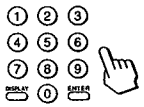
**4** Press Δ + or ∇ – to select ADD.




```
CH ERASE/ADD
                10
   ERASE
 ▶ADD
  >MENU

Select the channel
Use ≑ RETURN  Exit MENU
```

**5** Press 0–9 and ENTER to select the channel you want to add.
For example, to add channel 25, press 2, 5 and ENTER.



```
CH ERASE/ADD
                25
   ERASE
 ▶ADD
  >MENU

Select the channel
Use ≑ RETURN  Exit MENU
```

Press RETURN.
*A "+" sign appears in front of the channel number display, indicating that the channel is added to the channel scan memory.*


```
CH ERASE/ADD
                +25
   ERASE
 ▶ADD
  >MENU


Use ≑ RETURN  Exit MENU
```

**To add other channels**
Repeat step 5.

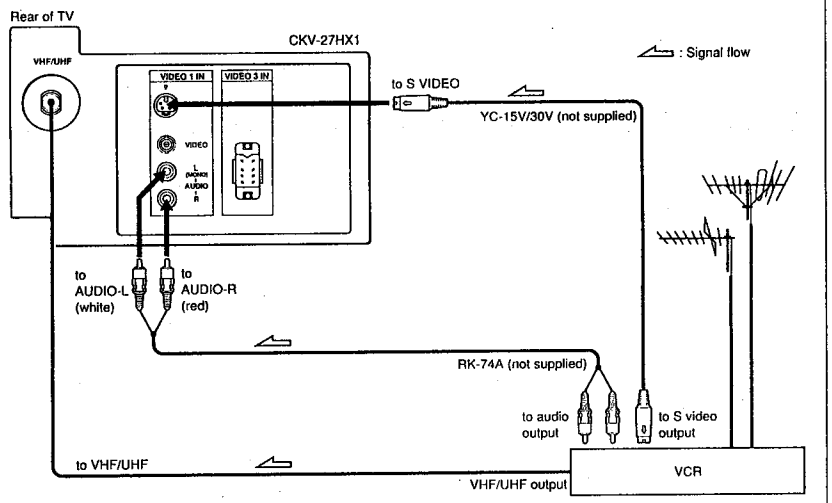


# 1-5. CONNECTING OTHER EQUIPMENT

## Video Equipment

After connecting, you will be able to playback video tapes.

### Connecting a VCR with an S video output jack (CKV-27HX1 only)



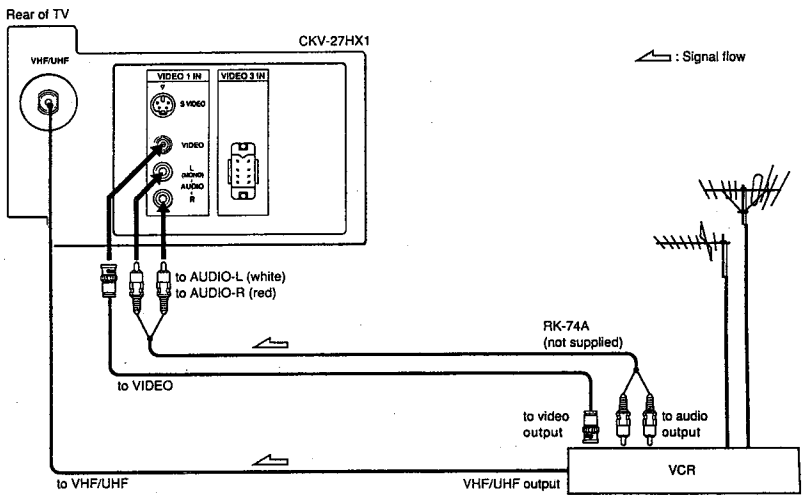

**Notes**

- If you connect a monaural VCR, connect the audio output of the VCR to the L (MONO) jack of VIDEO 1 IN on the monitor. The monaural sound will be heard from both speakers.
- For operating instructions, refer to the instruction manual furnished with the VCR.
- If the picture or sound is affected, move the VCR away from the monitor.
- If S VIDEO is set to OFF, you cannot watch VCR playback pictures from the S VIDEO IN.
  To set S VIDEO to ON, see "Watching a Video with Your S Video-Equipped VCR", p. 26.

**About S video input**

Video input and output signals can be separated into Y (luminance or brightness) and C (chroma or color) signals. Usually these two signals are combined in a VCR and sent as one signal to a TV. Separation of the Y and C signals prevents them from interfering with one another, thereby inproving picture (especially color) quality.
This monitor is equipped with an S video input jack through which these separated signals can be input directly. This way you can connect your S video-equipped VCR separately from a non-S video VCR.

## Connecting video equipment not equipped with an S video output jack




### Preparing for use

**1** Turn on the monitor.

**2** Press the TV/VIDEO button on the monitor or on the Remote Commander so that VIDEO appears on the screen.

**When you cannot obtain a clear picture and/or sound**
Make sure that the TV/VTR on the VCR is set to TV. Reselect the channel you want to view with the controls on the monitor or the Remote Commander.

### Operating your equipment (CKV-27HX1 only)

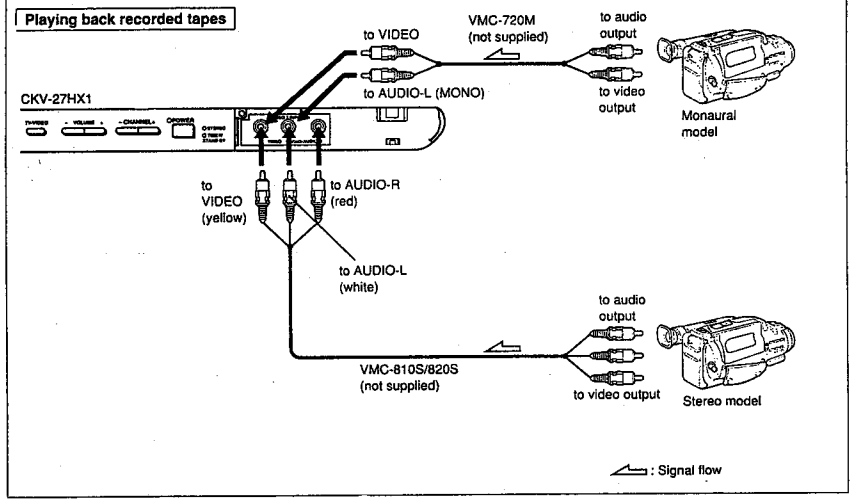
When using a Sony VCR, Multi-disc player or other manufacture's infrared remote control VCR, you can operate most of the equipments by using the supplied pre-programmed Remote Commander (p. 47).

**To return to TV mode**
Press the TV/VIDEO button so that a channel number appears on the screen.



## Connecting camcorders (CKV-27HX1 only)

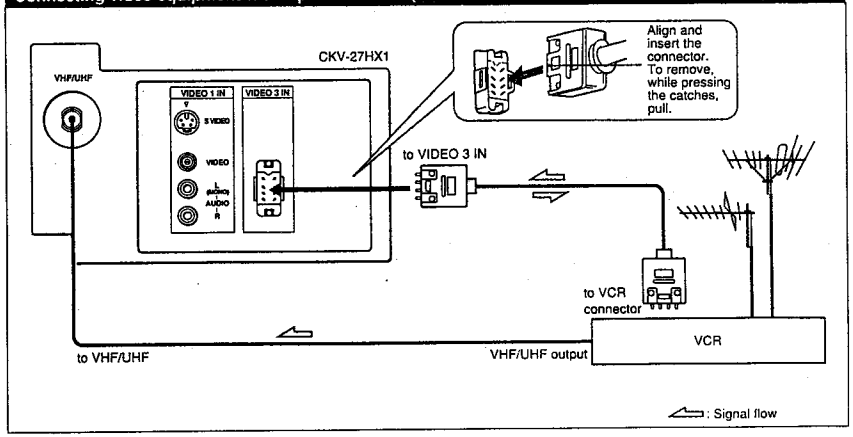
**Playing back recorded tapes**

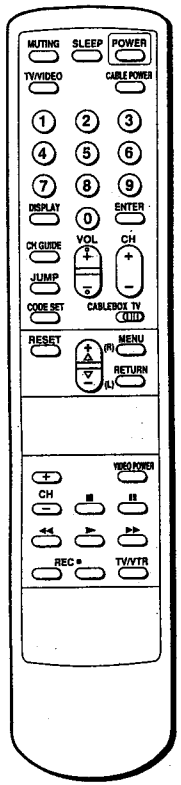



### Preparing for use

Same as p. 23.

## Connecting video equipment with 8-pin connector (CKV-27HX1 only)





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**To return to the normal screen**
Press MENU.

**Note**

If you set S VIDEO to ON, the monitor automatically receives S video signals whenever a VCR with S video is connected.

## Watching a Video with Your S Video-Equipped VCR (CKV-27HX1 only)

Use this feature to set S VIDEO to ON or OFF depending on the kind of video equipment you have connected to the monitor. For instructions on connecting video equipment, see pp. 22–24.

**Note**

If the monitor is in TV, VIDEO 2 or VIDEO 3 mode, the S VIDEO display appears in black and cannot be selected.
Press TV/VIDEO to change to VIDEO 1 mode.

**1** Press MENU.
*The main menu appears.*

MENU

```
▸VIDEO
 AUDIO
 TIME
 SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

**2** Press △+ or ▽– to select SET UP.

(R) (L)

```
 VIDEO
 AUDIO
 TIME
▸SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

Press RETURN.
*The SET UP menu appears.*

RETURN

```
SET UP
▸CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION/GUIDE
 S VIDEO: ON
 VIDEO LABEL
>MENU
```

**3** Press △+ or ▽– to select S VIDEO.
Then press RETURN.

(R) (L) RETURN

```
SET UP
 CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION/GUIDE
▸S VIDEO: ON
 VIDEO LABEL
>MENU
```

Press △+ or ▽– to select ON or OFF alternately.

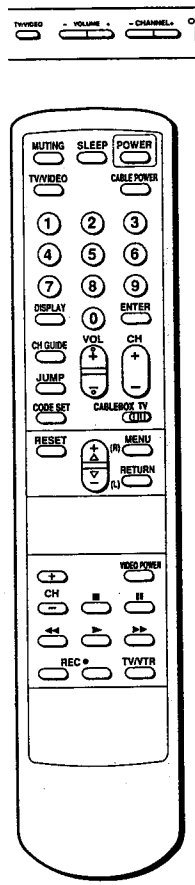
```
SET UP                    SET UP
 CABLE: ON                 CABLE: ON
 AUTO PROGRAM              AUTO PROGRAM
 CH ERASE/ADD              CH ERASE/ADD
 CH CAPTION/GUIDE    ↔     CH CAPTION/GUIDE
 S VIDEO: ON               S VIDEO: OFF
 VIDEO LABEL               VIDEO LABEL
>MENU                     >MENU
```

Press RETURN.
*The setting is completed.*





# 1-6. WATCHING TV PROGRAMS



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**1** Press POWER on the monitor or the Remote Commander to turn the monitor on.
*The TIMER/STAND BY indicator blinks until the picture appears.*

POWER or POWER

**2** Turn the cable mode on or off to select the type of channel you want to watch, VHF/UHF or cable TV.
(Follow the steps in "Turning the Cable Mode On or Off," p. 16.)

*If "VIDEO" or "S VIDEO" is displayed on the screen, press the TV/VIDEO button so that the channel number appears.*

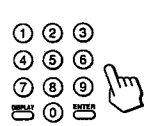
**3** Select a channel in one of the following two ways:

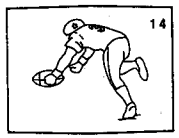
**To scan the preset channels* in numerical sequence**
Press CH +/–.

CH


* For more information on presetting channels, see pp. 17–21.

**To select a channel directly**
Press 0–9 and ENTER.
For example, to select channel 14, press 1, 4 and ENTER.

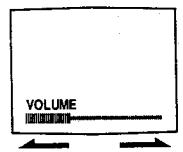





**4** Press VOL +/– to adjust the volume.

VOL

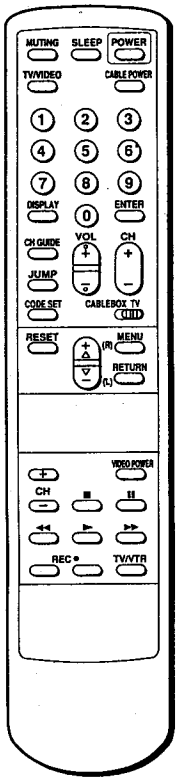
*The display will disappear automatically after 3 seconds.*




Press + to increase the volume.
Press – to decrease the volume.

**To turn off the monitor**
Press POWER on the monitor or the Remote Commander again.

## 1-7. USING CONVENIENT FEATURES

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### Muting the Sound — MUTING

Press MUTING.
*The display "MUTING" will appear on the screen.*


**To restore the sound**
Press MUTING again, or press VOL +.

### Keeping the Displays On-Screen — DISPLAY

**To display the channel**
Press DISPLAY.
*All the existing displays appear: channel number, channel caption (if set), MTS mode ("SAP" only), window picture input mode and the current time ("AM" or "PM" disappears after about three seconds).*


**To cancel the display**
Press DISPLAY again.
*The channel display will disappear.*

### Using the Sleep Timer — SLEEP

The sleep timer turns off the monitor automatically after the amount of time you select.

Press SLEEP.
*Each time you press SLEEP, the time increments "30", "60", "90" and "OFF" mode appear in sequence.*


SLEEP 30
SLEEP 60
SLEEP 90
SLEEP OFF

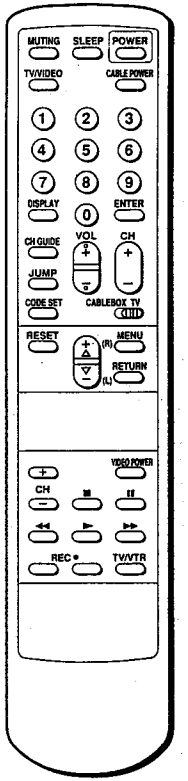
*The SLEEP display appears about one minute before the monitor turns off.*

**To cancel the setting**
Press SLEEP until "OFF" mode appears.
*The "SLEEP OFF" display appears for about three seconds.*
OR
Turn the monitor off.
*The sleep timer setting is cancelled.*

### Switching Quickly Between Two Channels — JUMP

Press JUMP once to recall the channel you were watching previously. Press JUMP again to switch back. Use this feature to keep track of two programs alternately.


## 1-8. USING CLOSED CAPTION

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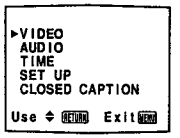
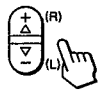
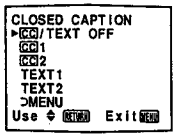
**1** Press MENU.
*The main menu appears.*

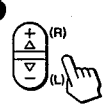

**2** Press △+ or ▽− to select CLOSED CAPTION.
Then press RETURN.
*The CLOSED CAPTION screen appears.*



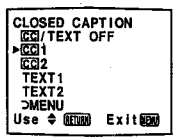




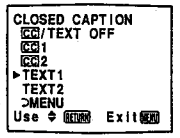

**3** Press △+ or ▽− to select closed caption mode.




Select CC1 or CC2 to view Captions.
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.)

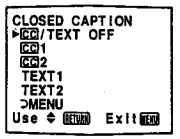



Select TEXT1 or TEXT2 to view Text.
Text is information that is presented using the half to full television screen. It is usually not related to the program.

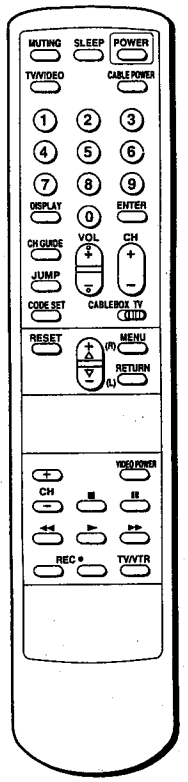



Select CC/TEXT OFF if you do not want to use the CLOSED CAPTION mode.

Press RETURN.
*The setting is completed.*

## 1-9. USING THE TIMER-ACTIVATED FUNCTIONS

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### Setting the Clock — CURRENT TIME SET

Follow these instructions to set the current time. The correct time must be set in order to use the timer-activated functions (ON/OFF TIMER, CHANNEL BLOCK).

EXAMPLE: Set the time to 3:15 PM, Monday.

**1** Press MENU.
*The main menu appears.*

MENU

```
▸VIDEO
 AUDIO
 TIME
 SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

**2** Press Δ+ or ∇– to select TIME.

(R) (L)

```
 VIDEO
 AUDIO
▸TIME
 SET UP
 CLOSED CAPTION
Use ≑ RETURN Exit MENU
```

Press RETURN.
*The TIME menu appears, and the cursor points to "CURRENT TIME SET"*

RETURN

```
TIME
▸CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 >MENU
 ___ --:-- AM
Use ≑ RETURN Exit MENU
```

**3** Press RETURN.
*The CURRENT TIME SET screen appears.*

RETURN

```
CURRENT TIME SET
▸___ --:-- AM
 >MENU
Use ≑ RETURN Exit MENU
```

**4** Press RETURN again.
*"Set the day." appears on the screen.*

RETURN

```
CURRENT TIME SET
  SUN 12:00 AM
  >MENU
Set the day.
Use ≑ RETURN Exit MENU
```

**5** Press Δ+ or ∇– to set the day.
*Each time you press Δ+ or ∇–, the day changes consecutively.*

(R) (L)

Press RETURN.
*"Set the time." appears on the screen.*

RETURN

```
CURRENT TIME SET
  MON 12:00 AM
  >MENU
Set the time.
Use ≑ RETURN Exit MENU
```

**6** Press Δ+ or ∇– to set the hour.
*Each time you press Δ+ or ∇–, the hour changes starting with "12:00 AM."*

(R) (L)

Press RETURN.

RETURN

```
CURRENT TIME SET
  MON 3:00 PM
  >MENU
Set the time.
Use ≑ RETURN Exit MENU
```

**7** Press Δ+ or ∇– to set the minutes.
*Each time you press Δ+ or ∇–, the minutes change in sequence.*

(R) (L)

```
CURRENT TIME SET
  MON 3:15 PM
  >MENU
Set the time.
Use ≑ RETURN Exit MENU
```

Press RETURN.
*The setting is completed, and the clock starts.*

RETURN

```
CURRENT TIME SET
▸ MON 3:15 PM
  >MENU
Use ≑ RETURN Exit MENU
```

**To reset the time**
Press RESET while in the CURRENT TIME screen, and repeat steps 4–7.

**To display the time**
Press DISPLAY.

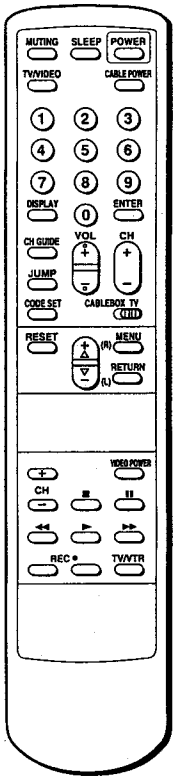
**To return to the normal screen**
Press MENU.

**Notes**

- The internal clock of this monitor operates on a 12-hour cycle. If a 24-hour cycle number (for instance, 13:00) is entered, it will be cleared when you press RETURN.

  12:00 AM stands for midnight.
  12:00 PM stands for noon.

- All the settings including CURRENT TIME SET will be erased if you unplug the monitor or a power failure occurs. Reset the current time by following steps 1–7.

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## Setting the ON/OFF TIMER

With this function you can set your favorite program to appear on the screen at the time that you set.

EXAMPLE: Set the timer to turn on the monitor every Monday through Friday at 3:15 PM for 2 hours, on channel 21.

**1** Press MENU.
*The main menu appears.*

MENU

```
▸VIDEO
 AUDIO
 TIME
 SET UP
 CLOSED CAPTION

Use ≑ RETURN Exit MENU
```

**2** Press Δ+ or ∇– to select TIME.
Then press RETURN.
*The TIME menu appears.*

(R) (L) RETURN

```
TIME
▸CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 >MENU

 MON  3:15 PM
Use ≑ RETURN Exit MENU
```

**3** Press Δ+ or ∇– to select ON/OFF TIMER.
Then press RETURN.
*The ON/OFF TIMER screen appears.*

(R) (L) RETURN

```
ON/OFF TIMER

▸EVERY SUN-SAT
 12:00AM _h CH___
 >MENU

Use ≑ RETURN Exit MENU
```

**Note**

If the ON/OFF TIMER display appears in black, the current time has not been set and you cannot select ON/OFF TIMER. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 36–37.

**4** Press RETURN again.
*"Set the day." appears on the screen.*

RETURN

```
ON/OFF TIMER

 EVERY SUN-SAT
 12:00AM _h CH___
 >MENU

Set the day.
Use ≑ RETURN Exit MENU
```

**5** Press Δ+ or ∇– to set the day.
*Each time you press Δ+ or ∇–, the days of the week change as shown in Fig. 1.*
Then press RETURN.
*"Set the time." appears on the screen.*

(R) (L) RETURN

```
ON/OFF TIMER

 EVERY MON-FRI
 12:00AM _h CH___
 >MENU

Set the time.
Use ≑ RETURN Exit MENU
```

**6** Press Δ+ or ∇– to set the hour that you want the TIMER to start.
*Each time you press Δ+ or ∇–, the hour changes in sequence.*
Then press RETURN.

(R) (L) RETURN

```
ON/OFF TIMER

 EVERY MON-FRI
 3:00PM _h CH___
 >MENU

Set the time.
Use ≑ RETURN Exit MENU
```

**7** Press Δ+ or ∇– to set the minutes.
*Each time you press Δ+ or ∇–, the minutes change in sequence.*
Then press RETURN.
*"Set the duration." appears on the screen.*

(R) (L) RETURN

```
ON/OFF TIMER

 EVERY MON-FRI
 3:15PM _h CH___
 >MENU

Set the duration.
Use ≑ RETURN Exit MENU
```

**8** Press Δ+ or ∇– to set the duration of time.
*Each time you press Δ+ or ∇–, the duration changes from "1" to "6" in sequence.*
Then press RETURN.
*"Select the channel" appears on the screen.*

(R) (L) RETURN

```
ON/OFF TIMER

 EVERY MON-FRI
 3:15PM 2h CH___
 >MENU

Select the channel
Use ≑ RETURN Exit MENU
```

**9** Press Δ+ or ∇– to set the channel that you want the TV to tune in.
*Each time you press Δ+ or ∇–, the channel number changes from 1 to 125 in sequence.*

(R) (L)

```
ON/OFF TIMER

 EVERY MON-FRI
 3:15PM 2h CH 21
 >MENU

Select the channel
Use ≑ RETURN Exit MENU
```

Press RETURN.
*The setting is completed, and the TIMER indicator on the front of the monitor lights up.*

RETURN

```
ON/OFF TIMER

▸EVERY MON-FRI
 3:15PM 2h CH 21
 >MENU

Use ≑ RETURN Exit MENU
```

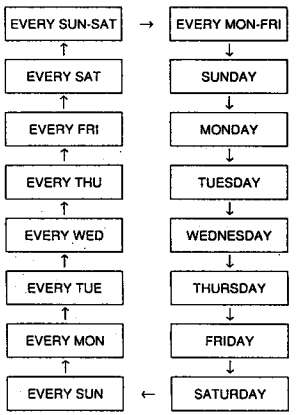
**To clear the ON/OFF TIMER setting**
Press RESET while in the ON/OFF TIMER screen.

**To return to the normal screen**
Press MENU.

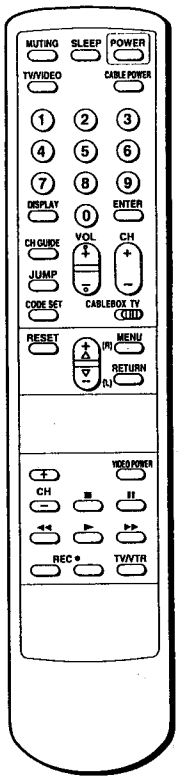
**Notes**

- While the TIMER is set, the TIMER indicator on the monitor is on.
- One minute before the timer goes off, the "TV will turn off" display will appear on the screen.
- All the settings including ON/OFF TIMER will be erased if you unplug the monitor or a power failure occurs. Reset the ON/OFF TIMER by following steps 1-9.
- If you have not set the clock correctly, the ON/OFF TIMER will not operate at the proper time. To set the clock, see "Setting the Clock–CURRENT TIME SET", pp. 36–37.

*Fig. 1*
**Selecting the day(s) of the week**
When you press Δ+, the days of the week appear in the following order.




(∇–: reverse order)

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## Setting CHANNEL BLOCK

Use this function to block a channel from appearing on the screen during the time you specify. You can use this function to prevent children from watching undesirable programs.

EXAMPLE: Set CHANNEL BLOCK every Sunday at 8:45 PM for one hour, on channel 38.

**1** Press MENU.
*The main menu appears.*

MENU

```
▸VIDEO
 AUDIO
 TIME
 SET UP
 CLOSED CAPTION
Use ≑ RETURN  Exit MENU
```

**2** Press Δ+ or ∇– to select TIME.
Then press RETURN.
*The TIME menu appears.*

(R) (L) RETURN

```
TIME
▸CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 >MENU

 MON  3:15 PM
Use ≑ RETURN  Exit MENU
```

**3** Press Δ+ or ∇– to select CHANNEL BLOCK.
Then press RETURN.
*The CHANNEL BLOCK screen appears.*

(R) (L) RETURN

```
CHANNEL BLOCK

▸EVERY SUN-SAT
 12:00AM _h CH____
 >MENU

Use ≑ RETURN  Exit MENU
```

**Note**

If the CHANNEL BLOCK display appears in black, the current time has not been set and you cannot select CHANNEL BLOCK. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 36–37.

**4** Press RETURN again.
*"Set the day." appears on the screen.*

RETURN

```
CHANNEL BLOCK

 EVERY SUN-SAT
 12:00AM _h CH____
 >MENU

Set the day.
Use ≑ RETURN  Exit MENU
```

**5** Press Δ+ or ∇– to set the day.
*Each time you press Δ+ or ∇–, the days of the week change as shown in Fig. 1.(See p. 39.)*
Then press RETURN.
*"Set the time." appears on the screen.*

(R) (L) RETURN

```
CHANNEL BLOCK

 SUNDAY
 12:00AM _h CH____
 >MENU

Set the time.
Use ≑ RETURN  Exit MENU
```

**6** Press Δ+ or ∇– to set the hour.
*Each time you press Δ+ or ∇–, the hour changes in sequence.*
Then press RETURN.

(R) (L) RETURN

```
CHANNEL BLOCK

 SUNDAY
 8:00PM _h CH____
 >MENU

Set the time.
Use ≑ RETURN  Exit MENU
```

**7** Press Δ+ or ∇– to set the minutes.
*Each time you press Δ+ or ∇–, the minutes change in sequence.*
Then press RETURN.
*"Set the duration." appears on the screen.*

(R) (L) RETURN

```
CHANNEL BLOCK

 SUNDAY
 8:45PM _h CH____
 >MENU

Set the duration.
Use ≑ RETURN  Exit MENU
```

**8** Press Δ+ or ∇– to set the duration of time that you want the monitor remain blocked.
*Each time you press Δ+ or ∇–, the duration changes from 1 to 6 in sequence.*
Then press RETURN.
*"Select the channel" appears on the screen.*

(R) (L) RETURN

```
CHANNEL BLOCK

 SUNDAY
 8:45PM 1h CH____
 >MENU

Select the channel
Use ≑ RETURN  Exit MENU
```

**9** Press Δ+ or ∇– to set the channel that you want to block.
*Each time you press Δ+ or ∇–, the channel number changes from 1 to 125 in sequence.*

(R) (L)

```
CHANNEL BLOCK

 SUNDAY
 8:45PM 1h CH 38
 >MENU

Select the channel
Use ≑ RETURN  Exit MENU
```

Press RETURN.
*The setting is completed.*

RETURN

```
CHANNEL BLOCK

▸SUNDAY
 8:45PM 1h CH 38
 >MENU

Use ≑ RETURN  Exit MENU
```

If you select a channel which has been blocked, the message of "BLOCKED" appears.

```
38

BLOCKED
```

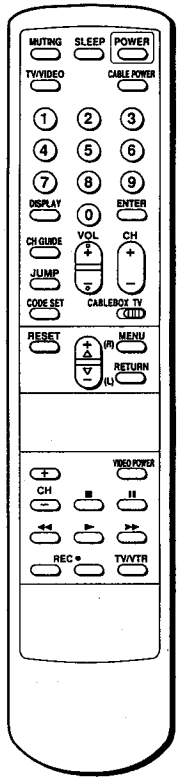
**To clear the BLOCK setting**
Press RESET while in the CHANNEL BLOCK screen.

**To return to the normal screen**
Press MENU.

**Notes**

- If you set a new CHANNEL BLOCK by following steps 1–9, the original setting will be erased.
- If you have not set the clock correctly, CHANNEL BLOCK will not operate at the proper time. To set the clock, see "Setting the Clock—CURRENT TIME SET", pp. 36–37.

## 1-10. CUSTOMIZING THE SCREEN DISPLAY

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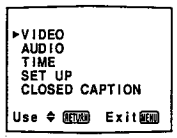
### Setting Channel Captions — CH CAPTION

Use this feature to caption up to 12 channel number displays with the matching channel call letters.

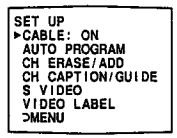
EXAMPLE: Caption channel 20 with ESPN at the caption position number 4.

**1** Press MENU.
*The main menu appears.*

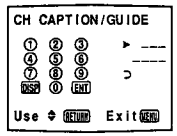

**2** Press Δ+ or ∇– to select SET UP.
Then press RETURN.
*The SET UP menu appears.*






**3** Press Δ+ or ∇– to select CH CAPTION/GUIDE.
Then press RETURN.
*The CH CAPTION/GUIDE screen appears.*

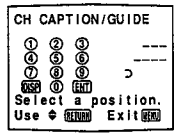




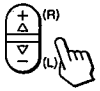

**Note**

If the CH CAPTION display appears in black, the monitor is in video mode and you cannot select CH CAPTION/GUIDE. Press TV/VIDEO to change to TV mode.

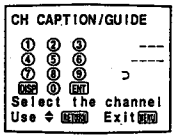
**4** Press RETURN again.
*"Select a position." appears on the screen.*

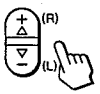

**5** Press Δ+ or ∇– to select a caption position number.
*Each time you press Δ+ or ∇–, the caption position number is marked in sequence.*
Then press RETURN.
*"Select the channel" appears on the screen.*



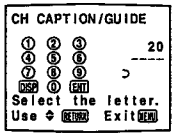




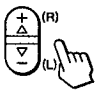

**6** Press Δ+ or ∇– to select the channel you want to caption.
*Each time you press Δ+ or ∇–, the channel number changes from 1 to 125.*
Then press RETURN.
*"Select the letter." appears on the screen.*



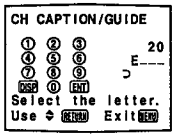




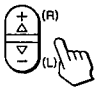

**7** Press Δ+ or ∇– to select the first letter.
*Each time you press Δ+ or ∇–, "0–9", "A-Z", "&", "/", "–" and "_(blank space)" appear in sequence.*
Then press RETURN.



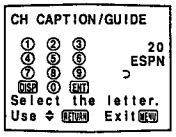




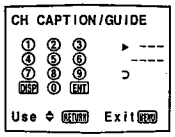

**8** Repeat step 7 to select each remaining letter.
(For a 3-letter caption, leave a space by pressing RETURN only.)







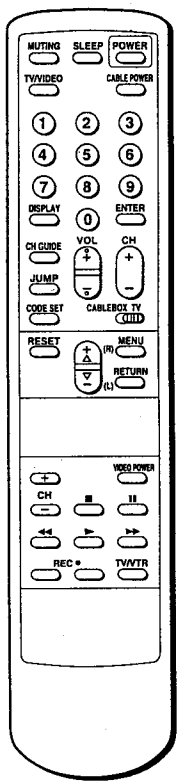

**9** Press RETURN.
*The setting is completed.*


**To caption other channels**
Repeat steps 4–9.

**To erase unneeded captions**
Call the caption setting screen by following steps 1–5, and press RESET.

**To return to the normal screen**
Press MENU.

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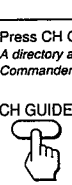
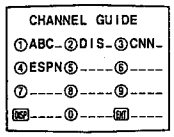
## Viewing the Captioned Channels — CH GUIDE

Use this feature to display the captions you set, and to select a channel directory for viewing.

**1** Press CH GUIDE.
*A directory appears, corresponding to the directory keys on the Remote Commander.*

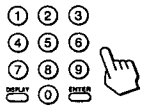
CH GUIDE

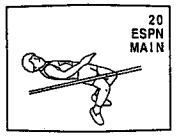


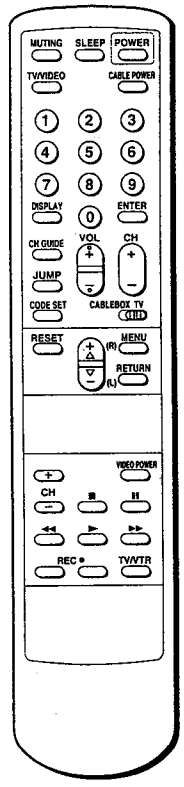



**To cancel the CHANNEL GUIDE screen**
Press CH GUIDE again.

**2** Press the directory key of the channel you want to watch.



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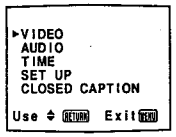
## Setting VIDEO LABEL (CKV-27HX1 only)

Use this feature to label each input mode in order to identify the equipment connected to each input terminal.

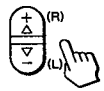
EXAMPLE: Label VIDEO 1 IN as VHS.

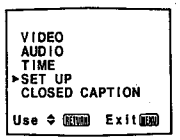
**1** Press MENU.
*The main menu appears.*

MENU



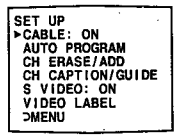

**2** Press △+ or ▽– to select SET UP.



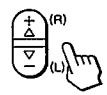


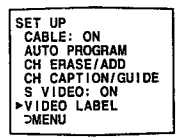

Press RETURN.
*The SET UP menu appears.*

RETURN



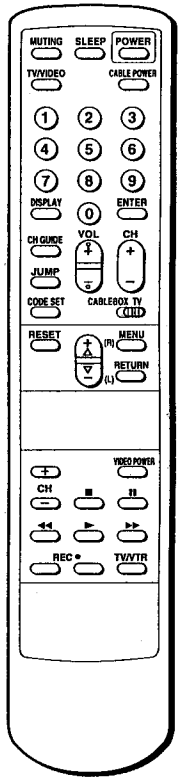

**3** Press △+ or ▽– to select VIDEO LABEL.






Press RETURN.
*The VIDEO LABEL screen appears.*

RETURN

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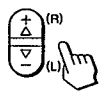
To return to the normal screen
Press MENU.

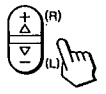
**4** Press Δ+ or ∇– to select the input mode you want to label.




```
VIDEO LABEL
►VIDEO1: VIDEO1
 VIDEO2: VIDEO2
 VIDEO3: VIDEO3
 ↻MENU
Use ≑ RETURN Exit MENU
```

Press RETURN.


**5** Press Δ+ or ∇– to select VHS.




```
VIDEO LABEL
 VIDEO1: VIDEO1
 VIDEO2: VIDEO2
 VIDEO3: VIDEO3
 ↻MENU
Use ≑ RETURN Exit MENU
```

*Each time you press Δ+, the label changes:*

**VIDEO 1**
VIDEO 1 → S VIDEO → BETA → 8 mm → VHS → LD

**VIDEO 2**
VIDEO 2 → BETA → 8 mm → VHS → LD

**VIDEO 3**
VIDEO 3 → BETA → 8 mm → VHS → LD

(∇–: reverse order)

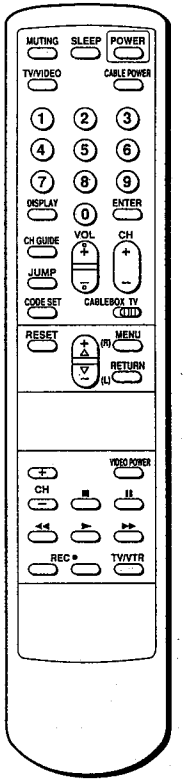
Press RETURN.


```
VIDEO LABEL
►VIDEO1: VHS
 VIDEO2: VIDEO2
 VIDEO3: VIDEO3
 ↻MENU
Use ≑ RETURN Exit MENU
```

**To label other input modes**
Repeat steps 4–5.



## 1-11. USING THE PRE-PROGRAMMED REMOTE COMMANDER (CKV-27HX1 ONLY)

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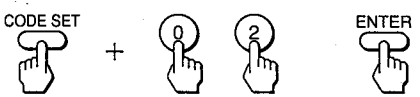
You can operate your video equipment and cable converter box that has an infrared remote detector with this supplied pre-programmed Remote Commander.

### Operating Sony or Non-Sony Video Equipment—Pre-Programmed Function

With the supplied Remote Commander, you can operate a Sony video cassette recorder (Beta, 8 mm, VHS) or a multi disc player as well as most non-Sony video equipment connected to your monitor by following the steps below.

**1** While pressing CODE SET, press 0 - 9 to enter the manufacturer's code number (see chart on p. 48). For example, to operate a Sony 8 mm VCR, press 0, 2 and ENTER.




**2** Use the video operating buttons on the Remote Commander to operate the video equipment.

**Operating a VCR**

| | |
|---|---|
| To turn on or off | Press VIDEO POWER. |
| To change channels (when watching TV programs through the VCR's tuner) | Press CH +/–. |
| To record | Press ● (2 buttons simultaneously). |
| To play | Press ▶. |
| To stop | Press ■. |
| To fast forward | Press ▶▶. |
| To rewind the tape | Press ◀◀. |
| To pause | Press II. |
| To search the picture forward and backward | Press ▶▶ or ◀◀ during playback. |

**Operating a Video Disc Player**

| | |
|---|---|
| To play | Press ▶. |
| To stop | Press ■. |
| To pause | Press II.<br>*To resume normal playback, press again.*<br>*This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the monitor will go into the standby mode if II is pressed. |
| To search the picture forward and backward | Keep pressing ▶▶ or ◀◀ during playback.<br>*To resume normal playback, release the button.* |

**Manufactures and Code Numbers (VCR/video disc player)**

| Manufacturer | Code number |
|---|---|
| SONY | 01, 02, 03, 04 |
| CANON | 05 |
| EMERSON | 22, 30, 33 |
| FISHER | 10, 11, 12, 15 |
| FUNAI | 29 |
| GENERAL ELECTRIC | 05, 08 |
| GOLDSTAR | 25 |
| HITACHI | 07, 08 |
| JVC | 16 |
| MAGNAVOX | 05, 06, 09 |
| MITSUBISHI | 18, 19, 26, 27 |
| MULTITECH | 29 |
| NEC | 16, 23, 31 |
| PANASONIC | 05, 06 |
| PHILCO | 05, 06 |
| PHILIPS | 05, 06, 09 |
| QUASAR | 05, 06 |
| RCA | 07, 08 |
| SAMSUNG | 24, 32 |
| SANYO | 11, 15 |
| SCOTT | 21 |
| SHARP | 13, 14 |
| SHINTOM | 34 |
| SYLVANIA | 05, 06, 09 |
| SYMPHONIC | 29 |
| TEKNIKA | 28, 29 |
| TOSHIBA | 20, 21 |
| TOTE VISION | 25 |
| ZENITH | 17 |

The code numbers for Sony equipment are assigned as follows:

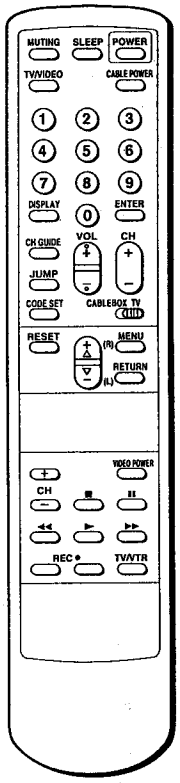
01 .....Beta, ED Beta VCR
02 .....8 mm VCR
03 .....VHS VCR
04 .....Video disc player

**Notes**

- If more than one code number is listed for manufacturers other than Sony, try entering them one by one, until you come to the correct code for your equipment.
- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.
- In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied Remote Commander. This is because your equipment may use a code that is not provided with this Remote Commander. In this case, please use the equipment's own remote control unit.

**CAUTION**

When you remove the batteries from the Remote Commander, all the settings will revert to the Sony Beta setting. Reset the codes by following the steps on p. 47.

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**Manufactures and Code Numbers (cable box)**

| Manufacturer | Code number |
|---|---|
| JERROLD | 60, 61, 62, 63, 64, 65 |
| PIONEER | 69, 70 |
| SCIENTIFIC ATLANTA | 66, 67 |
| TOCOM | 71, 72 |
| ZENITH | 68 |

## Operating a Cable Converter Box

Follow these instructions to set the manufacturer's code which will enable you to operate a connected cable converter box with the pre-programmed Remote Commander.

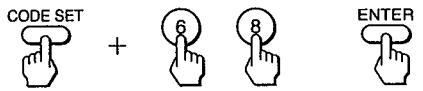
EXAMPLE: Operate a connected Zenith cable converter box.

**1** Set the CABLEBOX-TV selector to CABLEBOX.


**Notes**

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

**2** While pressing CODE SET, press 6 and 8 (Zenith's code number -see chart below) and ENTER.

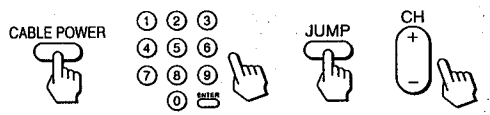



*A long beep sounds, indicating that the code has been set.*

**Note**

If you press a wrong code or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

**3** Use CABLE POWER and the TV control buttons (0 – 9, ENTER, JUMP and CH +/–) to operate the cable converter box.

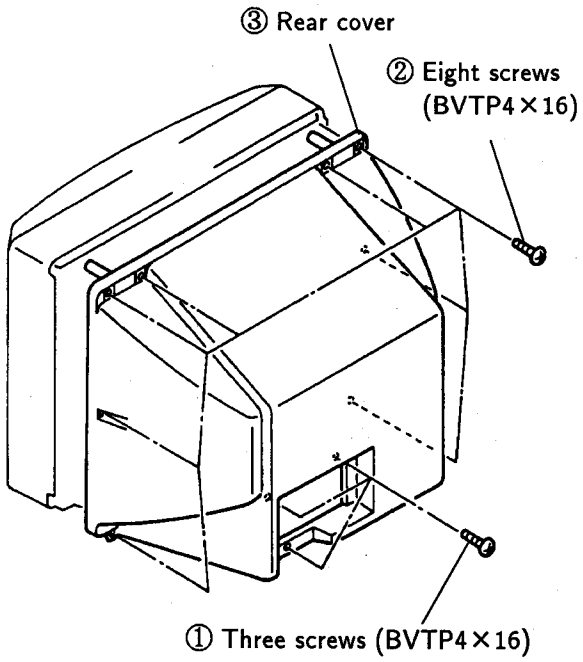



**To operate the monitor**
Set the CABLEBOX-TV selector to TV, then use the TV control buttons to control the monitor.

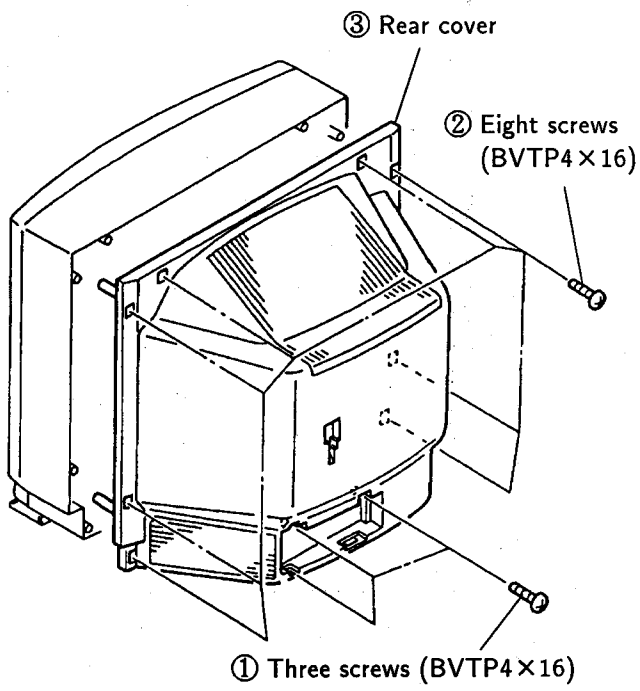
**For more details on operating the cable box**
Refer to the operating instructions that come with the cable box.

# SECTION 2
# DISASSEMBLY

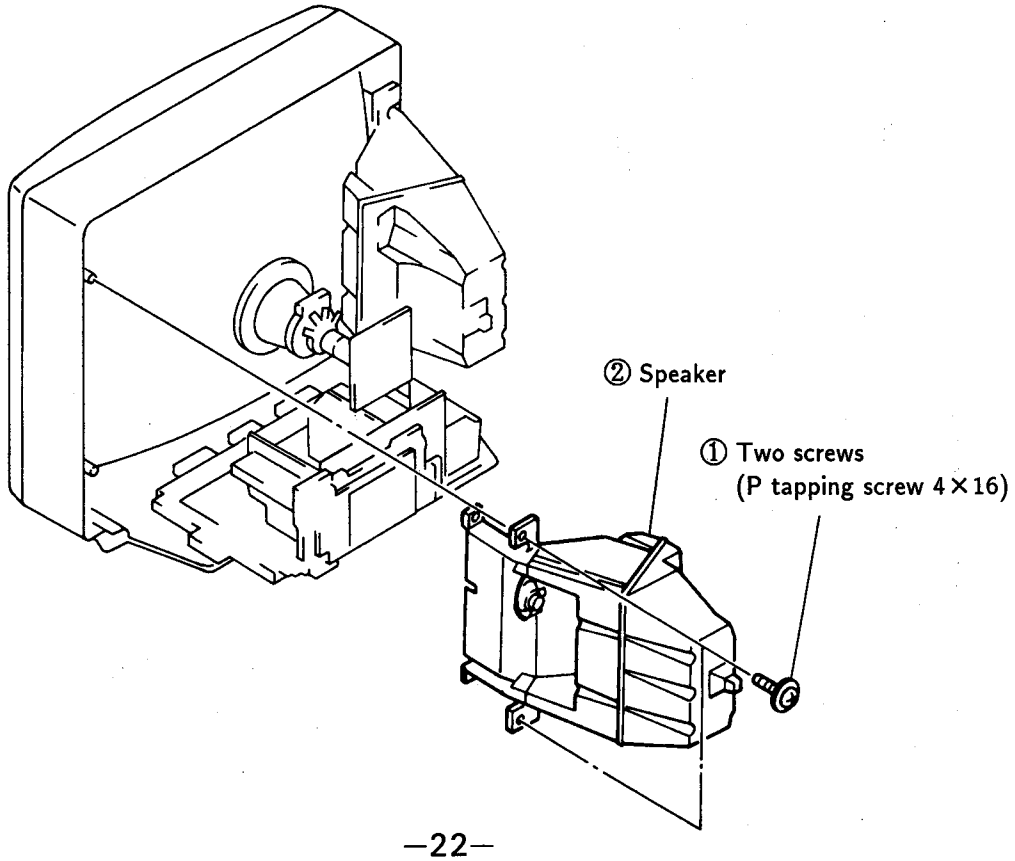
## 2-1-1. REAR COVER REMOVAL (CKV-27HX1)



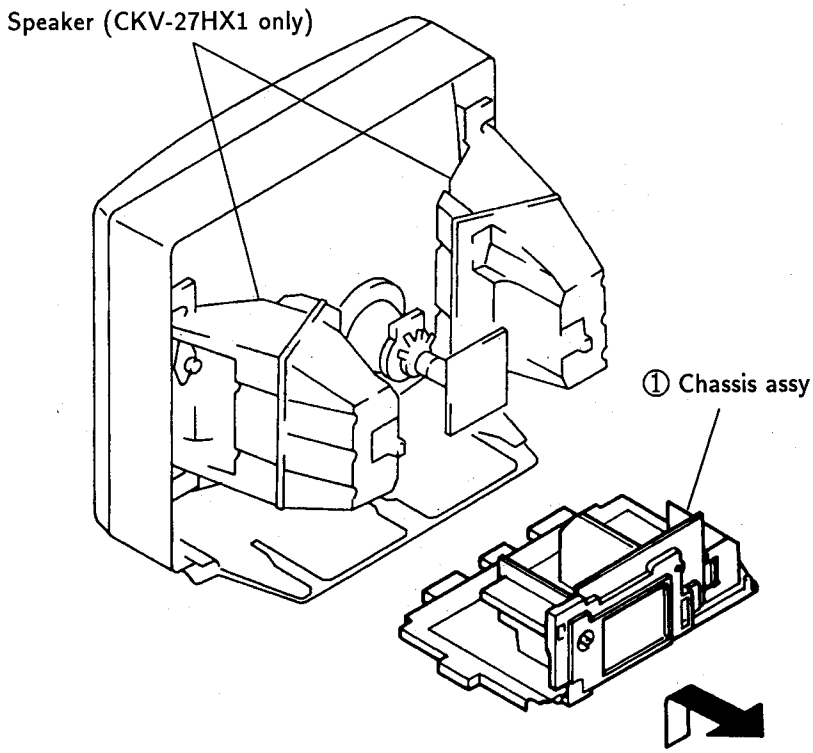

## 2-1-2. REAR COVER REMOVAL (CKV-27DST1)



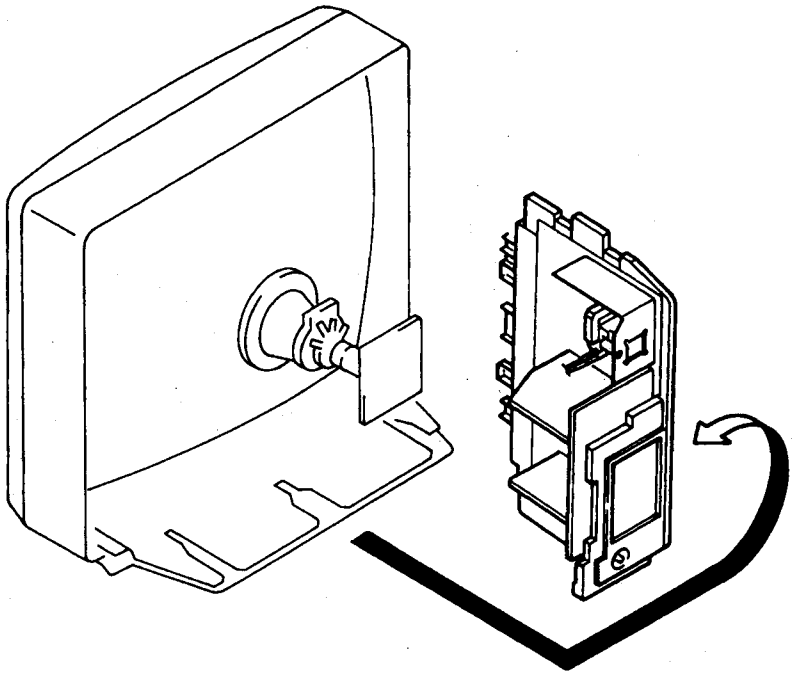

## 2-2. SPEAKER REMOVAL (CKV-27HX1 only)



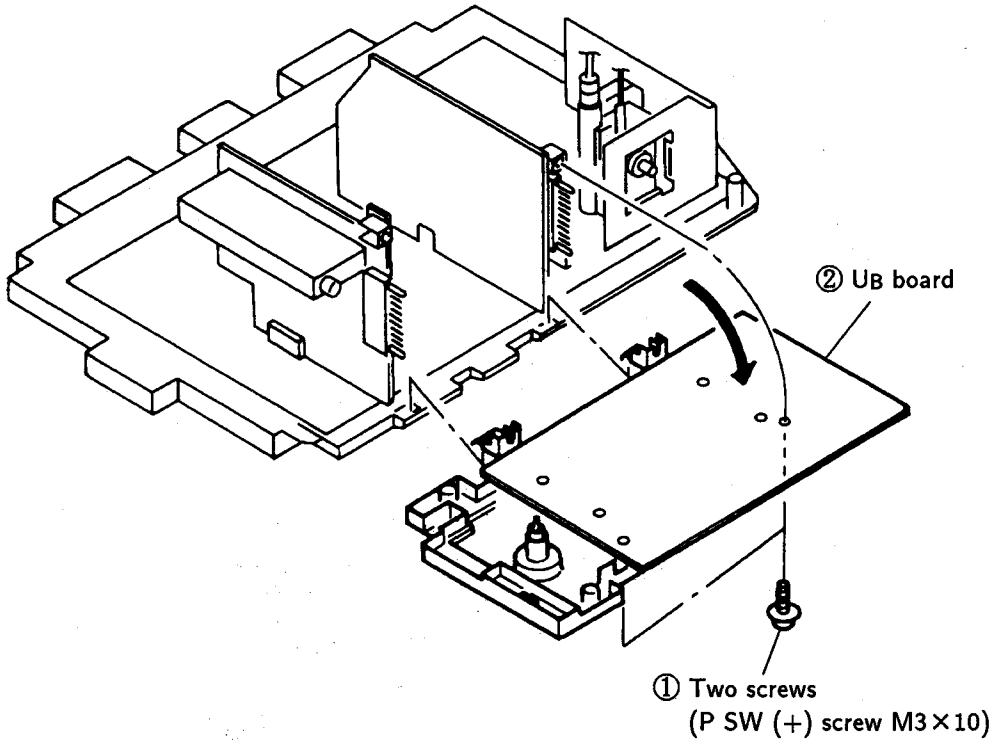
## 2-3. CHASSIS ASSY REMOVAL



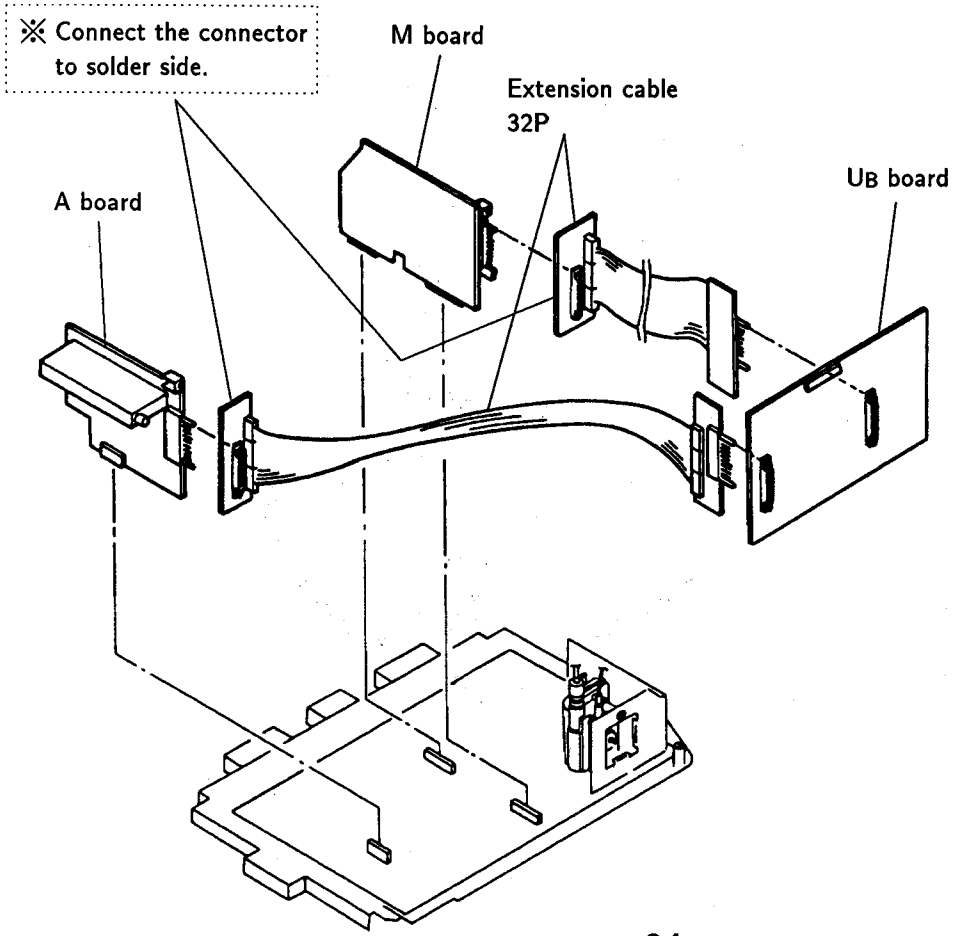

## 2-4. SERVICE POSITION

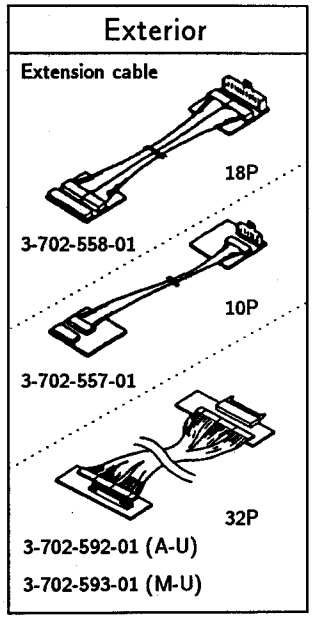


## 2-5. UB BOARD REMOVAL

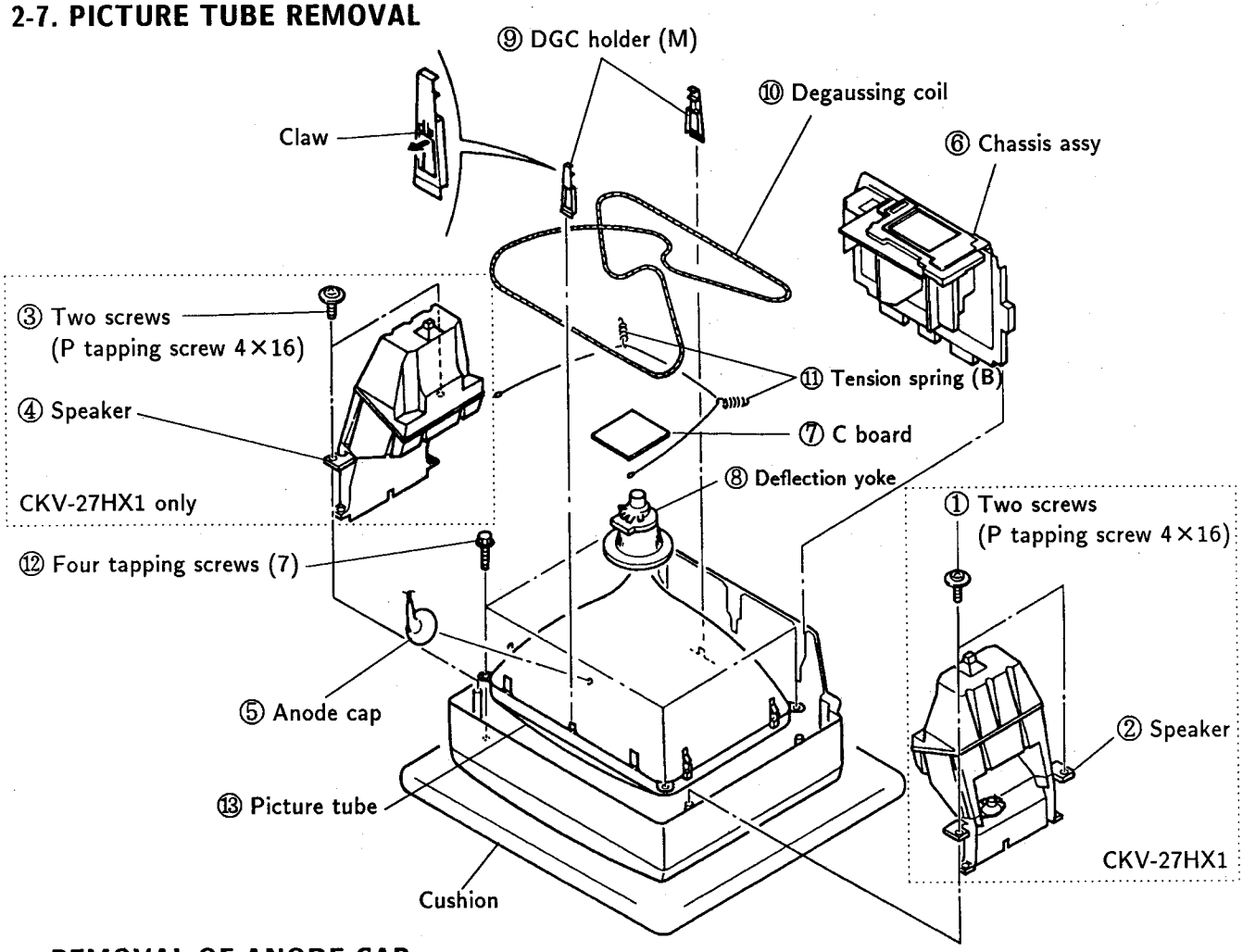



## 2-6. EXTENSION CABLE



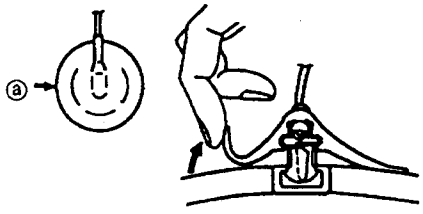
## 2-7. PICTURE TUBE REMOVAL



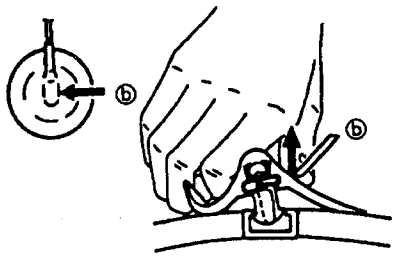

### • REMOVAL OF ANODE-CAP

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

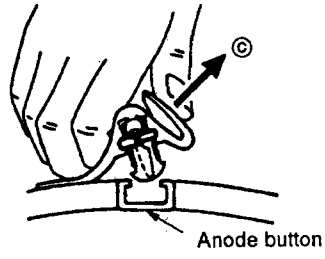
### • REMOVING PROCEDURES




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




② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



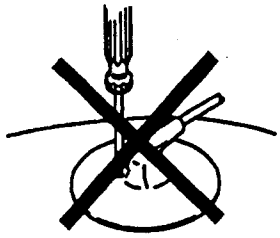

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

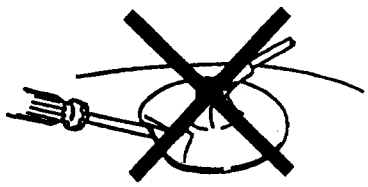
### • HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





## 2-8. REPAIR OF CHIP COMPONENT CIRCUIT BOARD

### 2-8-1. POINTS OF COMPONENT REMOVAL

**Handing of blower type soldering iron**

If hot blast is too strong or applied from a slanting direction, small components and solder near the component being removed can be blown off. Do not use blower type without temperature control.

### 2-8-2. NOTES ON SOLDERING FOR CHIP COMPONENTS

1) During soldering a chip component, if a soldering iron is applied for a long time, the heat may damage the component or cause pattern peeling.
2) Do not reuse a removed component. The characteristics of such a component may deteriorate.
3) Use wire solder containing silver ($\phi$ 0.3 or $\phi$ 0.6). (The pin electrodes of the laminated chip capacitor are silver +palladium, so if wire solder which does not contain silver is used, the silver of the pin electrode will be sucked into the solder.)

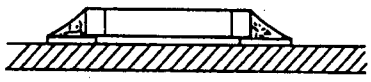
### 2-8-3. REMOVAL AND MOUNTING OF COMPONENTS

**Chip resistor and chip capacitor**

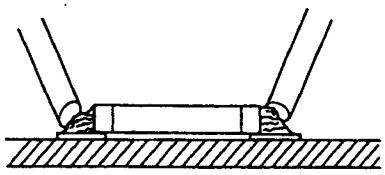
REMOVAL

• Using two soldering irons

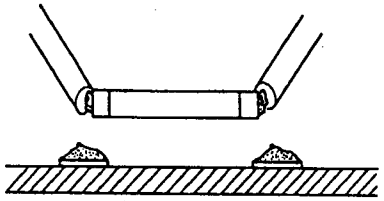
1) Mounted state



2)Melt the solder.

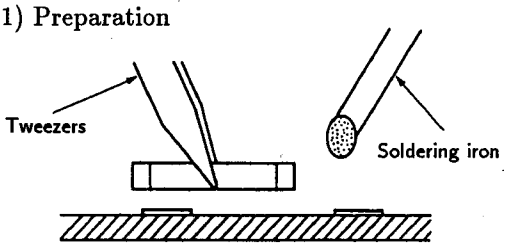


3)Remove the component.



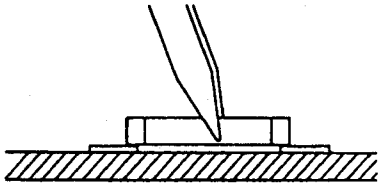
SOLDERING

1) Preparation

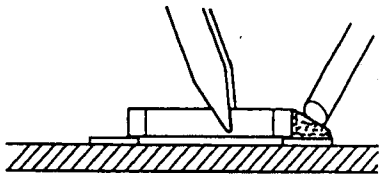



2) Location

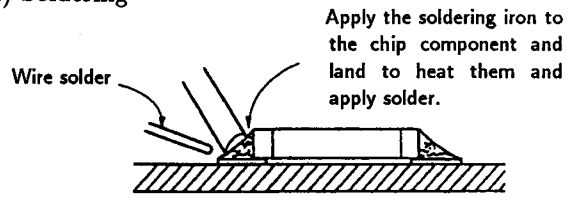
Be careful not to misposition.



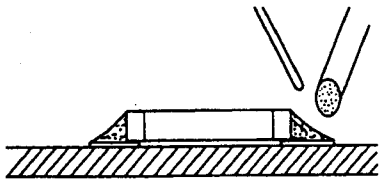
3) Tack soldering and flux application



4) Soldering




5) Soldering (Fix the fillet.)



6) Visual inspection

Check for the following defects :

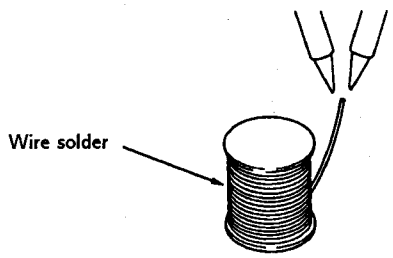
- No-soldered part
- Bridge (to other components or lands)
- Mispositioning
- Other defects

## 2-8-4. MINI-TRANSISTOR

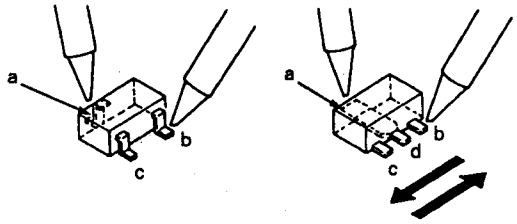
### REMOVAL

- Using two soldering irons

1) Put a little solder on the tip of two soldering irons.



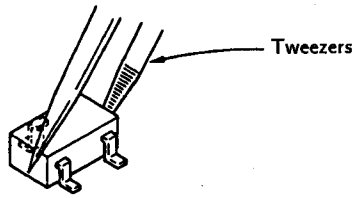

2) Apply the tip of one soldering iron to the point "a" and the other to the points "b" → "c" (or "b" → "d" → "c") and move the component in the directions indicated by arrows in the figure to remove it.



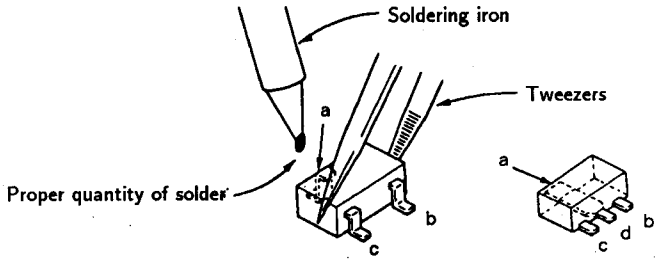

### MOUNTING

1) Apply a little flux to the land with a brush.

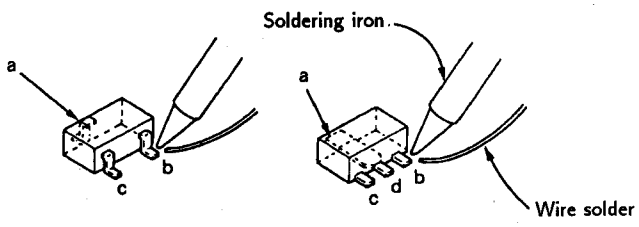

2) Place the component in position using tweezers.




3) Put a little solder on the tip of the soldering iron and solder the point "a" to fix the component.

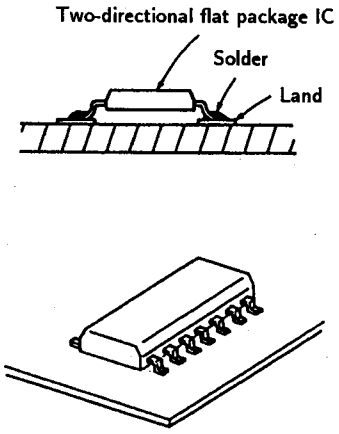



4) Bring the tip of the soldering iron and the wire solder close to the point to be soldered. Solder the points "b" → "c" (or "b" → "d" → "c") in order.



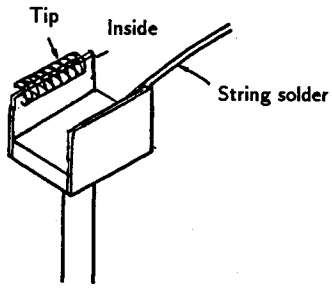
## 2-8-5. TWO-DIRECTIONAL FLAT PACKAGE IC

MOUNT CONDITION

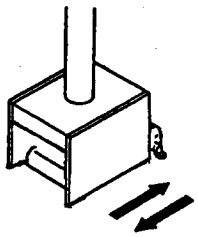



REMOVAL

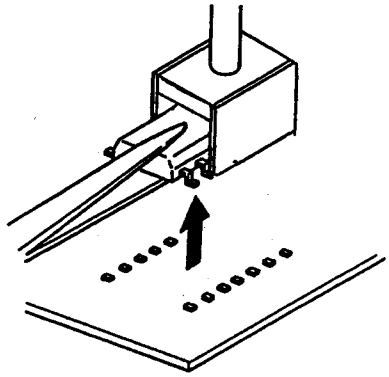
1) Apply some solder on the inside and the tip of the iron tip jig.




2) Place the iron tip jig over the IC, and move the jig to and fro as shown in the figure.

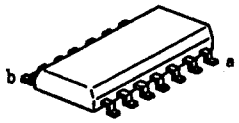


3) When the solder melts, lift the IC with a pair of tweezers and remove.

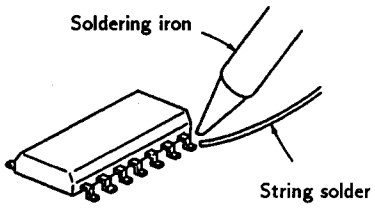


INSTALLATION

1) Place the two-directional flat package IC at the appointed position, solder pins a and b on the diagonal, and fasten it.

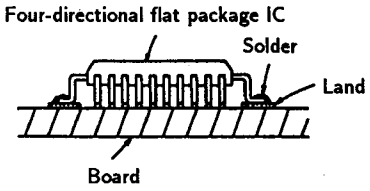


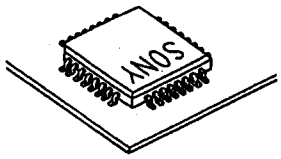

2) Solder the remaining pins with the soldering iron.



## 2-8-6. FOUR-DIRECTIONAL FLAT PACKAGE IC

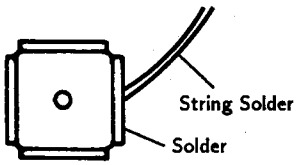
MOUNT CONDITION



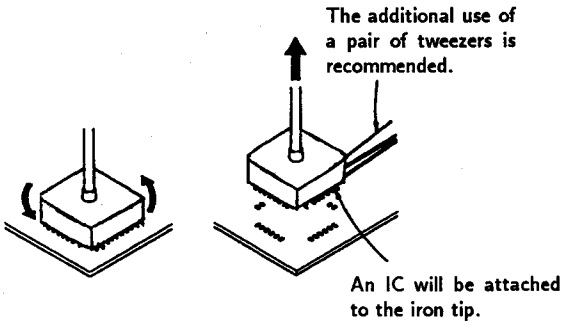




REMOVAL

1) Apply solder on the tip of the iron tip jig.




2) Place the iron tip jig over the IC, wait about two to three seconds, rotate the iron slightly and lift it up.

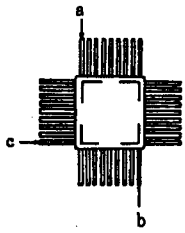



Note : For flat ICs of above 52P, the IC may not be completely attracted when the iron tip jig is lifted up. In these cases, use a pair of tweezers to remove.

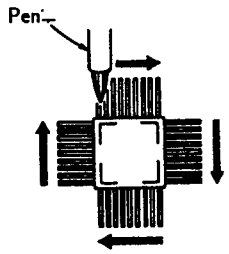
INSTALLATION

1) Place the four-directional flat package IC at the appointed position.

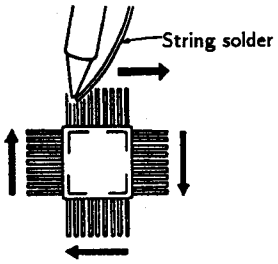
2) Apply a slight amount of solder on the iron tip, and solder the three sections in the order of a → b → c, and fix.



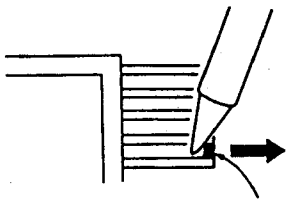

3) Apply a slight amount of flux with a pen on all four directions.




4) Apply solder on the iron tip and the string solder, and slide and solder in the directions of the arrows.



Note : 1) After soldering, if there are bridged sections, correct by sliding the soldering iron in the direction of the arrow.



Bridged section

If the bridges cannot be corrected using the above method, apply some flux with a pen and try again.

2) Soldering can be carried out more easily by sliding the iron tip near the tip of the IC leg. (Fig. A)

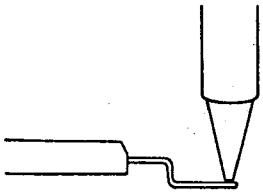


Fig. A

Be careful not to slide the bent sections of the leg as shown in Fig. B as soldering bridges will be formed.

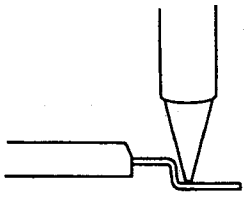
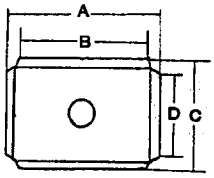
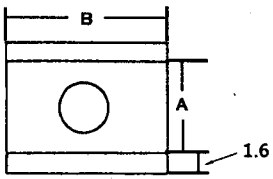
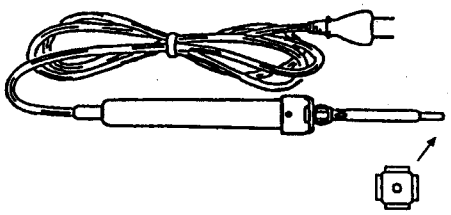
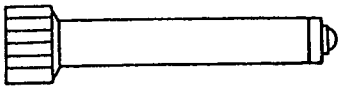


Fig. B

| Exterior | Description | Part No. | Measure (mm) | | | |
|---|---|---|---|---|---|---|
| | | | A | B | C | D |
|   | jig for removing 4-sided flat package IC | 3-702-554-01 | 12.5 | 9.5 | 12.5 | 9.5 |
| | | 〃 11 | 15.5 | 12.5 | 15.5 | 12.5 |
| | | 〃 21 | 16.3 | 13.3 | 16.3 | 13.3 |
| | | 〃 31 | 17.0 | 14.0 | 17.0 | 14.0 |
| | | 〃 41 | 23.0 | 20.0 | 17.0 | 14.0 |
| | | 〃 51 | 20.0 | 17.0 | 20.0 | 17.0 |
|   | jig for removing 2-sided flat package IC | 3-702-555-01 | 6.0 | 5.0 | | |
| | | 〃 11 | 6.0 | 10.0 | | |
| | | 〃 21 | 7.0 | 12.5 | | |
| | | 〃 31 | 9.0 | 15.2 | | |
| | | 〃 41 | 9.0 | 18.0 | | |
|  | soldering iron | 3-702-552-01 | 55W<br>60g<br>length 210mm | | | |
|  | soldering holder | 3-702-553-01 | | | | |

# SECTION 3
# SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted :

PICTURE control . . . . . RESET
BRIGHTNESS control . . . . . center

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

**Note :** Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

**Preparations :**

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

## 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   Contrast, Bightness } normal
2. Set the pattern generator raster signal to green.
3. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side.
   (See Figures 3-1 through 3-3.)
4. Move the deflection yoke forward and adjust so that entire screen is green. (See Figure 3-1.)
5. Switch the raster signal to blue, then to red and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it.
   (See Figure 3-4.)

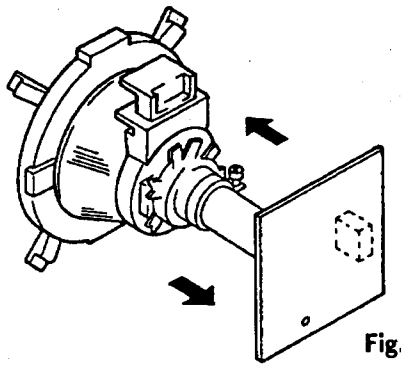


Fig.3-1

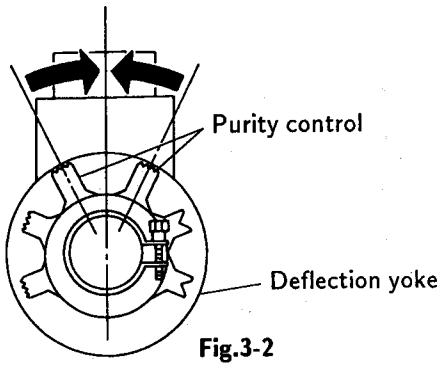



Fig.3-2

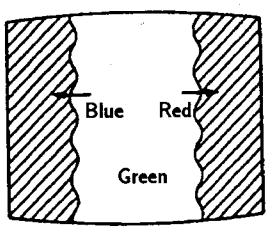



Fig.3-3

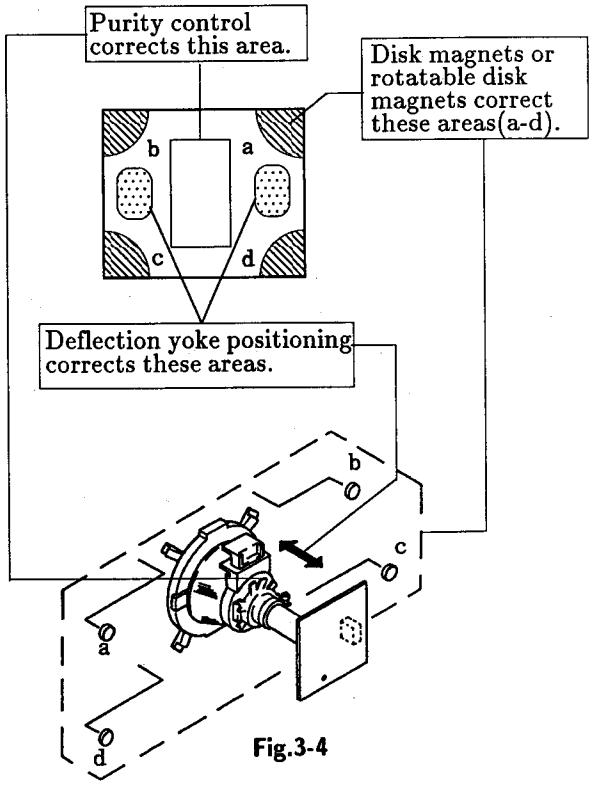


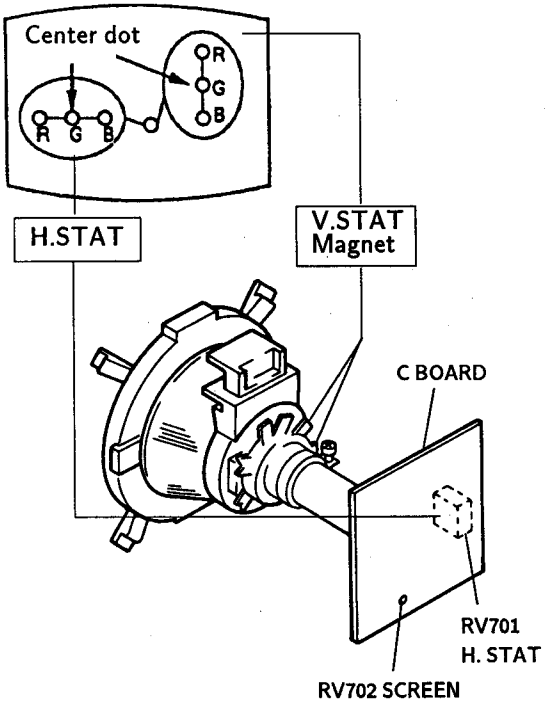

Fig.3-4

## 3-2. CONVERGENCE

**Preparation :**

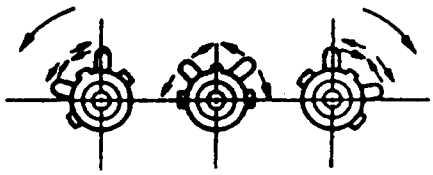
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) **Horizontal and Vertical Static Convergence**

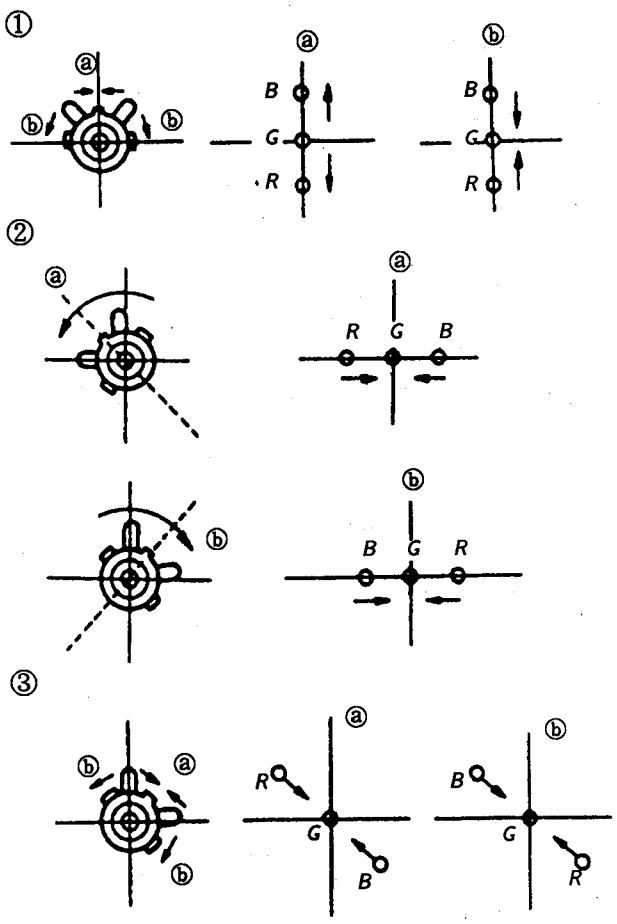



1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



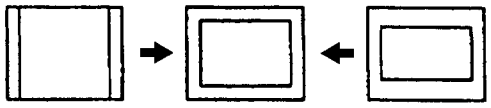
4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.



## V.SIZE ADJUSTMENT (VSIZ)

1. Input a cross-hatch signal.
2. Set to service adjustment Mode.
3. Select VSIZ with 1 and 4.
4. Adjust with 3 and 6 for the best vertical size.
5. Write into the memory by pressing MUTING then ENTER .

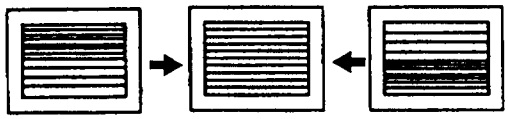
V. SIZE (VSIZ)



## V LINEARITY(VLIN), VS CORRECTION(VSCO), PIN AMP(PAMP), CORNER PIN(CPIN), AND PIN PHASE(PPHA) ADJUSTMENTS

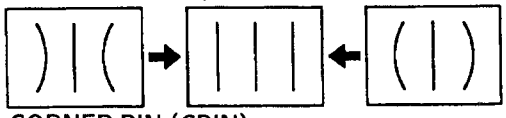
1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VLIN, VSCO, PAMP, CPIN, and PPHA with 1 and 4.
4. Adjust with 3 and 6 for the best picture.
5. Write the memory byPressing MUTING then ENTER.

V LINEARITY (VLIN)

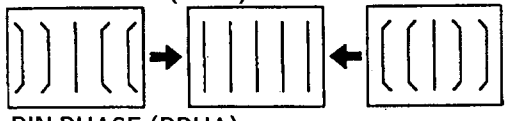


VS CORRECTION (VSCO)

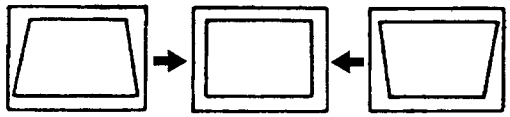
PIN AMP (PAMP)



CORNER PIN (CPIN)

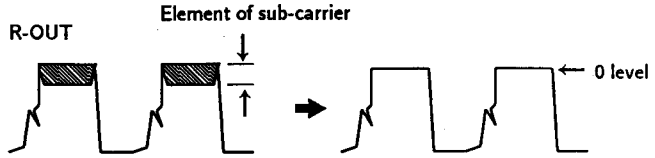


PIN PHASE (PPHA)



## CROMA TRAP ADJUSTMENT (CROM)

1. Input a red signal
2. Set to Service adjustment Mode.
3. Connect an oscilloscope CN703 Pin① (R OUT) of C board ground.
4. Select CROM with 1 and 4.
5. Adjust with 3 and 6 for the 0 level.




6. Write the memory by pressing MUTING then ENTER .

• **UB BOARD**

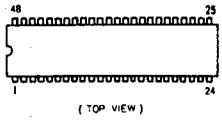
| IC | |
|---|---|
| IC401 | C – 4 |
| IC403 | B – 7 |
| IC404 | A – 7 |

| TRANSISTOR | |
|---|---|
| Q401 | C – 1 |
| Q405 | D – 7 |
| Q406 | D – 7 |

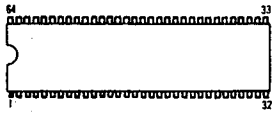
| DIODE | |
|---|---|
| D401 | C – 2 |
| D402 | C – 2 |
| D403 | C – 3 |
| D404 | C – 2 |
| D405 | B – 4 |
| D408 | C – 2 |
| D410 | D – 2 |
| D411 | C – 4 |
| D429 | C – 4 |
| D430 | B – 4 |
| D431 | C – 4 |
| D443 | C – 3 |
| D444 | B – 4 |

## 6-5. SEMICONDUCTORS

**CXA1465AS**

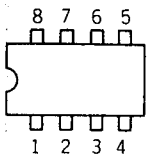



**CXP80424-065S**



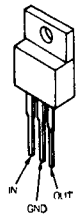

*(Top view)*

**LM358PS**
**MM1114XFF**
**MM1118XFF**
**ST24C02AB1**
**μPC393C**

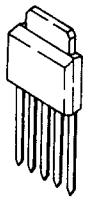



(Top view)

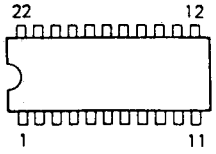
**LM7805CT**
**LM7812CT**
**RC7809FA**




**L78LR05D-MA**

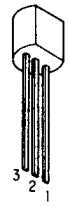


**M52470AP**
**M52470P**

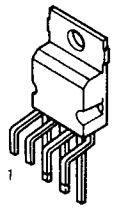



*(Top view)*

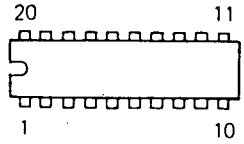
**RC78L05J**




**TDA8172**

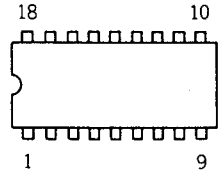



**TDA8424**



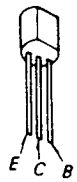

*(Top view)*

**Z8612812PSC**

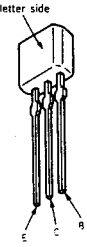



(Top view)

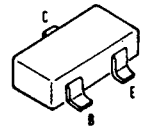
**2SA1091-O**
**2SA1091-R**



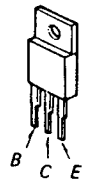

**2SA1175-HFE**
**2SA1309A**
**2SC2785-HFE**
**2SC3311A**



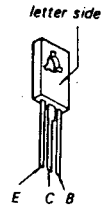

**2SB709A-Q**
**2SD601A-Q**



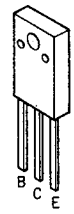

**2SB1370-EF**
**2SC4159-E**



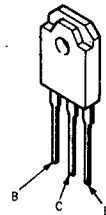

**2SC2688-LK**



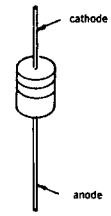

**2SC4834MNP**



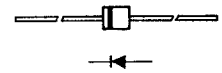

**2SC4927-01**
**2SC4927-02**



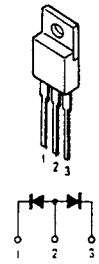

**D1NS4**
**D1N20R**
**RD10ES-B**
**RD10ES-B2**
**RD12ES-B3**
**RD13ES-B2**
**RD3.6ES-B1**
**RD5.1ES-B1**
**RD8.2ES-B3**
**1SS119**



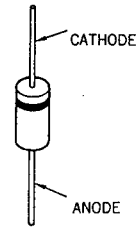

**D2S4M**
**D2S4MF**



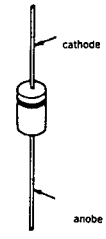
**D5SC4M**
**D5SC4MR**



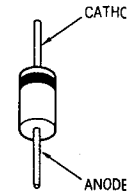

**EL1Z**
**GP08DPKG3**
**RGP10GPKG3**



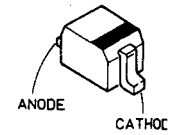

**ERC06-15S**
**S2L20UF**
**S3V10SS**




**ERD29-08J**
**RGP02-17EL-64**




**MA110**



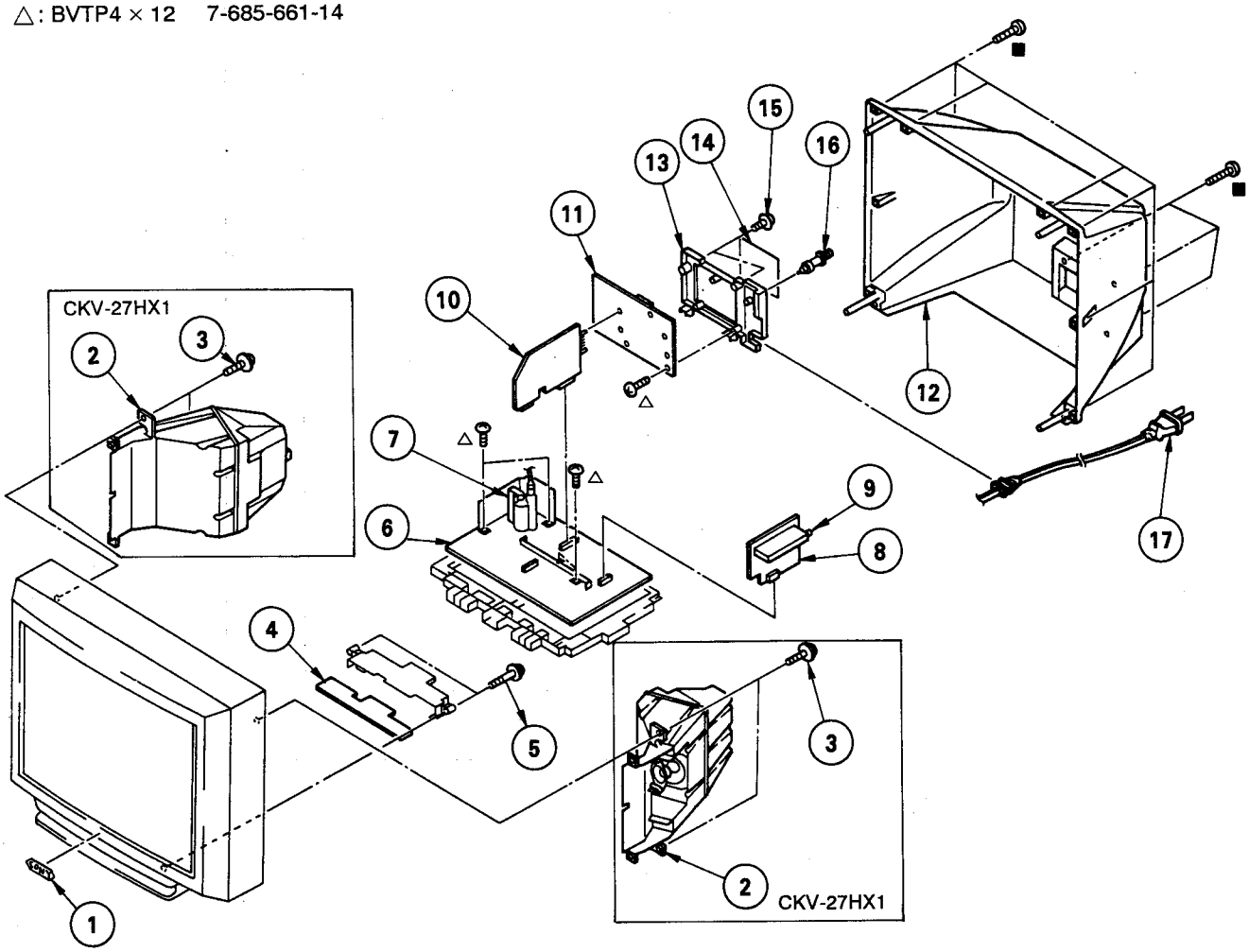
# SECTION 7
# EXPLODED VIEWS

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

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

## 7-1. CHASSIS

■ : BVTP4 × 16 7-685-663-79
△ : BVTP4 × 12 7-685-661-14

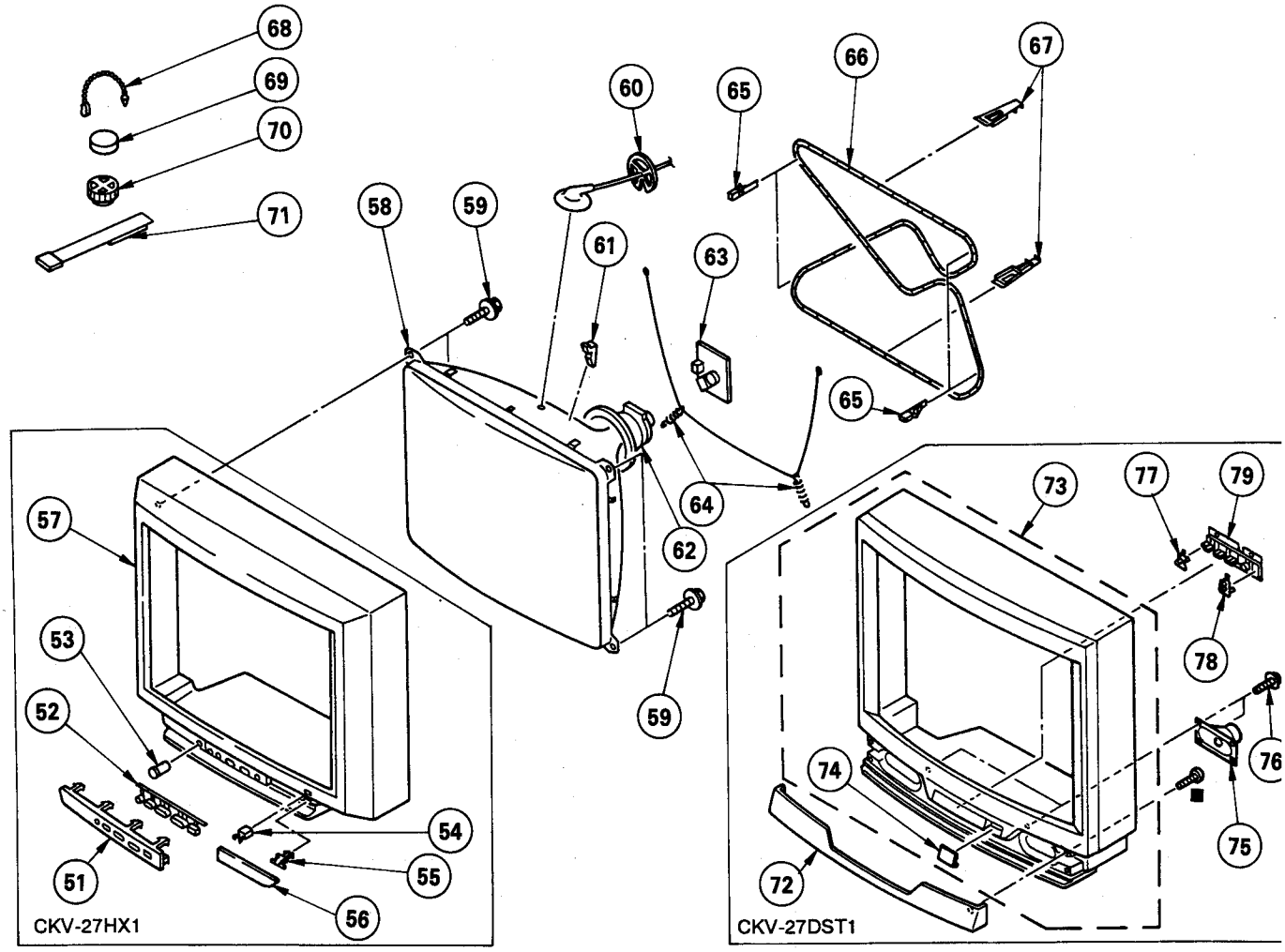



| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 1 | 4-394-048-01 | EMBLEM (NO.9), SONY | |
| 2 | 1-504-322-11 | BOX, SPEAKER (10CM.5CM) (CKV-27HX1) | |
| 3 | 4-384-096-01 | SCREW (4X16), TAPPING, +P (CKV-27HX1) | |
| 4 | *1-646-717-11 | H BOARD | |
| 5 | 4-319-520-11 | SCREW, SPECIAL (+PW4X30) | |
| 6 | *A-1346-116-A | D BOARD, COMPLETE (CKV-27HX1) | |
| | *A-1346-129-A | D BOARD, COMPLETE (CKV-27DST1) | |
| 7 | ⚠1-453-146-11 | TRANSFORMER ASSY, FLYBACK (NX-2604A3) | |
| 8 | *A-1297-065-A | A BOARD, COMPLETE | |
| 9 | ⚠8-598-039-01 | TUNER BTF-WA401 | |
| 10 | *A-1306-427-A | M BOARD, COMPLETE | |
| 11 | *A-1394-417-A | UB BOARD, COMPLETE (CKV-27HX1) | |
| | *A-1394-454-A | UB BOARD, COMPLETE (CKV-27DST1) | |
| 12 | 4-039-463-01 | COVER, REAR (CKV-27DST1) | |
| | 4-040-099-01 | COVER, REAR (CKV-27HX1) | |
| 13 | 4-039-524-11 | TERMINAL BOARD, ANTENNA | |
| 14 | 4-040-505-01 | LABEL, TERMINAL (CKV-27DST1) | |
| | 4-040-880-01 | LABEL, TERMINAL (CKV-27HX1) | |
| 15 | 4-382-854-11 | SCREW (M3X10), P, SW (+) | |
| 16 | 1-573-657-11 | PLUG, R-PIN | |
| 17 | ⚠1-751-059-11 | CORD, POWER (WITH CONNECTOR) (10.A/125V) | |

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

## 7-2. PICTURE TUBE

■ : BVTP4 × 16 7-685-663-79




| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 51 | 4-040-100-01 | PANEL, CONTROL (CKV-27HX1) | |
| 52 | 4-039-902-01 | BUTTON, MULTI (CKV-27HX1) | |
| 53 | *4-389-517-01 | GUIDE (R), LIGHT (CKV-27HX1) | |
| 54 | 4-392-036-01 | CATCHER, PUSH (CKV-27HX1) | |
| 55 | 3-703-035-11 | SHAFT, LID (CKV-27HX1) | |
| 56 | 4-040-096-11 | DOOR, CONTROL (CKV-27HX1) | |
| 57 | X-4031-072-1 | BEZNET ASSY (CKV-27HX1) | |
| 58 | ⚠8-733-838-05 | PICTURE TUBE (A68KZJ50X) | |
| 59 | 4-390-505-01 | SCREW (7), TAPPING | |
| 60 | *3-704-372-01 | HOLDER, HV CABLE | |
| 61 | 3-704-495-01 | SPACER, DY | |
| 62 | ⚠1-451-275-41 | DEFLECTION YOKE (Y28PFA) | |
| 63 | *A-1331-264-A | C BOARD, COMPLETE (CKV-27DST1) | |
| | *A-1331-270-A | C BOARD, COMPLETE (CKV-27HX1) | |
| 64 | 4-036-329-01 | SPRING (B), TENSION | |
| 65 | 4-040-388-01 | HOLDER (S), DGC | |
| 66 | ⚠1-406-726-21 | COIL, DEGAUSSING | |
| 67 | 4-040-387-01 | HOLDER (M), DGC | |
| 68 | 4-308-870-00 | CLIP, LEAD WIRE | |
| 69 | 1-452-032-00 | MAGNET, DISK; 10MMφ | |
| 70 | 1-452-094-00 | MAGNET, ROTATABLE DISK; 15MMφ | |
| 71 | X-4306-312-0 | PERMALLOY ASSY, CONVERGENCE | |
| 72 | X-4031-029-1 | GRILLE ASSY, SPEAKER (CKV-27DST1) | |
| 73 | X-4031-026-1 | BEZNET ASSY (CKV-27DST1) | 74 |
| 74 | 4-039-459-01 | PANEL (CKV-27DST1) | |
| 75 | 1-544-549-11 | SPEAKER (CKV-27DST1) | |
| 76 | 4-388-477-01 | SCREW(3X16),TAPPING,+BV WASHER | (CKV-27DST1 |
| 77 | 4-039-458-01 | FILTER, REMOTE (CKV-27DST1) | |
| 78 | 4-039-457-01 | GUIDE, LED (CKV-27DST1) | |
| 79 | 4-039-525-01 | BUTTON, MULTI (CKV-27DST1) | |

# SECTION 8
# ELECTRICAL PARTS LIST

**A** **M**

NOTE:

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

- 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.

RESISTORS
- All resistors are in ohms
- F : nonflammable

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

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

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

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| | *A-1297-065-A | A BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | <CAPACITOR> | | | |
| C173 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V | |
| C174 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V | |
| C175 | 1-126-103-11 | ELECT 470MF | 20% | 16V | |
| C176 | 1-126-103-11 | ELECT 470MF | 20% | 16V | |
| C177 | 1-124-907-11 | ELECT 10MF | 20% | 50V | |
| C178 | 1-126-101-11 | ELECT 100MF | 20% | 16V | |
| C179 | 1-124-916-11 | ELECT 22MF | 20% | 25V | |
| C181 | 1-164-161-11 | CERAMIC CHIP 0.0022MF | 10% | 50V | |
| | | <CONNECTOR> | | | |
| CN103 | *1-564-519-11 | PLUG, CONNECTOR 4P | | | |
| CN151 | *1-573-979-11 | CONNECTOR, BOARD TO BOARD 11P | | | |
| CN152 | 1-750-394-11 | PIN, CONNECTOR (STAKING) 32P | | | |
| CN164 | *1-564-505-11 | PLUG, CONNECTOR 2P | | | |
| CN165 | *1-564-505-11 | PLUG, CONNECTOR 2P | | | |
| | | <DIODE> | | | |
| D170 | 8-719-110-76 | DIODE RD33ESB1 | | | |
| | | <COIL> | | | |
| L170 | 1-408-408-00 | INDUCTOR 8.2UH | | | |
| L171 | 1-408-408-00 | INDUCTOR 8.2UH | | | |
| L172 | 1-408-408-00 | INDUCTOR 8.2UH | | | |
| | | <RESISTOR> | | | |
| R170 | 1-216-025-00 | METAL GLAZE 100 | 5% | 1/10W | |
| R174 | 1-216-689-11 | METAL GLAZE 39K | 5% | 1/10W | |
| R176 | 1-216-295-00 | METAL GLAZE 0 | 5% | 1/10W | |
| R177 | 1-215-900-11 | METAL OXIDE 22K | 5% | 2W | F |
| R179 | 1-216-065-00 | METAL GLAZE 4.7K | 5% | 1/10W | |
| R187 | 1-216-083-00 | METAL GLAZE 27K | 5% | 1/10W | |
| R193 | 1-216-037-00 | METAL GLAZE 330 | 5% | 1/10W | |
| | | <TUNER> | | | |
| TU101⚠ | 8-598-039-01 | TUNER BTF-WA401 | | | |
| | | ********** | | | |
| | *A-1306-427-A | M BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | <CAPACITOR> | | | |

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| C002 | 1-163-809-11 | CERAMIC CHIP 0.047MF | 10% | 25V | |
| C003 | 1-163-001-11 | CERAMIC CHIP 220PF | 10% | 50V | |
| C005 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C006 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C007 | 1-124-903-11 | ELECT 1MF | 20% | 50V | |
| C008 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C009 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C010 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C012 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C013 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C014 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C015 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C016 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C017 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C018 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C019 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C021 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C022 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C023 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C025 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C028 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C029 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C041 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V | |
| C043 | 1-163-159-00 | CERAMIC CHIP 12PF | 2% | 50V | |
| C045 | 1-124-119-00 | ELECT 330MF | 20% | 16V | |
| C047 | 1-104-896-91 | CERAMIC CHIP 24PF | 2% | 50V | |
| C049 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C050 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C051 | 1-163-031-11 | CERAMIC CHIP 0.01MF | | 50V | |
| C052 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C053 | 1-163-121-00 | CERAMIC CHIP 150PF | 5% | 50V | |
| C054 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C055 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C056 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C057 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V | |
| C058 | 1-163-037-11 | CERAMIC CHIP 0.022MF | 10% | 25V | |
| C059 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| C060 | 1-124-903-11 | ELECT 1MF | 20% | 50V | |
| C061 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V | |
| C062 | 1-124-907-11 | ELECT 10MF | 20% | 50V | |
| C150 | 1-136-165-00 | FILM 0.1MF | 5% | 50V | |
| C151 | 1-136-175-00 | FILM 0.068MF | 5% | 50V | |
| C152 | 1-124-907-11 | ELECT 10MF | 20% | 50V | |
| C153 | 1-137-367-11 | FILM 0.0033MF | 5% | 50V | |
| C154 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V | |
| C155 | 1-124-907-11 | ELECT 10MF | 20% | 50V | |
| C156 | 1-163-135-00 | CERAMIC CHIP 560PF | 5% | 50V | |
| C157 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V | |
| C158 | 1-124-903-11 | ELECT 1MF | 20% | 50V | |
| C160 | 1-124-903-11 | ELECT 1MF | 20% | 50V | |

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| C201 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C202 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C203 | 1-163-989-11 | CERAMIC CHIP | 0.033MF | 10% | 25V |
| C204 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C205 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C211 | 1-163-989-11 | CERAMIC CHIP | 0.033MF | 10% | 25V |
| C212 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C213 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C214 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C216 | 1-124-478-11 | ELECT | 100MF | 20% | 25V |
| C301 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C305 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C306 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C307 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C308 | 1-163-099-00 | CERAMIC CHIP | 18PF | 5% | 50V |
| C310 | 1-124-916-11 | ELECT | 22MF | 20% | 25V |
| C311 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C313 | 1-163-003-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C315 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C316 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C317 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C318 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C319 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C320 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C321 | 1-124-360-00 | ELECT | 1000MF | 20% | 16V |
| C322 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V |
| C323 | 1-126-176-11 | ELECT | 220MF | 20% | 10V |
| C324 | 1-163-003-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C325 | 1-163-037-11 | CERAMIC CHIP | 0.022MF | 10% | 25V |
| C326 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C327 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C328 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C329 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C330 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C331 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C332 | 1-164-489-11 | CERAMIC CHIP | 0.22MF | 10% | 16V |
| C333 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C334 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C335 | 1-163-001-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C336 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C337 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C338 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V |
| C340 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C341 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C342 | 1-137-414-91 | FILM | 0.0047MF | 10% | 100V |

<CONNECTOR>

| | | | |
|---|---|---|---|
| CN129 | *1-564-523-11 | PLUG, CONNECTOR 8P | |
| CN130 | 1-573-301-11 | CONNECTOR, BOARD TO BOARD 20P | |
| CN131 | *1-691-632-11 | CONNECTOR, BOARD TO BOARD 15P | |
| CN137 | 1-750-394-11 | PIN, CONNECTOR (STAKING) 32P | |
| CN138 | *1-564-511-11 | PLUG, CONNECTOR 8P | |
| CN168 | *1-564-505-11 | PLUG, CONNECTOR 2P | |

<DIODE>

| | | |
|---|---|---|
| D001 | 8-719-404-46 | DIODE MA110 |
| D002 | 8-719-404-46 | DIODE MA110 |
| D004 | 8-719-404-46 | DIODE MA110 |
| D005 | 8-713-300-57 | DIODE 1T33 |
| D006 | 8-719-110-17 | DIODE RD10ESB2 |
| D007 | 8-719-110-17 | DIODE RD10ESB2 |
| D008 | 8-719-110-17 | DIODE RD10ESB2 |
| D009 | 8-719-110-17 | DIODE RD10ESB2 |
| D150 | 8-719-404-46 | DIODE MA110 |
| D201 | 8-719-404-46 | DIODE MA110 |
| D202 | 8-719-404-46 | DIODE MA110 |
| D205 | 8-719-110-17 | DIODE RD10ESB2 |
| D206 | 8-719-110-17 | DIODE RD10ESB2 |
| D301 | 8-719-110-17 | DIODE RD10ESB2 |
| D304 | 8-719-110-17 | DIODE RD10ESB2 |

<IC>

| | | |
|---|---|---|
| IC101 | 8-752-841-16 | IC CXP80424-065S |
| IC102 | 8-759-043-86 | IC ST24C02AB1 |
| IC150 | 8-759-084-09 | IC Z8612812PSC |
| IC201 | 8-759-090-21 | IC TDA8424 |
| IC202 | 8-759-983-69 | IC LM358PS |
| IC301 | 8-752-059-67 | IC CXA1465AS |

<COIL>

| | | | |
|---|---|---|---|
| L001 | 1-410-470-11 | INDUCTOR | 10UH |
| L002 | 1-408-414-00 | INDUCTOR | 27UH |
| L150 | 1-410-470-11 | INDUCTOR | 10UH |

<TRANSISTOR>

| | | |
|---|---|---|
| Q001 | 8-729-422-36 | TRANSISTOR 2SB709A-Q |
| Q002 | 8-729-422-36 | TRANSISTOR 2SB709A-Q |
| Q004 | 8-729-422-36 | TRANSISTOR 2SB709A-Q |
| Q005 | 8-729-422-27 | TRANSISTOR 2SD601A-Q |
| Q151 | 8-729-422-27 | TRANSISTOR 2SD601A-Q |
| Q201 | 8-729-422-27 | TRANSISTOR 2SD601A-Q |
| Q301 | 8-729-422-36 | TRANSISTOR 2SB709A-Q |
| Q302 | 8-729-422-36 | TRANSISTOR 2SB709A-Q |
| Q307 | 8-729-422-27 | TRANSISTOR 2SD601A-Q |
| Q308 | 8-729-422-27 | TRANSISTOR 2SD601A-Q |

<RESISTOR>

| | | | | | |
|---|---|---|---|---|---|
| JR200 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |
| R002 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R003 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R004 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R005 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R006 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W |
| R007 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R008 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R009 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R011 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R012 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R013 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R016 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R017 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R018 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R019 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R020 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R021 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R022 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R023 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R025 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R026 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W |
| R027 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W |
| R028 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R029 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |

**M**

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R030 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R031 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R032 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R033 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R034 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R035 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R036 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R037 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R038 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R039 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R040 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R041 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R042 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R043 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R044 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R045 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R046 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R047 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R048 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R049 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R050 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R051 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R052 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R053 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R054 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R058 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R059 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R061 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R062 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R064 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R065 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R066 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R067 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R074 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R075 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R076 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R078 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R079 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R080 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R082 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R083 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R086 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R087 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R089 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R090 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R091 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R092 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R093 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R150 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R151 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R152 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R153 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R154 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R155 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R156 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R157 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R158 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R159 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R160 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R161 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R162 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R163 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R164 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R165 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R201 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R202 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R203 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R204 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R205 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R206 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R207 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R208 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R209 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R210 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R211 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R212 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R213 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R218 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R219 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R220 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R222 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R223 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R301 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R302 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R303 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R306 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R312 | 1-216-119-00 | METAL GLAZE | 820K | 5% | 1/10W | |
| R313 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R321 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R323 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R324 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R327 | 1-216-653-11 | METAL CHIP | 1.2K | 0.50% | 1/10W | |
| R328 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R329 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R330 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R331 | 1-216-678-11 | METAL CHIP | 13K | 0.50% | 1/10W | |
| R332 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R333 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R334 | 1-216-687-11 | METAL CHIP | 33K | 0.50% | 1/10W | |
| R335 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R336 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R337 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R338 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | F |
| R339 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R340 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R341 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R342 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R343 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R344 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R345 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W | |
| R346 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R347 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W | F |
| R348 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R349 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R350 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R351 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R352 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R353 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R354 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R356 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R374 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R375 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |

<CRYSTAL>

| | | |
|---|---|---|
| X001 | 1-579-917-21 | VIBRATOR, CRYSTAL |
| X301 | 1-567-505-11 | OSCILLATOR, CRYSTAL |

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

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| ********** | | | | | |
| | *A-1331-264-A | C BOARD, COMPLETE (CKV-27DST1) | | | |
| | | ********** | | | |
| | *A-1331-270-A | C BOARD, COMPLETE (CKV-27HX1) | | | |
| | | ********** | | | |
| | | <CAPACITOR> | | | |
| C700 | 1-102-074-00 | CERAMIC | 0.001MF | 10% 50V | |
| C701 | 1-162-114-00 | CERAMIC | 0.0047MF | 2KV | |
| C702 | 1-106-375-12 | MYLAR | 0.022MF | 99% 200V | |
| C703 | 1-106-375-12 | MYLAR | 0.022MF | 99% 200V | |
| C704 | 1-162-116-00 | CERAMIC | 680PF | 10% 2KV | |
| C705 | 1-123-946-00 | ELECT | 4.7MF | 20% 250V | |
| C706 | 1-126-101-11 | ELECT | 100MF | 20% 16V | |
| C707 | 1-102-129-00 | CERAMIC | 0.01MF | 10% 50V | |
| C711 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | |
| C712 | 1-164-081-11 | CERAMIC | 470PF | 10% 50V | (CKV-27DST1) |
| C712 | 1-164-084-11 | CERAMIC | 820PF | 10% 50V | (CKV-27HX1) |
| C731 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | |
| C732 | 1-164-081-11 | CERAMIC | 470PF | 10% 50V | (CKV-27DST1) |
| C732 | 1-164-084-11 | CERAMIC | 820PF | 10% 50V | (CKV-27HX1) |
| C751 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | |
| C752 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | (CKV-27DST1) |
| C752 | 1-164-085-11 | CERAMIC | 0.001MF | 10% 50V | (CKV-27HX1) |
| C771 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | (CKV-27HX1) |
| C772 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | (CKV-27HX1) |
| C773 | 1-164-083-11 | CERAMIC | 680PF | 10% 50V | (CKV-27HX1) |
| C774 | 1-102-129-00 | CERAMIC | 0.01MF | 10% 50V | (CKV-27HX1) |
| | | <CONNECTOR> | | | |
| CN701 | 1-695-915-11 | TAB (CONTACT) | | | |
| CN702 | *1-508-768-00 | PIN, CONNECTOR (5MM PITCH) 6P | | | |
| CN703 | *1-564-511-11 | PLUG, CONNECTOR 8P | | | |
| | | <DIODE> | | | |
| D711 | 8-719-911-19 | DIODE 1SS119 | | | |
| D712 | 8-719-911-19 | DIODE 1SS119 | | | |
| D713 | 8-719-901-83 | DIODE 1SS83 | | | (CKV-27HX1) |
| D731 | 8-719-911-19 | DIODE 1SS119 | | | |
| D732 | 8-719-911-19 | DIODE 1SS119 | | | |
| D751 | 8-719-911-19 | DIODE 1SS119 | | | |
| D752 | 8-719-911-19 | DIODE 1SS119 | | | |
| D770 | 8-719-911-19 | DIODE 1SS119 | | | |
| D771 | 8-719-911-19 | DIODE 1SS119 | | | |
| D772 | 8-719-911-19 | DIODE 1SS119 | | | |
| D773 | 8-719-911-19 | DIODE 1SS119 | | | |
| D774 | 8-719-901-83 | DIODE 1SS83 | | | (CKV-27HX1) |
| D775 | 8-719-901-83 | DIODE 1SS83 | | | (CKV-27HX1) |
| D776 | 8-719-901-83 | DIODE 1SS83 | | | (CKV-27HX1) |
| D777 | 8-719-109-68 | DIODE RD3.6ESB1 | | | |
| D790 | 8-719-911-19 | DIODE 1SS119 | | | |
| D791 | 8-719-911-19 | DIODE 1SS119 | | | |
| D792 | 8-719-911-19 | DIODE 1SS119 | | | |
| D793 | 8-719-911-19 | DIODE 1SS119 | | | |
| D794 | 8-719-911-19 | DIODE 1SS119 | | | |
| D795 | 8-719-911-19 | DIODE 1SS119 | | | |
| | | <JACK> | | | |
| J701 | ⚠1-540-071-13 | SOCKET, PICTURE TUBE | | | |
| | | <COIL> | | | |
| L701 | 1-410-478-11 | INDUCTOR | 47UH | | |
| | | <TRANSISTOR> | | | |
| Q711 | 8-729-926-73 | TRANSISTOR 2SC3271F-N | | | |
| Q712 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | | |
| Q731 | 8-729-926-73 | TRANSISTOR 2SC3271F-N | | | |
| Q732 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | | |
| Q751 | 8-729-926-73 | TRANSISTOR 2SC3271F-N | | | |
| Q752 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | | |
| Q770 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | | | |
| Q771 | 8-729-200-17 | TRANSISTOR 2SA1091-O | | | |
| Q772 | 8-729-200-17 | TRANSISTOR 2SA1091-O | | | |
| Q773 | 8-729-200-17 | TRANSISTOR 2SA1091-O | | | |
| Q774 | 8-729-200-17 | TRANSISTOR 2SA1091-O | | | (CKV-27HX1) |
| Q775 | 8-729-200-17 | TRANSISTOR 2SA1091-O | | | (CKV-27HX1) |
| Q776 | 8-729-200-17 | TRANSISTOR 2SA1091-O | | | (CKV-27HX1) |
| Q777 | 8-729-255-12 | TRANSISTOR 2SC2551-O | | | (CKV-27HX1) |
| Q778 | 8-729-255-12 | TRANSISTOR 2SC2551-O | | | (CKV-27HX1) |
| Q790 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | | |
| | | <RESISTOR> | | | |
| R700 | 1-247-739-11 | CARBON | 100 | 5% 1/2W | |
| R701 | 1-244-941-00 | CARBON | 680K | 5% 1/2W | |
| R702 | 1-249-496-11 | CARBON | 100K | 5% 1/2W | |
| R703 | 1-249-496-11 | CARBON | 100K | 5% 1/2W | |
| R704 | 1-216-398-11 | METAL OXIDE | 5.6 | 5% 3W F | |
| R705 | 1-216-398-11 | METAL OXIDE | 5.6 | 5% 3W F | |
| R706 | 1-214-921-00 | CARBON | 220K | 5% 1/2W | |
| R710 | 1-247-752-11 | CARBON | 1K | 5% 1/2W | (CKV-27HX1) |
| R710 | 1-247-758-11 | CARBON | 3.3K | 5% 1/2W | (CKV-27DST1) |
| R711 | 1-249-405-11 | CARBON | 100 | 5% 1/4W | |
| R712 | 1-215-924-00 | METAL OXIDE | 15K | 5% 3W F | |
| R714 | 1-249-421-11 | CARBON | 2.2K | 5% 1/4W | (CKV-27HX1) |
| R714 | 1-249-425-11 | CARBON | 4.7K | 5% 1/4W | (CKV-27DST1) |
| R716 | 1-249-415-11 | CARBON | 680 | 5% 1/4W | (CKV-27HX1) |
| R716 | 1-249-417-11 | CARBON | 1K | 5% 1/4W | (CKV-27DST1) |
| R717 | 1-249-393-11 | CARBON | 10 | 5% 1/4W | |
| R718 | 1-249-412-11 | CARBON | 390 | 5% 1/4W | (CKV-27HX1) |
| R718 | 1-249-413-11 | CARBON | 470 | 5% 1/4W | (CKV-27DST1) |
| R730 | 1-247-752-11 | CARBON | 1K | 5% 1/2W | (CKV-27HX1) |

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

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| R730 | 1-247-758-11 | CARBON | 3.3K | 5% | 1/2W (CKV-27DST1) |
| R731 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R732 | 1-215-924-00 | METAL OXIDE | 15K | 5% | 3W F |
| R734 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W (CKV-27HX1) |
| R734 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W (CKV-27DST1) |
| R736 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W (CKV-27HX1) |
| R736 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W (CKV-27DST1) |
| R737 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W (CKV-27DST1) |
| R737 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W (CKV-27HX1) |
| R750 | 1-247-752-11 | CARBON | 1K | 5% | 1/2W (CKV-27HX1) |
| R750 | 1-247-758-11 | CARBON | 3.3K | 5% | 1/2W (CKV-27DST1) |
| R751 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R752 | 1-215-924-00 | METAL OXIDE | 15K | 5% | 3W F |
| R754 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W (CKV-27HX1) |
| R754 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W (CKV-27DST1) |
| R756 | 1-249-410-11 | CARBON | 270 | 5% | 1/4W (CKV-27HX1) |
| R756 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W (CKV-27DST1) |
| R757 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R770 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R771 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W F |
| R772 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W F |
| R773 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W F |
| R774 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R775 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R776 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W F |
| R777 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W (CKV-27HX1) |
| R778 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W (CKV-27HX1) |
| R779 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W (CKV-27HX1) |
| R780 | 1-215-902-11 | METAL OXIDE | 47K | 5% | 1W F (CKV-27HX1) |
| R781 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W F (CKV-27HX1) |
| R782 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F (CKV-27HX1) |
| R783 | 1-215-902-11 | METAL OXIDE | 47K | 5% | 2W F (CKV-27HX1) |
| R784 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W F (CKV-27HX1) |
| R785 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W F (CKV-27HX1) |
| R786 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W F (CKV-27HX1) |
| R790 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W (CKV-27HX1) |
| R790 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W (CKV-27DST1) |
| R791 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R792 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R794 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R796 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W |
| R798 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |
| R799 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W |

<VARIABLE RESISTOR>

| | | | | | |
|---|---|---|---|---|---|
| RV701⚠ | 1-241-656-21 | RES, ADJ, METAL FILM 110M | | | |
| RV702 | 1-230-641-11 | RES, ADJ, METAL GLAZE 2.2M | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | *A-1346-116-A | D BOARD, COMPLETE (CKV-27HX1) ********** | | | |
| | *A-1346-129-A | D BOARD, COMPLETE (CKV-27DST1) ********** | | | |
| | 1-533-223-11 | CLIP, FUSE | | | |
| | 4-382-854-11 | SCREW (M3X10), P, SW (+) | | | |

<CAPACITOR>

| | | | | | |
|---|---|---|---|---|---|
| C501 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V |
| C502 | 1-162-131-11 | CERAMIC | 220PF | 10% | 2KV |
| C503 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V |
| C504 | 1-137-366-11 | FILM | 0.0022MF | 5% | 50V |
| C505 | 1-124-916-11 | ELECT | 22MF | 20% | 25V |
| C506 | 1-124-929-11 | ELECT | 22MF | 20% | 100V |
| C507 | 1-124-046-00 | ELECT | 10MF | 20% | 160V |
| C508 | 1-129-898-00 | FILM | 0.0022MF | 5% | 630V |
| C509 | 1-124-916-11 | ELECT | 22MF | 20% | 25V |
| C511 | 1-123-024-21 | ELECT | 33MF | | 160V |
| C512 | 1-102-212-00 | CERAMIC | 820PF | 10% | 500V |
| C513 | 1-102-212-00 | CERAMIC | 820PF | 10% | 500V |
| C514 | 1-102-244-00 | CERAMIC | 220PF | 10% | 500V |
| C515 | 1-137-416-11 | FILM | 0.01MF | 10% | 100V |
| C517 | 1-162-116-00 | CERAMIC | 680PF | 10% | 2KV |
| C518 | 1-162-116-00 | CERAMIC | 680PF | 10% | 2KV |
| C519 ⚠ | 1-104-771-11 | FILM | 0.02MF | 3% | 2KV |
| C520 ⚠ | 1-162-134-91 | CERAMIC | 470PF | 10% | 2KV |
| C521 ⚠ | 1-136-316-51 | FILM | 0.056MF | 5% | 630V |
| C522 | 1-106-383-00 | MYLAR | 0.047MF | 99% | 200V |
| C523 | 1-102-002-00 | CERAMIC | 680PF | 10% | 500V |
| C524 | 1-102-212-00 | CERAMIC | 820PF | 10% | 500V |
| C525 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C526 | 1-106-395-00 | MYLAR | 0.15MF | 10% | 200V |
| C527 | 1-124-341-00 | ELECT | 1MF | 20% | 200V |
| C528 | 1-136-113-00 | FILM | 2MF | 5% | 200V |
| C529 | 1-137-410-11 | FILM | 0.001MF | 10% | 100V |
| C530 | 1-104-770-11 | FILM | 0.62MF | 5% | 200V |
| C531 | 1-124-477-11 | ELECT | 47MF | 20% | 25V |
| C532 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C533 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C534 | 1-136-161-00 | FILM | 0.047MF | 5% | 50V |
| C535 | 1-124-911-11 | ELECT | 220MF | 20% | 50V |
| C536 | 1-137-421-91 | FILM | 0.068MF | 10% | 100V |
| C538 | 1-136-161-00 | FILM | 0.047MF | 5% | 50V |
| C540 | 1-137-366-11 | FILM | 0.0022MF | 5% | 50V |
| C541 | 1-137-366-11 | FILM | 0.0022MF | 5% | 50V |
| C542 | 1-130-481-00 | FILM | 0.0068MF | 5% | 50V |
| C545 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C547 | 1-164-079-11 | CERAMIC | 330PF | 10% | 50V |
| C548 ⚠ | 1-162-116-91 | CERAMIC | 680PF | 10% | 2KV |
| C550 | 1-106-387-00 | MYLAR | 0.068MF | 10% | 200V |
| C553 | 1-164-079-11 | CERAMIC | 330PF | 10% | 50V |
| C561 | 1-162-815-11 | CERAMIC | 47PF | 5% | 500V |

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

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| C595 | 1-123-932-00 | ELECT | 4.7MF | 20% | 160V |
| C598 | 1-124-342-00 | ELECT | 3.3MF | 20% | 160V |
| C600 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C601 ⚠ | 1-136-311-51 | FILM | 0.47MF | 20% | 125V |
| C602 ⚠ | 1-136-311-51 | FILM | 0.47MF | 20% | 125V |
| C603 ⚠ | 1-136-311-51 | FILM | 0.47MF | 20% | 125V |
| C604 ⚠ | 1-162-578-81 | CERAMIC | 0.0047MF | 20% | 400V |
| C607 | 1-104-757-11 | ELECT | 470MF | 20% | 200V |
| C608 | 1-104-757-11 | ELECT | 470MF | 20% | 200V |
| C609 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C610 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C611 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C612 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C613 | 1-164-625-11 | CERAMIC | 680PF | 10% | 500V |
| C614 | 1-164-625-11 | CERAMIC | 680PF | 10% | 500V |
| C616 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C617 | 1-124-607-11 | ELECT | 2200MF | 20% | 50V (CKV-27HX1) |
| C617 | 1-124-618-11 | ELECT | 2200MF | 20% | 35V (CKV-27DST1) |
| C618 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V |
| C619 | 1-124-360-00 | ELECT | 1000MF | 20% | 16V |
| C620 | 1-164-644-11 | CERAMIC | 330PF | 10% | 500V |
| C621 | 1-126-356-11 | ELECT | 220MF | 20% | 160V |
| C623 | 1-162-117-00 | CERAMIC | 100PF | 10% | 500V |
| C624 | 1-136-487-81 | FILM | 0.015MF | 5% | 50V |
| C625 | 1-129-744-91 | FILM | 0.027MF | 10% | 400V |
| C626 | 1-124-478-11 | ELECT | 100MF | 20% | 25V |
| C627 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C628 ⚠ | 1-164-497-51 | CERAMIC | 470PF | 20% | 400V |
| C634 | 1-165-127-11 | CERAMIC | 470PF | 10% | 500V |
| C635 | 1-124-477-11 | ELECT | 47MF | 20% | 16V |
| C636 | 1-137-374-11 | FILM | 0.047MF | 5% | 50V |
| C637 | 1-124-916-11 | ELECT | 22MF | 20% | 25V |
| C640 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C641 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C642 | 1-137-217-11 | FILM | 0.01MF | 5% | 1.25KV |
| C643 | 1-137-218-11 | FILM | 0.012MF | 5% | 1.25KV |
| C645 | 1-102-125-00 | CERAMIC | 0.0047MF | 10% | 50V |
| C646 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C647 | 1-124-916-11 | ELECT | 22MF | 20% | 25V |
| C684 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C695 | 1-124-907-11 | ELECT | 10MF | 20% | 50V |
| C2205 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C2208 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C2210 | 1-124-120-11 | ELECT | 220MF | 20% | 25V |
| C2211 | 1-124-477-11 | ELECT | 47MF | 20% | 25V |
| C2212 | 1-124-120-11 | ELECT | 220MF | 20% | 25V |
| C2213 | 1-136-173-00 | FILM | 0.47MF | 5% | 50V |
| C2215 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C2216 | 1-124-480-11 | ELECT | 470MF | 20% | 25V (CKV-27DST1) |
| C2216 | 1-126-105-11 | ELECT | 1000MF | 20% | 35V (CKV-27HX1) |
| C2217 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C2218 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V (CKV-27DST1) |
| C2218 | 1-126-105-11 | ELECT | 1000MF | 20% | 35V (CKV-27HX1) |
| C2219 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V (CKV-27DST1) |
| C2219 | 1-126-105-11 | ELECT | 1000MF | 20% | 35V (CKV-27HX1) |
| C2220 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |

<CONNECTOR>

| | | |
|---|---|---|
| CN104 | *1-573-979-11 | CONNECTOR, BOARD TO BOARD 11P |
| CN105 | *1-508-768-00 | PIN, CONNECTOR (5MM PITCH) 6P |
| CN107 | *1-580-798-11 | CONNECTOR PIN (DY) 6P |
| CN113 | *1-508-765-00 | PIN, CONNECTOR (5MM PITCH) 3P |
| CN114 | *1-580-843-11 | PIN, CONNECTOR (POWER) |
| CN115 | 1-573-298-11 | CONNECTOR, BOARD TO BOARD 20P |
| CN116 | *1-691-616-11 | CONNECTOR, BOARD TO BOARD 15P |
| CN117 | *1-573-978-11 | CONNECTOR, BOARD TO BOARD 11P |

<DIODE>

| | | |
|---|---|---|
| D501 | 8-719-028-72 | DIODE RGP02-17EL-6433 |
| D502 | 8-719-979-85 | DIODE EGP20G |
| D503 | 8-719-979-85 | DIODE EGP20G |
| D504 ⚠ | 8-719-302-44 | DIODE EU1Z-V1 |
| D505 | 8-719-936-84 | DIODE RGP10GPKG3 |
| D506 | 8-719-945-80 | DIODE ERC06-15S |
| D507 | 8-719-945-80 | DIODE ERC06-15S |
| D508 | 8-719-900-26 | DIODE ERD29-08J |
| D509 | 8-719-936-84 | DIODE RGP10GPKG3 |
| D510 | 8-719-936-82 | DIODE GP08DPKG3 |
| D511 | 8-719-936-82 | DIODE GP08DPKG3 |
| D512 | 8-719-109-84 | DIODE RD5.1ESB1 |
| D513 | 8-719-936-82 | DIODE GP08DPKG3 |
| D514 | 8-719-911-19 | DIODE 1SS119 |
| D515 | 8-719-911-19 | DIODE 1SS119 |
| D601 | 8-719-911-19 | DIODE 1SS119 |
| D602 ⚠ | 8-719-510-63 | DIODE D4SB60L-F |
| D603 | 8-719-500-69 | DIODE S3V10SS |
| D605 | 8-719-500-69 | DIODE S3V10SS |
| D607 | 8-719-510-02 | DIODE D1NS4 |
| D608 | 8-719-022-97 | DIODE D2S4MF (CKV-27HX1) |
| D608 | 8-719-510-02 | DIODE D1NS4 (CKV-27DST1) |
| D609 | 8-719-022-97 | DIODE D2S4MF (CKV-27HX1) |
| D609 | 8-719-510-02 | DIODE D1NS4 (CKV-27DST1) |
| D610 | 8-719-022-97 | DIODE D2S4MF (CKV-27HX1) |
| D610 | 8-719-510-02 | DIODE D1NS4 (CKV-27DST1) |
| D611 | 8-719-022-97 | DIODE D2S4MF (CKV-27HX1) |
| D611 | 8-719-510-02 | DIODE D1NS4 (CKV-27DST1) |
| D612 | 8-719-031-80 | DIODE D5SC4MR |
| D613 | 8-719-022-97 | DIODE D2S4MF |
| D614 | 8-719-110-33 | DIODE RD12ESB3 |
| D615 | 8-719-027-43 | DIODE S2L20UF |
| D616 | 8-719-027-43 | DIODE S2L20UF |
| D617 | 8-719-027-43 | DIODE S2L20UF |
| D618 | 8-719-027-43 | DIODE S2L20UF |
| D619 | 8-719-510-02 | DIODE D1NS4 |
| D622 | 8-719-911-19 | DIODE 1SS119 |
| D623 | 8-719-911-19 | DIODE 1SS119 |
| D624 | 8-719-911-19 | DIODE 1SS119 |
| D626 | 8-719-510-48 | DIODE D1N20R |
| D627 | 8-719-510-48 | DIODE D1N20R |
| D628 | 8-719-911-19 | DIODE 1SS119 |
| D629 | 8-719-936-82 | DIODE GP08DPKG3 (CKV-27HX1) |
| D630 | 8-719-936-82 | DIODE GP08DPKG3 (CKV-27HX1) |
| D631 | 8-719-936-82 | DIODE GP08DPKG3 (CKV-27HX1) |
| D632 | 8-719-936-82 | DIODE GP08DPKG3 (CKV-27HX1) |
| D633 | 8-719-110-09 | DIODE RD8.2ESB3 |
| D634 | 8-719-911-19 | DIODE 1SS119 |
| D635 | 8-719-911-19 | DIODE 1SS119 |

D

- 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.

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

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| D636 | 8-719-510-48 | DIODE D1N20R | |
| D637 | 8-719-911-19 | DIODE 1SS119 | |
| D638 | 8-719-911-19 | DIODE 1SS119 | |
| | | <FUSE> | |
| F601 ⚠ | 1-532-748-11 | FUSE, GLASS TUBE (6.3A/125V) | |
| | | <FERRITE BEAD> | |
| FB501 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB502 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB601 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB602 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB603 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB604 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB605 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB606 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB613 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| FB614 | 1-412-911-11 | INDUCTOR, FERRITE BEAD | |
| | | <IC> | |
| IC501 | 8-759-980-58 | IC TDA8172 | |
| IC504 | 8-759-103-93 | IC UPC393C | |
| IC601 ⚠ | 1-810-051-11 | POWER MODULE DM-48 | |
| IC602 | 8-759-805-37 | IC L78LR05D-MA | |
| IC604 | 8-759-924-12 | IC LM7805CT | |
| IC605 | 8-759-929-62 | IC LM7812CT | |
| IC606 | 8-759-982-10 | IC RC7809FA | |
| IC610 | 8-759-982-21 | IC RC78L05A | |
| IC2200 | 8-759-089-13 | IC TDA7262 (CKV-27HX1) | |
| IC2200 | 8-759-980-43 | IC TDA2009A (CKV-27DST1) | |
| | | <COIL> | |
| L502 | 1-421-465-00 | COIL, FERRITE CHOKE 68UH | |
| L503 | 1-412-524-11 | INDUCTOR 8.2UH | |
| L504 | 1-410-669-31 | INDUCTOR 33UH | |
| L505 | 1-459-104-00 | COIL, WITH CORE | |
| L506 | 1-422-613-11 | COIL, AIR CORE | |
| L508 | 1-412-553-11 | INDUCTOR 3.3MMH | |
| L509 ⚠ | 1-460-173-21 | COIL, HORIZONTAL LINEARITY | |
| L510 | 1-406-607-11 | COIL, CHOKE 15MMH | |
| L513 | 1-412-524-11 | INDUCTOR 8.2UH | |
| | | <MODULE> | |
| PM501 | 1-810-061-11 | PROTECTOR MODULE PM-38 | |
| | | <IC LINK> | |
| PS2201 ⚠ | 1-532-675-91 | LINK, IC 1.5A (CKV-27DST1) | |
| PS2201 ⚠ | 1-532-984-91 | LINK, IC 2.0A (CKV-27HX1) | |
| | | <TRANSISTOR> | |
| Q502 | 8-729-119-80 | TRANSISTOR 2SC2688-LK | |
| Q503 | 8-729-809-29 | TRANSISTOR 2SC4159-E | |
| Q505 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q591 | 8-729-016-32 | TRANSISTOR 2SC4927-01 | |
| Q601 | 8-729-019-51 | TRANSISTOR 2SC4834MNP | |
| Q602 | 8-729-019-51 | TRANSISTOR 2SC4834MNP | |
| Q603 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | |
| Q604 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q605 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q611 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q613 | 8-729-924-90 | TRANSISTOR 2SB1370-BF | |
| Q614 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q2202 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q2203 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | |
| | | <RESISTOR> | |
| JW651 | 1-216-341-11 | METAL OXIDE 0.22 5% 1W | F |
| R501 | 1-249-378-11 | CARBON 0.56 5% 1/4W | F |
| R503 | 1-215-862-11 | METAL OXIDE 68 5% 1W | F |
| R504 | 1-215-872-11 | METAL OXIDE 3.3K 5% 1W | F |
| R505 | 1-249-377-11 | CARBON 0.47 5% 1/4W | F |
| R506 | 1-215-886-11 | METAL OXIDE 100 5% 2W | F |
| R507 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R508 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | |
| R509 | 1-249-389-11 | CARBON 4.7 5% 1/4W | F |
| ⊠R511 ⚠ | | CARBON 1/4W | |
| R512 | 1-249-389-11 | CARBON 4.7 5% 1/4W | F |
| R513 | 1-216-393-00 | METAL OXIDE 2.2 5% 3W | F |
| R514 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R515 | 1-216-363-00 | METAL OXIDE 0.33 5% 2W | F |
| R516 | 1-249-401-11 | CARBON 47 5% 1/4W | |
| R517 | 1-215-916-00 | METAL OXIDE 680 5% 3W | F |
| R518 | 1-215-916-00 | METAL OXIDE 680 5% 3W | F |
| R519 | 1-249-426-11 | CARBON 5.6K 5% 1/4W | F |
| R520 | 1-249-423-11 | CARBON 3.3K 5% 1/4W | |
| R521 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| R522 | 1-215-886-11 | METAL OXIDE 100 5% 2W | F |
| R523 | 1-215-862-11 | METAL OXIDE 68 5% 1W | F |
| ⊠R524 ⚠ | | CARBON 1/4W | |
| R525 | 1-215-884-11 | METAL OXIDE 47 5% 2W | F |
| R526 | 1-247-887-00 | CARBON 220K 5% 1/4W | |
| R527 | 1-215-861-00 | METAL OXIDE 47 5% 1W | F |
| R528 | 1-260-326-71 | CARBON 680 5% 1/2W | |
| R530 | 1-215-445-00 | METAL 10K 1% 1/4W | |
| R531 | 1-247-903-00 | CARBON 1M 5% 1/4W | |
| R532 | 1-215-446-00 | METAL 11K 1% 1/4W | |
| R534 | 1-249-385-11 | CARBON 2.2 5% 1/4W | F |
| R535 | 1-216-453-00 | METAL OXIDE 270 5% 2W | F |
| R536 | 1-249-389-11 | CARBON 4.7 5% 1/4W | F |
| R539 | 1-215-459-00 | METAL 39K 1% 1/4W | |
| R543 | 1-249-419-11 | CARBON 1.5K 5% 1/4W | |
| R546 | 1-249-431-11 | CARBON 15K 5% 1/4W | |
| R547 | 1-247-883-00 | CARBON 150K 5% 1/4W | |
| R550 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R551 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R554 | 1-216-371-00 | METAL OXIDE 1.5 5% 2W | F |
| R556 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| R557 | 1-249-415-11 | CARBON 680 5% 1/4W | F |
| R561 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R562 | 1-215-437-00 | METAL 4.7K 1% 1/4W | |
| R563 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R564 | 1-249-433-11 | CARBON 22K 5% 1/4W | |
| R566 | 1-249-435-11 | CARBON 33K 5% 1/4W | |
| R580 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| R601 ⚠ | 1-202-888-91 | SOLID 2.2M 20% 1/2W | |
| R602 ⚠ | 1-202-888-91 | SOLID 2.2M 20% 1/2W | |
| R603 | 1-249-419-11 | CARBON 1.5K 5% 1/4W | |
| R605 | 1-247-893-11 | CARBON 390K 5% 1/4W | |
| R606 | 1-247-893-11 | CARBON 390K 5% 1/4W | |
| R607 ⚠ | 1-202-933-61 | FUSIBLE 0.1 10% 1/2W | F |
| R608 | 1-215-860-11 | METAL OXIDE 33 5% 1W | F |

D H

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

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R609 | 1-216-352-11 | METAL OXIDE | 1.8 | 5% | 1W | F |
| R610 | 1-216-352-11 | METAL OXIDE | 1.8 | 5% | 1W | F |
| R611 | 1-216-468-91 | METAL OXIDE | 82K | 5% | 2W | F |
| R612 | 1-216-468-91 | METAL OXIDE | 82K | 5% | 2W | F |
| R613 | 1-215-860-11 | METAL OXIDE | 33 | 5% | 1W | F |
| R614 | 1-215-860-11 | METAL OXIDE | 33 | 5% | 1W | F |
| R615 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R616 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R617 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R618 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R619 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R621 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R622 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R623 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R624 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R625 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R627 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R628 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R629 | 1-249-388-11 | CARBON | 3.9 | 5% | 1/4W | F |
| R630 | 1-215-857-11 | METAL OXIDE | 10 | 5% | 1W | F |
| R632 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | F |
| R633 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W | F |
| R635 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | F |
| R636 | 1-249-383-11 | CARBON | 1.5 | 5% | 1/4W | F |
| R637 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R638 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R639 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R640 ⚠ | 1-202-893-91 | SOLID | 8.2M | 20% | 1/2W | |
| R643 | 1-216-379-11 | METAL OXIDE | 6.8 | 5% | 2W | F |
| R644 ⚠ | 1-212-853-61 | FUSIBLE | 6.8 | 5% | 1/4W | F |
| R645 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R646 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R647 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R648 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W | |
| R649 | 1-216-431-11 | METAL OXIDE | 560 | 5% | 1W | F |
| R650 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W | F |
| R651 ⚠ | 1-212-954-61 | FUSIBLE | 6.8 | 5% | 1/2W | F |
| R652 ⚠ | 1-212-954-61 | FUSIBLE | 6.8 | 5% | 1/2W | F |
| R653 | 1-249-381-11 | CARBON | 1 | 5% | 1/4W | |
| R654 | 1-216-385-11 | METAL OXIDE | 0.47 | 5% | 3W | F |
| R655 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | F |
| R656 | 1-249-381-11 | CARBON | 1 | 5% | 1/4W | |
| R657 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R658 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W | F |
| R659 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W | |
| R660 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W | |
| R661 | 1-249-406-11 | CARBON | 120 | 5% | 1/4W | |
| R690 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R691 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R2209 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W | |
| R2210 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W (CKV-27HX1) | |
| R2210 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W (CKV-27DST1) | |
| R2211 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W | |
| R2212 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W (CKV-27HX1) | |
| R2212 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W (CKV-27DST1) | |
| R2215 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R2216 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R2217 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R2218 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | |
| R2219 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | |
| R2220 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W | |
| R2221 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W | |
| R2222 | 1-249-398-11 | CARBON | 27 | 5% | 1/4W | |
| R2223 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R2224 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R2225 | 1-249-398-11 | CARBON | 27 | 5% | 1/4W | |
| R2226 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W | F |
| R2227 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W | F |
| R2228 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R2229 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |

<RELAY>

| | | | |
|---|---|---|---|
| RY601 ⚠ | 1-515-684-22 | RELAY | |
| RY602 | 1-515-516-00 | RELAY | |

<SWITCH>

| | | | |
|---|---|---|---|
| S501 | 1-572-707-11 | SWITCH, LEVER | |
| S502 | 1-572-707-11 | SWITCH, LEVER | |

<TRANSFORMER>

| | | | |
|---|---|---|---|
| T501 ⚠ | 1-453-146-11 | TRANSFORMER ASSY, FLYBACK (NX-2604A3) | |
| T502 ⚠ | 1-437-195-14 | TRANSFORMER, HORIZONTAL DRIVE | |
| T503 ⚠ | 1-424-545-22 | TRANSFORMER, FERRITE (PMT) | |
| T601 ⚠ | 1-423-593-11 | TRANSFORMER, LINE FILTER (LFT) | |
| T602 ⚠ | 1-424-220-21 | TRANSFORMER, LINE FILTER | |
| T603 ⚠ | 1-423-563-11 | TRANSFORMER, CONVERTER DRIVE | |
| T604 ⚠ | 1-423-615-11 | TRANSFORMER, CONVERTER (PIT) | |
| T605 | 1-423-582-11 | TRANSFORMER, FERRITE (SBT) | |

<THERMISTOR>

| | | | |
|---|---|---|---|
| THP601 ⚠ | 1-809-539-11 | THERMISTOR, POSITIVE | |

<VARISTOR>

| | | | |
|---|---|---|---|
| VDR601 | 1-807-288-11 | VARISTOR | |
| VDR602 | 1-810-053-21 | VARISTOR | |
| VDR603 | 1-810-053-21 | VARISTOR | |

**********

*1-646-717-11 H BOARD
*******

<CAPACITOR>

| | | | | | |
|---|---|---|---|---|---|
| C1001 | 1-124-916-11 | ELECT | 22MF | 20% | 25V (CKV-27HX1) |
| C1002 | 1-124-903-11 | ELECT | 1MF | 20% | 50V (CKV-27HX1) |
| C1003 | 1-124-903-11 | ELECT | 1MF | 20% | 50V (CKV-27HX1) |
| C1004 | 1-124-122-11 | ELECT | 100MF | 20% | 50V |

<CONNECTOR>

| | | |
|---|---|---|
| CN154 | *1-564-520-11 | PLUG, CONNECTOR 5P (CKV-27HX1) |
| CN155 | *1-564-523-11 | PLUG, CONNECTOR 8P |

<LED UNIT>

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

**H** **UB**

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| D1004 | 1-810-039-11 | LED UNIT | | | |
| | | <IC> | | | |
| IC1001 | 8-746-185-11 | IC SBX1618-59 | | | |
| | | <JACK> | | | |
| J1001 | 1-695-585-11 | JACK BLOCK, PIN (L TYPE) 3P (CKV-27HX1) | | | |
| | | <RESISTOR> | | | |
| R1001 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W (CKV-27HX1) |
| R1002 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W (CKV-27HX1) |
| R1003 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W (CKV-27HX1) |
| R1004 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W (CKV-27HX1) |
| R1005 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W (CKV-27HX1) |
| R1007 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1008 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W |
| R1009 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R1010 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W |
| R1011 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W |
| R1012 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W |
| R1013 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R1014 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W |
| R1015 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| | | <SWITCH> | | | |
| S1001 | 1-571-532-21 | SWITCH, TACTIL | | | |
| S1002 | 1-571-532-21 | SWITCH, TACTIL | | | |
| S1003 | 1-571-532-21 | SWITCH, TACTIL | | | |
| S1004 | 1-571-532-21 | SWITCH, TACTIL | | | |
| S1005 | 1-571-532-21 | SWITCH, TACTIL | | | |
| S1006 | 1-571-532-21 | SWITCH, TACTIL | | | |
| S1007⚠ | 1-571-532-23 | SWITCH, TACTIL | | | |
| | | ********** | | | |
| | *A-1394-417-A | UB BOARD, COMPLETE (CKV-27HX1) | | | |
| | | ********** | | | |
| | *A-1394-454-A | UB BOARD, COMPLETE (CKV-27DST1) | | | |
| | | ********** | | | |
| | | <CAPACITOR> | | | |
| C401 | 1-163-031-11 | CERAMIC CHIP 0.01MF | | | 50V (CKV-27HX1) |
| C402 | 1-124-598-11 | ELECT | 22MF | 20% | 25V |
| C405 | 1-124-598-11 | ELECT | 22MF | 20% | 25V (CKV-27HX1) |
| C406 | 1-126-301-11 | ELECT | 1MF | 20% | 50V (CKV-27HX1) |
| C407 | 1-126-301-11 | ELECT | 1MF | 20% | 50V (CKV-27HX1) |
| C408 | 1-124-598-11 | ELECT | 22MF | 20% | 25V (CKV-27HX1) |
| C409 | 1-126-301-11 | ELECT | 1MF | 20% | 50V |
| C410 | 1-126-301-11 | ELECT | 1MF | 20% | 50V |
| C411 | 1-124-589-11 | ELECT | 47MF | 20% | 16V |
| C412 | 1-124-598-11 | ELECT | 22MF | 20% | 25V |
| C413 | 1-124-261-00 | ELECT | 10MF | 20% | 50V |
| C414 | 1-124-499-11 | ELECT | 1MF | 20% | 50V |
| C415 | 1-124-499-11 | ELECT | 1MF | 20% | 50V |
| C416 | 1-124-261-00 | ELECT | 10MF | 20% | 50V |
| C419 | 1-124-477-11 | ELECT | 47MF | 20% | 16V |
| C420 | 1-163-031-11 | CERAMIC CHIP | 0.01MF | | 50V (CKV-27HX1) |
| C421 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V (CKV-27HX1) |
| C441 | 1-124-477-11 | ELECT | 47MF | 20% | 16V |
| | | <FILTER BLOCK> | | | |
| CM402 | 1-466-912-21 | FILTER BLOCK, COMB | | | |
| | | <CONNECTOR> | | | |
| CN141 | *1-564-520-11 | PLUG, CONNECTOR 5P (CKV-27HX1) | | | |
| CN143 | 1-750-395-11 | SOCKET, CONNECTOR 32P | | | |
| CN147 | 1-750-395-11 | SOCKET, CONNECTOR 32P | | | |
| CN148 | *1-564-517-11 | PLUG, CONNECTOR 2P (CKV-27HX1) | | | |
| | | <DIODE> | | | |
| D401 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D402 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D403 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D404 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D405 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D408 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D410 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D411 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D429 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D430 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D431 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D443 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| D444 | 8-719-110-17 | DIODE RD10ESB2 (CKV-27HX1) | | | |
| | | <IC> | | | |
| IC401 | 8-759-634-69 | IC M52470P | | | |
| IC403 | 8-759-088-00 | IC MM1114XFF (CKV-27HX1) | | | |
| IC404 | 8-759-164-18 | IC MM1118XFF (CKV-27HX1) | | | |
| | | <JACK> | | | |
| J401 | 1-750-780-11 | JACK BLOCK, BNC PIN 3P | | | |
| J409 | 1-750-700-11 | CONNECTOR, SQUARE 8P (CKV-27HX1) | | | |
| J410 | 1-537-538-11 | TERMINAL, S (CKV-27HX1) | | | |
| | | <TRANSISTOR> | | | |
| Q401 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | | | |
| Q405 | 8-729-422-36 | TRANSISTOR 2SB709A-Q | | | |
| Q406 | 8-729-422-36 | TRANSISTOR 2SB709A-Q | | | |
| | | <RESISTOR> | | | |
| JR400 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W (CKV-27DST1) |
| JR401 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W (CKV-27DST1) |
| JR402 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |

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

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| JR403 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR408 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR409 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR410 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR411 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR412 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR415 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | (CKV-27HX1) |
| JR416 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR418 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR423 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR424 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR429 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR430 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR431 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR434 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR435 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | (CKV-27HX1) |
| JR498 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | (CKV-27HX1) |
| JR499 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| JR1493 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | (CKV-27HX1) |
| JW454 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| JW456 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R401 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | (CKV-27HX1) |
| R402 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R403 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R404 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R407 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | (CKV-27HX1) |
| R412 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R413 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R415 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | (CKV-27HX1) |
| R416 | 1-216-647-11 | METAL CHIP | 680 | 0.50% | 1/10W | |
| R417 | 1-216-645-11 | METAL CHIP | 560 | 0.50% | 1/10W | |
| R418 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R421 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R425 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R431 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | (CKV-27HX1) |
| R431 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | (CKV-27DST1) |
| R432 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | (CKV-27HX1) |
| R432 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | (CKV-27DST1) |
| R434 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | (CKV-27HX1) |
| R434 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | (CKV-27DST1) |
| R435 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | (CKV-27HX1) |
| R435 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | (CKV-27DST1) |
| R439 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R440 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | (CKV-27HX1) |
| R441 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R442 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R443 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R444 | 1-216-095-00 | METAL GLAZE | 82K | 5% | 1/10W | (CKV-27HX1) |
| R447 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | (CKV-27HX1) |
| R448 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | (CKV-27HX1) |
| R449 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | (CKV-27HX1) |
| R450 | 1-216-627-11 | METAL CHIP | 100 | 0.50% | 1/10W | |
| R453 | 1-216-653-11 | METAL CHIP | 1.2K | 0.50% | 1/10W | |
| R454 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R477 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |

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MISCELLANEOUS
**********

| | | |
|---|---|---|
| ⚠ | 1-406-726-21 | COIL, DEGAUSSING |
| ⚠ | 1-451-275-41 | DEFLECTION YOKE (Y28PFA) |
| | 1-452-032-00 | MAGNET, DISK; 10MMφ |
| | 1-452-094-00 | MAGNET, ROTATABLE DISK;15MMφ |
| | 1-504-322-11 | BOX, SPEAKER (10CM.5CM) (CKV-27HX1) |
| | 1-544-549-11 | SPEAKER (CKV-27DST1) |
| | 1-573-657-11 | PLUG, F-PIN (CKV-27DST1) |
| ⚠ | 1-751-059-11 | CORD, POWER (WITH CONNECTOR)(10.A/125V) |
| | 1-941-989-02 | CABLE, DGC FIXED |
| V901 ⚠ | 8-733-838-05 | PICTURE TUBE (A68KZJ50X) |

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ACCESSORIES AND PACKING MATERIALS
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| | | |
|---|---|---|
| | 3-756-890-21 | MANUAL, INSTRUCTION |
| * | 4-035-022-01 | INDIVIDUAL CARTON (CKV-27DST1) |
| * | 4-039-653-01 | CUSHION (UPPER) (ASSY) (CKV-27DST1) |
| * | 4-039-654-01 | CUSHION (LOWER) (ASSY) (CKV-27DST1) |
| * | 4-039-970-01 | INDIVIDUAL CARTON (CKV-27HX1) |
| * | 4-039-971-01 | CUSHION (UPPER) (ASSY) (CKV-27HX1) |
| * | 4-039-972-01 | CUSHION (LOWER) (ASSY) (CKV-27HX1) |
| | 4-384-027-01 | BAG, PROTECTION (CKV-27DST1) |
| * | 4-396-065-01 | BAG, PROTECTION (CKV-27HX1) |
| | 1-466-966-11 | REMOTE COMMANDER (RM-Y116) (CKV-27DST1) |
| | 1-467-060-11 | REMOTE COMMANDER (RM-Y117) (CKV-27HX1) |
| | 9-903-826-01 | COVER, BATTERY (FOR RM-Y116,Y117) |

9-964-940-01

Sony Corporation
TV Group

English
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