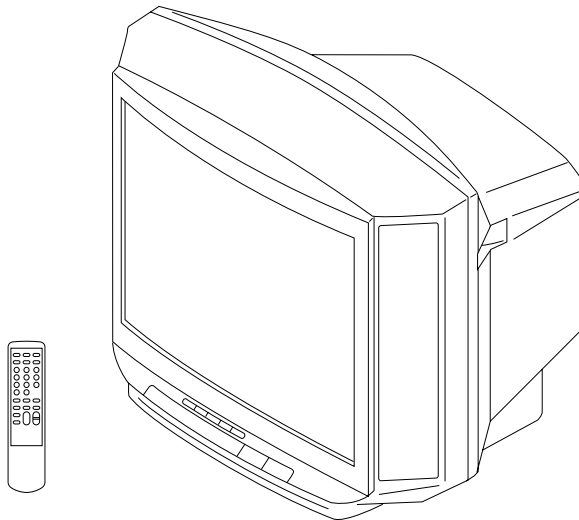


# SERVICE MANUAL

# BG-1S (D) CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
<i>KV-J21MF1AK</i>	<i>RM-883</i>	<i>India</i>	<i>SCC-K67K-A</i>				
<i>KV-J21MF3</i>	<i>RM-883</i>	<i>India</i>	<i>SCC-K76F-A</i>				
<i>KV-J21MN1AK</i>	<i>RM-883</i>	<i>India</i>	<i>SCC-K67L-A</i>				
<i>KV-J21PF1</i>	<i>RM-883</i>	<i>India</i>	<i>SCC-K67G-A</i>				



TRINITRON® COLOR TV  
**SONY®**

## SPECIFICATIONS

		Note
<b>Power requirements</b>	110-240 V AC, 50/60 Hz	
<b>Power consumption (W)</b>	Indicated on the rear of the TV	
<b>Television system</b>	B/G, I, D/K, M	Except for KV-J21PF1
	B/G	KV-J21PF1
<b>Color system</b>	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	Except for KV-J21PF1
	PAL, PAL 60, NTSC4.43, NTSC3.58 (AV IN)	KV-J21PF1
<b>Stereo system</b>	NICAM Stereo B/G, I; A2 Stereo (German) B/G	KV-J21MN1AK only
<b>Channel coverage</b>		
<b>B/G</b>	VHF: E2 to E12/UHF: E21 to E69/CATV: S01 to S03, S1 to S41	
<b>I</b>	UHF: B21 to B68/CATV: S01 to S03, S1 to S41	Except for KV-J21PF1
<b>D/K</b>	VHF: C1 to C12, R1 to R12/UHF: C13 to C57, R21 to R60/ CATV: S01 to S03, S1 to S41, Z1 to Z39	Except for KV-J21PF1
<b>M</b>	VHF: A2 to A13/UHF: A14 to A79/ CATV: A-8 to A-2, A to W+ 4, W+ 6 to W+ 84	Except for KV-J21PF1
<b>Audio output (speaker)</b>	3W + 3W	KV-J21MF3/J21PF1
	3W + 3W + 7W (3D WOOFER)	KV-J21MF1AK/J21MN1AK
<b>Inputs</b>	Antenna: 75 ohms	
	VIDEO IN jacks: phono jacks Video: 1 Vp-p, 75 ohms Audio: 500 mVrms, high impedance	
<b>Outputs</b>	Headphone jack: minijack	
	MONITOR OUT jacks: phono jacks Video: 1 Vp-p, 75 ohms Audio: 500 mVrms	
<b>Picture tube</b>	21 in.	
<b>Tube size (cm)</b>	54	Measured diagonally
<b>Screen size (cm)</b>	51	Measured diagonally
<b>Dimensions (w/h/d, mm)</b>	610 × 470 × 488	KV-J21MF3/J21PF1
	610 × 510 × 488	KV-J21MF1AK/J21MN1AK
<b>Mass (kg)</b>	23	KV-J21MF3/J21PF1
	25	KV-J21MF1AK/J21MN1AK

Design and specifications are subject to change without notice.

### 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.

### SAFETY-RELATED COMPONENT WARNING!!

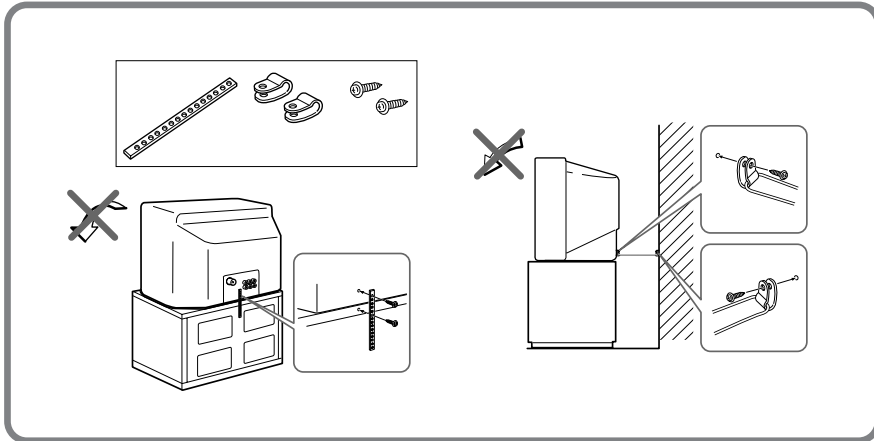
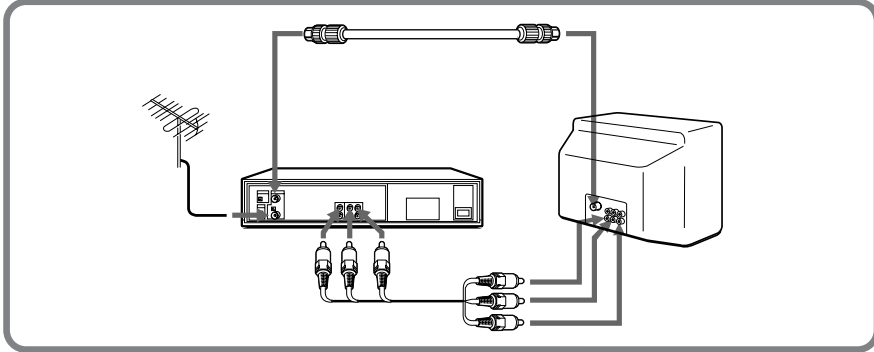
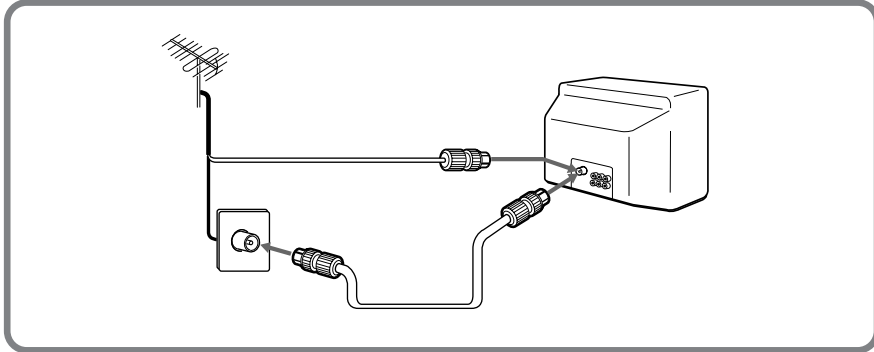
COMPONENTS IDENTIFIED BY SHADING AND MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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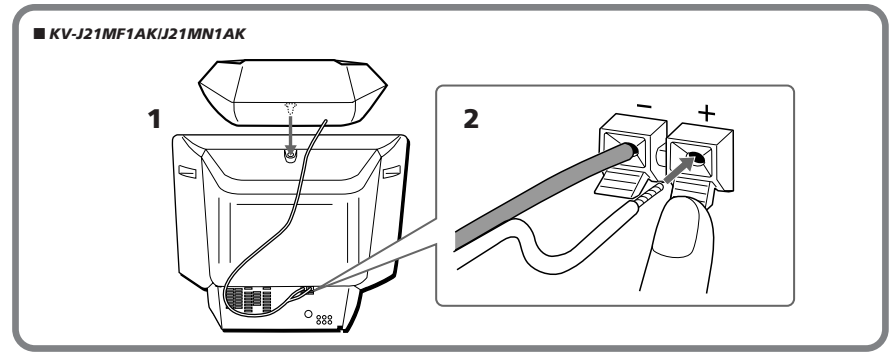
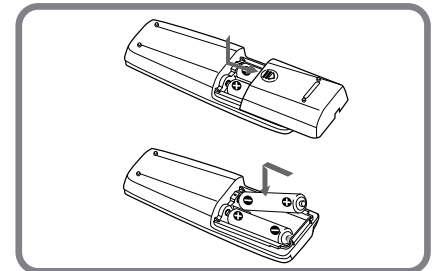
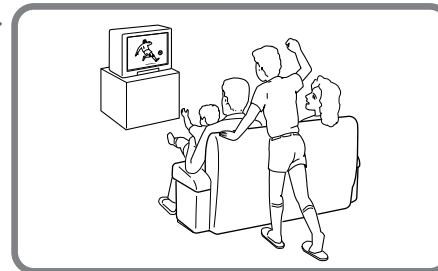
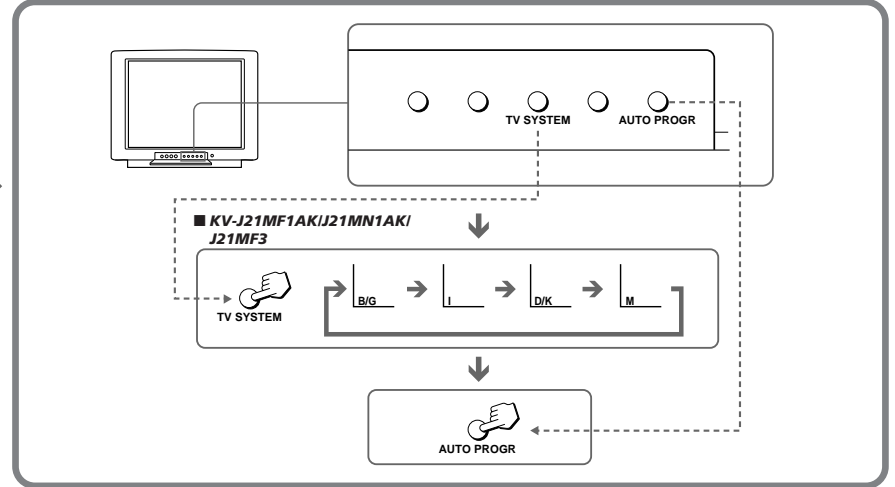
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## SECTION 1 GENERAL

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



2

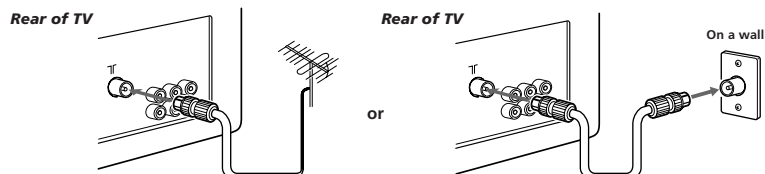


3

# Connections

## Connecting a VHF antenna or a combination VHF/UHF antenna — 75-ohm coaxial cable (round)

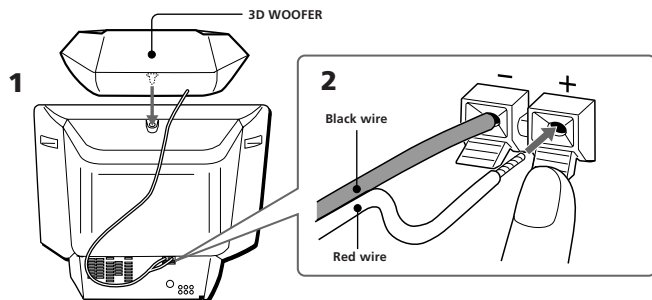
Attach an optional IEC antenna connector to the 75-ohm coaxial cable. Plug the connector into the  $\Pi$  (antenna) socket at the rear of the TV.



## Connecting the 3D WOOFER

■ KV-J21MF1AK/J21MN1AK only

- 1 Attach the 3D WOOFER into the foothold on the top of the TV.
- 2 Connect the wires to the 3D WOOFER (8Ω) terminals at the rear of the TV.  
The red wire should be connected to the ⊕ red terminal and the black wire to the ⊖ black terminal.



**Notes**

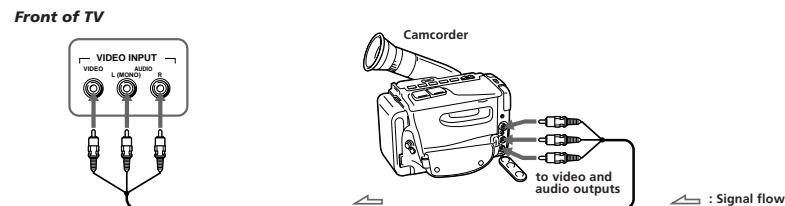
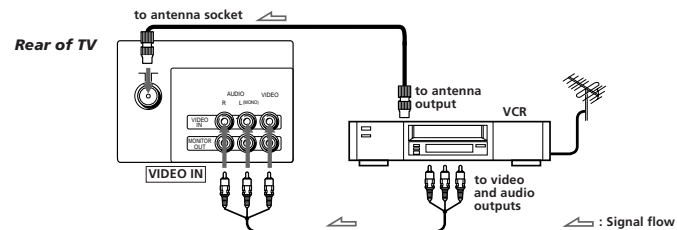
- Connect only the supplied 3D WOOFER; otherwise the TV may malfunction.
- Unplug the TV from the wall outlet when connecting the 3D WOOFER.
- To prevent a malfunction caused by a short circuit of the terminals, make sure that none of the 3D WOOFER wire strands stick out, making contact with the neighbouring speaker terminal.

4 Getting Started

## Connecting optional equipment

You can connect optional audio/video equipment to your TV such as a VCR, multi disc player, camcorder, video game or stereo system.

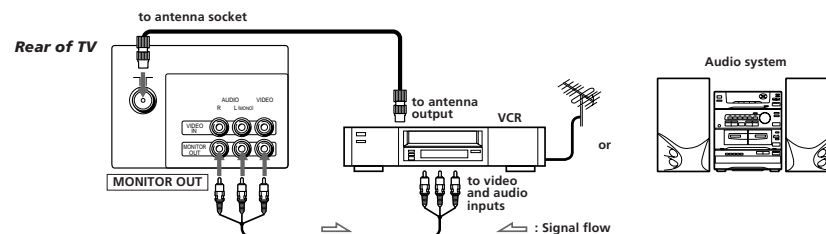
### Connecting video equipment using video input jacks



### When using the video input jacks

Do not connect video equipment to the video input jacks at the front and the rear of your TV simultaneously; otherwise the picture will not be displayed properly on the screen.

### Connecting audio/video equipment using MONITOR OUT jacks



### When recording through the MONITOR OUT jacks

If you change the channel or video input while recording with a VCR, the channel or video input you are recording also will be changed.

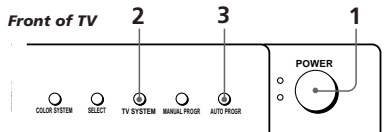
# Presetting channels

You can preset up to 100 TV channels in numerical sequence from program position 1 automatically.

To change the channel for a particular program position or to receive a channel with a weak signal, you can preset the channel manually. You can also disable program position.

You can preset TV channels using the buttons on the TV or the remote commander.

## Presetting channels automatically using the buttons on the TV

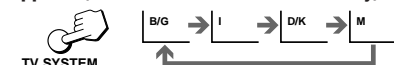


### 1 Press POWER to turn on the TV.

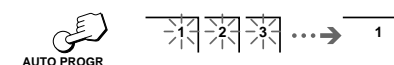


When the TV is turned on in standby mode, press POWER on the remote commander.

### 2 Press TV SYSTEM until your local TV system appears (KV-J21MF1AK/J21MN1AK/J21MF3 only)



### 3 Press AUTO PROGR.



### To start presetting channels automatically from the specified program position

- 1 Press MANUAL PROGR.
- 2 Press TV SYSTEM to select your local TV system (KV-J21MF1AK/J21MN1AK/J21MF3 only).
- 3 Press PROGR +/- to select the program position.
- 4 Press AUTO PROGR.

## 6 Getting Started

## Presetting channels manually using the buttons on the TV

- 1 Press **MANUAL PROGR.**
- 2 Press **PROGR +/-** on the remote commander until the required program position appears on the screen.
- 3 Press **TV SYSTEM** until your local TV system appears (KV-J21MF1AK/J21MN1AK/J21MF3 only).
- 4 Press **VOLUME +/-** until the required channel picture appears on the screen.
- 5 Press **MANUAL PROGR.**

### If the TV system is not properly selected (KV-J21MF1AK/J21MN1AK/J21MF3 only)

The color of the picture may be poor and/or the sound may be noisy. In this case, select the appropriate TV system.

- 1 Press **PROGR +/-** on the remote commander to select the program position.
- 2 Press **TV SYSTEM** until the picture and sound become normal.

### Notes (KV-J21MF1AK/J21MN1AK/J21MF3 only)

- If you do not know your local TV system, consult your nearest authorized service center or dealer.
- The setting of the TV SYSTEM is memorized for each program position.

## Disabling program positions using the buttons on the TV

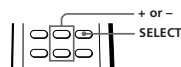
By disabling unused or unwanted program positions, you can skip those positions when you press PROGR +/- on the remote commander.

- 1 Press **PROGR +/-** on the remote commander until the unused or unwanted program position appears on the screen.
- 2 Press **MANUAL PROGR.**
- 3 Press **PIC MODE** on the remote commander.
- 4 Press **MANUAL PROGR.**

### To cancel the skip setting

Preset the channel manually or automatically again.

## Presetting channels automatically using the remote commander

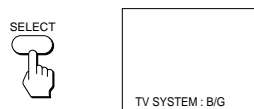


### 1 Press POWER to turn on the TV.

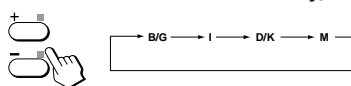


When the TV is turned on in standby mode, press POWER on the remote commander.

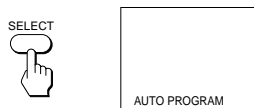
### 2 Press SELECT until "TV SYSTEM" appears (KV-J21MF1AK/J21MN1AK/J21MF3 only).



### 3 Press + or - to select your local TV system (KV-J21MF1AK/J21MN1AK/J21MF3 only).



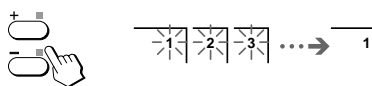
### 4 Press SELECT until "AUTO PROGRAM" appears.



### 5 Press + or -.

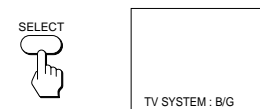


### 6 Press + or -.

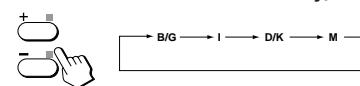


## Presetting channels manually using the remote commander

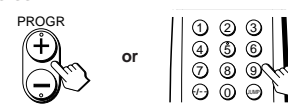
### 1 Press SELECT until "TV SYSTEM" appears (KV-J21MF1AK/J21MN1AK/J21MF3 only).



### 2 Press + or - to select your local TV system (KV-J21MF1AK/J21MN1AK/J21MF3 only).



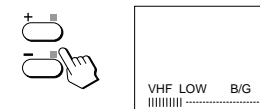
### 3 Press PROGR +/- or a number button until the required program appears on the screen.



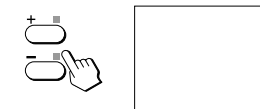
### 4 Press SELECT until "MANUAL PROGRAM" appears.



### 5 Press + or -.



### 6 Press + or -.



The selected channel appears on the screen.

### 7 Press SELECT to return to normal screen.



## If you are not satisfied with the picture and sound quality

You may be able to further improve the picture and sound quality by using fine tuning as below:

- 1 Select the program position you want to adjust.
- 2 Press SELECT until "MANUAL PROGRAM" appears on the screen.
- 3 Press + or - on the remote commander once.
- 4 Press DISP until "FINE" appears on the screen.
- 5 Press + or - continuously until you are satisfied with the picture and sound quality.
- 6 Press SELECT to return to normal screen.

## Operations

### Watching the TV

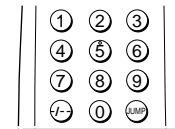
- 1 Press POWER to turn on the TV.



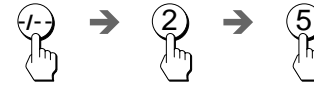
When the TV is turned on in standby mode, press POWER on the remote commander.

- 2 Select the TV program you want to watch.

To select a program position directly  
Press the number button.



To select a two-digit program position, press "-/--" before pressing the number buttons.  
For example: to select program position 25, press "-/--," and then "2" and "5."



To scan through program positions

Press PROGR +/- until the program position you want appears.



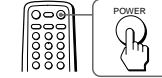
- 3 Press VOL +/- to adjust the volume.



### Turning off the TV

To turn off the TV temporarily

Press POWER on the remote commander. The STANDBY indicator on the TV lights up.



To turn off the TV completely

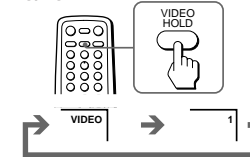
Press POWER on the TV.

If the power on the TV is turned off in standby mode, the STANDBY indicator on the TV may remain alight for a while.



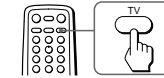
### Watching the video input

Press VIDEO/HOLD.



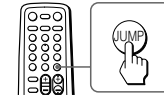
To watch TV

Press TV.



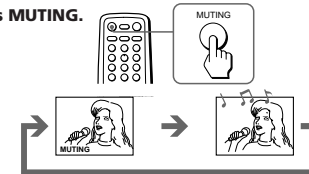
### Switching back quickly to the previous channel

Press JUMP.



### Muting the sound

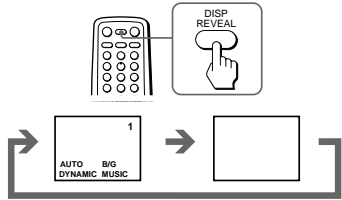
Press MUTING.



## Displaying on-screen information

### Press DISP/REVEAL.

The program position, local system, and TV settings are displayed on the screen.

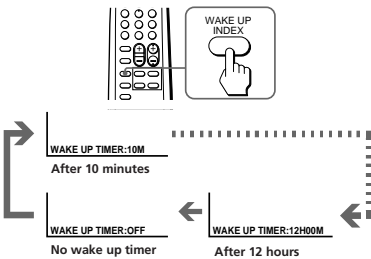


## Setting the Wake Up Timer

You can set the TV to automatically turn on as you have programmed.

### 1 Press WAKE UP/INDEX repeatedly to set the timer.

The on-screen display appears and the WAKE UP indicator on the TV lights up.



### 2 If you want a particular TV program or video input to be displayed using the Wake Up Timer, select the TV program or video input.

### 3 Press POWER on the remote commander or set the Sleep Timer to turn off the TV in standby mode.

To cancel the Wake Up Timer, press WAKE UP/INDEX repeatedly until "WAKE UP TIMER: OFF" appears, or turn off the main power of the TV.

#### Notes

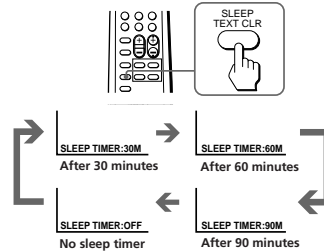
- The Wake Up Timer starts immediately after the on-screen display disappears.

- The last TV program position or video input just before the TV turns into standby mode will appear when the TV is turned on using the Wake Up Timer.
- If no buttons or controls are pressed for more than two hours after the TV is turned on using the Wake Up Timer, the TV automatically turns into standby mode. If you want to continue watching the TV, press any button or control on the remote commander or the TV.

## Setting the Sleep Timer

You can set the TV to automatically turn off as you have programmed.

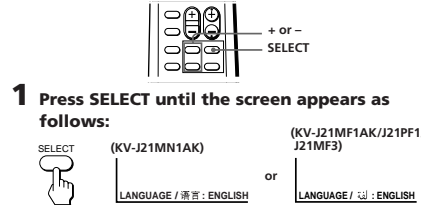
### Press SLEEP/TEXT CLR.



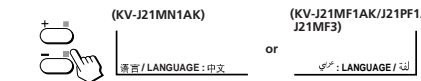
To cancel the Sleep Timer, press SLEEP/TEXT CLR repeatedly until "SLEEP TIMER: OFF" appears, or turn off the TV.

## Changing the on-screen display language

You can use buttons on the remote commander or the TV to change the on-screen display language.



### 2 Press + or - to select "中文" or "عربي".

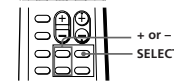


#### Note

- You can also use SELECT and VOLUME +/- on the TV to select the on-screen display language.

## Using the Child Lock feature

You can prevent a child from watching certain program positions by using the buttons on the remote commander.



### 1 Select the TV program you want to lock.

### 2 Press SELECT until "CHILD LOCK" appears on the screen.



### 3 Press + or - until "LOCKED" appears on the screen.



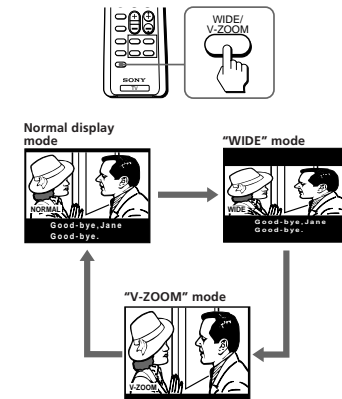
#### Notes

- To unlock the program position, repeat steps 1 to 3 as above until "LOCKED" disappears from the screen.
- To prevent your child from unlocking the program position, keep the remote commander away from your child.

## Watching the picture in wide mode

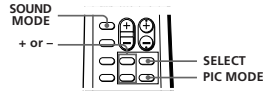
You can adjust the display mode accordingly to fit the programs to your TV screen size.

Press WIDE/V-ZOOM repeatedly until the wide display mode you want appears on the screen.





# Adjusting the sound and picture

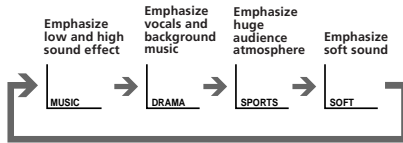


## Selecting the sound mode

Press **SOUND MODE** until the mode you want appears.



Each time you press **SOUND MODE**, the screen changes as follows:

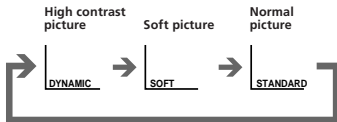


## Selecting the picture mode

Press **PIC MODE** until the mode you want appears.



Each time you press **PIC MODE**, the screen changes as follows:



### Note

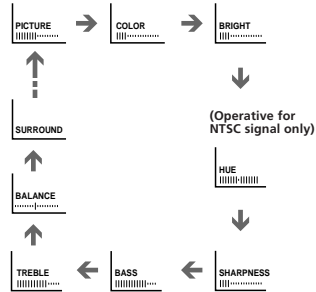
- If you change the picture and sound mode after the following adjustments, the adjustment changes in accordance with the picture and sound mode.

## Adjusting the sound and picture settings

1 Press **SELECT** until the item you want to adjust appears.



Each time you press **SELECT**, the screen changes as follows:



2 Press **+ or -** to adjust the item.

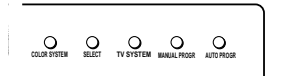


3 To adjust other items, repeat steps 1 and 2.

### Notes

- You can also use **SELECT** and **VOLUME +/-** on the TV to adjust the sound and picture settings.
- SURROUND** is only applicable to a stereo signal. When receiving a monaural signal, please turn off **SURROUND** for the best sound.

### Front of TV



### If the picture color is abnormal when receiving programs through the antenna terminal

Change the "TV SYSTEM" (for KV-J21MF1AK/J21MN1AK/J21MF3 only) or "COLOR SYSTEM" setting or adjust the "COLOR" level in the on-screen display until the color becomes normal.

### If the picture color is abnormal when receiving programs through the video input jack

Change the "COLOR SYSTEM" setting or adjust the "COLOR" level in the on-screen display until the color becomes normal.

### Note

- Normally set "COLOR SYSTEM" to "AUTO".

### If the sound is distorted or noisy when receiving programs through the antenna terminal

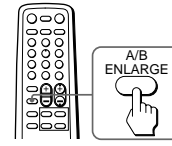
Change the "TV SYSTEM" setting (for KV-J21MF1AK/J21MN1AK/J21MF3 only) in the on-screen display until the sound becomes clear.

# Selecting a stereo or bilingual program

## KV-J21MN1AK only

Press **A/B/ENLARGE** repeatedly until you receive the sound you want.

The on-screen display changes corresponding to the selected sound and the **WAKE UP/STEREO** indicator also lights up.



### Notes

- If the signal is very weak, the sound becomes monaural automatically.
- If the stereo sound is noisy when receiving a **NICAM** program, select "MONO". The sound becomes monaural, however, the noise will be reduced.

### If the sound is distorted or noisy when receiving a monaural program through the antenna terminal

Press **A/B/ENLARGE** repeatedly until "MONO" appears on the screen.

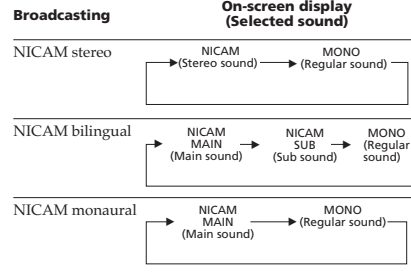


To cancel the monaural sound setting, press **A/B/ENLARGE** again until "AUTO" appears on the screen.

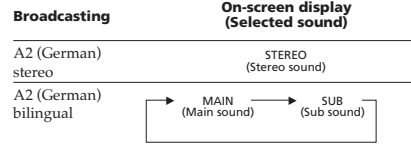
### Notes

- The "MONO" or "AUTO" setting is memorized for each program position.
- You cannot receive stereo signal when the TV is in the "MONO" setting.

## When receiving a NICAM program



## When receiving an A2 (German) program



## Troubleshooting

If you have any problems, read this manual again and check the countermeasure for each of the symptoms listed below.

If the problem persists, contact your nearest authorized service center or dealer.

### Snowy picture Noisy sound



- Check the antenna.
- Check the antenna connection on the TV and on the wall.
- Check the TV SYSTEM setting (KV-J21MF1AK/J21MN1AK/J21MF3 only).

### Dotted lines or stripes



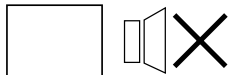
- This may be caused by local interference (e.g. cars, neon signs and hair dryers). Adjust the antenna for minimum interference.

### Double images or "ghosts"



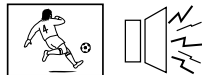
- This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

### No picture No sound



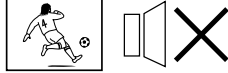
- Press POWER.
- Check the antenna connection.
- Check the VCR connections.
- Check the power cord connection.
- Check the standby mode.

### Good picture Noisy sound



- Check the TV SYSTEM setting (KV-J21MF1AK/J21MN1AK/J21MF3 only).
- Reduce the TREBLE level or select the "SOFT" sound mode.

### Good picture No sound



- Press VOLUME +.
- Press MUTE.
- Press A/B/ENLARGE (KV-J21MN1AK).

### No color



- Adjust the COLOR level in the on-screen display.
- Check the COLOR SYSTEM setting.

### TV cannot receive stereo signal

- Press A/B/ENLARGE until "AUTO" appears on the screen (KV-J21MN1AK).

### TV cabinet creaks

- Even if the picture or the sound is normal, changes in the room temperature sometimes make the TV cabinet expand or contract, making a noise. This does not indicate a malfunction.

### Note on the remote commander

- The supplied remote commander is used on several models of the TV. If you do not find instructions for some controls that are on the remote commander, that means your TV does not employ the features of those controls, e.g. TEXT.

### Note on the TV SYSTEM button

- The TV SYSTEM button is not used on your TV (KV-J21PF1 only).

### Notes

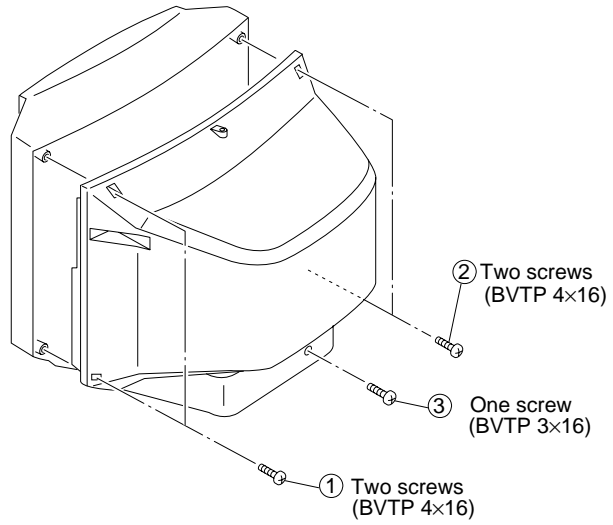
- When you switch on the TV, you may hear the "boon" sound that is caused by the demagnetization of the TV. This does not indicate a malfunction.
- The picture color may become abnormal if you change the direction of your TV. To obtain the normal picture color, press POWER on the TV to switch off the TV for five minutes and then switch it on again.

### WARNING

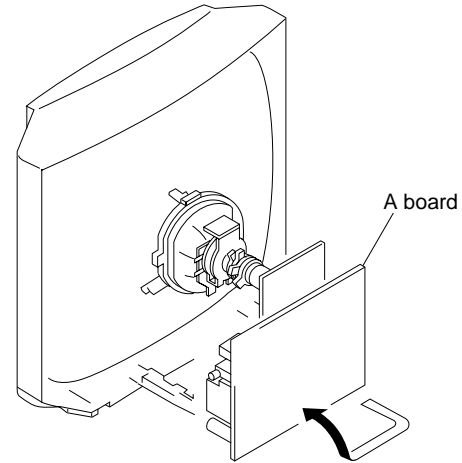
Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

## SECTION 2 DISASSEMBLY

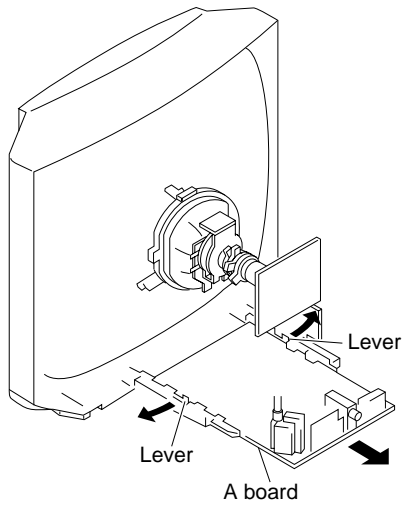
### 2-1. REAR COVER REMOVAL



### 2-3. SERVICE POSITION



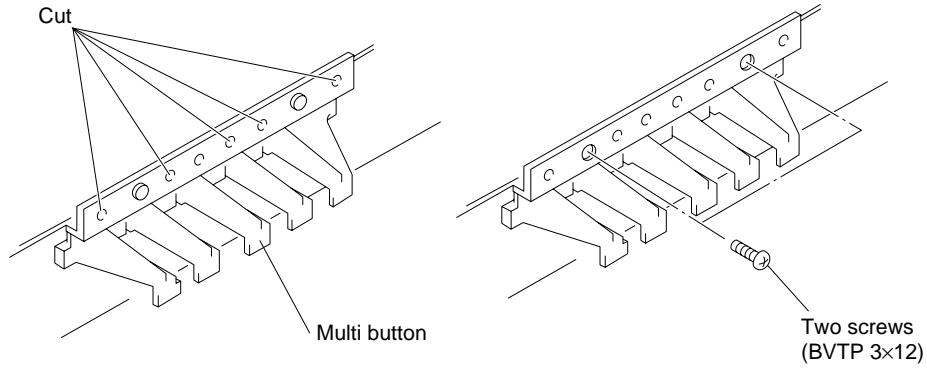
### 2-2. A BOARD REMOVAL



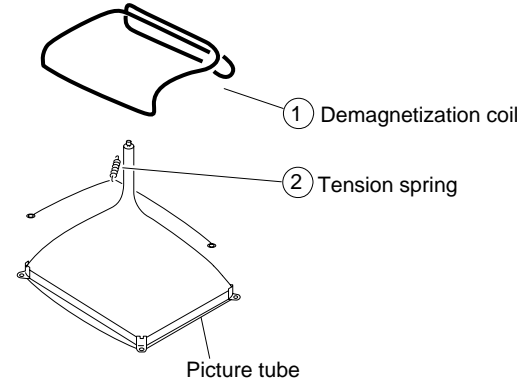
## 2-4. REPLACEMENT OF PARTS

For replacement of the Multi Button, Power Button and Light Guide, cut the welded portions from them, exchange with the new parts, and fix them with screws (+BVTP) respectively.

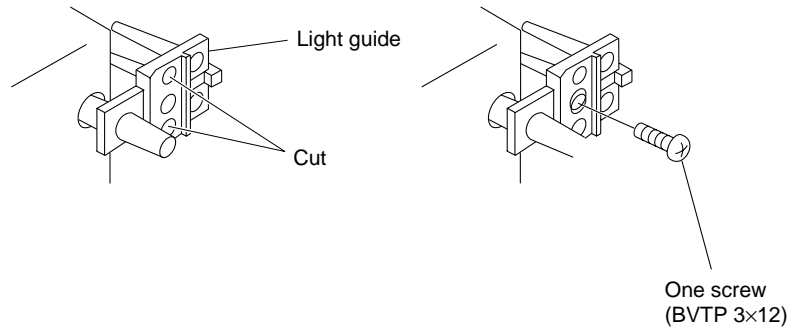
### 2-4-1. REPLACEMENT OF MULTI BUTTON



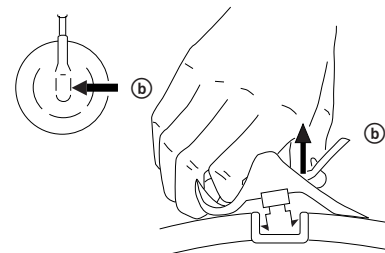
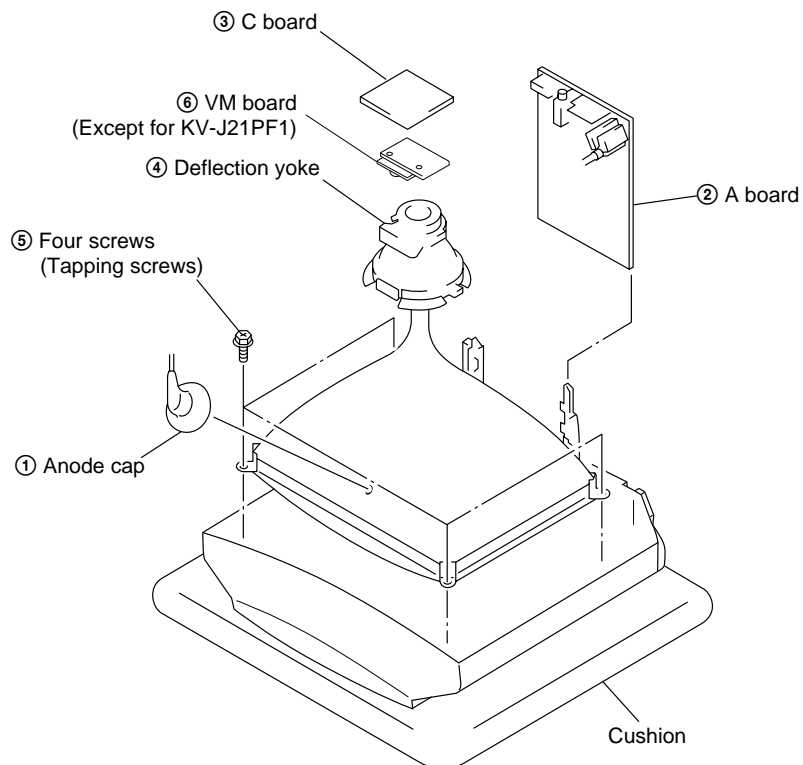
### 2-5. DEMAGNETIZATION COIL REMOVAL



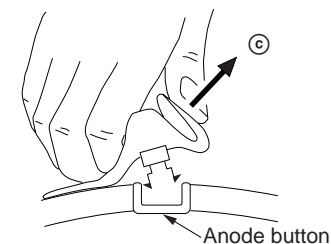
### 2-4-2. REPLACEMENT OF LIGHT GUIDE



## 2-6. PICTURE TUBE REMOVAL



- ② Using a thumb press down, then pull up the rubber cap firmly in the direction indicated by the arrow ②.

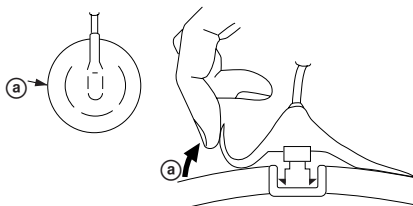


- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ③.

### • REMOVAL OF ANODE-CAP

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

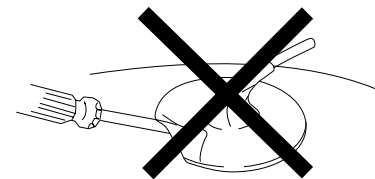
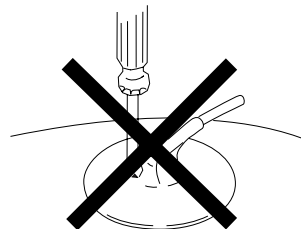
### • REMOVING PROCEDURES



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

### • HOW TO HANDLE AN ANODE-CAP

- ① Do not damage the surface of anode-cap with sharp shaped objects.
- ② Do not press the rubber too hard so as not to damage the inside of anode-cap. A metal fitting called the shatter-hook terminal is built into the rubber.
- ③ Do not turn the foot of rubber over too hard. The shatter-hook terminal will stick out or 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.

Controls and switch should be set as follows unless otherwise noted:  
 PICTURE control..... normal  
 BRIGHTNESS control..... normal

Perform the adjustments in the following order:

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

**Note :** Test Equipment Required:

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

### Preparation :

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

### 3-1. BEAM LANDING

1. Input a white signal with the pattern generator.  
 Contrast } normal  
 Brightness }
2. Position neck assy as shown in Figure 3-1. (Except for KV-J21PF1)
3. Set the pattern generator raster signal to green.
4. Move the deflection yoke to the rear and adjust with the purity control so that the green is at the center and the blue and the red take up equally sized areas on each side. (See Figures 3-1 through 3-3.)
5. Move the deflection yoke forward and adjust so that entire screen is green. (See Figure 3-1.)
6. Switch the raster signal to blue, then to red and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Figure 3-4.)

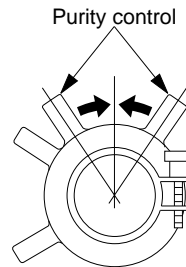


Fig. 3-2

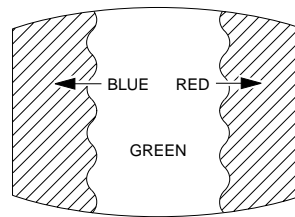


Fig. 3-3

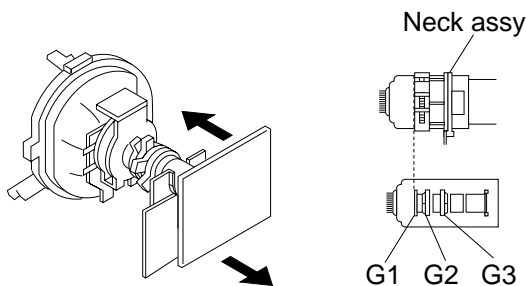


Fig. 3-1

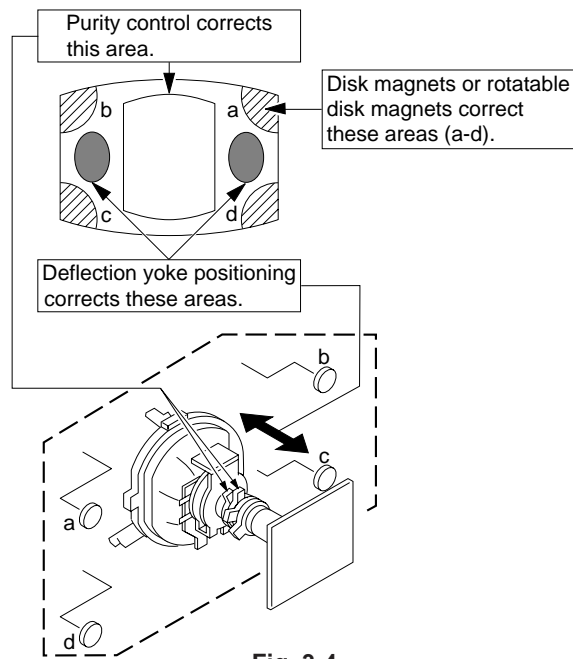


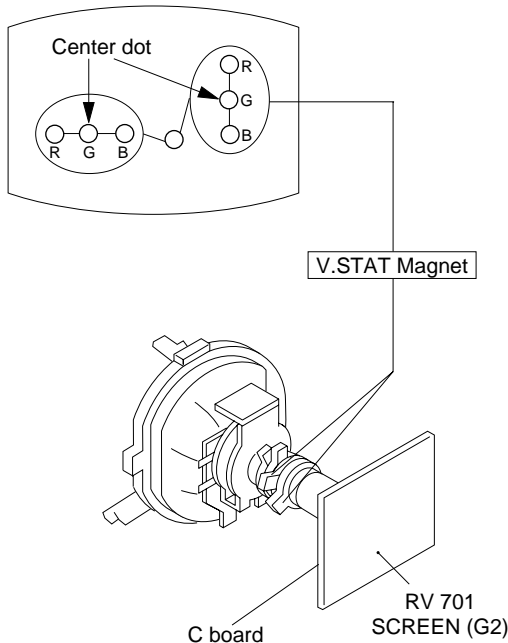
Fig. 3-4

### 3-2. CONVERGENCE

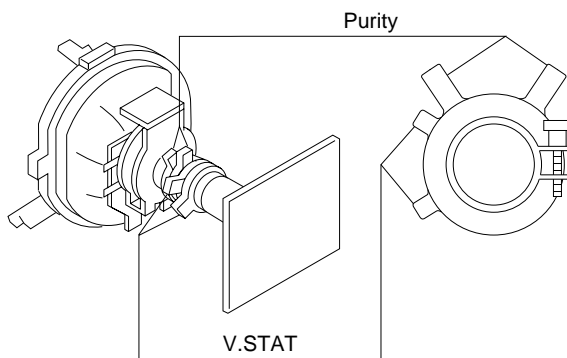
#### Preparation :

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

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

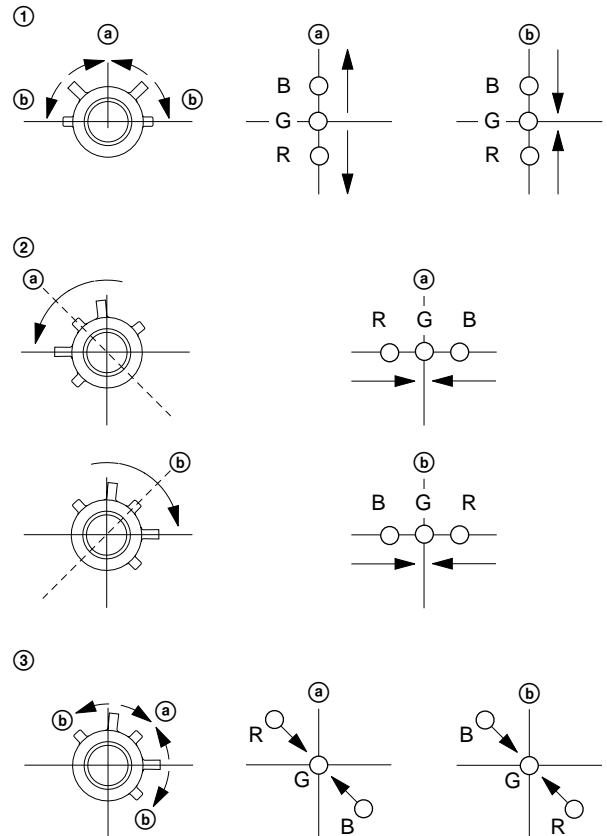


1. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving horizontally), adjust the H.STAT VR so that the red, green and blue dots are on top of each other at the center of the screen.



- Operation of V.STAT magnet.

If the V.STAT magnet is moved in the direction of the Ⓐ and Ⓑ arrows, the red, green and blue dots move as shown below.



- Operation of BMC (Hexapole) magnet.

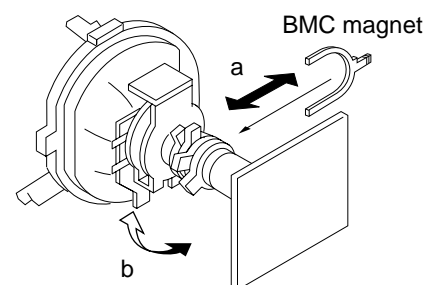
If the blue or red dot does not converge with the other two dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

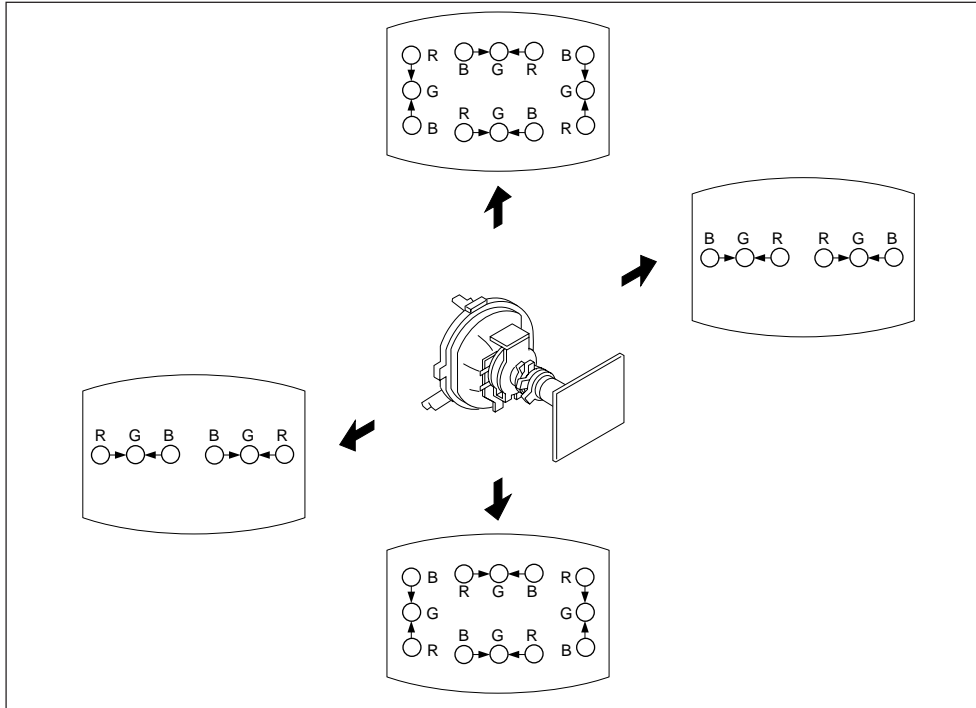
In either case, repeat Beam Landing Adjustment.



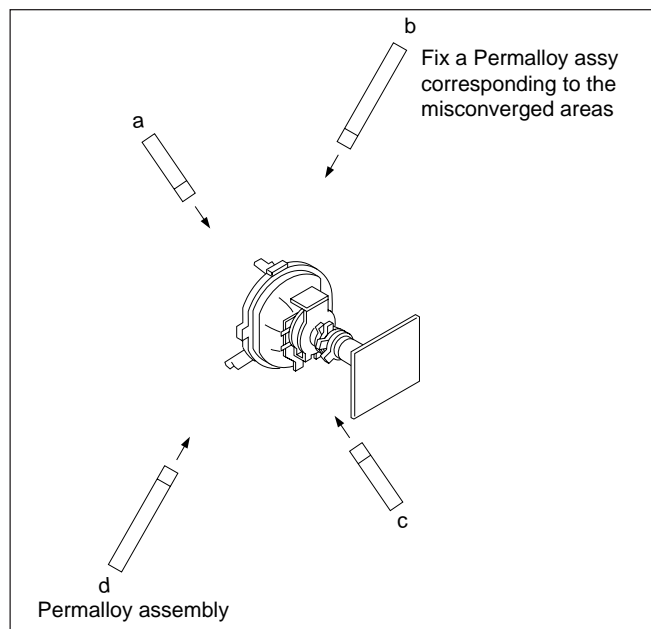
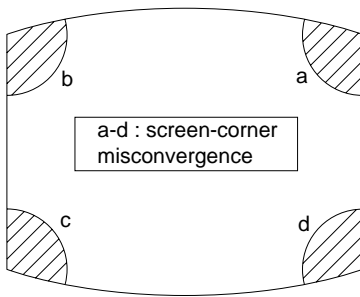
**(2) Dynamic Convergence Adjustment**

**Preparation :**

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
1. Slightly loosen the deflection yoke screws.
  2. Remove the deflection yoke spacer.
  3. Move the deflection yoke as shown in the figure below and optimize the convergence.
  4. Tighten the deflection yoke screws.
  5. Install the deflection yoke spacer.



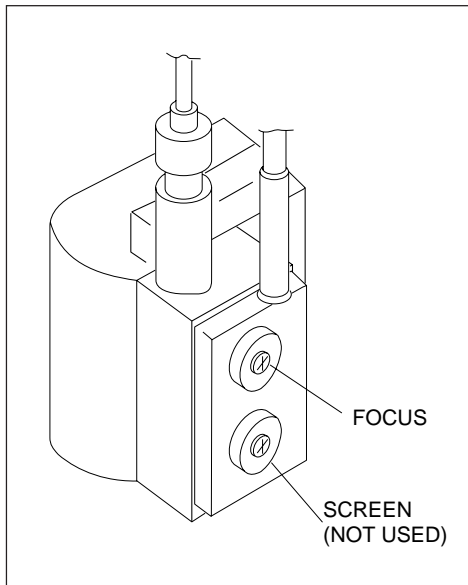
**(3) Screen-corner Convergence**





### 3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for the best focus.



Note: Screen VR is not use.

#### a. AN ITEM OF ADJUSTMENT

Item number	Adjustment item	Initial DATA	Note
09	RDR	28	WHITE POINT R
0A	GDR	20	WHITE POINT G
0B	BDR	20	WHITE POINT B

#### b. METHOD OF CANCELLATION FROM SERVICE MODE

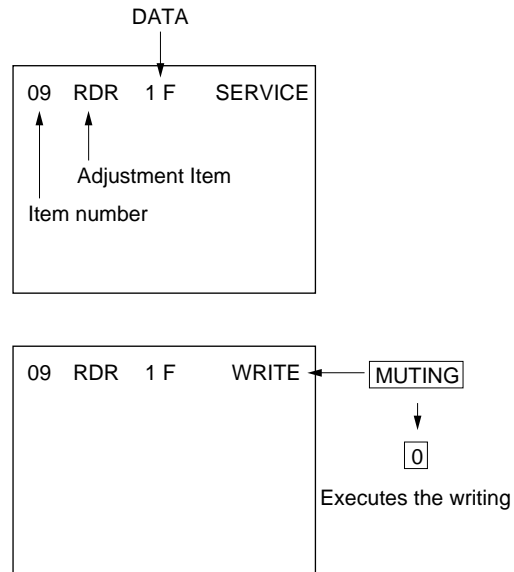
Set the standby condition (Press **POWER** button on the commander) and then press **POWER** button again, hereupon it becomes TV mode.

#### c. METHOD OF WRITE FOR MEMORY

- 1) Set to Service Mode.
- 2) Press **1** (UP) and **4** (DOWN) to select an item of adjustments.
- 3) Press **MUTING** button and it will indicate WRITE on screen.
- 4) Press **0** button to write into memory.

#### d. MEMORY WRITE CONFIRMATION METHOD

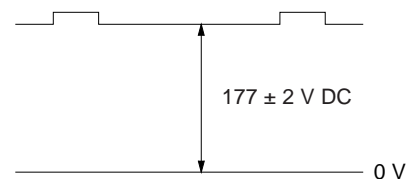
- 1) After adjustment, pull out the plug from AC outlet, and then plug into AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again, confirm they were adjusted.



### 3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

#### 1. G2 (SCREEN) ADJUSTMENT (RV701)

- 1) Set the PICTURE and BRIGHTNESS to normal.
- 2) Put to VIDEO input mode without signals.
- 3) Connect R, G and B of the C board cathode to the oscilloscope.
- 4) Adjust G2 (RV701) volume to the value below.



#### 2. WHITE BALANCE ADJUSTMENTS

- 1) Set to Service Mode.
- 2) Input an entire white signal.
- 3) Set the PICTURE to maximum.
- 4) Select RDR(09) with **1** and **4**, and then set the level to 28 with **3** and **6**.
- 5) Select GDR(0A) and BDR(0B) with **1** and **4** and adjust the level with **3** and **6** for the best white balance.
- 6) Write into the memory by pressing **MUTING**, then **0**.

## SECTION 4 SELF DIAGNOSIS FUNCTION

If no acknowledgement is returned from a device which is turned "ON", the device has a problem.  
In this case, one of the LED's responding to the problem device will flicker a defined number of times.

Flickering is operated by lighting the LED's for 60ss each time.

The flickering frequency responding to each failed device is shown below.

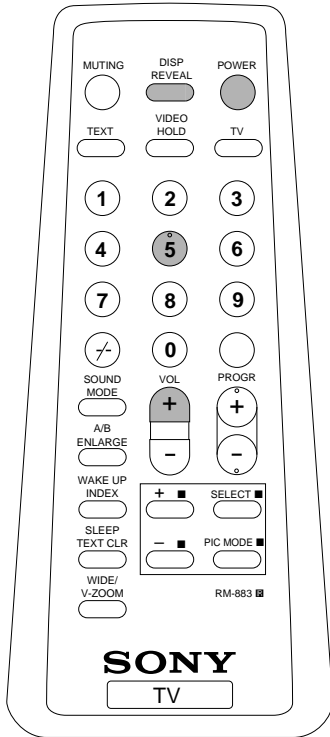
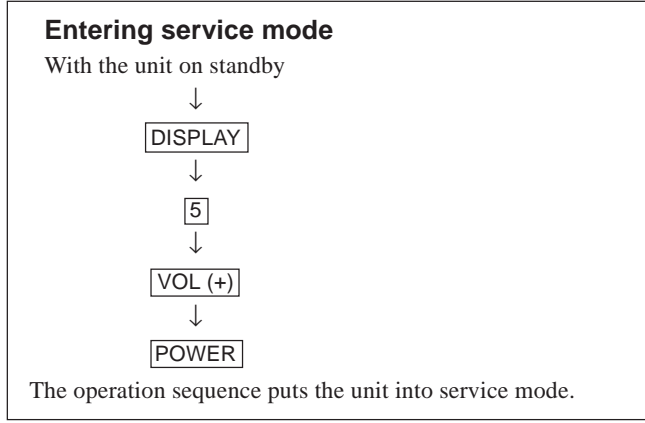
<b>Device</b>	NONVOLA- TILE MEMORY	—	Y/C JUNGLE	—	—	TONE CONTROL (IC 201)
<b>Flickering Frequency</b>	1	—	3	—	—	6

All the devices are checked one after another from the left of the table.  
If an error is found, the responding LED will start flickering.  
So, if more than 1 device have failed, only the one on the left side will flicker.

# SECTION 5 CIRCUIT ADJUSTMENTS

## 5-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-883 that comes with this unit.

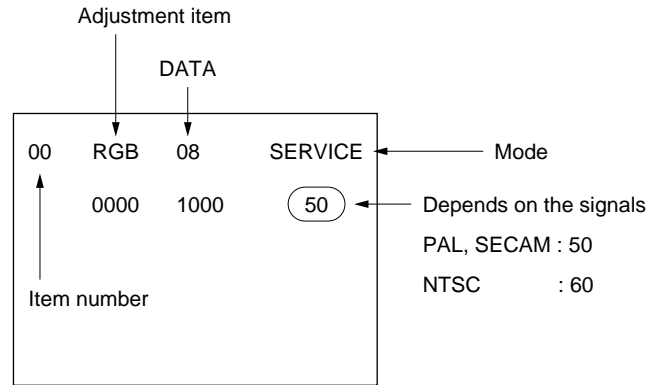


RM-883

[1], [4]	Raise/lower the service item number
[3], [6]	Raise/lower the data
[MUTING]	Writes
[0]	Executes the writing

- [7], [0] All data becomes the values in memory
- [8], [0] All user control goes to the standard state
- [5], [0] Service data initialization (Be sure not to use usually.)
- [2], [0] Write 50Hz adjustment data to 60Hz, or viceversa.

The screen display is :



[1], [4]	Select the adjustment item.
↓	
[3], [6]	Raise/lower the data.
↓	
[MUTING]	Writes
↓	
[0]	Executes the writing.

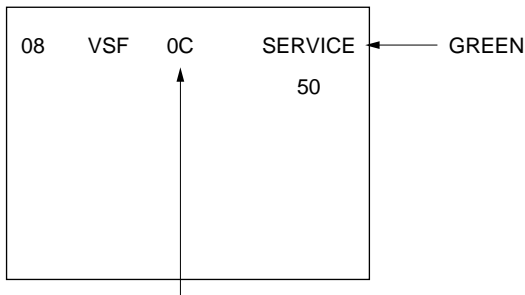
## 5-2. ADJUSTMENT METHOD

Item Number 08

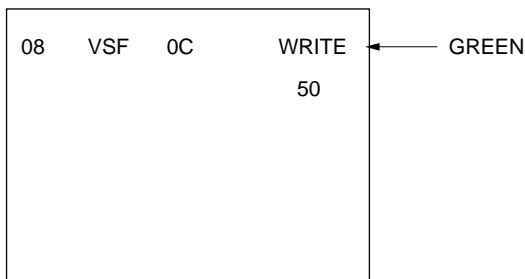
This explanation uses V-SHIFT as an example.

1. Select 08 V-SHIFT with the [1] and [4] buttons.
2. Raise/lower the data with the [3] and [6] buttons.
3. Select the optimum state. (The standard is 0F for PAL reception.)
4. Write with the [MUTING] button.
5. Execute the writing with the [0] button. (The WRITE display returns to green SERVICE.)

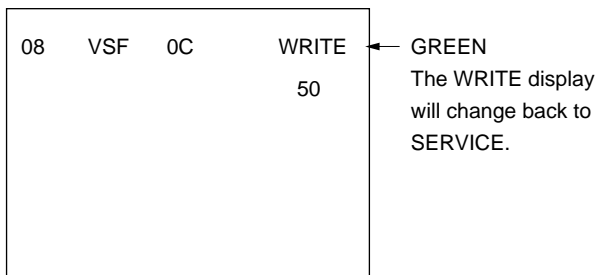
Use the same method for Items Number 00-4B. Use [1] and [4] to select the adjustment item, use [3] and [6] to adjust, write with [MUTING], then execute the write with [0].



Ajust with the [3] and [6] buttons.



Written with the [MUTING].



Write executed with [0].

Adjustment Item Table (For KV-J21MF1AK/J21MF3/J21PF1)

Item number	Adjustment Item	Data range	Initial data	Standard data	Note	Device
00	HSF	00-3F	24	50/60Hz	H SHIFT	TDA8375
01	HSZ	00-3F	23	50/60Hz	H SIZE	TDA8375
02	PAP	00-3F	21	50/60Hz	PIN AMPLITUDE	TDA8375
03	CNP	00-3F	29	50/60Hz	CORNER PIN	TDA8375
04	TLT	00-3F	20	50/60Hz	TILT	TDA8375
05	VSL	00-3F	20	50/60Hz	V SLOPE	TDA8375
06	VAP	00-3F	1D	50/60Hz	V AMPLITUDE	TDA8375
07	SCR	00-3F	20	50/60Hz	S CORRECTION	TDA8375
08	VSF	00-3F	20	50/60Hz	V SHIFT	TDA8375
09	RDR	00-3F	28		WHITE POINT R	TDA8375
0A	GDR	00-3F	20		WHITE POINT G	TDA8375
0B	BDR	00-3F	20		WHITE POINT B	TDA8375
0C	FO	00-03	00	TV: 00 VIDEO: 00 TEXT: 01	∅ TIME CONSTANT	TDA8375
0D	AGC	00-3F	30	TV: 30 VIDEO: 30 TEXT: 30	AGC TAKE OVER	TDA8375
0E	VSW	00-01	00	TV: 00 VIDEO: 01 TEXT: 00	VIDEO MUTE	TDA8375
0F	FOR	00-03	00		FORCED FIELD FREQ.	TDA8375
10	DL	00-01	00		INTERLACE	TDA8375
11	POC	00-01	00		SYNCHRO MODE FIX	TDA8375
12	VID	00-01	00	50/60Hz	VIDEO IDENT MODE	TDA8375
13	HCO	00-01	00	50/60Hz	EHT TRACKING MODE	TDA8375
14	EVG	00-01	00	50/60Hz	ENABLE V GUARD	TDA8375
15	SBL	00-01	00	50/60Hz	SERVICE BLANKING	TDA8375
16	PRD	00-01	00	50/60Hz	OVER-VOLTAGE INPUT	TDA8375
17	COR	00-01	00	TV/VIDEO/TEXT	NOISE CORING PEAK	TDA8375
18	PMX	00-3F	2D		PICTURE MAX DATA	TDA8375
19	PMI	00-3F	00		PICTURE MIN DATA	TDA8375
1A	SBR	00-7F	4B		SUB-BRIGHTNESS	TDA8375
1B	SHU	00-0F	07		SUB-HUE	TDA8375
1C	SSH	00-03	01	TV: 01 VIDEO: 02	SUB-SHARPNESS	TDA8375
1D	SC1	00-3F	1F	50: 26 60: 29	SUB-COLOR LOWER	TDA8375
1E	SC2	00-3F	0D	50: 0C 60: 0D	SUB-COLOR HIGHER	TDA8375
1F	AIP	00-7F	3F		ADJUSTMENT IF-PLL	TDA8375
20	VZM	00-3F	19		VERTICAL ZOOM	TDA8375
21	TXP	00-0F	09		TEXT PICTURE CONT.	SAA5281
22	MXP	00-0F	0D		TEXT MIX MODE PIC.	SAA5281
23	BKP	00-3F	00		BLK OFF PICTURE	μ-CON
24	ODL	00-FF	10		POWER ON DELAY	μ-CON
25	OFR	00-0F	00		STBY → ON RGB OUT	μ-CON
26	OFM	00-0F	00		MAIN POWER RGB OUT	μ-CON
27	OSH	00-3F	0A		OSD POSITION H	μ-CON
28	MUT	00-01	01		NO SYNC. MUTE	μ-CON
29	ABL	00-01	01		BRIGHT ABL	μ-CON
2A	DTV	00-01	00		DISABLE TV SYSTEM KEY	μCON
2B	SCM	00-01	01		SECAM TRAP ACTIVE	μ-CON
2C	ROC	00-0F	07		ROTATION CENTER	μCON
2D	ROS	00-07	03		ROTATION STEP WIDTH	μ-CON
2E	DVM	00-01	00		DISABLE VM	μ-CON
2F	POM	00-01	00		PORT MUTE	μ-CON
30	FBT	00-01	00		CM FOR FBT LAYER SHORT	μ-CON
31	OP0	00-FF	40		OPTION 0	μ-CON
32	OP1	00-FF	06		OPTION 1	μ-CON
33	OP2	00-FF	00		OPTION 2	μ-CON

Adjustment Item Table (For KV-J21MN1AK)

Item number	Adjustment Item	Data range	Initial data	Standard data	Note	Device
00	HSF	00-3F	24		H SHIFT	TDA8375
01	HSZ	00-3F	23		H SIZE	TDA8375
02	PAP	00-3F	21		PIN AMPLITUDE	TDA8375
03	CNP	00-3F	29		CORNER PIN	TDA8375
04	TLT	00-3F	20		TILT	TDA8375
05	VSL	00-3F	20		V SLOPE	TDA8375
06	VAP	00-3F	1D		V AMPLITUDE	TDA8375
07	SCR	00-3F	20		S CORRECTION	TDA8375
08	VSF	00-3F	20		V SHIFT	TDA8375
09	RDR	00-3F	28		WHITE POINT R	TDA8375
0A	GDR	00-3F	20		WHITE POINT G	TDA8375
0B	BDR	00-3F	20		WHITE POINT B	TDA8375
0C	FO	00-03	00		∅ TIME CONSTANT	TDA8375
0D	AGC	00-3F	30		AGC TAKE OVER	TDA8375
0E	VSW	00-01	00		VIDEO MUTE	TDA8375
0F	FOR	00-03	00		FORCED FIELD FREQ.	TDA8375
10	DL	00-01	00		INTERLACE	TDA8375
11	POC	00-01	00		SYNCHRO MODE FIX	TDA8375
12	VID	00-01	00		VIDEO IDENT MODE	TDA8375
13	HCO	00-01	00		EHT TRACKING MODE	TDA8375
14	EVG	00-01	00		ENABLE V GUARD	TDA8375
15	SBL	00-01	00		SERVICE BLANKING	TDA8375
16	PRD	00-01	00		OVER-VOLTAGE INPUT	TDA8375
17	COR	00-01	00		NOISE CORING PEAK	TDA8375
18	PMX	00-3F	27		PICTURE MAX DATA	TDA8375
19	PMI	00-3F	05		PICTURE MIN DATA	TDA8375
1A	SBR	00-7F	4B		SUB-BRIGHTNESS	TDA8375
1B	SHU	00-0F	07		SUB-HUE	TDA8375
1C	SSH	00-03	01		SUB-SHARPNESS	TDA8375
1D	SC1	00-3F	1F		SUB-COLOR LOWER	TDA8375
1E	SC2	00-3F	0B		SUB-COLOR HIGHER	TDA8375
1F	AIP	00-7F	3F		ADJUSTMENT IF-PLL	TDA8375
20	VZM	00-3F	19		VERTICAL ZOOM	TDA8375
21	FAW	00-FF	08		NICAM FAW THRESH	MSP3410
22	CTM	00-FF	08		NICAM ERROR BIT (MONO)	MSP3410
23	CTN	00-FF	50		NICAM ERROR BIT (NICAM)	MSP3410
24	WCD	00-FF	0A		DATA CHANGE BEFORE W. G.	MSP3410
25	WST	00-FF	15		MONO → W. G. STEREO	MSP3410
26	WTM	00-FF	50		DISCONNECTING POINT	MSP3410
27	WBT	00-FF	EA		W. G CHANGE TIMER	MSP3410
28	ACG	00-01	01		W. B BILINGUAL	MSP3410
29	CDB	00-3F	28		DISCONNECTING POINT	MSP3410
2A	FGP	00-7F	24		AGC AUTO/CONSTANT	MSP3410
2B	FMP	00-7F	40		AGC GAIN CONSTANT	MSP3410
2C	WGP	00-7F	3C		FM (B/G, I, D/K) PRESCALE	MSP3410
2D	NIP	00-7F	7F		FM (M) PRESCALE	MSP3410
2E	CRM	00-01	00		W. G. PRESCALE	MSP3410
2F	CML	00-03	00		NICAM PRESCALE	MSP3410
30	ACO	00-01	01		CARRIER MUTE	MSP3410
31	WAC	00-01	01		CARRIER MUTE LEVEL	MSP3410
32	DLY	00-FF	30		AUDIO CLOCK OUT	MSP3410
33	DLG	00-FF	10		W. G. AGREEMENT COUNT	MSP3410
					STEREO SEARCH DELAY	MSP3410
					INTERVAL OF ID CHECK	MSP3410

Item number	Adjustment Item	Data range	Initial data	Standard data	Note	Device
34	TXP	00-0F	09		TEXT PICTURE	SAA5281
35	MXP	00-0F	0D		TEXT MIX MODE PICTURE	SAA5281
36	BKP	00-3F	00		BLK OFF PICTURE	μ-CON
37	HBL	00-3F	25		H BLK LEFT WIDTH	μ-CON
38	HBR	00-3F	20		H BLK RIGHT WIDTH	μ-CON
39	VBH	00-7F	00		H BLK HIGH WIDTH	μ-CON
3A	VBL	00-7F	FF		H BLK LOW WIDTH	μ-CON
3B	ODL	00-FF	10		POWER ON DELAY	μ-CON
3C	OFR	00-0F	00		STBY → ON RGB OUT	μ-CON
3D	OFM	00-0F	00		MAIN POWER RGB OUT	μ-CON
3E	OSH	00-3F	0A		OSD POSITION H	μ-CON
3F	DKS	00-01	01		D/K NICAM	μ-CON
40	MUT	00-01	01		NO SYNC. MUTE	μ-CON
41	DWZ	00-01	01		DIABLE WIDEZOOM	μ-CON
42	ABL	00-01	01		BRIGHT ABL	μ-CON
43	DTV	00-01	00		DISABLE TV SYSTEM KEY	μ-CON
44	SCM	00-01	00		SECAM TRAP ACTIVE	μ-CON
45	ROC	00-0F	07		ROTATION CENTER	μ-CON
46	ROS	00-07	03		ROTATION STEP WIDTH	μ-CON
47	DVM	00-01	00		DISABLE VM MUTE	μ-CON
48	FBT	00-01	00		C/M FOR FBT LAYER SHORT	μ-CON
49	OP0	00-FF	40		OPTION 0	μ-CON
4A	OP1	00-FF	07		OPTION 1	μ-CON
4B	OP2	00-FF	00		OPTION 2	μ-CON

**NOTE**

- Standard Data: Those are the standard data values written on the microprocessor. Therefore, the data values of the modes are stored respectively in the memory.  
 In case of a device replacement, adjustment by rewriting the data value is necessary for some items.
- 50 ..... 50 Hz data
- 60 ..... 60 Hz data
- Standard data listed on the adjustment item table are reference values, therefore it is different for every model.

**ITEM INFORMATION**

- 10. DL: TV/MIX Mode 0=Interlace 1=interlace, TEXT Mode 0=interlace 1=Interlace
  - 29. ABL (For KV-J21MF1AK/J21MF3/J21PF1) • 42. ABL (For KV-J21MN1AK): Bright ABL ON/OFF ON=1 OFF=0
  - 31. OP0 • 32. OP1 • 33. OP2 (For KV-J21MF1AK/J21MF3/J21PF1)
  - 49. OP0 • 4A. OP1 • 4B. OP2 (For KV-J21MN1AK)
- Input data are different according to models.  
 AV INPUT : 00 → NO MODEL, 01 → MONO, CXA1315, 10/11 → STEREO, TDA8424  
 TV System : 00 → Multi model, 01 → B/G, 10 → D/K.I, 11 → B/G D/K  
 NTSC, SECAM, Chin  
 Shrp : Dynamic Mode @ 1 → Sharpness 50%, 0 → Sharpness 70%.  
 VM Operation : 0 → OFF, 1 → ON

**No. 31/49 OP0 \* Input data are different according to models**

Item	–	AV Input		–	Remote Preset	Auto Program	Arabic/ Video	Reserved
KV-J21MF1AK	0	1	0	0	1	1	1	0
KV-J21MF3	0	1	0	0	1	1	1	0
KV-J21MN1AK	0	1	0	0	1	1	0	0
KV-J21PF1	0	0	0	0	1	1	1	0

**No. 32/4A OP1**

Item	–	Tilt	–	TV System		NTSC 3.58	SECAM	Chin
KV-J21MF1AK	0	0	0	0	0	1	1	0
KV-J21MF3	0	0	0	0	0	1	1	0
KV-J21MN1AK	0	0	0	0	0	1	1	1
KV-J21PF1	0	0	0	0	1	1	0	0

**No. 33/4B OP2**

Item	–	–	Child Lock	Space Sound	High Dev.	100 Prg	4.3 Wide	S.Video
KV-J21MF1AK	0	0	1	0	0	1	1	0
KV-J21MF3	0	0	1	0	0	1	1	0
KV-J21MN1AK	0	0	1	0	0	1	1	0
KV-J21PF1	0	0	1	0	0	1	1	0



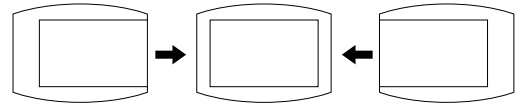
### 5-3. A BOARD ADJUSTMENT AFTER IC003 (MEMORY) REPLACEMENT

1. Enter to Service Mode.
2. Press commander buttons **[5]** and **[0]** (Data Initialize), and **[2]** and **[0]** (Data Copy) to initialize the data.
3. Call each item number, and check if the respective screen shows the normal picture.  
In case some items are not well-adjusted, give them fine adjustment.  
Write the data per each item number (**[MUTING]** + **[0]**).
4. Select item numbers “31/49” (OP0), “32/4A” (OP1) and “33/4B” (OP2) and respectively set the bit per model with command buttons **[3]** and **[6]**.
5. Press commander buttons **[8]** and **[0]** (Test Normal) to return to the data that was set on the shipment from the factory.  
(= Cancel Service Mode.)

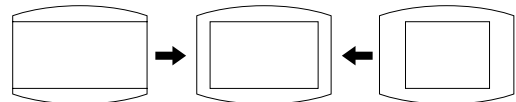
### 5-4. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 08

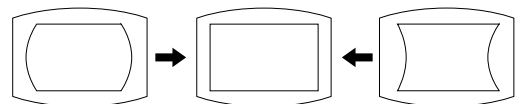
00 HSF (H SHIFT)



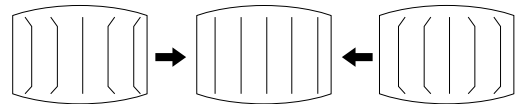
01 HSZ (H SIZE)



02 PAP (PIN AMPLITUDE)



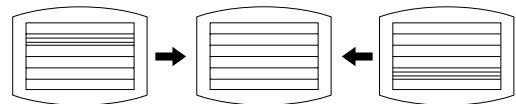
03 CNP (CORNER PIN)



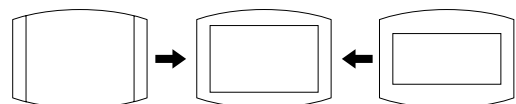
04 TLT (TILT)



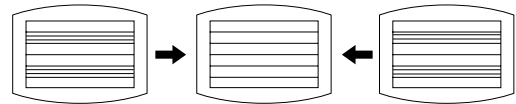
05 VSL (V SLOPE)



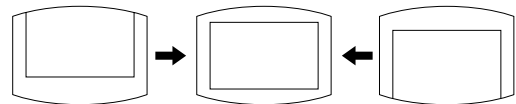
06 VAP (V AMPLITUDE)



07 SCR (S CORRECTION)



08 VSF (V SHIFT)





## SECTION 7 EXPLODED VIEW

KV-J21MF1AK/J21MF3  
KV-J21MN1AK/J21PF1  
RM-883

KV-J21MF1AK/J21MF3  
KV-J21MN1AK/J21PF1  
RM-883

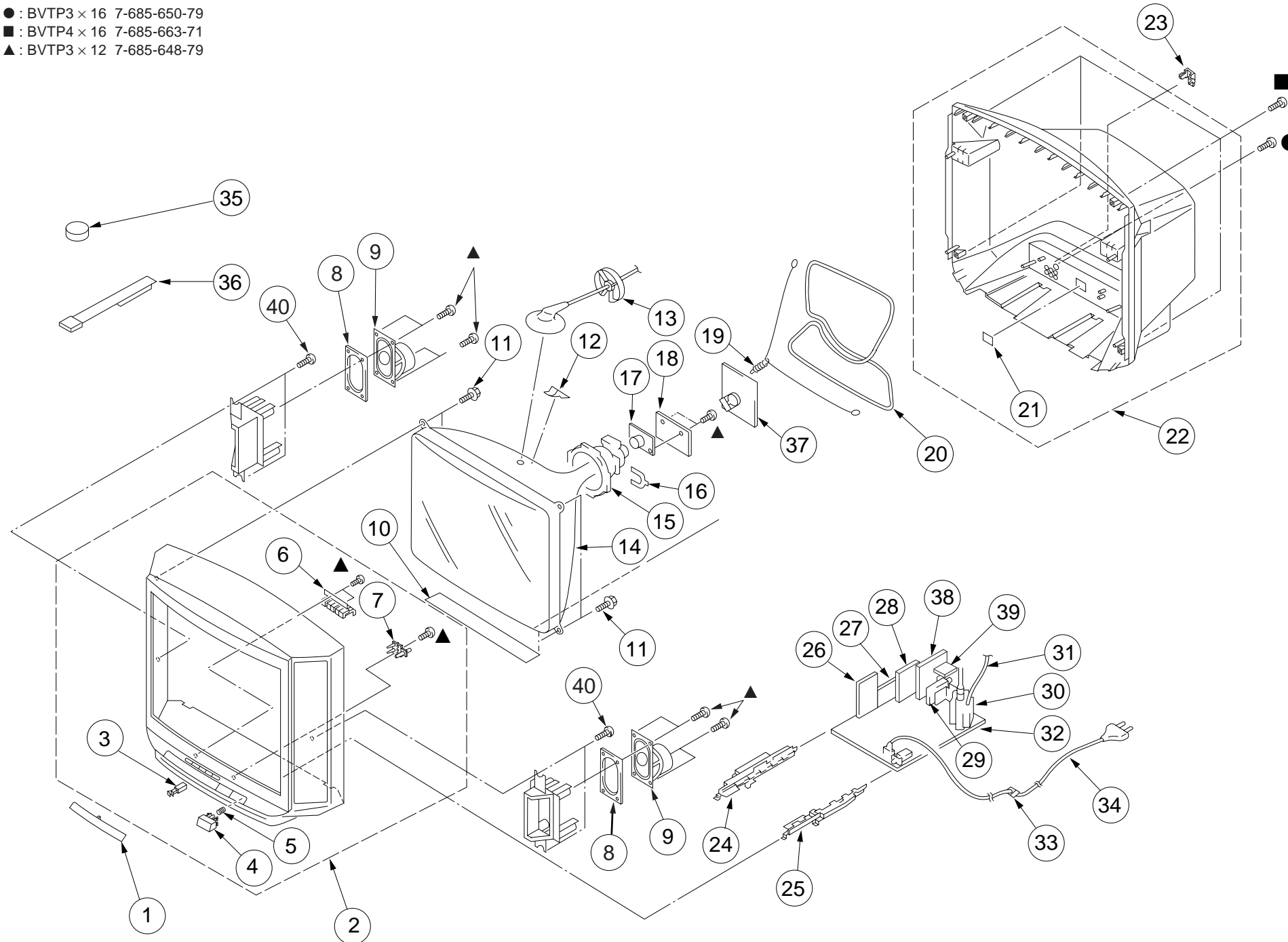
### NOTE:

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

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

### 7-1. CHASSIS

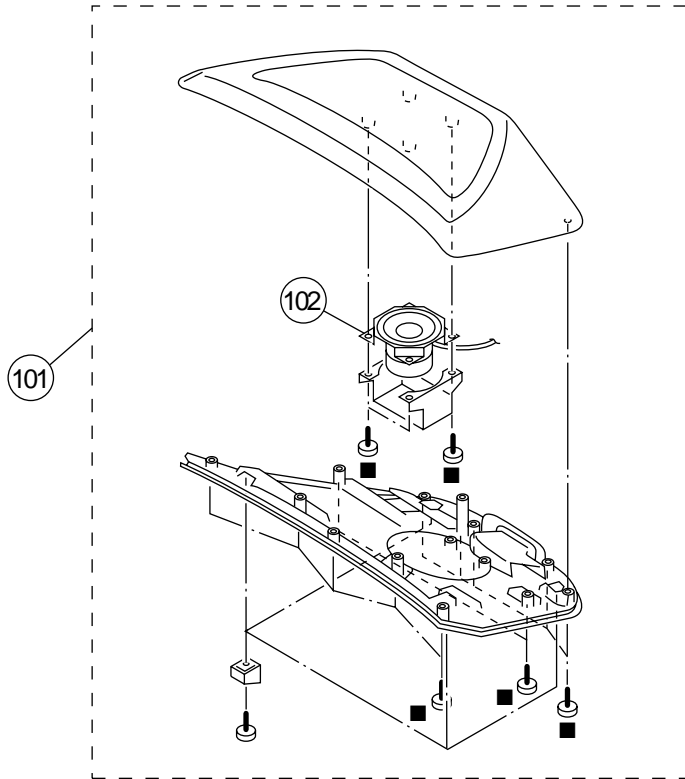
- : BVTP3 × 16 7-685-650-79
- : BVTP4 × 16 7-685-663-71
- ▲ : BVTP3 × 12 7-685-648-79



1	4-060-121-51	DOOR, CONTROL (KV-J21MF1AK)	
	4-060-121-21	DOOR, CONTROL (KV-J21MF3)	
	4-060-121-41	DOOR, CONTROL (KV-J21MN1AK)	
	4-060-121-31	DOOR, CONTROL (KV-J21PF1)	
2	X-4035-534-1	BEZNET ASSY (KV-J21MF1AK)	1,3-7
	X-4035-333-1	BEZNET ASSY (KV-J21MF3)	1,3-7
	X-4035-533-1	BEZNET ASSY (KV-J21MN1AK)	1,3-7
	X-4035-505-2	BEZNET ASSY (KV-J21PF1)	1,3-7
3	4-047-464-01	CATCHER, PUSH	
4	4-060-123-11	BUTTON, POWER (EXCEPT FOR KV-J21PF1)	
	4-060-123-21	BUTTON, POWER (KV-J21PF1)	
5	4-036-405-41	SPRING, COMPRESSION	
6	4-060-122-11	BUTTON, MULTI (EXCEPT FOR KV-J21PF1)	
	4-060-122-21	BUTTON, MULTI (KV-J21PF1)	
7	4-060-124-01	LIGHT, GUIDE	
8	4-054-408-01	CUSHION, SPEAKER	
9	1-503-902-11	SPEAKER	
10	4-054-468-01	SHEET, BLOTING	
11	4-057-862-01	SCREW, TAPPING 5+CROWN WASHER	
12	4-046-600-11	SPACER, DY	
13	* 3-704-372-41	HOLDER, HV CABLE	
14	$\triangle$ 8-738-774-05	PICTURE TUBE (A51JUH71X)	
15	8-451-280-33	DEFLECTION YOKE (Y21PXA2)	
16	1-452-277-00	MAGNET, BMC	
17	1-452-509-51	NECK ASSY, CRT (NA308) (EXCEPT FOR KV-J21PF1)	
18	* A-1342-422-A	VM BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK)	
19	4-369-318-71	SPRING, TENSION	
20	$\triangle$ 1-409-942-11	COIL, DEMAGNETIZATION	
21	4-049-416-11	BLIND, SHEET	
22	$\triangle$ X-4035-536-1	REAR COVER ASSY (KV-J21MF1AK/J21MN1AK)	
	$\triangle$ X-4034-556-1	REAR COVER ASSY (KV-J21MF3/J21PF1) 21	
23	4-049-130-21	CLAMP, CODE	
24	* 4-060-125-01	GUIDE (L), PWB	
25	* 4-060-126-01	GUIDE (R), PWB	
26	* A-1294-197-A	A11 BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK)	
	* A-1293-714-A	A11 BOARD, COMPLETE (KV-J21MF3)	
27	* A-1294-182-A	A12 BOARD, COMPLETE (EXCEPT FOR KV-J21MF3)	
	* A-1294-149-A	A12 BOARD, COMPLETE (KV-J21MF3)	
28	A-1298-553-A	A3 BOARD, COMPLETE (KV-J21MN1AK ONLY)	
29	$\triangle$ 8-598-323-30	TUNER, VSS BT-AG401	
30	$\triangle$ 1-453-193-21	TRANSFORMER ASSY, FLYBACK (NX-1742/M3A)	
31	$\triangle$ 1-900-700-05	LEAD ASSY, FOCUS	
32	* A-1298-554-A	A BOARD, COMPLETE (KV-J21MF1AK)	
	* A-1298-517-A	A BOARD, COMPLETE (KV-J21MF3)	
	* A-1298-552-A	A BOARD, COMPLETE (KV-J21MN1AK)	
	* A-1298-518-A	A BOARD, COMPLETE (KV-J21PF1)	
33	$\triangle$ 4-389-778-31	HOLDER, AC CORD	
34	$\triangle$ 1-574-062-61	CORD, POWER (WITH CONNECTOR) 2.5A/250V	
35	1-452-032-00	MAGNET, DISC	
36	X-4309-608-8	PERMALLOY ASSY, CONVERGENCE	
37	* A-1331-799-A	C BOARD, COMPLETE (EXCEPT FOR KV-J21MF3)	
	* A-1331-697-A	C BOARD, COMPLETE (KV-J21MF3)	
38	* A-1380-580-A	K BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK ONLY)	
39	* A-1380-581-A	K1 BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK ONLY)	
40	4-302-404-03	SCREW (WASHER HEAD) (+P 4X16)	

**7-2. 3D Speaker (KV-J21MF1AK/J21MN1AK only)**

■ : BVTP4 × 16 7-685-663-71



<u>REF.NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
101	A-1501-280-A	BOX ASSY, SPEAKER	
102	1-505-892-11	SPEAKER (10CM)	

SECTION 8

ELECTRICAL PARTS LIST

**A** (KV-J21MF1AK)  
(KV-J21MN1AK)

NOTE:

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

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

- 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, PF :  $\mu$  $\mu$ F
- COILS**
- MMH :  $\mu$ H, UH :  $\mu$ H

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
* A-1298-554-A	A BOARD, COMPLETE (KV-J21MF1AK)	*****		C061	1-125-800-51	ELECT	2.2MF 20% 63V
* A-1298-552-A	A BOARD, COMPLETE (KV-J21MN1AK)	*****		C072	1-126-935-11	ELECT	470MF 20% 16V
* 1-535-893-11	TERMINAL,FASTEN(POSITIVE LOCK)			C074	1-102-110-00	CERAMIC	220PF 10% 50V
* 1-580-798-11	CONNECTOR PIN (DY) 6P			C101	1-101-003-00	CERAMIC	0.0047MF 50V
* 3-691-950-11	SPACER, P.C.BOARD			C102	1-136-165-00	FILM	0.1MF 5% 50V
4-382-854-11	SCREW (M3X10), P, SW (+)			C105	1-125-806-51	ELECT	220MF 20% 16V
	<CAPACITOR>			C106	1-125-797-51	ELECT	10MF 20% 50V
C001	1-102-119-00	CERAMIC	0.0015MF 10% 50V	C108	1-125-807-51	ELECT	1000MF 20% 16V
C002	1-126-965-11	ELECT	22MF 20% 50V	C109	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C003	1-102-973-00	CERAMIC	100PF 5% 50V	C111	1-102-074-00	CERAMIC	0.001MF 10% 50V
C004	1-125-800-51	ELECT	2.2MF 20% 63V	C114	1-102-973-00	CERAMIC	100PF 5% 50V
C007	1-125-798-51	ELECT	0.47MF 20% 63V	C115	1-102-947-00	CERAMIC	10PF 0.5PF 50V
C009	1-102-824-00	CERAMIC	470PF 5% 50V	C116	1-136-165-00	FILM	0.1MF 5% 50V
C010	1-136-157-00	FILM	0.022MF 5% 50V	C117	1-102-973-00	CERAMIC	100PF 5% 50V
C011	1-125-794-51	ELECT	47MF 20% 16V	C118	1-126-965-11	ELECT	22MF 20% 50V
C012	1-102-973-00	CERAMIC	100PF 5% 50V	C119	1-136-153-00	FILM	0.01MF 5% 50V
C015	1-101-884-00	CERAMIC	56PF 5% 50V	C120	1-130-493-00	MYLAR	0.068MF 5% 50V
C016	1-101-884-00	CERAMIC	56PF 5% 50V	C121	1-130-493-00	MYLAR	0.068MF 5% 50V
C017	1-102-973-00	CERAMIC	100PF 5% 50V	C122	1-125-804-51	ELECT	100MF 20% 16V
C018	1-102-973-00	CERAMIC	100PF 5% 50V	C124	1-136-165-00	FILM	0.1MF 5% 50V
C021	1-102-074-00	CERAMIC	0.001MF 10% 50V	C125	1-136-165-00	FILM	0.1MF 5% 50V
C022	1-102-074-00	CERAMIC	0.001MF 10% 50V	C233	1-125-794-51	ELECT	47MF 20% 16V
C023	1-102-074-00	CERAMIC	0.001MF 10% 50V	C234	1-125-794-51	ELECT	47MF 20% 16V
C024	1-102-074-00	CERAMIC	0.001MF 10% 50V	C235	1-125-804-51	ELECT	100MF 20% 16V
C025	1-102-074-00	CERAMIC	0.001MF 10% 50V	C236	1-126-948-11	ELECT	100MF 20% 35V
C026	1-102-074-00	CERAMIC	0.001MF 10% 50V	C237	1-125-804-51	ELECT	100MF 20% 16V
C027	1-102-074-00	CERAMIC	0.001MF 10% 50V	C238	1-137-188-51	FILM	0.15MF 5% 50V
C034	1-136-165-00	FILM	0.1MF 5% 50V	C239	1-125-804-51	ELECT	100MF 20% 16V
C042	1-102-973-00	CERAMIC	100PF 5% 50V	C240	1-137-188-51	FILM	0.15MF 5% 50V
C044	1-102-973-00	CERAMIC	100PF 5% 50V	C241	1-125-813-51	ELECT	1000MF 20% 25V
C046	1-102-973-00	CERAMIC	100PF 5% 50V	C242	1-136-153-00	FILM	0.01MF 5% 50V
C048	1-136-165-00	FILM	0.1MF 5% 50V	C243	1-125-797-51	ELECT	10MF 20% 50V
C049	1-136-165-00	FILM	0.1MF 5% 50V	C244	1-125-813-51	ELECT	1000MF 20% 25V
C050	1-126-960-11	ELECT	1MF 20% 50V	C246	1-128-551-11	ELECT	22MF 20% 25V
C052	1-136-165-00	FILM	0.1MF 5% 50V	C247	1-125-813-51	ELECT	1000MF 20% 25V
C053	1-102-074-00	CERAMIC	0.001MF 10% 50V	C253	1-125-804-51	ELECT	100MF 20% 16V
C055	1-126-935-11	ELECT	470MF 20% 16V	C254	1-130-480-00	MYLAR	0.0056MF 5% 50V
C056	1-102-074-00	CERAMIC	0.001MF 10% 50V	C255	1-130-480-00	MYLAR	0.0056MF 5% 50V
C057	1-102-852-91	CERAMIC	47PF 5% 50V	C257	1-136-175-00	FILM	0.68MF 5% 50V
C058	1-102-973-00	CERAMIC	100PF 5% 50V	C258	1-136-175-00	FILM	0.68MF 5% 50V
C059	1-102-973-00	CERAMIC	100PF 5% 50V	C300	1-125-794-51	ELECT	47MF 20% 16V
C060	1-102-074-00	CERAMIC	0.001MF 10% 50V	C304	1-136-165-00	FILM	0.1MF 5% 50V
				C305	1-136-165-00	FILM	0.1MF 5% 50V
				C306	1-136-165-00	FILM	0.1MF 5% 50V
				C307	1-136-165-00	FILM	0.1MF 5% 50V
				C308	1-136-165-00	FILM	0.1MF 5% 50V
				C309	1-136-165-00	FILM	0.1MF 5% 50V

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

**A** (KV-J21MF1AK)  
(KV-J21MN1AK)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C310	1-136-165-00	FILM	0.1MF 5% 50V	C501	1-102-228-00	CERAMIC	470PF 10% 500V
C311	1-102-951-00	CERAMIC	15PF 5% 50V	C523	1-126-933-11	ELECT	100MF 20% 16V
C312	1-102-951-00	CERAMIC	15PF 5% 50V	C548	1-106-220-00	MYLAR	0.1MF 10% 100V
C313	1-125-804-51	ELECT	100MF 20% 16V	C551	1-126-948-11	ELECT	100MF 20% 35V
C314	1-102-121-00	CERAMIC	0.0022MF 10% 50V	C552	1-126-948-11	ELECT	100MF 20% 35V
C315	1-126-960-11	ELECT	1MF 20% 50V	C553	1-102-127-00	CERAMIC	0.0068MF 10% 50V
C316	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C554	1-102-244-00	CERAMIC	220PF 10% 500V
C319	1-136-165-00	FILM	0.1MF 5% 50V	C555	1-101-804-00	CERAMIC	10PF 5% 500V
C320	1-136-165-00	FILM	0.1MF 5% 50V	C562	1-126-933-11	ELECT	100MF 20% 16V
C321	1-136-165-00	FILM	0.1MF 5% 50V	C602	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C323	1-101-880-00	CERAMIC	47PF 5% 50V	C603	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C324	1-125-800-51	ELECT	2.2MF 20% 63V	C604	1-117-752-11	ELECT(BLOCK)	330MF 20% 450V
C325	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C605	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C326	1-102-949-00	CERAMIC	12PF 5% 50V	C606	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C327	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C607	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C328	1-136-153-00	FILM	0.01MF 5% 50V	C608	1-104-332-11	CERAMIC	470PF 10% 2KV
C329	1-130-478-00	MYLAR	0.0039MF 5% 50V	C609	1-124-347-00	ELECT	100MF 20% 160V
C330	1-136-165-00	FILM	0.1MF 5% 50V	C610	1-126-943-11	ELECT	2200MF 20% 25V
C331	1-125-797-51	ELECT	10MF 20% 50V	C611 $\Delta$	1-164-497-51	CERAMIC	470PF 10% 400V
C332	1-136-165-00	FILM	0.1MF 5% 50V	C612	1-102-228-00	CERAMIC	470PF 10% 500V
C333	1-136-165-00	FILM	0.1MF 5% 50V	C613	1-102-824-00	CERAMIC	470PF 5% 50V
C334	1-102-123-00	CERAMIC	0.0033MF 10% 50V	C614	1-126-943-11	ELECT	2200MF 20% 25V
C335	1-102-973-00	CERAMIC	100PF 5% 50V	C616	1-102-228-00	CERAMIC	470PF 10% 500V
C336	1-125-797-51	ELECT	10MF 20% 50V	C618	1-102-114-00	CERAMIC	470PF 10% 50V
C337	1-125-804-51	ELECT	100MF 20% 16V	C619	1-162-116-00	CERAMIC	680PF 10% 2KV
C339	1-101-361-00	CERAMIC	150PF 5% 50V	C621 $\Delta$	1-104-705-51	FILM	0.1MF 20% 250V
C340	1-102-074-00	CERAMIC	0.001MF 10% 50V	C622	1-107-368-11	MYLAR	0.047MF 99% 200V
C341	1-102-973-00	CERAMIC	100PF 5% 50V	C623	1-126-934-11	ELECT	220MF 20% 16V
C342	1-136-165-00	FILM	0.1MF 5% 50V	C624	1-126-767-11	ELECT	1000MF 20% 16V
C344	1-125-797-51	ELECT	10MF 20% 50V	C625	1-102-074-00	CERAMIC	0.001MF 10% 50V
C349	1-125-797-51	ELECT	10MF 20% 50V	C627	1-162-116-00	CERAMIC	680PF 10% 2KV
C350	1-125-794-51	ELECT	47MF 20% 16V	C628	1-102-824-00	CERAMIC	470PF 5% 50V
C351	1-136-165-00	FILM	0.1MF 5% 50V	C630 $\Delta$	1-164-497-51	CERAMIC	470PF 10% 400V
C352	1-136-169-00	FILM	0.22MF 5% 50V	C631	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C358	1-136-165-00	FILM	0.1MF 5% 50V	C632 $\Delta$	1-164-497-51	CERAMIC	470PF 10% 400V
C359	1-125-804-51	ELECT	100MF 20% 16V	C633	1-161-754-00	CERAMIC	0.001MF 10% 3KV
C361	1-102-074-00	CERAMIC	0.001MF 10% 50V	C634	1-102-114-00	CERAMIC	470PF 10% 50V
C362	1-162-211-31	CERAMIC	33PF 5% 50V	C801	1-123-024-21	ELECT	33MF 160V
C367	1-136-165-00	FILM	0.1MF 5% 50V	C802	1-107-364-11	MYLAR	0.01MF 10% 200V
C368	1-136-165-00	FILM	0.1MF 5% 50V	C804	1-102-074-00	CERAMIC	0.001MF 10% 50V
C369	1-136-165-00	FILM	0.1MF 5% 50V	C805	1-102-244-00	CERAMIC	220PF 10% 500V
C370	1-136-165-00	FILM	0.1MF 5% 50V	C806	1-126-960-11	ELECT	1MF 20% 50V
C374	1-126-967-11	ELECT	47MF 20% 50V	C807	1-136-569-11	FILM	1.2MF 5% 200V
C375	1-126-967-11	ELECT	47MF 20% 50V	C808	1-129-746-00	FILM	0.039MF 5% 400V
C401	1-101-004-00	CERAMIC (KV-J21MN1AK)	0.01MF 50V	C809	1-162-115-00	CERAMIC	330PF 10% 2KV
C402	1-136-153-00	FILM	0.01MF 5% 50V	C810	1-106-365-00	MYLAR	0.0082MF 99% 200V
C403	1-126-968-11	ELECT	100MF 20% 50V	C811	1-162-318-11	CERAMIC	0.001MF 10% 500V
C404	1-101-004-00	CERAMIC (KV-J21MN1AK)	0.01MF 50V	C812	1-136-081-00	FILM	0.012MF 3% 2KV
C405	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C816	1-107-636-11	ELECT	10MF 20% 160V
C406	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C820	1-161-754-00	CERAMIC	0.001MF 10% 2KV
C407	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C821	1-104-999-11	MYLAR	0.1MF 10% 200V
C408	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C822	1-136-111-00	FILM	1MF 5% 200V
C410	1-102-961-00	CERAMIC	27PF 5% 50V	C823	1-136-153-00	FILM	0.01MF 5% 50V
C423	1-102-820-00	CERAMIC	330PF 5% 50V	C825	1-107-364-11	MYLAR	0.01MF 10% 200V
C425	1-101-004-00	CERAMIC (KV-J21MN1AK)	0.01MF 50V	C850	1-126-941-11	ELECT	470MF 20% 25V
				C852	1-104-574-11	CERAMIC	0.0047MF 10% 2KV
				C853	1-162-318-11	CERAMIC	0.001MF 10% 500V
				C854	1-126-941-11	ELECT	470MF 20% 25V

KV-J21MF1AK/J21MF3

KV-J21MN1AK/J21PF1

RM-883

A	(KV-J21MF1AK)
	(KV-J21MN1AK)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C856	1-162-318-11	CERAMIC	0.001MF 10% 500V			<COMPOSITION CIRCUIT BLOCK>	
C857	1-136-159-00	FILM	0.033MF 5% 50V				
C860	1-102-228-00	CERAMIC	470PF 10% 500V	CP001	1-233-747-11	CIRCUIT BLOCK, COMPOSITION	
C861	1-107-654-11	ELECT	33MF 20% 250V	CP002	1-233-749-11	CIRCUIT BLOCK, COMPOSITION	
C875	1-128-562-11	ELECT	47MF 20% 100V	CP003	1-233-748-11	CIRCUIT BLOCK, COMPOSITION	
				CP004	1-233-750-11	CIRCUIT BLOCK, COMPOSITION	
C876	1-107-369-11	MYLAR	0.068MF 10% 100V	CP005	1-233-749-11	CIRCUIT BLOCK, COMPOSITION	
C891	1-102-116-00	CERAMIC	680PF 10% 50V				
C898	1-137-150-11	MYLAR	0.01MF 10% 100V			<TRIMMER>	
C901	1-102-824-00	CERAMIC	470PF 5% 50V				
C902	1-102-824-00	CERAMIC	470PF 5% 50V	CT55	1-404-801-11	TRAP, CERAMIC	
C1201	1-125-804-51	ELECT	100MF 20% 16V				
C1202	1-136-165-00	FILM	0.1MF 5% 50V			<DIODE>	
C1203	1-136-165-00	FILM	0.1MF 5% 50V	D001	8-719-109-81	DIODE RD4.7ESB2	
C1204	1-125-804-51	ELECT	100MF 20% 16V	D002	8-719-911-19	DIODE ISS119-25	
C1205	1-136-165-00	FILM	0.1MF 5% 50V	D003	8-719-911-19	DIODE ISS119-25	
C1206	1-136-165-00	FILM	0.1MF 5% 50V	D005	8-719-109-84	DIODE RD5.1ESB1	
C1210	1-125-804-51	ELECT	100MF 20% 16V	D008	8-719-109-89	DIODE RD5.6ESB2	
C1213	1-126-960-11	ELECT	1MF 20% 50V	D103	8-719-016-42	DIODE MC932	
C1214	1-125-797-51	ELECT	10MF 20% 50V	D251	8-719-911-19	DIODE ISS119-25	
C1215	1-102-976-00	CERAMIC	180PF 5% 50V	D252	8-719-016-42	DIODE MC932	
C1216	1-136-173-00	FILM	0.47MF 5% 50V	D301	8-719-911-19	DIODE ISS119-25	
C1217	1-125-804-51	ELECT	100MF 20% 16V	D305	8-719-911-19	DIODE ISS119-25	
C1218	1-102-976-00	CERAMIC	180PF 5% 50V	D306	8-719-911-19	DIODE ISS119-25	
C1221	1-136-173-00	FILM	0.47MF 5% 50V	D307	8-719-911-19	DIODE ISS119-25	
C1226	1-125-806-51	ELECT	220MF 20% 16V	D308	8-719-109-54	DIODE RD2.2ESB2	
C1230	1-136-165-00	FILM (KV-J21MF1AK)	0.1MF 5% 50V	D310	8-719-911-19	DIODE ISS119-25	
C1259	1-102-124-00	CERAMIC	0.0039MF 10% 50V	D311	8-719-109-54	DIODE RD2.2ESB2	
C1260	1-102-124-00	CERAMIC	0.0039MF 10% 50V	D312	8-719-110-08	DIODE RD8.2ESB2	
C1513	1-126-968-11	ELECT	100MF 20% 50V	D315	8-719-121-24	DIODE RD9.1ESL	
		<CONNECTOR>		D351	8-719-908-03	DIODE GP08D	
CN101	* 1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P		D399	8-719-121-24	DIODE RD9.1ESL	
CN103	* 1-564-509-11	PLUG, CONNECTOR 6P		D401	8-719-911-19	DIODE ISS119-25	
CN111	* 1-564-505-11	PLUG, CONNECTOR 2P		D403	8-719-911-19	DIODE ISS119-25	
CN251	* 1-564-507-11	PLUG, CONNECTOR 4P		D513	8-719-109-84	DIODE RD5.1ESB1	
CN601	* 1-580-843-11	PIN, CONNECTOR (POWER)		D551	8-719-908-03	DIODE GP08D	
CN602	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D561	8-719-911-19	DIODE ISS119-25	
CN603	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D591	8-719-911-19	DIODE ISS119-25	
CN604	1-695-915-11	TAB (CONTACT)		D601	8-719-510-53	DIODE D4SB60L	
CN605	1-695-915-11	TAB (CONTACT)		D604	8-719-301-64	DIODE RU4DS	
CN606	1-695-915-11	TAB (CONTACT)		D605	8-719-067-18	DIODE RN4Z	
CN607	1-695-915-11	TAB (CONTACT)		D606	8-719-510-73	DIODE S3L20UF4	
CN608	1-564-506-11	PLUG, CONNECTOR 3P		D607	8-719-510-26	DIODE D1NL20-TA	
CN609	* 1-564-506-11	PLUG, CONNECTOR 3P		D609	8-719-510-26	DIODE D1NL20-TA	
CN612	1-695-915-11	TAB (CONTACT)		D610	8-719-510-26	DIODE D1NL20-TA	
CN613	1-695-915-11	TAB (CONTACT)		D611	8-719-510-26	DIODE D1NL20-TA	
CN614	1-695-915-11	TAB (CONTACT)		D801	8-719-945-80	DIODE ERC06-15S	
CN615	1-695-915-11	TAB (CONTACT)		D802	8-719-900-26	DIODE ERD29-08J	
CN851	1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P		D851	8-719-302-43	DIODE EL1Z	
		<FILTER>		D852	8-719-028-72	DIODE RGP02-17EL-6433	
CF55	1-567-099-00	FILTER, CERAMIC (KV-J21MF1AK)		D853	8-719-302-43	DIODE EL1Z	
				D855	8-719-302-43	DIODE EL1Z	
				D857	8-719-908-03	DIODE GP08D	
				D858	8-719-908-03	DIODE GP08D	
				D860	8-719-911-19	DIODE ISS119-25	
				D901	8-719-054-60	DIODE LNK0220022G	
				D1201	8-719-121-24	DIODE RD9.1ESL	
				D1202	8-719-121-24	DIODE RD9.1ESL	



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

**A** (KV-J21MF1AK)  
(KV-J21MN1AK)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D1203	8-719-121-24	DIODE RD9.1ESL		L101	1-410-470-11	INDUCTOR 10UH	
D1207	8-719-121-24	DIODE RD9.1ESL		L301	1-408-598-31	INDUCTOR 3.9UH	
D1208	8-719-121-24	DIODE RD9.1ESL		L401	1-410-498-11	INDUCTOR 1.2UH	
D1504	8-719-911-19	DIODE 1SS119-25		L402	1-410-510-11	INDUCTOR 12UH	
D1505	8-719-109-81	DIODE RD4.7ESB2		L406	1-410-507-11	INDUCTOR 6.8UH	
		<FUSE>		L410	1-410-501-51	INDUCTOR 2.2UH	
F601	$\triangle$ 1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V		L802	1-412-527-11	INDUCTOR 15UH	
		<FERRITE BEAD>		L804	1-459-075-00	INDUCTOR 0UH	
FB101	1-410-397-21	FERRITE 1.1UH		L805	1-459-769-13	COIL, HORIZONTAL LINEARITY	
FB102	1-410-397-21	FERRITE 1.1UH		L807	1-459-390-00	INDUCTOR 0UH	
FB251	1-410-397-21	FERRITE 1.1UH		L808	1-412-553-11	INDUCTOR 3.3MMH	
FB601	1-410-397-21	FERRITE 1.1UH		L821	1-459-111-00	INDUCTOR 0UH	
FB603	1-410-397-21	FERRITE 1.1UH		L850	1-408-947-00	INDUCTOR 2.2MMH	
FB610	1-410-396-41	FERRITE 0.45UH				<TRANSISTOR>	
FB612	1-410-397-21	FERRITE 1.1UH		Q030	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FB801	1-410-397-21	FERRITE 1.1UH		Q108	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<FUSE CLIP>		Q109	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FH01	1-533-223-11	CLIP, FUSE		Q110	8-729-119-78	TRANSISTOR 2SC2785-HFE	
FH02	1-533-223-11	CLIP, FUSE		Q202	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<IC>		Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC001	8-752-889-58	IC CXP85220A-055S (KV-J21MF1AK)		Q208	8-729-030-02	TRANSISTOR DTC144ESA	
IC001	8-752-893-68	IC CXP85224A-062S (KV-J21MN1AK)		Q209	8-729-029-92	TRANSISTOR DTC143ESA	
IC002	8-759-805-37	IC L78LR05D-MA		Q210	8-729-029-92	TRANSISTOR DTC143ESA	
IC003	8-759-370-34	IC ST24C08FB6		Q301	8-729-029-66	TRANSISTOR DTC114ESA	
IC004	8-742-041-12	HYB IC SBX1981-11(12)		Q302	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC102	8-759-157-40	IC UPC574J		Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC203	8-759-336-30	IC TA8223K		Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-J21MN1AK)	
IC300	8-759-365-26	IC TDA8375A		Q402	8-729-922-66	TRANSISTOR 2SC2410SN	
IC351	8-759-288-85	IC TDA4665T-T		Q403	8-729-029-92	TRANSISTOR DTC143ESA	
IC354	8-759-251-56	IC TDA8395T		Q404	8-729-029-92	TRANSISTOR DTC143ESA	
IC521	8-759-195-63	IC PQ09RE11		Q406	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC551	8-759-801-98	IC LA7830		Q408	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC601	8-749-014-00	IC STR-S6707N		Q409	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC602	8-749-921-89	IC SE115N		Q414	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC603	$\triangle$ 8-749-010-64	PHOTO COUPLER PC123F2		Q417	8-729-029-92	TRANSISTOR DTC143ESA	
IC801	8-759-145-58	IC UPC4558C		Q561	8-729-200-17	TRANSISTOR 2SA1091-R	
IC1203	8-759-701-75	IC NJM7805FA		Q801	8-729-140-50	TRANSISTOR 2SC3209LK	
IC1210	8-759-145-58	IC UPC4558C		Q802	8-729-821-87	TRANSISTOR 2SD1878-CA	
		<JACK>		Q821	8-729-209-15	TRANSISTOR 2SD2012	
J251	1-770-786-11	JACK		Q902	8-729-030-02	TRANSISTOR DTC144ESA	
J1201	1-770-661-11	JACK BLOCK, PIN 6P		Q903	8-729-030-02	TRANSISTOR DTC144ESA	
J1202	1-695-585-11	JACK BLOCK, PIN (L TYPE) 3P		Q1201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<COIL>		Q1202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L001	1-408-397-00	INDUCTOR 1UH		Q1203	8-729-119-78	TRANSISTOR 2SC2785-HFE	
L002	1-410-509-51	INDUCTOR 10UH		Q1204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
L003	1-408-605-31	INDUCTOR 15UH		Q1207	8-729-119-78	TRANSISTOR 2SC2785-HFE	
				Q1208	8-729-119-78	TRANSISTOR 2SC2785-HFE	
				Q1209	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-J21MF1AK)	
				Q1264	8-729-029-92	TRANSISTOR DTC143ESA (KV-J21MN1AK)	
				Q1265	8-729-029-92	TRANSISTOR DTC143ESA (KV-J21MN1AK)	
				Q1513	8-729-119-78	TRANSISTOR 2SC2785-HFE	



A	(KV-J21MF1AK)
	(KV-J21MN1AK)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<RESISTOR>					
R007	1-247-855-31	CARBON	10K 5% 1/4W	R180	1-249-409-11	CARBON	220 5% 1/4W
R008	1-220-958-81	METAL	1K 5% 1/2W	R181	1-249-409-11	CARBON	220 5% 1/4W
R009	1-220-958-81	METAL	1K 5% 1/2W	R182	1-249-409-11	CARBON	220 5% 1/4W
R010	1-220-958-81	METAL	1K 5% 1/2W	R241	1-249-411-11	CARBON	330 5% 1/4W
R012	1-249-401-11	CARBON	47 5% 1/4W	R242	1-249-411-11	CARBON	330 5% 1/4W
R013	1-220-958-81	METAL	1K 5% 1/2W	R243	1-247-855-31	CARBON	10K 5% 1/4W
R014	1-220-958-81	METAL	1K 5% 1/2W	R244	1-247-855-31	CARBON	10K 5% 1/4W
R015	1-247-825-31	CARBON	560 5% 1/4W	R245	1-249-426-11	CARBON	5.6K 5% 1/4W
R016	1-220-958-81	METAL	1K 5% 1/2W	R246	1-249-426-11	CARBON	5.6K 5% 1/4W
R017	1-220-961-81	METAL	2.2K 5% 1/2W	R247	1-220-959-81	METAL	1.5K 5% 1/2W
R018	1-249-409-11	CARBON	220 5% 1/4W	R248	1-220-959-81	METAL	1.5K 5% 1/2W
R019	1-247-883-00	CARBON	150K 5% 1/4W	R249	1-220-958-81	METAL	1K 5% 1/2W
R021	1-247-847-31	CARBON	4.7K 5% 1/4W	R250	1-220-958-81	METAL	1K 5% 1/2W
R025	1-220-961-81	METAL	2.2K 5% 1/2W	R252	1-249-411-11	CARBON	330 5% 1/4W
R026	1-220-961-81	METAL	2.2K 5% 1/2W	R253	1-247-855-31	CARBON	10K 5% 1/4W
R027	1-247-847-31	CARBON	4.7K 5% 1/4W	R254	1-249-389-11	CARBON	4.7 5% 1/4W
R028	1-247-807-31	CARBON	100 5% 1/4W	R255	1-249-389-11	CARBON	4.7 5% 1/4W
R029	1-247-847-31	CARBON	4.7K 5% 1/4W	R256	1-249-411-11	CARBON	330 5% 1/4W
R031	1-220-958-81	METAL	1K 5% 1/2W	R264	1-220-963-81	METAL	3.3K 5% 1/2W
R032	1-220-961-81	METAL (KV-J21MN1AK)	2.2K 5% 1/2W	R265	1-220-963-81	METAL	3.3K 5% 1/2W
R033	1-220-958-81	METAL	1K 5% 1/2W	R266	1-249-437-11	CARBON	47K 5% 1/4W
R035	1-220-958-81	METAL	1K 5% 1/2W	R303	1-247-807-31	CARBON	100 5% 1/4W
R036	1-220-958-81	METAL	1K 5% 1/2W	R304	1-247-807-31	CARBON	100 5% 1/4W
R038	1-249-409-11	CARBON	220 5% 1/4W	R305	1-247-807-31	CARBON	100 5% 1/4W
R040	1-249-409-11	CARBON	220 5% 1/4W	R306	1-247-807-31	CARBON	100 5% 1/4W
R041	1-247-807-31	CARBON	100 5% 1/4W	R307	1-247-807-31	CARBON	100 5% 1/4W
R042	1-249-412-11	CARBON	390 5% 1/4W	R308	1-249-409-11	CARBON	220 5% 1/4W
R045	1-220-961-81	METAL	2.2K 5% 1/2W	R309	1-249-409-11	CARBON	220 5% 1/4W
R047	1-247-807-31	CARBON	100 5% 1/4W	R310	1-249-441-11	CARBON	100K 5% 1/4W
R048	1-247-807-31	CARBON	100 5% 1/4W	R311	1-249-430-11	CARBON	12K 5% 1/4W
R053	1-220-961-81	METAL	2.2K 5% 1/2W	R312	1-247-807-31	CARBON	100 5% 1/4W
R054	1-247-855-31	CARBON	10K 5% 1/4W	R313	1-220-963-81	METAL	3.3K 5% 1/2W
R057	1-220-958-81	METAL	1K 5% 1/2W	R316	1-247-847-31	CARBON	4.7K 5% 1/4W
R060	1-249-411-11	CARBON	330 5% 1/4W	R317	1-220-958-81	METAL	1K 5% 1/2W
R061	1-220-961-81	METAL	2.2K 5% 1/2W	R318	1-220-978-81	METAL	120K 5% 1/2W
R062	1-220-961-81	METAL	2.2K 5% 1/2W	R319	1-259-877-11	CARBON	1.2M 5% 1/4W
R063	1-220-961-81	METAL	2.2K 5% 1/2W	R320	1-249-434-11	CARBON	27K 5% 1/4W
R065	1-249-409-11	CARBON	220 5% 1/4W	R321	1-215-459-00	METAL	39K 1% 1/4W
R066	1-249-409-11	CARBON	220 5% 1/4W	R322	1-249-434-11	CARBON	27K 5% 1/4W
R068	1-247-807-31	CARBON	100 5% 1/4W	R326	1-249-424-11	CARBON	3.9K 5% 1/4W
R071	1-249-411-11	CARBON	330 5% 1/4W	R330	1-247-825-31	CARBON	560 5% 1/4W
R076	1-247-807-31	CARBON	100 5% 1/4W	R331	1-247-897-11	CARBON	560K 5% 1/4W
R077	1-247-807-31	CARBON	100 5% 1/4W	R332	1-249-409-11	CARBON	220 5% 1/4W
R090	1-247-855-31	CARBON	10K 5% 1/4W	R334	1-247-823-31	CARBON	470 5% 1/4W
R101	1-247-847-31	CARBON	4.7K 5% 1/4W	R335	1-247-855-31	CARBON	10K 5% 1/4W
R102	1-220-958-81	METAL	1K 5% 1/2W	R336	1-220-961-81	METAL	2.2K 5% 1/2W
R113	1-249-433-11	CARBON	22K 5% 1/4W	R339	1-215-408-00	METAL	300 1% 1/4W
R114	1-247-823-31	CARBON	470 5% 1/4W	R340	1-249-411-11	CARBON	330 5% 1/4W
R115	1-249-433-11	CARBON	22K 5% 1/4W	R341	1-220-958-81	METAL	1K 5% 1/2W
R116	1-249-433-11	CARBON	22K 5% 1/4W	R344	1-259-880-11	CARBON	2.2M 5% 1/4W
R117	1-249-433-11	CARBON	22K 5% 1/4W	R351	1-249-393-11	CARBON	10 5% 1/4W
R118	1-249-433-11	CARBON	22K 5% 1/4W	R355	1-249-393-11	CARBON	10 5% 1/4W
R119	1-220-960-81	METAL	1.8K 5% 1/2W	R356	1-220-958-81	METAL	1K 5% 1/2W
R120	1-247-891-00	CARBON	330K 5% 1/4W	R360	1-259-884-11	CARBON	4.7M 5% 1/4W
R131	1-216-464-11	METAL OXIDE	18K 5% 2W F	R401	1-249-435-11	CARBON (KV-J21MN1AK)	33K 5% 1/4W

**A** (KV-J21MF1AK)  
(KV-J21MN1AK)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R402	1-249-433-11	CARBON 22K	5% 1/4W	R616	1-247-289-00	CARBON 8.2M	5% 1W
R403	1-220-946-81	METAL 68	5% 1/2W	R617	1-215-924-00	METAL OXIDE 15K	5% 3W F
R404	1-249-410-11	CARBON 270	5% 1/4W	R618	1-219-134-11	FUSIBLE 0.1	10% 1/4W
R406	1-247-847-31	CARBON 4.7K	5% 1/4W	R619	1-219-134-11	FUSIBLE 0.1	10% 1/4W
R407	1-249-424-11	CARBON 3.9K	5% 1/4W	R622	1-217-192-21	METAL 0.22	10% 2W
R408	1-220-960-81	METAL 1.8K	5% 1/2W	R623	1-247-807-31	CARBON 100	5% 1/4W
R409	1-247-807-31	CARBON 100	5% 1/4W	R624	1-216-446-00	METAL OXIDE 18	5% 2W F
R410	1-247-855-31	CARBON 10K	5% 1/4W	R625	1-249-424-11	CARBON 3.9K	5% 1/4W
R411	1-220-961-81	METAL 2.2K	5% 1/2W	R626	1-249-420-11	CARBON 1.8K	5% 1/4W
R412	1-249-427-11	CARBON 6.8K	5% 1/4W	R627	1-249-417-11	CARBON 1K	5% 1/4W
R413	1-220-961-81	METAL 2.2K	5% 1/2W	R628	1-249-417-11	CARBON 1K	5% 1/4W
R414	1-247-823-31	CARBON 470	5% 1/4W	R629	1-249-399-11	CARBON 33	5% 1/4W
R416	1-249-409-11	CARBON 220	5% 1/4W	R632	1-249-381-11	CARBON 1	5% 1/4W
R419	1-220-958-81	METAL 1K	5% 1/2W	R636	1-215-924-00	METAL OXIDE 15K	5% 3W F
R420	1-249-412-11	CARBON 390	5% 1/4W	R801	1-215-920-11	METAL OXIDE 3.3K	5% 3W F
R421	1-249-409-11	CARBON 220	5% 1/4W	R802	1-249-385-11	CARBON 2.2	5% 1/4W F
R424	1-220-961-81	METAL 2.2K	5% 1/2W	R803	1-247-839-31	CARBON 2.2K	5% 1/4W
R425	1-249-412-11	CARBON 390	5% 1/4W	R804	1-249-417-11	CARBON 1K	5% 1/4W
R426	1-249-407-11	CARBON 150	5% 1/4W	R805	1-249-433-11	CARBON 22K	5% 1/4W
R429	1-249-412-11	CARBON 390	5% 1/4W	R809	1-247-756-11	CARBON 2.2K	5% 1/2W F
R433	1-249-433-11	CARBON 22K	5% 1/4W	R811	1-216-343-00	METAL OXIDE 0.33	5% 1W F
R434	1-247-823-31	CARBON 470	5% 1/4W	R812	1-215-447-00	METAL 12K	1% 1/4W
R440	1-249-407-11	CARBON 150	5% 1/4W	R816	1-249-435-11	CARBON 33K	5% 1/4W
R441	1-220-946-81	METAL 68	5% 1/2W	R820	1-249-419-11	CARBON 1.5K	5% 1/4W
R521	1-249-417-11	CARBON 1K	5% 1/4W	R821	1-215-911-11	METAL OXIDE 100	5% 3W F
R552	1-247-883-00	CARBON 150K	5% 1/4W	R822	1-216-429-00	METAL OXIDE 270	5% 1W F
R553	1-249-433-11	CARBON 22K	5% 1/4W	R823	1-249-931-11	CARBON 2.2K	5% 1/4W F
R554	1-102-074-00	CERAMIC 0.001MF	10% 50V	R825	1-249-392-11	CARBON 8.2	5% 1/4W F
R555	1-247-855-31	CARBON 10K	5% 1/4W	R826	1-249-422-11	CARBON 2.7K	5% 1/4W
R556	1-249-417-11	CARBON 1K	5% 1/4W	R827	1-249-440-11	CARBON 82K	5% 1/4W
R557	1-249-420-11	CARBON 1.8K	5% 1/4W	R828	1-249-424-11	CARBON 3.9K	5% 1/4W
R561	1-247-839-31	CARBON 2.2K	5% 1/4W	R829	1-249-419-11	CARBON 1.5K	5% 1/4W
R562	1-249-419-11	CARBON 1.5K	5% 1/4W F	R831	1-215-863-11	METAL OXIDE 100	5% 1W F
R563	1-260-126-11	CARBON 180K	5% 1/2W	R832	1-247-839-31	CARBON 2.2K	5% 1/4W
R564	1-249-438-11	CARBON 56K	5% 1/4W	R834	1-247-855-31	CARBON 10K	5% 1/4W
R565	1-249-438-11	CARBON 56K	5% 1/4W	R851	1-249-382-11	CARBON 1.2	5% 1/4W F
R566	1-247-847-31	CARBON 4.7K	5% 1/4W	R852	1-249-923-11	CARBON 1K	5% 1/4W F
R569	1-260-354-71	CARBON 150K	5% 1/2W	R853	1-249-377-11	CARBON 0.47	5% 1/4W F
R571	1-249-409-11	CARBON 220	5% 1/4W	R854	1-249-377-11	CARBON 0.47	5% 1/4W F
R601	1-202-968-11	CEMENTED 1.2	5% 10W	R855	1-202-818-00	SOLID 1K	20% 1/2W
R602	1-202-968-11	CEMENTED 1.2	5% 10W	R856	1-247-855-31	CARBON 10K	5% 1/4W
R606	1-215-915-11	METAL OXIDE 470	5% 3W F	R857	1-249-438-11	CARBON 56K	5% 1/4W
R610	1-215-924-00	METAL OXIDE 15K	5% 3W F	R858	1-216-370-11	METAL OXIDE 1.2	5% 2W F
R611	1-202-933-61	FUSIBLE 0.1	10% 1/2W F	R860	1-247-887-00	CARBON 220K	5% 1/4W
R612	1-249-377-11	CARBON 0.47	5% 1/4W	R881	1-247-825-31	CARBON 560	5% 1/4W
R612	1-219-134-11	FUSIBLE 0.1	10% 1/4W	R882	1-249-422-11	CARBON 2.7K	5% 1/4W
R613	1-249-377-11	CARBON 0.47	5% 1/4W	R883	1-247-903-00	CARBON 1M	5% 1/4W
R613	1-219-134-11	FUSIBLE 0.1	10% 1/4W	R895	1-216-349-00	METAL OXIDE 1	5% 1W F
R614	1-215-877-11	METAL OXIDE 22K	5% 1W F	R898	1-247-839-31	CARBON 2.2K	5% 1/4W
R615	1-249-401-11	CARBON 47	5% 1/4W	R902	1-247-847-31	CARBON 4.7K	5% 1/4W
				R904	1-247-847-31	CARBON 4.7K	5% 1/4W
				R905	1-220-958-81	METAL 1K	5% 1/2W
				R906	1-220-958-81	METAL 1K	5% 1/2W
				R907	1-220-960-81	METAL 1.8K	5% 1/2W
				R908	1-220-960-81	METAL 1.8K	5% 1/2W
				R909	1-220-963-81	METAL 3.3K	5% 1/2W
				R910	1-220-963-81	METAL 3.3K	5% 1/2W

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

RM-883

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

**A (KV-J21MF1AK)**  
**(KV-J21MN1AK)**

**A (KV-J21MF3)**

REF. NO.	PART NO.	DESCRIPTION	REMARK
R911	1-249-428-11	CARBON	8.2K 5% 1/4W
R913	1-247-823-31	CARBON	470 5% 1/4W
R914	1-247-823-31	CARBON	470 5% 1/4W
R915	1-249-428-11	CARBON	8.2K 5% 1/4W
R1201	1-249-404-00	CARBON	82 5% 1/4W
R1202	1-220-958-81	METAL	1K 5% 1/2W
R1203	1-249-437-11	CARBON	47K 5% 1/4W
R1204	1-249-437-11	CARBON	47K 5% 1/4W
R1205	1-249-404-00	CARBON	82 5% 1/4W
R1206	1-249-437-11	CARBON	47K 5% 1/4W
R1207	1-249-437-11	CARBON	47K 5% 1/4W
R1211	1-220-946-81	METAL	68 5% 1/2W
R1212	1-220-958-81	METAL	1K 5% 1/2W
R1213	1-220-958-81	METAL	1K 5% 1/2W
R1214	1-247-895-00	CARBON	470K 5% 1/4W
R1215	1-247-895-00	CARBON	470K 5% 1/4W
R1216	1-247-895-00	CARBON	470K 5% 1/4W
R1217	1-247-823-31	CARBON	470 5% 1/4W
R1219	1-247-855-31	CARBON	10K 5% 1/4W
R1220	1-220-958-81	METAL	1K 5% 1/2W
R1221	1-247-855-31	CARBON	10K 5% 1/4W
R1226	1-220-964-81	METAL	39K 5% 1/2W
R1227	1-220-964-81	METAL	39K 5% 1/2W
R1228	1-220-958-81	METAL	1K 5% 1/2W
R1229	1-247-823-31	CARBON	470 5% 1/4W
R1230	1-247-855-31	CARBON	10K 5% 1/4W
R1231	1-220-958-81	METAL	1K 5% 1/2W
R1232	1-249-424-11	CARBON	3.9K 5% 1/4W
R1233	1-220-961-81	METAL	2.2K 5% 1/2W
R1234	1-220-964-81	METAL	39K 5% 1/2W
R1235	1-220-964-81	METAL	39K 5% 1/2W
R1239	1-249-389-11	CARBON	4.7 5% 1/4W F
R1240	1-247-807-31	CARBON	100 5% 1/4W
R1241	1-220-958-81	METAL	1K 5% 1/2W
R1243	1-247-807-31	CARBON	100 5% 1/4W
R1246	1-249-411-11	CARBON	330 5% 1/4W
R1247	1-247-823-31	CARBON	470 5% 1/4W
R1248	1-220-958-81	METAL	1K 5% 1/2W
R1249	1-247-823-31	CARBON	470 5% 1/4W
R1250	1-247-901-11	CARBON	820K 5% 1/4W
R1251	1-247-901-11	CARBON	820K 5% 1/4W
R1252	1-220-961-81	METAL	2.2K 5% 1/2W
R1253	1-249-418-11	METAL	1.2K 5% 1/4W
R1513	1-247-855-31	CARBON	10K 5% 1/4W
R1514	1-247-847-31	CARBON	4.7K 5% 1/4W
R1515	1-247-807-31	CARBON	100 5% 1/4W

<SWITCH>

S601	$\Delta$ 1-571-433-31	SWITCH, PUSH (AC POWER)
S801	1-572-707-11	SWITCH, LEVER
S901	1-570-577-41	SWITCH, PUSH
S902	1-570-577-41	SWITCH, PUSH
S903	1-570-577-41	SWITCH, PUSH

REF. NO.	PART NO.	DESCRIPTION	REMARK
S904	1-570-577-41	SWITCH, PUSH	
S905	1-570-577-41	SWITCH, PUSH	
		<SPARK GAP>	
SG801	1-519-422-11	GAP, SPARK	
		<SURFACE WAVE FILTER>	
SWF401	1-760-771-11	FILTER, SURFACE WAVE	
		<TRANSFORMER>	
T601	$\Delta$ 1-431-683-11	TRANSFORMER, CONVERTER (SRT)	
T605	$\Delta$ 1-431-383-21	TRANSFORMER, LINE FILTER	
T801	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
T851	$\Delta$ 1-453-193-21	TRANSFORMER ASSY, FLYBACK (NX-1742/M3A)	
		<THERMISTOR>	
THP601	$\Delta$ 1-808-059-31	THERMISTOR, POSITIVE	
		<TUNER>	
TU101	$\Delta$ 8-598-323-30	TUNER, VSS BT-AG401	
		<CRYSTAL>	
X101	1-577-082-11	VIBRATOR, CERAMIC	
X300	1-411-752-11	COIL	
X358	1-567-505-11	OSCILLATOR, CRYSTAL	
X443	1-567-504-11	OSCILLATOR, CRYSTAL	
*****			
	* A-1298-517-A	A BOARD, COMPLETE (KV-J21MF3)	
		*****	
	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
	* 3-691-950-11	SPACER, P.C.BOARD	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		<CAPACITOR>	
C001	1-102-119-00	CERAMIC	0.0015MF 10% 50V
C002	1-126-965-11	ELECT	22MF 20% 50V
C003	1-102-973-00	CERAMIC	100PF 5% 50V
C004	1-126-961-11	ELECT	2.2MF 20% 50V
C007	1-126-959-11	ELECT	0.47MF 20% 50V
C009	1-102-824-00	CERAMIC	470PF 5% 50V
C010	1-136-157-00	FILM	0.022MF 5% 50V
C011	1-126-967-11	ELECT	47MF 20% 16V
C012	1-102-973-00	CERAMIC	100PF 5% 50V
C015	1-101-884-00	CERAMIC	56PF 5% 50V
C016	1-101-884-00	CERAMIC	56PF 5% 50V
C017	1-102-973-00	CERAMIC	100PF 5% 50V

**A** (KV-J21MF3)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C018	1-102-973-00	CERAMIC	100PF 5% 50V	C247	1-126-942-61	ELECT	1000MF 20% 25V
C021	1-102-074-00	CERAMIC	0.001MF 10% 50V	C253	1-126-933-11	ELECT	100MF 20% 16V
C022	1-102-074-00	CERAMIC	0.001MF 10% 50V	C254	1-136-153-00	FILM	0.01MF 5% 50V
C023	1-102-074-00	CERAMIC	0.001MF 10% 50V	C255	1-136-153-00	FILM	0.01MF 5% 50V
C024	1-102-074-00	CERAMIC	0.001MF 10% 50V	C257	1-136-165-00	FILM	0.1MF 5% 50V
C025	1-102-074-00	CERAMIC	0.001MF 10% 50V	C258	1-136-165-00	FILM	0.1MF 5% 50V
C026	1-102-074-00	CERAMIC	0.001MF 10% 50V	C300	1-126-967-11	ELECT	47MF 20% 16V
C027	1-102-074-00	CERAMIC	0.001MF 10% 50V	C304	1-136-165-00	FILM	0.1MF 5% 50V
C034	1-136-165-00	FILM	0.1MF 5% 50V	C305	1-136-165-00	FILM	0.1MF 5% 50V
C042	1-102-973-00	CERAMIC	100PF 5% 50V	C306	1-136-165-00	FILM	0.1MF 5% 50V
C044	1-102-973-00	CERAMIC	100PF 5% 50V	C307	1-136-165-00	FILM	0.1MF 5% 50V
C046	1-102-973-00	CERAMIC	100PF 5% 50V	C308	1-136-165-00	FILM	0.1MF 5% 50V
C048	1-136-165-00	FILM	0.1MF 5% 50V	C309	1-136-165-00	FILM	0.1MF 5% 50V
C049	1-136-165-00	FILM	0.1MF 5% 50V	C310	1-136-165-00	FILM	0.1MF 5% 50V
C050	1-126-960-11	ELECT	1MF 20% 50V	C311	1-102-951-00	CERAMIC	15PF 5% 50V
C052	1-136-165-00	FILM	0.1MF 5% 50V	C312	1-102-951-00	CERAMIC	15PF 5% 50V
C053	1-102-074-00	CERAMIC	0.001MF 10% 50V	C313	1-126-933-11	ELECT	100MF 20% 16V
C055	1-126-935-11	ELECT	470MF 20% 16V	C314	1-102-121-00	CERAMIC	0.0022MF 10% 50V
C056	1-102-074-00	CERAMIC	0.001MF 10% 50V	C315	1-126-960-11	ELECT	1MF 20% 50V
C057	1-102-852-91	CERAMIC	47PF 5% 50V	C316	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C058	1-102-973-00	CERAMIC	100PF 5% 50V	C319	1-136-165-00	FILM	0.1MF 5% 50V
C059	1-102-973-00	CERAMIC	100PF 5% 50V	C320	1-136-165-00	FILM	0.1MF 5% 50V
C060	1-102-074-00	CERAMIC	0.001MF 10% 50V	C321	1-136-165-00	FILM	0.1MF 5% 50V
C061	1-126-961-11	ELECT	2.2MF 20% 50V	C323	1-101-880-00	CERAMIC	47PF 5% 50V
C072	1-126-935-11	ELECT	470MF 20% 16V	C324	1-126-961-11	ELECT	2.2MF 20% 50V
C074	1-102-110-00	CERAMIC	220PF 10% 50V	C325	1-102-947-00	CERAMIC	10PF 0.5PF 50V
C101	1-101-003-00	CERAMIC	0.0047MF 50V	C326	1-102-949-00	CERAMIC	12PF 5% 50V
C102	1-136-165-00	FILM	0.1MF 5% 50V	C327	1-102-947-00	CERAMIC	10PF 0.5PF 50V
C105	1-126-934-11	ELECT	220MF 20% 16V	C328	1-136-165-00	FILM	0.1MF 5% 50V
C106	1-126-964-51	ELECT	10MF 20% 50V	C329	1-130-478-00	MYLAR	0.0039MF 5% 50V
C108	1-126-767-11	ELECT	1000MF 20% 16V	C330	1-136-165-00	FILM	0.1MF 5% 50V
C109	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C331	1-126-964-51	ELECT	10MF 20% 50V
C111	1-102-074-00	CERAMIC	0.001MF 10% 50V	C332	1-136-165-00	FILM	0.1MF 5% 50V
C114	1-102-973-00	CERAMIC	100PF 5% 50V	C333	1-136-165-00	FILM	0.1MF 5% 50V
C115	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C334	1-102-123-00	CERAMIC	0.0033MF 10% 50V
C116	1-136-165-00	FILM	0.1MF 5% 50V	C335	1-102-973-00	CERAMIC	100PF 5% 50V
C117	1-102-973-00	CERAMIC	100PF 5% 50V	C336	1-126-964-51	ELECT	10MF 20% 50V
C118	1-126-965-11	ELECT	22MF 20% 50V	C337	1-126-933-11	ELECT	100MF 20% 16V
C119	1-136-153-00	FILM	0.01MF 5% 50V	C339	1-101-361-00	CERAMIC	150PF 5% 50V
C120	1-130-493-00	MYLAR	0.068MF 5% 50V	C340	1-102-074-00	CERAMIC	0.001MF 10% 50V
C121	1-130-493-00	MYLAR	0.068MF 5% 50V	C341	1-102-973-00	CERAMIC	100PF 5% 50V
C122	1-126-933-11	ELECT	100MF 20% 16V	C342	1-136-165-00	FILM	0.1MF 5% 50V
C124	1-136-165-00	FILM	0.1MF 5% 50V	C344	1-126-964-51	ELECT	10MF 20% 50V
C125	1-136-165-00	FILM	0.1MF 5% 50V	C349	1-126-964-51	ELECT	10MF 20% 50V
C132	1-102-973-00	CERAMIC	100PF 5% 50V	C350	1-126-967-11	ELECT	47MF 20% 16V
C233	1-126-967-11	ELECT	47MF 20% 16V	C351	1-136-165-00	FILM	0.1MF 5% 50V
C234	1-126-967-11	ELECT	47MF 20% 16V	C352	1-136-169-00	FILM	0.22MF 5% 50V
C235	1-126-933-11	ELECT	100MF 20% 16V	C358	1-136-165-00	FILM	0.1MF 5% 50V
C236	1-126-949-11	ELECT	220MF 20% 35V	C359	1-126-933-11	ELECT	100MF 20% 16V
C237	1-126-933-11	ELECT	100MF 20% 16V	C361	1-102-074-00	CERAMIC	0.001MF 10% 50V
C238	1-137-188-51	FILM	0.15MF 5% 50V	C362	1-162-211-31	CERAMIC	33PF 5% 50V
C239	1-126-933-11	ELECT	100MF 20% 16V	C367	1-136-165-00	FILM	0.1MF 5% 50V
C240	1-137-188-51	FILM	0.15MF 5% 50V	C368	1-136-165-00	FILM	0.1MF 5% 50V
C241	1-126-942-61	ELECT	1000MF 20% 25V	C369	1-136-165-00	FILM	0.1MF 5% 50V
C242	1-136-153-00	FILM	0.01MF 5% 50V	C370	1-136-165-00	FILM	0.1MF 5% 50V
C243	1-126-964-51	ELECT	10MF 20% 50V	C374	1-126-967-11	ELECT	47MF 20% 50V
C244	1-126-942-61	ELECT	1000MF 20% 25V	C375	1-126-967-11	ELECT	47MF 20% 50V
C246	1-128-551-11	ELECT	22MF 20% 25V	C402	1-136-153-00	FILM	0.01MF 5% 50V

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

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

**A** (KV-J21MF3)

REF. NO.	PART NO.	DESCRIPTION	REMARK
C403	1-126-968-11	ELECT	100MF 20% 50V
C405	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C406	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C407	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C408	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C410	1-102-961-00	CERAMIC	27PF 5% 50V
C423	1-102-820-00	CERAMIC	330PF 5% 50V
C501	1-102-228-00	CERAMIC	470PF 10% 500V
C523	1-126-933-11	ELECT	100MF 20% 16V
C548	1-106-220-00	MYLAR	0.1MF 10% 100V
C551	1-126-948-11	ELECT	100MF 20% 35V
C552	1-126-948-11	ELECT	100MF 20% 35V
C553	1-102-127-00	CERAMIC	0.0068MF 10% 50V
C554	1-102-244-00	CERAMIC	220PF 10% 500V
C555	1-101-804-00	CERAMIC	10PF 5% 500V
C562	1-126-933-11	ELECT	100MF 20% 16V
C602	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C603	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C604	1-125-555-11	ELECT(BLOCK)	330MF 20% 400V
C605	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C606	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C607	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C608	1-104-332-11	CERAMIC	470PF 10% 2KV
C609	1-124-347-00	ELECT	100MF 20% 160V
C610	1-126-943-11	ELECT	2200MF 20% 25V
C611	$\Delta$ 1-164-497-51	CERAMIC	470PF 10% 400V
C612	1-102-228-00	CERAMIC	470PF 10% 500V
C613	1-102-824-00	CERAMIC	470PF 5% 50V
C614	1-126-943-11	ELECT	2200MF 20% 25V
C616	1-102-228-00	CERAMIC	470PF 10% 500V
C618	1-102-114-00	CERAMIC	470PF 10% 50V
C619	1-162-116-00	CERAMIC	680PF 10% 2KV
C621	$\Delta$ 1-104-705-51	FILM	0.1MF 20% 250V
C622	1-107-368-11	MYLAR	0.047MF 99% 200V
C623	1-126-934-11	ELECT	220MF 20% 16V
C624	1-126-767-11	ELECT	1000MF 20% 16V
C625	1-102-074-00	CERAMIC	0.001MF 10% 50V
C627	1-162-116-00	CERAMIC	680PF 10% 2KV
C628	1-102-824-00	CERAMIC	470PF 5% 50V
C630	$\Delta$ 1-164-497-51	CERAMIC	470PF 10% 400V
C631	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C632	$\Delta$ 1-164-497-51	CERAMIC	470PF 10% 400V
C633	1-161-754-00	CERAMIC	0.001MF 10% 3KV
C634	1-102-114-00	CERAMIC	470PF 10% 50V
C801	1-123-024-21	ELECT	33MF 160V
C802	1-107-364-11	MYLAR	0.01MF 10% 200V
C804	1-102-074-00	CERAMIC	0.001MF 10% 50V
C805	1-102-244-00	CERAMIC	220PF 10% 500V
C806	1-126-960-11	ELECT	1MF 20% 50V
C807	1-136-569-11	FILM	1.2MF 5% 200V
C808	1-129-746-00	FILM	0.039MF 5% 400V
C809	1-162-115-00	CERAMIC	330PF 10% 2KV
C810	1-106-365-00	MYLAR	0.0082MF 99% 200V
C811	1-162-318-11	CERAMIC	0.001MF 10% 500V
C812	1-136-081-00	FILM	0.012MF 3% 2KV
C816	1-107-636-11	ELECT	10MF 20% 160V
C820	1-161-754-00	CERAMIC	0.001MF 10% 2KV

REF. NO.	PART NO.	DESCRIPTION	REMARK
C821	1-104-999-11	MYLAR	0.1MF 10% 200V
C822	1-136-111-00	FILM	1MF 5% 200V
C823	1-136-153-00	FILM	0.01MF 5% 50V
C825	1-107-364-11	MYLAR	0.01MF 10% 200V
C850	1-126-941-11	ELECT	470MF 20% 25V
C852	1-104-574-11	CERAMIC	0.0047MF 10% 2KV
C853	1-162-318-11	CERAMIC	0.001MF 10% 500V
C854	1-126-941-11	ELECT	470MF 20% 25V
C856	1-162-318-11	CERAMIC	0.001MF 10% 500V
C857	1-136-159-00	FILM	0.033MF 5% 50V
C860	1-102-228-00	CERAMIC	470PF 10% 500V
C861	1-107-654-11	ELECT	33MF 20% 250V
C875	1-128-562-11	ELECT	47MF 20% 100V
C876	1-107-369-11	MYLAR	0.068MF 10% 100V
C891	1-102-116-00	CERAMIC	680PF 10% 50V
C898	1-137-150-11	MYLAR	0.01MF 10% 100V
C901	1-102-824-00	CERAMIC	470PF 5% 50V
C902	1-102-824-00	CERAMIC	470PF 5% 50V
C1201	1-126-933-11	ELECT	100MF 20% 16V
C1202	1-136-165-00	FILM	0.1MF 5% 50V
C1203	1-136-165-00	FILM	0.1MF 5% 50V
C1204	1-126-933-11	ELECT	100MF 20% 16V
C1205	1-136-165-00	FILM	0.1MF 5% 50V
C1206	1-136-165-00	FILM	0.1MF 5% 50V
C1210	1-126-933-11	ELECT	100MF 20% 16V
C1213	1-126-960-11	ELECT	1MF 20% 50V
C1214	1-126-964-51	ELECT	10MF 20% 50V
C1215	1-102-976-00	CERAMIC	180PF 5% 50V
C1216	1-136-173-00	FILM	0.47MF 5% 50V
C1217	1-126-933-11	ELECT	100MF 20% 16V
C1218	1-102-976-00	CERAMIC	180PF 5% 50V
C1221	1-136-173-00	FILM	0.47MF 5% 50V
C1226	1-126-934-11	ELECT	220MF 20% 16V
C1230	1-136-165-00	FILM	0.1MF 5% 50V
C1259	1-102-127-00	CERAMIC	0.0068MF 10% 50V
C1260	1-102-127-00	CERAMIC	0.0068MF 10% 50V
C1513	1-126-968-11	ELECT	100MF 20% 50V
CF55	1-567-099-00	FILTER, CERAMIC	
		<FILTER>	
		<CONNECTOR>	
CN101	* 1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P	
CN103	* 1-564-509-11	PLUG, CONNECTOR 6P	
CN111	* 1-564-505-11	PLUG, CONNECTOR 2P	
CN251	* 1-564-507-11	PLUG, CONNECTOR 4P	
CN601	* 1-580-843-11	PIN, CONNECTOR (POWER)	
CN602	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN603	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN604	1-695-915-11	TAB (CONTACT)	
CN605	1-695-915-11	TAB (CONTACT)	
CN606	1-695-915-11	TAB (CONTACT)	
CN607	1-695-915-11	TAB (CONTACT)	
CN609	* 1-564-506-11	PLUG, CONNECTOR 3P	
CN612	1-695-915-11	TAB (CONTACT)	



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

**A** (KV-J21MF3)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
CN613	1-695-915-11	TAB (CONTACT)		D853	8-719-302-43	DIODE EL1Z	
CN614	1-695-915-11	TAB (CONTACT)		D855	8-719-302-43	DIODE EL1Z	
CN615	1-695-915-11	TAB (CONTACT)		D857	8-719-908-03	DIODE GP08D	
CN851	1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P		D858	8-719-908-03	DIODE GP08D	
		<COMPOSITION CIRCUIT BLOCK>		D860	8-719-911-19	DIODE ISS119-25	
CP001	1-233-747-11	CIRCUIT BLOCK, COMPOSITION		D901	8-719-054-60	DIODE LNK0220022G	
CP002	1-233-749-11	CIRCUIT BLOCK, COMPOSITION		D1201	8-719-121-24	DIODE RD9.1ESL	
CP003	1-233-748-11	CIRCUIT BLOCK, COMPOSITION		D1202	8-719-121-24	DIODE RD9.1ESL	
CP004	1-233-750-11	CIRCUIT BLOCK, COMPOSITION		D1203	8-719-121-24	DIODE RD9.1ESL	
CP005	1-233-749-11	CIRCUIT BLOCK, COMPOSITION		D1207	8-719-121-24	DIODE RD9.1ESL	
		<TRIMMER>		D1208	8-719-121-24	DIODE RD9.1ESL	
CT55	1-404-801-11	TRAP, CERAMIC		D1504	8-719-911-19	DIODE ISS119-25	
		<DIODE>		D1505	8-719-109-81	DIODE RD4.7ESB2	
D001	8-719-109-81	DIODE RD4.7ESB2				<FUSE>	
D002	8-719-911-19	DIODE ISS119-25		F601	$\triangle$ 1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V	
D003	8-719-911-19	DIODE ISS119-25				<FERRITE BEAD>	
D005	8-719-109-84	DIODE RD5.1ESB1		FB101	1-410-397-21	FERRITE	1.1UH
D008	8-719-109-89	DIODE RD5.6ESB2		FB102	1-410-397-21	FERRITE	1.1UH
D103	8-719-016-42	DIODE MC932		FB251	1-410-397-21	FERRITE	1.1UH
D251	8-719-911-19	DIODE ISS119-25		FB601	1-410-397-21	FERRITE	1.1UH
D252	8-719-016-42	DIODE MC932		FB603	1-410-397-21	FERRITE	1.1UH
D301	8-719-911-19	DIODE ISS119-25		FB610	1-410-396-41	FERRITE	0.45UH
D305	8-719-911-19	DIODE ISS119-25		FB612	1-410-397-21	FERRITE	1.1UH
D306	8-719-911-19	DIODE ISS119-25		FB801	1-410-397-21	FERRITE	1.1UH
D307	8-719-911-19	DIODE ISS119-25				<FUSE CLIP>	
D308	8-719-109-54	DIODE RD2.2ESB2		FH01	1-533-223-11	CLIP, FUSE	
D310	8-719-911-19	DIODE ISS119-25		FH02	1-533-223-11	CLIP, FUSE	
D311	8-719-109-54	DIODE RD2.2ESB2				<IC>	
D312	8-719-110-08	DIODE RD8.2ESB2		IC001	8-752-889-58	IC CXP85220A-055S	
D315	8-719-121-24	DIODE RD9.1ESL		IC002	8-759-805-37	IC L78LR05D-MA	
D351	8-719-908-03	DIODE GP08D		IC003	8-759-370-33	IC ST24C04FB6	
D399	8-719-121-24	DIODE RD9.1ESL		IC004	8-742-041-12	HYB IC SBX1981-11(12)	
D401	8-719-911-19	DIODE ISS119-25		IC102	8-759-157-40	IC UPC574J	
D402	8-719-911-19	DIODE ISS119-25		IC203	8-759-339-60	IC TA8248K	
D403	8-719-911-19	DIODE ISS119-25		IC300	8-759-365-26	IC TDA8375A	
D513	8-719-109-84	DIODE RD5.1ESB1		IC351	8-759-288-85	IC TDA4665T-T	
D551	8-719-908-03	DIODE GP08D		IC354	8-759-251-56	IC TDA8395T	
D561	8-719-911-19	DIODE ISS119-25		IC401	8-759-800-65	IC LA7910	
D591	8-719-911-19	DIODE ISS119-25		IC521	8-759-195-63	IC PQ09RE11	
D601	8-719-510-53	DIODE D4SB60L		IC551	8-759-801-98	IC LA7830	
D604	8-719-301-64	DIODE RU4DS		IC601	8-749-014-00	IC STR-S6707N	
D605	8-719-067-18	DIODE RN4Z		IC602	8-749-921-89	IC SE115N	
D606	8-719-510-73	DIODE S3L20UF4		IC603	$\triangle$ 8-749-010-64	PHOTO COUPLER PC123F2	
D607	8-719-510-26	DIODE D1NL20-TA		IC801	8-759-145-58	IC UPC4558C	
D609	8-719-510-26	DIODE D1NL20-TA		IC1210	8-759-145-58	IC UPC4558C	
D610	8-719-510-26	DIODE D1NL20-TA					
D611	8-719-510-26	DIODE D1NL20-TA					
D801	8-719-945-80	DIODE ERC06-15S					
D802	8-719-900-26	DIODE ERD29-08J					
D851	8-719-302-43	DIODE EL1Z					
D852	8-719-028-72	DIODE RGP02-17EL-6433					

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

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**A** (KV-J21MF3)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<JACK>					
J251	1-770-786-11	JACK		Q1207	8-729-119-79	TRANSISTOR 2SC2785-FEK	
J1201	1-770-661-11	JACK BLOCK, PIN 6P		Q1208	8-729-119-79	TRANSISTOR 2SC2785-FEK	
J1202	1-695-585-11	JACK BLOCK, PIN (L TYPE) 3P		Q1209	8-729-119-79	TRANSISTOR 2SC2785-FEK	
				Q1513	8-729-119-79	TRANSISTOR 2SC2785-FEK	
		<COIL>					
L001	1-408-397-00	INDUCTOR 1UH		R007	1-247-855-31	CARBON 10K	5% 1/4W
L002	1-410-509-51	INDUCTOR 10UH		R008	1-249-417-11	CARBON 1K	5% 1/4W
L003	1-408-605-31	INDUCTOR 15UH		R009	1-249-417-11	CARBON 1K	5% 1/4W
L101	1-410-470-11	INDUCTOR 10UH		R010	1-249-417-11	CARBON 1K	5% 1/4W
L301	1-408-598-31	INDUCTOR 3.9UH		R012	1-249-401-11	CARBON 47	5% 1/4W
L401	1-410-498-11	INDUCTOR 1.2UH		R013	1-249-417-11	CARBON 1K	5% 1/4W
L402	1-410-510-11	INDUCTOR 12UH		R014	1-249-417-11	CARBON 1K	5% 1/4W
L406	1-410-507-11	INDUCTOR 6.8UH		R015	1-247-825-31	CARBON 560	5% 1/4W
L410	1-410-501-51	INDUCTOR 2.2UH		R016	1-249-417-11	CARBON 1K	5% 1/4W
L802	1-412-527-11	INDUCTOR 15UH		R017	1-247-839-31	CARBON 2.2K	5% 1/4W
L804	1-459-075-00	INDUCTOR 0UH		R018	1-249-409-11	CARBON 220	5% 1/4W
L805	1-459-769-13	COIL, HORIZONTAL LINEARITY		R019	1-247-883-00	CARBON 150K	5% 1/4W
L807	1-459-390-00	INDUCTOR 0UH		R021	1-247-847-31	CARBON 4.7K	5% 1/4W
L808	1-412-553-11	INDUCTOR 3.3MMH		R025	1-247-839-31	CARBON 2.2K	5% 1/4W
L821	1-459-111-00	INDUCTOR 0UH		R026	1-247-839-31	CARBON 2.2K	5% 1/4W
L850	1-408-947-00	INDUCTOR 2.2MMH		R027	1-247-847-31	CARBON 4.7K	5% 1/4W
		<TRANSISTOR>		R028	1-247-807-31	CARBON 100	5% 1/4W
Q030	8-729-119-79	TRANSISTOR 2SC2785-FEK		R029	1-247-847-31	CARBON 4.7K	5% 1/4W
Q108	8-729-119-79	TRANSISTOR 2SC2785-FEK		R031	1-249-417-11	CARBON 1K	5% 1/4W
Q109	8-729-119-79	TRANSISTOR 2SC2785-FEK		R033	1-249-417-11	CARBON 1K	5% 1/4W
Q110	8-729-119-79	TRANSISTOR 2SC2785-FEK		R035	1-249-417-11	CARBON 1K	5% 1/4W
Q202	8-729-119-76	TRANSISTOR 2SA1175-HFE		R036	1-249-417-11	CARBON 1K	5% 1/4W
Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE		R037	1-249-417-11	CARBON 1K	5% 1/4W
Q208	8-729-030-02	TRANSISTOR DTC144ESA		R038	1-249-409-11	CARBON 220	5% 1/4W
Q209	8-729-029-92	TRANSISTOR DTC143ESA		R040	1-249-409-11	CARBON 220	5% 1/4W
Q210	8-729-029-92	TRANSISTOR DTC143ESA		R041	1-247-807-31	CARBON 100	5% 1/4W
Q301	8-729-029-66	TRANSISTOR DTC114ESA		R042	1-249-412-11	CARBON 390	5% 1/4W
Q302	8-729-119-79	TRANSISTOR 2SC2785-FEK		R045	1-247-839-31	CARBON 2.2K	5% 1/4W
Q303	8-729-119-79	TRANSISTOR 2SC2785-FEK		R047	1-247-807-31	CARBON 100	5% 1/4W
Q402	8-729-922-66	TRANSISTOR 2SC2410SN		R048	1-247-807-31	CARBON 100	5% 1/4W
Q403	8-729-029-92	TRANSISTOR DTC143ESA		R053	1-247-839-31	CARBON 2.2K	5% 1/4W
Q404	8-729-029-92	TRANSISTOR DTC143ESA		R054	1-247-855-31	CARBON 10K	5% 1/4W
Q406	8-729-119-76	TRANSISTOR 2SA1175-HFE		R057	1-249-417-11	CARBON 1K	5% 1/4W
Q408	8-729-119-79	TRANSISTOR 2SC2785-FEK		R058	1-247-847-31	CARBON 4.7K	5% 1/4W
Q409	8-729-119-76	TRANSISTOR 2SA1175-HFE		R060	1-249-411-11	CARBON 330	5% 1/4W
Q414	8-729-119-79	TRANSISTOR 2SC2785-FEK		R061	1-247-839-31	CARBON 2.2K	5% 1/4W
Q417	8-729-029-92	TRANSISTOR DTC143ESA		R062	1-247-839-31	CARBON 2.2K	5% 1/4W
Q561	8-729-200-17	TRANSISTOR 2SA1091-R		R063	1-247-839-31	CARBON 2.2K	5% 1/4W
Q801	8-729-140-50	TRANSISTOR 2SC3209LK		R065	1-249-409-11	CARBON 220	5% 1/4W
Q802	8-729-821-87	TRANSISTOR 2SD1878-CA		R066	1-249-409-11	CARBON 220	5% 1/4W
Q821	8-729-209-15	TRANSISTOR 2SD2012		R068	1-247-807-31	CARBON 100	5% 1/4W
Q902	8-729-030-02	TRANSISTOR DTC144ESA		R071	1-249-411-11	CARBON 330	5% 1/4W
Q903	8-729-030-02	TRANSISTOR DTC144ESA		R076	1-247-807-31	CARBON 100	5% 1/4W
Q1201	8-729-119-79	TRANSISTOR 2SC2785-FEK		R077	1-247-807-31	CARBON 100	5% 1/4W
Q1202	8-729-119-79	TRANSISTOR 2SC2785-FEK		R090	1-247-855-31	CARBON 10K	5% 1/4W
Q1203	8-729-119-79	TRANSISTOR 2SC2785-FEK		R101	1-247-847-31	CARBON 4.7K	5% 1/4W
Q1204	8-729-119-76	TRANSISTOR 2SA1175-HFE		R102	1-249-417-11	CARBON 1K	5% 1/4W
				R113	1-249-433-11	CARBON 22K	5% 1/4W
				R114	1-247-823-31	CARBON 470	5% 1/4W
				R115	1-249-433-11	CARBON 22K	5% 1/4W

**A** (KV-J21MF3)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R116	1-249-433-11	CARBON	22K 5% 1/4W	R355	1-249-393-11	CARBON	10 5% 1/4W
R117	1-249-433-11	CARBON	22K 5% 1/4W	R356	1-249-417-11	CARBON	1K 5% 1/4W
R118	1-249-433-11	CARBON	22K 5% 1/4W	R360	1-259-884-11	CARBON	4.7M 5% 1/4W
R119	1-249-420-11	CARBON	1.8K 5% 1/4W	R403	1-249-403-11	CARBON	68 5% 1/4W
R120	1-247-891-00	CARBON	330K 5% 1/4W	R406	1-247-847-31	CARBON	4.7K 5% 1/4W
R131	1-216-464-11	METAL OXIDE	18K 5% 2W F	R407	1-249-424-11	CARBON	3.9K 5% 1/4W
R180	1-249-409-11	CARBON	220 5% 1/4W	R408	1-249-420-11	CARBON	1.8K 5% 1/4W
R181	1-249-409-11	CARBON	220 5% 1/4W	R409	1-247-807-31	CARBON	100 5% 1/4W
R182	1-249-409-11	CARBON	220 5% 1/4W	R410	1-247-855-31	CARBON	10K 5% 1/4W
R240	1-249-410-11	CARBON	270 5% 1/4W	R411	1-247-839-31	CARBON	2.2K 5% 1/4W
R242	1-249-410-11	CARBON	270 5% 1/4W	R412	1-249-427-11	CARBON	6.8K 5% 1/4W
R243	1-247-855-31	CARBON	10K 5% 1/4W	R413	1-247-839-31	CARBON	2.2K 5% 1/4W
R244	1-247-855-31	CARBON	10K 5% 1/4W	R414	1-247-823-31	CARBON	470 5% 1/4W
R245	1-249-426-11	CARBON	5.6K 5% 1/4W	R416	1-249-409-11	CARBON	220 5% 1/4W
R246	1-249-426-11	CARBON	5.6K 5% 1/4W	R419	1-249-417-11	CARBON	1K 5% 1/4W
R247	1-249-419-11	CARBON	1.5K 5% 1/4W	R420	1-249-412-11	CARBON	390 5% 1/4W
R248	1-249-419-11	CARBON	1.5K 5% 1/4W	R421	1-249-409-11	CARBON	220 5% 1/4W
R249	1-249-417-11	CARBON	1K 5% 1/4W	R424	1-247-839-31	CARBON	2.2K 5% 1/4W
R250	1-249-417-11	CARBON	1K 5% 1/4W	R425	1-249-412-11	CARBON	390 5% 1/4W
R252	1-249-411-11	CARBON	330 5% 1/4W	R426	1-249-407-11	CARBON	150 5% 1/4W
R253	1-247-855-31	CARBON	10K 5% 1/4W	R429	1-249-412-11	CARBON	390 5% 1/4W
R254	1-249-389-11	CARBON	4.7 5% 1/4W	R433	1-249-433-11	CARBON	22K 5% 1/4W
R255	1-249-389-11	CARBON	4.7 5% 1/4W	R434	1-247-823-31	CARBON	470 5% 1/4W
R256	1-249-411-11	CARBON	330 5% 1/4W	R440	1-249-407-11	CARBON	150 5% 1/4W
R264	1-249-431-11	CARBON	15K 5% 1/4W	R521	1-249-417-11	CARBON	1K 5% 1/4W
R265	1-249-431-11	CARBON	15K 5% 1/4W	R552	1-247-883-00	CARBON	150K 5% 1/4W
R266	1-249-437-11	CARBON	47K 5% 1/4W	R553	1-249-433-11	CARBON	22K 5% 1/4W
R303	1-247-807-31	CARBON	100 5% 1/4W	R554	1-102-074-00	CERAMIC	0.001MF 10% 50V
R304	1-247-807-31	CARBON	100 5% 1/4W	R555	1-247-855-31	CARBON	10K 5% 1/4W
R305	1-247-807-31	CARBON	100 5% 1/4W	R556	1-249-417-11	CARBON	1K 5% 1/4W
R306	1-247-807-31	CARBON	100 5% 1/4W	R557	1-249-420-11	CARBON	1.8K 5% 1/4W
R307	1-247-807-31	CARBON	100 5% 1/4W	R561	1-247-839-31	CARBON	2.2K 5% 1/4W
R308	1-249-409-11	CARBON	220 5% 1/4W	R562	1-249-419-11	CARBON	1.5K 5% 1/4W F
R309	1-249-409-11	CARBON	220 5% 1/4W	R563	1-260-126-11	CARBON	180K 5% 1/2W
R310	1-249-441-11	CARBON	100K 5% 1/4W	R564	1-249-438-11	CARBON	56K 5% 1/4W
R311	1-249-430-11	CARBON	12K 5% 1/4W	R565	1-249-438-11	CARBON	56K 5% 1/4W
R312	1-247-807-31	CARBON	100 5% 1/4W	R566	1-247-847-31	CARBON	4.7K 5% 1/4W
R313	1-247-843-11	CARBON	3.3K 5% 1/4W	R569	1-260-354-71	CARBON	150K 5% 1/2W
R316	1-247-847-31	CARBON	4.7K 5% 1/4W	R571	1-249-409-11	CARBON	220 5% 1/4W
R317	1-249-417-11	CARBON	1K 5% 1/4W	R601	1-202-968-11	CEMENTED	1.2 5% 10W
R318	1-247-881-00	CARBON	120K 5% 1/4W	R602	1-202-968-11	CEMENTED	1.2 5% 10W
R319	1-259-877-11	CARBON	1.2M 5% 1/4W	R606	1-215-915-11	METAL OXIDE	470 5% 3W F
R320	1-249-434-11	CARBON	27K 5% 1/4W	R610	1-215-924-00	METAL OXIDE	15K 5% 3W F
R321	1-215-459-00	METAL	39K 1% 1/4W	R611	1-202-933-61	FUSIBLE	0.1 10% 1/2W F
R322	1-249-434-11	CARBON	27K 5% 1/4W	R612	1-249-377-11	CARBON	0.47 5% 1/4W F
R326	1-249-412-11	CARBON	390 5% 1/4W	R613	1-249-377-11	CARBON	0.47 5% 1/4W F
R330	1-247-825-31	CARBON	560 5% 1/4W	R614	1-215-877-11	METAL OXIDE	22K 5% 1W F
R331	1-247-897-11	CARBON	560K 5% 1/4W	R615	1-249-401-11	CARBON	47 5% 1/4W
R332	1-249-409-11	CARBON	220 5% 1/4W	R616	1-247-289-00	CARBON	8.2M 5% 1W
R334	1-247-823-31	CARBON	470 5% 1/4W	R617	1-215-924-00	METAL OXIDE	15K 5% 3W F
R335	1-247-855-31	CARBON	10K 5% 1/4W	R618	1-249-377-11	CARBON	0.47 5% 1/4W F
R336	1-247-839-31	CARBON	2.2K 5% 1/4W	R619	1-249-377-11	CARBON	0.47 5% 1/4W F
R339	1-215-408-00	METAL	300 1% 1/4W	R622	1-217-192-21	METAL	0.22 10% 2W
R340	1-249-410-11	CARBON	270 5% 1/4W	R623	1-247-807-31	CARBON	100 5% 1/4W
R341	1-249-417-11	CARBON	1K 5% 1/4W	R624	1-216-446-00	METAL OXIDE	18 5% 2W F
R344	1-259-880-11	CARBON	2.2M 5% 1/4W	R625	1-249-424-11	CARBON	3.9K 5% 1/4W
R351	1-249-393-11	CARBON	10 5% 1/4W	R626	1-249-420-11	CARBON	1.8K 5% 1/4W
				R627	1-249-417-11	CARBON	1K 5% 1/4W





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

**A** (KV-J21MF3)

**A** (KV-J21PF1)

REF. NO.	PART NO.	DESCRIPTION	REMARK
<TRANSFORMER>			
T601	$\Delta$ 1-429-137-21	TRANSFORMER, CONVERTER (SRT)	
T605	$\Delta$ 1-431-383-21	TRANSFORMER, LINE FILTER	
T801	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
T851	$\Delta$ 1-453-193-21	TRANSFORMER ASSY, FLYBACK (NX-1742/M3A)	
<THERMISTOR>			
THP601	$\Delta$ 1-808-059-31	THERMISTOR, POSITIVE	
<TUNER>			
TU101	$\Delta$ 8-598-323-30	TUNER, VSS BT-AG401	
<CRYSTAL>			
X101	1-577-082-11	VIBRATOR, CERAMIC	
X300	1-411-752-11	COIL	
X358	1-567-505-11	OSCILLATOR, CRYSTAL	
X443	1-567-504-11	OSCILLATOR, CRYSTAL	
*****			
	* A-1298-518-A	A BOARD, COMPLETE (KV-J21PF1)	
		*****	
	* 1-580-798-11	CONNECTOR PIN (DY) 6P	
	* 3-691-950-11	SPACER, P.C.BOARD	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<CAPACITOR>			
C001	1-102-119-00	CERAMIC	0.0015MF 10% 50V
C002	1-126-965-11	ELECT	22MF 20% 50V
C004	1-125-800-51	ELECT	2.2MF 20% 63V
C007	1-125-798-51	ELECT	0.47MF 20% 63V
C009	1-102-824-00	CERAMIC	470PF 5% 50V
C010	1-136-157-00	FILM	0.022MF 5% 50V
C011	1-125-794-51	ELECT	47MF 20% 16V
C015	1-101-884-00	CERAMIC	56PF 5% 50V
C016	1-101-884-00	CERAMIC	56PF 5% 50V
C017	1-102-973-00	CERAMIC	100PF 5% 50V
C018	1-102-973-00	CERAMIC	100PF 5% 50V
C021	1-102-074-00	CERAMIC	0.001MF 10% 50V
C022	1-102-074-00	CERAMIC	0.001MF 10% 50V
C023	1-102-074-00	CERAMIC	0.001MF 10% 50V
C024	1-102-074-00	CERAMIC	0.001MF 10% 50V
C025	1-102-074-00	CERAMIC	0.001MF 10% 50V
C026	1-102-074-00	CERAMIC	0.001MF 10% 50V
C027	1-102-074-00	CERAMIC	0.001MF 10% 50V
C034	1-136-165-00	FILM	0.1MF 5% 50V
C042	1-102-973-00	CERAMIC	100PF 5% 50V
C044	1-102-973-00	CERAMIC	100PF 5% 50V
C046	1-102-973-00	CERAMIC	100PF 5% 50V
C048	1-136-165-00	FILM	0.1MF 5% 50V
C049	1-136-165-00	FILM	0.1MF 5% 50V
C050	1-126-960-11	ELECT	1MF 20% 50V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C052	1-136-165-00	FILM	0.1MF 5% 50V
C053	1-102-074-00	CERAMIC	0.001MF 10% 50V
C055	1-126-935-11	ELECT	470MF 20% 16V
C056	1-102-074-00	CERAMIC	0.001MF 10% 50V
C057	1-102-852-91	CERAMIC	47PF 5% 50V
C058	1-102-973-00	CERAMIC	100PF 5% 50V
C059	1-102-973-00	CERAMIC	100PF 5% 50V
C060	1-102-074-00	CERAMIC	0.001MF 10% 50V
C061	1-125-800-51	ELECT	2.2MF 20% 63V
C072	1-126-935-11	ELECT	470MF 20% 16V
C074	1-102-110-00	CERAMIC	220PF 10% 50V
C101	1-101-003-00	CERAMIC	0.0047MF 50V
C102	1-136-165-00	FILM	0.1MF 5% 50V
C105	1-125-806-51	ELECT	220MF 20% 16V
C106	1-125-797-51	ELECT	10MF 20% 50V
C108	1-125-807-51	ELECT	1000MF 20% 16V
C109	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C111	1-102-074-00	CERAMIC	0.001MF 10% 50V
C114	1-102-973-00	CERAMIC	100PF 5% 50V
C115	1-102-947-00	CERAMIC	10PF 0.5PF 50V
C116	1-136-165-00	FILM	0.1MF 5% 50V
C117	1-102-973-00	CERAMIC	100PF 5% 50V
C118	1-126-965-11	ELECT	22MF 20% 50V
C119	1-136-153-00	FILM	0.01MF 5% 50V
C120	1-130-493-00	MYLAR	0.068MF 5% 50V
C121	1-130-493-00	MYLAR	0.068MF 5% 50V
C122	1-125-804-51	ELECT	100MF 20% 16V
C124	1-136-165-00	FILM	0.1MF 5% 50V
C125	1-136-165-00	FILM	0.1MF 5% 50V
C233	1-125-794-51	ELECT	47MF 20% 16V
C234	1-125-794-51	ELECT	47MF 20% 16V
C235	1-125-804-51	ELECT	100MF 20% 16V
C236	1-126-949-11	ELECT	220MF 20% 35V
C237	1-125-804-51	ELECT	100MF 20% 16V
C238	1-137-188-51	FILM	0.15MF 5% 50V
C239	1-125-804-51	ELECT	100MF 20% 16V
C240	1-137-188-51	FILM	0.15MF 5% 50V
C241	1-125-813-51	ELECT	1000MF 20% 25V
C242	1-136-153-00	FILM	0.01MF 5% 50V
C243	1-125-797-51	ELECT	10MF 20% 50V
C244	1-125-813-51	ELECT	1000MF 20% 25V
C246	1-128-551-11	ELECT	22MF 20% 25V
C247	1-125-813-51	ELECT	1000MF 20% 25V
C253	1-125-804-51	ELECT	100MF 20% 16V
C254	1-136-153-00	FILM	0.01MF 5% 50V
C255	1-136-153-00	FILM	0.01MF 5% 50V
C257	1-136-165-00	FILM	0.1MF 5% 50V
C258	1-136-165-00	FILM	0.1MF 5% 50V
C300	1-125-794-51	ELECT	47MF 20% 16V
C304	1-136-165-00	FILM	0.1MF 5% 50V
C305	1-136-165-00	FILM	0.1MF 5% 50V
C306	1-136-165-00	FILM	0.1MF 5% 50V
C307	1-136-165-00	FILM	0.1MF 5% 50V
C308	1-136-165-00	FILM	0.1MF 5% 50V
C309	1-136-165-00	FILM	0.1MF 5% 50V
C310	1-136-165-00	FILM	0.1MF 5% 50V
C311	1-102-951-00	CERAMIC	15PF 5% 50V
C312	1-102-951-00	CERAMIC	15PF 5% 50V

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

RM-883

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

**A** (KV-J21PF1)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C313	1-125-804-51	ELECT	100MF 20% 16V	C605	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C314	1-102-121-00	CERAMIC	0.0022MF 10% 50V	C606	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C315	1-126-960-11	ELECT	1MF 20% 50V	C607	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C316	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C608	1-104-332-11	CERAMIC	470PF 10% 2KV
C319	1-136-165-00	FILM	0.1MF 5% 50V	C609	1-124-347-00	ELECT	100MF 20% 160V
C320	1-136-165-00	FILM	0.1MF 5% 50V	C610	1-126-943-11	ELECT	2200MF 20% 25V
C321	1-136-165-00	FILM	0.1MF 5% 50V	C611 $\Delta$	1-164-497-51	CERAMIC	470PF 10% 400V
C323	1-101-880-00	CERAMIC	47PF 5% 50V	C612	1-102-228-00	CERAMIC	470PF 10% 500V
C324	1-125-800-51	ELECT	2.2MF 20% 63V	C613	1-102-824-00	CERAMIC	470PF 5% 50V
C325	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C614	1-126-943-11	ELECT	2200MF 20% 25V
C326	1-102-949-00	CERAMIC	12PF 5% 50V	C616	1-102-228-00	CERAMIC	470PF 10% 500V
C327	1-102-947-00	CERAMIC	10PF 0.5PF 50V	C618	1-102-114-00	CERAMIC	470PF 10% 50V
C328	1-136-153-00	FILM	0.01MF 5% 50V	C619	1-162-116-00	CERAMIC	680PF 10% 2KV
C329	1-130-478-00	MYLAR	0.0039MF 5% 50V	C621 $\Delta$	1-104-705-51	FILM	0.1MF 20% 250V
C330	1-136-165-00	FILM	0.1MF 5% 50V	C622	1-107-368-11	MYLAR	0.047MF 99% 200V
C331	1-125-797-51	ELECT	10MF 20% 50V	C623	1-126-934-11	ELECT	220MF 20% 16V
C332	1-136-165-00	FILM	0.1MF 5% 50V	C624	1-126-767-11	ELECT	1000MF 20% 16V
C333	1-136-165-00	FILM	0.1MF 5% 50V	C625	1-102-074-00	CERAMIC	0.001MF 10% 50V
C334	1-102-123-00	CERAMIC	0.0033MF 10% 50V	C627	1-162-116-00	CERAMIC	680PF 10% 2KV
C335	1-102-973-00	CERAMIC	100PF 5% 50V	C628	1-102-824-00	CERAMIC	470PF 5% 50V
C336	1-125-797-51	ELECT	10MF 20% 50V	C630 $\Delta$	1-164-497-51	CERAMIC	470PF 10% 400V
C337	1-125-804-51	ELECT	100MF 20% 16V	C631	1-161-830-00	CERAMIC	0.0047MF 99% 500V
C339	1-101-361-00	CERAMIC	150PF 5% 50V	C632 $\Delta$	1-164-497-51	CERAMIC	470PF 10% 400V
C340	1-102-074-00	CERAMIC	0.001MF 10% 50V	C633	1-161-754-00	CERAMIC	0.001MF 10% 3KV
C341	1-102-973-00	CERAMIC	100PF 5% 50V	C634	1-102-114-00	CERAMIC	470PF 10% 50V
C342	1-136-165-00	FILM	0.1MF 5% 50V	C801	1-123-024-21	ELECT	33MF 160V
C344	1-125-797-51	ELECT	10MF 20% 50V	C802	1-107-364-11	MYLAR	0.01MF 10% 200V
C349	1-125-797-51	ELECT	10MF 20% 50V	C804	1-102-074-00	CERAMIC	0.001MF 10% 50V
C359	1-125-804-51	ELECT	100MF 20% 16V	C805	1-102-244-00	CERAMIC	220PF 10% 500V
C361	1-102-074-00	CERAMIC	0.001MF 10% 50V	C806	1-126-960-11	ELECT	1MF 20% 50V
C362	1-162-211-31	CERAMIC	33PF 5% 50V	C807	1-136-569-11	FILM	1.2MF 5% 200V
C367	1-136-165-00	FILM	0.1MF 5% 50V	C808	1-129-746-00	FILM	0.039MF 5% 400V
C368	1-136-165-00	FILM	0.1MF 5% 50V	C809	1-162-115-00	CERAMIC	330PF 10% 2KV
C369	1-136-165-00	FILM	0.1MF 5% 50V	C810	1-106-365-00	MYLAR	0.0082MF 99% 200V
C370	1-136-165-00	FILM	0.1MF 5% 50V	C811	1-162-318-11	CERAMIC	0.001MF 10% 500V
C374	1-126-967-11	ELECT	47MF 20% 50V	C812	1-136-081-00	FILM	0.012MF 3% 2KV
C375	1-126-967-11	ELECT	47MF 20% 50V	C816	1-107-636-11	ELECT	10MF 20% 160V
C402	1-136-153-00	FILM	0.01MF 5% 50V	C820	1-161-754-00	CERAMIC	0.001MF 10% 2KV
C403	1-126-968-11	ELECT	100MF 20% 50V	C821	1-104-999-11	MYLAR	0.1MF 10% 200V
C405	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C822	1-136-111-00	FILM	1MF 5% 200V
C406	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C823	1-136-153-00	FILM	0.01MF 5% 50V
C407	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C825	1-107-364-11	MYLAR	0.01MF 10% 200V
C408	1-102-125-00	CERAMIC	0.0047MF 10% 50V	C850	1-126-941-11	ELECT	470MF 20% 25V
C410	1-102-961-00	CERAMIC	27PF 5% 50V	C852	1-104-574-11	CERAMIC	0.0047MF 10% 2KV
C411	1-101-888-00	CERAMIC	68PF 5% 50V	C853	1-162-318-11	CERAMIC	0.001MF 10% 500V
C423	1-102-820-00	CERAMIC	330PF 5% 50V	C854	1-126-941-11	ELECT	470MF 20% 25V
C501	1-102-228-00	CERAMIC	470PF 10% 500V	C856	1-162-318-11	CERAMIC	0.001MF 10% 500V
C523	1-126-933-11	ELECT	100MF 20% 16V	C857	1-136-159-00	FILM	0.033MF 5% 50V
C548	1-106-220-00	MYLAR	0.1MF 10% 100V	C860	1-102-228-00	CERAMIC	470PF 10% 500V
C551	1-126-948-11	ELECT	100MF 20% 35V	C861	1-107-654-11	ELECT	33MF 20% 250V
C552	1-126-948-11	ELECT	100MF 20% 35V	C875	1-128-562-11	ELECT	47MF 20% 100V
C553	1-102-127-00	CERAMIC	0.0068MF 10% 50V	C876	1-107-369-11	MYLAR	0.068MF 10% 100V
C554	1-102-244-00	CERAMIC	220PF 10% 500V	C891	1-102-116-00	CERAMIC	680PF 10% 50V
C555	1-101-804-00	CERAMIC	10PF 5% 500V	C898	1-137-150-11	MYLAR	0.01MF 10% 100V
C562	1-126-933-11	ELECT	100MF 20% 16V	C901	1-102-824-00	CERAMIC	470PF 5% 50V
C602	1-161-830-00	CERAMIC	0.0047MF 99% 500V	C902	1-102-824-00	CERAMIC	470PF 5% 50V
C603	1-161-830-00	CERAMIC	0.0047MF 99% 500V	C1201	1-125-804-51	ELECT	100MF 20% 16V
C604	1-117-752-11	ELECT(BLOCK)	330MF 20% 450V	C1202	1-136-165-00	FILM	0.1MF 5% 50V

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**A** (KV-J21PF1)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C1203	1-136-165-00	FILM	0.1MF 5% 50V	D103	8-719-016-42	DIODE MC932	
C1204	1-125-804-51	ELECT	100MF 20% 16V	D251	8-719-911-19	DIODE ISS119-25	
C1205	1-136-165-00	FILM	0.1MF 5% 50V	D252	8-719-016-42	DIODE MC932	
C1206	1-136-165-00	FILM	0.1MF 5% 50V	D301	8-719-911-19	DIODE ISS119-25	
C1210	1-125-804-51	ELECT	100MF 20% 16V	D305	8-719-911-19	DIODE ISS119-25	
C1213	1-126-960-11	ELECT	1MF 20% 50V	D306	8-719-911-19	DIODE ISS119-25	
C1214	1-125-797-51	ELECT	10MF 20% 50V	D307	8-719-911-19	DIODE ISS119-25	
C1215	1-102-976-00	CERAMIC	180PF 5% 50V	D308	8-719-109-54	DIODE RD2.2ESB2	
C1216	1-136-173-00	FILM	0.47MF 5% 50V	D310	8-719-911-19	DIODE ISS119-25	
C1217	1-125-804-51	ELECT	100MF 20% 16V	D311	8-719-109-54	DIODE RD2.2ESB2	
C1218	1-102-976-00	CERAMIC	180PF 5% 50V	D312	8-719-110-08	DIODE RD8.2ESB2	
C1221	1-136-173-00	FILM	0.47MF 5% 50V	D315	8-719-121-24	DIODE RD9.1ESL	
C1226	1-125-806-51	ELECT	220MF 20% 16V	D351	8-719-908-03	DIODE GP08D	
C1230	1-136-165-00	FILM	0.1MF 5% 50V	D399	8-719-121-24	DIODE RD9.1ESL	
C1259	1-102-127-00	CERAMIC	0.0068MF 10% 50V	D403	8-719-911-19	DIODE ISS119-25	
C1260	1-102-127-00	CERAMIC	0.0068MF 10% 50V	D513	8-719-109-84	DIODE RD5.1ESB1	
C1513	1-126-968-11	ELECT	100MF 20% 50V	D551	8-719-908-03	DIODE GP08D	
		<FILTER>		D561	8-719-911-19	DIODE ISS119-25	
CF55	1-567-099-00	FILTER, CERAMIC		D591	8-719-911-19	DIODE ISS119-25	
		<CONNECTOR>		D601	8-719-510-53	DIODE D4SB60L	
CN101	* 1-560-124-00	PLUG, CONNECTOR (2.5MM) 4P		D604	8-719-301-64	DIODE RU4DS	
CN103	* 1-564-509-11	PLUG, CONNECTOR 6P		D605	8-719-510-73	DIODE S3L20UF4	
CN251	* 1-564-507-11	PLUG, CONNECTOR 4P		D606	8-719-510-73	DIODE S3L20UF4	
CN601	* 1-580-843-11	PIN, CONNECTOR (POWER)		D607	8-719-510-26	DIODE D1NL20-TA	
CN602	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D609	8-719-510-26	DIODE D1NL20-TA	
CN603	* 1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D610	8-719-510-26	DIODE D1NL20-TA	
CN604	1-695-915-11	TAB (CONTACT)		D611	8-719-510-26	DIODE D1NL20-TA	
CN605	1-695-915-11	TAB (CONTACT)		D801	8-719-945-80	DIODE ERC06-15S	
CN606	1-695-915-11	TAB (CONTACT)		D802	8-719-900-26	DIODE ERD29-08J	
CN607	1-695-915-11	TAB (CONTACT)		D851	8-719-302-43	DIODE EL1Z	
CN612	1-695-915-11	TAB (CONTACT)		D852	8-719-028-72	DIODE RGP02-17EL-6433	
CN613	1-695-915-11	TAB (CONTACT)		D853	8-719-302-43	DIODE EL1Z	
CN614	1-695-915-11	TAB (CONTACT)		D855	8-719-302-43	DIODE EL1Z	
CN615	1-695-915-11	TAB (CONTACT)		D857	8-719-908-03	DIODE GP08D	
CN851	1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P		D858	8-719-908-03	DIODE GP08D	
		<COMPOSITION CIRCUIT BLOCK>		D860	8-719-911-19	DIODE ISS119-25	
CP001	1-233-747-11	CIRCUIT BLOCK, COMPOSITION		D901	8-719-054-60	DIODE LNK0220022G	
CP002	1-233-749-11	CIRCUIT BLOCK, COMPOSITION		D1201	8-719-121-24	DIODE RD9.1ESL	
CP003	1-233-748-11	CIRCUIT BLOCK, COMPOSITION		D1202	8-719-121-24	DIODE RD9.1ESL	
CP004	1-233-750-11	CIRCUIT BLOCK, COMPOSITION		D1203	8-719-121-24	DIODE RD9.1ESL	
CP005	1-233-749-11	CIRCUIT BLOCK, COMPOSITION		D1207	8-719-121-24	DIODE RD9.1ESL	
		<TRIMMER>		D1208	8-719-121-24	DIODE RD9.1ESL	
CT55	1-404-801-11	TRAP, CERAMIC		D1504	8-719-911-19	DIODE ISS119-25	
		<DIODE>		D1505	8-719-109-81	DIODE RD4.7ESB2	
D001	8-719-109-81	DIODE RD4.7ESB2				<FUSE>	
D002	8-719-911-19	DIODE ISS119-25		F601	$\triangle$ 1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V	
D003	8-719-911-19	DIODE ISS119-25				<FERRITE BEAD>	
D005	8-719-109-84	DIODE RD5.1ESB1		FB101	1-410-397-21	FERRITE	1.1UH
D008	8-719-109-89	DIODE RD5.6ESB2		FB102	1-410-397-21	FERRITE	1.1UH
				FB251	1-410-397-21	FERRITE	1.1UH
				FB601	1-410-397-21	FERRITE	1.1UH
				FB603	1-410-397-21	FERRITE	1.1UH
				FB610	1-410-396-41	FERRITE	0.45UH
				FB612	1-410-397-21	FERRITE	1.1UH
				FB801	1-410-397-21	FERRITE	1.1UH

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

RM-883

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

**A** (KV-J21PF1)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
		<FUSE CLIP>		Q210	8-729-029-92	TRANSISTOR DTC143ESA	
FH01	1-533-223-11	CLIP, FUSE		Q301	8-729-029-66	TRANSISTOR DTC114ESA	
FH02	1-533-223-11	CLIP, FUSE		Q303	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<IC>		Q402	8-729-922-66	TRANSISTOR 2SC2410SN	
IC001	8-752-889-58	IC CXP85220A-055S		Q406	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC002	8-759-805-37	IC L78LR05D-MA		Q408	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC003	8-759-370-34	IC ST24C08FB6		Q409	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC004	8-742-041-12	HYB IC SBX1981-11(12)		Q414	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC102	8-759-157-40	IC UPC574J		Q561	8-729-200-17	TRANSISTOR 2SA1091-R	
IC203	8-759-339-60	IC TA8248K		Q801	8-729-140-50	TRANSISTOR 2SC3209LK	
IC300	8-759-365-26	IC TDA8375A		Q802	8-729-821-87	TRANSISTOR 2SD1878-CA	
IC351	8-759-288-85	IC TDA4665T-T		Q821	8-729-209-15	TRANSISTOR 2SD2012	
IC521	8-759-195-63	IC PQ09RE11		Q902	8-729-030-02	TRANSISTOR DTC144ESA	
IC551	8-759-801-98	IC LA7830		Q903	8-729-030-02	TRANSISTOR DTC144ESA	
IC601	8-749-014-00	IC STR-S6707N		Q1201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC602	8-749-921-89	IC SE115N		Q1202	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC603 $\Delta$	8-749-010-64	PHOTO COUPLER PC123F2		Q1203	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC801	8-759-145-58	IC UPC4558C		Q1204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
IC1210	8-759-145-58	IC UPC4558C		Q1207	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<JACK>		Q1208	8-729-119-78	TRANSISTOR 2SC2785-HFE	
J251	1-770-786-11	JACK		Q1209	8-729-119-78	TRANSISTOR 2SC2785-HFE	
J1201	1-770-661-11	JACK BLOCK, PIN 6P		Q1513	8-729-119-78	TRANSISTOR 2SC2785-HFE	
J1202	1-695-585-11	JACK BLOCK, PIN (L TYPE) 3P				<RESISTOR>	
		<COIL>		R007	1-247-855-31	CARBON	10K 5% 1/4W
L001	1-408-397-00	INDUCTOR	1UH	R008	1-220-958-81	METAL	1K 5% 1/2W
L002	1-410-509-51	INDUCTOR	10UH	R010	1-220-958-81	METAL	1K 5% 1/2W
L003	1-408-605-31	INDUCTOR	15UH	R012	1-249-401-11	CARBON	47 5% 1/4W
L101	1-410-470-11	INDUCTOR	10UH	R013	1-220-958-81	METAL	1K 5% 1/2W
L301	1-408-598-31	INDUCTOR	3.9UH	R015	1-247-825-31	CARBON	560 5% 1/4W
L401	1-410-498-11	INDUCTOR	1.2UH	R016	1-220-958-81	METAL	1K 5% 1/2W
L402	1-410-510-11	INDUCTOR	12UH	R017	1-220-961-81	METAL	2.2K 5% 1/2W
L406	1-410-507-11	INDUCTOR	6.8UH	R018	1-249-409-11	CARBON	220 5% 1/4W
L410	1-410-501-51	INDUCTOR	2.2UH	R019	1-247-883-00	CARBON	150K 5% 1/4W
L802	1-412-527-11	INDUCTOR	15UH	R021	1-247-847-31	CARBON	4.7K 5% 1/4W
L804	1-459-075-00	INDUCTOR	0UH	R025	1-220-961-81	METAL	2.2K 5% 1/2W
L805	1-459-769-13	COIL, HORIZONTAL LINEARITY		R026	1-220-961-81	METAL	2.2K 5% 1/2W
L807	1-459-390-00	INDUCTOR	0UH	R027	1-247-847-31	CARBON	4.7K 5% 1/4W
L808	1-412-553-11	INDUCTOR	3.3MMH	R028	1-247-807-31	CARBON	100 5% 1/4W
L821	1-459-111-00	INDUCTOR	0UH	R029	1-247-847-31	CARBON	4.7K 5% 1/4W
L850	1-408-947-00	INDUCTOR	2.2MMH	R031	1-220-958-81	METAL	1K 5% 1/2W
		<TRANSISTOR>		R033	1-220-958-81	METAL	1K 5% 1/2W
Q030	8-729-119-78	TRANSISTOR 2SC2785-HFE		R035	1-220-958-81	METAL	1K 5% 1/2W
Q108	8-729-119-78	TRANSISTOR 2SC2785-HFE		R036	1-220-958-81	METAL	1K 5% 1/2W
Q109	8-729-119-78	TRANSISTOR 2SC2785-HFE		R038	1-249-409-11	CARBON	220 5% 1/4W
Q110	8-729-119-78	TRANSISTOR 2SC2785-HFE		R040	1-249-409-11	CARBON	220 5% 1/4W
Q202	8-729-119-76	TRANSISTOR 2SA1175-HFE		R041	1-247-807-31	CARBON	100 5% 1/4W
Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE		R042	1-249-412-11	CARBON	390 5% 1/4W
Q208	8-729-030-02	TRANSISTOR DTC144ESA		R045	1-220-961-81	METAL	2.2K 5% 1/2W
Q209	8-729-029-92	TRANSISTOR DTC143ESA		R047	1-247-807-31	CARBON	100 5% 1/4W
				R048	1-247-807-31	CARBON	100 5% 1/4W
				R053	1-220-961-81	METAL	2.2K 5% 1/2W
				R054	1-247-855-31	CARBON	10K 5% 1/4W
				R057	1-220-958-81	METAL	1K 5% 1/2W
				R060	1-249-411-11	CARBON	330 5% 1/4W
				R061	1-220-961-81	METAL	2.2K 5% 1/2W



**A** (KV-J21PF1)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R062	1-220-961-81	METAL	2.2K 5% 1/2W	R322	1-249-434-11	CARBON	27K 5% 1/4W
R063	1-220-961-81	METAL	2.2K 5% 1/2W	R326	1-249-424-11	CARBON	3.9K 5% 1/4W
R065	1-249-409-11	CARBON	220 5% 1/4W	R330	1-247-825-31	CARBON	560 5% 1/4W
R066	1-249-409-11	CARBON	220 5% 1/4W	R331	1-247-897-11	CARBON	560K 5% 1/4W
R068	1-247-807-31	CARBON	100 5% 1/4W	R332	1-249-409-11	CARBON	220 5% 1/4W
R071	1-249-411-11	CARBON	330 5% 1/4W	R335	1-247-855-31	CARBON	10K 5% 1/4W
R076	1-247-807-31	CARBON	100 5% 1/4W	R336	1-220-961-81	METAL	2.2K 5% 1/2W
R077	1-247-807-31	CARBON	100 5% 1/4W	R339	1-215-408-00	METAL	300 1% 1/4W
R090	1-247-855-31	CARBON	10K 5% 1/4W	R340	1-249-411-11	CARBON	330 5% 1/4W
R101	1-247-847-31	CARBON	4.7K 5% 1/4W	R341	1-220-958-81	METAL	1K 5% 1/2W
R102	1-220-958-81	METAL	1K 5% 1/2W	R344	1-259-880-11	CARBON	2.2M 5% 1/4W
R113	1-249-433-11	CARBON	22K 5% 1/4W	R351	1-249-393-11	CARBON	10 5% 1/4W
R114	1-247-823-31	CARBON	470 5% 1/4W	R355	1-249-393-11	CARBON	10 5% 1/4W
R115	1-249-433-11	CARBON	22K 5% 1/4W	R356	1-220-958-81	METAL	1K 5% 1/2W
R116	1-249-433-11	CARBON	22K 5% 1/4W	R360	1-259-884-11	CARBON	4.7M 5% 1/4W
R117	1-249-433-11	CARBON	22K 5% 1/4W	R403	1-220-946-81	METAL	68 5% 1/2W
R118	1-249-433-11	CARBON	22K 5% 1/4W	R406	1-247-847-31	CARBON	4.7K 5% 1/4W
R119	1-220-960-81	METAL	1.8K 5% 1/2W	R407	1-249-424-11	CARBON	3.9K 5% 1/4W
R120	1-247-891-00	CARBON	330K 5% 1/4W	R408	1-220-960-81	METAL	1.8K 5% 1/2W
R131	1-216-464-11	METAL OXIDE	18K 5% 2W F	R409	1-247-807-31	CARBON	100 5% 1/4W
R180	1-249-409-11	CARBON	220 5% 1/4W	R414	1-247-823-31	CARBON	470 5% 1/4W
R181	1-249-409-11	CARBON	220 5% 1/4W	R416	1-249-409-11	CARBON	220 5% 1/4W
R182	1-249-409-11	CARBON	220 5% 1/4W	R419	1-220-958-81	METAL	1K 5% 1/2W
R240	1-249-410-11	CARBON	270 5% 1/4W	R420	1-249-412-11	CARBON	390 5% 1/4W
R242	1-249-410-11	CARBON	270 5% 1/4W	R421	1-249-409-11	CARBON	220 5% 1/4W
R243	1-247-855-31	CARBON	10K 5% 1/4W	R424	1-220-961-81	METAL	2.2K 5% 1/2W
R244	1-247-855-31	CARBON	10K 5% 1/4W	R425	1-249-412-11	CARBON	390 5% 1/4W
R245	1-249-426-11	CARBON	5.6K 5% 1/4W	R426	1-249-407-11	CARBON	150 5% 1/4W
R246	1-249-426-11	CARBON	5.6K 5% 1/4W	R429	1-249-412-11	CARBON	390 5% 1/4W
R247	1-220-959-81	METAL	1.5K 5% 1/2W	R433	1-249-433-11	CARBON	22K 5% 1/4W
R248	1-220-959-81	METAL	1.5K 5% 1/2W	R434	1-247-823-31	CARBON	470 5% 1/4W
R249	1-220-958-81	METAL	1K 5% 1/2W	R438	1-247-823-31	CARBON	470 5% 1/4W
R250	1-220-958-81	METAL	1K 5% 1/2W	R440	1-249-407-11	CARBON	150 5% 1/4W
R252	1-249-411-11	CARBON	330 5% 1/4W	R521	1-249-417-11	CARBON	1K 5% 1/4W
R253	1-247-855-31	CARBON	10K 5% 1/4W	R552	1-247-883-00	CARBON	150K 5% 1/4W
R254	1-249-389-11	CARBON	4.7 5% 1/4W	R553	1-249-433-11	CARBON	22K 5% 1/4W
R255	1-249-389-11	CARBON	4.7 5% 1/4W	R554	1-102-074-00	CERAMIC	0.001MF 10% 50V
R256	1-249-411-11	CARBON	330 5% 1/4W	R555	1-247-855-31	CARBON	10K 5% 1/4W
R264	1-249-431-11	CARBON	15K 5% 1/4W	R556	1-249-417-11	CARBON	1K 5% 1/4W
R265	1-249-431-11	CARBON	15K 5% 1/4W	R557	1-249-420-11	CARBON	1.8K 5% 1/4W
R266	1-249-437-11	CARBON	47K 5% 1/4W	R561	1-247-839-31	CARBON	2.2K 5% 1/4W
R303	1-247-807-31	CARBON	100 5% 1/4W	R562	1-249-419-11	CARBON	1.5K 5% 1/4W F
R304	1-247-807-31	CARBON	100 5% 1/4W	R563	1-260-126-11	CARBON	180K 5% 1/2W
R305	1-247-807-31	CARBON	100 5% 1/4W	R564	1-249-438-11	CARBON	56K 5% 1/4W
R306	1-247-807-31	CARBON	100 5% 1/4W	R565	1-249-438-11	CARBON	56K 5% 1/4W
R307	1-247-807-31	CARBON	100 5% 1/4W	R566	1-247-847-31	CARBON	4.7K 5% 1/4W
R308	1-249-409-11	CARBON	220 5% 1/4W	R569	1-260-354-71	CARBON	150K 5% 1/2W
R309	1-249-409-11	CARBON	220 5% 1/4W	R571	1-249-409-11	CARBON	220 5% 1/4W
R310	1-249-441-11	CARBON	100K 5% 1/4W	R601	1-202-961-11	CEMENTED	1.8 5% 10W
R311	1-249-430-11	CARBON	12K 5% 1/4W	R602	1-202-961-11	CEMENTED	1.8 5% 10W
R312	1-247-807-31	CARBON	100 5% 1/4W	R606	1-215-915-11	METAL OXIDE	470 5% 3W F
R313	1-220-963-81	METAL	3.3K 5% 1/2W	R610	1-215-924-00	METAL OXIDE	15K 5% 3W F
R318	1-220-978-81	METAL	120K 5% 1/2W	R611	1-202-933-61	FUSIBLE	0.1 10% 1/2W F
R319	1-259-877-11	CARBON	1.2M 5% 1/4W	R612	1-249-377-11	CARBON	0.47 5% 1/4W F
R320	1-249-434-11	CARBON	27K 5% 1/4W	R613	1-249-377-11	CARBON	0.47 5% 1/4W F
R321	1-215-459-00	METAL	39K 1% 1/4W	R614	1-215-877-11	METAL OXIDE	22K 5% 1W F
				R615	1-249-401-11	CARBON	47 5% 1/4W

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

RM-883

**A (KV-J21PF1)**

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

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R616	1-247-289-00	CARBON	8.2M 5%	1W	R911	1-249-428-11	CARBON 8.2K 5%
R617	1-215-924-00	METAL OXIDE	15K 5%	3W F	R913	1-247-823-31	CARBON 470 5%
R618	1-249-377-11	CARBON	0.47 5%	1/4W F	R914	1-247-823-31	CARBON 470 5%
R619	1-249-377-11	CARBON	0.47 5%	1/4W F	R915	1-249-428-11	CARBON 8.2K 5%
R622	1-217-192-21	METAL	0.22 10%	2W	R1201	1-249-404-00	CARBON 82 5%
R623	1-247-807-31	CARBON	100 5%	1/4W	R1202	1-220-958-81	METAL 1K 5%
R624	1-216-446-00	METAL OXIDE	18 5%	2W F	R1203	1-249-437-11	CARBON 47K 5%
R625	1-249-424-11	CARBON	3.9K 5%	1/4W	R1204	1-249-437-11	CARBON 47K 5%
R626	1-249-420-11	CARBON	1.8K 5%	1/4W	R1205	1-249-404-00	CARBON 82 5%
R627	1-249-417-11	CARBON	1K 5%	1/4W	R1206	1-249-437-11	CARBON 47K 5%
R628	1-249-417-11	CARBON	1K 5%	1/4W	R1207	1-249-437-11	CARBON 47K 5%
R629	1-249-399-11	CARBON	33 5%	1/4W	R1211	1-220-946-81	METAL 68 5%
R632	1-249-381-11	CARBON	1 5%	1/4W	R1212	1-220-958-81	METAL 1K 5%
R636	1-215-924-00	METAL OXIDE	15K 5%	3W F	R1213	1-220-958-81	METAL 1K 5%
R801	1-215-920-11	METAL OXIDE	3.3K 5%	3W F	R1214	1-247-895-00	CARBON 470K 5%
R802	1-249-385-11	CARBON	2.2 5%	1/4W F	R1215	1-247-895-00	CARBON 470K 5%
R803	1-247-839-31	CARBON	2.2K 5%	1/4W	R1216	1-247-895-00	CARBON 470K 5%
R804	1-249-417-11	CARBON	1K 5%	1/4W	R1217	1-247-823-31	CARBON 470 5%
R805	1-249-433-11	CARBON	22K 5%	1/4W	R1219	1-247-855-31	CARBON 10K 5%
R809	1-247-756-11	CARBON	2.2K 5%	1/2W F	R1220	1-220-958-81	METAL 1K 5%
R811	1-216-343-00	METAL OXIDE	0.33 5%	1W F	R1221	1-247-855-31	CARBON 10K 5%
R812	1-215-447-00	METAL	12K 1%	1/4W	R1226	1-220-964-81	METAL 39K 5%
R816	1-249-435-11	CARBON	33K 5%	1/4W	R1227	1-220-964-81	METAL 39K 5%
R820	1-249-419-11	CARBON	1.5K 5%	1/4W	R1228	1-220-958-81	METAL 1K 5%
R821	1-215-911-11	METAL OXIDE	100 5%	3W F	R1229	1-247-823-31	CARBON 470 5%
R822	1-216-429-00	METAL OXIDE	270 5%	1W F	R1230	1-247-855-31	CARBON 10K 5%
R823	1-249-931-11	CARBON	2.2K 5%	1/4W F	R1231	1-220-958-81	METAL 1K 5%
R825	1-249-392-11	CARBON	8.2 5%	1/4W F	R1232	1-249-424-11	CARBON 3.9K 5%
R826	1-249-422-11	CARBON	2.7K 5%	1/4W	R1233	1-220-961-81	METAL 2.2K 5%
R827	1-249-440-11	CARBON	82K 5%	1/4W	R1234	1-220-964-81	METAL 39K 5%
R828	1-249-424-11	CARBON	3.9K 5%	1/4W	R1235	1-220-964-81	METAL 39K 5%
R829	1-249-419-11	CARBON	1.5K 5%	1/4W	R1239	1-249-389-11	CARBON 4.7 5%
R831	1-215-863-11	METAL OXIDE	100 5%	1W F	R1240	1-247-807-31	CARBON 100 5%
R832	1-247-839-31	CARBON	2.2K 5%	1/4W	R1241	1-220-958-81	METAL 1K 5%
R834	1-247-855-31	CARBON	10K 5%	1/4W	R1243	1-247-807-31	CARBON 100 5%
R851	1-249-382-11	CARBON	1.2 5%	1/4W F	R1246	1-249-411-11	CARBON 330 5%
R852	1-249-923-11	CARBON	1K 5%	1/4W F	R1247	1-247-823-31	CARBON 470 5%
R853	1-249-377-11	CARBON	0.47 5%	1/4W F	R1248	1-220-958-81	METAL 1K 5%
R854	1-249-377-11	CARBON	0.47 5%	1/4W F	R1249	1-247-823-31	CARBON 470 5%
R855	1-202-818-00	SOLID	1K 20%	1/2W	R1250	1-247-901-11	CARBON 820K 5%
R856	1-247-855-31	CARBON	10K 5%	1/4W	R1251	1-247-901-11	CARBON 820K 5%
R857	1-249-438-11	CARBON	56K 5%	1/4W	R1252	1-220-961-81	METAL 2.2K 5%
R858	1-216-370-11	METAL OXIDE	1.2 5%	2W F	R1253	1-249-418-11	CARBON 1.2K 5%
R860	1-247-887-00	CARBON	220K 5%	1/4W	R1513	1-247-855-31	CARBON 10K 5%
R881	1-247-825-31	CARBON	560 5%	1/4W	R1514	1-247-847-31	CARBON 4.7K 5%
R882	1-249-422-11	CARBON	2.7K 5%	1/4W	R1515	1-247-807-31	CARBON 100 5%
R883	1-247-903-00	CARBON	1M 5%	1/4W			
R895	1-216-349-00	METAL OXIDE	1 5%	1W F			
R898	1-247-839-31	CARBON	2.2K 5%	1/4W			
R902	1-247-847-31	CARBON	4.7K 5%	1/4W			
R904	1-247-847-31	CARBON	4.7K 5%	1/4W			
R905	1-220-958-81	METAL	1K 5%	1/2W			
R906	1-220-958-81	METAL	1K 5%	1/2W			
R907	1-220-960-81	METAL	1.8K 5%	1/2W			
R908	1-220-960-81	METAL	1.8K 5%	1/2W			
R909	1-220-963-81	METAL	3.3K 5%	1/2W			
R910	1-220-963-81	METAL	3.3K 5%	1/2W			
						<SWITCH>	
					S601 $\Delta$ 1-571-433-31	SWITCH, PUSH (AC POWER)	
					S801 1-572-707-11	SWITCH, LEVER	
					S901 1-570-577-41	SWITCH, PUSH	
					S902 1-570-577-41	SWITCH, PUSH	
					S903 1-570-577-41	SWITCH, PUSH	
					S904 1-570-577-41	SWITCH, PUSH	
					S905 1-570-577-41	SWITCH, PUSH	

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

**A** (KV-J21PF1)

**A3** (KV-J21MN1AK only)

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<SPARK GAP>	
SG801	1-519-422-11	GAP, SPARK	
		<SURFACE WAVE FILTER>	
SWF401	1-577-169-12	SAWF	
		<TRANSFORMER>	
T601	$\Delta$ 1-429-137-21	TRANSFORMER, CONVERTER (SRT)	
T605	$\Delta$ 1-431-383-21	TRANSFORMER, LINE FILTER	
T801	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
T851	$\Delta$ 1-453-193-21	TRANSFORMER ASSY, FLYBACK	
		<THERMISTOR>	
THP601	$\Delta$ 1-808-059-31	THERMISTOR, POSITIVE	
		<TUNER>	
TU101	$\Delta$ 8-598-323-30	TUNER, VSS BT-AG401	
		<CRYSTAL>	
X101	1-577-082-11	VIBRATOR, CERAMIC	
X300	1-411-752-11	COIL	
X358	1-567-505-11	OSCILLATOR, CRYSTAL	
X443	1-567-504-11	OSCILLATOR, CRYSTAL	
*****			
A-1298-553-A	A3 BOARD, COMPLETE (KV-J21MN1AK ONLY) *****		
		<CAPACITOR>	
C1201	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1202	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1205	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1206	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1207	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1208	1-163-083-00	CERAMIC CHIP 1PF	0.25PF 50V
C1209	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C1210	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1211	1-124-584-00	ELECT 100MF	20% 10V
C1212	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1213	1-126-151-11	ELECT 4.7MF	20% 16V
C1214	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1215	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1216	1-125-798-51	ELECT 0.47MF	20% 63V
C1217	1-163-033-91	CERAMIC CHIP 0.022MF	50V
C1218	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1219	1-124-584-00	ELECT 100MF	20% 10V
C1221	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V

REF. NO.	PART NO.	DESCRIPTION	REMARK
C1222	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1223	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1224	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1225	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C1226	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1227	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C1228	1-163-131-00	CERAMIC CHIP 390PF	5% 50V
C1229	1-126-157-11	ELECT 10MF	20% 16V
C1230	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1231	1-126-157-11	ELECT 10MF	20% 16V
C1232	1-124-234-00	ELECT 22MF	20% 16V
C1233	1-126-962-11	ELECT 3.3MF	20% 50V
C1234	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1235	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C1236	1-163-005-11	CERAMIC CHIP 470PF	10% 50V
C1237	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1238	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1239	1-126-157-11	ELECT 10MF	20% 16V
C1240	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C1241	1-125-794-51	ELECT 47MF	20% 16V
C1242	1-104-760-11	CERAMIC CHIP 0.047MF	10% 50V
C1243	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1244	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1245	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C1246	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C1247	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C1248	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1250	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1252	1-216-295-91	SHORT 0	
C1253	1-216-295-91	SHORT 0	
C1254	1-124-234-00	ELECT 22MF	20% 16V
C1255	1-124-584-00	ELECT 100MF	20% 10V
C1256	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1257	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C1258	1-163-033-91	CERAMIC CHIP 0.022MF	50V
C1260	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1261	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1262	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1263	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C1264	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C1265	1-124-234-00	ELECT 22MF	20% 16V
C1266	1-125-794-51	ELECT 47MF	20% 16V
C1267	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1268	1-124-584-00	ELECT 100MF	20% 10V
		<CONNECTOR>	
CN1201	1-691-109-11	PLUG (L TYPE) 12P	
		<DIODE>	
D1201	8-719-908-03	DIODE GP08D	
		<FERRITE BEAD>	
FB1201	1-412-911-31	FERRITE 0UH	
FB1202	1-412-911-31	FERRITE 0UH	



**A3** (KV-J21MN1AK only)

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
FB1203	1-412-911-31	FERRITE	0UH	R1207	1-216-053-00	RES,CHIP	1.5K 5% 1/10W
FB1204	1-412-911-31	FERRITE	0UH	R1209	1-216-035-00	RES,CHIP	270 5% 1/10W
FB1205	1-412-911-31	FERRITE	0UH	R1210	1-216-041-00	RES,CHIP	470 5% 1/10W
				R1211	1-216-015-00	RES,CHIP	39 5% 1/10W
FB1206	1-412-911-31	FERRITE	0UH	R1212	1-216-097-91	RES,CHIP	100K 5% 1/10W
		<FILTER>		R1213	1-216-097-91	RES,CHIP	100K 5% 1/10W
FL1201	1-239-803-11	ENCAPSULATED COMPONENT		R1214	1-216-033-00	RES,CHIP	220 5% 1/10W
		<IC>		R1217	1-216-073-00	RES,CHIP	10K 5% 1/10W
IC1201	8-752-059-57	IC CXA1110BS		R1218	1-216-049-91	RES,CHIP	1K 5% 1/10W
IC1202	8-759-429-98	IC MSP3410B-PP-F7		R1219	1-216-047-91	RES,CHIP	820 5% 1/10W
IC1203	8-759-231-53	IC TA7805S		R1220	1-216-049-91	RES,CHIP	1K 5% 1/10W
		<CHIP CONDUCTOR>		R1223	1-216-051-00	RES,CHIP	1.2K 5% 1/10W
JR1	1-216-295-91	SHORT	0	R1224	1-216-059-00	RES,CHIP	2.7K 5% 1/10W
JR2	1-216-295-91	SHORT	0	R1225	1-216-059-00	RES,CHIP	2.7K 5% 1/10W
JR3	1-216-295-91	SHORT	0	R1226	1-216-295-91	SHORT	0
JR4	1-216-295-91	SHORT	0				
JR5	1-216-295-91	SHORT	0	R1227	1-216-295-91	SHORT	0
JR6	1-216-295-91	SHORT	0	R1228	1-216-049-91	RES,CHIP	1K 5% 1/10W
JR7	1-216-295-91	SHORT	0	R1229	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
JR8	1-216-295-91	SHORT	0	R1230	1-216-069-00	RES,CHIP	6.8K 5% 1/10W
JR9	1-216-295-91	SHORT	0	R1231	1-216-049-91	RES,CHIP	1K 5% 1/10W
JR10	1-216-295-91	SHORT	0				
JR11	1-216-295-91	SHORT	0	R1232	1-216-027-00	RES,CHIP	120 5% 1/10W
		<COIL>		R1233	1-216-045-00	RES,CHIP	680 5% 1/10W
L1201	1-408-399-00	INDUCTOR	1.5UH	R1234	1-216-045-00	RES,CHIP	680 5% 1/10W
L1202	1-412-010-41	INDUCTOR CHIP	22UH	R1240	1-216-041-00	RES,CHIP	470 5% 1/10W
L1203	1-408-602-11	INDUCTOR	8.2UH	R1241	1-216-075-00	RES,CHIP	12K 5% 1/10W
L1204	1-408-591-11	INDUCTOR	1UH				
L1205	1-408-602-11	INDUCTOR	8.2UH	R1242	1-216-027-00	RES,CHIP	120 5% 1/10W
				R1243	1-216-037-00	RES,CHIP	330 5% 1/10W
L1206	1-412-951-11	INDUCTOR	10UH	R1244	1-216-059-00	RES,CHIP	2.7K 5% 1/10W
L1207	1-412-951-11	INDUCTOR	10UH	R1245	1-216-057-00	RES,CHIP	2.2K 5% 1/10W
		<TRANSISTOR>		R1246	1-260-306-51	CARBON	15 5% 1/2W
Q1201	8-729-230-49	TRANSISTOR 2SC2712-YG				<SWITCH>	
Q1203	8-729-266-92	TRANSISTOR 2SC2669-O		SW1201	1-579-560-11	FILTER, SAWTOOTH WAVE	
Q1205	8-729-216-22	TRANSISTOR 2SA1162-G		SW1202	1-579-559-11	FILTER, SAWTOOTH WAVE	
Q1206	8-729-216-22	TRANSISTOR 2SA1162-G				<TRANSFORMER>	
Q1207	8-729-230-49	TRANSISTOR 2SC2712-YG		T1202	1-416-000-11	COIL	
						<CRYSTAL>	
Q1211	8-729-230-49	TRANSISTOR 2SC2712-YG		X1201	1-760-094-11	VIBRATOR, CRYSTAL	
Q1212	8-729-230-49	TRANSISTOR 2SC2712-YG					
		<RESISTOR>					
R1201	1-216-022-00	RES,CHIP	75 5% 1/10W				
R1202	1-216-085-00	RES,CHIP	33K 5% 1/10W				
R1203	1-216-081-00	RES,CHIP	22K 5% 1/10W				
R1204	1-216-035-00	RES,CHIP	270 5% 1/10W				
R1205	1-216-027-00	RES,CHIP	120 5% 1/10W				

**A11**

**A12 (Except for  
KV-J21MF3)**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1294-197-A	A11 BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK)	*****		Q411	8-729-119-78	TRANSISTOR 2SC2785-HFE	
* A-1293-714-A	A11 BOARD, COMPLETE (KV-J21MF3)	*****		Q412	8-729-119-78	TRANSISTOR 2SC2785-HFE	
<CAPACITOR>				<RESISTOR>			
C409	1-101-880-00	CERAMIC	47PF 5% 50V	R414	1-247-823-31	CARBON	470 5% 1/4W
C411	1-101-888-00	CERAMIC	68PF 5% 50V	R415	1-249-409-11	CARBON	220 5% 1/4W
C412	1-101-888-00	CERAMIC	68PF 5% 50V	R417	1-249-409-11	CARBON	220 5% 1/4W
C414	1-102-973-00	CERAMIC	100PF 5% 50V	R418	1-249-415-11	CARBON	680 5% 1/4W
C416	1-102-973-00	CERAMIC	100PF 5% 50V	R422	1-247-809-31	CARBON	120 5% 1/4W
C417	1-102-973-00	CERAMIC	100PF 5% 50V	R423	1-249-407-11	CARBON	150 5% 1/4W
C418	1-102-820-00	CERAMIC	330PF 5% 50V	R427	1-249-411-11	CARBON	330 5% 1/4W
C419	1-102-973-00	CERAMIC	100PF 5% 50V	R428	1-249-433-11	CARBON	22K 5% 1/4W
C422	1-102-820-00	CERAMIC	330PF 5% 50V	R430	1-247-823-31	CARBON	470 5% 1/4W
C424	1-102-824-00	CERAMIC	470PF 5% 50V	R431	1-249-433-11	CARBON	22K 5% 1/4W
<FILTER>				R432	1-247-823-31	CARBON	470 5% 1/4W
CF45	1-767-220-11	FILTER, CERAMIC		R435	1-247-823-31	CARBON	470 5% 1/4W
CF60	1-567-100-00	FILTER, CERAMIC		R436	1-249-433-11	CARBON	22K 5% 1/4W
CF65	1-567-101-11	FILTER, CERAMIC		R437	1-249-433-11	CARBON	22K 5% 1/4W
<CONNECTOR>				*****			
CN401	* 1-778-603-11	PIN, CONNECTOR (PC BOARD) 12P		* A-1294-182-A	A12 BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK/J21PF1)	*****	
<TRIMMER>				<CAPACITOR>			
CT45	1-579-690-11	TRAP, CERAMIC		C201	1-125-799-51	ELECT	1MF 20% 63V
CT60	1-409-429-11	TRAP, CERAMIC		C202	1-125-804-51	ELECT	100MF 20% 16V
CT65	1-409-327-00	TRAP, CERAMIC (6.5MHZ)		C203	1-125-799-51	ELECT	1MF 20% 63V
<DIODE>				C204	1-125-804-51	ELECT	100MF 20% 16V
D402	8-719-911-19	DIODE 1SS119-25		C205	1-136-159-00	FILM	0.033MF 5% 50V
<IC>				C206	1-130-480-00	MYLAR	0.0056MF 5% 50V
IC401	8-759-800-65	IC LA7910		C207	1-125-800-51	ELECT	2.2MF 20% 63V
<COIL>				C208	1-125-800-51	ELECT	2.2MF 20% 63V
L403	1-410-510-11	INDUCTOR	12UH	C209	1-130-480-00	MYLAR	0.0056MF 5% 50V
L404	1-410-508-11	INDUCTOR	8.2UH	C210	1-136-159-00	FILM	0.033MF 5% 50V
L405	1-410-508-11	INDUCTOR	8.2UH	C211	1-136-165-00	FILM	0.1MF 5% 50V
L407	1-410-511-11	INDUCTOR	15UH	C1212	1-125-799-51	ELECT	1MF 20% 63V
L408	1-410-500-11	INDUCTOR	1.8UH	C1219	1-125-804-51	ELECT	100MF 20% 16V
L409	1-410-501-51	INDUCTOR	2.2UH	C1222	1-136-173-00	FILM	0.47MF 5% 50V
L411	1-410-502-11	INDUCTOR	2.7UH	C1223	1-125-799-51	ELECT	1MF 20% 63V
<TRANSISTOR>				C1225	1-136-173-00	FILM	0.47MF 5% 50V
Q405	8-729-119-76	TRANSISTOR 2SA1175-HFE		C1228	1-125-799-51	ELECT	1MF 20% 63V
Q407	8-729-119-76	TRANSISTOR 2SA1175-HFE		CN1211	* 1-778-603-11	PIN, CONNECTOR (PC BOARD) 12P	
Q410	8-729-119-76	TRANSISTOR 2SA1175-HFE		CN1212	* 1-778-603-11	PIN, CONNECTOR (PC BOARD) 12P	

**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

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**A12 (Except for KV-J21MF3)**

**A12 (KV-J21MF3)**

**C**

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D1209	8-719-121-24	DIODE RD9.1ESL	
		<IC>	
IC201	8-759-090-21	IC TDA8424	
IC202	8-759-708-12	IC NJM78L12A	
IC1211	8-759-711-23	IC NJM2234L	
IC1212	8-759-711-23	IC NJM2234L	
		<TRANSISTOR>	
Q1205	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<RESISTOR>	
R203	1-220-951-31	METAL 220 5% 1/2W	
R204	1-220-951-31	METAL 220 5% 1/2W	
R1222	1-220-958-31	METAL 1K 5% 1/2W	
R1223	1-220-969-31	METAL 10K 5% 1/2W	
R1224	1-220-969-31	METAL 10K 5% 1/2W	
R1242	1-220-958-31	METAL 1K 5% 1/2W	
R1244	1-220-948-31	METAL 100 5% 1/2W	
*****			
* A-1294-149-A	A12 BOARD, COMPLETE (KV-J21MF3) *****		
		<CAPACITOR>	
C201	1-126-960-11	ELECT 1MF 20% 50V	
C202	1-126-933-11	ELECT 100MF 20% 16V	
C203	1-126-960-11	ELECT 1MF 20% 50V	
C204	1-126-933-11	ELECT 100MF 20% 16V	
C205	1-136-159-00	FILM 0.033MF 5% 50V	
C206	1-130-480-00	MYLAR 0.0056MF 5% 50V	
C207	1-126-961-11	ELECT 2.2MF 20% 50V	
C208	1-126-961-11	ELECT 2.2MF 20% 50V	
C209	1-130-480-00	MYLAR 0.0056MF 5% 50V	
C210	1-136-159-00	FILM 0.033MF 5% 50V	
C211	1-136-165-00	FILM 0.1MF 5% 50V	
C1212	1-126-960-11	ELECT 1MF 20% 50V	
C1219	1-126-933-11	ELECT 100MF 20% 16V	
C1222	1-136-173-00	FILM 0.47MF 5% 50V	
C1223	1-126-960-11	ELECT 1MF 20% 50V	
C1225	1-136-173-00	FILM 0.47MF 5% 50V	
C1228	1-126-960-11	ELECT 1MF 20% 50V	
		<CONNECTOR>	
CN1211*	1-778-603-11	PIN, CONNECTOR (PC BOARD) 12P	
CN1212*	1-778-603-11	PIN, CONNECTOR (PC BOARD) 12P	

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D1209	8-719-121-24	DIODE RD9.1ESL	
		<IC>	
IC201	8-759-090-21	IC TDA8424	
IC202	8-759-708-12	IC NJM78L12A	
IC1211	8-759-711-23	IC NJM2234L	
IC1212	8-759-711-23	IC NJM2234L	
		<TRANSISTOR>	
Q1205	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<RESISTOR>	
R203	1-249-409-11	CARBON 220 5% 1/4W	
R204	1-249-409-11	CARBON 220 5% 1/4W	
R1222	1-249-417-11	CARBON 1K 5% 1/4W	
R1223	1-247-855-31	CARBON 10K 5% 1/4W	
R1224	1-247-855-31	CARBON 10K 5% 1/4W	
R1242	1-249-417-11	CARBON 1K 5% 1/4W	
R1244	1-247-807-31	CARBON 100 5% 1/4W	
*****			
* A-1331-799-A	C BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK/J21PF1) *****		
* A-1331-697-A	C BOARD, COMPLETE (KV-J21MF3) *****		
4-382-854-11	SCREW (M3X10), P, SW (+)		
		<CAPACITOR>	
C701	1-162-114-00	CERAMIC 0.0047MF 2KV	
C702	1-102-074-00	CERAMIC 0.001MF 10% 50V	
C703	1-107-651-11	ELECT 4.7MF 20% 250V	
C704	1-130-202-00	FILM 0.022MF 5% 400V	
C708	1-102-114-00	CERAMIC 470PF 10% 50V	
C709	1-102-114-00	CERAMIC 470PF 10% 50V	
C710	1-102-114-00	CERAMIC 470PF 10% 50V	
C712	1-102-115-00	CERAMIC 560PF 10% 50V	
C713	1-102-115-00	CERAMIC 560PF 10% 50V	
C714	1-102-115-00	CERAMIC 560PF 10% 50V	
C716	1-124-122-11	ELECT 100MF 20% 50V (KV-J21MF1AK/J21MN1AK/J21PF1)	
C716	1-126-968-11	ELECT 100MF 20% 50V (KV-J21MF3)	
C736	1-102-114-00	CERAMIC 470PF 10% 50V	
C737	1-102-114-00	CERAMIC 470PF 10% 50V	
C746	1-102-114-00	CERAMIC 470PF 10% 50V	



**KV-J21MF1AK/J21MF3**  
**KV-J21MN1AK/J21PF1**

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**K (KV-J21MF1AK)**  
**(KV-J21MN1AK)**

**K1 (KV-J21MF1AK)**  
**(KV-J21MN1AK)**

**VM (KV-J21MF1AK)**  
**(KV-J21MN1AK)**

REF. NO.	PART NO.	DESCRIPTION	REMARK
C1527	1-136-165-00	FILM 0.1MF 5%	50V
C1528	1-126-953-11	ELECT 2200MF 20%	35V
C1529	1-126-953-11	ELECT 2200MF 20%	35V
<CONNECTOR>			
CN1501*	1-564-508-11	PLUG, CONNECTOR 5P	
CN1502*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1503*	1-564-506-11	PLUG, CONNECTOR 3P	
CN1504	1-564-506-11	PLUG, CONNECTOR 3P	
<DIODE>			
D1501	8-719-911-19	DIODE 1SS119-25	
D1502	8-719-110-72	DIODE RD30ESB2	
D1503	8-719-110-72	DIODE RD30ESB2	
<IC>			
IC1501	8-759-980-43	IC TDA2009A	
<IC LINK>			
PS1501	1-532-984-11	LINK, IC 2A/90V	
<TRANSISTOR>			
Q1503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1504	8-729-202-67	TRANSISTOR 2SK246-GR3	
<RESISTOR>			
R1501	1-249-385-11	CARBON 2.2 5%	1/4W
R1502	1-249-385-11	CARBON 2.2 5%	1/4W
R1503	1-220-958-81	METAL 1K 5%	1/2W
R1504	1-220-961-81	METAL 2.2K 5%	1/2W
R1505	1-249-400-11	CARBON 39 5%	1/4W
R1506	1-249-400-11	CARBON 39 5%	1/4W
R1512	1-247-855-31	CARBON 10K 5%	1/4W
R1516	1-247-855-31	CARBON 10K 5%	1/4W
R1517	1-249-401-11	CARBON 47 5%	1/4W
R1518	1-247-825-31	CARBON 560 5%	1/4W
R1521	1-249-432-11	CARBON 18K 5%	1/4W
R1522	1-247-847-31	CARBON 4.7K 5%	1/4W
R1523	1-220-961-81	METAL 2.2K 5%	1/2W
R1524	1-249-438-11	CARBON 56K 5%	1/4W
R1525	1-249-398-11	CARBON 27 5%	1/4W
R1526	1-220-959-81	METAL 1.5K 5%	1/2W
R1528	1-220-959-81	METAL 1.5K 5%	1/2W
R1534	1-216-388-11	METAL OXIDE 0.82 5%	3W F

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REF. NO.	PART NO.	DESCRIPTION	REMARK
	* A-1380-581-A	K1 BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK ONLY)	*****
<CONNECTOR>			
CN3251*	1-564-506-11	PLUG, CONNECTOR 3P	
<JACK>			
J3251	1-536-707-21	TERMINAL, PUSH (2P)	
*****			
	* A-1342-422-A	VM BOARD, COMPLETE (KV-J21MF1AK/J21MN1AK)	*****
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<CAPACITOR>			
C1722	1-102-115-00	CERAMIC 560PF 10%	50V
C1724	1-102-961-00	CERAMIC 27PF 5%	50V
C1751	1-136-153-00	FILM 0.01MF 5%	50V
C1761	1-161-830-00	CERAMIC 0.0047MF 99%	500V
C1763	1-107-638-11	ELECT 33MF 20%	160V
C1764	1-125-804-51	ELECT 100MF 20%	16V
C1768	1-107-368-11	MYLAR 0.047MF 99%	200V
C1769	1-107-667-11	ELECT 2.2MF 20%	160V
C1770	1-104-999-11	MYLAR 0.1MF 10%	200V
C1771	1-125-797-51	ELECT 10MF 20%	50V
C1772	1-125-804-51	ELECT 100MF 20%	16V
C1773	1-107-368-11	MYLAR 0.047MF 99%	200V
C1775	1-125-804-51	ELECT 100MF 20%	16V
C1776	1-125-797-51	ELECT 10MF 20%	50V
C1778	1-130-471-51	MYLAR 0.001MF 5%	50V
C1779	1-130-471-51	MYLAR 0.001MF 5%	50V
C1780	1-125-797-51	ELECT 10MF 20%	50V
<CONNECTOR>			
CN1701	1-564-511-11	PLUG, CONNECTOR 8P	
<DIODE>			
D1761	8-719-911-19	DIODE 1SS119-25	
D1763	8-719-911-19	DIODE 1SS119-25	
D1764	8-719-911-19	DIODE 1SS119-25	
D1767	8-719-110-88	DIODE RD39ESB2	
D1768	8-719-110-88	DIODE RD39ESB2	
<COIL>			
L1721	1-414-191-11	INDUCTOR 150UH	
L1722	1-408-621-31	INDUCTOR 330UH	

**VM (KV-J21MF1AK)**  
**VM (KV-J21MN1AK)**

**VM (KV-J21MF3)**

REF. NO.	PART NO.	DESCRIPTION	REMARK
L1723	1-414-182-11	INDUCTOR 6.8UH	
L1761	1-410-478-11	INDUCTOR 47UH	
L1762	1-408-610-31	INDUCTOR 39UH	
<TRANSISTOR>			
Q1722	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1723	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1756	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1761	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1762	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1763	8-729-017-05	TRANSISTOR 2SA1837	
Q1764	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1765	8-729-017-06	TRANSISTOR 2SC4793	
Q1766	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1767	8-729-142-86	TRANSISTOR 2SC3733	
Q1777	8-729-326-11	TRANSISTOR 2SC2611	
<RESISTOR>			
R1721	1-247-825-31	CARBON 560 5% 1/4W	
R1722	1-249-412-11	CARBON 390 5% 1/4W	
R1723	1-249-407-11	CARBON 150 5% 1/4W	
R1724	1-249-407-11	CARBON 150 5% 1/4W	
R1725	1-249-412-11	CARBON 390 5% 1/4W	
R1727	1-220-963-81	METAL 3.3K 5% 1/2W	
R1728	1-247-855-31	CARBON 10K 5% 1/4W	
R1732	1-125-797-51	ELECT 10MF 20% 50V	
R1736	1-220-959-81	METAL 1.5K 5% 1/2W	
R1753	1-249-434-11	CARBON 27K 5% 1/4W	
R1762	1-249-409-11	CARBON 220 5% 1/4W	
R1764	1-247-734-11	CARBON 39 5% 1/2W F	
R1765	1-249-414-11	CARBON 560 5% 1/4W F	
R1766	1-249-418-11	CARBON 1.2K 5% 1/4W	
R1768	1-220-961-81	METAL 2.2K 5% 1/2W	
R1769	1-249-384-11	CARBON 1.8 5% 1/4W F	
R1770	1-249-435-11	CARBON 33K 5% 1/4W	
R1772	1-249-432-11	CARBON 18K 5% 1/4W	
R1774	1-215-912-11	METAL OXIDE 150 5% 3W F	
R1775	1-249-417-11	CARBON 1K 5% 1/4W F	
R1776	1-249-432-11	CARBON 18K 5% 1/4W	
R1777	1-249-438-11	CARBON 56K 5% 1/4W	
R1778	1-249-430-11	CARBON 12K 5% 1/4W	
R1779	1-247-825-31	CARBON 560 5% 1/4W	
R1780	1-249-418-11	CARBON 1.2K 5% 1/4W	
R1781	1-249-410-11	CARBON 270 5% 1/4W	
R1782	1-249-384-11	CARBON 1.8 5% 1/4W F	
R1784	1-247-807-31	CARBON 100 5% 1/4W	
R1785	1-249-400-11	CARBON 39 5% 1/4W F	
R1786	1-249-435-11	CARBON 33K 5% 1/4W	
R1787	1-249-428-11	CARBON 8.2K 5% 1/4W	
R1788	1-220-959-81	METAL 1.5K 5% 1/2W	
R1789	1-247-823-31	CARBON 470 5% 1/4W	
R1790	1-216-451-11	METAL OXIDE 120 5% 2W F	
R1791	1-249-411-11	CARBON 330 5% 1/4W	

REF. NO.	PART NO.	DESCRIPTION	REMARK
R1812	1-247-847-31	CARBON 4.7K 5% 1/4W	
R1851	1-249-393-11	CARBON 10 5% 1/4W	
*****			
	* A-1342-403-A	VM BOARD, COMPLETE (KV-J21MF3)	
		*****	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
<CAPACITOR>			
C1722	1-102-115-00	CERAMIC 560PF 10% 50V	
C1724	1-102-961-00	CERAMIC 27PF 5% 50V	
C1751	1-136-153-00	FILM 0.01MF 5% 50V	
C1761	1-161-830-00	CERAMIC 0.0047MF 99% 500V	
C1763	1-107-638-11	ELECT 33MF 20% 160V	
C1764	1-126-933-11	ELECT 100MF 20% 16V	
C1768	1-107-368-11	MYLAR 0.047MF 99% 200V	
C1769	1-107-667-11	ELECT 2.2MF 20% 160V	
C1770	1-104-999-11	MYLAR 0.1MF 10% 200V	
C1771	1-126-964-51	ELECT 10MF 20% 50V	
C1772	1-126-933-11	ELECT 100MF 20% 16V	
C1773	1-107-368-11	MYLAR 0.047MF 99% 200V	
C1775	1-126-933-11	ELECT 100MF 20% 16V	
C1776	1-126-964-51	ELECT 10MF 20% 50V	
C1778	1-130-471-51	MYLAR 0.001MF 5% 50V	
C1779	1-130-471-51	MYLAR 0.001MF 5% 50V	
C1780	1-126-964-51	ELECT 10MF 20% 50V	
<CONNECTOR>			
CN1701	1-564-511-11	PLUG, CONNECTOR 8P	
<DIODE>			
D1761	8-719-911-19	DIODE 1SS119-25	
D1763	8-719-911-19	DIODE 1SS119-25	
D1764	8-719-911-19	DIODE 1SS119-25	
D1767	8-719-110-88	DIODE RD39ESB2	
D1768	8-719-110-88	DIODE RD39ESB2	
<COIL>			
L1721	1-414-191-11	INDUCTOR 150UH	
L1722	1-408-621-31	INDUCTOR 330UH	
L1723	1-414-182-11	INDUCTOR 6.8UH	
L1761	1-410-478-11	INDUCTOR 47UH	
L1762	1-408-610-31	INDUCTOR 39UH	
<TRANSISTOR>			
Q1722	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1723	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1756	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1761	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1762	8-729-119-76	TRANSISTOR 2SA1175-HFE	



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



REF. NO.	PART NO.	DESCRIPTION	REMARK
Q1763	8-729-017-05	TRANSISTOR 2SA1837	
Q1764	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1765	8-729-017-06	TRANSISTOR 2SC4793	
Q1766	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1767	8-729-142-86	TRANSISTOR 2SC3733	
Q1777	8-729-326-11	TRANSISTOR 2SC2611	
		<RESISTOR>	
R1721	1-247-825-31	CARBON 560	5% 1/4W
R1722	1-249-412-11	CARBON 390	5% 1/4W
R1723	1-249-407-11	CARBON 150	5% 1/4W
R1724	1-249-407-11	CARBON 150	5% 1/4W
R1725	1-249-412-11	CARBON 390	5% 1/4W
R1727	1-247-843-11	CARBON 3.3K	5% 1/4W
R1728	1-247-855-31	CARBON 10K	5% 1/4W
R1732	1-126-964-51	ELECT 10MF	20% 50V
R1736	1-249-419-11	CARBON 1.5K	5% 1/4W
R1753	1-249-434-11	CARBON 27K	5% 1/4W
R1762	1-249-409-11	CARBON 220	5% 1/4W
R1764	1-247-734-11	CARBON 39	5% 1/2W F
R1765	1-249-414-11	CARBON 560	5% 1/4W F
R1766	1-249-418-11	CARBON 1.2K	5% 1/4W
R1768	1-247-839-31	CARBON 2.2K	5% 1/4W
R1769	1-249-384-11	CARBON 1.8	5% 1/4W F
R1770	1-249-435-11	CARBON 33K	5% 1/4W
R1772	1-249-432-11	CARBON 18K	5% 1/4W
R1774	1-215-912-11	METAL OXIDE 150	5% 3W F
R1775	1-249-417-11	CARBON 1K	5% 1/4W F
R1776	1-249-432-11	CARBON 18K	5% 1/4W
R1777	1-249-438-11	CARBON 56K	5% 1/4W
R1778	1-249-430-11	CARBON 12K	5% 1/4W
R1779	1-247-825-31	CARBON 560	5% 1/4W
R1780	1-249-418-11	CARBON 1.2K	5% 1/4W
R1781	1-249-410-11	CARBON 270	5% 1/4W
R1782	1-249-384-11	CARBON 1.8	5% 1/4W F
R1784	1-247-807-31	CARBON 100	5% 1/4W
R1785	1-249-400-11	CARBON 39	5% 1/4W F
R1786	1-249-435-11	CARBON 33K	5% 1/4W
R1787	1-249-428-11	CARBON 8.2K	5% 1/4W
R1788	1-249-419-11	CARBON 1.5K	5% 1/4W
R1789	1-247-823-31	CARBON 470	5% 1/4W
R1790	1-216-451-11	METAL OXIDE 120	5% 2W F
R1791	1-249-411-11	CARBON 330	5% 1/4W
R1812	1-247-847-31	CARBON 4.7K	5% 1/4W
R1851	1-249-393-11	CARBON 10	5% 1/4W

REF. NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS *****	
$\Delta$	1-409-942-11	COIL, DEMAGNETIZATION	
	1-417-154-21	MATCHING TRANSFORMER, ANTENNA (KV-J21MF3 ONLY)	
	1-452-032-00	MAGNET, DISC	
	1-452-277-00	MAGNET, BMC	
	1-452-509-51	NECK ASSY, CRT (NA308) (EXCEPT FOR KV-J21PF1)	
	1-501-730-41	ANTENNA, TELESCOPIC (KV-J21MF3 ONLY)	
	1-503-902-11	SPEAKER	
	1-505-892-11	SPEAKER (10CM) (KV-J21MF1AK/J21MN1AK ONLY)	
$\Delta$	1-574-062-61	CORD, POWER (WITH CONNECTOR) 2.5A/250V	
$\Delta$	1-900-700-05	LEAD ASSY, FOCUS	
	8-451-280-33	DEFLECTION YOKE (Y21PXA2)	
$\Delta$	8-738-774-05	PICTURE TUBE (A51JU71X)	
*****			
ACCESSORIES AND PACKING MATERIALS *****			
	1-417-154-21	MATCHING TRANSFORMER, ANTENNA (KV-J21MF3 ONLY)	
	1-501-730-41	ANTENNA, TELESCOPIC (KV-J21MF3 ONLY)	
	3-701-910-01	SCREW, SPECIAL (DIA. 3.8X20)	
	3-862-021-11	MANUAL, INSTRUCTION (EXCEPT FOR KV-J21MF3)	
	3-862-021-21	MANUAL, INSTRUCTION (KV-J21MF3)	
*	4-053-003-01	BAG, PROTECTION	
*	4-064-273-01	CUSHION (LOWER)(ASSY) (KV-J21MF1AK/J21MN1AK)	
*	4-059-261-01	CUSHION (LOWER)(ASSY) (KV-J21MF3/J21PF1)	
*	4-064-274-01	CUSHION (UPPER)(ASSY) (KV-J21MF1AK/J21MN1AK)	
*	4-059-262-01	CUSHION (UPPER)(ASSY) (KV-J21MF3/J21PF1)	
*	4-064-279-01	INDIVIDUAL CARTON (KV-J21MF1AK/J21MN1AK)	
*	4-056-172-01	INDIVIDUAL CARTON (KV-J21MF3)	
*	4-059-267-01	INDIVIDUAL CARTON (KV-J21PF1)	
	4-392-003-31	BAND, HOLD	
	4-392-004-21	CLIP	
*****			
REMOTE COMMANDER *****			
	1-475-800-11	REMOTE COMMANDER (RM-883)	