

# SERVICE MANUAL

## BA-4 CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-13M40	RM-Y156	US	SCC-S01E-A
KV-13M40	RM-Y156	CND	SCC-S03D-A
KV-13M50	RM-Y156	US	SCC-S01G-A
KV-13M51	RM-Y156W	US	SCC-S01F-A
KV-14MB40	RM-Y156	E	SCC-S04P-A
KV-14MB40C	RM-Y156	E	SCC-S04N-A
KV-14MB40A	RM-Y156	E	SCC-S04Q-A
KV-20M40	RM-Y156	US	SCC-S01A-A
KV-20M40	RM-Y156	CND	SCC-S03C-A
KV-20S40	RM-Y155	US	SCC-S01C-A
KV-20S40	RM-Y155	CND	SCC-S03A-A
KV-20S41	RM-Y156W	US	SCC-S01B-A
KV-20S41	RM-Y156W	CND	SCC-S03L-A
KV-20V80	RM-Y135A	US	SCC-S01D-A
KV-20V80	RM-Y135A	CND	SCC-S03B-A

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-21SE80A	RM-Y135A	E	SCC-S04M-A
KV-21MB40C	RM-Y156	E	SCC-S04F-A
KV-21MB40M	RM-Y156	MX	SCC-S02B-A
KV-21MB40P	RM-Y156	E	SCC-S04E-A
KV-21ME40	RM-Y156	E	SCC-S04B-A
KV-21SB40C	RM-Y155	E	SCC-S04H-A
KV-21SB40M	RM-Y155	MX	SCC-S02A-A
KV-21SB40P	RM-Y155	E	SCC-S04J-A
KV-21SE80	RM-Y135A	E	SCC-S04L-A
KV-21SE80C	RM-Y135A	E	SCC-S04K-A
KV-21SE40	RM-Y155	E	SCC-S04A-A
KV-21SE40C	RM-Y155	E	SCC-S04C-A
KV-21SE40A	RM-Y155	E	SCC-S04D-A
KV-21XT4A	RM-Y155	E	SCC-S04G-A
KV-21ME40C	RM-Y156	E	SCC-S04W-A



TRINITRON® COLOR TV  
**SONY®**

## SPECIFICATIONS

KV-	13M40* 13M50** 13M51** 14MB40*	14MB40C* 14MB40A**	20M40 20S40 20S41	21MB40M 21MB40P 21SB40P 21SB40M	21MB40C 21SB40C 21XT4A	20V80* 21SE80**	21SE80A 21SE80C	21ME40 21SE40	21SE40C 21SE40A 21ME40C
Power Requirements	120V, 60 Hz	220V, 50/60 Hz	120V, 60Hz	120V, 60Hz	220V, 50/60Hz	120V, 60Hz	220V, 50/60 Hz	120V, 60 Hz	220V, 50/60Hz
Number of Inputs/Outputs									
Video <sup>1)</sup>	1*/2**	1*/2**	2	2	2	2	2	2	2
S Video <sup>2)</sup>	-	-	-	-	-	1*/-**	-	-	-
Audio <sup>3)</sup>	1*/2**	1*/2**	2	2	2	2*/**	2	2	2
Audio Out <sup>4)</sup>	-	-	-	-	-	1*/**	1	-	-
Speaker Output (W)	3W	3W	3W (M40) 3W x 2 (S40/41)	3W (MB40M/40P) 3W x 2 (SB40M/40P)	3W(MB40C) 3W x 2 (SB40C/XT4A)	5W x 2	5W x 2	3W x 2 (ME40) 4W x 2 (SE40)	4W x 2 (SE40A/40C) 3W x 2 (ME40C)
Power Consumption (W)									
In use (Max.)	75W	80W	80W (M40 ) 90W (S40/41 )	80W (MB40M/40P) 90W (SB40M/40P)	85W (MB40C) 95W (SB40C)/(XT4A)	100W	105W	90W	95W
In standby	8W	10W	8W	8W	10W	8W	10W	8W	10W
Dimensions (W/H/D) (mm) (in.)	358 x 342 x 401 mm 14 <sup>1</sup> / <sub>8</sub> x 13 <sup>1</sup> / <sub>2</sub> x 15 <sup>3</sup> / <sub>4</sub> in.	358 x 342 x 401 mm 14 <sup>1</sup> / <sub>8</sub> x 13 <sup>1</sup> / <sub>2</sub> x 15 <sup>3</sup> / <sub>4</sub> in.	522 x 477 x 479 mm 21 x 18 <sup>3</sup> / <sub>4</sub> x 18 <sup>7</sup> / <sub>8</sub>	522 x 477 x 479 mm 21 x 18 <sup>3</sup> / <sub>4</sub> x 18 <sup>7</sup> / <sub>8</sub>	522 x 477 x 479 mm 21 x 18 <sup>3</sup> / <sub>4</sub> x 18 <sup>7</sup> / <sub>8</sub>	556 x 464.5 x 474.9 mm 21 <sup>7</sup> / <sub>8</sub> x 18 <sup>1</sup> / <sub>4</sub> x 18 <sup>2</sup> / <sub>3</sub> in.	556 x 464.5 x 474.9 mm 21 <sup>7</sup> / <sub>8</sub> x 18 <sup>1</sup> / <sub>4</sub> x 18 <sup>2</sup> / <sub>3</sub> in.	610 x 464.5 x 469..5 mm 24 x 18 x 18 <sup>1</sup> / <sub>2</sub> in.	610 x 464.5 x 469..5 mm 24 x 18 x 18 <sup>1</sup> / <sub>2</sub> in.
Mass (kg) (lbs)	10 kg 22 lbs.	10 kg 22 lbs.	21.6 kg 48 lbs.	21.6 kg 48 lbs.	21.6 kg 48 lbs.	22.6 kg 49 lbs. 3 oz.	22.6 kg 49 lbs. 3 oz.	20.6 kg 45 lbs.	20.6 kg 45 lbs.

## Television System

American TV Standard (all models except: KV-14MB40A/21SE40A/21XTA4/21SE80A)  
PAL-M, PAL-N, NTSC (for KV-14MB40A/21SE40A/21XTA4/21SE80A only)

## Channel Coverage

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

## Picture Tube

Trinitron Tube

## Visible Screen Size

13-inch picture measured diagonally  
20-inch picture measured diagonally

## Actual Screen Size

14-inch picture measured diagonally  
21-inch picture measured diagonally

## Antenna

75 ohm external terminal for VHF/UHF

## Supplied Accessories

Remote commander (w/2 size AA (R6) batteries)

RM-Y156: (KV-13M40/13M50/14MB40/20M40/21MB40M/  
21MB40P/21MB40C/14MB40C/14MB40A/21ME40/21ME40C only)

RM-156W: (KV-13M51/20S41 only)

RM-Y155: (KV-20S40/21SB40M/21SB40P)

21SB40C/21XT4A/21SE40/21SE40C/21SE40A only)

RM-Y135A: (KV-20V80/21SE80/21SE80A/21SE80C only)

Antenna Dipole (7 models)

(KV-21SE80A/21SE40A/21XT4A/13M40/13M50/13M51/14MB40A only)

Antenna Connector

(all models except: KV-20M40/20S40/20S41/21SE80/21SE80C/20V80)

## Optional Accessory

Antenna dipole (KV-20M40/20S40/20S41 only)

<sup>1)</sup> 1 Vp-p 75 ohms unbalanced, sync negative

<sup>2)</sup> Y: 1 Vp-p 75 ohms unbalanced, sync negative

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

<sup>3)</sup> 500 mVrms (100% modulation), Impedance: 47 kilohms

<sup>4)</sup> More than 408 mVrms at the maximum volume setting (variable)

More than 408 mVrms (fix)

Impedance: 50 kilohms

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

**(●) ® SRS (SOUND RETRIEVAL SYSTEM)**

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

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USP 4638258.4482866. BBE and BBE symbol are  
trademarks of BBE Sound, Inc.

(For KV-21SE80/21SE80A/21SE80C/20V80 only)

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## WARNINGS AND CAUTIONS

### CAUTION!

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

### WARNING!!

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

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

### ATTENTION

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

### ATTENTION!!

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

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

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

## SELF-DIAGNOSTIC FUNCTION

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

### DIAGNOSTIC TEST INDICATORS

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

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

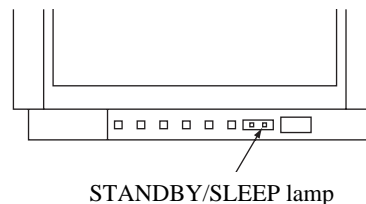
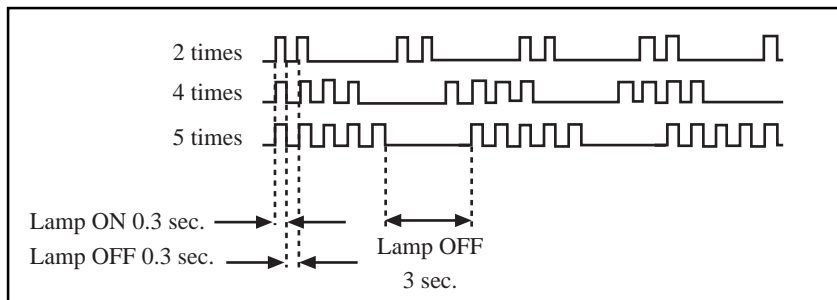
Diagnostic Item Description	No. of times STANDBY/TIMER lamp flashes	Self-diagnostic display/ Diagnostic result	Probable Cause Location	Detected Symptoms
* Power does not turn on	Does not light	—	* Power cord is not plugged in. * Fuse is burned out (F601)	* Power does not come on. * No power is supplied to the TV. * AC power supply is faulty.
* +B overcurrent (OCP)	2 times	2:0 or 2:1	* H.OUT (Q502) is shorted. (A board) * IC751 (for 13"), IC701 and Q701 ( for 20"/21") is shorted. (C board)	* Power does not come on. * Load on power line is shorted.
* Vertical deflection stopped	4 times	4:0 or 4:1	* +13V is not supplied. (A board) * IC 541 is faulty (A board)	* Has entered standby state after horizontal raster. * Vertical deflection pulse is stopped. * Power line is shorted or power supply is stopped.
* White balance failure (not balanced)	5 times	5:0 or 5:1	* Video OUT (Q394 to 392) is faulty. (A board) * IC301 is faulty. (A board) * G2 is improperly adjusted. (Note 2)	* No raster is generated. * CRT cathode current detection reference pulse output is small.

Note 1: If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.

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

Note 2: Refer to Screen (G2) Adjustment in Section 3-4 of this manual.

## DISPLAY OF STANDBY/TIMER LIGHT FLASH COUNT



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

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

## STOPPING THE STANDBY/TIMER FLASH

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

## SELF-DIAGNOSTIC SCREEN DISPLAY

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

### [To Bring Up Screen Test]

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

Screen display → channel [5] → Sound volume [−] → Power ON  
↑

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

### Self-Diagnostic screen display

SELF DIAGNOSTIC		
2:	0	←-----Numeral "0" means that no fault has been detected.
3:	N/A	0
4:		0
5:	1	←-----Numeral "1" means a fault has been detected one time only.
101:	N/A	0

## HANDLING OF SELF-DIAGNOSTIC SCREEN DISPLAY

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

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

### [Clearing the result display]

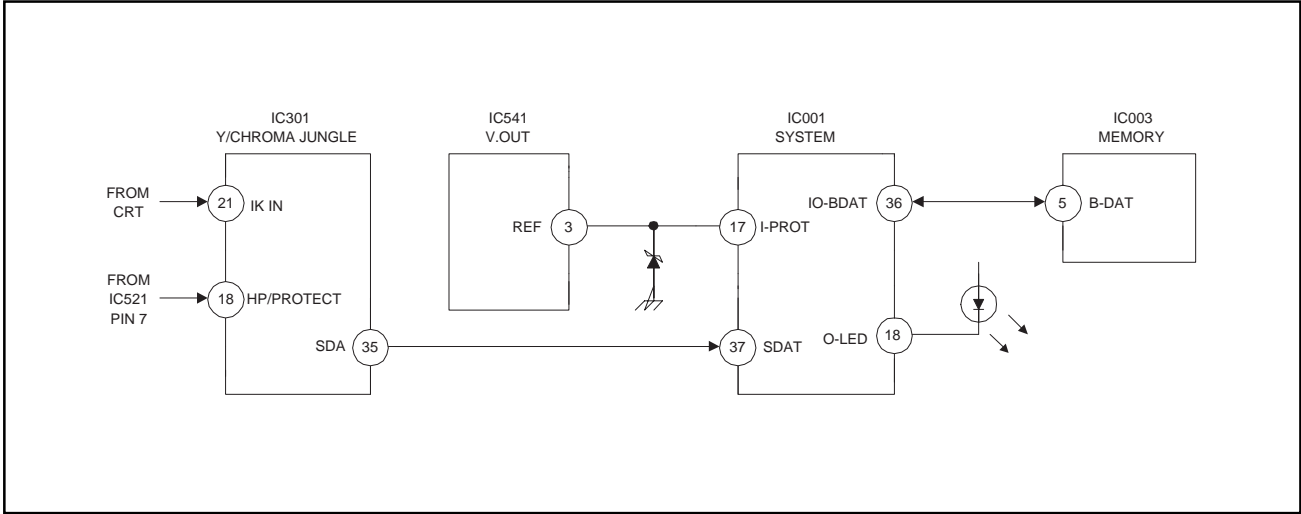
To clear the result display to "0", press buttons on the remote commander sequentially as shown below when the diagnostic screen is being displayed.

Channel [8] → [ENTER]

### [Quitting Self-diagnostic screen]

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

6. SELF-DIAGNOSTIC CIRCUIT



+B overcurrent (OCP)

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

Vertical deflection stopped

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

White balance failure

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

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

## SAFETY CHECK-OUT

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

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or 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 cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

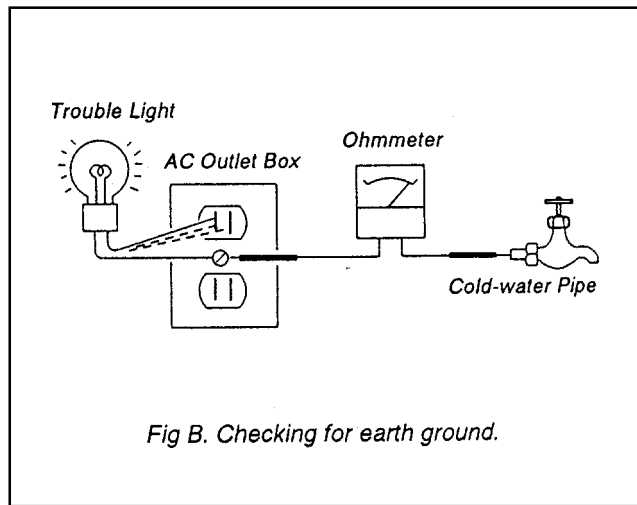
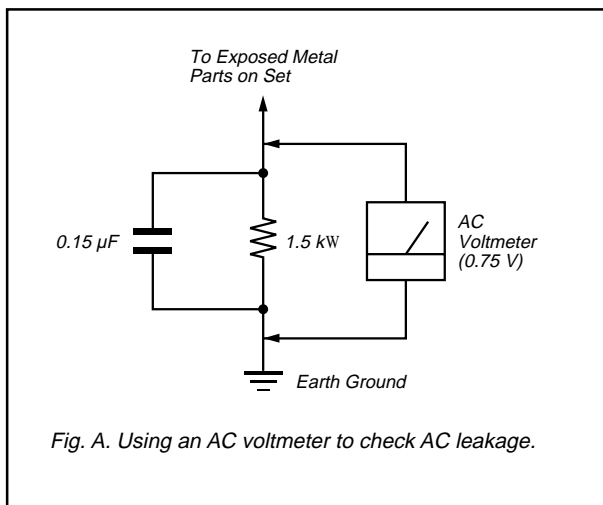
### LEAKAGE TEST

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

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

### HOW TO FIND A GOOD EARTH GROUND

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



## SECTION 1-1 GENERAL

The instructions mentioned in this section are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

### Warnings and Cautions

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



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**CAUTION**  
When using TV games, computers, and similar products with your TV, keep the brightness and contrast functions at low settings. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high brightness or contrast setting, the image can be permanently imprinted onto the screen. Continuously watching the same channel can cause the imprint of station logos onto the TV screen. These types of imprints are not covered by your warranty because they are the result of misuse.

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

#### Safety Precautions

- Operate the TV only on 120 V AC.
- One blade of the power plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer. TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- If any liquid or solid object falls into the TV, unplug it and have it checked by qualified personnel before operating it further.
- Unplug the TV from the wall outlet if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

For more safety information, see the "IMPORTANT SAFEGUARDS" leaflet packed with your TV.

#### Protecting the TV

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

**Note on CAPTION VISION**  
This television receiver provides display of television closed captioning in accordance with § 15.119 of the FCC rules.

**Note to CATV System Installer**  
Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

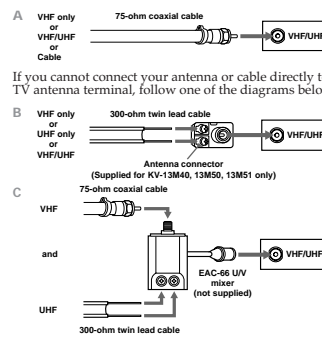
Use of this television for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

### Step 1: Connecting the TV

The following steps guide you through your initial set up. Check the model number of your TV (located on the front of this manual) and select the appropriate diagram.

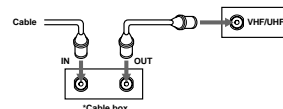
#### Connecting an Indoor, Outdoor or Cable Antenna

This connection offers the best picture quality. Connection is made directly from the cable or antenna to the TV.



#### Connecting to a Cable TV System Through a Cable Box

Some pay cable TV systems use scrambled or encoded signals that require a cable box\* to view all channels.



#### Note

- If you will be controlling all channel selection through your cable box, you should consider using the CHANNEL FIX feature discussed on page 11.

Warnings and Cautions • Connecting the TV • Connecting an Antenna • Connecting a Cable Box

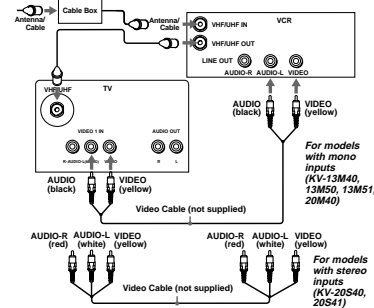
### Connecting a VCR

See your VCR instructions to set up the VCR. After connecting the VCR to the TV, you will be able to do the following:

- Watch video tapes
- Record one TV program while viewing another

#### Notes

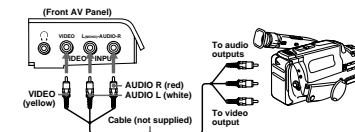
- If your cable system requires the use of a cable box, install it between the cable and the VCR.
- For a monaural VCR, connect the audio output of the VCR to the AUDIO L (MONO) on the TV.



### Connecting a Camcorder

All models except KV-13M40

Use this connection to view a video tape from a camcorder.



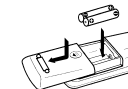
#### Notes

- For a monaural camcorder, connect the audio output of the camcorder to AUDIO L (MONO) on the TV.
- If you are connecting your camcorder to a monaural TV (KV-13M50, 13M51, 20M40 only), plug the white audio connector into the AUDIO L input on the TV.
- You can also connect a camcorder to inputs on the rear of the TV (all models).

### Step 2: Using the Remote Control

#### Inserting Batteries

Insert two size AA (R6) batteries (supplied) by matching the + and - on the batteries to the + and - inside the battery compartment. With normal use, the batteries should last for approximately six months.

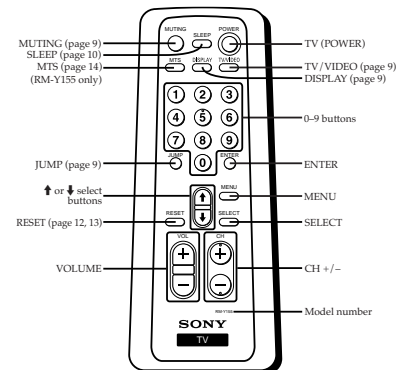


#### Notes

- Remove the batteries to avoid possible damage from battery leakage if you will not be using the remote control for an extended period of time.
- Handle the remote control with care. Avoid dropping it, getting it wet, or placing it in direct sunlight, near a heater, or where the humidity is high.

#### Remote Control Operation Buttons

In the instructions that follow, please refer to the buttons on your remote control. The remote control shown is model RM-Y155.





## Step 3: Setting Menu Language

### Changing the Menu Language

#### Except Canadian models

The menu illustrations are for KV-20S40. Your on-screen menus may not look like those used within this manual. When a feature is only available to a limited set of models, those models will be listed.

If you want to view the menus in Spanish, you can change the menu language.

#### 1 Press MENU.

The main menu appears. Move the cursor  $\blacktriangle$  or  $\blacktriangledown$  to the SET UP menu, press SELECT.



#### 2 Press $\blacktriangle$ or $\blacktriangledown$ to move the cursor to LANGUAGE and press SELECT.

ENGLISH will appear red.



#### 3 Press $\blacktriangle$ or $\blacktriangledown$ to select ESPAÑOL and press SELECT.

ESPAÑOL will turn red and the menu will appear in Spanish.



#### 4 Press MENU to return to the TV program.

## Step 4: Setting up Your Channels

### Setting Up the TV Automatically

#### KV-20M40, 20S40, 20S41 only

The Easy Set Up Guide allows you to set up the on-screen language and set all receivable channels. (The Easy Set Up Guide screen appears every time you turn on the TV until you perform AUTO PROGRAM).

#### 1 Press POWER to turn on your TV.

The Easy Set Up Guide screen appears.

#### 2 (Except Canadian Models) Press CH + to select English screens or CH - to select Spanish screens.

Press VOL + to continue or VOL - for a DEMO of functions and menus.



#### To perform this function again

Press the SET UP button on your TV.

### Auto Programming Your Channels (AUTO PROGRAM)

The AUTO PROGRAM feature allows you to set all receivable channels in one step. After this function is completed, you may delete unwanted channels or add additional channels.

#### Notes

- If the TV is set to VIDEO, you cannot run AUTO PROGRAM. Press TV/VIDEO on the remote control until a channel number appears.
- It is usually best to preset channels during the day when more channels are broadcasting and receivable.

#### 1 Press MENU.



#### 2 Move the cursor $\blacktriangle$ or $\blacktriangledown$ to the SET UP menu and press SELECT.

The SET UP menu appears.



#### 3 Move the cursor $\blacktriangle$ or $\blacktriangledown$ to CHANNEL SET UP and press SELECT.

#### 4 Move the cursor $\blacktriangle$ or $\blacktriangledown$ to AUTO PROGRAM and press SELECT.

- Pressing any button on the remote control while AUTO PROGRAM is scanning and presetting channels will cause AUTO PROGRAM to stop.
- When you run AUTO PROGRAM your CHANNEL FIX and ON/OFF TIMER settings will be erased.



### Skipping or Adding Channels (CHANNEL SKIP/ADD)

After you run AUTO PROGRAM, you can skip unnecessary channels or add new ones.

- Press MENU and select the SET UP menu.
- Move the cursor to CHANNEL SET UP and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to CHANNEL SKIP/ADD and press SELECT.



- To skip or add a channel:
  - Press CH + or - or 0-9 to enter the desired channel.
  - Press SELECT to SKIP or ADD.



- To skip or add other channels, repeat step 4.
- Press MENU to return to the TV program.

#### Note

- If a channel you want to add was not received by AUTO PROGRAM, you must use the 0-9 buttons to manually add the channel.

### Setting Cable TV On or Off (CABLE)

If you have connected the TV to a cable TV system, set CABLE to ON. If you will be using an antenna, set CABLE to OFF to receive VHF/UHF channels.

- Press MENU.
- Move the cursor to the SET UP menu and press SELECT.
- Move the cursor to CHANNEL SET UP and press SELECT.



- Move the cursor to CABLE and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to select ON or OFF.
- Press SELECT.
- Press MENU to return to the TV program.



After adjusting the CABLE setting, you will need to run AUTO PROGRAM. (See page 7).

#### Note

- If no picture appears, the TV may be set to a video input and CABLE can not be selected. Press TV/VIDEO until a channel number appears, then follow steps 1-6.

## Watching the TV

Press POWER to turn the TV on.

#### Note

- If VIDEO is on the screen, press TV/VIDEO until a channel number appears.

### Selecting a Channel Directly

Press 0-9 to select a channel.

The channel changes after 2 seconds, or you can press ENTER for immediate selection.



### Scanning Channels

Press CH +/- until the channel appears.

#### Note

- Keeping the CH + or - button pressed, allows you to rapidly scan to the desired channel.



### Jumping Quickly Between Two Channels

Press JUMP.

The TV alternates or jumps between the last two channels viewed.



#### Note

- You can only jump to channels you have selected with the 0-9 keys.

### Muting the Sound

Press MUTING.

MUTING appears on the screen.

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



### Displaying On-Screen Information

Use the DISPLAY key to check current time, channel and Multichannel TV Sound (MTS).

#### 1 Press DISPLAY.

The channel number and local time (if set), are displayed. The TV displays the MTS mode if SAP or STEREO are selected and available (KV-20S40, 20S41 only). The MTS mode display disappears after 4 seconds.

#### 2 Press DISPLAY again.

CCI (default setting) appears on the screen for a few seconds. A printed version of the dialog and sound effects will appear, if available.

#### 3 To turn off CAPTION VISION, press DISPLAY again until DISPLAY OFF appears.

It will take a few seconds for DISPLAY OFF to disappear.

#### Notes

- See page 12 for more information about CAPTION VISION.
- See page 14 for more information about MTS.

### Watching Video Tapes

#### 1 Press TV/VIDEO until the correct video input appears.



#### 2 Press PLAY on your VCR to view the video tape.

#### 3 Press TV/VIDEO to return to the TV program.

### Listening with Headphones or an Earphone

Plug the headphones or earphone into the jack on the front of the TV. Using headphones will turn off the sound to the TV speakers.

#### Note

- If your TV is monaural, the monaural sound will be heard from both headphones.

## Additional Features

### Setting the SLEEP Timer

The SLEEP timer programs the TV to stay on for a length of time and then shut off automatically.

- Press SLEEP until the length of time you want the TV to stay on appears. SLEEP appears one minute before the TV shuts off.
- To cancel the sleep timer, press SLEEP again until SLEEP OFF appears, or turn off the TV.



### Setting DAYLIGHT SAVING

All models except KV-13M40

You can program DAYLIGHT SAVING to automatically adjust the time.

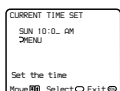
- Press MENU and select the TIMER menu.
- Move the cursor to DAYLIGHT SAVING and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to select YES or NO based on the following options:  
Spring: Select YES, the current time moves one hour ahead.  
Fall: Select NO, the current time moves back one hour.



### Setting the clock (CURRENT TIME SET)

All models except KV-13M40

- Press MENU and select the TIMER menu.
- Move the cursor to CURRENT TIME SET and press SELECT.
- Set the current day.  
Press SELECT and press  $\blacktriangle$  or  $\blacktriangledown$  until the day entry is highlighted, press SELECT.
- Set the current time.  
Press SELECT until the time entry is highlighted.  
Press  $\blacktriangle$  or  $\blacktriangledown$  until the current hour is displayed and press SELECT.  
Press  $\blacktriangle$  or  $\blacktriangledown$  until the current minute is displayed and press SELECT.



### Setting the ON/OFF TIMER

All models except KV-13M40

You can program your TV for scheduled viewing using the ON/OFF TIMER. The CURRENT TIME SET must be set in order for the ON/OFF TIMER to function.

- Press MENU and select the TIMER menu.
- Move the cursor to ON/OFF TIMER and press SELECT.



## Additional Features (continued)

### 3 Enter the ON/OFF TIMER setting.

- Press SELECT until the day entry is highlighted.  
Press  $\blacktriangle$  or  $\blacktriangledown$  to cycle through the day options.  
Select an entry and press SELECT.
- Press SELECT until the time entry is highlighted.  
Press  $\blacktriangle$  or  $\blacktriangledown$  to set the hour and press SELECT.  
Press  $\blacktriangle$  or  $\blacktriangledown$  to set the minute and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to set the duration, up to six hours, and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to select the channel and press SELECT.  
The TIMER indicator, on the front of the TV, will light up.



To erase your ON/OFF TIMER settings

Press RESET, while in the TIMER menu.

#### Note

- If you exit the ON/OFF TIMER menu while setting the TIMER, your settings will be saved.

### Setting FAVORITE CHANNEL

This feature provides quick access to your favorite channels.

- Press MENU and select the SET UP menu.
- Move the cursor to FAVORITE CHANNEL and press SELECT.



- Press  $\blacktriangle$  or  $\blacktriangledown$  to select AUTO or MANUAL and press SELECT.  
Selecting AUTO will display the last five channels chosen with the remote control's 0-9 buttons.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to select 1, 2, 3, 4 or 5 and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  to highlight the desired channel and press SELECT.

To use FAVORITE CHANNEL

Press SELECT when in normal viewing mode. Your options will appear on the screen.

### Setting CHANNEL FIX

This feature is useful when you want to control all channel selection through a cable box or video equipment.

- Press MENU and select the SET UP menu.
- Move the cursor to  $\blacktriangle$  FAVORITE CHANNEL and press SELECT.



- Select CHANNEL FIX and set your TV to one of the following options:  
2-6: When the cable box is connected to VHF/UHF input.  
Use your cable box remote to change channels.



VIDEO 1: When you have connected video equipment (e.g. DSS receiver) and you want the TV fixed to it. You will be able to alternate between video sources.

OFF: When you want to switch CHANNEL FIX off.

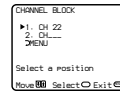
#### Notes

- For information on connecting a cable box, see page 3.
- ON/OFF TIMER settings will be erased when CHANNEL FIX is set.
- FAVORITE CHANNEL can not be accessed when CHANNEL FIX is set.

### Blocking out a Channel (CHANNEL BLOCK)

This feature is useful in preventing child access to designated channels.

- Press MENU and select the SET UP menu.
- Move the cursor  $\blacktriangle$  or  $\blacktriangledown$  to CHANNEL BLOCK and press SELECT.



- Move the cursor to 1 or 2 and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  until you reach the channel you want to block and press SELECT.

When you try to tune to the blocked channel, BLOCKED will appear on the screen. CAPTION VISION will also be blocked.

To erase your CHANNEL BLOCK settings

Press RESET, while in the CHANNEL BLOCK menu.

### Selecting CAPTION VISION

Some programs are broadcast with CAPTION VISION. These services are sometimes limited to specific broadcasting networks and may not be available in your area. (CC1 is the default setting).

- Press MENU and select the SET UP menu.
- Move the cursor  $\blacktriangle$  or  $\blacktriangledown$  to CAPTION VISION and press SELECT.
- Press  $\blacktriangle$  or  $\blacktriangledown$  and set your TV to one of the following options:



Choose	To Display
CC1, 2, 3 or 4	A printed version of the dialog or sound effects of a program. (The default setting is CC1).
TEXT 1, 2, 3 or 4	Station/network related information that usually is not related to the program.
XDS (Extended Data Services)	A program's type, name, length and call letters.

- Press DISPLAY.

The caption will appear in a few seconds, if available.

- To turn off CAPTION VISION, press DISPLAY until DISPLAY OFF appears.

#### Notes

- Captions disappear for a few seconds when you press the MUTING button.
- Captions may appear with a white box or other errors, if you have poor reception on the channel.

## Using the VIDEO Menu

### Adjusting the VIDEO Settings

You can adjust the PICTURE, BRIGHTNESS, COLOR, HUE, and SHARPNESS of any TV image.

- Press MENU and select the VIDEO menu.



- Move the cursor  $\blacktriangle$  or  $\blacktriangledown$  to the feature you want to adjust and press SELECT. See the ADJUSTABLE ITEMS chart below for a list of the adjustments you can make.



#### ADJUSTABLE ITEMS

Item	Press $\blacktriangle$ to	Press $\blacktriangledown$ to
PICTURE	Increase the contrast	Decrease the contrast
BRIGHTNESS	Brighten the picture	Darken the picture
COLOR	Increase color intensity	Decrease color intensity
HUE	Increase the green tones	Decrease the green tones
SHARPNESS	Sharpen the picture	Soften the picture

- Press MENU to return to the TV program.

Restoring the factory video settings


Press RESET, while in the VIDEO menu.

## Audio Menu

### Selecting Stereo or Bilingual Programs (MTS)

*KV-20S40, 20S41 only*

The Multichannel TV Sound (MTS) feature allows you to enjoy Stereo Sound (STEREO), Second Audio Programs (SAP), or Monaural Sound (MONO) when available.

- 1 Press **MENU** and select the **AUDIO**  menu.
- 2 Move the cursor to **MTS** and press **SELECT**.



- 3 Press **▲** or **▼** to select **STEREO**, **SAP**, or **MONO** and press **SELECT**.

Choose	To
STEREO	Listen to stereo sound.
SAP	Listen to bilingual and other programs.
MONO	Reduce noise during poor stereo broadcasts.

#### For Direct MTS Access

Press **MTS** repeatedly to cycle through the MTS options.

#### Note

- If your TV does not have sound, try changing your MTS setting.

## Troubleshooting

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

Problem	Suggestion
<b>No picture, no sound</b>	<ul style="list-style-type: none"><li>• Make sure the power cord is connected.</li><li>• If a red light keeps flashing on the front of your TV, for more than a few minutes, call your local service center.</li><li>• Check the TV/VIDEO setting: when watching TV, set to TV; when watching video tapes, set to VIDEO (page 9).</li><li>• Make sure the batteries have been inserted correctly into the remote control.</li><li>• Try another channel. It could be station trouble.</li></ul>
<b>Poor or no picture, good sound</b>	<ul style="list-style-type: none"><li>• Adjust <b>PICTURE</b> in the VIDEO menu (page 13).</li><li>• Adjust <b>BRIGHTNESS</b> in the VIDEO menu (page 13).</li><li>• Check the antenna and/or cable connections (page 3).</li></ul>
<b>Good picture, no sound</b>	<ul style="list-style-type: none"><li>• Press <b>MUTING</b> so that <b>MUTING</b> disappears from the screen (page 9).</li><li>• Check your <b>AUDIO</b> settings. Your TV may be set to <b>SAP</b> (page 14).</li></ul>
<b>No color</b>	<ul style="list-style-type: none"><li>• Adjust <b>COLOR</b> in the VIDEO menu (page 13).</li><li>• Make sure that a black and white program is not being broadcast.</li></ul>
<b>Only snow appears on the screen</b>	<ul style="list-style-type: none"><li>• Check the <b>CABLE</b> setting in the SET UP menu (page 8).</li><li>• Check the antenna and/or cable connections (page 3).</li><li>• Make sure the channel selected is currently broadcasting.</li></ul>
<b>Dotted lines or stripes</b>	<ul style="list-style-type: none"><li>• Adjust the antenna.</li><li>• Move the TV away from other electronic equipment. Some electronic equipment can create electrical noise, which can interfere with TV reception.</li></ul>
<b>Double images or ghosts</b>	<ul style="list-style-type: none"><li>• Check your outdoor antenna or call your cable service.</li></ul>
<b>Cannot receive higher number channels (UHF) when using an antenna</b>	<ul style="list-style-type: none"><li>• Make sure <b>CABLE</b> is set to <b>OFF</b> in the SET UP menu (page 8).</li><li>• Use <b>AUTO PROGRAM</b> to add channels that are not presently in the memory (page 7).</li></ul>
<b>Cable stations don't seem to work</b>	<ul style="list-style-type: none"><li>• Make sure <b>CABLE</b> is set to <b>ON</b> in the SET UP menu (page 8).</li><li>• Use <b>AUTO PROGRAM</b> to add channels that are not presently in the memory (page 7).</li></ul>
<b>Remote control does not operate</b>	<ul style="list-style-type: none"><li>• Batteries could be weak. Replace them (page 5).</li><li>• Move the TV 3–4 feet away from fluorescent lights.</li></ul>
<b>The TV needs to be cleaned</b>	<ul style="list-style-type: none"><li>• Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzene, which might damage the finish of the cabinet.</li></ul>
<b>The TV is fixed to one channel</b>	<ul style="list-style-type: none"><li>• Try turning <b>CHANNEL FIX</b> off (page 11).</li><li>• Use <b>AUTO PROGRAM</b> to add receivable channels that are not presently in the TV memory (page 7).</li></ul>

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

## SECTION 1-2 GENERAL

Las instrucciones contenidas en esta sección, son abstractos del manual de instrucciones y operacion. La numeracion de las paginas hacen referencia el numero de pagina en el manual original.

### Advertencias

Para evitar el riesgo de incendios o de descargas eléctricas, no exponga al televisor a la lluvia ni a la humedad.



Este símbolo sirve para indicar al usuario la presencia de altas tensiones sin aislar el interior de este producto, las que pueden ser de una magnitud que presente riesgo de descargas eléctricas.

Este símbolo sirve para indicar al usuario que el manual que acompaña a este producto contiene instrucciones importantes referentes al funcionamiento y mantenimiento del producto.

#### PRECAUCIÓN

Al utilizar videojuegos, computadoras o productos similares con el televisor, mantenga las preferencias de brillo y contraste a un nivel bajo. Si una imagen fija permanece en la pantalla durante mucho tiempo con elevada intensidad de brillo o contraste, la imagen puede quedar grabada en la pantalla de forma permanente. Igualmente, ver continuamente el mismo programa de televisión podría dejar grabada en la pantalla el logotipo de la emisora. La garantía no cubre estas quemaduras de la pantalla, ya que se deben al mal uso del aparato.

Cualquier cambio o modificación que no se detalla expresamente en el presente manual podría anular su autorización para emplear este aparato.

#### Precauciones de seguridad

- Alimente el televisor exclusivamente con 120 V CA (con excepción KV-14MB40C, 21MB40C, 21ME40C, 21SB40C, 21SE40C).
- Alimente el televisor exclusivamente con 220 V CA (sólo KV-14MB40C, 21MB40C, 21ME40C, 21SB40C, 21SE40C).

- Por motivos de seguridad, un contacto de la clavija del cable eléctrico de este aparato es más ancho que el otro y la clavija entrará en el enchufe en solamente una posición. Si no puede introducirla totalmente en el enchufe, consulte con su concesionario. PARA EVITAR DESCARGAS ELÉCTRICAS, NO USE ESTA CLAVIJA POLARIZADA A MENOS QUE LOS CONTACTOS QUEDEN COMPLETAMENTE DENTRO DEL ENCHUFE.

- Si algún líquido u objeto cae dentro del televisor, desenchufe el aparato y llévelo a revisión por un técnico calificado antes de volver a utilizarlo.
- Si no va a utilizar el televisor durante varios días, desconéctelo. Para desenchufar el cable eléctrico, sujételo por la clavija, nunca tire del cable mismo.

Para mayores informes sobre medidas de seguridad, consulte el folleto "NORMAS IMPORTANTES SOBRE SEGURIDAD" que acompaña al televisor.

#### Protección del televisor

- Para evitar el sobrecalentamiento interno, no cubra las rejillas de ventilación.

- No instale el televisor en un lugar caliente o húmedo, ni donde esté expuesto a cantidades excesivas de polvo o a vibraciones mecánicas.

#### Nota sobre CAPTION VISION

Este aparato de televisión permite ver texto superpuesto a las imágenes, en cumplimiento con lo dispuesto en el inciso 15.119 de las normas de la Comisión Federal de Comunicaciones (FCC) de EUA.

#### Nota para el técnico que instala el sistema de cable

El inciso 820-40 de NEC contiene normas para la puesta a tierra y en particular, dispone que la tierra del cable debe conectarse al sistema de puesta a tierra del edificio, en el punto más cercano a la entrada del cable como sea factible.

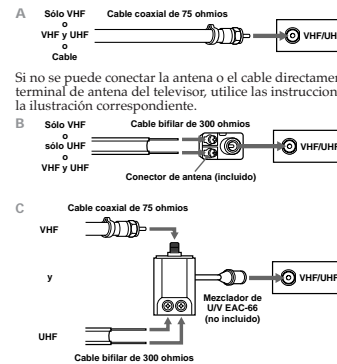
El empleo de este televisor para fines que no sean el de ver en privado programas de televisión de UHF, de VHF o transmitidos por compañías de cable para uso del público en general, puede requerir la autorización de la emisora o compañía de cable, del propietario del programa o de ambos.

### Paso 1: Instalación

Este instructivo le guiará durante la instalación de su televisor. Siga las indicaciones de los dibujos correspondientes a su televisor (el número de modelo aparece en la portada de este manual) y seleccione el diagrama apropiado.

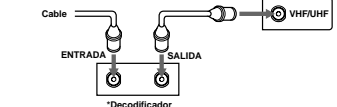
#### Conexión a Antena Interior, Exterior o de Cable

Utilice esta conexión para lograr una óptima calidad de imagen. Se conecta el cable o la antena directamente al televisor.



#### Conexión a Sistema de Cable por Medio de Decodificador.

Algunos sistemas de televisión por cable de paga usan señales deformadas o codificadas que requieren un decodificador\* para poder ver todos los canales.



#### Nota

- Si va a hacer la selección de todos los canales a través de su decodificador, debe usted considerar la posibilidad de usar la función FIJAR CANAL, que se describe en la página 11.

Advertencias • Instalación • Conexión a Antena • Conexión a Decodificador

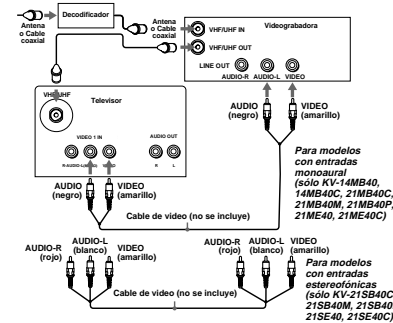
#### Conexión a Videgrabadora

Consulte las instrucciones para instalar la videgrabadora. Una vez conectada la videgrabadora al televisor, podrá:

- Ver videocintas
- Grabar un programa de televisión mientras ve otro

#### Notas

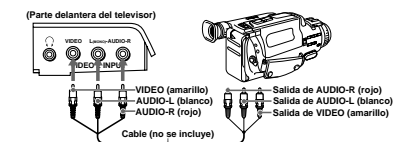
- Si su sistema de cable requiere de un decodificador, conéctelo entre el cable y la videgrabadora.
- Si utiliza una videgrabadora monoaural, conecte la salida de audio de la videgrabadora al conector AUDIO L (MONO) del televisor.



#### Conexión a Cámara de Video

##### Con excepción KV-14MB40, 14MB40C

Utilice esta conexión para ver la videocinta de una cámara de video.



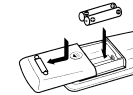
#### Notas

- Si utiliza una cámara de video monoaural, conecte la salida de audio de la cámara al enchufe AUDIO L (MONO) del televisor.
- Si conecta su cámara de video a un televisor monoaural (sólo KV-14MB40, 14MB40C, 21MB40C, 21MB40P, 21ME40, 21ME40C), enchufe la clavija blanca de audio de la cámara en la entrada de AUDIO L del televisor.
- También puede conectar su cámara de video a las entradas localizadas en la parte posterior del televisor (todos los modelos).

### Paso 2: Uso del Control Remoto

#### Instalación de las Pilas

Inserte dos pilas AA (R6) (se incluyen). Asegúrese que los signos + y - de las pilas concuerdan con los signos + y - dentro del control remoto. Las pilas deben durar aproximadamente 6 meses con uso normal.

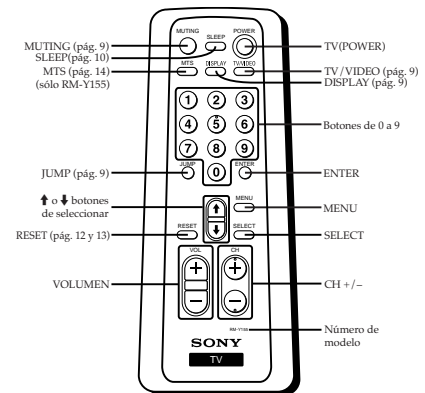


#### Notas

- Para evitar el daño que podría causar la fuga de electrolito de las pilas, síquelas del compartimiento si no piensa utilizar el control remoto durante largo tiempo.
- Maneje el control remoto con cuidado. No lo deje caer ni permita que se moje. No lo coloque bajo la luz solar directa, cerca de un calentador o en lugares húmedos.

#### Operación de los Botones del Control Remoto

Las siguientes instrucciones se refieren a los botones de su control remoto. El dibujo corresponde al control remoto RM-Y155.



#### Si pierde su control remoto

##### Con excepción KV-14MB40, 14MB40C

Usted puede usar los botones en la parte delantera del televisor para controlar los menús y cambiar los canales.

Conexión a Videgrabadora • Conexión a Cámara de Video • Uso del Control Remoto • Instalación de las Pilas • Operación de los Botones del Control Remoto

### Paso 3: Ajuste de Idioma de los Menús

#### Cambio de Idioma de los Menús

Las ilustraciones de los menús que se utilizan corresponden al modelo KV-21SE40. Es posible que sus menús en pantalla no aparezcan igual que aquellos utilizados en este manual. Al presentar funciones que se encuentren en otros modelos, el manual indicará los números de modelo correspondientes.

Si prefiere ver los menús en inglés, puede cambiar el idioma de los menús.

- 1 Oprima **MENU**. Aparece el menú principal. Coloque el cursor  $\blacktriangle$  o  $\blacktriangledown$  en el menú de **PREFERENCIAS** y oprima **SELECT**.



- 2 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para colocar el cursor en **LENGUAJE** y oprima **SELECT**. La palabra **ESPAÑOL** se pondrá roja.



- 3 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para colocar el cursor en **ENGLISH** y oprima **SELECT**. **ENGLISH** se pondrá roja y los menús aparecerán en inglés.



- 4 Para volver a la pantalla normal, oprima **MENU**.

**Nota**

- Con excepción de los modelos KV-14MB40, 14MB40C, usted puede controlar los menús usando los botones en la parte delantera del televisor siguiendo las instrucciones en la pantalla.

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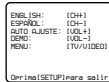
### Paso 4: Programación de Canales

#### Programación Automática del Televisor

**Con excepción KV-14MB40, 14MB40C**

La función Guía de Programación Fácil le permitirá seleccionar el idioma de los menús y sincronizar automáticamente todos los canales que el televisor pueda recibir. (Mientras no lleve a cabo la **AUTO PROGRAMACION**, la pantalla que muestra la Guía de Programación Fácil aparecerá cada vez que se encienda el televisor).

- 1 Oprima **POWER** para encender el televisor. Aparecerá en pantalla la Guía de Programación Fácil.
- 2 Oprima **CH+** para que los menús aparezcan en inglés o **CH-** para que aparezcan en español.
- 3 Oprima **VOL+** para continuar o **VOL-** para una demostración de las funciones y menús.



Para repetir Auto Ajuste

Oprima **SET UP** en la parte delantera del televisor.

#### Programación Automática de los Canales (AUTO PROGRAMACION)

La función de **AUTO PROGRAMACION** le permite programar en un solo paso todos los canales que su televisor pueda recibir. Después, podrá omitir los canales que no desee incluir o añadir otros.

- Notas**
- Si el televisor está ajustado a una entrada de **VIDEO**, no podrá utilizar **AUTO PROGRAMACION**. Oprima **TV/VIDEO** del control remoto hasta que aparezca un número de canal.
  - Se recomienda programar los canales durante el día, cuando es mayor el número de canales que están transmitiendo.

- 1 Oprima **MENU**.



- 2 Coloque el cursor  $\blacktriangle$  o  $\blacktriangledown$  en el menú de **PREFERENCIAS** y oprima **SELECT** o **CH+**. Aparece el menú de **PREFERENCIAS**.



- 3 Coloque el cursor  $\blacktriangle$  o  $\blacktriangledown$  en **AJUSTE DE CANAL** y oprima **SELECT**.

- 4 Coloque el cursor  $\blacktriangle$  o  $\blacktriangledown$  en **AUTO PROGRAMACION** y oprima **SELECT**. En la pantalla aparece **AUTO PROGRAMACION** y el televisor empezará a buscar y programar los canales automáticamente.



#### Notas

- Si oprime cualquier botón del control remoto mientras **AUTO PROGRAMACION** esté activada, esta función cesará.
- Al llevar a cabo función **AUTO PROGRAMACION**, se borrarán sus selecciones de **FIJAR CANAL** y **ENCENDIDO/APAGADO**.

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Ajuste de idioma de los Menús • Programación de canales • Guía de Programación Fácil • Programación Automática de Canales

#### Para Omitir o Añadir Canales (OMITIR/AÑADIR)

Después de efectuar la **AUTO PROGRAMACION**, podrá omitir los canales no deseados o añadir otros.

- 1 Oprima **MENU** y seleccione el menú de **PREFERENCIAS**.
- 2 Coloque el cursor en **AJUSTE DE CANAL** y oprima **SELECT**.
- 3 Oprima  $\blacktriangle$  o  $\blacktriangledown$  en **OMITIR/AÑADIR CANAL** y oprima **SELECT**.



- 4 Para omitir o añadir un canal:

- (1) Oprima **CH +** / **-** o del 0 al 9 para seleccionar el canal que desea.
- (2) Oprima **SELECT** para seleccionar **OMITIR** o **AÑADIR**.



- 5 Para omitir o añadir otros canales, repita el paso 4.

- 6 Oprima **MENU** para volver al programa de televisión.

**Nota**

- Si quiere añadir un canal que no se captó con **AUTO PROGRAMACION**, tendrá que usar los botones de 0 a 9 para añadirlo.

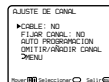
#### Para Activar o Desactivar el Sistema de Cable (CABLE)

Si conecta su televisor a un sistema de cable, cambie la función **CABLE** a **SI**. Si utiliza una antena, cambie la función **CABLE** a **NO** para recibir canales de **VHF/UHF**.

- 1 Oprima **MENU**.
- 2 Coloque el cursor en el menú de **PREFERENCIAS** y oprima **SELECT**.
- 3 Coloque el cursor en **AJUSTE DE CANAL** y oprima **SELECT**.



- 4 Coloque el cursor en **CABLE** y oprima **SELECT**.
- 5 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para seleccionar **SI** o **NO**.
- 6 Oprima **SELECT**.
- 7 Oprima **MENU** para volver al programa de televisión.



Después de ajustar la función de **CABLE** necesita efectuar la **AUTO PROGRAMACION**. (Consulte pág. 7).

**Nota**

- Si la imagen no aparece, es posible que el televisor está ajustado a una entrada de video y no se puede seleccionar **CABLE**. Oprima **TV/VIDEO** hasta que aparezca un número de canal y repita los pasos del 1 al 6.

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### Para ver Programas de Televisión

Oprima **POWER** para encender el televisor.

#### Nota

- Si la indicación **VIDEO** aparece en la pantalla, oprima **TV/VIDEO** para que aparezca un número de canal.

#### Selección Directa de Canales

Oprima los botones del 0 al 9 para seleccionar un canal.

El canal cambiará en 2 segundos, o puede oprimir **ENTER** después de haber seleccionado el canal para un cambio inmediato.



#### Exploración de Canales

Oprima **CH +/-** hasta que aparezca el canal que desea.

- Nota**
- Al mantener **CH +** o **-** oprimido, usted puede llegar rápidamente al canal deseado.



#### Cambio Rápido Entre dos Canales

Oprima **JUMP**.

Oprima este botón para alternar entre dos canales.

- Nota**
- Podrá cambiar rápidamente sólo a un canal que haya seleccionado con los botones de 0 a 9.



#### Eliminación del Sonido

Oprima **MUTING**.

En la pantalla aparece la indicación **MUTING**.

Para restablecer el sonido, vuelva a oprimir **MUTING** u oprima **VOL +**.



#### Información en Pantalla

Utilice el botón **DISPLAY** para ver la hora actual, canal y función de sonido Multicanal (MTS).

- 1 Oprima **DISPLAY**. Aparecerán el número de canal y la hora actual (si está ajustada). También aparecerá la modalidad de sonido multicanal (MTS) que está en uso si se ha seleccionado un segundo programa de audio (SAP) o sonido estéreo (ESTEREO) (Sólo KV-21SB40C, 21SB40M, 21SB40P, 21SE40, 21SE40C).
- 2 Oprima **DISPLAY** una vez más. CC1 (el ajuste de fábrica) aparecerá en la pantalla. Una versión escrita del diálogo aparecerá, si la emisora ofrece este servicio.
- 3 Para desactivar **CAPTION VISION**, vuelva a oprimir **DISPLAY** hasta que aparezca la indicación **DISPLAY OFF**. **DISPLAY OFF** desaparecerá a los tres segundos.

#### Notas

- Consulte la página 12 para mayores informes sobre **CAPTION VISION**.
- Consulte la página 14 para mayores informes sobre **MTS**.

#### Para ver Videocintas

- 1 Oprima **TV/VIDEO** hasta que aparezca la entrada de video que busca.
- 2 Para ver la cinta, oprima **PLAY** en su videoregrabadora.
- 3 Oprima **TV/VIDEO** para regresar a un programa de televisión.



#### Uso de Auriculares

Introduzca la clavija de los auriculares en el enchufe ubicado en la parte delantera del televisor. Al usar los auriculares, automáticamente se apagará el sonido de las bocinas del televisor.

#### Nota

- Si su televisor es monoaural, escuchará el sonido monoaural en ambos auriculares.

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OMITIR/AÑADIR • CABLE • Para ver Programas • Selección de canales • JUMP • Eliminación de Sonido • Información en Pantalla • Videocintas • Auriculares

KV-113M40/50/51, KV-114MB40/40C/40A1, KV-120M40/S40/S41/V80, KV-121SE40/40A/40C/80/80A/80C1, KV-121MB40C/40M/40P1, KV-121ME40/40P1, KV-121SB40/40M/40P1, KV-21XT4A



## Otras Funciones

### Apagado Automático (SLEEP)

La función SLEEP permite que el televisor esté encendido por el período de tiempo que usted indique y después se apague automáticamente.

- 1 Oprima SLEEP hasta que aparezca el número de minutos que desee. Un minuto antes de que el televisor se apague, aparecerá en la pantalla el mensaje SLEEP.
- 2 Para cancelar el apagado automático, vuelva a oprimir SLEEP hasta que aparezca SLEEP OFF o apague el televisor.

**Nota**  
• Si su televisor no recibe una señal en treinta minutos, se apagará automáticamente.

### Para poner HORA DE VERANO

Puedes programar HORA DE VERANO para ajustar automáticamente el tiempo.

- 1 Oprima MENU y seleccione el menú de RELOJ .
- 2 Coloque el cursor en HORA DE VERANO y oprima SELECT.
- 3 Coloque  $\blacktriangle$  o  $\blacktriangledown$  para seleccionar SI o NO basándose en las siguientes opciones:  
Primavera: Seleccione SI para adelantar el reloj una hora.  
Otoño: Seleccione NO para atrasar el reloj una hora.

### Para poner el reloj a la hora (FIJAR HORA ACTUAL)

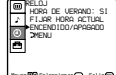
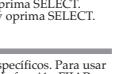
- 1 Oprima MENU y seleccione el menú de RELOJ .
- 2 Coloque el cursor en FIJAR HORA ACTUAL y oprima SELECT.

- 3 Indique el día.  
Oprima SELECT hasta realzar el día.  
Oprima  $\blacktriangle$  o  $\blacktriangledown$  hasta que aparezca el día de hoy y oprima SELECT.
- 4 Indique la hora.  
Oprima SELECT hasta realzar la hora.  
Oprima  $\blacktriangle$  o  $\blacktriangledown$  hasta que aparezca la hora actual y oprima SELECT.  
Oprima  $\blacktriangle$  o  $\blacktriangledown$  hasta que aparezca el minuto actual y oprima SELECT.

### Para usar ENCENDIDO/APAGADO

Usted puede ajustar su televisor para ver programas específicos. Para usar ENCENDIDO/APAGADO, primero tiene que poner a la función FIJAR HORA ACTUAL.

- 1 Oprima MENU y seleccione el menú de RELOJ .
- 2 Coloque el cursor en ENCENDIDO/APAGADO y oprima SELECT.



## Otras Funciones (continuación)

- 3 Indique el día, hora, duración y canal deseados.
  - a Oprima SELECT hasta realzar el renglón correspondiente a los días.  
Oprima  $\blacktriangle$  o  $\blacktriangledown$  para cambiar la opción del día.  
Cuando aparezca el día deseado, oprima SELECT.
  - b Oprima SELECT hasta realzar la hora.  
Oprima  $\blacktriangle$  o  $\blacktriangledown$  para indicar la hora deseada y oprima SELECT.  
Oprima  $\blacktriangle$  o  $\blacktriangledown$  para indicar el minuto deseado y oprima SELECT.
  - c Oprima  $\blacktriangle$  o  $\blacktriangledown$  para indicar la duración deseada, hasta de seis horas, y oprima SELECT.
  - d Oprima  $\blacktriangle$  o  $\blacktriangledown$  para indicar el canal deseado y oprima SELECT. Se encenderá el indicador del reloj en la parte delantera del televisor.

Para borrar las indicaciones seleccionadas mediante ENCENDIDO/APAGADO Oprima RESET mientras se encuentra en el menú de ENCENDIDO/APAGADO.

**Nota**  
• Si se sale del menú de ENCENDIDO/APAGADO al estar programando esta función, quedarán registradas las indicaciones seleccionadas.

### Programación de CANAL FAVORITO

Esta función le dará rápido acceso a sus canales favoritos.

- 1 Oprima MENU y seleccione el menú de PREFERENCIAS .
- 2 Coloque el cursor en CANAL FAVORITO y oprima SELECT.
- 3 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para seleccionar AUTO o MANUAL y oprima SELECT.  
Al seleccionar AUTO, se mostrarán en pantalla los últimos cinco canales escogidos con los botones de 0 a 9 del control remoto.
- 4 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para seleccionar 1, 2, 3, 4 o 5 y oprima SELECT.
- 5 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para seleccionar el canal que desee y oprima SELECT.

Para usar CANAL FAVORITO Oprima SELECT cuando el menú no esté activado. Sus opciones aparecerán en la pantalla.

### Programación de FIJAR CANAL

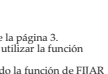
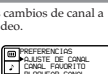
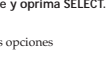
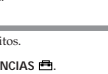
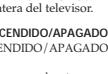
Esta función resulta útil cuando quiera hacer todos los cambios de canal a través de un decodificador de cable o un aparato de video.

- 1 Oprima MENU y seleccione el menú de PREFERENCIAS .
- 2 Coloque el cursor en AJUSTE DE CANAL y oprima SELECT.
- 3 Seleccione FIJAR CANAL y ajuste en el televisor a una de las siguientes opciones:

2-6: Cuando el decodificador se encuentre conectado a AUX y el cable o antena esté conectado a la entrada VHF/UHF. Utilice el control remoto de su decodificador para cambiar canales.  
VIDEO 1: Cuando haya conectado un aparato de video (p.ej. receptor de DSS) y quiere que el televisor reciba la señal de ese aparato. Así podrá intercambiar entre las dos fuentes de video.  
OFF: Cuando quiere apagar FIJAR CANAL.

#### Notas

- Para detalles sobre la conexión de un decodificador, consulte la página 3.
- Se borrarán las selecciones de ENCENDIDO/APAGADO al utilizar la función FIJAR CANAL.
- La función CANAL FAVORITO no puede ser accedida cuando la función de FIJAR CANAL ha sido seleccionada.



### Para usar BLOQUEAR CANAL

Esta función sirve para impedir que los niños vean determinados canales.

- 1 Oprima MENU y seleccione el menú de PREFERENCIAS .
- 2 Coloque el cursor en BLOQUEAR CANAL y oprima SELECT.
- 3 Coloque el cursor para 1 o 2 y oprima SELECT.
- 4 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para mostrar el canal que desea bloquear y oprima SELECT.  
Al escoger el canal que va a suprimir, la palabra BLOQUEADO aparecerá en la pantalla y se suprimirá CAPTION VISION.

Para cancelar las opciones seleccionadas bajo BLOQUEAR CANAL Oprima RESET mientras se encuentre en el menú de BLOQUEAR CANAL.

### Para seleccionar una Opción de CAPTION VISION

Algunos programas son transmitidos con subtítulos conocidos como CAPTION VISION. Estos servicios son limitados a específicas emisoras y es posible que no estén disponibles en su área. (El ajuste de fábrica es CC1).

- 1 Oprima MENU y seleccione el menú de PREFERENCIAS .
- 2 Coloque el cursor en CAPTION VISION y oprima SELECT.
- 3 Oprima  $\blacktriangle$  o  $\blacktriangledown$  y programe su televisor a una de las siguientes opciones:

Elija	Para mostrar
CCI, 2, 3 o 4	Un versión escrita del diálogo o los efectos de sonido de un programa. (El ajuste de fábrica es CCI).
TEXT 1, 2, 3 o 4	Información de emisora / estación que no está relacionado con el programa.
XDS (Servicio ampliado de datos)	Un tipo de programa, nombre, duración y siglas de canal.

- 4 Oprima DISPLAY.  
Los subtítulos aparecerán, si la emisora ofrece este servicio.
- 5 Para desactivar CAPTION VISION, oprima DISPLAY hasta que aparezca DISPLAY OFF.

#### Notas

- La información escrita desaparecerá durante unos segundos si oprime el botón MUTING.
- La información escrita podrá aparecer con un cuadro blanco u otros errores si la recepción del canal es deficiente.

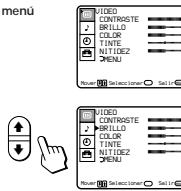
## Uso del Menú de VIDEO

### Ajustes de la imagen (VIDEO)

Puede cambiar el contraste, brillo, color, tinte y nitidez de la imagen.

- 1 Oprima MENU y seleccione el menú de VIDEO .

- 2 Oprima  $\blacktriangle$  o  $\blacktriangledown$  para seleccionar la función que desea ajustar y oprima SELECT.  
Consulte la tabla DESCRIPCIÓN DE FUNCIONES para una explicación de los ajustes que se pueden hacer.



### DESCRIPCIÓN DE FUNCIONES

Función	Oprima $\blacktriangle$	Oprima $\blacktriangledown$
CONTRASTE	Aumentar el contraste	Disminuir el contraste
BRILLO	Aumentar el brillo de la imagen	Disminuir el brillo de la imagen
COLOR	Aumentar el nivel de los colores	Disminuir el nivel de los colores
TINTE	Aumentar los tonos verdes	Disminuir los tonos verdes
NITIDEZ	Aumentar la nitidez de imagen	Suavizar la imagen

- 3 Oprima MENU para volver al programa de televisión.

Para reestablecer los niveles de video originales Oprima RESET, cuando se encuentre en el menú de VIDEO.

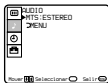
## Uso del Menú de AUDIO

### Selección de Programas Estereofónicos o Bilingües (MTS)

Solo KV-21SB40C, 21SB40M, 21SB40P, 21SE40, 21SE40C

La función de Sonido Multicanal (MTS) permite disfrutar de sonido estereofónico (ESTEREO), un Segundo Programa de Audio (SAP) o de Sonido Monoaural, (MONO), cuando existe.

- 1 Oprima MENU y seleccione el menú AUDIO .
- 2 Oprima \* o \* en MTS y oprima SELECT.



- 3 Oprima \* o \* para seleccionar ESTEREO, SAP, o MONO y oprima SELECT.

Elija	Para
ESTEREO	Escuchar sonido estereofónico.
SAP	Escuchar programas bilingües y afines.
MONO	Reducir el ruido durante transmisiones estereofónicas deficientes.

### Acceso directo a MTS

Oprima MTS en su control remoto para recorrer las opciones MTS.

#### Nota

- Si el televisor no tiene audio, puede ser la función SAP este seleccionada. Confirme la selección de AUDIO.

Menú de Video • Ajustes de la Imagen • Menú de Audio • Programas Bilingües (MTS)

## Solución de Problemas

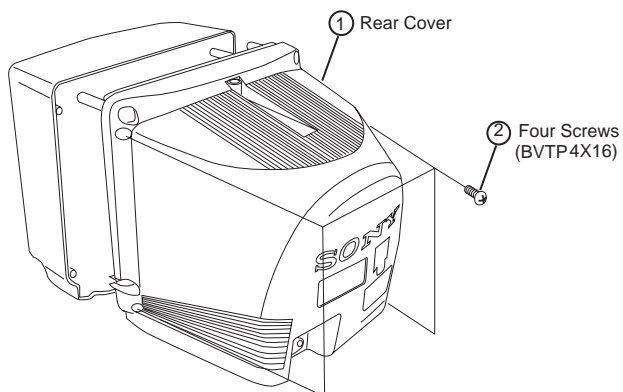
En caso de un problema con su televisor, siga estas recomendaciones. Si el problema persiste, comuníquese con el concesionario Sony más cercano.

Problema	Sugerencia
<b>Ausencia de imagen y sonido</b>	<ul style="list-style-type: none"><li>• Asegúrese de que el cable eléctrico esté bien conectado.</li><li>• Si la luz roja en la parte delantera del televisor centellea, llame al centro de servicio.</li><li>• Compruebe si el ajuste TV/VIDEO es correcto: TV para ver la televisión y VIDEO para cintas de video (página 9).</li><li>• Coloque las pilas del control remoto en la posición correcta.</li><li>• Pruebe otro canal. Es posible que el problema se deba a la emisora.</li></ul>
<b>Imagen defectuosa o ausencia de imagen, pero sonido adecuado</b>	<ul style="list-style-type: none"><li>• Ajuste CONTRASTE en el menú VIDEO (pág. 13).</li><li>• Ajuste BRILLO en el menú VIDEO (pág. 13).</li><li>• Revise las conexiones de la antena o del cable (pág. 3).</li></ul>
<b>Buena imagen, pero ausencia de sonido</b>	<ul style="list-style-type: none"><li>• Oprima MUTING para que la palabra MUTING desaparezca de la pantalla (pág. 9).</li><li>• Compruebe que el ajuste de AUDIO. Es posible que el función de SAP ha sido seleccionada. (pág. 14).</li></ul>
<b>Ausencia de color</b>	<ul style="list-style-type: none"><li>• Ajuste la opción COLOR del menú VIDEO (pág. 13).</li><li>• Compruebe que no se trata de un programa en blanco y negro.</li></ul>
<b>Si aparece sólo nieve en la pantalla</b>	<ul style="list-style-type: none"><li>• Compruebe la función CABLE en el menú de PREFERENCIAS (pág. 8).</li><li>• Revise las conexiones de la antena o del cable (pág. 3).</li><li>• Compruebe si el canal está transmitiendo.</li></ul>
<b>Lineas punteadas o rayas</b>	<ul style="list-style-type: none"><li>• Ajuste la posición de la antena.</li><li>• Mantenga el televisor alejado de otros aparatos electrónicos. Algunos aparatos electrónicos provocan ruidos eléctricos que pueden interferir con la recepción del televisor.</li></ul>
<b>Imágenes dobles o "fantasmas"</b>	<ul style="list-style-type: none"><li>• Compruebe su antena area o comuníquese con su proveedor del cable.</li></ul>
<b>No se reciben los canales UHF utilizando una antena</b>	<ul style="list-style-type: none"><li>• Compruebe si la función CABLE del menú de PREFERENCIAS está en NO (pág. 8).</li><li>• Use AUTO PROGRAMACIÓN para añadir los canales que no estén en la memoria del televisor (pág. 7).</li></ul>
<b>No se reciben los canales de cable</b>	<ul style="list-style-type: none"><li>• Compruebe si la opción CABLE del menú de PREFERENCIAS está en SI (pág. 8).</li><li>• Use AUTO PROGRAMACIÓN para añadir los canales que no estén en la memoria del televisor (pág. 7).</li></ul>
<b>El control remoto no funciona</b>	<ul style="list-style-type: none"><li>• Las pilas pueden estar descargadas; cámbielas (pág. 5).</li></ul>
<b>El televisor necesita una limpieza</b>	<ul style="list-style-type: none"><li>• Limpie el televisor con un paño suave y seco. No utilice solventes fuertes como adelgazador de pintura o bencina, que pueden dañar el acabado del mueble.</li></ul>
<b>No se puede cambiar el canal</b>	<ul style="list-style-type: none"><li>• Desactive la función FIJAR CANAL(página 11).</li><li>• Utilice AUTO PROGRAMACION para añadir canales que no se encuentren en la memoria del televisor (página 7).</li></ul>

## SECTION 2 DISASSEMBLY

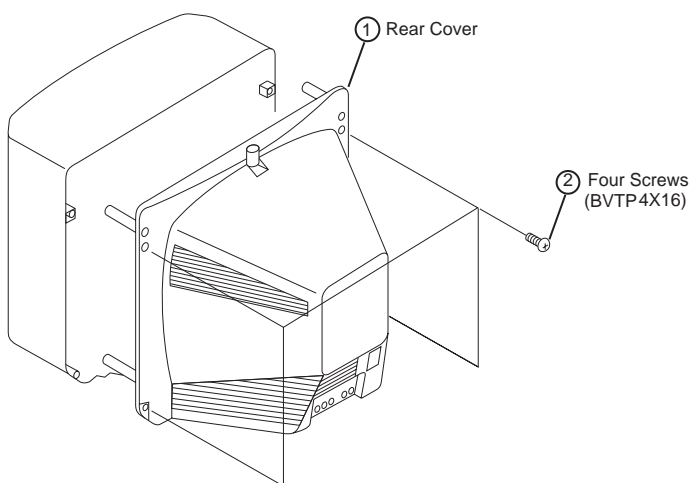
### 2-1-1. REAR COVER REMOVAL

(KV-13M40/13M50/13M51/14MB40/14MB40A/14MB40C)



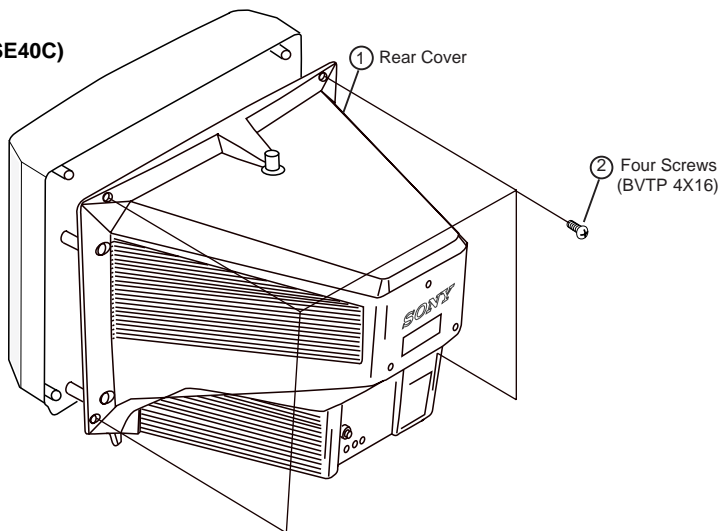
### 2-1-2. REAR COVER REMOVAL

(KV-20M40/20S40/20S41/21MB40C/21MB40M/21MB40P/21SB40C/21SB40M/21SB40P/21XT4A)



### 2-1-3. REAR COVER REMOVAL

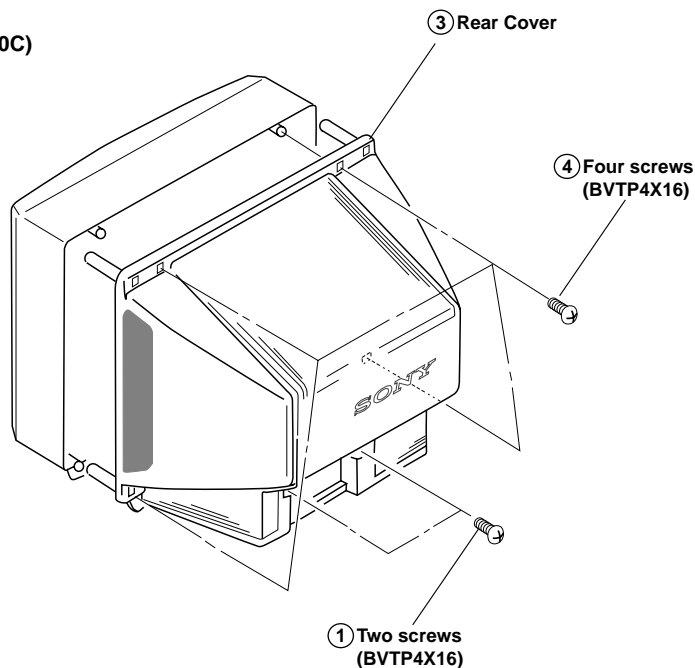
(KV-21ME40/21ME40C/21SE40/21SE40A/21SE40C)



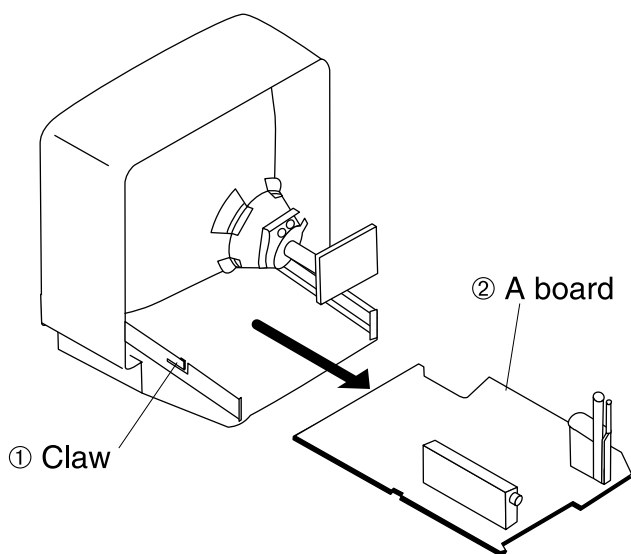


## 2-1-4. REAR COVER REMOVAL

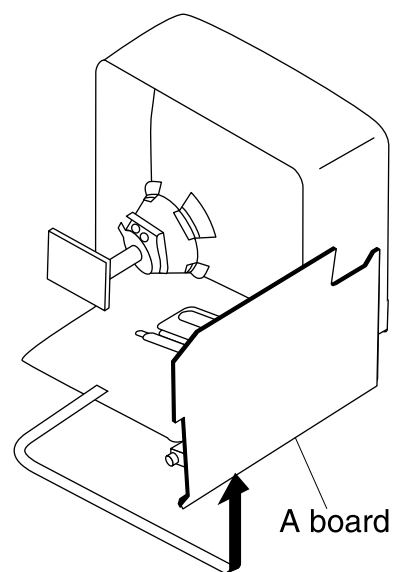
(KV-20V80/21SE80/21SE80A/21SE80C)



## 2-2. A BOARD REMOVAL (FOR ALL MODELS)



## 2-3. SERVICE POSITION (FOR ALL MODELS)



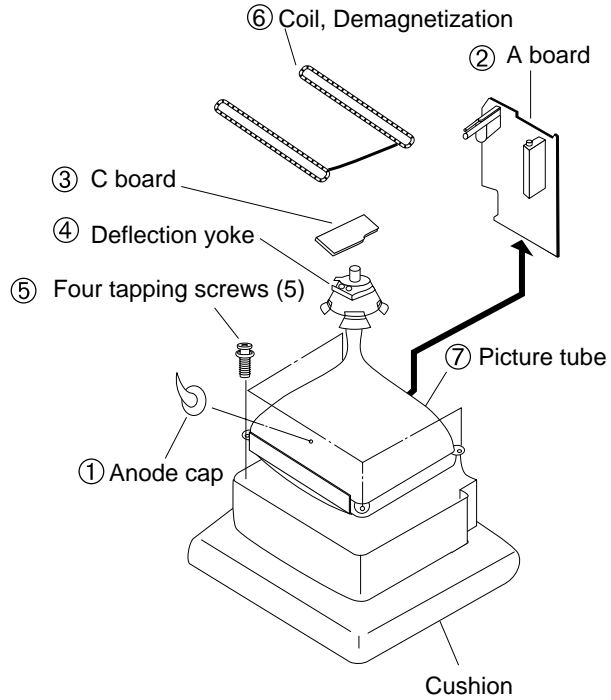
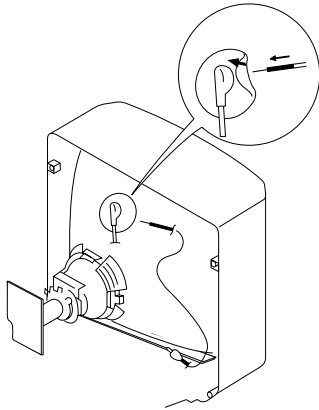
## 2-4-1. PICTURE TUBE REMOVAL (KV-13M40/13M50/13M51/14MB40/14MB40C/14MB40A)

### WARNING

#### Before removing anode cap:

H.V. remains in the CRT even after the power is disconnected.

To avoid electrical shock, discharge CRT before attempting to remove the anode cap : Short between anode and CRT mounting bracket.



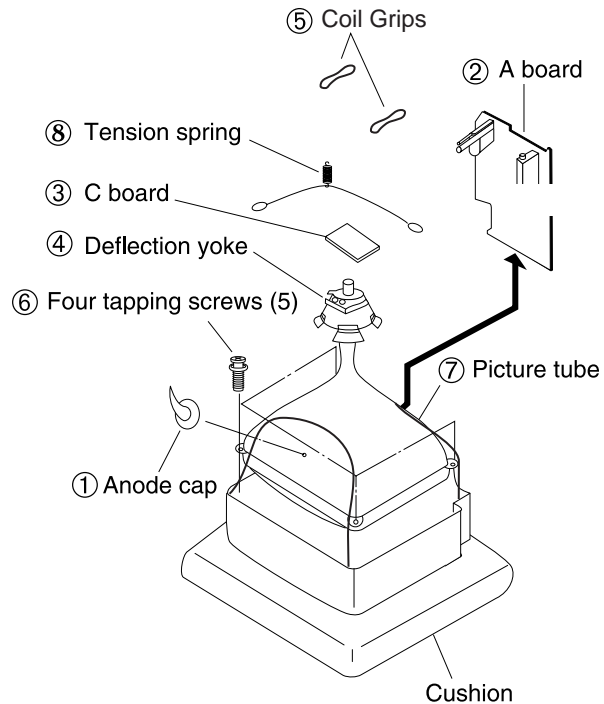
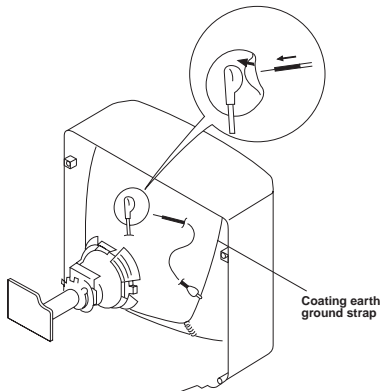
## 2-4-2. PICTURE TUBE REMOVAL (KV-20M40/20S40/20S41/21MB40C/21MB40M/21ME40/21ME40C/21SB40C/21SB40M/21SB40P/21SE40/21SE40A/21SE40C/21MB40P/21XT4A)

### WARNING

#### Before removing anode cap:

H.V. remains in the CRT even after the power is disconnected.

To avoid electrical shock, discharge CRT before attempting to remove the anode cap : Short between anode and CRT coating earth ground strap.

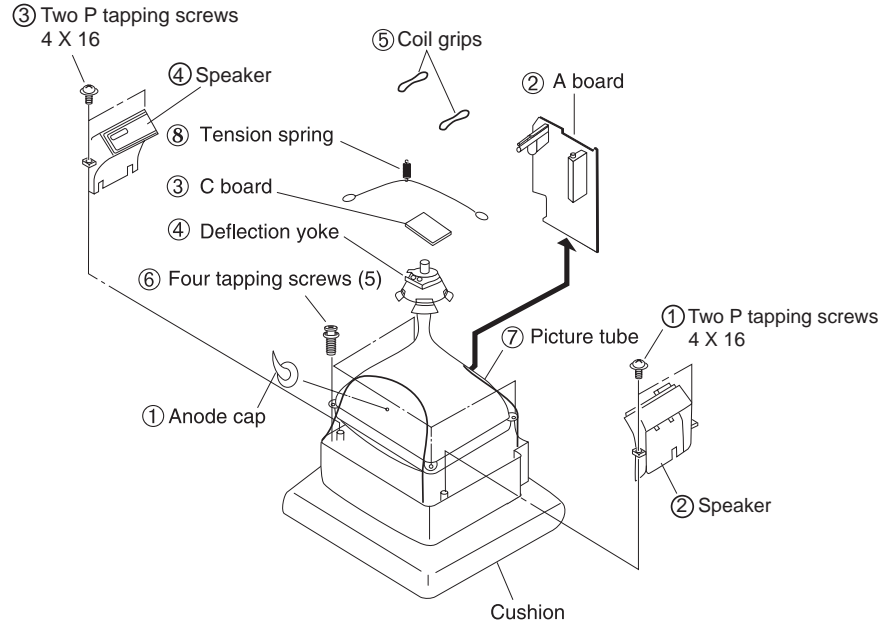
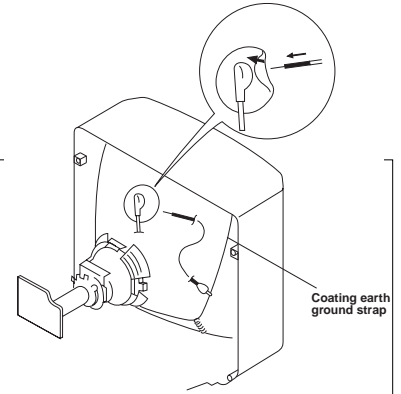


## 2-4-3. PICTURE TUBE REMOVAL (KV-20V80/21SE80C/21SE80/21SE80A)

### **WARNING** Before removing anode cap:

H.V. remains in the CRT even after the power is disconnected.

To avoid electrical shock, discharge CRT before attempting to remove the anode cap : Short between anode and CRT coating earth ground strap.



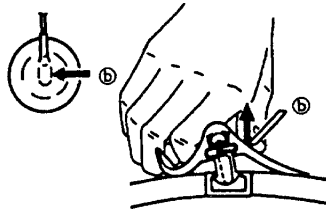
### • REMOVAL OF THE ANODE-CAP

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

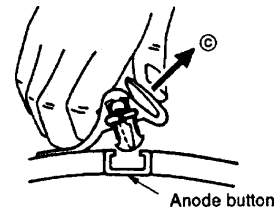
### • REMOVAL PROCEDURES



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



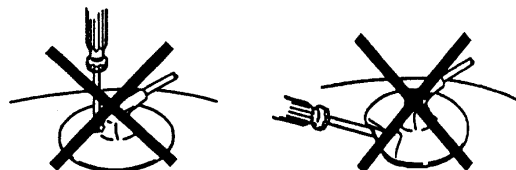
② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow b.



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

### • HOW TO HANDLE AN ANODE-CAP

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



## SECTION 3 SET-UP ADJUSTMENTS

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

The controls and switch should be set as follows unless otherwise noted:

PICTURE control ..... normal

BRIGHTNESS control ..... normal

Perform the adjustments in order as follows:

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

**Note:** Test Equipment Required

1. Color Bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital Multimeter

### 3-1. BEAM LANDING

#### Preparation:

- Feed in the white pattern signal.
- Before starting, degauss the entire screen.

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2.
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that the entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets. (Fig.4)

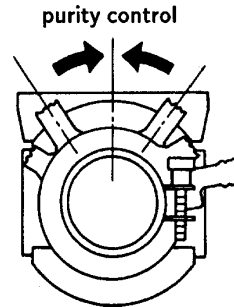


Fig. 2

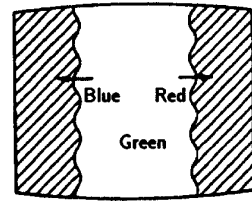


Fig. 3

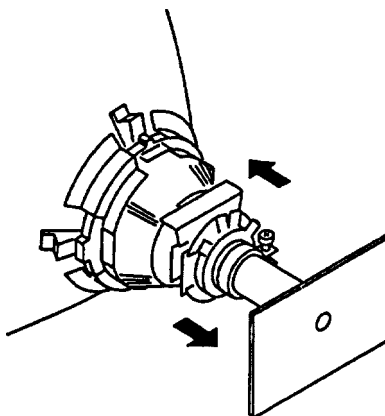


Fig. 1

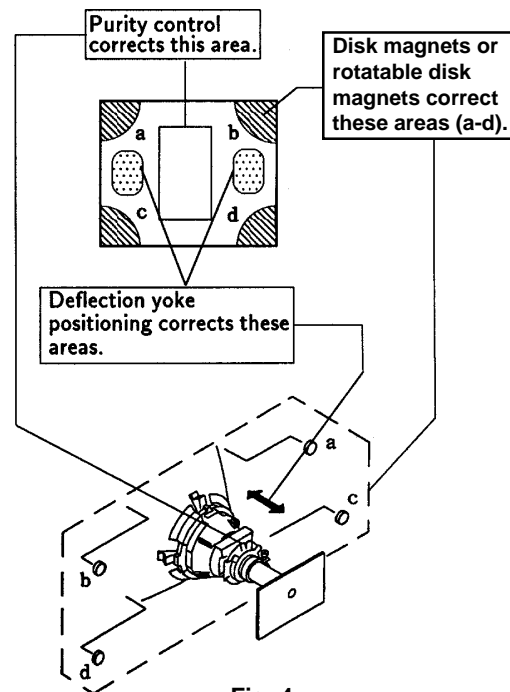


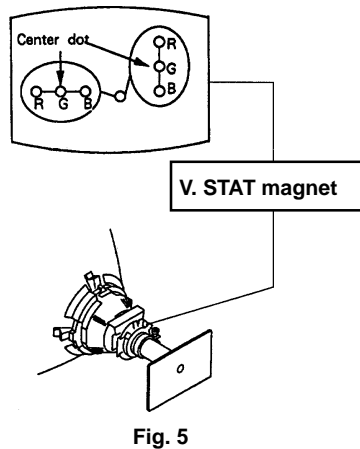
Fig. 4

## 3-2. CONVERGENCE

### Preparation:

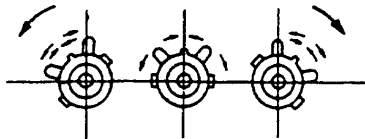
- Before starting, perform FOCUS, V. LIN and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

### (1) Vertical Static Convergence

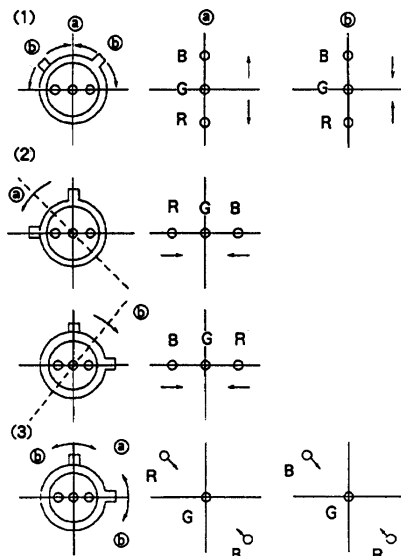


1. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)

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



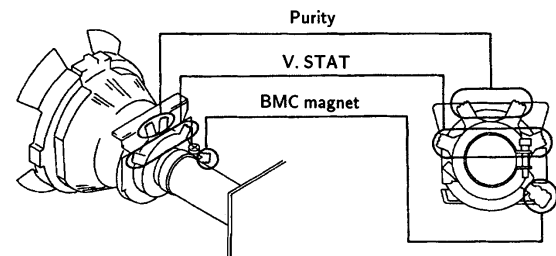
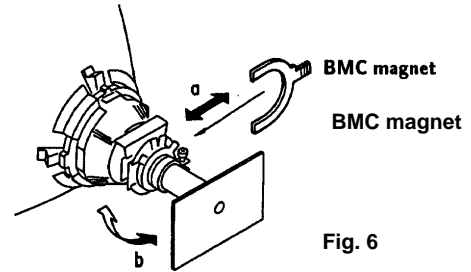
2. When the V. STAT magnet is moved in the direction of arrow (a) and (b), red, green, and blue dots move as shown below:



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

- Move BMC magnet (a) to correct insufficient H. Static convergence.
- Rotate BMC magnet (b) to correct insufficient V. Static convergence.

In either case, repeat Beam Landing Adjustment.

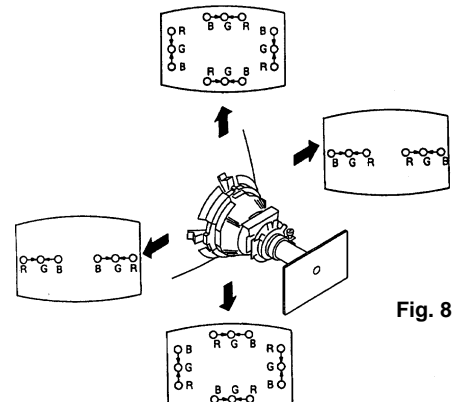


### (2) Dynamic Convergence Adjustment

#### Preparation:

- Before starting, perform Horizontal and Vertical Static Convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below. (Fig. 8)
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



### (3) Screen-corner Convergence

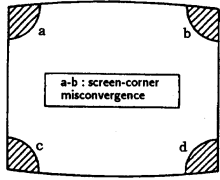
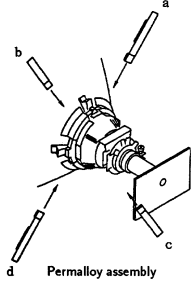


Fig. 9

Affix a permalloy assembly corresponding to the misconverged areas:



### 3-3. FOCUS

1. Adjust FOCUS control (RV752 on C-board) for best picture for 13" and 14".

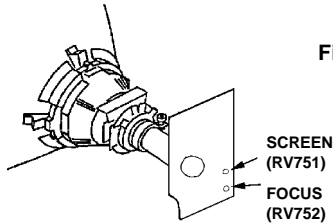


Fig. 10-A

2. Adjust FOCUS control for best picture for 20" and 21".

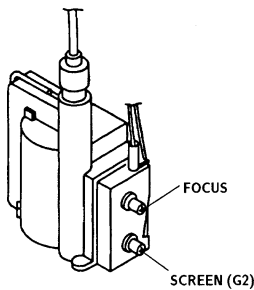


Fig. 10-B

### 3-4. SCREEN (G2)

1. Input a dots pattern.
2. Set the PICTURE and BRIGHT controls at minimum and COLOR control at normal.
3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown in Fig. 11 so that voltages on the red, green, and blue cathodes are: 170Vdc (for 20" and 21") and 150Vdc (for 13" and 14").

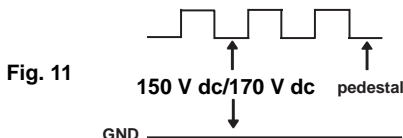


Fig. 11

4. Observe the screen and adjust:

SCREEN (G2) VR (for 20" and 21")  
SCREEN (G2) RV751 (for 13" and 14")

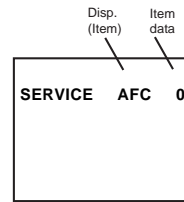
to obtain the faintly visible background of dot signal.

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

### (1) SERVICE MODE PROCEDURE

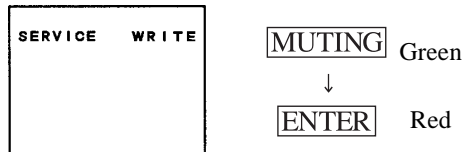
1. Standby mode. (Power off)
2. **DISPLAY** → **5** → **VOL (+)** → **POWER** on the Remote Commander. (Press each button within a second.)

### (2) SERVICE ADJUSTMENT MODE IN



3. The CRT displays the item being adjusted.
4. Press **1** or **4** on the Remote Commander to select the item.
5. Press **3** or **6** on the Remote Commander to change the data.
6. Press **MUTING** then **ENTER** to write into memory.

### (3) SERVICE ADJUSTMENT MODE MEMORY



7. Turn set off and on to exit.

## 3-6. WHITE BALANCE ADJUSTMENTS

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

## SECTION 4

### SAFETY RELATED ADJUSTMENTS

#### **A** BOARD

#### ■ R582 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

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

IC301, IC521, IC602, D572, D573, D574, DY,  
C507, C511, C574, C575, R578, R582, R583, R584,  
R585, R586, R625, R626, R634, R635, T504 (FBT)

#### (1) Preparation before Confirmation

- 1) Turn the POWER switch ON. Input an entirely white signal and set the PICTURE and BRIGHT controls to maximum.
- 2) Confirm that the voltage between C574(+) and ground is more than: 99.8VDC (for 20"/21")  
95.0VDC (for 13"/14")  
when the set is operating normally with  $120.0 \pm 2.0$  VAC, (or  $220.0 \pm 2.0$  VAC supply for KV-14MB40C/40A, 21ME40C, 21MB40C, 21SE40C/40A/80C/80A, 21SB40C and 21XT4A only).

#### (2) Hold-down Operation Confirmation

- 1) Connect the current meter between Pin 11 of the FBT (T504) and the PCB land where Pin 11 would normally attach.
- 2) Input a dot signal and set PICTURE and BRIGHTNESS to minimum:  
 $I_{ABL} = 95+100/-95\mu A$  (for 20"/21")  
 $40+100/-40\mu A$  (for 13"/14")
- 3) Confirm the voltage of A board TP-600 is  
 $116.8 \pm 0.3$  VDC (for 20"/21")  
 $117.0 \pm 0.3$  VDC (for 13"/14")
- 4) Connect the Digital Voltmeter and the DC power supply via diode 1SS119 to C574 (+). (See figure 1.0 on next page.)
- 5) Increase the DC power voltage gradually until the picture blanks out.
- 6) Read the digital voltmeter indication.
- 7) Turn DC power source off immediately.

#### STANDARD

Less than or equal to: 127.3 VDC (for 20"/21")  
117.75 VDC (for 13"/14")

- 8) Input a white signal and set PICTURE and BRIGHTNESS to Max

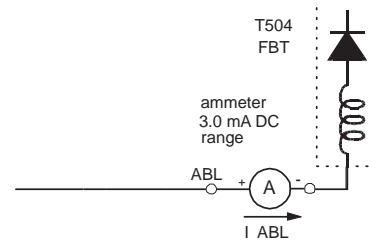
- 9) Repeat steps from (4) to (7).

#### STANDARD

Less than or equal to: 127.3 VDC (for 20"/21")  
117.75 VDC (for 13"/14")

#### (3) Hold-down Readjustment

If the current setting indicated in step 2-2 cannot be met, readjustment should be performed by altering the resistance value of R582, a component marked with ■.



#### B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

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

IC001, IC602, R030, R624, R626, R632,  
R633, R635, R636, R637, R638, R639

- 1) Supply  $130 \pm 2.0$  VAC (or  $220.0 \pm 2.0$  VAC supply for KV-14MB40C/40A, 21ME40C, 21MB40C, 21SE40C/40A/80C/80A, 21SB40C and 21XT4A only) to the set with a variable auto transformer.
- 2) Input a dot signal.
- 3) Set the PICTURE control and the BRIGHT control to minimum condition.
- 4) Set to service adjustment mode.
- 5) Select PADJ with [1] and [4].
- 6) Adjust with [6] to the 0 level.
- 7) Confirm the voltage of A BOARD TP-600 is less than 125V DC.
- 8) If step 7 is not satisfied, replace the components, repeat the above steps.
- 9) Supply  $120.0 \pm 2.0$  VAC (or  $220.0 \pm 2.0$  VAC supply for KV-14MB40C/40A, 21ME40C, 21MB40C, 21SE40C/40A/80C/80A, 21SB40C and 21XT4A only) to the set with a variable auto transformer.
- 10) Adjust with [3] and [6] for:  $116.8 \pm 0.3$  V DC (for 20"/21")  
 $117.0 \pm 0.3$  V DC (for 13"/14")
- 11) Write into the memory by pressing [MUTING] then [ENTER].

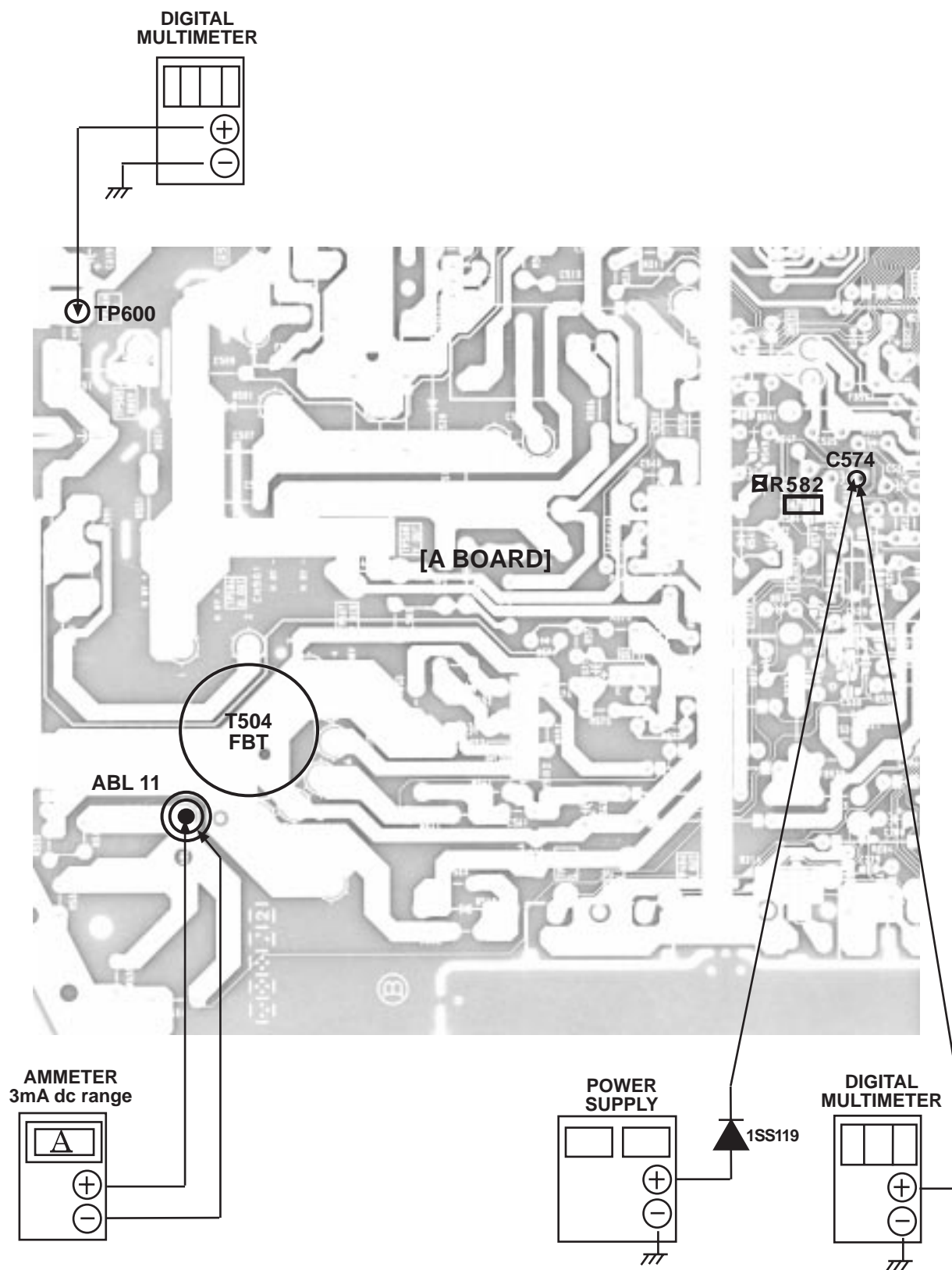


Figure 1.0



## SECTION 5 CIRCUIT ADJUSTMENTS

### 5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use Remote Commander (RM-Y155) to perform circuit adjustments on this model.

NOTE : Test Equipment Required.

1. Pattern Generator
2. Frequency Counter
3. Digital Multimeter
4. Audio OSC

7. Press **[8]** then **[ENTER]** on the Remote Commander to initialize.



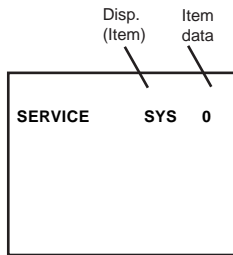
Carry out step 7 when adjusting IDs 0 to 4 and when replacing and adjusting IC003.

#### (1) Method of Setting the Service Adjustment Mode

##### SERVICE MODE PROCEDURE

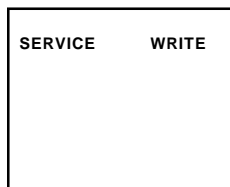
1. Standby mode. (Power off)
2. **[DISPLAY]** → **[5]** → **[VOL (+)]** → **[POWER]** on the Remote Commander. (Press each button within a second.)

##### SERVICE ADJUSTMENT MODE IN



3. The CRT displays the item being adjusted.
4. Press **[1]** or **[4]** on the Remote Commander to select the item.
5. Press **[3]** or **[6]** on the Remote Commander to change the data.
6. Press **[MUTING]** then **[ENTER]** to write into memory.

##### SERVICE ADJUSTMENT MODE MEMORY

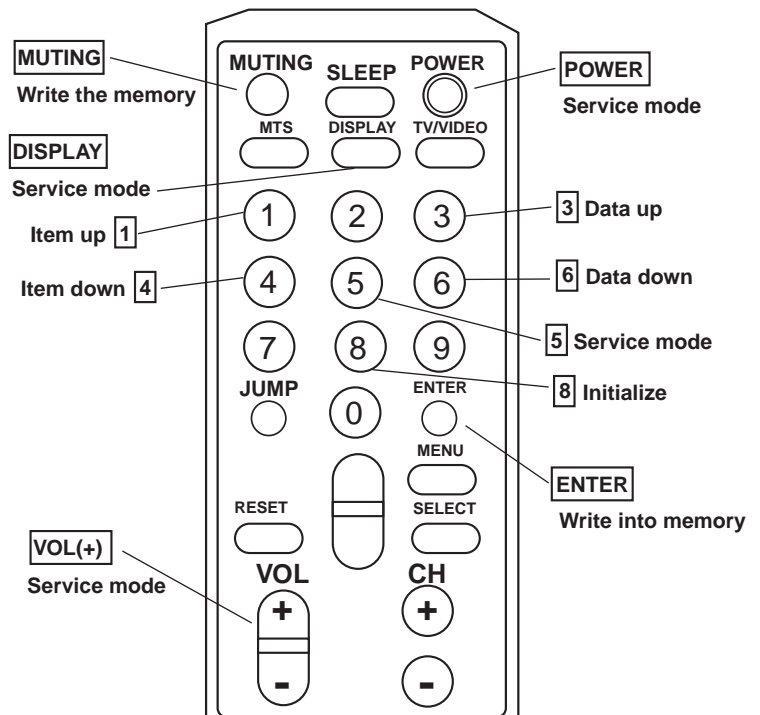


**[MUTING]** Green  
↓  
**[ENTER]** Red

#### (2) Memory Write Confirmation Method

1. After adjustment, pull out the plug from the AC outlet, then replace the plug in the AC outlet again.
2. Turn the power switch ON and set to service mode.
3. Call the adjusted items again to confirm they were adjusted.

#### (3) Adjust Buttons and Indicator



RM-Y155

#### (4) Item of Adjustments

NO.	ITEM	FUNCTION	DATA RANGE	INITIAL DATA				AVERAGE DATA
				NTSC	PAL-M	PAL-N	VIDEO	
1	HSIZ	HORIZONTAL AMP. ADJ.	0 - 6.3	3.1	3.1	3.1		3.1
2	HPOS	HORIZONTAL POS. ADJ.	0 - 6.3	2.1	2.1	1.9		2.8
3	VBOW	VRT LINE BOWING ADJ.	0 - 1.5		6			8
4	VANG	VRT LINE BOW SLANT ADJ.	0 - 1.5		6			1.0
5	TRAP	HORIZ. TRAPEZOID ADJ.	0 - 1.5		1.5			1.5
6	PAMP	HORIZ. PIN DISTORTION ADJ.	0 - 6.3	3.1	3.1	3.1		3.1
7	CPIN	SAME AS PAMP-SCRN TP/BTM	0 - 6.3	3.1	3.1	3.1		3.1
8	VSIZ	VERTICAL AMP. ADJUST	0 - 6.3	4.3	4.3	4.7		4.4
9	VPOS	VERTICAL POSITION ADJ.	0 - 6.3	3.5	3.5	2.8		3.3
10	VLIN	VERTICAL LINEARITY ADJ.	0 - 1.5	7	7	7		5
11	SCOR	VERTICAL AMOUNT ADJ.	0 - 1.5	7	7	7		9
12	VZOM	16:9 CRT Z MODE ON/OFF	0, 1		0			0
13	EHT	VRT HI-VOLT. CORRECTION	0 - 1.5		1.5			1.5
14	ASP	ASPECT RATIO CONTROL	0 - 6.3		4.7			4.7
15	SCRL	16:9 CRT Z MODE TRAN SCRL	0 - 6.3		3.1			3.1
16	HBLK	RGB OUT WIDTH CONTROL	0, 1		1			1
17	LBLK	LEFT SCREEN HBLK CONTROL	0 - 1.5		1.5			1.5
18	RBLK	RGT SCREEN HBLK CONTROL	0 - 1.5		3			3
19	VUSN	V SAW WAVEFORM COMPRES	0, 1		0			0
20	HDW	H. DRIVE PULSE WIDTH	0, 1		0			0
21	EWDC	EW/DC ADJUST	0, 1		0			0
22	LVLN	SCREEN BTM VRT LIN ADJUST	0 - 1.5		0			0
23	UVLN	SCREEN TOP VRT LIN ADJUST	0 - 1.5		0			0
24	RDRV	R OUTPUT DRIVE CONTROL	0 - 6.3		3.0			3.2
25	GDRV	G OUTPUT DRIVE CONTROL	0 - 6.3		2.4			2.8
26	BDRV	B OUTPUT DRIVE CONTROL	0 - 6.3		2.1			2.5
27	RCUT	R OUTPUT CUTOFF CONTROL	0 - 1.5		1.5			7
28	GCUT	G OUTPUT CUTOFF CONTROL	0 - 1.5		7			5
29	BCUT	B OUTPUT CUTOFF CONTROL	0 - 1.5		7			6
30	DCOL	DYNAMIC COLOR ON/OFF	0, 1		0			1
31	SHUE	SUB HUE	0 - 3.1		1.5			1.5
32	SCOL	SUB COLOR	0 - 3.1	1.4	1.4	1.4		1.5
33	SBRT	SUB BRIGHTNESS	0 - 3.1		7			5
34	RON	R OUTPUT ON/OFF	0, 1		1			1
35	GON	G OUTPUT ON/OFF	0, 1		1			1
36	BON	B OUTPUT ON/OFF	0, 1		1			1
37	AXPL	AXIS PAL	0, 1		0			0
38	AXNT	AXIS NTSC	0, 1		0			0
39	CBPF	CHROMA BPF ON/OFF	0, 1		1			1
40	CTRP	Y TRAP FILTER ON/OFF	0, 1	0,1:combfilter models				0
41	COFF	COLOR ON/OFF	0, 1		0			0
42	KOFF	SET COLOR KILLER	0, 1		0			0
43	SSHP	SUB SHARPNESS	0 - 1.5		1.0			1.0
44	SHPF	SHARPNESS CIRCUIT F0	0, 1		1		1	1
45	PREL	PRE/OVR SHOOT SWITCHING	0, 1		0			0
46	Y-DC	DC TRANS RATIO SWITCHING	0, 1		1			1
47	GAMM	GAMMA CORRECTION AMNT	0 - 3		0			0
48	ABLM	ABL MODE SWITCHING	0, 1		1			1
49	VTH	ABL C D VTH SWITCHING	0, 1		1			1
50	YDEL	Y DELAY TIME CONTROL	0 - 1.5		7			7
51	NCOL	NO COLOR ID	0, 1		1			1
52	FSC	FSC OUT ON/OFF	0, 1	'1' for V series, '0' for S,M & trinorma				0
53	K-ID	KILLER ID CONTROL SW	0, 1		0			0
54	HOsc	H VCO OSCILLATION FREQ	0 - 1.5		1.0			1.0
55	VSS	V SYNC SLICE LEVEL	0, 1		0			0
56	HSS	H SYNC SLICE LEVEL	0, 1		0			0
57	HMSK		0, 1		1			1
58	VTMS	SELECT SIGNAL VTIM PIN	0 - 3		0			0
59	CDMD	V CNT DWN MODE SWITCHING	0 - 3		0		1	1
60	AFC	AFC LOOP GAIN SWITCHING	0 - 3		0		0	0
61	FIFR	FIELD FREQUENCY	0 - 3	'3' for NTSC models, '1' for trinorma				3
62	SBAL	SUB BALANCE	0 - 1.5		1.3			1.3
63	DISP	OSD POSITION	0 - 1.2.7		1.5			1.5
64	PADJ	POWER ADJUSTMENT	0 - 6.3		5.1			4.7

SERVICE ID0 25

Note: No. 1 through 64 show adjustment order.

**(5) Feature ID Map**

	KV-	DESTINATION	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5
1	13M40	(U)	25	1	0	3	19	0
2	13M40	(CND)	9	1	0	3	19	0
3	14MB40	(E)	25	1	0	3	51	1
4	14MB40C	(E)	25	1	0	3	51	1
5	14MB40A	(E)	31	3	0	3	51	1
6	20M40	(CND)	9	3	0	131	23	1
7	20M40	(U)	25	3	0	131	23	1
8	21MB40P	(E)	25	3	0	195	55	1
9	21MB40M	(MX)	25	3	0	195	55	1
10	21MB40C	(E)	25	3	0	195	55	1
11	21SE40	(E)	25	3	1	195	55	1
12	20S40	(CND)	9	3	1	131	23	1
13	20S41	(U)	25	3	1	131	23	1
14	20S41	(CND)	9	3	1	131	23	1
15	20S40	(U)	25	3	1	131	23	1
16	21SE40C	(E)	25	3	1	195	55	1
17	20V80	(U)	25	19	13	131	31	1
18	20V80	(CND)	9	19	13	131	31	1
19	21SE80	(E)	25	3	29	195	63	1
20	21SE80A	(E)	31	3	29	195	55	1
21	21SE80C	(E)	25	3	29	195	63	1
22	21ME40	(E)	25	3	0	195	55	1
23	13M51	(U)	25	3	0	3	19	1
24	13M50	(U)	25	3	0	3	19	1
25	21XT4A	(E)	31	3	1	195	55	1
26	21ME40C	(E)	25	3	0	195	55	1
27	21SB40P	(E)	25	3	1	195	55	1
28	21SB40M	(MX)	25	3	1	195	55	1
29	21SB40C	(E)	25	3	1	195	55	1
30	21SE40A	(E)	31	3	1	195	55	1

**5-2. A BOARD ADJUSTMENTS****H. FREQUENCY ADJUSTMENT**

1. Input a monoscope signal.
2. Set to Service adjustment Mode.
3. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE).
4. Select the item of AFC, set to 3 level (free run).
5. Check H. Frequency for the  $15735 \pm 200$  Hz. (NTSC) or check H. Frequency for the  $15650 \pm 200$  Hz. (Trinorma)
6. Select the item of AFC again, adjust the level "0".
7. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

**V. FREQUENCY ADJUSTMENT**

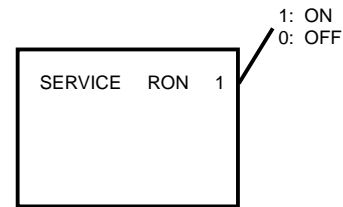
1. Select video 1 with no signal input.
2. Set the conditions with standard setting.
3. Connect the frequency counter across TP-508 or CN501 VDY (+) pin ⑥ connector and ground.
4. Check V. Frequency for the  $60 \pm 2$  Hz (NTSC)
5. Check V. Frequency for the  $50 \pm 2$  Hz (Trinorma).

**SUB CONTRACT ADJUSTMENT (SCON)**

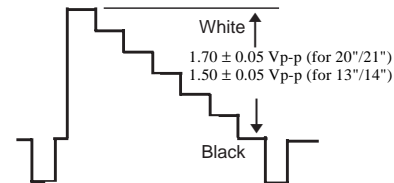
1. Input a color-bar signal.
2. Select the red color.
3. Set to Service adjustment Mode.
4. Select the item DCOL to "0" level.
5. Set the conditions as follows.

PICTURE ..... MAX  
 COLOR ..... MIN  
 BRIGHT ..... CENTER

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



6. Connect an oscilloscope to CN752 Pin ③ (for 13"/14") or CN702 Pin ③ (for 20"/21") (R OUT) of C Board and ground.
7. Select RDRV with **[1]** and **[4]**.
8. Adjust with **[3]** and **[6]** for:  $1.70 \pm 0.05$  Vp-p.
9. Adjust with **[3]** and **[6]** for:  $1.50 \pm 0.05$  Vp-p.



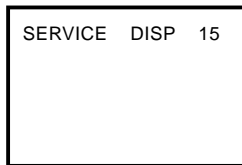
9. Reset the item DCOL to "1" level.
10. Write the memory by pressing **[MUTING]** then **[ENTER]**.
11. Return the following back to normal after adjustment.

PICTURE ..... MAX  
 COLOR ..... CENTER  
 BRIGHT ..... CENTER

R ON ..... ON (1)  
 G ON ..... ON (1)  
 B ON ..... ON (1)

## DISPLAY POSITION ADJUSTMENT (DISP)

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

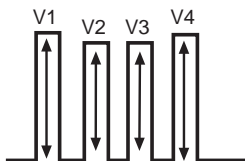


## SUB BRIGHT ADJUSTMENT (SBRT)

1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Set the PICTURE and BRIGHT to minimum.
4. Select SBRT with **[1]** and **[4]**.
5. Adjust with **[3]** and **[6]** to obtain a faintly visible cross-hatch.
6. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

## SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1. Input a color-bar signal.
2. Set to Service adjustment Mode.
3. Select the item DCOL and set to "0" level.
4. Connect an oscilloscope to CN752 Pin ⑤ (for 13"/14") or CN702 Pin ⑤ (for 20"/21") (BLUE OUT) of C Board and ground.
5. Select SHUE and SCOL with **[1]** and **[4]**.
6. Adjust with **[3]** and **[6]** for the  $V1 = V4 \pm 0.1V_{p-p}$  (SCOL) and  $V2 = V3 \pm 0.1V_{p-p}$  (SHUE).

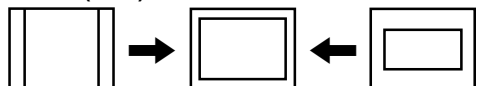


7. Reset the item DCOL to "1" level.
8. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

## 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.

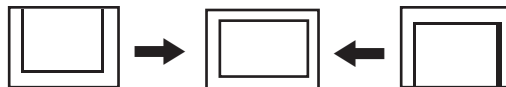
### V. SIZE (VSIZ)



## V. CENTER ADJUSTMENT (VPOS)

1. Input a cross-hatch signal.
2. Set to Service adjustment Mode.
3. Select VPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best vertical center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

### V. CENTER (VPOS)

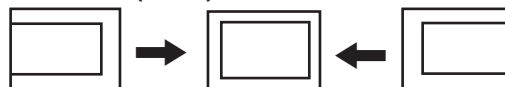


## H. CENTER ADJUSTMENT (HPOS)

Note : Perform this adjustment after checking H. FREQUENCY.

1. Input a cross-hatch signal.
2. Set the Service adjustment Mode.
3. Select HPOS with **[1]** and **[4]**.
4. Adjust with **[3]** and **[6]** for the best horizontal center.
5. Write into the memory by pressing **[MUTING]** then **[ENTER]**.

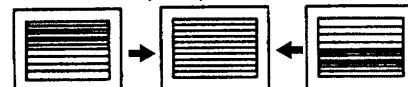
### H. CENTER (VPOS)



## V. LINEARITY (VLIN) AND V CORRECTION

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

### V LINEARITY (VLIN)



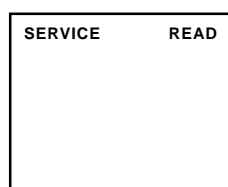
### V CORRECTION



## SERVICE ADJUSTMENT MODE MEMORY

1. Change DCOL to "1".
2. After completing all adjustments, press "0" then **[ENTER]**.

### READ FROM MEMORY



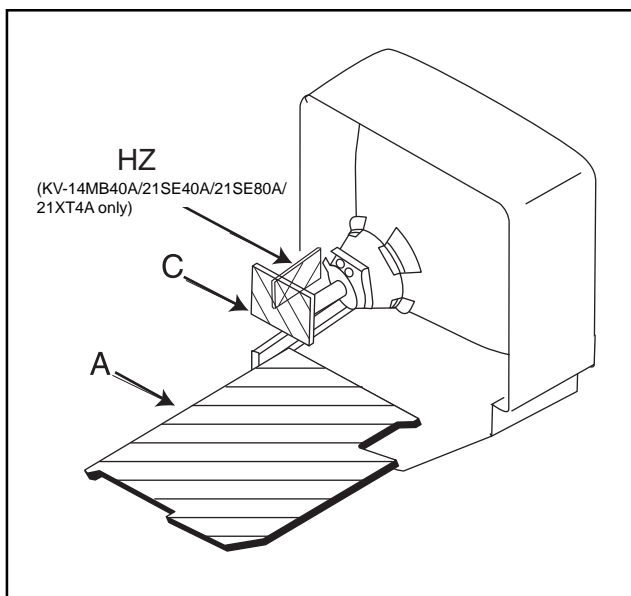
Green

**[0]**

Red

**[ENTER]**

## 6-2. Circuit Boards Location



## 6-3. Printed Wiring Boards and Schematic Diagrams

Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$  50V or less are not indicated except for electrolytic and tantalums.
- All electrolytics are 50V unless otherwise specified
- Indication of resistance, which does not have one for rating electrical power, is as follows:

Pitch: 5mm  
Rating electrical power 1/4W

- All resistors are in ohms.  
 $\text{K}\Omega=1000\Omega$ ,  $\text{M}\Omega=1000\text{K}\Omega$
- nonflammable resistor.
- $\Delta$ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R582 on pages 23 and 24).
- When replacing parts in the table below be sure to perform the related adjustment.

Part replaced ()	Adjustment ()
IC301, IC521, IC602, D572, D573, D574, DY, C507, C511, C574, C575, R578, R582, R583, R584, R585, R586, R625, R626, R634, R635, T504 (FBT)	HV HOLD-DOWN (R582)
IC001, IC602, R030, R624, R626, R632, R633, R635, R636, R637, R638, R639	B+ VOLTAGE CONFIRMATION

- All voltages are in V.
- Voltage is DC with respect to ground unless otherwise noted.
- Readings are taken with a  $10\text{M}\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.

- : B + Line
- : B - Line
- : signal path

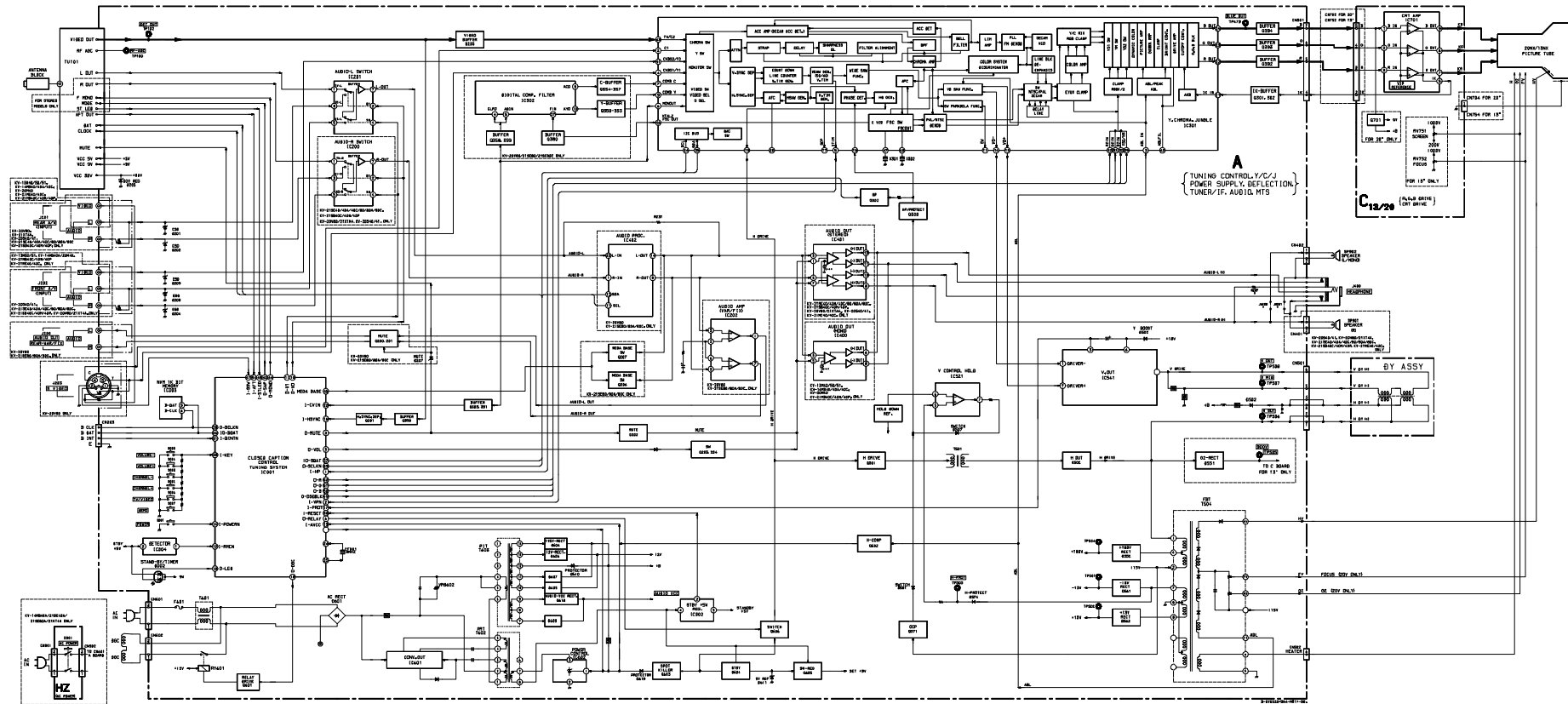
### Reference Information

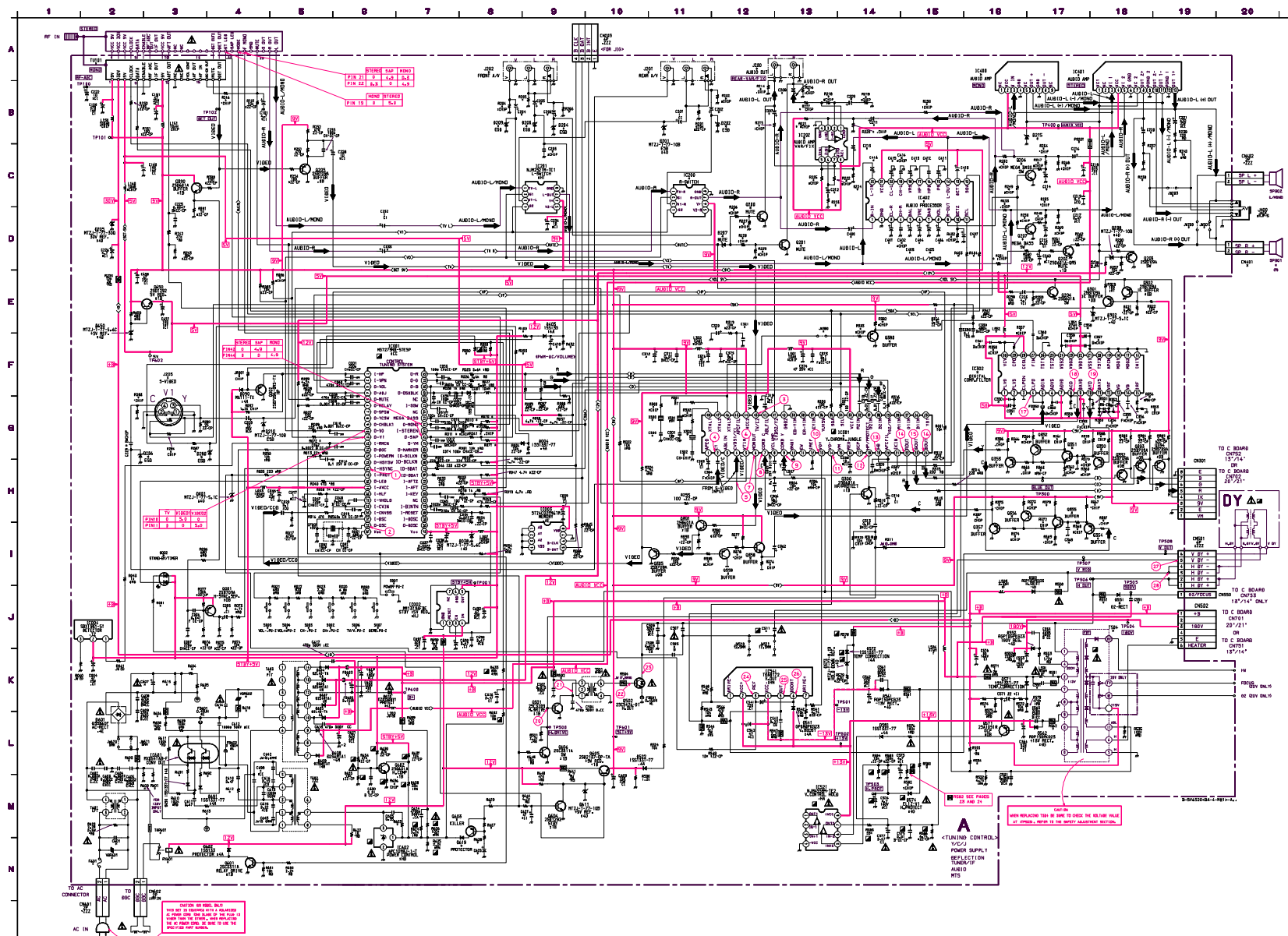
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NON FLAMMABLE CARBON
	: FUSE	NON FLAMMABLE FUSIBLE
	: RW	NON FLAMMABLE WIREWOUND
	: RS	NON FLAMMABLE METAL OXIDE
	: RB	NON FLAMMABLE CEMENT
	:	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

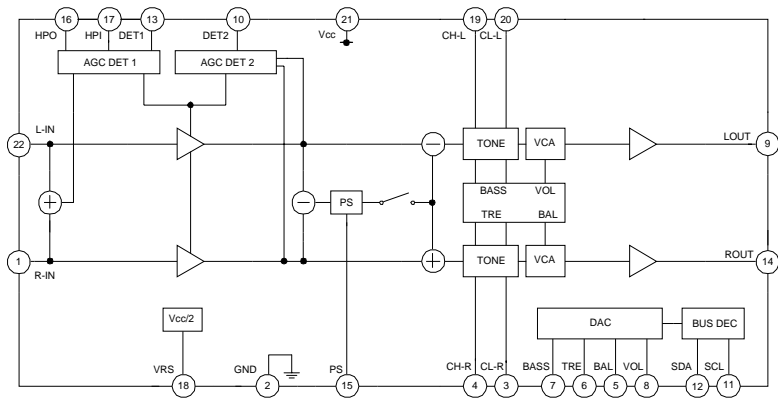
**Note:** The symbol display is on the component side.

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

The symbol indicates fast operating fuse. Replace only with fuse of same rating as marked.

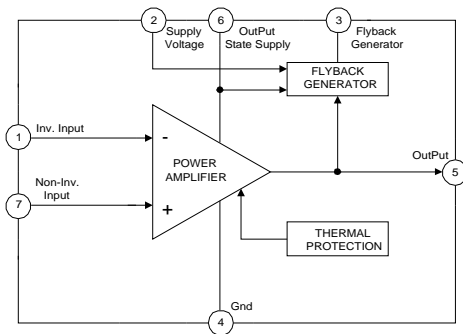




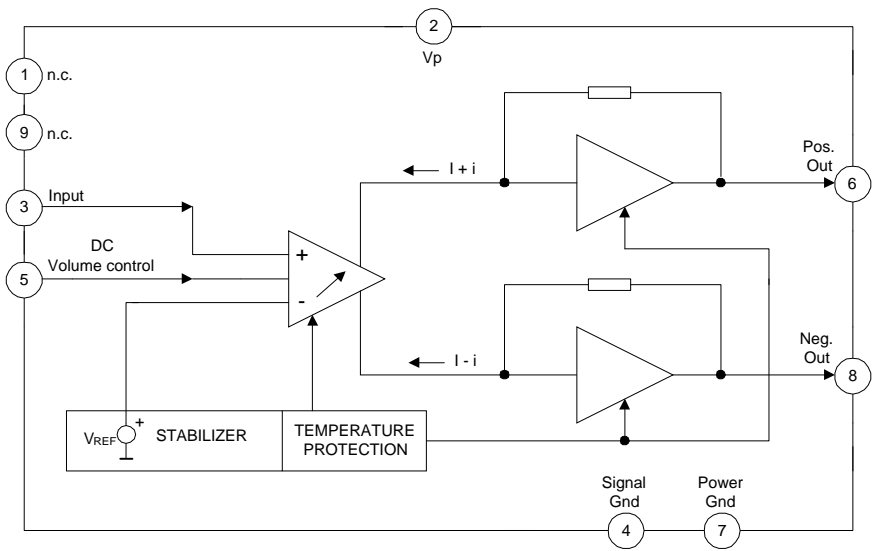


A BOARD : IC402 CXA2021S

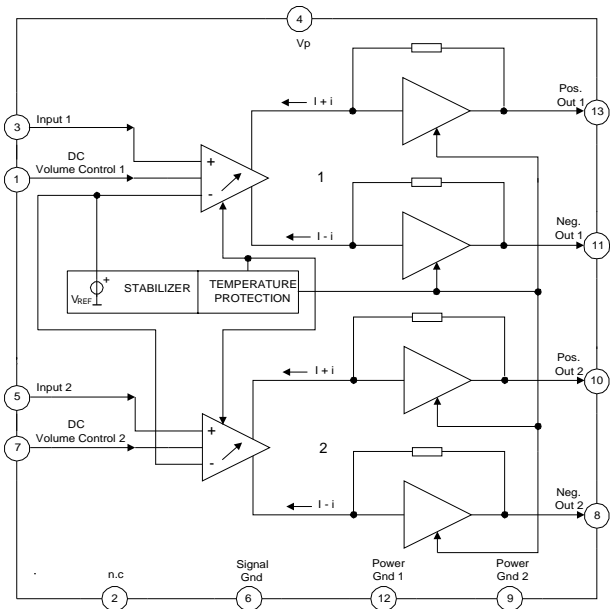




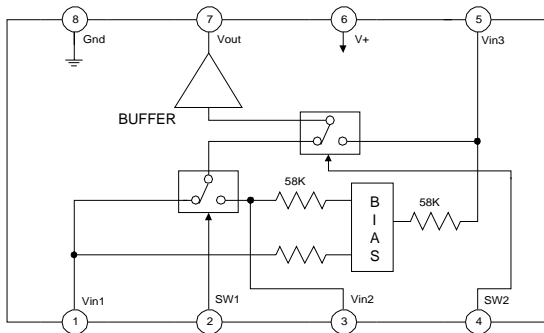
A BOARD : IC541 TDA8172



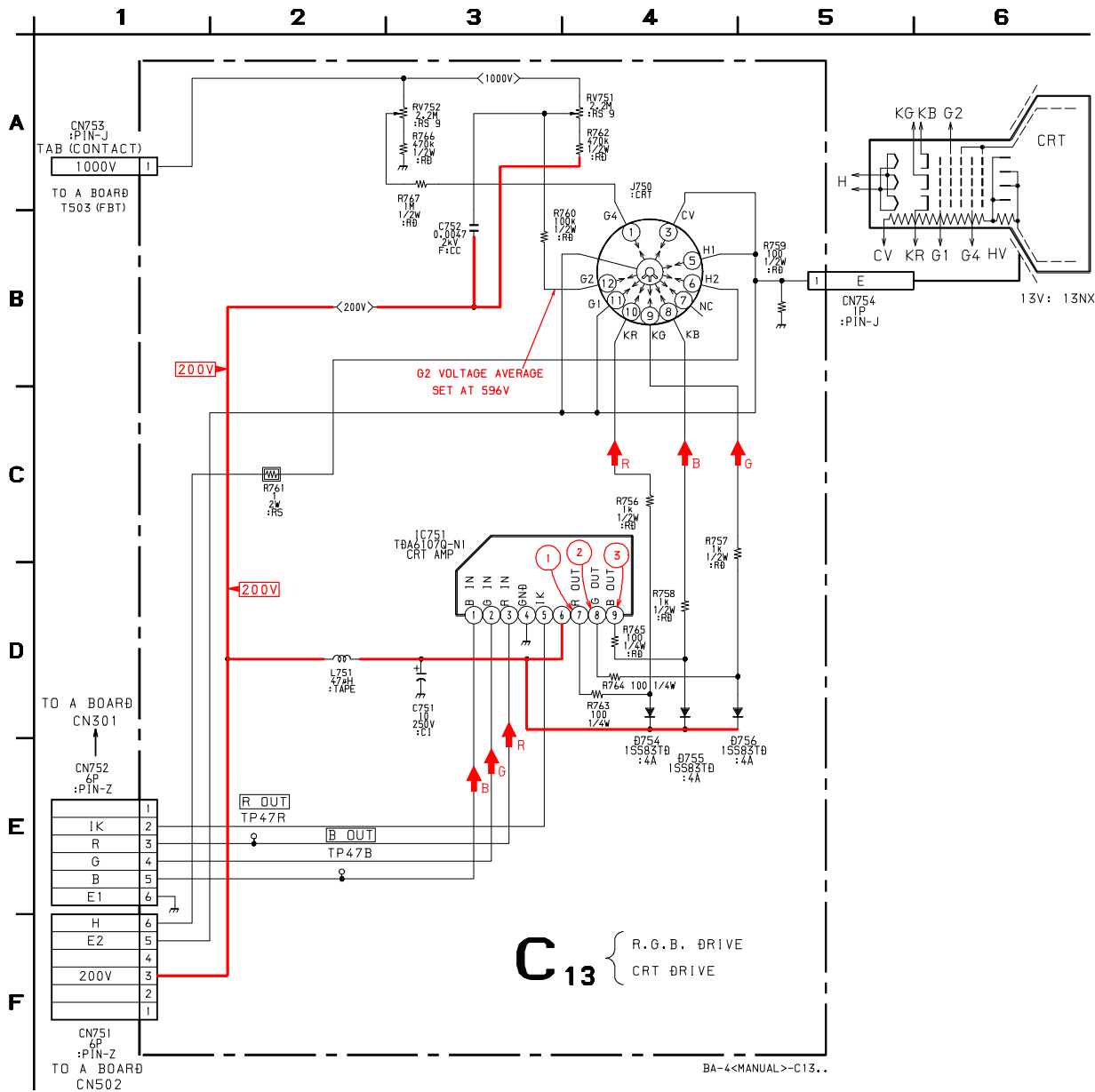
A BOARD : IC400 TDA7056B



A BOARD : IC401 TDA7057Q



A BOARD : IC200, 201 NJM2521M



1

2

3

4

5

6

A

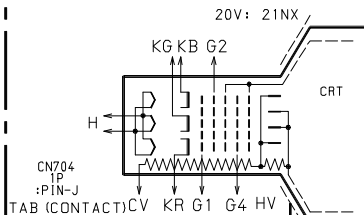
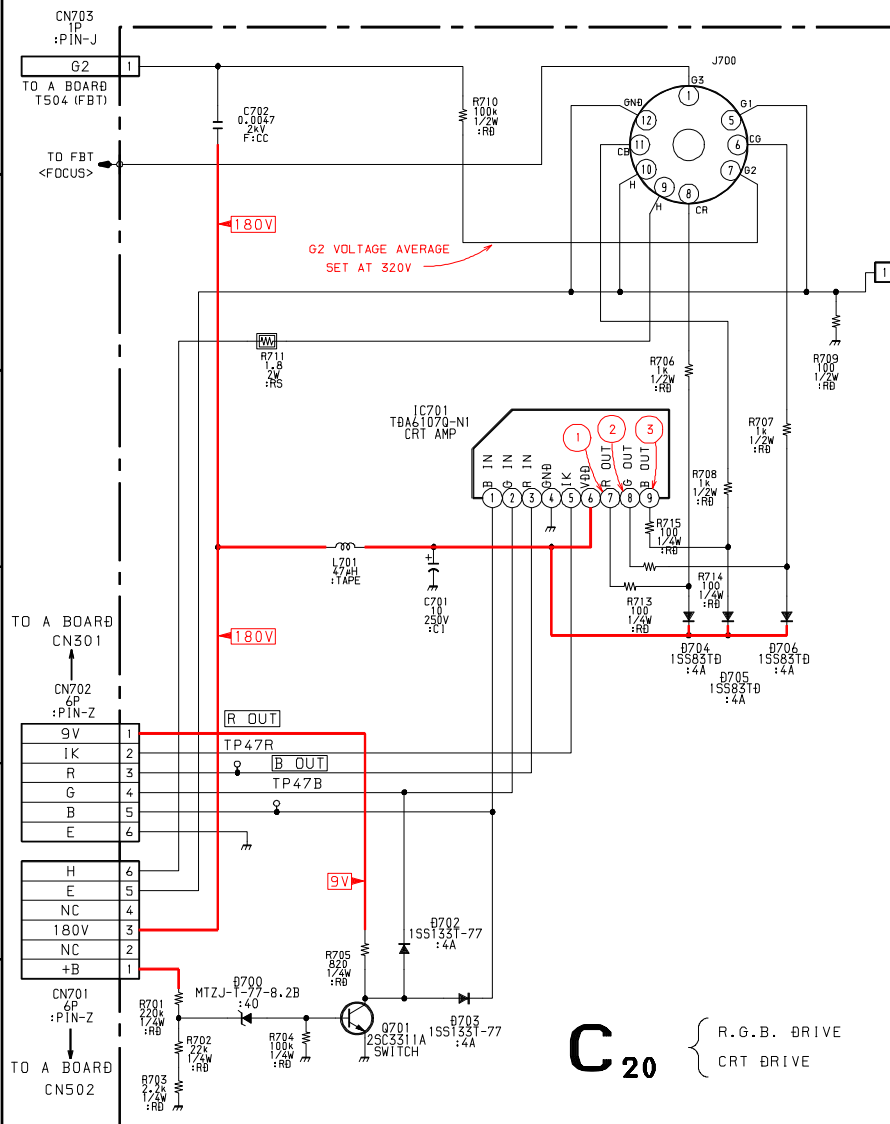
B

C

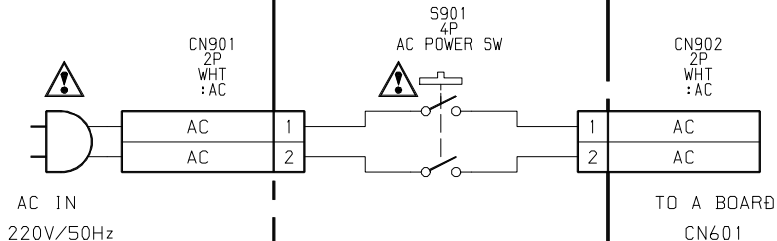
D

E

F

C<sub>20</sub>

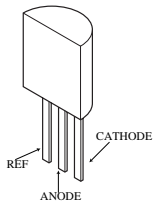
R.G.B. DRIVE  
CRT DRIVE

**1****2****3****A****B**

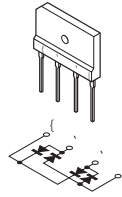
B-SV6520&lt;BA4-M#1&gt;-HZ.

## 6-4. SEMICONDUCTORS

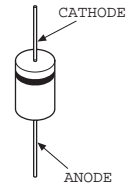
uPC1093J-1-T



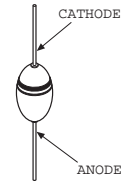
D3SB60F



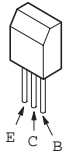
EL1Z-V1  
RGP10GPKG3  
1SS133T-77  
MTZJ-T-77-10B  
MTZJ-T-77-30D  
MTZJ-T-77-5.1C  
D2S4MTA1



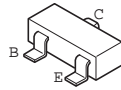
GP08DPKG3



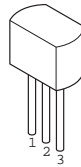
2SC3209  
2SC5426-01  
2SC3209LK-TP  
2SD1292



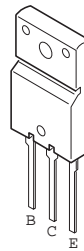
2SB709A-QRS-TX  
2SD601A-QRS-TX



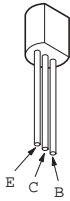
TDA6107Q  
TDA7056B



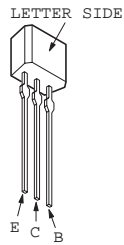
2SD2137-OP-TA



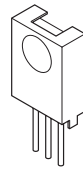
2SA1091-0  
2SD1292



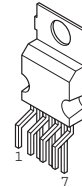
2SA1309A  
2SA1175-HFE  
2SC3311A



SBX198



TDA8172





## SECTION 7 EXPLODED VIEWS

• Items with no part number and no description are not stocked because they are seldom required for routine service

• The component parts of an assembly are indicated by the reference numbers in the remarks column.

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

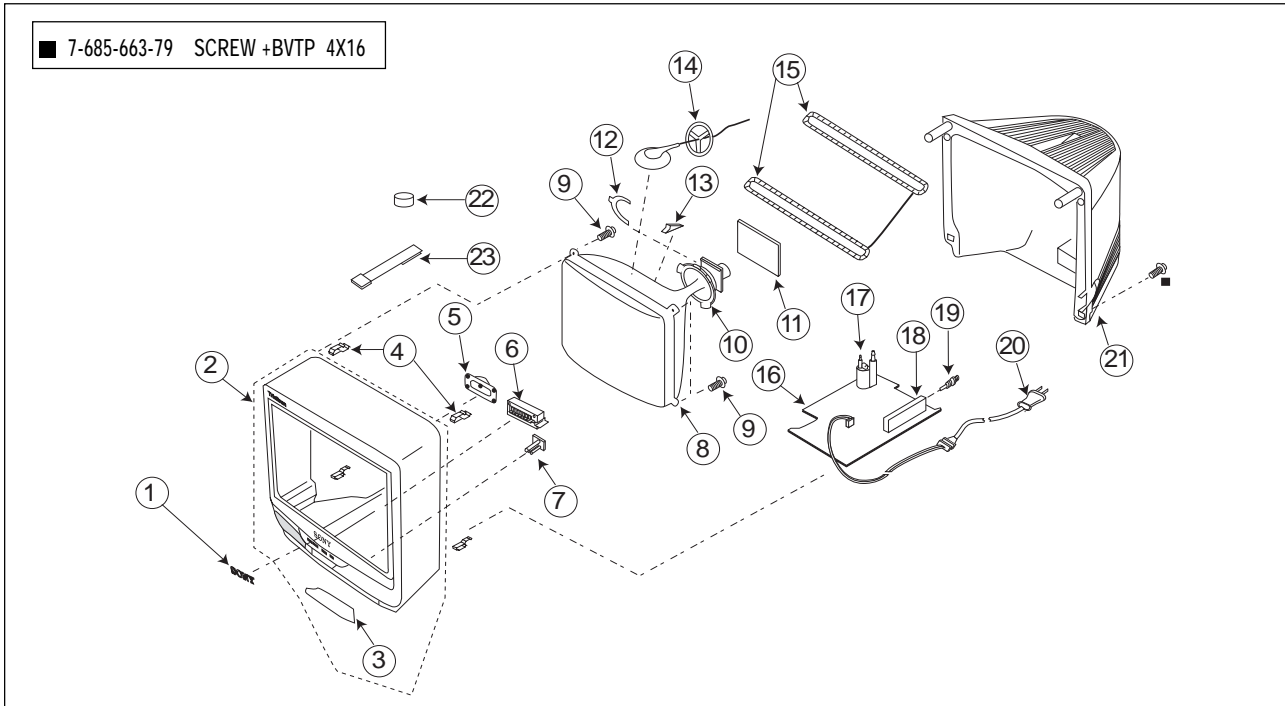
### Note:

The components identified with gray shading and a critical symbol ( Δ ) are critical for safety. Replace only with part number specified.

### Note:

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

## 7-1. CHASSIS (KV-13M40/13M50/13M51/14MB40/14MB40A/14MB40C)



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-162-01	EMBLEM (NO.6) SONY		13	4-053-005-01	SPACER, DY	
2	X-4035-709-1	BEZNET, ASSY (KV-13M40)	3	14	3-704-372-31	HOLDER, HV	
2	X-4035-710-1	BEZNET, ASSY (KV-13M50)	3	15	1-411-985-31	COIL, DEMAGNETIZATION	
2	X-4035-711-1	BEZNET, ASSY (KV-13M51)	3	16 *	A-1298-305-A	A BOARD, COMPLETE (KV-14MB40C)	
2	X-4035-712-1	BEZNET, ASSY (KV-14MB40C/14MB40)	3	16 *	A-1298-451-A	A BOARD, COMPLETE (KV-14MB40/13M40)	
2	X-4035-713-1	BEZNET, ASSY (KV-14MB40A)	3	16 *	A-1298-452-A	A BOARD, COMPLETE (KV-13M51/13M50)	
				16 *	A-1298-465-A	A BOARD, COMPLETE (KV-14MB40A)	
3	4-051-569-21	DOOR (KV-14MB40A/14MB40C/14MB40/13M40/13M50)		17 Δ	1-453-210-11	TRANSFORMER ASSY, FLYBACK (NX-1731//X4E4)	
3	4-051-569-31	DOOR (KV-13M51)		18 Δ	8-598-430-00	TUNER BTF-FA401	
4	4-055-079-01	HOLDER, DCG		19	1-766-374-11	PLUG, F PIN	
5	1-505-828-11	SPEAKER (9x5 cm)		20 Δ	1-751-057-11	CORD, POWER (WITH CONNECTOR)	
6	4-051-567-01	BUTTON, MULTI (KV-14MB40C/14MB40/13M40/13M50/14MB40A)				(KV-14MB40/13M40/13M50)	
6	4-051-567-11	BUTTON, MULTI (KV-13M51)		20 Δ	1-751-058-11	CORD, POWER (WITH CONNECTOR) (KV-13M51)	
7	4-051-568-11	FILTER, REMOTE (KV-14MB40C/14MB40/14MB40A/13M40/13M50)		20 Δ	1-769-796-71	CORD, POWER (WITH CONNECTOR)	
						(KV-14MB40C/14MB40A)	
7	4-064-703-01	GUIDE, LED (KV-14MB40A)		21	4-051-570-11	REAR COVER (KV-13M51)	
8 Δ	8-735-562-05	CRT 14NDXM (SDS)		21	4-051-570-41	REAR COVER (KV-14MB40C/14MB40/14MB40A)	
9	4-365-808-01	SCREW (5), TAPPING		21	4-051-870-51	REAR COVER (KV-13M40/13M50)	
10 Δ	8-451-418-11	DY 14NDA2-X		22	1-452-032-00	MAGNET, DISC	
				23	4-051-735-22	PIECE (A) 75 CONVERSION CORRECTION	
11 *	A-1331-729-A	C BOARD, MOUNTED					
12	1-452-277-00	MAGNET, BMC					

- Items with no part number and no description are not stocked because they are seldom required for routine service

- The component parts of an assembly are indicated by the reference numbers in the remarks column.

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

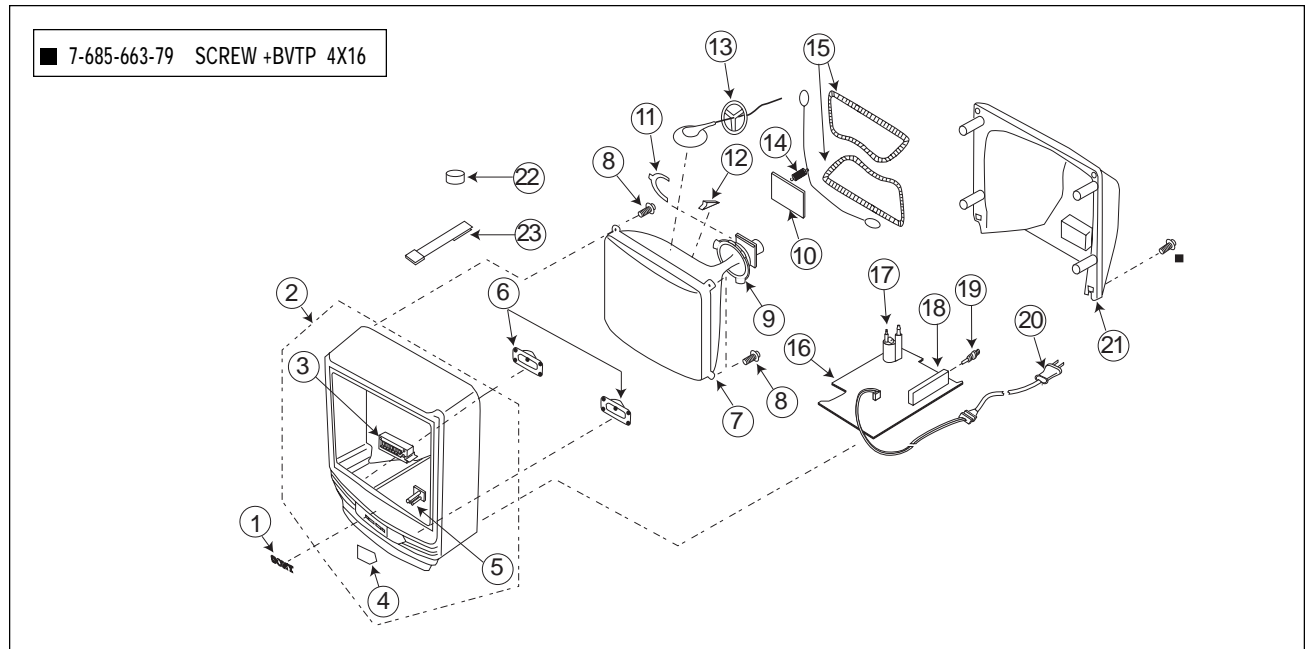
**Note:**

The components identified with gray shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

## 7-2. CHASSIS (KV-20M40/20S40/20S41/21MB40C/21MB40M/21MB40P/21SB40C/21SB40M/21SB40P/21XT4A)



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-161-01	EMBLEM (NO.8) SONY		15 $\Delta$	1-416-571-11	COIL, DEMAGNETIZATION (KV-21MB40C/21XT4A/21SB40C)	
2	X-4035-231-1	BEZNET, ASSY (KV-20M40/21MB40C)	3-5	15 $\Delta$	1-416-572-21	COIL, DEMAGNETIZATION (KV-20M40/21MB40P/21SB40M/20S40/20S41/21MB40M/21SB40P)	
2	X-4035-306-1	BEZNET, ASSY (KV-21MB40P/21MB40M)	3-5				
2	X-4035-307-1	BEZNET, ASSY (KV-20S40)	3-5	16 *	A-1298-303-A	A BOARD, COMPLETE (KV-20M40/21MB40P/21MB40M)	
2	X-4035-309-1	BEZNET, ASSY (KV-21SB40M/21SB40C/21SB40P)	3-5	16 *	A-1298-431-A	A BOARD, COMPLETE (KV-20S41/20S40)	
2	X-4035-696-1	BEZNET, ASSY (KV-20S41)	3-5	16 *	A-1298-423-A	A BOARD, COMPLETE (KV-21MB40C)	
2	X-4035-697-1	BEZNET, ASSY (KV-21XT4A)	3-5	16 *	A-1298-538-A	A BOARD, COMPLETE (KV-21SB40M/21SB40P)	
3	4-062-597-01	BUTTON, MULTI (EXCEPT KV-20S41)		16 *	A-1298-539-A	A BOARD, COMPLETE (KV-21XT4A)	
3	4-062-597-11	BUTTON, MULTI (KV-20S41 only)		16 *	A-1298-540-A	A BOARD, COMPLETE (KV-21SB40C)	
4	4-062-596-01	DOOR (EXCEPT KV-20S41)					
4	4-062-596-11	DOOR (KV-20S41 only)		17 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX1744//X4E4)	
5	4-062-599-01	GUIDE, LED (EXCEPT KV-21XT4A)		18 $\Delta$	8-598-430-00	TUNER BTF-FA401	
5	4-062-599-11	GUIDE, LED (KV-21XT4A only)					
6	1-505-828-11	SPEAKER (9x5 cm)		18 $\Delta$	8-598-431-00	TUNER BTF-WA411 (KV-20S40/20S41/21SB40C/21SB40M/21SB40P/21XTA)	
6	1-505-831-11	SPEAKER (9x5 cm) (KV-20S41/21SB40M/21XT4A/20S40/21SB40C/21SB40P)					
7 $\Delta$	8-738-768-05	CRT 21NX (KV-20M40/21MB40P/21SB40M/20S41/20S40/21MB40M/21SB40P)		19	1-766-374-11	PLUG, F PIN	
7 $\Delta$	8-738-781-05	CRT 21NX (KV-21MB40C/21XT4A/21SB40C)		20 $\Delta$	1-751-057-11	CORD, POWER (WITH CONNECTOR) (KV-20M40/21MB40P/21SB40M/20S41/21MB40M/21SB40P)	
8	4-365-808-01	SCREW (5), TAPPING		20 $\Delta$	1-751-058-11	CORD, POWER (WITH CONNECTOR) (KV-20S41)	
9 $\Delta$	8-451-440-21	DY Y21NXA-X		20 $\Delta$	1-769-796-71	CORD, POWER (WITH CONNECTOR) (KV-21MB40C/21XT4A/21SB40C)	
10 *	A-1331-728-A	C BOARD, MOUNTED					
11	1-452-277-00	MAGNET, BMC		21	4-062-598-01	REAR COVER (KV-20M40/21MB40P/21MB40C/21MB40M)	
12	4-053-005-01	SPACER, DY		21	4-062-598-21	REAR COVER (21SB40M/21XT4A/20S40/21SB40C/21SB40P)	
13	3-704-372-31	HOLDER, HV		21	4-062-598-41	REAR COVER (KV-20S41)	
14 *	4-375-394-01	SPRING, TENSION		22	1-452-032-00	MAGNET, DISC	
				23	4-051-735-22	PIECE (A) 75 CONVERSION CORRECTION	

• Items with no part number and no description are not stocked because they are seldom required for routine service

• The component parts of an assembly are indicated by the reference numbers in the remarks column.

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

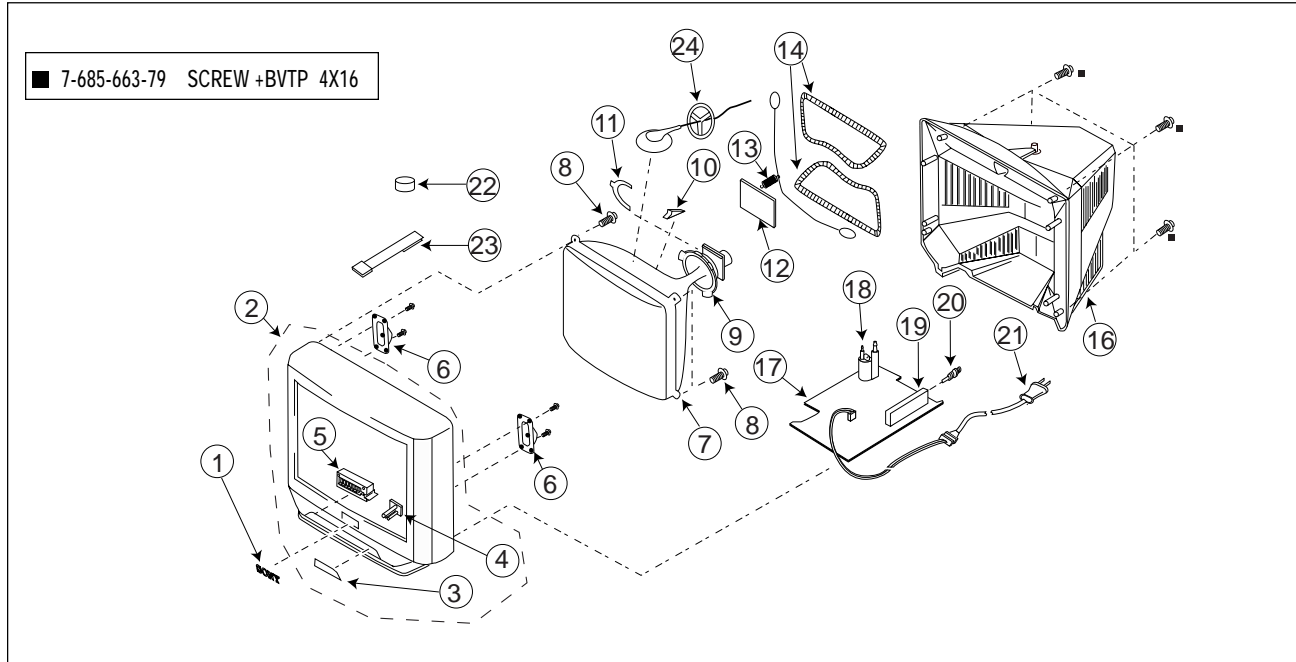
**Note:**

The components identified with gray shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

### 7-3. CHASSIS (KV-21ME40/21ME40C/21SE40/21SE40A/21SE40C)



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-161-01	EMBLEM (NO.8) SONY		16	4-062-602-31	REAR COVER (KV-21SE40/21SE40C/21SE40A)	
2	X-4035-232-1	BEZNET, ASSY (KV-21SE40/21SE40C)	3-5	16	4-062-602-11	REAR COVER (KV-21ME40/21ME40C)	
2	X-4035-311-1	BEZNET, ASSY (KV-21ME40/21ME40C)	3-5	17 *	A-1298-301-A	A BOARD, COMPLETE (KV-21SE40)	
2	X-4035-313-1	BEZNET, ASSY (KV-21SE40A)	3-5	17 *	A-1298-302-A	A BOARD, COMPLETE (KV-21SE40A)	
3	4-062-604-01	DOOR (KV-21SE40/21SE40C/21SE40A)		17 *	A-1298-418-A	A BOARD, COMPLETE (KV-21ME40)	
3	4-062-604-11	DOOR (KV-21ME40/21ME40C)		17 *	A-1298-419-A	A BOARD, COMPLETE (KV-21SE40C)	
4	4-062-607-01	GUIDE, LED		17 *	A-1298-555-A	A BOARD, COMPLETE (KV-21ME40C)	
5	4-062-603-01	BUTTON, MULTI		18 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX1744//X4E4)	
6	1-505-831-11	SPEAKER (9x5 cm) (KV-21ME40/21ME40C)		19 $\Delta$	8-598-430-00	TUNER BTF-FA401 (KV-21ME40/21ME40C)	
6	1-505-930-11	SPEAKER (9x5 cm) (KV-21SE40/21SE40C/21SE40A)		19 $\Delta$	8-598-431-00	TUNER BTF-WA411 (KV-21SE40/21SE40A/21SE40C)	
7 $\Delta$	8-738-768-05	CRT 21NX (KV-21SE40/21ME40)		20	1-766-374-11	PLUG, F PIN	
7 $\Delta$	8-738-781-05	CRT 21NX (KV-21SE40C/21SE40A/21ME40C)		21 $\Delta$	1-751-057-11	CORD, POWER (WITH CONNECTOR)	
8	4-365-808-01	SCREW (5), TAPPING				(KV-21SE40/21ME40)	
9 $\Delta$	8-451-440-21	DY Y21NXA-X		21 $\Delta$	1-769-796-71	CORD, POWER (WITH CONNECTOR)	
10	4-053-005-01	SPACER, DY				(KV-21SE40C/21SE40A/21ME40C)	
11	1-452-277-00	MAGNET, BMC		22	1-452-032-00	MAGNET, DISC	
12 *	A-1331-728-A	C BOARD, MOUNTED		23	4-051-735-22	PIECE (A) 75 CONVERSION CORRECTION	
13 *	4-375-394-01	SPRING, TENSION		24	3-704-372-31	HOLDER, HV	
14 $\Delta$	1-416-571-11	COIL, DEMAGNETIZATION					
		(KV-21SE40C/21SE40A/21ME40C)					
14 $\Delta$	1-416-572-21	COIL, DEMAGNETIZATION (KV-21SE40/21ME40)					

- Items with no part number and no description are not stocked because they are seldom required for routine service

- The component parts of an assembly are indicated by the reference numbers in the remarks column.

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

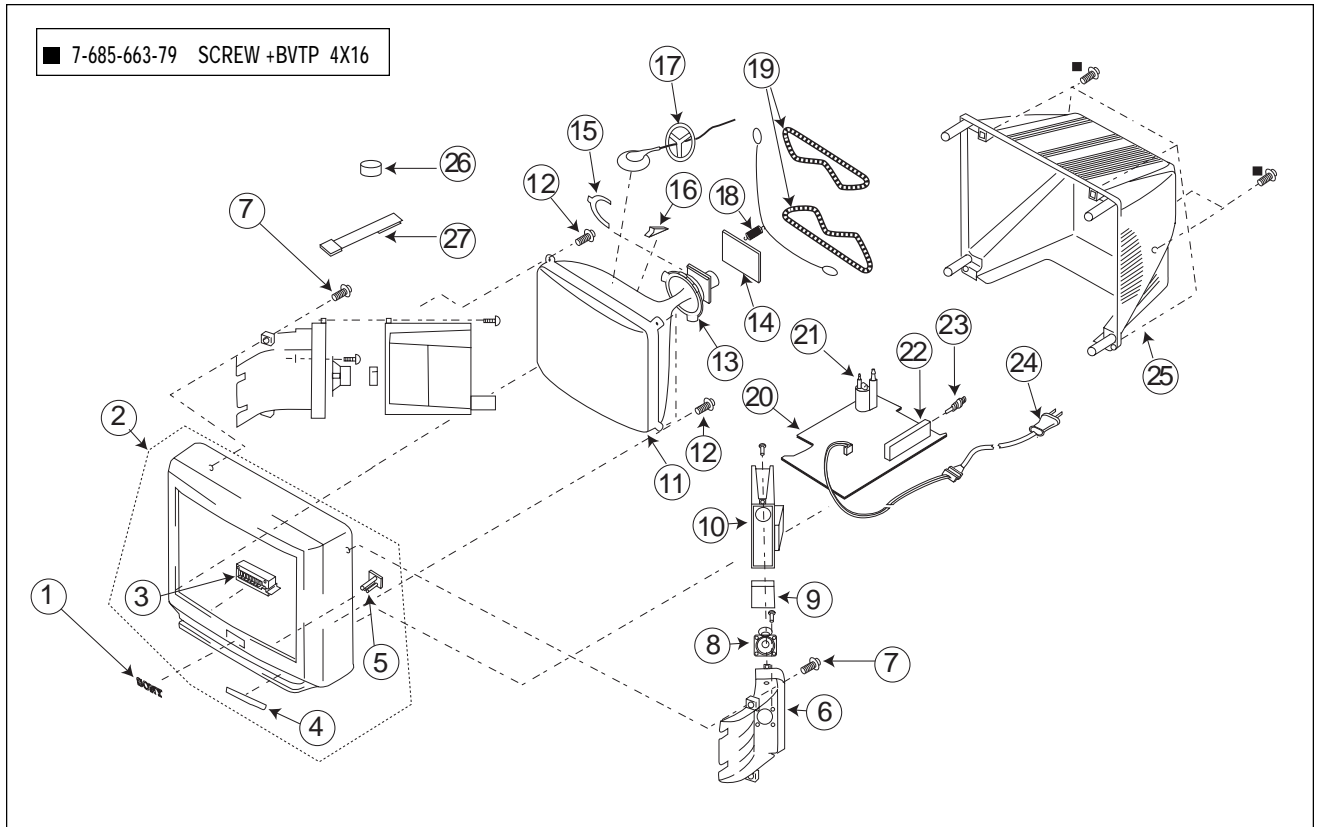
**Note:**

The components identified with gray shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

## 7-4. CHASSIS (KV-20V80/21SE80/21SE80A/21SE80C)



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	4-046-161-01	EMBLEM (NO.8) SONY	
2	X-4035-233-1	BEZNET, ASSY (KV-20V80/21SE80C/21SE80)	3-5
2	X-4035-314-1	BEZNET, ASSY (KV-21SE80A)	3-5
3	4-062-603-01	BUTTON, MULTI	
4	4-062-604-01	DOOR	
5	4-062-607-01	GUIDE, LED	
6 *	4-062-609-01	BAFFLE, SPEAKER	
7	4-384-096-01	SCREW(4X16) TAPPING +P	
8	1-505-404-11	SPEAKER (8CM)	
9 *	4-064-221-01	SPONGE, ACOUSTIC	
10	X-4033-616-1	COVER ASSY, SPEAKER	
11 $\Delta$	8-738-768-05	CRT 21NX (KV-20V80/21SE80)	
11 $\Delta$	8-738-781-05	CRT 21NX (KV-21SE80C/21SE80A)	
12	4-365-808-01	SCREW (5), TAPPING	
13 $\Delta$	8-451-440-21	DY Y21NXA-X	
14 *	A-1331-728-A	C BOARD, MOUNTED	
15	1-452-277-00	MAGNET, BMC	
16	4-053-005-01	SPACER, DY	
17	3-704-372-31	HOLDER, HV	
18	4-375-394-01	SPRING, TENSION	

REF.NO.	PART NO.	DESCRIPTION	REMARK
19 $\Delta$	1-416-571-11	COIL, DEMAGNETIZATION (KV-21SE80C/21SE80A)	
19 $\Delta$	1-416-572-21	COIL, DEMAGNETIZATION (KV-20V80/21SE80)	
20 *	A-1298-304-A	A BOARD, COMPLETE (KV-20V80)	
20 *	A-1298-436-A	A BOARD, COMPLETE (KV-21SE80C)	
20 *	A-1298-437-A	A BOARD, COMPLETE (KV-21SE80)	
20 *	A-1298-438-A	A BOARD, COMPLETE (KV-21SE80A)	
21 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX1744//X4E4)	
22 $\Delta$	8-598-431-00	TUNER BTF-WA411	
23	1-766-374-11	PLUG, F PIN	
24 $\Delta$	1-751-057-11	CORD, POWER (WITH CONNECTOR)	(KV-20V80/21SE80)
24 $\Delta$	1-769-796-71	CORD, POWER (WITH CONNECTOR)	(KV-21SE80C/21SE80A)
25	4-062-610-01	REAR COVER (KV-20V80)	
25	4-062-610-11	REAR COVER (KV-21SE80C/21SE80/21SE80A)	
26	1-452-032-00	MAGNET, DISC	
27	4-051-735-22	PIECE (A) 75 CONVERSION CORRECTION	

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

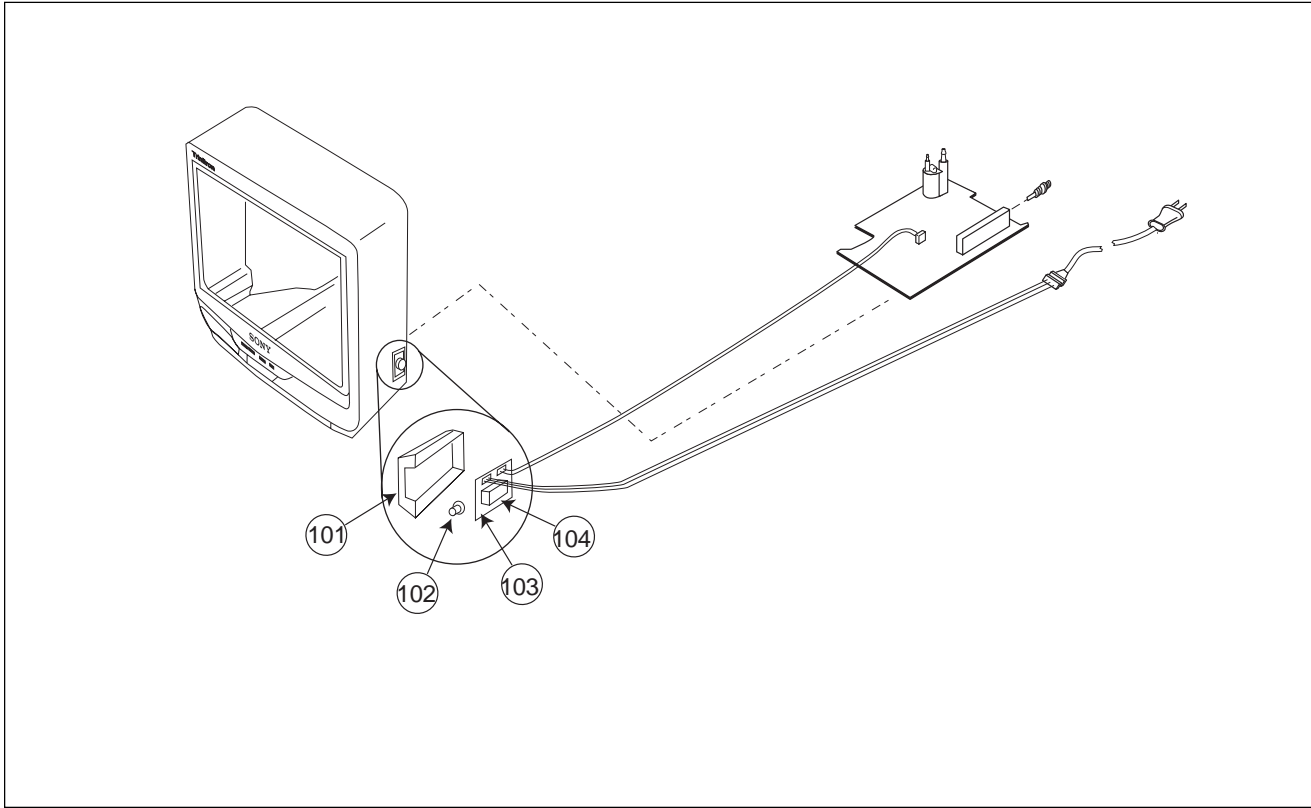
**Note:**

The components identified with gray shading and a critical symbol ( Δ ) are critical for safety. Replace only with part number specified.

**Note:**

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

**7-5. MAIN POWER SWITCH (KV-14MB40A/21SE40A/21SE80A/21XT4A)**



REF.NO.	PART NO.	DESCRIPTION	REMARK
101	4-062-612-01	BRACKET, MAIN POWER	
102	4-062-611-01	BUTTON, MAIN POWER	
103	A-1372-117-A	MOUNTED PCB, HZ	
104 Δ	1-571-433-21	SWITCH, PUSH (AC POWER)	

## SECTION 8 ELECTRICAL PARTS LIST

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## COMMON PARTS LISTING

### Note:

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

### Note:

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

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

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

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

### RESISTORS

- All resistors are in ohms
- F : nonflammable

### CAPACITORS

- MF =  $\mu$ F

### INDUCTORS

- UH =  $\mu$ H, MMH = mH

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

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

### \*A BOARD, COMPLETE

A-1298-451-A (KV-13M40/14MB40)  
A-1298-305-A (KV-14MB40C)  
A-1298-465-A (KV-14MB40A)  
A-1298-303-A (KV-20M40/21MB40M/21MB40P)  
A-1298-432-A (KV-21MB40C)  
A-1298-301-A (KV-21SE40)  
A-1298-431-A (KV-20S40/20S41)  
A-1298-419-A (KV-21SE40C)  
A-1298-304-A (KV-20V80)  
A-1298-437-A (KV-21SE80)  
A-1298-438-A (KV-21SE80A)  
A-1298-436-A (KV-21SE80C)  
A-1298-418-A (KV-21ME40)  
A-1298-452-A (KV-13M50/13M51)  
A-1298-539-A (KV-21XT4A)  
A-1298-555-A (KV-21ME40C)  
A-1298-538-A (KV-21SB40M/21SB40P)  
A-1298-540-A (KV-21SB40C)  
A-1298-302-A (KV-21SE40A)

- 1-533-223-11 HOLDER, FUSE
- \* 1-900-800-67 CONNECTOR ASSY, 6P MINI MICRO
- \* 1-900-802-45 CONNECTOR ASSY, 7 PIN
- 4-382-854-11 SCREW (M3X10), P, SW (+)

### CAPACITOR

C001	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C004	1-104-664-11	ELECT	47MF	20%	25V
C005	1-126-960-11	ELECT	1MF	20%	50V
C006	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C007	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C008	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C010	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C011	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C012	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C013	1-163-259-91	CERAMIC CHIP	220PF	5%	50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
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C014	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C017	1-126-960-11	ELECT	1MF	20%	50V
C019	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C020	1-130-495-00	FILM	0.1MF	5%	50V
C027	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C028	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C030	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C034	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C037	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C038	1-126-941-11	ELECT	470MF	20%	25V
C039	1-126-964-11	ELECT	10MF	20%	50V
C046	1-104-664-11	ELECT	47MF	20%	25V
C047	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C048	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C050	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C051	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C052	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C053	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C060	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C062	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C065	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C072	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C074	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C091	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C092	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C101	1-126-963-11	ELECT	4.7MF	20%	50V
C150	1-126-935-11	ELECT	470MF	20%	16V
C151	1-104-664-11	ELECT	47MF	20%	25V
C160	1-126-382-11	ELECT	100MF	20%	16V
C200	1-107-698-11	ELECT	10MF	20%	25V
C201	1-126-960-11	ELECT	1MF	20%	50V
C202-209		VARIANT (SEE VARIANT PARTS LIST)			
C211-214		VARIANT (SEE VARIANT PARTS LIST)			
C215	1-126-957-11	ELECT	0.22MF	20%	50V
C216		VARIANT (SEE VARIANT PARTS LIST)			
C217	1-126-959-11	ELECT	0.47MF	20%	50V
C218	1-126-941-11	ELECT	470MF	20%	25V
C219	1-130-495-00	FILM	0.1MF	5%	50V

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**COMMON PARTS LISTING**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C220		VARIANT (SEE VARIANT PARTS LIST)		C507		VARIANT (SEE VARIANT PARTS LIST)	
C221	1-126-941-11	ELECT 470MF 20%	25V	C508	1-106-371-00	MYLAR 0.015MF 20%	200V
C222	1-126-964-11	ELECT 10MF 20%	50V	C509 $\Delta$	1-162-115-00	CERAMIC 330PF 10%	2KV
C223	1-126-963-11	ELECT 4.7MF 20%	50V	C511		VARIANT (SEE VARIANT PARTS LIST)	
C225	1-163-017-00	CERAMIC CHIP 0.0047MF 10%	50V	C531	1-106-387-00	MYLAR 0.068MF 10%	200V
C226	1-107-635-11	ELECT 4.7MF 20%	160V	C541	1-126-969-11	ELECT 220MF 20%	50V
C228	1-126-964-11	ELECT 10MF 20%	50V	C42	1-126-967-11	ELECT 47MF 20%	50V
C229		VARIANT (SEE VARIANT PARTS LIST)		C543	1-136-169-00	FILM 0.22MF 5%	50V
C232	1-126-960-11	ELECT 1MF 20%	50V	C551		VARIANT (SEE VARIANT PARTS LIST)	
C233		VARIANT (SEE VARIANT PARTS LIST)		C552	1-102-244-00	CERAMIC 220PF 10%	500V
C234	1-126-964-11	ELECT 10MF 20%	50V	C553	1-107-652-11	ELECT 10MF 20%	250V
C255	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C561	1-102-244-00	CERAMIC 220PF 10%	500V
C260	1-126-960-11	ELECT 1MF 20%	50V	C562	1-126-941-11	ELECT 470MF 20%	25V
C300		VARIANT (SEE VARIANT PARTS LIST)		C563	1-102-244-00	CERAMIC 220PF 10%	500V
C301	1-163-099-00	CERAMIC CHIP 18PF 5%	50V	C564	1-126-941-11	ELECT 470MF 20%	25V
C302		VARIANT (SEE VARIANT PARTS LIST)		C571 $\Delta$	1-126-965-11	ELECT 22MF 20%	50V
C303	1-126-964-11	ELECT 10MF 20%	50V	C573	1-126-963-11	ELECT 4.7MF 20%	50V
C304		VARIANT (SEE VARIANT PARTS LIST)		C574	1-107-635-11	ELECT 4.7MF 20%	160V
C305	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V	C575	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C306	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V	C576	1-123-024-21	ELECT 33MF 160V	
C307		VARIANT (SEE VARIANT PARTS LIST)		C577 $\Delta$	1-126-959-11	ELECT 0.47MF 20%	50V
C308	1-126-964-11	ELECT 10MF 20%	50V	C591		VARIANT (SEE VARIANT PARTS LIST)	
C309		VARIANT (SEE VARIANT PARTS LIST)		C601		VARIANT (SEE VARIANT PARTS LIST)	
C310	1-126-960-11	ELECT 1MF 20%	50V	C602 $\Delta$	1-113-920-11	CERAMIC 0.0022MF 20%	250V
C311	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C603 $\Delta$	1-113-920-11	CERAMIC 0.0022MF 20%	250V
C312		VARIANT (SEE VARIANT PARTS LIST)		C604 $\Delta$	1-113-920-11	CERAMIC 0.0022MF 20%	250V
C313	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C605 $\Delta$	1-113-920-11	CERAMIC 0.0022MF 20%	250V
C316	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C607		VARIANT (SEE VARIANT PARTS LIST)	
C317	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C608	1-113-910-11	CERAMIC 470PF 10%	250V
C318	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V	C609	1-113-910-11	CERAMIC 470PF 10%	250V
C319	1-126-963-11	ELECT 4.7MF 20%	50V	C610	1-136-173-00	FILM 0.47MF 5%	50V
C320		VARIANT (SEE VARIANT PARTS LIST)		C611	1-136-173-00	FILM 0.47MF 5%	50V
C321		VARIANT (SEE VARIANT PARTS LIST)		C612	1-164-645-11	CERAMIC 1000PF 10%	500V
C330	1-163-007-11	CERAMIC CHIP 680PF 10%	50V	C613	1-164-645-11	CERAMIC 1000PF 10%	500V
C348		VARIANT (SEE VARIANT PARTS LIST)		C614		VARIANT (SEE VARIANT PARTS LIST)	
C350-362		VARIANT (SEE VARIANT PARTS LIST)		C615	1-136-169-00	FILM 0.22MF 5%	50V
C373	1-163-038-91	CERAMIC CHIP 0.1MF 25V		C616	1-136-169-00	FILM 0.22MF 5%	50V
C374	1-104-664-11	ELECT 47MF 20%	25V	C617	1-165-127-11	CERAMIC 470PF 10%	500V
C375	1-163-038-91	CERAMIC CHIP 0.1MF 25V		C618	1-165-127-11	CERAMIC 470PF 10%	500V
C376	1-104-664-11	ELECT 47MF 20%	25V	C619	1-123-024-21	ELECT 33MF 160V	
C390	1-130-495-00	FILM 0.1MF 5%	50V	C620	1-126-942-61	ELECT 1000MF 20%	25V
C400-407		VARIANT (SEE VARIANT PARTS LIST)		C621	1-126-941-11	ELECT 470MF 20%	25V
C410-416		VARIANT (SEE VARIANT PARTS LIST)		C623	1-136-171-00	FILM 0.33MF 5%	50V
C418		VARIANT (SEE VARIANT PARTS LIST)		C624	1-137-417-11	MYLAR 0.0047MF 10%	200V
C502	1-106-371-00	MYLAR 0.015MF 20%	200V	C625		VARIANT (SEE VARIANT PARTS LIST)	
C504	1-102-228-00	CERAMIC 470PF 10%	500V	C626	1-126-959-11	ELECT 0.47MF 20%	50V
C505		VARIANT (SEE VARIANT PARTS LIST)		C627	1-126-967-11	ELECT 47MF 20%	50V





## COMMON PARTS LISTING

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C629	1-104-665-11	ELECT 100MF 20% 25V	
C630	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C651	1-126-382-11	ELECT 100MF 20% 16V	
C653	1-104-664-11	ELECT 47MF 20% 25V	
C690	1-126-959-11	ELECT 0.47MF 20% 50V	
C691	1-126-941-11	ELECT 470MF 20% 25V	
C692	1-104-664-11	ELECT 47MF 20% 25V	
C693	1-136-173-00	FILM 0.47MF 5% 50V	
C699		VARIANT (SEE VARIANT PARTS LIST)	

### FILTER

CF001	1-767-487-11	VIBRATOR, CRYSTAL
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### CONNECTOR

CN203	1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P
CN401		VARIANT (SEE VARIANT PARTS LIST)
CN402	1-564-505-11	PLUG, CONNECTOR 2P
CN501 *	1-580-798-11	CONNECTOR PIN (DY) 6P
CN601 *	1-580-843-11	PIN, CONNECTOR (POWER)

CN602	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
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### DIODE

D001	8-719-921-44	DIODE MTZJ-T-77-5.1C
D002		VARIANT (SEE VARIANT PARTS LIST)
D003	8-719-991-33	DIODE 1SS133T-77
D004	8-719-991-33	DIODE 1SS133T-77
D038	8-719-109-89	DIODE MTZJ-T-77-5.6C
D090	8-719-404-49	DIODE MA111-TX
D201	8-719-110-17	DIODE MTZJ-T-77-10B
D202-204		VARIANT (SEE VARIANT PARTS LIST)
D205	8-719-982-22	DIODE MTZJ-T-77-30D
D206-207		VARIANT (SEE VARIANT PARTS LIST)
D208	8-719-110-17	DIODE MTZJ-T-77-10B
D209		VARIANT (SEE VARIANT PARTS LIST)
D210	8-719-110-17	DIODE MTZJ-T-77-10B
D215		VARIANT (SEE VARIANT PARTS LIST)
D280		VARIANT (SEE VARIANT PARTS LIST)
D302	8-719-921-44	DIODE MTZJ-T-77-5.1C
D403	8-719-991-33	DIODE 1SS133T-77
D502	8-719-302-43	DIODE RGP10GPKG23
D522	8-719-991-33	DIODE 1SS133T-77
D541	8-719-908-03	DIODE GP08DPKG23
D551		VARIANT (SEE VARIANT PARTS LIST)
D552	8-719-302-43	DIODE RGP10GPKG23
D561	8-719-979-85	DIODE RGP15GPKG23
D562	8-719-979-85	DIODE RGP15GPKG23

REF.NO.	PART NO.	DESCRIPTION	REMARK
D571 $\Delta$	8-719-991-33	DIODE 1SS133T-77	
D572	8-719-991-33	DIODE 1SS133T-77	
D573	8-719-110-08	DIODE MTZJ-T-77-8.2B	
D574 $\Delta$	8-719-302-43	DIODE EL1Z-V1	
D581	8-719-991-33	DIODE 1SS133T-77	
D601 $\Delta$	8-719-510-51	DIODE D3SB60F	
D602	8-719-991-33	DIODE 1SS133T-77	
D604	8-719-052-86	DIODE D2L40-TA	
D605	8-719-052-86	DIODE D2L40-TA	
D606	8-719-022-97	DIODE D2S4MTA1	
D607	8-719-022-97	DIODE D2S4MTA1	
D608	8-719-018-84	DIODE D2S6MTA1	
D609	8-719-018-84	DIODE D2S6MTA1	
D610 $\Delta$	8-719-057-52	DIODE EZ0150AV1	

D611	8-719-110-17	DIODE MTZJ-T-77-10B
D619		VARIANT (SEE VARIANT PARTS LIST)
D650	8-719-109-89	DIODE MTZJ-T-77-5.6C
D690	8-719-991-33	DIODE 1SS133T-77
D691	8-719-991-33	DIODE 1SS133T-77

### FUSE

F601		VARIANT (SEE VARIANT PARTS LIST)
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### FERRITE BEAD

FB501	1-410-396-41	FERRITE 0.45UH
FB601	1-410-396-41	FERRITE 0.45UH
FB602	1-410-396-41	FERRITE 0.45UH
FB603	1-412-911-11	FERRITE
FB605	1-410-396-41	FERRITE 0.45UH

### IC

IC001	8-759-540-75	IC M37273M8-STESP
IC002	8-759-371-21	IC MM1319AFBE
IC003	8-759-354-28	IC ST24C02FM6TR
IC004	8-742-014-11	IC SBX1981-51
IC200		VARIANT (SEE VARIANT PARTS LIST)
IC201	8-759-450-93	IC NJM2521M-TE1
IC202		VARIANT (SEE VARIANT PARTS LIST)
IC301-302		VARIANT (SEE VARIANT PARTS LIST)
IC400-402		VARIANT (SEE VARIANT PARTS LIST)
IC521 $\Delta$	8-759-100-96	IC NJM4558M-TE2
IC541	8-759-980-58	IC TDA8172
IC601 $\Delta$	8-729-039-65	TRANSISTOR MX0541AB-F
IC602 $\Delta$	8-759-198-31	IC UPC1093J-1-T

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**COMMON PARTS LISTING**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>JACK</u>				Q501	8-729-140-50	TRANSISTOR 2SC3209LK-TP	
J200-203		VARIANT (SEE VARIANT PARTS LIST)		Q502 $\Delta$	8-729-043-43	TRANSISTOR 2SC5426-01	
J400	1-568-267-21	JACK		Q522	8-729-119-76	TRANSISTOR 2SA1048TP-YGR	
<u>CHIP CONDUCTOR</u>				Q571 $\Delta$	8-729-200-17	TRANSISTOR 2SA10910-TPE2	
JR001	1-216-295-91	SHORT		Q601	8-729-119-78	TRANSISTOR 2SC3311A-QRSTA	
JR002	1-216-295-91	SHORT		Q602	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
<u>COIL</u>				Q603		VARIANT (SEE VARIANT PARTS LIST)	
L001	1-410-470-11	INDUCTOR 10UH		Q604	8-729-111-55	TRANSISTOR 2SD1292	
L002	1-412-032-11	INDUCTOR CHIP 100UH		Q605	8-729-423-99	TRANSISTOR 2SD2137-OP-TA	
L003	1-412-032-11	INDUCTOR CHIP 100UH		Q606	8-729-119-78	TRANSISTOR 2SC3311A-QRSTA	
L150	1-412-032-11	INDUCTOR CHIP 100UH		Q650	8-729-111-55	TRANSISTOR 2SD1292	
L151	1-412-029-11	INDUCTOR CHIP 10UH		<u>RESISTOR</u>			
L160	1-412-029-11	INDUCTOR CHIP 10UH		R001	1-249-429-11	CARBON 10K 5%	1/4W
L301	1-412-029-11	INDUCTOR CHIP 10UH		R002	1-249-429-11	CARBON 10K 5%	1/4W
L302	1-412-029-11	INDUCTOR CHIP 10UH		R003	1-216-033-00	RES,CHIP 220 5%	1/10W
L351	1-412-031-11	INDUCTOR CHIP 47UH		R004	1-216-073-00	RES,CHIP 10K 5%	1/10W
L352		VARIANT (SEE VARIANT PARTS LIST)		R005	1-247-815-91	CARBON 220 5%	1/4W
L503	1-412-553-11	INDUCTOR 3.3MMH		R007	1-216-025-91	RES,CHIP 100 5%	1/10W
L504	1-412-533-21	INDUCTOR 47UH		R008	1-216-033-00	RES,CHIP 220 5%	1/10W
L591 $\Delta$	1-412-531-31	INDUCTOR 33UH		R009	1-247-815-91	CARBON 220 5%	1/4W
<u>IC LINK</u>				R010-011		VARIANT (SEE VARIANT PARTS LIST)	
PS201		VARIANT (SEE VARIANT PARTS LIST)		R013	1-247-863-91	CARBON 22K 5%	1/4W
<u>TRANSISTOR</u>				R016	1-249-413-11	CARBON 470 5%	1/4W
Q001	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R017	1-216-113-00	RES,CHIP 470K 5%	1/10W
Q002	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R018	1-249-417-11	CARBON 1K 5%	1/4W
Q200-201		VARIANT (SEE VARIANT PARTS LIST)		R019	1-249-425-11	CARBON 4.7K 5%	1/4W
Q202	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R020	1-249-427-11	CARBON 6.8K 5%	1/4W
Q203	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R021	1-249-415-11	CARBON 680 5%	1/4W
Q204	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R022	1-249-416-11	CARBON 820 5%	1/4W
Q205	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R023	1-249-421-11	CARBON 2.2K 5%	1/4W
Q206-207		VARIANT (SEE VARIANT PARTS LIST)		R025	1-249-426-11	CARBON 5.6K 5%	1/4W
Q300	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R026	1-249-426-11	CARBON 5.6K 5%	1/4W
Q301	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R027	1-249-426-11	CARBON 5.6K 5%	1/4W
Q302	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R028	1-216-049-91	RES,CHIP 1K 5%	1/10W
Q305	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R030	1-249-429-11	CARBON 10K 5%	1/4W
Q350-359		VARIANT (SEE VARIANT PARTS LIST)		R031	1-216-045-00	RES,CHIP 680 5%	1/10W
Q380		VARIANT (SEE VARIANT PARTS LIST)		R032	1-216-033-00	RES,CHIP 220 5%	1/10W
Q390	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R033	1-247-815-91	CARBON 220 5%	1/4W
Q391	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R038	1-216-049-91	RES,CHIP 1K 5%	1/10W
Q392	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R040	1-249-413-11	CARBON 470 5%	1/4W
Q393	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R043	1-249-417-11	CARBON 1K 5%	1/4W
Q394	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R044	1-216-033-00	RES,CHIP 220 5%	1/10W
				R045	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
				R046	1-216-033-00	RES,CHIP 220 5%	1/10W
				R047	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
				R048	1-216-025-91	RES,CHIP 100 5%	1/10W



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REF.NO.	PART NO.	DESCRIPTION	REMARK				REF.NO.	PART NO.	DESCRIPTION	REMARK			
R049	1-216-089-91	RES,CHIP	47K	5%	1/10W		R260	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R050	1-249-429-11	CARBON	10K	5%	1/4W		R261	1-216-097-91	RES,CHIP	100K	5%	1/10W	
R051		VARIANT (SEE VARIANT PARTS LIST)					R262	1-216-025-91	RES,CHIP	100	5%	1/10W	
R053		VARIANT (SEE VARIANT PARTS LIST)					R268-269		VARIANT (SEE VARIANT PARTS LIST)				
R054	1-216-073-00	RES,CHIP	10K	5%	1/10W		R280	1-216-022-00	RES,CHIP	75	5%	1/10W	
R056	1-249-425-11	CARBON	4.7K	5%	1/4W		R283-284		VARIANT (SEE VARIANT PARTS LIST)				
R057	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		R287		VARIANT (SEE VARIANT PARTS LIST)				
R058	1-216-065-91	RES,CHIP	4.7K	5%	1/10W		R290	1-216-025-91	RES,CHIP	100	5%	1/10W	
R065	1-216-033-00	RES,CHIP	220	5%	1/10W		R300		VARIANT (SEE VARIANT PARTS LIST)				
R066	1-216-033-00	RES,CHIP	220	5%	1/10W		R301	1-216-295-91	SHORT				
R070-072		VARIANT (SEE VARIANT PARTS LIST)					R302-303		VARIANT (SEE VARIANT PARTS LIST)				
R073	1-249-425-11	CARBON	4.7K	5%	1/4W		R304	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R074	1-216-073-00	RES,CHIP	10K	5%	1/10W		R306	1-216-675-11	METAL CHIP	10K	1%	1/10W	
R075	1-216-073-00	RES,CHIP	10K	5%	1/10W		R307		VARIANT (SEE VARIANT PARTS LIST)				
R076	1-216-121-91	RES,CHIP	1M	5%	1/10W		R310	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R077	1-216-097-91	RES,CHIP	100K	5%	1/10W		R312	1-216-033-00	RES,CHIP	220	5%	1/10W	
R080-081		VARIANT (SEE VARIANT PARTS LIST)					R313	1-247-815-91	CARBON	220	5%	1/4W	
R085	1-216-073-00	RES,CHIP	10K	5%	1/10W		R314	1-247-815-91	CARBON	220	5%	1/4W	
R086		VARIANT (SEE VARIANT PARTS LIST)					R315	1-247-815-91	CARBON	220	5%	1/4W	
R087	1-216-045-00	RES,CHIP	680	5%	1/10W		R316	1-216-025-91	RES,CHIP	100	5%	1/10W	
R088	1-216-045-00	RES,CHIP	680	5%	1/10W		R318	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R089	1-216-045-00	RES,CHIP	680	5%	1/10W		R319	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R090	1-216-051-00	RES,CHIP	1.2K	5%	1/10W		R320	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R091	1-249-429-11	CARBON	10K	5%	1/4W		R321	1-216-069-00	RES,CHIP	6.8K	5%	1/10W	
R096	1-216-045-00	RES,CHIP	680	5%	1/10W		R322	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R099	1-249-425-11	CARBON	4.7K	5%	1/4W		R324	1-249-425-11	CARBON	4.7K	5%	1/4W	
R101	1-216-073-00	RES,CHIP	10K	5%	1/10W		R329	1-216-025-91	RES,CHIP	100	5%	1/10W	
R150	1-216-025-91	RES,CHIP	100	5%	1/10W		R330	1-216-025-9	RES,CHIP	100	5%	1/10W	
R151	1-216-025-91	RES,CHIP	100	5%	1/10W		R331	1-216-025-91	RES,CHIP	100	5%	1/10W	
R201	1-216-113-00	RES,CHIP	470K	5%	1/10W		R347	1-216-045-00	RES,CHIP	680	5%	1/10W	
R202		VARIANT (SEE VARIANT PARTS LIST)					R350-352		VARIANT (SEE VARIANT PARTS LIST)				
R204-206		VARIANT (SEE VARIANT PARTS LIST)					R353	1-216-295-91	SHORT				
R214-235		VARIANT (SEE VARIANT PARTS LIST)					R354		VARIANT (SEE VARIANT PARTS LIST)				
R237-238		VARIANT (SEE VARIANT PARTS LIST)					R356	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R239	1-247-815-91	CARBON	220	5%	1/4W		R357-370		VARIANT (SEE VARIANT PARTS LIST)				
R240	1-249-417-11	CARBON	1K	5%	1/4W		R372-380		VARIANT (SEE VARIANT PARTS LIST)				
R241		VARIANT (SEE VARIANT PARTS LIST)					R382		VARIANT (SEE VARIANT PARTS LIST)				
R242	1-249-434-11	CARBON	27K	5%	1/4W		R383	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R243	1-216-689-11	RES,CHIP	39K	5%	1/10W		R384	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R246-250		VARIANT (SEE VARIANT PARTS LIST)					R385	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R251	1-216-041-00	RES,CHIP	470	5%	1/10W		R387-388		VARIANT (SEE VARIANT PARTS LIST)				
R252	1-216-041-00	RES,CHIP	470	5%	1/10W		R390	1-216-025-91	RES,CHIP	100	5%	1/10W	
R253	1-215-899-11	METAL OXIDE	15K	5%	2W F		R391	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R254	1-216-025-91	RES,CHIP	100	5%	1/10W		R392	1-216-025-91	RES,CHIP	100	5%	1/10W	
R255	1-216-025-91	RES,CHIP	100	5%	1/10W		R393	1-216-049-91	RES,CHIP	1K	5%	1/10W	
R256	1-249-425-11	CARBON	4.7K	5%	1/4W		R394	1-216-025-91	RES,CHIP	100	5%	1/10W	
R257	1-216-073-00	RES,CHIP	10K	5%	1/10W		R395-397		VARIANT (SEE VARIANT PARTS LIST)				
R258	1-249-429-11	CARBON	10K	5%	1/4W		R400		VARIANT (SEE VARIANT PARTS LIST)				
R259	1-216-073-00	RES,CHIP	10K	5%	1/10W		R402-404		VARIANT (SEE VARIANT PARTS LIST)				
							R432		VARIANT (SEE VARIANT PARTS LIST)				

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

**COMMON PARTS LISTING**

REF.NO.	PART NO.	DESCRIPTION	REMARK	
R501	1-249-421-11	CARBON 2.2K	5%	1/4W
R502		VARIANT (SEE VARIANT PARTS LIST)		
R508		VARIANT (SEE VARIANT PARTS LIST)		
R524	1-249-429-11	CARBON 10K	5%	1/4W F
R532	1-215-437-00	METAL 4.7K	1%	1/4W
R533		VARIANT (SEE VARIANT PARTS LIST)		
R534		VARIANT (SEE VARIANT PARTS LIST)		
R535	1-249-441-11	CARBON 100K	5%	1/4W
R541	1-216-065-91	RES,CHIP 4.7K	5%	1/10W
R542	1-249-429-11	CARBON 10K	5%	1/4W
R543	1-249-429-11	CARBON 10K	5%	1/4W
R544	1-216-377-11	METAL OXIDE 4.7	5%	2W F
R546	1-215-890-11	METAL OXIDE 470	5%	2W F
R547	1-249-385-11	CARBON 2.2	5%	1/4W F
R548	1-249-425-11	CARBON 4.7K	5%	1/4W
R549	1-216-073-00	RES,CHIP 10K	5%	1/10W
R551		VARIANT (SEE VARIANT PARTS LIST)		
R552	1-247-887-00	CARBON 220K	5%	1/4W
R553	1-260-312-11	CARBON 47	5%	1/2W
R561-562		VARIANT (SEE VARIANT PARTS LIST)		
R571 $\Delta$	1-216-369-00	METAL OXIDE 1	5%	2W F
R572 $\Delta$	1-249-429-11	CARBON 10K	5%	1/4W
R573 $\Delta$	1-247-895-91	CARBON 470K	5%	1/4W
R574		VARIANT (SEE VARIANT PARTS LIST)		
R575 $\Delta$	1-247-891-00	CARBON 30K	5%	1/4W
R576 $\Delta$	1-249-441-11	CARBON 100K	5%	1/4W
R578		VARIANT (SEE VARIANT PARTS LIST)		
R579	1-208-777-11	RES,CHIP 620	1%	1/10W
R580	1-216-295-91	SHORT		
R582		VARIANT (SEE VARIANT PARTS LIST)		
R583	1-208-830-11	RES,CHIP 100K	1%	1/10W
R584	1-208-806-11	RES,CHIP 10K	1%	1/10W
R585	1-216-085-00	RES,CHIP 33K	5%	1/10W
R586 $\Delta$	1-216-065-91	RES,CHIP 4.7K	5%	1/10W
R590	1-249-418-11	CARBON 1.2K	5%	1/4W
R591		VARIANT (SEE VARIANT PARTS LIST)		
R600-601		VARIANT (SEE VARIANT PARTS LIST)		
R603-606		VARIANT (SEE VARIANT PARTS LIST)		
R608	1-249-441-11	CARBON 100K	5%	1/4W
R609	1-249-441-11	CARBON 100K	5%	1/4W
R610	1-249-441-11	CARBON 100K	5%	1/4W
R611	1-249-441-11	CARBON 100K	5%	1/4W
R612-613		VARIANT (SEE VARIANT PARTS LIST)		
R615		VARIANT (SEE VARIANT PARTS LIST)		
R618		VARIANT (SEE VARIANT PARTS LIST)		
R620 $\Delta$	1-219-512-11	CARBON 2.2M	5%	1/2W
R622	1-249-393-11	CARBON 10	5%	1/4W F
R623		VARIANT (SEE VARIANT PARTS LIST)		
R624	1-249-421-11	CARBON 2.2K	5%	1/4W
R625 $\Delta$	1-215-429-00	METAL 2.2K	1%	1/4W
R626 $\Delta$	1-215-469-00	METAL 100K	1%	1/4W
R627-629		VARIANT (SEE VARIANT PARTS LIST)		
R630	1-249-421-11	CARBON 2.2K	5%	1/4W
R631	1-249-429-11	CARBON 10K	5%	1/4W
R632	1-215-445-00	METAL 10K	1%	1/4W
R633	1-215-457-00	METAL 33K	1%	1/4W
R634 $\Delta$	1-216-089-91	RES,CHIP 47K	5%	1/10W
R635 $\Delta$	1-216-073-00	RES,CHIP 10K	5%	1/10W
R636		VARIANT (SEE VARIANT PARTS LIST)		
R637	1-208-806-11	RES,CHIP 10K	1%	1/10
R638	1-215-457-00	METAL 33K	1%	1/4W
R639	1-216-089-91	RES,CHIP 47K	5%	1/10W
R641	1-216-397-11	METAL OXIDE 4.7	5%	3W F
R642	1-249-425-11	CARBON 4.7K	5%	1/4W
R643	1-249-429-11	CARBON 10K	5%	1/4W
R649	1-249-413-11	CARBON 470	5%	1/4W
R650	1-249-415-11	CARBON 680	5%	1/4W
R690	1-216-355-11	METAL OXIDE 3.3	5%	1W F
R691-692		VARIANT (SEE VARIANT PARTS LIST)		
R699	1-249-413-11	CARBON 470	5%	1/4W F
<b>RELAY</b>				
RY601		VARIANT (SEE VARIANT PARTS LIST)		
<b>SWITCH</b>				
S001-007		VARIANT (SEE VARIANT PARTS LIST)		
<b>TRANSFORMER</b>				
T501 $\Delta$	1-437-210-11	TRANSFORMER, HORIZONTAL DRIVE		
T504		VARIANT (SEE VARIANT PARTS LIST)		
T601 $\Delta$	1-423-895-11	TRANSFORMER, LINE FILTER (LFT)		
T602 $\Delta$	1-429-992-11	TRANSFORMER, CONVERTER (PRT)		
T603		VARIANT (SEE VARIANT PARTS LIST)		
<b>THERMISTOR</b>				
THP601		VARIANT (SEE VARIANT PARTS LIST)		
<b>TUNER</b>				
TU101		VARIANT (SEE VARIANT PARTS LIST)		
<b>VARIABLE RESISTOR</b>				
VDR601		VARIANT (SEE VARIANT PARTS LIST)		
VDR602		VARIANT (SEE VARIANT PARTS LIST)		
<b>CRYSTAL</b>				
X300		VARIANT (SEE VARIANT PARTS LIST)		
X301	1-567-505-11	OSCILLATOR, CRYSTAL		
X302		VARIANT (SEE VARIANT PARTS LIST)		



## BOARD VARIANT PARTS LIST

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

**KV-13M40/14MB40**

### Note:

The components identified with shading and a critical symbol ( **△** ) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK			
A BOARD VARIANT LIST: KV-13M40/14MB40						
CAPACITOR						
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C312	1-126-933-11	ELECT	100MF	20%	16V	
C320	1-126-959-11	ELECT	0.47MF	20%	50V	
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B				
C418	1-126-964-11	ELECT	10MF	20%	50V	
C507	△ 1-117-836-11	FILM	6800PF	3%	2KV	
C511	△ 1-119-967-11	FILM	0.43MF	5%	200V	
C551	1-162-114-00	CERAMIC	0.0047MF		2KV	
C591	△ 1-137-350-11	MYLAR	0.015MF	10%	100V	
C601	△ 1-136-311-51	FILM	0.47MF	20%	125V	
C607	△ 1-117-893-11	ELECT	470MF	20%	250V	
C614	△ 1-129-723-00	FILM	0.056MF	5%	630V	
C699	1-164-645-11	CERAMIC	1000PF	10%	500V	
DIODE						
D002	1-810-039-21	LED UNIT				
D215	8-719-110-17	DIODE MTZJ-T-77-10B				
D551	8-719-028-72	DIODE RGP02-17PKG23				
FUSE						
F601	△ 1-533-795-11	LINK, FUSE				
IC						
IC301	8-752-083-09	IC CXA2061S				
IC400	8-759-490-18	IC TDA7056B/N1				
JACK						
J201	1-580-441-71	JACK, PIN 2P				
IC LINK						
PS201	1-532-637-00	LINK, IC				
RESISTOR						
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R246	1-216-295-91	SHORT				
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W	
R284	1-216-295-91	SHORT				
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W	
R400	1-249-438-11	CARBON	56K	5%	1/4W	
R432	1-247-863-91	CARBON	22K	5%	1/4W	
R502	△ 1-215-924-00	METAL OXIDE	15K	5%	3W F	

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R508	<b>△</b> 1-215-863-11	METAL OXIDE	100	5%	1W F	
R533	1-215-465-00	METAL	68K	1%	1/4W	
R534	1-215-449-00	METAL	15K	1%	1/4W	
R551	1-215-870-11	METAL OXIDE	1.5K	5%	1W F	
R561	1-216-359-00	METAL OXIDE	6.8	5%	1W F	
R562	1-216-359-00	METAL OXIDE	6.8	5%	1W F	
R574	1-249-416-11	CARBON	820	5%	1/4W F	
R578	1-215-902-11	METAL OXIDE	47K	5%	2W F	
<b>✕</b> R582	1-208-850-11	RES,CHIP	680K	1%	1/10W	
R591	1-215-882-00	METAL OXIDE	22	5%	2W F	
R600	<b>△</b> 1-219-513-11	CARBON	4.7M	5%	1/2W	
R603	<b>△</b> 1-205-998-11	CEMENTED	1	5%	10W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F	
R612	1-216-349-00	METAL OXIDE	1	5%	1W F	
R613	1-216-349-00	METAL OXIDE	1	5%	1W F	
R615	1-247-893-11	CARBON	390K	5%	1/4W	
R618	1-212-857-00	FUSIBLE	10	5%	1/4W F	
R623	1-249-441-11	CARBON	100K	5%	1/4W	
R636	1-208-794-11	RES,CHIP	3.3K	1%	1/10W	
R691	1-247-791-91	CARBON	22	5%	1/4W	
R692	1-247-791-91	CARBON	22	5%	1/4W	

### RELAY

RY601 **△** 1-755-146-11 RELAY, AC POWER

### SWITCH

S001 1-571-532-21 SWITCH, TACTILE  
 S002 1-571-532-21 SWITCH, TACTILE  
 S003 1-571-532-21 SWITCH, TACTILE  
 S004 1-571-532-21 SWITCH, TACTILE  
 S005 1-571-532-21 SWITCH, TACTILE

S006 1-571-532-21 SWITCH, TACTILE

### TRANSFORMER

T504 **△** 1-453-210-11 TRANSFORMER ASSY, FLYBACK (NX-1731//X4E4)  
 T603 **△** 1-431-674-11 TRANSFORMER, CONVERTER (PIT)

### THERMISTOR

THP601 1-810-597-11 THERMISTOR, POSITIVE

### TUNER

TU101 **△** 8-598-430-00 TUNER, FSS BTF-FA401

### VARISTOR

VDR601 **△** 1-809-267-41 VARISTOR ERZV10D471  
 VDR602 1-809-267-41 VARISTOR ERZV10D471





## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-14MB40C**

REF.NO. PART NO. DESCRIPTION REMARK

**A BOARD VARIANT LIST: KV-14MB40C**

CAPACITOR

C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-933-11	ELECT	100MF	20%	16V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			

C418	1-126-964-11	ELECT	10MF	20%	50V
C507 $\Delta$	1-117-836-11	FILM	6800PF	3%	2KV
C511 $\Delta$	1-119-967-11	FILM	0.43MF	5%	200V
C551	1-162-114-00	CERAMIC	0.0047MF		2KV
C591 $\Delta$	1-137-350-11	MYLAR	0.015MF	10%	100V

C601 $\Delta$	1-136-311-61	FILM	0.47MF	20%	300V
C607 $\Delta$	1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614 $\Delta$	1-137-347-11	FILM	0.022MF	3%	2KV

DIODE

D002	1-810-039-21	LED UNIT			
D215	8-719-110-17	DIODE MTZJ-T-77-10B			
D551	8-719-028-72	DIODE RGP02-17PKG23			

FUSE

F601 $\Delta$	1-532-506-51	FUSE			
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IC

IC301	8-752-083-09	IC CXA2061S			
IC400	8-759-490-18	IC TDA7056B/N1			

JACK

J201	1-580-441-71	JACK, PIN 2P			
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IC LINK

PS201	1-532-637-00	LINK, IC			
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RESISTOR

R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R246	1-216-295-91	SHORT			
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R284	1-216-295-91	SHORT			

R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-247-863-91	CARBON	22K	5%	1/4W
R502 $\Delta$	1-215-924-00	METAL OXIDE	15K	5%	3W F
R508 $\Delta$	1-215-863-11	METAL OXIDE	100	5%	1W F

REF.NO. PART NO. DESCRIPTION REMARK

R533	1-215-465-00	METAL	68K	1%	1/4W
R534	1-215-449-00	METAL	15K	1%	1/4W
R551	1-215-870-11	METAL OXIDE	1.5K	5%	1W F
R561	1-216-359-00	METAL OXIDE	6.8	5%	1W F
R562	1-216-359-00	METAL OXIDE	6.8	5%	1W F
R574	1-249-416-11	CARBON	820	5%	1/4 F

R578	1-215-902-11	METAL OXIDE	47K	5%	2W F
R582	1-208-850-11	RES,CHIP	680K	1%	1/10W
R591	1-215-882-00	METAL OXIDE	22	5%	2W F
R601 $\Delta$	1-247-289-00	CARBON	8.2M	5%	1W
R603	1-202-962-11	CEMENTED	3.3	5%	10W

R604	1-247-889-00	CARBON	270K	5%	1/4W
R605	1-247-889-00	CARBON	270K	5%	1/4W
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2 F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W F

R618	1-212-942-00	FUSIBLE	2.2	5%	1/2 F
R623	1-249-437-11	CARBON	47K	5%	1/4W
R636	1-208-794-11	RES,CHIP	3.3K	1%	1/10W
R691	1-249-399-11	CARBON	33	5%	1/4W
R692	1-249-399-11	CARBON	33	5%	1/4W

RELAY

RY601 $\Delta$	1-755-146-11	RELAY, AC POWER			
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SWITCH

S001	1-571-532-21	SWITCH, TACTILE			
S002	1-571-532-21	SWITCH, TACTILE			
S003	1-571-532-21	SWITCH, TACTILE			
S004	1-571-532-21	SWITCH, TACTILE			
S005	1-571-532-21	SWITCH, TACTILE			

S006	1-571-532-21	SWITCH, TACTILE			
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TRANSFORMER

T504 $\Delta$	1-453-210-11	TRANSFORMER ASSY, FLYBACK (NX-1731//X4E4)			
T603 $\Delta$	1-431-675-11	TRANSFORMER, CONVERTER (PIT)			

THERMISTOR

THP601	1-806-165-12	THERMISTOR (POSITIVE)			
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TUNER

TU101 $\Delta$	8-598-430-00	TUNER, FSS BTF-FA401			
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VARISTOR

VDR601 $\Delta$	1-809-267-41	VARISTOR ERZV10D471			
VDR602	1-809-267-41	VARISTOR ERZV10D471			



# BOARD VARIANT PARTS LIST

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

**KV-14MB40A**

## Note:

The components identified with shading and a critical symbol (▲) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK			
A BOARD VARIANT LIST: KV-14MB40A						
CAPACITOR						
C204	1-107-698-11	ELECT	10MF	20%	25V	
C205	1-126-960-11	ELECT	1MF	20%	50V	
C300	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C302	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C309	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C312	1-126-933-11	ELECT	100MF	20%	16V	
C320	1-126-957-11	ELECT	0.22MF	20%	50V	
C321	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B				
C418	1-126-964-11	ELECT	10MF	20%	50V	
C507	△ 1-117-836-11	FILM	6800PF	3%	2KV	
C511	△ 1-119-967-11	FILM	0.43MF	5%	200V	
C551	1-162-114-00	CERAMIC	0.0047MF		2KV	
C591	△ 1-137-350-11	MYLAR	0.015MF	10%	100V	
C601	△ 1-136-311-61	FILM	0.47MF	20%	300V	
C607	△ 1-125-731-11	ELECT(BLOCK)	270MF	20%	400V	
C614	△ 1-137-347-11	FILM	0.022MF	3%	2KV	
DIODE						
D002	1-810-039-11	LED UNIT				
D203	8-719-110-17	DIODE MTZJ-T-77-10B				
D209	8-719-110-17	DIODE MTZJ-T-77-10B				
D215	8-719-110-17	DIODE MTZJ-T-77-10B				
D551	8-719-028-72	DIODE RGP02-17PKG23				
FUSE						
F601	△ 1-532-506-51	FUSE				
IC						
IC301	8-752-082-35	IC CXA2060AS				
IC400	8-759-490-18	IC TDA7056B/N1				
JACK						
J201	1-580-441-71	JACK, PIN 2P				
J202	1-580-441-41	JACK, PIN 2P				
IC LINK						
PS201	1-532-637-00	LINK, IC				

REF.NO.	PART NO.	DESCRIPTION	REMARK			
RESISTOR						
R072	1-247-815-91	CARBON	220	5%	1/4W	
R081	1-249-413-11	CARBON	470	5%	1/4W	
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R204	1-216-022-00	RES,CHIP	75	5%	1/10W	
R205	1-247-895-91	CARBON	470K	5%	1/4W	
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W	
R235	1-216-057-00	RES,CHIP	2.2K	5%	10W	
R246	1-216-295-91	SHORT				
R269	1-216-057-00	RES,CHIP	2.2K	5%	110W	
R284	1-216-295-91	SHORT				
R300	1-216-295-91	SHORT				
R302	1-216-295-91	SHORT				
R307	1-216-077-00	RES,CHIP	15K	5%	110W	
R400	1-249-438-11	CARBON	56K	5%	1/4W	
R432	1-247-863-91	CARBON	22K	5%	1/4W	
R502	△ 1-215-924-00	METAL OXIDE	15K	5%	3W	F
R508	△ 1-215-863-11	METAL OXIDE	100	5%	1W	F
R533	1-215-465-00	METAL	68K	1%	1/4W	
R534	1-215-449-00	METAL	15K	1%	1/4W	
R551	1-215-870-11	METAL OXIDE	1.5K	5%	1W	F
R561	1-216-359-00	METAL OXIDE	6.8	5%	1W	F
R562	1-216-359-00	METAL OXIDE	6.8	5%	1W	F
R574	1-249-416-11	CARBON	820	5%	1/4W	F
R578	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R582	1-208-850-11	RES,CHIP	680K	1%	1/10W	
R591	1-215-882-00	METAL OXIDE	22	5%	2W	F
R601	△ 1-247-289-00	CARBON	8.2M	5%	1W	
R603	△ 1-202-962-11	CEMENTED	3.3	5%	10W	
R604	1-247-889-00	CARBON	270K	5%	1/4W	
R605	1-247-889-00	CARBON	270K	5%	1/4W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R623	1-249-437-11	CARBON	47K	5%	1/4W	
R636	1-208-794-11	RES,CHIP	3.3K	1%	1/10W	
R691	1-249-399-11	CARBON	33	5%	1/4W	
R692	1-249-399-11	CARBON	33	5%	1/4W	
RELAY						
RY601	△ 1-755-146-11	RELAY, AC POWER				



## BOARD VARIANT PARTS LIST

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-14MB40A**

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### SWITCH

S001	1-571-532-21	SWITCH, TACTILE	
S002	1-571-532-21	SWITCH, TACTILE	
S003	1-571-532-21	SWITCH, TACTILE	
S004	1-571-532-21	SWITCH, TACTILE	
S005	1-571-532-21	SWITCH, TACTILE	

S006	1-571-532-21	SWITCH, TACTILE	
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### TRANSFORMER

T504	$\Delta$ 1-453-210-11	TRANSFORMER ASSY, FLYBACK (NX-1731//X4E4)	
T603	$\Delta$ 1-431-675-11	TRANSFORMER, CONVERTER (PIT)	

### THERMISTOR

THP601	1-806-165-12	THERMISTOR (POSITIVE)	
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### TUNER

TU101	$\Delta$ 8-598-430-00	TUNER, FSS BTF-FA401	
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### VARISTOR

VDR601	$\Delta$ 1-809-267-41	VARISTOR ERZV10D471	
VDR602	1-809-267-41	VARISTOR ERZV10D471	

### CRYSTAL

X300	1-579-972-11	VIBRATOR, CRYSTAL	
X302	1-579-973-11	VIBRATOR, CRYSTAL	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## BOARD VARIANT PARTS LIST

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

**KV-20M40/21MB40P/21MB40M**

### Note:

The components identified with shading and a critical symbol (▲) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>A BOARD VARIANT LIST: KV-20M40/21MB40P/21MB40M</b>			
<u>CAPACITOR</u>			
C203	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
C204	1-107-698-11	ELECT 10MF 20% 25V	
C205	1-126-960-11	ELECT 1MF 20% 50V	
C309	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	
C312	1-126-942-61	ELECT 1000MF 20% 25V	
C320	1-126-959-11	ELECT 0.47MF 20% 50V	
C321	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B	
C418	1-126-964-11	ELECT 10MF 20% 50V	
C505 ▲	1-162-115-00	CERAMIC 330PF 10% 2KV	
C507 ▲	1-119-865-11	MYLAR 5700PF 3% 2KV	
C511 ▲	1-117-665-11	FILM 0.33MF 5% 200V	
C591 ▲	1-137-150-11	MYLAR 0.01MF 10% 100V	
C601 ▲	1-136-311-51	FILM 0.47MF 20% 125V	
C607 ▲	1-117-941-11	ELECT(BLOCK) 470MF 20% 250V	
C614 ▲	1-129-723-00	FILM 0.056MF 5% 630V	
C625	1-126-960-11	ELECT 1MF 20% 50V	
C699	1-164-645-11	CERAMIC 1000PF 10% 500V	
<u>DIODE</u>			
D002	1-810-039-21	LED UNIT	
D203	8-719-110-17	DIODE MTZJ-T-77-10B	
D209	8-719-110-17	DIODE MTZJ-T-77-10B	
D215	8-719-110-17	DIODE MTZJ-T-77-10B	
D619	8-719-991-33	DIODE 1SS133T-77	
<u>FUSE</u>			
F601 ▲	1-533-795-11	LINK, FUSE	
<u>IC</u>			
IC301	8-752-083-09	IC CXA2061S	
IC400	8-759-490-18	IC TDA7056B/N1	
<u>JACK</u>			
J201	1-580-441-71	JACK, PIN 2P	
J202	1-580-441-41	JACK, PIN 2P	
<u>IC LINK</u>			
PS201	1-532-637-00	LINK, IC	
<u>TRANSISTOR</u>			
Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	

REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>RESISTOR</u>			
R072	1-247-815-91	CARBON 220 5% 1/4W	
R086	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R204	1-216-022-00	RES,CHIP 75 5% 1/10W	
R205	1-247-895-91	CARBON 470K 5% 1/4W	
R231	1-216-073-00	RES,CHIP 10K 5% 1/10W	
R235	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R246	1-216-295-91	SHORT	
R269	1-216-057-00	RES,CHIP 2.2K 5% 1/10W	
R284	1-216-295-91	SHORT	
R307	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R400	1-249-438-11	CARBON 56K 5% 1/4W	
R432	1-247-863-91	CARBON 22K 5% 1/4W	
R502 ▲	1-215-923-00	METAL OXIDE 10K 5% 3W F	
R508 ▲	1-215-864-00	METAL OXIDE 150 5% 1W F	
R533	1-215-461-00	METAL 47K 1% 1/4W	
R534	1-215-453-00	METAL 22K 1% 1/4W	
R561	1-216-349-00	METAL OXIDE 1 5% 1W F	
R562	1-216-349-00	METAL OXIDE 1 5% 1W F	
R574	1-249-417-11	CARBON 1K 5% 1/4W F	
R578	1-216-467-11	METAL OXIDE 56K 5% 2W F	
☒ R582	1-208-826-11	RES,CHIP 68K 1% 1/10W	
R591	1-215-880-00	METAL OXIDE 10 5% 2W F	
R600 ▲	1-219-513-11	CARBON 4.7M 5% 1/2W	
R603 ▲	1-205-998-11	CEMENTED 1 5% 10W	
R606	1-220-926-11	FUSIBLE 0.47 10% 1/2W F	
R612	1-216-349-00	METAL OXIDE 1 5% 1W F	
R613	1-216-349-00	METAL OXIDE 1 5% 1W F	
R615	1-247-893-11	CARBON 390K 5% 1/4W	
R618	1-212-857-00	FUSIBLE 10 5% 1/4W F	
R623	1-249-441-11	CARBON 100K 5% 1/4W	
R627	1-249-441-11	CARBON 100K 5% 1/4W	
R628	1-249-425-11	CARBON 4.7K 5% 1/4W	
R629	1-247-807-31	CARBON 100 5% 1/4W	
R636	1-208-798-11	RES,CHIP 4.7K 1% 1/10W	
R691	1-247-791-91	CARBON 22 5% 1/4W	
R692	1-247-791-91	CARBON 22 5% 1/4W	
<u>RELAY</u>			
RY601 ▲	1-755-018-11	RELAY	
<u>SWITCH</u>			
S001	1-692-431-21	SWITCH, TACTILE	
S002	1-692-431-21	SWITCH, TACTILE	
S003	1-692-431-21	SWITCH, TACTILE	



## BOARD VARIANT PARTS LIST

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-20M40/21MB40P/21MB40M**

REF.NO.	PART NO.	DESCRIPTION	REMARK
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S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S007	1-692-431-21	SWITCH, TACTILE	

### TRANSFORMER

T504	$\Delta$ 1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)	
T603	$\Delta$ 1-431-674-11	TRANSFORMER, CONVERTER (PIT)	

### THERMISTOR

THP601	1-810-597-11	THERMISTOR, POSITIVE	
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### TUNER

TU101	$\Delta$ 8-598-430-00	TUNER, FSS BTF-FA401	
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### VARISTOR

VDR601	$\Delta$ 1-801-074-41	VARISTOR ERZ10D271	
VDR602	1-801-074-41	VARISTOR ERZ10D271	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## BOARD VARIANT PARTS LIST

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

**KV-21MB40C**

### Note:

The components identified with shading and a critical symbol ( **△** ) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK		
A BOARD VARIANT LIST: KV-21MB40C					
CAPACITOR					
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V
C505	△ 1-162-115-00	CERAMIC	330PF	10%	2KV
C507	△ 1-119-865-11	MYLAR	5700PF	3%	2KV
C511	△ 1-117-665-11	FILM	0.33MF	5%	200V
C591	△ 1-137-150-11	MYLAR	0.01MF	10%	100V
C601	△ 1-136-311-61	FILM	0.47MF	20%	300V
C607	△ 1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614	△ 1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V
DIODE					
D002	1-810-039-21	LED UNIT			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			
	D215	8-719-110-17	DIODE MTZJ-T-77-10B		
D619	8-719-991-33	DIODE 1SS133T-77			
FUSE					
F601	△ 1-532-506-51	FUSE			
IC					
IC301	8-752-083-09	IC CXA2061S			
IC400	8-759-490-18	IC TDA7056B/N1			
JACK					
J201	1-580-441-71	JACK, PIN 2P			
J202	1-580-441-41	JACK, PIN 2P			
IC LINK					
PS201	1-532-637-00	LINK, IC			
TRANSISTOR					
Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA			

REF.NO.	PART NO.	DESCRIPTION	REMARK		
RESISTOR					
R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R246	1-216-295-91	SHORT			
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-247-863-91	CARBON	22K	5%	1/4W
R502	△ 1-215-923-00	METAL OXIDE	10K	5%	3W F
R508	△ 1-215-864-00	METAL OXIDE	150	5%	1W F
R533	1-215-461-00	METAL	47K	1%	1/4W
R534	1-215-453-00	METAL	22K	1%	1/4W
R561	1-216-349-00	METAL OXIDE	1	5%	1W F
R562	1-216-349-00	METAL OXIDE	1	5%	1W F
R574	1-249-417-11	CARBON	1K	5%	1/4W F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F
R582	1-208-826-11	RES,CHIP	68K	1%	1/10W
R591	1-215-880-00	METAL OXIDE	10	5%	2W F
R601	△ 1-247-289-00	CARBON	8.2M	5%	1W
R603	△ 1-202-962-11	CEMENTED	3.3	5%	10W
R604	1-247-889-00	CARBON	270K	5%	1/4W
R605	1-247-889-00	CARBON	270K	5%	1/4W
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W F
R623	1-249-437-11	CARBON	47K	5%	1/4W
R627	1-249-441-11	CARBON	100K	5%	1/4W
R628	1-249-425-11	CARBON	4.7K	5%	1/4W
R629	1-247-807-31	CARBON	100	5%	1/4W
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W
R691	1-249-399-11	CARBON	33	5%	1/4W
R692	1-249-399-11	CARBON	33	5%	1/4W
RELAY					
RY601	△ 1-755-018-11	RELAY			
SWITCH					
S001	1-692-431-21	SWITCH, TACTILE			
S002	1-692-431-21	SWITCH, TACTILE			
S003	1-692-431-21	SWITCH, TACTILE			



## BOARD VARIANT PARTS LIST

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-21MB40C**

REF.NO.	PART NO.	DESCRIPTION	REMARK
S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S007	1-692-431-21	SWITCH, TACTILE	

### TRANSFORMER

T504	$\Delta$ 1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)	
T603	$\Delta$ 1-431-675-11	TRANSFORMER, CONVERTER (PIT)	

### THERMISTOR

THP01	1-809-827-11	THERMISTOR, POSITIVE	
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### TUNER

TU101	$\Delta$ 8-598-430-00	TUNER, FSS BTF-FA401	
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### VARISTOR

VDR601	$\Delta$ 1-809-267-41	VARISTOR ERZV10D471	
VDR602	1-809-267-41	VARISTOR ERZV10D471	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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# BOARD VARIANT PARTS LIST

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

**KV-21SE40**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### A BOARD VARIANT LIST: KV-21SE40

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V

C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V
C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-51	FILM	0.47MF	20%	125V

C607 $\Delta$	1-117-941-11	ELECT(BLOCK)	470MF	20%	250V
C614 $\Delta$	1-129-723-00	FILM	0.056MF	5%	630V
C625	1-126-960-11	ELECT	1MF	20%	50V
C699	1-164-645-11	CERAMIC	1000PF	10%	500V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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#### DIODE

D002	1-810-039-21	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D209	8-719-110-17	DIODE MTZJ-T-77-10B

D619	8-719-991-33	DIODE 1SS133T-77
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#### FUSE

F601 $\Delta$	1-533-795-11	LINK, FUSE
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REF.NO.	PART NO.	DESCRIPTION	REMARK
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#### IC

IC200	8-759-450-93	IC NJM2521M-TE1
IC301	8-752-083-09	IC CXA2061S
IC401	8-759-490-17	IC TDA7057AQ/N2

#### JACK

J201	1-580-443-21	JACK, PIN 3P
J202	1-691-110-11	JACK, PIN 3P

#### IC LINK

PS201	1-532-984-11	LINK, IC
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#### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA
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#### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	110W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W

R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R269	1-216-065-91	RES,CHIP	4.7K	5%	1/10W

R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-247-854-11	CARBON	9.1K	5%	1/4W
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K	5%	3W F



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-21SE40**

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R508	$\Delta$ 1-215-864-00	METAL OXIDE	150	5%	1W	F
R533	1-215-461-00	METAL	47K	1%	1/4W	
R534	1-215-453-00	METAL	22K	1%	1/4W	
R561	1-216-349-00	METAL OXIDE	1	5%	1W	F
R562	1-216-349-00	METAL OXIDE	1	5%	1W	F
R574	1-249-417-11	CARBON	1K	5%	1/4W	F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W	F
$\square$ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W	
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F
R600	$\Delta$ 1-219-513-11	CARBON	4.7M	5%	1/2W	
R601	$\Delta$ 1-247-289-00	CARBON	8.2M	5%	1W	
R603	$\Delta$ 1-202-962-11	CEMENTED	3.3	5%	10W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R615	1-247-893-11	CARBON	390K	5%	1/4W	
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R623	1-249-437-11	CARBON	47K	5%	1/4W	
R627	1-249-441-11	CARBON	100K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-247-807-31	CARBON	100	5%	1/4W	
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R691	1-249-399-11	CARBON	33	5%	1/4W	
R692	1-249-399-11	CARBON	33	5%	1/4W	

RELAY

RY601  $\Delta$  1-755-018-11 RELAY

SWITCH

S001 1-692-431-21 SWITCH, TACTILE  
 S002 1-692-431-21 SWITCH, TACTILE  
 S003 1-692-431-21 SWITCH, TACTILE  
 S004 1-692-431-21 SWITCH, TACTILE  
 005 1-692-431-21 SWITCH, TACTILE

S006 1-692-431-21 SWITCH, TACTILE  
 S007 1-692-431-21 SWITCH, TACTILE

TRANSFORMER

T504  $\Delta$  1-453-211-11 TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)  
 T603  $\Delta$  1-431-675-11 TRANSFORMER, CONVERTER (PIT)

THERMISTOR

THP601 1-809-827-11 THERMISTOR, POSITIVE

REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>TUNER</u>			
TU101	$\Delta$ 8-598-431-00	TUNER, FSS BTF-WA411	
<u>VARISTOR</u>			
VDR601	$\Delta$ 1-809-267-41	VARISTOR ERZV10D471	
VDR602	1-809-267-41	VARISTOR ERZV10D471	



# BOARD VARIANT PARTS LIST

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

**KV-20S40/20S41**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## A BOARD VARIANT LIST: KV-20S40/20S41

### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V

C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V
C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-51	FILM	0.47MF	20%	125V

C607 $\Delta$	1-117-941-11	ELECT(BLOCK)	470MF	20%	250V
C614 $\Delta$	1-129-723-00	FILM	0.056MF	5%	630V
C625	1-126-960-11	ELECT	1MF	20%	50V
C699	1-164-645-11	CERAMIC	1000PF	10%	500V

### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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### DIODE

D002	1-810-039-21	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D209	8-719-110-17	DIODE MTZJ-T-77-10B

D619	8-719-991-33	DIODE 1SS133T-77
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### FUSE

F601 $\Delta$	1-533-795-11	LINK, FUSE
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REF.NO.	PART NO.	DESCRIPTION	REMARK
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### IC

IC200	8-759-450-93	IC NJM2521M-TE1
IC301	8-752-083-09	IC CXA2061S
IC401	8-759-490-17	IC TDA7057AQ/N2

### JACK

J201	1-580-443-21	JACK, PIN 3P
J202	1-691-110-11	JACK, PIN 3P

### LINK

PS201	1-532-984-11	LINK, IC
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### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA
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### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W

R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K	5%	3W F



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-20S40/20S41**

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R508 $\Delta$	1-215-864-00	METAL OXIDE	150	5%	1W	F
R533	1-215-461-00	METAL	47K	1%	1/4W	
R534	1-215-453-00	METAL	22K	1%	1/4W	
R561	1-216-349-00	METAL OXIDE	1	5%	1W	F
R562	1-216-349-00	METAL OXIDE	1	5%	1W	F
R574	1-249-417-11	CARBON	1K	5%	1/4W	F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W	F
$\square$ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W	
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F
R600 $\Delta$	1-219-513-11	CARBON	4.7M	5%	1/2W	
R603 $\Delta$	1-205-998-11	CEMENTED	1	5%	10W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F
R612	1-216-349-00	METAL OXIDE	1	5%	1W	F
R613	1-216-349-00	METAL OXIDE	1	5%	1W	F
R615	1-247-893-11	CARBON	390K	5%	1/4W	
R618	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R623	1-249-441-11	CARBON	100K	5%	1/4W	
R627	1-249-441-11	CARBON	100K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-247-807-31	CARBON	100	5%	1/4W	
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R691	1-247-791-91	CARBON	22	5%	1/4W	
R692	1-247-791-91	CARBON	22	5%	1/4W	

RELAY

RY601  $\Delta$  1-755-018-11 RELAY

SWITCH

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

S006 1-692-431-21 SWITCH, TACTILE  
 S007 1-692-431-21 SWITCH, TACTILE

TRANSFORMER

T504  $\Delta$  1-453-211-11 TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)  
 T603  $\Delta$  1-431-674-11 TRANSFORMER, CONVERTER (PIT)

THERMISTOR

THP601 1-810-597-11 THERMISTOR, POSITIVE

REF.NO. PART NO. DESCRIPTION REMARK

TUNER

TU101  $\Delta$  8-598-431-00 TUNER, FSS BTF-WA411

VARISTOR

VDR601  $\Delta$  1-801-074-41 VARISTOR ERZV10D271  
 VDR602 1-801-074-41 VARISTOR ERZV10D271



# A BOARD VARIANT PARTS LIST

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

**KV-21SE40C**

## Note:

The components identified with shading and a critical symbol ( **Δ** ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO. PART NO. DESCRIPTION REMARK

### A BOARD VARIANT LIST: KV-21SE40C

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V

C505	Δ 1-162-115-00	CERAMIC	330PF	10%	2KV
C507	Δ 1-119-865-11	MYLAR	5700PF	3%	2KV
C511	Δ 1-117-665-11	FILM	0.33MF	5%	200V
C591	Δ 1-137-150-11	MYLAR	0.01MF	10%	100V
C601	Δ 1-136-311-61	FILM	0.47MF	20%	300V

C607	Δ 1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614	Δ 1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P			
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#### DIODE

D002	1-810-039-21	LED UNIT			
D202	8-719-110-17	DIODE MTZJ-T-77-10B			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D204	8-719-110-17	DIODE MTZJ-T-77-10B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			

D619	8-719-991-33	DIODE 1SS133T-77			
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#### FUSE

F601	Δ 1-532-506-51	FUSE			
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REF.NO. PART NO. DESCRIPTION REMARK

#### IC

IC200	8-759-450-93	IC NJM2521M-TE1			
IC301	8-752-083-09	IC CXA2061S			
IC401	8-759-490-17	IC TDA7057AQ/N2			

#### JACK

J201	1-580-443-21	JACK, PIN 3P			
J202	1-691-110-11	JACK, PIN 3P			

#### IC LINK

PS201	1-532-984-11	LINK, IC			
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#### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA			
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#### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W

R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R269	1-216-065-91	RES,CHIP	4.7K	5%	1/10W

R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-247-854-11	CARBON	9.1K	5%	1/4W
R502	Δ 1-215-923-00	METAL OXIDE	10K	5%	3W F



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-21SE40C**

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK
R508	1-215-864-00	METAL OXIDE	150	5%	1W F	THERMISTOR			
R533	1-215-461-00	METAL	47K	1%	1/4W	THP601	1-809-827-11	THERMISTOR, POSITIVE	
R534	1-215-453-00	METAL	22K	1%	1/4W	TUNER			
R561	1-216-349-00	METAL OXIDE	1	5%	1W F	TU101	8-598-431-00	TUNER, FSS BTF-WA411	
R562	1-216-349-00	METAL OXIDE	1	5%	1W F	VARISTOR			
R574	1-249-417-11	CARBON	1K	5%	1/4 F	VDR601	1-809-267-41	VARISTOR ERZV10D471	
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F	VDR602	1-809-267-41	VARISTOR ERZV10D471	
R582	1-208-826-11	RES,CHIP	68K	1%	1/10W				
R591	1-215-880-00	METAL OXIDE	10	5%	2W F				
R601	1-247-289-00	CARBON	8.2M	5%	1W				
R603	1-202-962-11	CEMENTED	3.3	5%	10W				
R604	1-247-889-00	CARBON	270K	5%	1/4W				
R605	1-247-889-00	CARBON	270K	5%	1/4W				
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F				
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W F				
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W F				
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W F				
R623	1-249-437-11	CARBON	47K	5%	1/4W				
R627	1-249-441-11	CARBON	100K	5%	1/4W				
R628	1-249-425-11	CARBON	4.7K	5%	1/4W				
R629	1-247-807-31	CARBON	100	5%	1/4W				
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W				
R691	1-249-399-11	CARBON	33	5%	1/4W				
R692	1-249-399-11	CARBON	33	5%	1/4W				
RELAY									
RY601	1-755-018-11	RELAY							
SWITCH									
S001	1-692-431-21	SWITCH, TACTILE							
S002	1-692-431-21	SWITCH, TACTILE							
S003	1-692-431-21	SWITCH, TACTILE							
S004	1-692-431-21	SWITCH, TACTILE							
S005	1-692-431-21	SWITCH, TACTILE							
S006	1-692-431-21	SWITCH, TACTILE							
S007	1-692-431-21	SWITCH, TACTILE							
TRANSFORMER									
T504	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)							
T603	1-431-675-11	TRANSFORMER, CONVERTER (PIT)							



# BOARD VARIANT PARTS LIST

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

**KV-20V80**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO. PART NO. DESCRIPTION REMARK

### A BOARD VARIANT LIST: KV-20V80

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V
C207	1-126-959-11	ELECT	0.47MF	20%	50V
C208	1-126-959-11	ELECT	0.47MF	20%	50V
C209	1-126-963-11	ELECT	4.7MF	20%	50V
C211	1-126-964-11	ELECT	10MF	20%	50V
C212	1-126-963-11	ELECT	4.7MF	20%	50V
C213	1-126-964-11	ELECT	10MF	20%	50V
C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C229	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C233	1-126-960-11	ELECT	1MF	20%	50V
C304	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C307	1-126-964-11	ELECT	10MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C348	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C350	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C351	1-126-964-11	ELECT	10MF	20%	50V
C352	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C353	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C354	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C355	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C356	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C357	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C358	1-104-664-11	ELECT	47MF	20%	25V
C359	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C360	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C361	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C362	1-126-964-11	ELECT	10MF	20%	50V
C400	1-126-963-11	ELECT	4.7MF	20%	50V
C401	1-126-956-91	ELECT	0.1MF	20%	50V
C402	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C403	1-126-963-11	ELECT	4.7MF	20%	50V

REF.NO. PART NO. DESCRIPTION REMARK

C404	1-126-963-11	ELECT	4.7MF	20%	50V
C405	1-126-963-11	ELECT	4.7MF	20%	50V
C406	1-126-963-11	ELECT	4.7MF	20%	50V
C407	1-126-9642-11	ELECT	10MF	20%	50V
C410	1-126-963-11	ELECT	4.7MF	20%	50V
C411	1-126-956-91	ELECT	0.1MF	20%	50V
C412	1-130-495-00	FILM	0.1MF	5%	50V
C413	1-126-967-11	ELECT	47MF	20%	50V
C414	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C415	1-126-956-91	ELECT	0.1MF	20%	50V
C416	1-126-963-11	ELECT	4.7MF	20%	50V
C418	1-126-963-11	ELECT	4.7MF	20%	50V
C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V
C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-51	FILM	0.47MF	20%	125V
C607 $\Delta$	1-117-941-11	ELECT(BLOCK)	470MF	20%	250V
C614 $\Delta$	1-129-723-00	FILM	0.056MF	5%	630V
C625	1-126-960-11	ELECT	1MF	20%	50V
C699	1-164-645-11	CERAMIC	1000PF	10%	500V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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#### DIODE

D002	1-810-039-21	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D206	8-719-110-17	DIODE MTZJ-T-77-10B
D207	8-719-109-66	DIODE RD3.3ES-T1B
D209	8-719-110-17	DIODE MTZJ-T-77-10B
D280	8-719-110-17	DIODE MTZJ-T-77-10B
D619	8-719-991-33	DIODE 1SS133T-77

#### FUSE

F601 $\Delta$	1-533-795-11	LINK, FUSE
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#### IC

IC200	8-759-450-93	IC NJM2521M-TE1
IC202	8-759-100-96	IC NJM4558M-TE2
IC301	8-752-083-09	IC CXA2061S



## BOARD VARIANT PARTS LIST

## Note:

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## Note:

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

**KV-20V80**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC302	8-752-385-80	IC CXD2073S		R206	1-247-895-91	CARBON 470K	5% 1/4W
IC401	8-759-490-17	IC TDA7057AQ/N2		R214	1-216-113-00	RES,CHIP 470K	5% 1/10W
IC402	8-752-072-39	IC CXA2021S		R215	1-216-033-00	RES,CHIP 220	5% 1/10W
<b>JACK</b>				R216	1-216-113-00	RES,CHIP 470K	5% 1/10W
J200	1-580-441-61	JACK, PIN 2P		R217	1-216-033-00	RES,CHIP 220	5% 1/10W
J201	1-580-443-21	JACK, PIN 3P		R218	1-216-067-00	RES,CHIP 5.6K	5% 1/10W
J202	1-691-110-11	JACK, PIN 3P		R219	1-216-073-00	RES,CHIP 10K	5% 1/10W
J203	1-694-242-11	TERMINAL, S		R220	1-216-073-00	RES,CHIP 10K	5% 1/10W
<b>COIL</b>				R221	1-216-073-00	RES,CHIP 10K	5% 1/10W
L352	1-412-031-11	INDUCTOR CHIP 47UH		R222	1-216-067-00	RES,CHIP 5.6K	5% 1/10W
<b>IC LINK</b>				R223	1-249-429-11	CARBON 10K	5% 1/4W
PS201	1-532-984-11	LINK, IC		R224	1-249-429-11	CARBON 10K	5% 1/4W
<b>TRANSISTOR</b>				R225	1-216-073-00	RES,CHIP 10K	5% 1/10W
Q200	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R226	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q201	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R227	1-216-097-91	RES,CHIP 100K	5% 1/10W
Q350	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R228	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q351	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R229	1-216-097-91	RES,CHIP 100K	5% 1/10W
Q352	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R232	1-216-069-00	RES,CHIP 6.8K	5% 1/10W
Q353	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R233	1-216-069-00	RES,CHIP 6.8K	5% 1/10W
Q354	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R234	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q355	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R235	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q356	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R237	1-247-815-91	CARBON 220	5% 1/4W
Q357	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R238	1-249-417-11	CARBON 1K	5% 1/4W
Q358	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX		R241	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
Q359	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R268	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q380	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX		R269	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA		R283	1-216-022-00	RES,CHIP 75	5% 1/10W
<b>RESISTOR</b>				R287	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R010	1-216-033-00	RES,CHIP 220	5% 1/10W	R303	1-216-025-91	RES,CHIP 100	5% 1/10W
R011	1-247-815-91	CARBON 220	5% 1/4W	R307	1-216-065-91	RES,CHIP 4.7K	5% 1/10W
R051	1-216-033-00	RES,CHIP 220	5% 1/10W	R350	1-208-766-11	RES,CHIP 220	1% 1/10W
R053	1-247-815-91	CARBON 220	5% 1/4W	R351	1-208-766-11	RES,CHIP 220	1% 1/10W
R070	1-249-425-11	CARBON 4.7K	5% 1/4W	R352	1-208-794-11	RES,CHIP 3.3K	1% 1/10W
R071	1-249-425-11	CARBON 4.7K	5% 1/4W	R354	1-208-794-11	RES,CHIP 3.3K	1% 1/10W
R072	1-247-815-91	CARBON 220	5% 1/4W	R357	1-216-091-00	RES,CHIP 56K	5% 1/10W
R080	1-249-429-11	CARBON 10K	5% 1/4W	R358	1-216-043-91	RES,CHIP 560	5% 1/10W
R086	1-216-073-00	RES,CHIP 10K	5% 1/10W	R359	1-216-057-00	RES,CHIP 2.2K	5% 1/10W
R202	1-216-113-00	RES,CHIP 470K	5% 1/10W	R360	1-216-081-00	RES,CHIP 22K	5% 1/10W
R204	1-216-022-00	RES,CHIP 75	5% 1/10W	R361	1-216-049-91	RES,CHIP 1K	5% 1/10W
R205	1-247-895-91	CARBON 470K	5% 1/4W	R362	1-216-043-91	RES,CHIP 560	5% 1/10W
				R363	1-216-037-00	RES,CHIP 330	5% 1/10W
				R364	1-216-025-91	RES,CHIP 100	5% 1/10W
				R365	1-216-025-91	RES,CHIP 100	5% 1/10W
				R366	1-216-053-00	RES,CHIP 1.5K	5% 1/10W
				R367	1-216-057-00	RES,CHIP 2.2K	5% 1/10W

# A BOARD VARIANT PARTS LIST

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

**KV-20V80**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
R368	1-216-025-91	RES,CHIP	100 5% 1/10W
R369	1-216-045-00	RES,CHIP	680 5% 1/10W
R370	1-216-295-91	SHORT	
R372	1-216-035-00	RES,CHIP	270 5% 1/10W
R373	1-216-025-91	RES,CHIP	100 5% 1/10W
R374	1-216-025-91	RES,CHIP	100 5% 1/10W
R375	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R376	1-216-049-91	RES,CHIP	1K 5% 1/10W
R377	1-216-049-91	RES,CHIP	1K 5% 1/10W
R378	1-216-041-00	RES,CHIP	470 5% 1/10W
R379	1-216-049-91	RES,CHIP	1K 5% 1/10W
R380	1-208-790-11	RES,CHIP	2.2K 1% 1/10W
R382	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
R387	1-216-025-91	RES,CHIP	100 5% 1/10W
R388	1-216-025-91	RES,CHIP	100 5% 1/10W
R395	1-216-025-91	RES,CHIP	100 5% 1/10W
R396	1-216-025-91	RES,CHIP	100 5% 1/10W
R397	1-216-025-91	RES,CHIP	100 5% 1/10W
R400	1-247-863-91	CARBON	22K 5% 1/4W
R402	1-216-121-91	RES,CHIP	1M 5% 1/10W
R403	1-247-815-91	CARBON	220 5% 1/4W
R404	1-247-815-91	CARBON	220 5% 1/4W
R432	1-249-429-11	CARBON	10K 5% 1/4W
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K 5% 3W F
R508 $\Delta$	1-215-864-00	METAL OXIDE	150 5% 1W F
R533	1-215-461-00	METAL	47K 1% 1/4W
R534	1-215-453-00	METAL	22K 1% 1/4W
R561	1-216-349-00	METAL OXIDE	1 5% 1W F
R562	1-216-349-00	METAL OXIDE	1 5% 1W F
R574	1-249-417-11	CARBON	1K 5% 1/4W F
R578	1-216-467-11	METAL OXIDE	56K 5% 2W F
R582	1-208-826-11	RES,CHIP	68K 1% 1/10W
R591	1-215-880-00	METAL OXIDE	10 5% 2W F
R600 $\Delta$	1-219-513-11	CARBON	4.7M 5% 1/2W
R603 $\Delta$	1-205-998-11	CEMENTED	1 5% 10W
R606	1-220-926-11	FUSIBLE	0.47 10% 1/2W F
R612	1-216-349-00	METAL OXIDE	1 5% 1W F
R613	1-216-349-00	METAL OXIDE	1 5% 1W F
R615	1-247-893-11	CARBON	390K 5% 1/4W
R618	1-212-857-00	FUSIBLE	10 5% 1/4W F
R623	1-249-441-11	CARBON	100K 5% 1/4W
R627	1-249-441-11	CARBON	100K 5% 1/4W
R628	1-249-425-11	CARBON	4.7K 5% 1/4W
R629	1-247-807-31	CARBON	100 5% 1/4W
R636	1-208-798-11	RES,CHIP	4.7K 1% 1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R691	1-247-791-91	CARBON	22 5% 1/4W
R692	1-247-791-91	CARBON	22 5% 1/4W
<b>RELAY</b>			
RY601 $\Delta$	1-755-018-11	RELAY	
<b>SWITCH</b>			
S001	1-692-431-21	SWITCH, TACTILE	
S002	1-692-431-21	SWITCH, TACTILE	
S003	1-692-431-21	SWITCH, TACTILE	
S004	1-692-431-21	SWITCH, TACTILE	
S005	1-692-431-21	SWITCH, TACTILE	
S006	1-692-431-21	SWITCH, TACTILE	
S007	1-692-431-21	SWITCH, TACTILE	
<b>TRANSFORMER</b>			
T504 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)	
T603 $\Delta$	1-431-674-11	TRANSFORMER, CONVERTER (PIT)	
<b>THERMISTOR, POSITIVE</b>			
THP601	1-810-597-11	THERMISTOR, POSITIVE	
<b>TUNER</b>			
TU101 $\Delta$	8-598-431-00	TUNER, FSS BTF-WA411	
<b>VARISTOR</b>			
VDR601 $\Delta$	1-801-074-41	VARISTOR ERZV10D271	
VDR602	1-801-074-41	VARISTOR ERZV10D271	

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-21SE80**

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

**A BOARD VARIANT LIST: KV-21SE80**

**CAPACITOR**

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V
C207	1-126-959-11	ELECT	0.47MF	20%	50V
C208	1-126-959-11	ELECT	0.47MF	20%	50V
C209	1-126-963-11	ELECT	4.7MF	20%	50V
C211	1-126-964-11	ELECT	10MF	20%	50V
C212	1-126-963-11	ELECT	4.7MF	20%	50V
C213	1-126-964-11	ELECT	10MF	20%	50V
C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C229	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C233	1-126-960-11	ELECT	1MF	20%	50V
C304	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C307	1-126-964-11	ELECT	10MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C348	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C350	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C351	1-126-964-11	ELECT	10MF	20%	50V
C352	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C353	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C354	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C355	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C356	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C357	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C358	1-104-664-11	ELECT	47MF	20%	25V
C359	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C360	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C361	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C362	1-126-964-11	ELECT	10MF	20%	50V
C400	1-126-963-11	ELECT	4.7MF	20%	50V
C401	1-126-956-91	ELECT	0.1MF	20%	50V
C402	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C403	1-126-963-11	ELECT	4.7MF	20%	50V
C404	1-126-963-11	ELECT	4.7MF	20%	50V
C405	1-126-963-11	ELECT	4.7MF	20%	50V

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

C406	1-126-963-11	ELECT	4.7MF	20%	50V
C407	1-126-964-11	ELECT	10MF	20%	50V
C410	1-126-963-11	ELECT	4.7MF	20%	50V
C411	1-126-956-91	ELECT	0.1MF	20%	50V
C412	1-130-495-00	FILM	0.1MF	5%	50V
C413	1-126-967-11	ELECT	47MF	20%	50V
C414	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C415	1-126-956-91	ELECT	0.1MF	20%	50V
C416	1-126-963-11	ELECT	4.7MF	20%	50V
C418	1-126-963-11	ELECT	4.7MF	20%	50V
C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V
C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-51	FILM	0.47MF	20%	125V
C607 $\Delta$	1-117-941-11	ELECT(BLOCK)	470MF	20%	250V
C614 $\Delta$	1-129-723-00	FILM	0.056MF	5%	630V
C625	1-126-960-11	ELECT	1MF	20%	50V
C699	1-164-645-11	CERAMIC	1000PF	10%	500V

**CONNECTOR**

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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**DIODE**

D002	1-810-039-21	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D206	8-719-110-17	DIODE MTZJ-T-77-10B
D207	8-719-109-66	DIODE RD3.3ES-T1B
D209	8-719-110-17	DIODE MTZJ-T-77-10B
D280	8-719-110-17	DIODE MTZJ-T-77-10B
D619	8-719-991-33	DIODE 1SS133T-77

**FUSE**

F601 $\Delta$	1-533-795-11	LINK, FUSE
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**IC**

IC200	8-759-450-93	IC NJM2521M-TE1
IC202	8-759-100-96	IC NJM4558M-TE2
IC301	8-752-083-09	IC CXA2061S
IC302	8-752-385-80	IC CXD2073S
IC401	8-759-490-17	IC TDA7057AQ/N2
IC402	8-752-072-39	IC CXA2021S



# A BOARD VARIANT PARTS LIST

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

**KV-21SE80**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>JACK</b>			
J200	1-580-441-61	JACK, PIN 2P	
J201	1-580-443-21	JACK, PIN 3P	
J202	1-691-110-11	JACK, PIN 3P	
<b>COIL</b>			
L352	1-412-031-11	INDUCTOR CHIP 47UH	
<b>IC LINK</b>			
PS201	1-532-984-11	LINK, IC	
<b>TRANSISTOR</b>			
Q200	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q201	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q206	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q207	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q350	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q351	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q352	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q353	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q354	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q355	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q356	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q357	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q358	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q359	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q380	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
<b>RESISTOR</b>			
R010	1-216-033-00	RES,CHIP 220 5%	1/10W
R011	1-247-815-91	CARBON 220 5%	1/4W
R051	1-216-033-00	RES,CHIP 220 5%	1/10W
R053	1-247-815-91	CARBON 220 5%	1/4W
R070	1-249-425-11	CARBON 4.7K 5%	1/4W
R071	1-249-425-11	CARBON 4.7K 5%	1/4W
R072	1-247-815-91	CARBON 220 5%	1/4W
R080	1-249-429-11	CARBON 10K 5%	1/4W
R086	1-216-073-00	RES,CHIP 10K 5%	1/10W
R202	1-216-113-00	RES,CHIP 470K 5%	1/10W
R204	1-216-022-00	RES,CHIP 75 5%	1/10W
R205	1-247-895-91	CARBON 470K 5%	1/4W
R206	1-247-895-91	CARBON 470K 5%	1/4W
R214	1-216-113-00	RES,CHIP 470K 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R215	1-216-033-00	RES,CHIP 220 5%	1/10W
R216	1-216-113-00	RES,CHIP 470K 5%	1/10W
R217	1-216-033-00	RES,CHIP 220 5%	1/10W
R218	1-216-067-00	RES,CHIP 5.6K 5%	1/10W
R219	1-216-073-00	RES,CHIP 10K 5%	1/10W
R220	1-216-073-00	RES,CHIP 10K 5%	1/10W
R221	1-216-073-00	RES,CHIP 10K 5%	1/10W
R222	1-216-067-00	RES,CHIP 5.6K 5%	1/10W
R223	1-249-429-11	CARBON 10K 5%	1/4W
R224	1-249-429-11	CARBON 10K 5%	1/4W
R225	1-216-073-00	RES,CHIP 10K 5%	1/10W
R226	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R227	1-216-097-91	RES,CHIP 100K 5%	1/10W
R228	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R229	1-216-097-91	RES,CHIP 100K 5%	1/10W
R232	1-216-073-00	RES,CHIP 10K 5%	1/10W
R233	1-216-073-00	RES,CHIP 10K 5%	1/10W
R234	1-216-055-00	RES,CHIP 1.8K 5%	1/10W
R235	1-216-055-00	RES,CHIP 1.8K 5%	1/10W
R237	1-247-815-91	CARBON 220 5%	1/4W
R238	1-249-417-11	CARBON 1K 5%	1/4W
R241	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R247	1-216-025-91	RES,CHIP 100 5%	1/10W
R248	1-216-025-91	RES,CHIP 100 5%	1/10W
R249	1-216-081-00	RES,CHIP 22K 5%	1/10W
R250	1-216-081-00	RES,CHIP 22K 5%	1/10W
R268	1-216-081-00	RES,CHIP 22K 5%	1/10W
R269	1-216-081-00	RES,CHIP 22K 5%	1/10W
R283	1-216-022-00	RES,CHIP 75 5%	1/10W
R284	1-216-295-91	SHORT	
R287	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R303	1-216-025-91	RES,CHIP 100 5%	1/10W
R307	1-216-065-91	RES,CHIP 4.7K 5%	1/10W
R350	1-208-766-11	RES,CHIP 220 1%	1/10W
R351	1-208-766-11	RES,CHIP 220 1%	1/10W
R352	1-208-794-11	RES,CHIP 3.3K 1%	1/10W
R354	1-208-794-11	RES,CHIP 3.3K 1%	1/10W
R357	1-216-091-00	RES,CHIP 56K 5%	1/10W
R358	1-216-043-91	RES,CHIP 560 5%	1/10W
R359	1-216-057-00	RES,CHIP 2.2K 5%	1/10W
R360	1-216-081-00	RES,CHIP 22K 5%	1/10W
R361	1-216-049-91	RES,CHIP 1K 5%	1/10W
R362	1-216-043-91	RES,CHIP 560 5%	1/10W
R363	1-216-037-00	RES,CHIP 330 5%	1/10W
R364	1-216-025-91	RES,CHIP 100 5%	1/10W



## BOARD VARIANT PARTS LIST

## Note:

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## Note:

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

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

**KV-21SE80**

REF.NO.	PART NO.	DESCRIPTION	REMARK				REF.NO.	PART NO.	DESCRIPTION	REMARK			
R365	1-216-025-91	RES,CHIP	100	5%	1/10W		R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R366	1-216-053-00	RES,CHIP	1.5K	5%	1/10W		R629	1-247-807-31	CARBON	100	5%	1/4W	
R367	1-216-057-00	RES,CHIP	2.2K	5%	1/10W		R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R368	1-216-025-91	RES,CHIP	100	5%	1/10W		R691	1-247-791-91	CARBON	22	5%	1/4W	
R369	1-216-045-00	RES,CHIP	680	5%	1/10W		R692	1-247-791-91	CARBON	22	5%	1/4W	
<b>RELAY</b>													
R370	1-216-295-91	SHORT					RY601 $\Delta$ 1-755-018-11 RELAY						
R372	1-216-035-00	RES,CHIP	270	5%	1/10W		<b>SWITCH</b>						
R373	1-216-025-91	RES,CHIP	100	5%	1/10W		S001	1-692-431-21	SWITCH, TACTILE				
R374	1-216-025-91	RES,CHIP	100	5%	1/10W		S002	1-692-431-21	SWITCH, TACTILE				
R375	1-216-053-00	RES,CHIP	1.5K	5%	1/10W		S003	1-692-431-21	SWITCH, TACTILE				
R376	1-216-049-91	RES,CHIP	1K	5%	1/10W		S004	1-692-431-21	SWITCH, TACTILE				
R377	1-216-049-91	RES,CHIP	1K	5%	1/10W		S005	1-692-431-21	SWITCH, TACTILE				
R378	1-216-041-00	RES,CHIP	470	5%	1/10W		S006	1-692-431-21	SWITCH, TACTILE				
R379	1-216-049-91	RES,CHIP	1K	5%	1/10W		S007	1-692-431-21	SWITCH, TACTILE				
R380	1-208-790-11	RES,CHIP	2.2K	1%	1/10W		<b>TRANSFORMER</b>						
R382	1-216-053-00	RES,CHIP	1.5K	5%	1/10W		T504	$\Delta$ 1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)				
R387	1-216-025-91	RES,CHIP	100	5%	1/10W		T603	$\Delta$ 1-431-674-11	TRANSFORMER, CONVERTER (PIT)				
R388	1-216-025-91	RES,CHIP	100	5%	1/10W		<b>THERMISTOR</b>						
R395	1-216-025-91	RES,CHIP	100	5%	1/10W		THP601	1-810-597-11	THERMISTOR, POSITIVE				
R396	1-216-025-91	RES,CHIP	100	5%	1/10W		<b>TUNER</b>						
R397	1-216-025-91	RES,CHIP	100	5%	1/10W		TU101	$\Delta$ 8-598-431-00	TUNER, FSS BTF-WA411				
R400	1-247-863-91	CARBON	22K	5%	1/4W		<b>VARISTOR</b>						
R402	1-216-121-91	RES,CHIP	1M	5%	1/10W		VDR601	$\Delta$ 1-801-074-41	VARISTOR ERZV10D271				
R403	1-247-815-91	CARBON	220	5%	1/4W		VDR602	1-801-074-41	VARISTOR ERZV10D271				
R404	1-247-815-91	CARBON	220	5%	1/4W								
R432	1-249-429-11	CARBON	10K	5%	1/4W								
R502	$\Delta$ 1-215-923-00	METAL OXIDE	10K	5%	3W	F							
R508	$\Delta$ 1-215-864-00	METAL OXIDE	150	5%	1W	F							
R533	1-215-461-00	METAL	47K	1%	1/4W								
R534	1-215-453-00	METAL	22K	1%	1/4W								
R561	1-216-349-00	METAL OXIDE	1	5%	1W	F							
R562	1-216-349-00	METAL OXIDE	1	5%	1W	F							
R574	1-249-417-11	CARBON	1K	5%	1/4	F							
R578	1-216-467-11	METAL OXIDE	56K	5%	2W	F							
■ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W								
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F							
R600	$\Delta$ 1-219-513-11	CARBON	4.7M	5%	1/2W								
R603	$\Delta$ 1-205-998-11	CEMENTED	1	5%	10W								
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F							
R612	1-216-349-00	METAL OXIDE	1	5%	1W	F							
R613	1-216-349-00	METAL OXIDE	1	5%	1W	F							
R615	1-247-893-11	CARBON	390K	5%	1/4W								
R618	1-212-857-00	FUSIBLE	10	5%	1/4W	F							
R623	1-249-441-11	CARBON	100K	5%	1/4W								
R627	1-249-441-11	CARBON	100K	5%	1/4W								





# BOARD VARIANT PARTS LIST

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

**KV-21SE80A**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### A BOARD VARIANT LIST: KV-21SE80A

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C207	1-126-959-11	ELECT	0.47MF	20%	50V
C208	1-126-959-11	ELECT	0.47MF	20%	50V
C209	1-126-963-11	ELECT	4.7MF	20%	50V
C211	1-126-964-11	ELECT	10MF	20%	50V
C212	1-126-963-11	ELECT	4.7MF	20%	50V

C213	1-126-964-11	ELECT	10MF	20%	50V
C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V

C300	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C302	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C309	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-957-11	ELECT	0.22MF	20%	50V

C321	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C400	1-126-963-11	ELECT	4.7MF	20%	50V
C401	1-126-956-91	ELECT	0.1MF	20%	50V
C402	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V

C403	1-126-963-11	ELECT	4.7MF	20%	50V
C404	1-126-963-11	ELECT	4.7MF	20%	50V
C405	1-126-963-11	ELECT	4.7MF	20%	50V
C406	1-126-963-11	ELECT	4.7MF	20%	50V
C407	1-126-964-11	ELECT	10MF	20%	50V

C410	1-126-963-11	ELECT	4.7MF	20%	50V
C411	1-126-956-91	ELECT	0.1MF	20%	50V
C412	1-130-495-00	FILM	0.1MF	5%	50V
C413	1-126-967-11	ELECT	47MF	20%	50V
C414	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V

C415	1-126-956-91	ELECT	0.1MF	20%	50V
C416	1-126-963-11	ELECT	4.7MF	20%	50V
C418	1-126-963-11	ELECT	4.7MF	20%	50V

C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV

C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V
C591	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-61	FILM	0.47MF	20%	300V

REF.NO.	PART NO.	DESCRIPTION	REMARK
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C607 $\Delta$	1-125-731-11	ELECT(BLOCK)	270MF 20% 400V
C614 $\Delta$	1-137-347-11	FILM	0.022MF 3% 2KV
C625	1-126-960-11	ELECT	1MF 20% 50V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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#### DIODE

D002	1-810-039-11	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D207	8-719-109-66	DIODE RD3.3ES-T1B

D209	8-719-110-17	DIODE MTZJ-T-77-10B
D619	8-719-991-33	DIODE 1SS133T-77

#### FUSE

F601 $\Delta$	1-532-506-51	FUSE
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#### IC

IC200	8-759-450-93	IC NJM2521M-TE1
IC202	8-759-100-96	IC NJM4558M-TE2
IC301	8-752-082-35	IC CXA2060AS
IC401	8-759-490-17	IC TDA7057AQ/N2
IC402	8-752-072-39	IC CXA2021S

#### JACK

J200	1-580-441-61	JACK, PIN 2P
J201	1-580-443-21	JACK, PIN 3P
J202	1-691-110-11	JACK, PIN 3P

#### IC LINK

PS201	1-532-984-11	LINK, IC
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#### TRANSISTOR

Q200	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q201	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q206	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q207	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX
Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA

#### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W



## BOARD VARIANT PARTS LIST

## Note:

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## Note:

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

**KV-21SE80A**

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W
R072	1-247-815-91	CARBON	220	5%	1/4W
R081	1-249-413-11	CARBON	470	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W
R206	1-247-895-91	CARBON	470K	5%	1/4W
R214	1-216-113-00	RES,CHIP	470K	5%	1/10W
R215	1-216-033-00	RES,CHIP	220	5%	1/10W
R216	1-216-113-00	RES,CHIP	470K	5%	1/10W
R217	1-216-033-00	RES,CHIP	220	5%	1/10W
R218	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R219	1-216-073-00	RES,CHIP	10K	5%	1/10W
R220	1-216-073-00	RES,CHIP	10K	5%	1/10W
R221	1-216-073-00	RES,CHIP	10K	5%	1/10W
R222	1-216-067-00	RES,CHIP	5.6K	5%	1/10W
R223	1-249-429-11	CARBON	10K	5%	1/4W
R224	1-249-429-11	CARBON	10K	5%	1/4W
R225	1-216-073-00	RES,CHIP	10K	5%	1/10W
R226	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R227	1-216-097-91	RES,CHIP	100K	5%	1/10W
R228	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R229	1-216-097-91	RES,CHIP	100K	5%	1/10W
R232	1-216-073-00	RES,CHIP	10K	5%	1/10W
R233	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-055-00	RES,CHIP	1.8K	5%	1/10W
R235	1-216-055-00	RES,CHIP	1.8K	5%	1/10W
R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R247	1-216-025-91	RES,CHIP	100	5%	1/10W
R248	1-216-025-91	RES,CHIP	100	5%	1/10W
R249	1-216-081-00	RES,CHIP	22K	5%	1/10W
R250	1-216-081-00	RES,CHIP	22K	5%	1/10W
R268	1-216-081-00	RES,CHIP	22K	5%	1/10W
R269	1-216-081-00	RES,CHIP	22K	5%	1/10W
R284	1-216-295-91	SHORT			
R300	1-216-295-91	SHORT			
R302	1-216-295-91	SHORT			
R307	1-216-077-00	RES,CHIP	15K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R402	1-216-121-91	RES,CHIP	1M	5%	1/10W
R403	1-247-815-91	CARBON	220	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R404	1-247-815-91	CARBON	220	5%	1/4W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K	5%	3W F
R508 $\Delta$	1-215-864-00	METAL OXIDE	150	5%	1W F
R533	1-215-461-00	METAL	47K	1%	1/4W
R534	1-215-453-00	METAL	22K	1%	1/4W
R561	1-216-349-00	METAL OXIDE	1	5%	1W F
R562	1-216-349-00	METAL OXIDE	1	5%	1W F
R574	1-249-417-11	CARBON	1K	5%	1/4W F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F
R582	1-208-826-11	RES,CHIP	68K	1%	1/10W
R591	1-215-880-00	METAL OXIDE	10	5%	2W F
R601 $\Delta$	1-247-289-00	CARBON	8.2M	5%	1W
R603 $\Delta$	1-202-962-11	CEMENTED	3.3	5%	10W
R604	1-247-889-00	CARBON	270K	5%	1/4W
R605	1-247-889-00	CARBON	270K	5%	1/4W
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W F
R623	1-249-437-11	CARBON	47K	5%	1/4W
R627	1-249-441-11	CARBON	100K	5%	1/4W
R628	1-249-425-11	CARBON	4.7K	5%	1/4W
R629	1-247-807-31	CARBON	100	5%	1/4W
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W
R691	1-249-399-11	CARBON	33	5%	1/4W
R692	1-249-399-11	CARBON	33	5%	1/4W

RELAY

RY601  $\Delta$  1-755-018-11 RELAY

SWITCH

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

TRANSFORMER

T504 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)
T603 $\Delta$	1-431-675-11	TRANSFORMER, CONVERTER (PIT)



## BOARD VARIANT PARTS LIST

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

**KV-21SE80A**

### Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>THERMISTOR</u>			
THP601	1-809-827-11	THERMISTOR, POSITIVE	
<u>TUNER</u>			
TU101	$\Delta$ 8-598-431-00	TUNER, FSS BTF-WA411	
<u>VARISTOR</u>			
VDR601	$\Delta$ 1-809-267-41	VARISTOR ERZV10D471	
VDR602	1-809-267-41	VARISTOR ERZV10D471	
<u>CRYSTAL</u>			
X300	1-579-972-11	VIBRATOR, CRYSTAL	
X302	1-579-973-11	VIBRATOR, CRYSTAL	

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (▲) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-21SE80C**

REF.NO. PART NO. DESCRIPTION REMARK

**A BOARD VARIANT LIST: KV-21SE80C**

CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V
C207	1-126-959-11	ELECT	0.47MF	20%	50V
C208	1-126-959-11	ELECT	0.47MF	20%	50V
C209	1-126-963-11	ELECT	4.7MF	20%	50V
C211	1-126-964-11	ELECT	10MF	20%	50V
C212	1-126-963-11	ELECT	4.7MF	20%	50V
C213	1-126-964-11	ELECT	10MF	20%	50V
C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C229	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C233	1-126-960-11	ELECT	1MF	20%	50V
C304	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C307	1-126-964-11	ELECT	10MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C348	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C350	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C351	1-126-964-11	ELECT	10MF	20%	50V
C352	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C353	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C354	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C355	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C356	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C357	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C358	1-104-664-11	ELECT	47MF	20%	25V
C359	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C360	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C361	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C362	1-126-964-11	ELECT	10MF	20%	50V
C400	1-126-963-11	ELECT	4.7MF	20%	50V
C401	1-126-956-91	ELECT	0.1MF	20%	50V
C402	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C403	1-126-963-11	ELECT	4.7MF	20%	50V
C404	1-126-963-11	ELECT	4.7MF	20%	50V
C405	1-126-963-11	ELECT	4.7MF	20%	50V

REF.NO. PART NO. DESCRIPTION REMARK

C406	1-126-963-11	ELECT	4.7MF	20%	50V
C407	1-126-964-11	ELECT	10MF	20%	50V
C410	1-126-963-11	ELECT	4.7MF	20%	50V
C411	1-126-956-91	ELECT	0.1MF	20%	50V
C412	1-130-495-00	FILM	0.1MF	5%	50V
C413	1-126-967-11	ELECT	47MF	20%	50V
C414	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C415	1-126-956-91	ELECT	0.1MF	20%	50V
C416	1-126-963-11	ELECT	4.7MF	20%	50V
C418	1-126-963-11	ELECT	4.7MF	20%	50V
C505	▲ 1-162-115-00	CERAMIC	330PF	10%	2KV
C507	▲ 1-119-865-11	MYLAR	5700PF	3%	2KV
C511	▲ 1-117-665-11	FILM	0.33MF	5%	200V
C591	▲ 1-137-150-11	MYLAR	0.01MF	10%	100V
C601	▲ 1-136-311-61	FILM	0.47MF	20%	300V
C607	▲ 1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614	▲ 1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V

CONNECTOR

CN401 1-564-505-11 PLUG, CONNECTOR 2P

DIODE

D002	1-810-039-21	LED UNIT			
D202	8-719-110-17	DIODE MTZJ-T-77-10B			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D204	8-719-110-17	DIODE MTZJ-T-77-10B			
D206	8-719-110-17	DIODE MTZJ-T-77-10B			
D207	8-719-109-66	DIODE RD3.3ES-T1B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			
D280	8-719-110-17	DIODE MTZJ-T-77-10B			
D619	8-719-991-33	DIODE 1SS133T-77			

FUSE

F601 ▲ 1-532-506-51 FUSE

IC

IC200	8-759-450-93	IC NJM2521M-TE1			
IC202	8-759-100-96	IC NJM4558M-TE2			
IC301	8-752-083-09	IC CXA2061S			
IC302	8-752-385-80	IC CXD2073S			
IC401	8-759-490-17	IC TDA7057AQ/N2			
IC402	8-752-072-39	IC CXA2021S			



# BOARD VARIANT PARTS LIST

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

**KV-21SE80C**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>JACK</u>			
J200	1-580-441-61	JACK, PIN 2P	
J201	1-580-443-21	JACK, PIN 3P	
J202	1-691-110-11	JACK, PIN 3P	
<u>COIL</u>			
L352	1-412-031-11	INDUCTOR CHIP 47UH	
<u>IC LINK</u>			
PS201	1-532-984-11	LINK, IC	
<u>TRANSISTOR</u>			
Q200	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q201	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q206	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q207	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q350	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q351	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q352	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q353	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q354	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q355	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q356	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q357	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q358	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	
Q359	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q380	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
<u>RESISTOR</u>			
R010	1-216-033-00	RES,CHIP	220 5% 1/10W
R011	1-247-815-91	CARBON	220 5% 1/4W
R051	1-216-033-00	RES,CHIP	220 5% 1/10W
R053	1-247-815-91	CARBON	220 5% 1/4W
R070	1-249-425-11	CARBON	4.7K 5% 1/4W
R071	1-249-425-11	CARBON	4.7K 5% 1/4W
R072	1-247-815-91	CARBON	220 5% 1/4W
R080	1-249-429-11	CARBON	10K 5% 1/4W
R086	1-216-073-00	RES,CHIP	10K 5% 1/10W
R202	1-216-113-00	RES,CHIP	470K 5% 1/10W
R204	1-216-022-00	RES,CHIP	75 5% 1/10W
R205	1-247-895-91	CARBON	470K 5% 1/4W
R206	1-247-895-91	CARBON	470K 5% 1/4W
R214	1-216-113-00	RES,CHIP	470K 5% 1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK
R215	1-216-033-00	RES,CHIP	220 5% 1/10W
R216	1-216-113-00	RES,CHIP	470K 5% 1/10W
R217	1-216-033-00	RES,CHIP	220 5% 1/10W
R218	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
R219	1-216-073-00	RES,CHIP	10K 5% 1/10W
R220	1-216-073-00	RES,CHIP	10K 5% 1/10W
R221	1-216-073-00	RES,CHIP	10K 5% 1/10W
R222	1-216-067-00	RES,CHIP	5.6K 5% 1/10W
R223	1-249-429-11	CARBON	10K 5% 1/4W
R224	1-249-429-11	CARBON	10K 5% 1/4W
R225	1-216-073-00	RES,CHIP	10K 5% 1/10W
R226	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R227	1-216-097-91	RES,CHIP	100K 5% 1/10W
R228	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R229	1-216-097-91	RES,CHIP	100K 5% 1/10W
R232	1-216-073-00	RES,CHIP	10K 5% 1/10W
R233	1-216-073-00	RES,CHIP	10K 5% 1/10W
R234	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
R235	1-216-055-00	RES,CHIP	1.8K 5% 1/10W
R237	1-247-815-91	CARBON	220 5% 1/4W
R238	1-249-417-11	CARBON	1K 5% 1/4W
R241	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R247	1-216-025-91	RES,CHIP	100 5% 1/10W
R248	1-216-025-91	RES,CHIP	100 5% 1/10W
R249	1-216-081-00	RES,CHIP	22K 5% 1/10W
R250	1-216-081-00	RES,CHIP	22K 5% 1/10W
R268	1-216-081-00	RES,CHIP	22K 5% 1/10W
R269	1-216-081-00	RES,CHIP	22K 5% 1/10W
R283	1-216-022-00	RES,CHIP	75 5% 1/10W
R284	1-216-295-91	SHORT	
R287	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R303	1-216-025-91	RES,CHIP	100 5% 1/10W
R307	1-216-065-91	RES,CHIP	4.7K 5% 1/10W
R350	1-208-766-11	RES,CHIP	220 1% 1/10W
R351	1-208-766-11	RES,CHIP	220 1% 1/10W
R352	1-208-794-11	RES,CHIP	3.3K 1% 1/10W
R354	1-208-794-11	RES,CHIP	3.3K 1% 1/10W
R357	1-216-091-00	RES,CHIP	56K 5% 1/10W
R358	1-216-043-91	RES,CHIP	560 5% 1/10W
R359	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
R360	1-216-081-00	RES,CHIP	22K 5% 1/10W
R361	1-216-049-91	RES,CHIP	1K 5% 1/10W
R362	1-216-043-91	RES,CHIP	560 5% 1/10W
R363	1-216-037-00	RES,CHIP	330 5% 1/10W
R364	1-216-025-91	RES,CHIP	100 5% 1/10W



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

**KV-21SE80C**

REF.NO.	PART NO.	DESCRIPTION	REMARK				REF.NO.	PART NO.	DESCRIPTION	REMARK			
R365	1-216-025-91	RES,CHIP	100	5%	1/10W		R627	1-249-441-11	CARBON	100K	5%	1/4W	
R366	1-216-053-00	RES,CHIP	1.5K	5%	1/10W		R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R367	1-216-057-00	RES,CHIP	2.2K	5%	1/10W		R629	1-247-807-31	CARBON	100	5%	1/4W	
R368	1-216-025-91	RES,CHIP	100	5%	1/10W		R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R369	1-216-045-00	RES,CHIP	680	5%	1/10W		R691	1-249-399-11	CARBON	33	5%	1/4W	
							R692	1-249-399-11	CARBON	33	5%	1/4W	
							<u>RELAY</u>						
							RY601 ⚠ 1-755-018-11 RELAY						
							<u>TRANSFORMER</u>						
							T504 ⚠ 1-453-211-11 TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)						
							T603 ⚠ 1-431-675-11 TRANSFORMER, CONVERTER (PIT)						
							<u>THERMISTOR</u>						
							THP601 1-809-827-11 THERMISTOR, POSITIVE						
							<u>TUNER</u>						
							TU101 ⚠ 8-598-431-00 TUNER, FSS BTF-WA411						
							<u>VARISTOR</u>						
							VDR601⚠ 1-809-267-41 VARISTOR ERZV10D471						
							VDR602 1-809-267-41 VARISTOR ERZV10D471						
R370	1-216-295-91	SHORT											
R372	1-216-035-00	RES,CHIP	270	5%	1/10W								
R373	1-216-025-91	RES,CHIP	100	5%	1/10W								
R374	1-216-025-91	RES,CHIP	100	5%	1/10W								
R375	1-216-053-00	RES,CHIP	1.5K	5%	1/10W								
R376	1-216-049-91	RES,CHIP	1K	5%	1/10W								
R377	1-216-049-91	RES,CHIP	1K	5%	1/10W								
R378	1-216-041-00	RES,CHIP	470	5%	1/10W								
R379	1-216-049-91	RES,CHIP	1K	5%	1/10W								
R380	1-208-790-11	RES,CHIP	2.2K	1%	1/10W								
R382	1-216-053-00	RES,CHIP	1.5K	5%	1/10W								
R387	1-216-025-91	RES,CHIP	100	5%	1/10W								
R388	1-216-025-91	RES,CHIP	100	5%	1/10W								
R395	1-216-025-91	RES,CHIP	100	5%	1/10W								
R396	1-216-025-91	RES,CHIP	100	5%	1/10W								
R397	1-216-025-91	RES,CHIP	100	5%	1/10W								
R400	1-247-863-91	CARBON	22K	5%	1/4W								
R402	1-216-121-91	RES,CHIP	1M	5%	1/10W								
R403	1-247-815-91	CARBON	220	5%	1/4W								
R404	1-247-815-91	CARBON	220	5%	1/4W								
R432	1-249-429-11	CARBON	10K	5%	1/4W								
R502 ⚠	1-215-923-00	METAL OXIDE	10K	5%	3W	F							
R508 ⚠	1-215-864-00	METAL OXIDE	150	5%	1W	F							
R533	1-215-461-00	METAL	47K	1%	1/4W								
R534	1-215-453-00	METAL	22K	1%	1/4W								
R561	1-216-349-00	METAL OXIDE	1	5%	1W	F							
R562	1-216-349-00	METAL OXIDE	1	5%	1W	F							
R574	1-249-417-11	CARBON	1K	5%	1/4W	F							
R578	1-216-467-11	METAL OXIDE	56K	5%	2W	F							
✖ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W								
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F							
R601 ⚠	1-247-289-00	CARBON	8.2M	5%	1W								
R603 ⚠	1-202-962-11	CEMENTED	3.3	5%	10W								
R604	1-247-889-00	CARBON	270K	5%	1/4W								
R605	1-247-889-00	CARBON	270K	5%	1/4W								
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F							
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W	F							
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W	F							
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F							
R623	1-249-437-11	CARBON	47K	5%	1/4W								





# BOARD VARIANT PARTS LIST

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

**KV-21ME40**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## A BOARD VARIANT LIST: KV-21ME40

### CAPACITOR

C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V

C220	1-126-941-11	ELECT	470MF	20%	25V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V

C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V
C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V

C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-51	FILM	0.47MF	20%	125V
C607 $\Delta$	1-117-941-11	ELECT(BLOCK)	470MF	20%	250V
C614 $\Delta$	1-129-723-00	FILM	0.056MF	5%	630V

C625	1-126-960-11	ELECT	1MF	20%	50V
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C699	1-164-645-11	CERAMIC	1000PF	10%	500V
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### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P			
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### DIODE

D002	1-810-039-21	LED UNIT			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			
D215	8-719-110-17	DIODE MTZJ-T-77-10B			
D619	8-719-991-33	DIODE 1SS133T-77			

### FUSE

F601 $\Delta$	1-533-795-11	LINK, FUSE			
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### IC

IC301	8-752-083-09	IC CXA2061S			
IC401	8-759-490-17	IC TDA7057AQ/N2			

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### JACK

J201	1-580-441-71	JACK, PIN 2P	
J202	1-580-441-41	JACK, PIN 2P	

### IC LINK

PS201	1-532-984-11	LINK, IC	
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### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
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### RESISTOR

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W

R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W

R246	1-216-295-91	SHORT			
R268	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W

R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K	5%	3W F
R508 $\Delta$	1-215-864-00	METAL OXIDE	150	5%	1W F
R533	1-215-461-00	METAL	47K	1%	1/4W

R534	1-215-453-00	METAL	22K	1%	1/4W
R561	1-216-349-00	METAL OXIDE	1	5%	1W F
R562	1-216-349-00	METAL OXIDE	1	5%	1W F
R574	1-249-417-11	CARBON	1K	5%	1/4W F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F

$\Delta$ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W
R591	1-215-880-00	METAL OXIDE	10	5%	2W F
R600 $\Delta$	1-219-513-11	CARBON	4.7M	5%	1/2W
R603 $\Delta$	1-205-998-11	CEMENTED	1	5%	10W
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F



## BOARD VARIANT PARTS LIST

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-21ME40**

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R612	1-216-349-00	METAL OXIDE	1	5%	1W	F
R613	1-216-349-00	METAL OXIDE	1	5%	1W	F
R615	1-247-893-11	CARBON	390K	5%	1/4W	
R618	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R623	1-249-441-11	CARBON	100K	5%	1/4W	
R627	1-249-441-11	CARBON	100K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-247-807-31	CARBON	100	5%	1/4W	
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R691	1-247-791-91	CARBON	22	5%	1/4W	
R692	1-247-791-91	CARBON	22	5%	1/4W	

RELAY

RY601  $\Delta$  1-755-018-11 RELAY

SWITCH

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

TRANSFORMER

T504	$\Delta$ 1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)
T603	$\Delta$ 1-431-674-11	TRANSFORMER, CONVERTER (PIT)

THERMISTOR

THP601	1-810-597-11	THERMISTOR, POSITIVE
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TUNER

TU101	$\Delta$ 8-598-430-00	TUNER, FSS BTF-FA401
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VARISTOR

VDR601	$\Delta$ 1-801-074-41	VARISTOR ERZV10D271
VDR602	1-801-074-41	VARISTOR ERZV10D271

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## BOARD VARIANT PARTS LIST

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

**KV-13M50/13M51**

### Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### A BOARD VARIANT LIST: KV-13M50/13M51

#### CAPACITOR

C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-933-11	ELECT	100MF	20%	16V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V
C507 $\Delta$	1-117-836-11	FILM	6800PF	3%	2KV
C511 $\Delta$	1-119-967-11	FILM	0.43MF	5%	200V
C551	1-162-114-00	CERAMIC	0.0047MF		2KV
C591 $\Delta$	1-137-350-11	MYLAR	0.015MF	10%	100V
C601 $\Delta$	1-136-311-51	FILM	0.47MF	20%	125V
C607 $\Delta$	1-117-893-11	ELECT	470MF	20%	250V
C614 $\Delta$	1-129-723-00	FILM	0.056MF	5%	630V
C699	1-164-645-11	CERAMIC	1000PF	10%	500V

#### DIODE

D002	1-810-039-21	LED UNIT			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			
D215	8-719-110-17	DIODE MTZJ-T-77-10B			
D551	8-719-028-72	DIODE RGP02-17PKG23			

#### FUSE

F601 $\Delta$	1-533-795-11	LINK, FUSE			
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#### IC

IC301	8-752-083-09	IC CXA2061S			
IC400	8-759-490-18	IC TDA7056B/N1			

#### JACK

J201	1-580-441-71	JACK, PIN 2P			
J202	1-580-441-41	JACK, PIN 2P			

#### IC LINK

PS201	1-532-637-00	LINK, IC			
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REF.NO.	PART NO.	DESCRIPTION	REMARK
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#### RESISTOR

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R246	1-216-295-91	SHORT			
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-247-863-91	CARBON	22K	5%	1/4W
R502 $\Delta$	1-215-924-00	METAL OXIDE	15K	5%	3W F
R508 $\Delta$	1-215-863-11	METAL OXIDE	100	5%	1W F
R533	1-215-465-00	METAL	68K	1%	1/4W
R534	1-215-449-00	METAL	15K	1%	1/4W
R551	1-215-870-11	METAL OXIDE	1.5K	5%	1W F
R561	1-216-359-00	METAL OXIDE	6.8	5%	1W F
R562	1-216-359-00	METAL OXIDE	6.8	5%	1W F
R574	1-249-416-11	CARBON	820	5%	1/4W F
R578	1-215-902-11	METAL OXIDE	47K	5%	2W F
R582 $\Delta$	1-208-850-11	RES,CHIP	680K	1%	1/10W
R591	1-215-882-00	METAL OXIDE	22	5%	2W F
R600 $\Delta$	1-219-513-11	CARBON	4.7M	5%	1/2W
R603 $\Delta$	1-205-998-11	CEMENTED	1	5%	10W
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F
R612	1-216-349-00	METAL OXIDE	1	5%	1W F
R613	1-216-349-00	METAL OXIDE	1	5%	1W F
R615	1-247-893-11	CARBON	390K	5%	1/4W
R618	1-212-857-00	FUSIBLE	10	5%	1/4W F
R623	1-249-441-11	CARBON	100K	5%	1/4W
R636	1-208-794-11	RES,CHIP	3.3K	1%	1/10W
R691	1-247-791-91	CARBON	22	5%	1/4W
R692	1-247-791-91	CARBON	22	5%	1/4W

#### RELAY

RY601 $\Delta$	1-755-146-11	RELAY, AC POWER			
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#### SWITCH

S001	1-571-532-21	SWITCH, TACTILE			
S002	1-571-532-21	SWITCH, TACTILE			



## BOARD VARIANT PARTS LIST

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-13M50/13M51**

REF.NO.	PART NO.	DESCRIPTION	REMARK
S003	1-571-532-21	SWITCH, TACTILE	
S004	1-571-532-21	SWITCH, TACTILE	
S005	1-571-532-21	SWITCH, TACTILE	
S006	1-571-532-21	SWITCH, TACTILE	

### TRANSFORMER

T504	$\Delta$ 1-453-210-11	TRANSFORMER ASSY, FLYBACK (NX-1731//X4E4)
T603	$\Delta$ 1-431-674-11	TRANSFORMER, CONVERTER (PIT)

### THERMISTOR

THP601	1-810-597-11	THERMISTOR, POSITIVE
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### TUNER

TU101	$\Delta$ 8-598-430-00	TUNER, FSS BTF-FA401
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### VARISTOR

VDR601	$\Delta$ 1-801-074-41	VARISTOR ERZV10D271
VDR602	1-801-074-41	VARISTOR ERZV10D271

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## BOARD VARIANT PARTS LIST

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

**KV-21XT4A**

### Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### A BOARD VARIANT LIST: KV-21XT4A

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C300	1-163-099-00	CERAMIC CHIP	18PF	5%	50V

C302	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C309	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-957-11	ELECT	0.22MF	20%	50V
C321	1-163-259-91	CERAMIC CHIP	220PF	5%	50V

C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V
C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V

C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-61	FILM	0.47MF	20%	300V
C607 $\Delta$	1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614 $\Delta$	1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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#### DIODE

D002	1-810-039-11	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D209	8-719-110-17	DIODE MTZJ-T-77-10B

D619	8-719-991-33	DIODE 1SS133T-77
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#### FUSE

F601 $\Delta$	1-532-506-51	FUSE
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REF.NO.	PART NO.	DESCRIPTION	REMARK
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#### IC

IC200	8-759-450-93	IC NJM2521M-TE1
IC301	8-752-082-35	IC CXA2060AS
IC401	8-759-490-17	IC TDA7057AQ/N2

#### JACK

J201	1-580-443-21	JACK, PIN 3P
J202	1-691-110-11	JACK, PIN 3P

#### IC LINK

PS201	1-532-984-11	LINK, IC
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#### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA
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#### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R081	1-249-413-11	CARBON	470	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W

R205	1-247-895-91	CARBON	470K	5%	1/4W
R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R284	1-216-295-91	SHORT			
R300	1-216-295-91	SHORT			
R302	1-216-295-91	SHORT			
R307	1-216-077-00	RES,CHIP	15K	5%	1/10W



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-21XT4A**

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R400	1-247-863-91	CARBON	22K	5%	1/4W	
R432	1-249-429-11	CARBON	10K	5%	1/4W	
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R508 $\Delta$	1-215-864-00	METAL OXIDE	150	5%	1W	F
R533	1-215-461-00	METAL	47K	1%	1/4W	
R534	1-215-453-00	METAL	22K	1%	1/4W	
R561	1-216-349-00	METAL OXIDE	1	5%	1W	F
R562	1-216-349-00	METAL OXIDE	1	5%	1W	F
R574	1-249-417-11	CARBON	1K	5%	1/4W	F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W	F
$\boxtimes$ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W	
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F
R601 $\Delta$	1-247-289-00	CARBON	8.2M	5%	1W	
R603 $\Delta$	1-202-962-11	CEMENTED	3.3	5%	10W	
R604	1-247-889-00	CARBON	270K	5%	1/4W	
R605	1-247-889-00	CARBON	270K	5%	1/4W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R623	1-249-437-11	CARBON	47K	5%	1/4W	
R627	1-249-441-11	CARBON	100K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-247-807-31	CARBON	100	5%	1/4W	
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R691	1-249-399-11	CARBON	33	5%	1/4W	
R692	1-249-399-11	CARBON	33	5%	1/4W	
<u>RELAY</u>						
RY601 $\Delta$	1-755-018-11	RELAY				
<u>SWITCH</u>						
S001	1-692-431-21	SWITCH, TACTILE				
S002	1-692-431-21	SWITCH, TACTILE				
S003	1-692-431-21	SWITCH, TACTILE				
S004	1-692-431-21	SWITCH, TACTILE				
S005	1-692-431-21	SWITCH, TACTILE				
S006	1-692-431-21	SWITCH, TACTILE				
S007	1-692-431-21	SWITCH, TACTILE				
<u>TRANSFORMER</u>						
T504 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)				
T603 $\Delta$	1-431-675-11	TRANSFORMER, CONVERTER (PIT)				

REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>THERMISTOR</u>			
THP601	1-809-827-11	THERMISTOR, POSITIVE	
<u>TUNER</u>			
TU101 $\Delta$	8-598-431-00	TUNER, FSS BTF-WA411	
<u>VARISTOR</u>			
VDR601 $\Delta$	1-809-267-41	VARISTOR ERZV10D471	
VDR602	1-809-267-41	VARISTOR ERZV10D471	
<u>CRYSTAL</u>			
X300	1-579-972-11	VIBRATOR, CRYSTAL	
X302	1-579-973-11	VIBRATOR, CRYSTAL	



# BOARD VARIANT PARTS LIST

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

**KV-21ME40C**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## A BOARD VARIANT LIST: KV-21ME40C

### CAPACITOR

C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V
C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V
C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-61	FILM	0.47MF	20%	300V
C607 $\Delta$	1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614 $\Delta$	1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V

### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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### DIODE

D002	1-810-039-21	LED UNIT
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D209	8-719-110-17	DIODE MTZJ-T-77-10B
D215	8-719-110-17	DIODE MTZJ-T-77-10B
D619	8-719-991-33	DIODE 1SS133T-77

### FUSE

F601 $\Delta$	1-532-506-51	FUSE
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### IC

IC301	8-752-083-09	IC CXA2061S
IC401	8-759-490-17	IC TDA7057AQ/N2

### JACK

J201	1-580-441-71	JACK, PIN 2P
J202	1-580-441-41	JACK, PIN 2P

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### IC LINK

PS201	1-532-984-11	LINK, IC
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### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA
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### RESISTOR

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R246	1-216-295-91	SHORT			
R268	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R502 $\Delta$	1-215-923-00	METAL OXIDE	10K	5%	3W F
R508 $\Delta$	1-215-864-00	METAL OXIDE	150	5%	1W F
R533	1-215-461-00	METAL	47K	1%	1/4W
R534	1-215-453-00	METAL	22K	1%	1/4W
R561	1-216-349-00	METAL OXIDE	1	5%	1W F
R562	1-216-349-00	METAL OXIDE	1	5%	1W F
R574	1-249-417-11	CARBON	1K	5%	1/4W F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F
R582 $\Delta$	1-208-826-11	RES,CHIP	68K	1%	1/10W
R591	1-215-880-00	METAL OXIDE	10	5%	2W F
R601 $\Delta$	1-247-289-00	CARBON	8.2M	5%	1W
R603 $\Delta$	1-202-962-11	CEMENTED	3.3	5%	10W
R604	1-247-889-00	CARBON	270K	5%	1/4W
R605	1-247-889-00	CARBON	270K	5%	1/4W
R606	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W F
R623	1-249-437-11	CARBON	47K	5%	1/4W
R627	1-249-441-11	CARBON	100K	5%	1/4W

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-21ME40C**

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R628	1-249-425-11	CARBON	4.7K	5%	1/4W
R629	1-247-807-31	CARBON	100	5%	1/4W
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W
R691	1-249-399-11	CARBON	33	5%	1/4W
R692	1-249-399-11	CARBON	33	5%	1/4W

**RELAY**

RY601  $\Delta$  1-755-018-11 RELAY

**SWITCH**

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

S006 1-692-431-21 SWITCH, TACTILE  
S007 1-692-431-21 SWITCH, TACTILE

**TRANSFORMER**

T504  $\Delta$  1-453-211-11 TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)

T603  $\Delta$  1-431-675-11 TRANSFORMER, CONVERTER (PIT)

**THERMISTOR**

THP601 1-809-827-11 THERMISTOR, POSITIVE

**TUNER**

TU101  $\Delta$  8-598-430-00 TUNER, FSS BTF-FA401

**VARISTOR**

VDR601  $\Delta$  1-809-267-41 VARISTOR ERZV10D471

VDR602 1-809-267-41 VARISTOR ERZV10D471

REF.NO.	PART NO.	DESCRIPTION	REMARK
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# A BOARD VARIANT PARTS LIST

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

**KV-21SB40M/21SB40P**

## Note:

The components identified with shading and a critical symbol ( **Δ** ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO. PART NO. DESCRIPTION REMARK

### A BOARD VARIANT LIST: KV-21SB40M/21SB40P

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V

C505 Δ	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 Δ	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 Δ	1-117-665-11	FILM	0.33MF	5%	200V
C591 Δ	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 Δ	1-136-311-51	FILM	0.47MF	20%	125V

C607 Δ	1-117-941-11	ELECT(BLOCK)	470MF	20%	250V
C614 Δ	1-129-723-00	FILM	0.056MF	5%	630V
C625	1-126-960-11	ELECT	1MF	20%	50V
C699	1-164-645-11	CERAMIC	1000PF	10%	500V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P			
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#### DIODE

D002	1-810-039-21	LED UNIT			
D202	8-719-110-17	DIODE MTZJ-T-77-10B			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D204	8-719-110-17	DIODE MTZJ-T-77-10B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			

D619	8-719-991-33	DIODE 1SS133T-77			
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#### FUSE

F601 Δ	1-533-795-11	LINK, FUSE			
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REF.NO. PART NO. DESCRIPTION REMARK

#### IC

IC200	8-759-450-93	IC NJM2521M-TE1			
IC301	8-752-083-09	IC CXA2061S			
IC401	8-759-490-17	IC TDA7057AQ/N2			

#### JACK

J201	1-580-443-21	JACK, PIN 3P			
J202	1-691-110-11	JACK, PIN 3P			

#### IC LINK

PS201	1-532-984-11	LINK,IC			
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#### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA			
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#### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W

R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R502 Δ	1-215-923-00	METAL OXIDE	10K	5%	3W F

R508 Δ	1-215-864-00	METAL OXIDE	150	5%	1W F
R533	1-215-461-00	METAL	47K	1%	1/4W



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-21SB40M/21SB40P**

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK
R534	1-215-453-00	METAL	22K	1%	1/4W	<u>VARISTOR</u>			
R561	1-216-349-00	METAL OXIDE	1	5%	1W F	VDR601 ⚠ 1-801-074-41 VARISTOR ERZV10D271			
R562	1-216-349-00	METAL OXIDE	1	5%	1W F	VDR602 1-801-074-41 VARISTOR ERZV10D271			
R574	1-249-417-11	CARBON	1K	5%	1/4W F				
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F				
✖ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W				
R591	1-215-880-00	METAL OXIDE	10	5%	2W F				
R600 ⚠	1-219-513-11	CARBON	4.7M	5%	1/2W				
R603 ⚠	1-205-998-11	CEMENTED	1	5%	10W				
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W F				
R612	1-216-349-00	METAL OXIDE	1	5%	1W F				
R613	1-216-349-00	METAL OXIDE	1	5%	1W F				
R615	1-247-893-11	CARBON	390K	5%	1/4W				
R618	1-212-857-00	FUSIBLE	10	5%	1/4W F				
R623	1-249-441-11	CARBON	100K	5%	1/4W				
R627	1-249-441-11	CARBON	100K	5%	1/4W				
R628	1-249-425-11	CARBON	4.7K	5%	1/4W				
R629	1-247-807-31	CARBON	100	5%	1/4W				
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W				
R691	1-247-791-91	CARBON	22	5%	1/4W				
R692	1-247-791-91	CARBON	22	5%	1/4W				
<u>RELAY</u>									
RY601 ⚠	1-755-018-11	RELAY							
<u>SWITCH</u>									
S001	1-692-431-21	SWITCH, TACTILE							
S002	1-692-431-21	SWITCH, TACTILE							
S003	1-692-431-21	SWITCH, TACTILE							
S004	1-692-431-21	SWITCH, TACTILE							
S005	1-692-431-21	SWITCH, TACTILE							
S006	1-692-431-21	SWITCH, TACTILE							
S007	1-692-431-21	SWITCH, TACTILE							
<u>TRANSFORMER</u>									
T504 ⚠	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)							
T603 ⚠	1-431-674-11	TRANSFORMER, CONVERTER (PIT)							
<u>THERMISTOR</u>									
THP601	1-810-597-11	THERMISTOR, POSITIVE							
<u>TUNER</u>									
TU101 ⚠	8-598-431-00	TUNER, FSS BTF-WA411							





# BOARD VARIANT PARTS LIST

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

**KV-21SB40C**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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## A BOARD VARIANT LIST: KV-21SB40C

### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C309	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V

C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-959-11	ELECT	0.47MF	20%	50V
C321	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C359	8-719-158-15	DIODE	UDZ-TE-17-5.6B		
C418	1-126-964-11	ELECT	10MF	20%	50V

C505	$\Delta$ 1-162-115-00	CERAMIC	330PF	10%	2KV
C507	$\Delta$ 1-119-865-11	MYLAR	5700PF	3%	2KV
C511	$\Delta$ 1-117-665-11	FILM	0.33MF	5%	200V
C591	$\Delta$ 1-137-150-11	MYLAR	0.01MF	10%	100V
C601	$\Delta$ 1-136-311-61	FILM	0.47MF	20%	300V

C607	$\Delta$ 1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614	$\Delta$ 1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V

### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P
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### DIODE

D002	1-810-039-21	LED UNIT
D202	8-719-110-17	DIODE MTZJ-T-77-10B
D203	8-719-110-17	DIODE MTZJ-T-77-10B
D204	8-719-110-17	DIODE MTZJ-T-77-10B
D209	8-719-110-17	DIODE MTZJ-T-77-10B

D619	8-719-991-33	DIODE 1SS133T-77
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### FUSE

F601	$\Delta$ 1-532-506-51	FUSE
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### IC

IC200	8-759-450-93	IC NJM2521M-TE1
IC301	8-752-083-09	IC CXA2061S
IC401	8-759-490-17	IC TDA7057AQ/N2

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### JACK

J201	1-580-443-21	JACK, PIN 3P
J202	1-691-110-11	JACK, PIN 3P

### IC LINK

PS201	1-532-984-11	LINK, IC
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### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA
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### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W
R205	1-247-895-91	CARBON	470K	5%	1/4W

R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R269	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R284	1-216-295-91	SHORT			
R307	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R400	1-247-863-91	CARBON	22K	5%	1/4W
R432	1-249-429-11	CARBON	10K	5%	1/4W
R502	$\Delta$ 1-215-923-00	METAL OXIDE	10K	5%	3W F

R508	$\Delta$ 1-215-864-00	METAL OXIDE	150	5%	1W F
R533	1-215-461-00	METAL	47K	1%	1/4W
R534	1-215-453-00	METAL	22K	1%	1/4W
R561	1-216-349-00	METAL OXIDE	1	5%	1W F
R562	1-216-349-00	METAL OXIDE	1	5%	1W F

R574	1-249-417-11	CARBON	1K	5%	1/4W F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W F
$\boxtimes$ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W



## BOARD VARIANT PARTS LIST

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

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

**KV-21SB40C**

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F
R601 $\Delta$	1-247-289-00	CARBON	8.2M	5%	1W	
R603 $\Delta$	1-202-962-11	CEMENTED	3.3	5%	10W	
R604	1-247-889-00	CARBON	270K	5%	1/4W	
R605	1-247-889-00	CARBON	270K	5%	1/4W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2W	F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R623	1-249-437-11	CARBON	47K	5%	1/4W	
R627	1-249-441-11	CARBON	100K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-247-807-31	CARBON	100	5%	1/4W	
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R691	1-249-399-11	CARBON	33	5%	1/4W	
R692	1-249-399-11	CARBON	33	5%	1/4W	

RELAY

RY601  $\Delta$  1-755-018-11 RELAY

SWITCH

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

TRANSFORMER

T504 $\Delta$	1-453-211-11	TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)
T603 $\Delta$	1-431-675-11	TRANSFORMER, CONVERTER (PIT)

THERMISTOR

THP601 1-809-827-11 THERMISTOR, POSITIVE

TUNER

TU101  $\Delta$  8-598-431-00 TUNER, FSS BTF-WA411

VARISTOR

VDR601 $\Delta$	1-809-267-41	VARISTOR ERZV10D471
VDR602	1-809-267-41	VARISTOR ERZV10D471

# A BOARD VARIANT PARTS LIST

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

**KV-21SE40A**

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
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### A BOARD VARIANT LIST: KV-21SE40A

#### CAPACITOR

C202	1-126-960-11	ELECT	1MF	20%	50V
C203	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C204	1-107-698-11	ELECT	10MF	20%	25V
C205	1-126-960-11	ELECT	1MF	20%	50V
C206	1-126-960-11	ELECT	1MF	20%	50V

C214	1-126-957-11	ELECT	0.22MF	20%	50V
C216	1-126-959-11	ELECT	0.47MF	20%	50V
C220	1-126-941-11	ELECT	470MF	20%	25V
C233	1-126-960-11	ELECT	1MF	20%	50V
C300	1-163-099-00	CERAMIC CHIP	18PF	5%	50V

C302	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C309	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C312	1-126-942-61	ELECT	1000MF	20%	25V
C320	1-126-957-11	ELECT	0.22MF	20%	50V
C321	1-163-259-91	CERAMIC CHIP	220PF	5%	50V

C359	8-719-158-15	DIODE UDZ-TE-17-5.6B			
C418	1-126-964-11	ELECT	10MF	20%	50V
C505 $\Delta$	1-162-115-00	CERAMIC	330PF	10%	2KV
C507 $\Delta$	1-119-865-11	MYLAR	5700PF	3%	2KV
C511 $\Delta$	1-117-665-11	FILM	0.33MF	5%	200V

C591 $\Delta$	1-137-150-11	MYLAR	0.01MF	10%	100V
C601 $\Delta$	1-136-311-61	FILM	0.47MF	20%	300V
C607 $\Delta$	1-125-731-11	ELECT(BLOCK)	270MF	20%	400V
C614 $\Delta$	1-137-347-11	FILM	0.022MF	3%	2KV
C625	1-126-960-11	ELECT	1MF	20%	50V

#### CONNECTOR

CN401	1-564-505-11	PLUG, CONNECTOR 2P			
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#### DIODE

D002	1-810-039-11	LED UNIT			
D202	8-719-110-17	DIODE MTZJ-T-77-10B			
D203	8-719-110-17	DIODE MTZJ-T-77-10B			
D204	8-719-110-17	DIODE MTZJ-T-77-10B			
D209	8-719-110-17	DIODE MTZJ-T-77-10B			

D619	8-719-991-33	DIODE 1SS133T-77			
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#### FUSE

F601 $\Delta$	1-532-506-51	FUSE			
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REF.NO.	PART NO.	DESCRIPTION	REMARK
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#### IC

IC200	8-759-450-93	IC NJM2521M-TE1	
IC301	8-752-082-35	IC CXA2060AS	
IC401	8-759-490-17	IC TDA7057AQ/N2	

#### JACK

J201	1-580-443-21	JACK, PIN 3P	
J202	1-691-110-11	JACK, PIN 3P	

#### IC LINK

PS201	1-532-984-11	LINK, IC	
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#### TRANSISTOR

Q603	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
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#### RESISTOR

R010	1-216-033-00	RES,CHIP	220	5%	1/10W
R011	1-247-815-91	CARBON	220	5%	1/4W
R051	1-216-033-00	RES,CHIP	220	5%	1/10W
R070	1-249-425-11	CARBON	4.7K	5%	1/4W
R071	1-249-425-11	CARBON	4.7K	5%	1/4W

R072	1-247-815-91	CARBON	220	5%	1/4W
R081	1-249-413-11	CARBON	470	5%	1/4W
R086	1-216-073-00	RES,CHIP	10K	5%	1/10W
R202	1-216-113-00	RES,CHIP	470K	5%	1/10W
R204	1-216-022-00	RES,CHIP	75	5%	1/10W

R205	1-247-895-91	CARBON	470K	5%	1/4W
R206	1-247-895-91	CARBON	470K	5%	1/4W
R230	1-216-073-00	RES,CHIP	10K	5%	1/10W
R231	1-216-073-00	RES,CHIP	10K	5%	1/10W
R234	1-216-057-00	RES,CHIP	2.2K	5%	1/10W

R235	1-216-057-00	RES,CHIP	2.2K	5%	1/10W
R237	1-247-815-91	CARBON	220	5%	1/4W
R238	1-249-417-11	CARBON	1K	5%	1/4W
R241	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R268	1-216-065-91	RES,CHIP	4.7K	5%	1/10W

R269	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R284	1-216-295-91	SHORT			
R300	1-216-295-91	SHORT			
R302	1-216-295-91	SHORT			
R307	1-216-077-00	RES,CHIP	15K	5%	1/10W



## BOARD VARIANT PARTS LIST

## Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

## Note:

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

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

**KV-21SE40A**

REF.NO.	PART NO.	DESCRIPTION	REMARK			
R400	1-247-863-91	CARBON	22K	5%	1/4W	
R432	1-247-854-11	CARBON	9.1K	5%	1/4W	
R502	△ 1-215-923-00	METAL OXIDE	10K	5%	3W	F
R508	△ 1-215-864-00	METAL OXIDE	150	5%	1W	F
R533	1-215-461-00	METAL	47K	1%	1/4W	
R534	1-215-453-00	METAL	22K	1%	1/4W	
R561	1-216-349-00	METAL OXIDE	1	5%	1W	F
R562	1-216-349-00	METAL OXIDE	1	5%	1W	F
R574	1-249-417-11	CARBON	1K	5%	1/4W	F
R578	1-216-467-11	METAL OXIDE	56K	5%	2W	F
✖ R582	1-208-826-11	RES,CHIP	68K	1%	1/10W	
R591	1-215-880-00	METAL OXIDE	10	5%	2W	F
R601	△ 1-247-289-00	CARBON	8.2M	5%	1W	
R603	△ 1-202-962-11	CEMENTED	3.3	5%	10W	
R604	1-247-889-00	CARBON	270K	5%	1/4W	
R605	1-247-889-00	CARBON	270K	5%	1/4W	
R606	1-220-926-11	FUSIBLE	0.47	10%	1/2	F
R612	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R613	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R618	1-212-942-00	FUSIBLE	2.2	5%	1/2W	F
R623	1-249-437-11	CARBON	47K	5%	1/4W	
R627	1-249-441-11	CARBON	100K	5%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-247-807-31	CARBON	100	5%	1/4W	
R636	1-208-798-11	RES,CHIP	4.7K	1%	1/10W	
R691	1-249-399-11	CARBON	33	5%	1/4W	
R692	1-249-399-11	CARBON	33	5%	1/4W	
<u>RELAY</u>						
RY601 △ 1-755-018-11 RELAY						
<u>SWITCH</u>						
S001	1-692-431-21	SWITCH, TACTILE				
S002	1-692-431-21	SWITCH, TACTILE				
S003	1-692-431-21	SWITCH, TACTILE				
S004	1-692-431-21	SWITCH, TACTILE				
S005	1-692-431-21	SWITCH, TACTILE				
S006	1-692-431-21	SWITCH, TACTILE				
S007	1-692-431-21	SWITCH, TACTILE				
<u>TRANSFORMER</u>						
T504 △ 1-453-211-11 TRANSFORMER ASSY, FLYBACK (NX-1744//X4E4)						
T603 △ 1-431-675-11 TRANSFORMER, CONVERTER (PIT)						

REF.NO.	PART NO.	DESCRIPTION	REMARK
<u>THERMISTOR</u>			
THP601	1-809-827-11	THERMISTOR, POSITIVE	
<u>TUNER</u>			
TU101 △ 8-598-431-00 TUNER, FSS BTF-WA411			
<u>VARISTOR</u>			
VDR601△ 1-809-267-41 VARISTOR ERZV10D471			
VDR602	1-809-267-41	VARISTOR ERZV10D471	
<u>CRYSTAL</u>			
X300	1-579-972-11	VIBRATOR, CRYSTAL	
X301	1-579-973-11	VIBRATOR, CRYSTAL	



## COMPLETE PARTS LISTING

### Note:

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

### Note:

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>C</b>			
KV-13M40, 13M50, 13M51, 14MB40, 14MB40A, 14MB40C only			
* A-1331-729-A C MOUNTED PC BOARD			
	1-900-800-64	CONNECTOR ASSY, 1P G2 SCREEN	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<u>CAPACITOR</u>			
C751	1-107-652-11	ELECT	10MF 20% 250V
C752	1-115-350-51	CERAMIC	0.0047MF 2KV
<u>CONNECTOR</u>			
CN754	1-695-915-11	TAB (CONTACT)	
<u>DIODE</u>			
D754	8-719-901-83	DIODE 1SS83TD	
D755	8-719-901-83	DIODE 1SS83TD	
D756	8-719-901-83	DIODE 1SS83TD	
<u>IC</u>			
IC751	8-759-491-92	IC TDA6107Q-N1	
<u>JACK</u>			
J750 $\Delta$	1-251-192-11	SOCKET, CRT	
<u>COIL</u>			
L751	1-410-478-11	INDUCTOR 47UH	
<u>RESISTOR</u>			
R756	1-260-099-11	CARBON	1K 5% 1/2W
R757	1-260-099-11	CARBON	1K 5% 1/2W
R758	1-260-099-11	CARBON	1K 5% 1/2W
R759	1-260-087-11	CARBON	100 5% 1/2W
R760	1-260-123-11	CARBON	100K 5% 1/2W
R761	1-216-389-11	METAL OXIDE	1 5% 3W F
R762	1-260-131-11	CARBON	470K 5% 1/2W
R763	1-247-807-31	CARBON	100 5% 1/4W
R764	1-247-807-31	CARBON	100 5% 1/4W
R765	1-247-807-31	CARBON	100 5% 1/4W
R766	1-260-131-11	CARBON	470K 5% 1/2W
R767	1-260-135-11	CARBON	1M 5% 1/2W
<u>VARIABLE RESISTOR</u>			
RV751	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
RV752	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	

REF.NO.	PART NO.	DESCRIPTION	REMARK
<b>C</b>			
KV-20M40, 20S40, 20S41, 20V80, 21MB40C, 21MB40M, 21MB40P, 21ME40, 21ME40C, 21SB40C, 21SB40M, 21SB40P, 21SE40, 21SE40A, 21SE40C, 21SE80, 21SE80A, 21SE80C, 21XT4A only			
* A-1331-728-A C MOUNTED PC BOARD			
	1-900-800-64	CONNECTOR ASSY, 1P G2 SCREEN	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<u>CAPACITOR</u>			
C701	1-107-652-11	ELECT	10MF 20% 250V
C702	1-115-350-51	CERAMIC	0.0047MF 2KV
<u>CONNECTOR</u>			
CN704	1-695-915-11	TAB (CONTACT)	
<u>DIODE</u>			
D700	8-719-110-08	DIODE MTZJ-T-77-8.2B	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	8-719-991-33	DIODE 1SS133T-77	
D704	8-719-901-83	DIODE 1SS83TD	
D705	8-719-901-83	DIODE 1SS83TD	
D706	8-719-901-83	DIODE 1SS83TD	
<u>IC</u>			
IC701	8-759-491-92	IC TDA6107Q-N1	
<u>JACK</u>			
J700 $\Delta$	1-451-464-11	SOCKET, CRT	
<u>COIL</u>			
L701	1-410-478-11	INDUCTOR 47UH	
<u>TRANSISTOR</u>			
Q701	8-729-119-78	TRANSISTOR 2SC3311A-QRSTA	
<u>RESISTOR</u>			
R701	1-247-887-00	CARBON	220K 5% 1/4W
R702	1-247-863-91	CARBON	22K 5% 1/4W
R703	1-249-421-11	CARBON	2.2K 5% 1/4W
R704	1-249-441-11	CARBON	100K 5% 1/4W
R705	1-249-416-11	CARBON	820 5% 1/4W

**Note:**

The components identified with shading and a critical symbol (  $\Delta$  ) are critical for safety. Replace only with part number specified.

**Note:**

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

## COMPLETE PARTS LISTING



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R706	1-260-099-11	CARBON	1K 5% 1/2W				
R707	1-260-099-11	CARBON	1K 5% 1/2W				
R708	1-260-099-11	CARBON	1K 5% 1/2W				
R709	1-260-087-11	CARBON	100 5% 1/2W				
R710	1-260-123-11	CARBON	100K 5% 1/2W				
R711	1-216-392-11	METAL OXIDE	1.8 5% 3W F				
R713	1-247-807-31	CARBON	100 5% 1/4W				
R714	1-247-807-31	CARBON	100 5% 1/4W				
R715	1-247-807-31	CARBON	100 5% 1/4W				

**HZ**

KV-14MB40A, 21SE40A, 21XT4A, 21SE80A only

\* A-1372-117-A HZ BOARD, MOUNTED

CONNECTOR

CN901 \* 1-580-843-11 PIN, CONNECTOR (POWER)  
 CN902 \* 1-580-843-11 PIN, CONNECTOR (POWER)

SWITCH

S901  $\Delta$  1-571-433-21 SWITCH, PUSH (AC POWER)