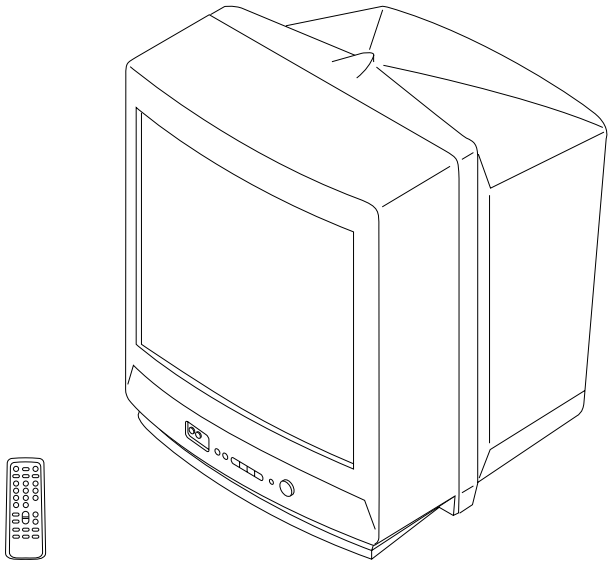
SERVICE MANUAL

BG-2S CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-G21MW3	RM-869	ME	SCC-U07U-A
KV-G21QW3	RM-869	ME	SCC-U07T-A

MODEL	COMMANDER	DEST.	CHASSIS NO.



TRINITRON® COLOR TV

SONY®

SPECIFICATIONS

		Note
Power requirements	110-240 V AC, 50/60 Hz	
Power consumption (W)	Indicated on the rear of the TV	
Television system	B/G	KV-G21QW3
	B/G, I, D/K, M	KV-G21MW3
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58	KV-G21MW3
	PAL, PAL 60, SECAM, NTSC4.43	KV-G21QW3
Channel coverage	VHF: E2 to E12 / UHF: E21 to E69 / CATV: S01 to S03, S1 to S41	
Audio output (speaker)	3W + 3W	
Inputs	(antenna): 75 ohms external terminal	
	(video input) jacks: phono jacks (video): 1 Vp-p, 75 ohms ♪ (audio): 500 mVrms, high impedance	
Outputs	(earphone) jack: mini jack	
	(monitor output) jacks: phono jacks (video): 1 Vp-p, 75 ohms ♪ (audio): 500 mVrms	
Picture tube	21 in.	
Tube size (cm)	54	Measured diagonally
Screen size (cm)	51	Measured diagonally
Dimensions (w/h/d, mm)	516 × 464 × 478	
Mass (kg)	22	

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 ⚠ 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.

TABLE OF CONTENTS

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.

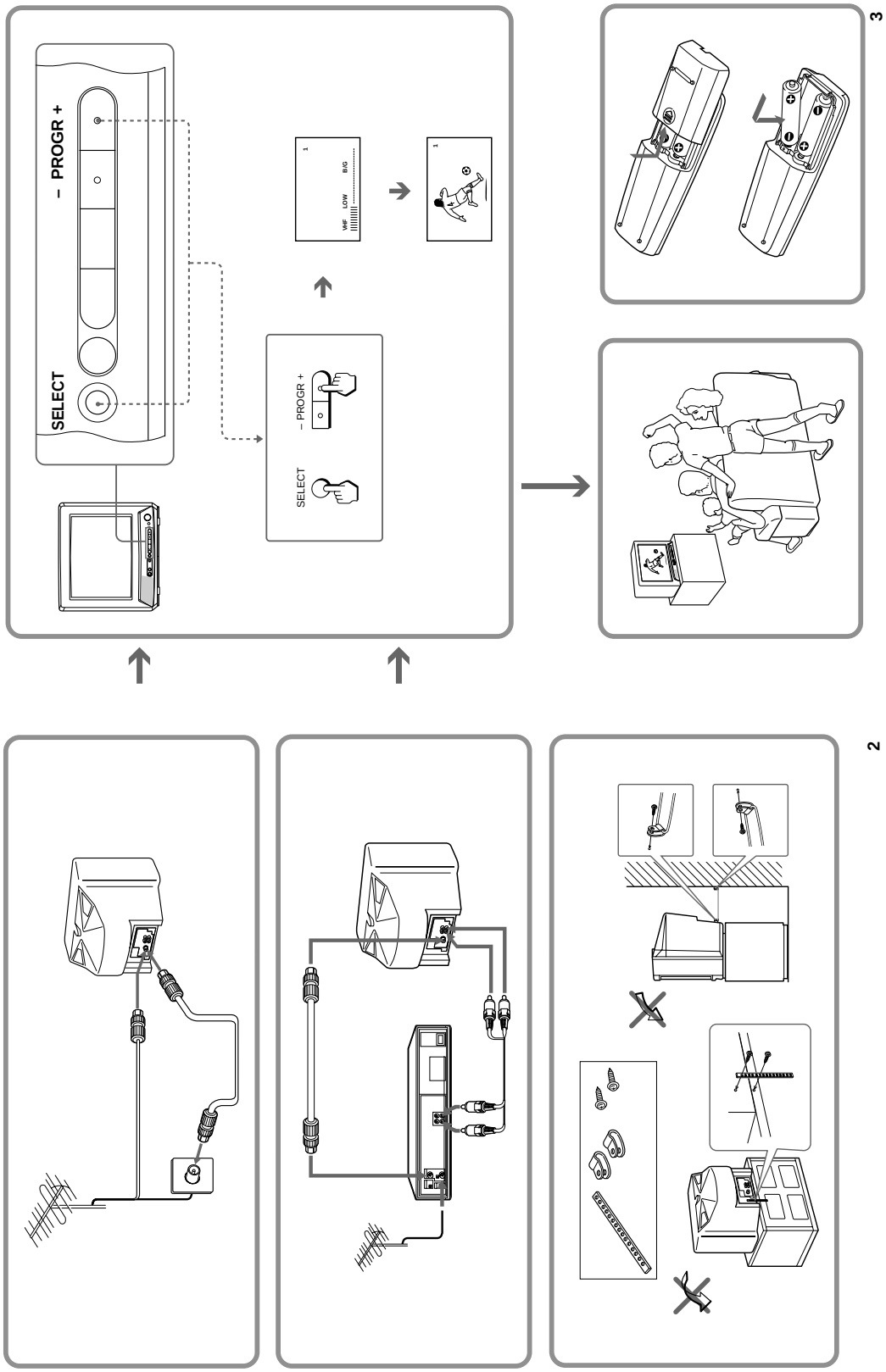
The flickering frequency responding to each failed device is shown below.

Board name	A Board	A Board
Ref. No.	IC003	IC300
Device	NONVOLATILE MEMORY (ST24C08FB6)	Y/C JUNGLE (TDA8374A)
Flickering Frequency	1	3

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 1
GENERAL

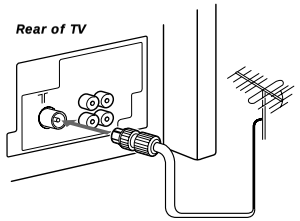
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



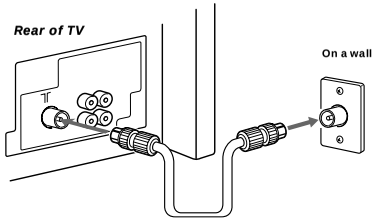
Connections

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 ⊤ (antenna) socket at the rear of the TV.



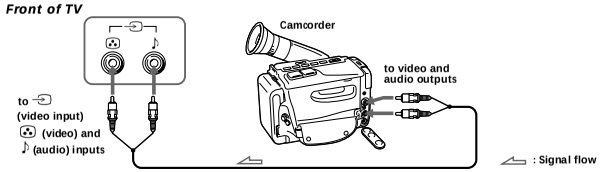
or

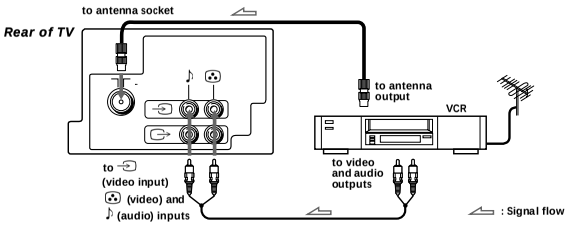


Connecting optional equipment

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

Connecting video equipment using the ⇨ (video input) jack

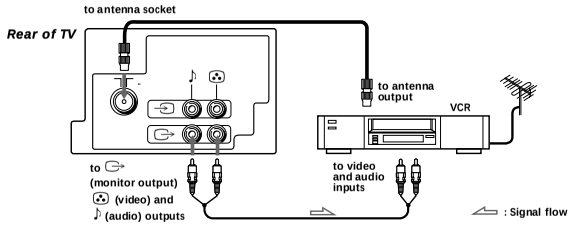




When connecting video equipment to the ⇨ (video input) jack

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 the ⇦ (monitor output) jack



When recording through the ⇦ (monitor output) jack

Do not change the channel or video input while recording with a VCR; otherwise the channel or video input you are recording also will be changed.

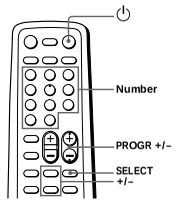
EN

Presetting channels

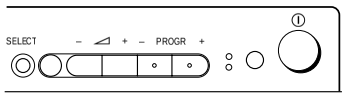
You can preset up to 100 TV channels in numerical sequence from program position 1 using the buttons on the remote commander or the TV.

You can preset TV channels quickly, automatically or manually.

Remote commander



Front of TV

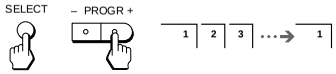


Quick channel presetting

1 Press ⏻ to turn on the TV.

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

2 Press SELECT and PROGR + on the TV simultaneously for one to two seconds.



If the picture color is poor and/or the sound is noisy (for KV-G21MW3 only)

Select the appropriate TV system as follows:

1 Press SELECT on the remote commander or the TV until "TV SYSTEM" appears.

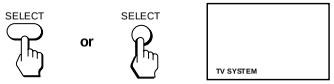
2 Press + / – on the remote commander or ◿ + / – on the TV until the picture and sound becomes normal.

Notes

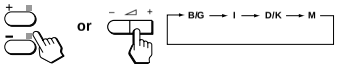
- If you do not know your local TV system, consult your nearest authorized service center or dealer.
- The setting of the "TV SYSTEM" is memorized for each program position.

Presetting channels automatically

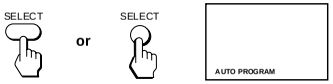
1 Press SELECT on the remote commander or the TV until "TV SYSTEM" appears on the screen (for KV-G21MW3 only).



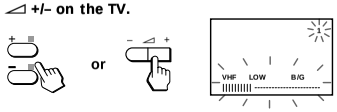
2 Press +/– on the remote commander or ◿ +/– on the TV to select the TV system (for KV-G21MW3 only).



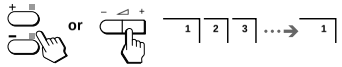
3 Press SELECT on the remote commander or the TV until "AUTO PROGRAM" appears on the screen.



4 Press +/– on the remote commander or ◿ +/– on the TV.

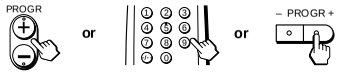


5 Press +/– on the remote commander or ◿ +/– on the TV again.



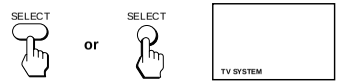
To start presetting channels automatically from the specified program position

Press PROGR + / – or number buttons on the remote commander or PROGR + / – on the TV until the required program position appears on the screen after step 4 of "Presetting channels automatically".

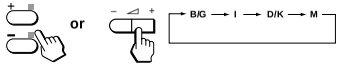


Presetting channels manually

1 Press SELECT on the remote commander or the TV until "TV SYSTEM" appears on the screen (for KV-G21MW3 only).

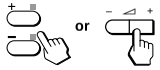


2 Press +/– on the remote commander or ◿ +/– on the TV to select the TV system (for KV-G21MW3 only).

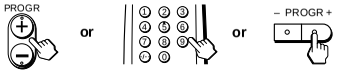


3 Press SELECT on the remote commander or the TV until "MANUAL PROGRAM" appears on the screen.

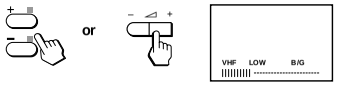
4 Press +/– on the remote commander or ◿ +/– on the TV.



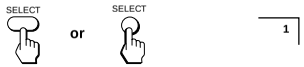
5 Press PROGR +/– or number buttons on the remote commander or PROGR +/– on the TV until the required program position appears on the screen.



6 Press +/– on the remote commander or ◿ +/– on the TV until the required channel picture appears on the screen.



7 Press SELECT on the remote commander or the TV.



Disabling program positions

1 Press PROGR +/– or number buttons on the remote commander or PROGR +/– on the TV until the unused or unwanted program position appears on the screen.

2 Press SELECT on the remote commander or the TV until "MANUAL PROGRAM" appears on the screen.

3 Press +/– on the remote commander or ◿ +/– on the TV.

4 Press PIC MODE on the remote commander.

5 Press SELECT on the remote commander or the TV.

To preset the disabled program position again

Preset the channel quickly, automatically or manually.

KV-G21MW3/G21QW3
RM-869

Watching the TV

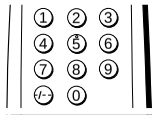
1 **Press ⏻ to turn on the TV.**

When the TV is turned on in standby mode, press ⏻ 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 the number buttons.

For example: to select program position 25, press "-/--", and then "2" and "5".

To scan through program positions

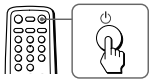
Press PROGR + / – until the program position you want appears.

3 **Press +/– to adjust the volume.**

Turning off the TV

To turn off the TV temporarily

Press ⏻ on the remote commander. The ⏻ indicator on the TV lights up.



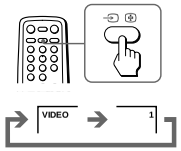
To turn off the TV completely

Press ⏻ on the TV.

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

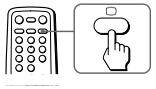
Watching the video input

Press → .



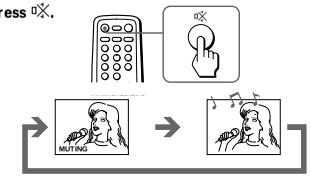
To watch TV

Press ▢.



Muting the sound

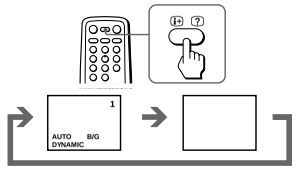
Press 🔇.



Displaying on-screen information

Press i+ ? .

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

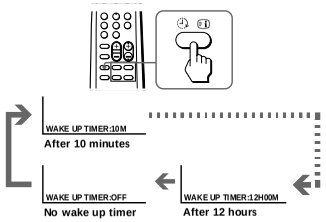


Setting the Wake Up Timer

You can set the TV automatically turned on as you program.

1 **Press 🕘 repeatedly to set the timer.**

The on-screen display appears and the 🕘 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 ⏻ on the remote commander or set the Sleep Timer to turn off the TV in standby mode.**

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

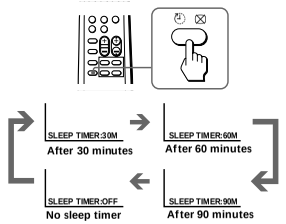
Notes

- 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 TV or remote commander.

Setting the Sleep Timer

You can set the TV automatically turned off as you program.

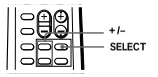
Press ⏲ ⊠ .



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

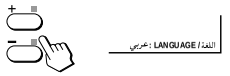
Changing the on-screen display language

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



1 **Press SELECT until the screen appears as follows:**

2 **Press +/– to select "عربي".**



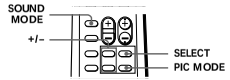
Note

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

Adjusting the picture

Note on the SOUND MODE button

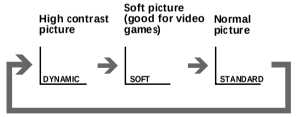
- The sound mode feature is unavailable for your TV. Thus, the SOUND MODE button on the remote commander is not used for your TV.



Selecting the picture mode

Press PIC MODE until the mode you want appears.

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



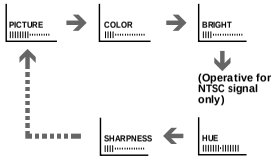
Note

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

Adjusting the picture setting

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

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



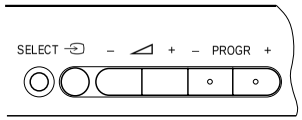
2 Press +/– to adjust the item.

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

Note

- You can also use SELECT and +/– on the TV to adjust the picture setting.

Front of TV



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

Change the "TV SYSTEM" (for KV-G21MW3 only) or "COLOR SYSTEM" setting or adjust the "COLOR" level in the on-screen display until the color becomes normal.

If the picture 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-G21MW3 only) in the on-screen display until the sound becomes clear.

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 after trying the methods below, 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 (for KV-G21MW3 only).

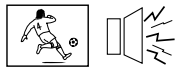
Dotted lines or stripes

➡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"

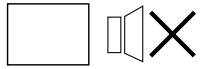
➡This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

Good picture
Noisy sound



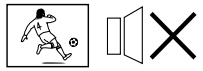
➡Check the TV SYSTEM setting (for KV-G21MW3 only).

No picture
No sound



➡Press ⏻ or ⏻.
➡Check the antenna connection.
➡Check the VCR connections.
➡Check the power cord connection.
➡Check the standby mode.

Good picture
No sound



➡Press +.
➡Press .

No color

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

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. and SOUND MODE.

Notes

- When you turn 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 ⏻ on the TV to turn off the TV for five minutes and then turn it on again.
- Design and specifications are subject to change without notice.
- All contents in the instruction manual are subject to change without notice.

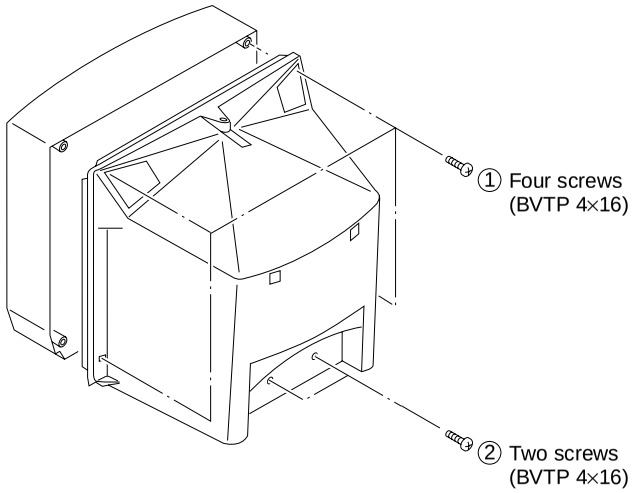
WARNING

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

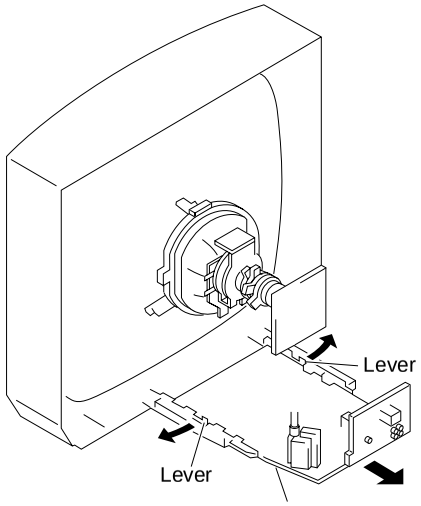
KV-G21MW3/G21QW3
RM-869

SECTION 2
DISASSEMBLY

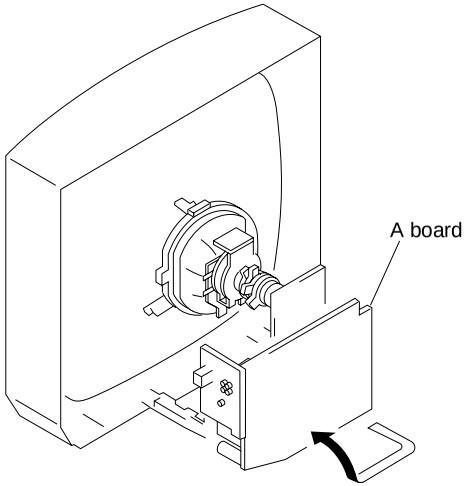
2-1. REAR COVER REMOVAL



2-2. A BOARD REMOVAL



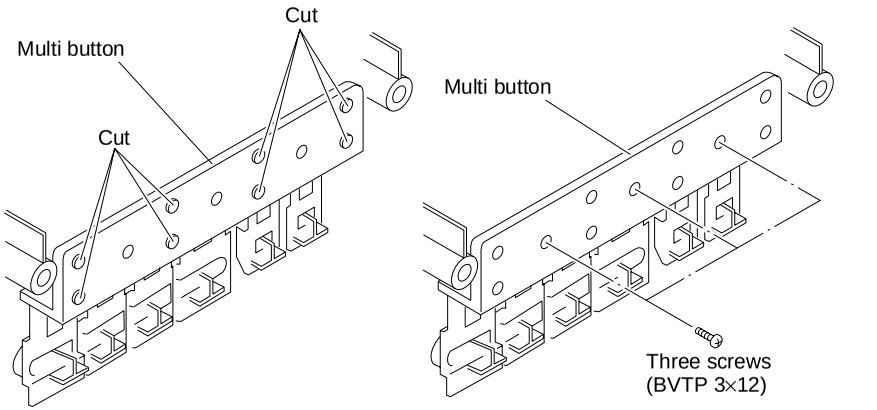
2-3. SERVICE POSITION



2-4. REPLACEMENT OF PARTS

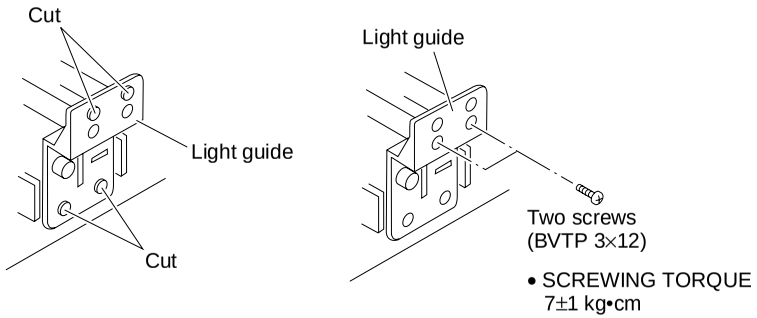
For replacement of the Multi Button and Light Guide, cut the welded portions from them, exchange with the new parts, and fix them with screws (+BVTP) respectively.

2-4-1. REPLACEMENT OF MULTI BUTTON



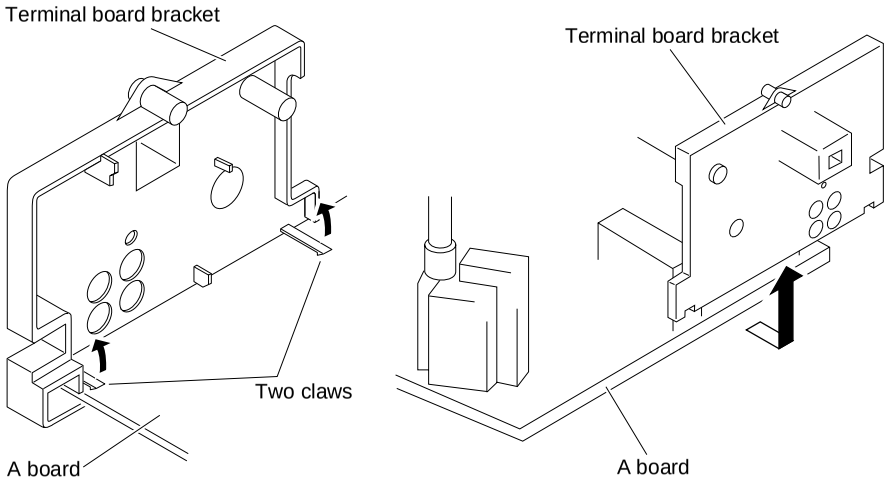
• SCREWING TORQUE
7±1 kg•cm

2-4-2. REPLACEMENT OF LIGHT GUIDE

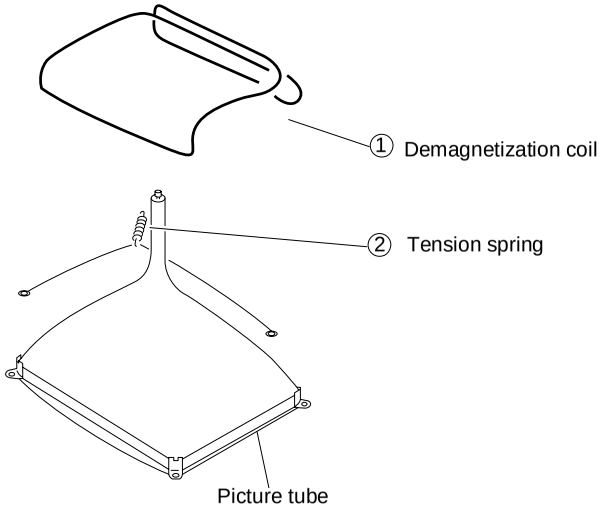


• SCREWING TORQUE
7±1 kg•cm

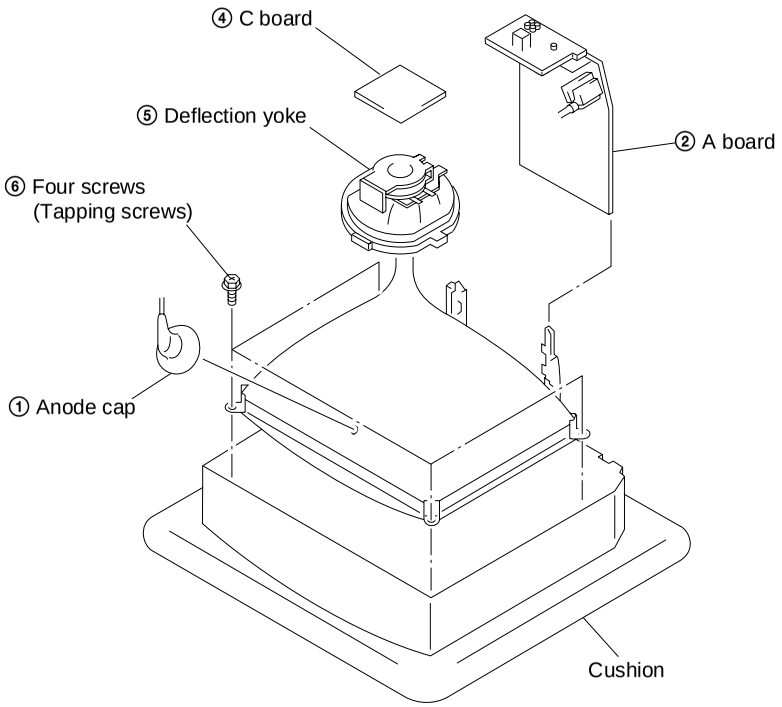
2-5. TERMINAL BOARD BRACKET REMOVAL



2-6. DEMAGNETIZATION COIL REMOVAL



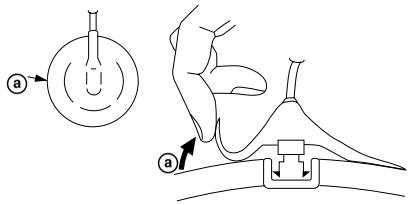
2-7. PICTURE TUBE REMOVAL



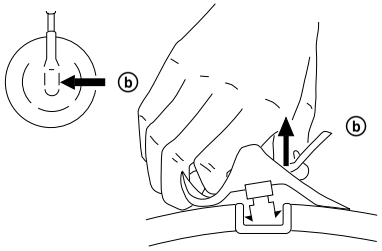
• REMOVAL OF ANODE-CAP

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.

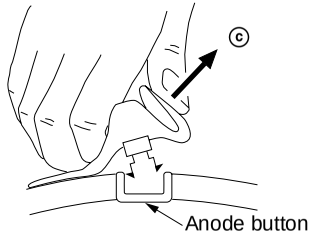
• REMOVING PROCEDURES



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



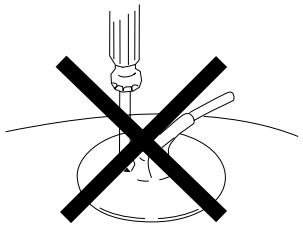
② Using a thumb press down, then pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.

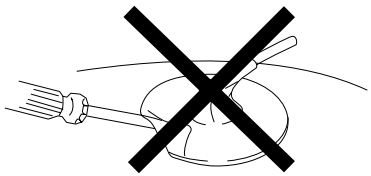


③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ.

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

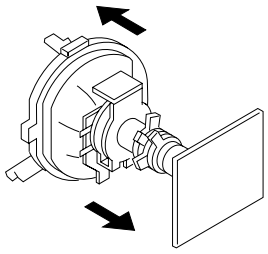


Fig. 3-1

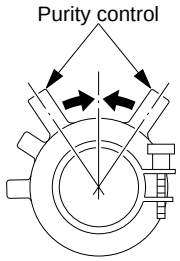


Fig. 3-2

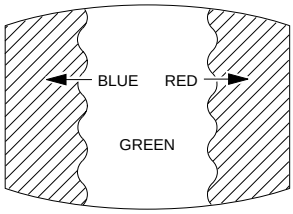


Fig. 3-3

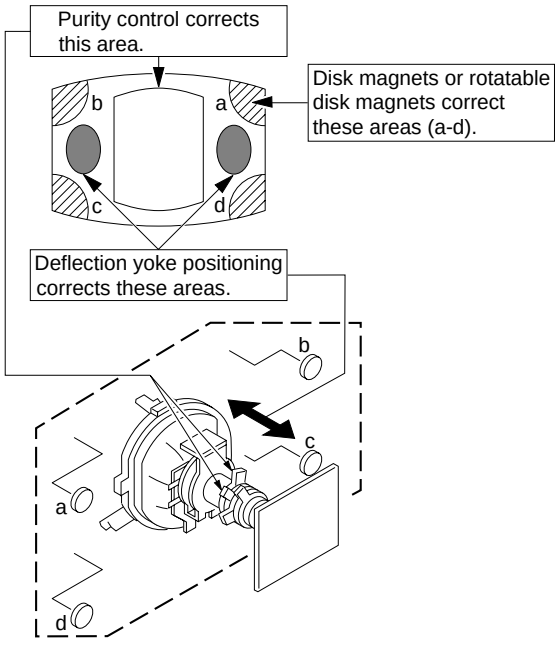


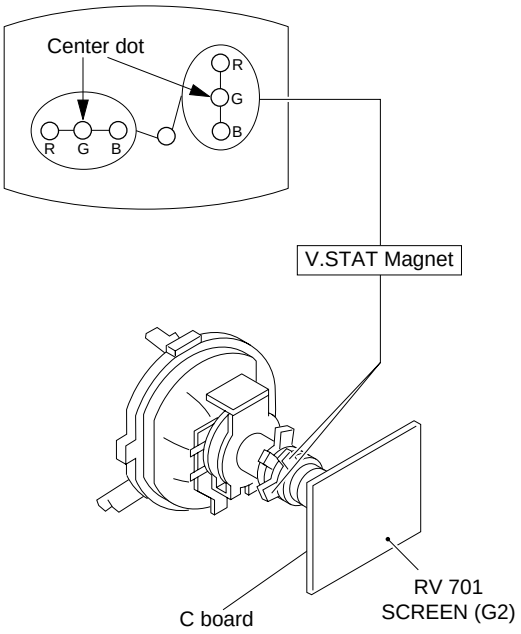
Fig. 3-4

3-2. CONVERGENCE

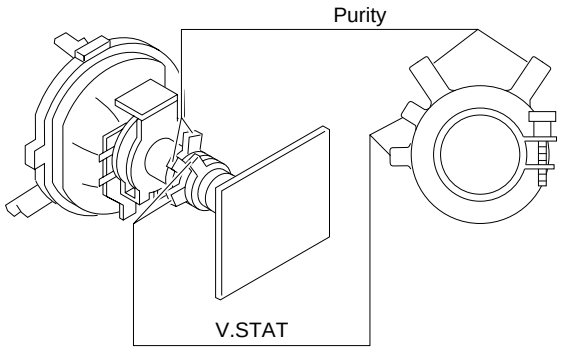
Preparation :

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

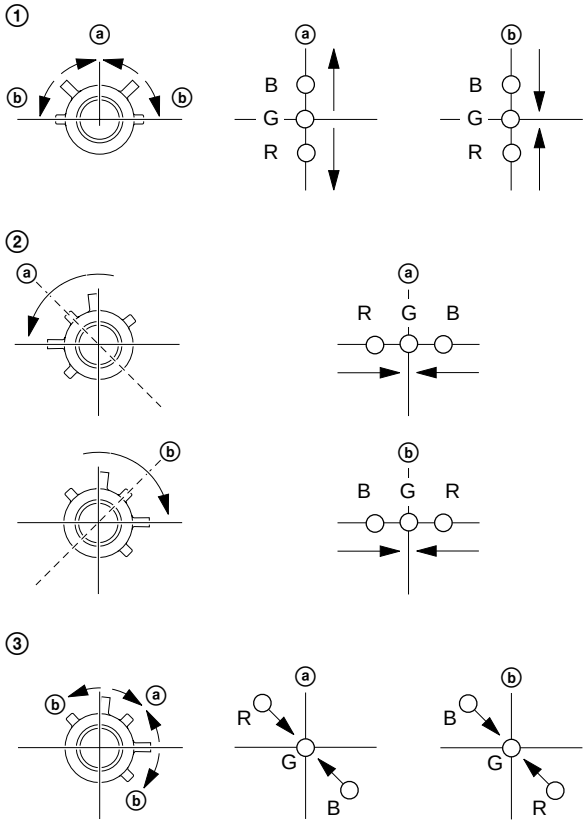
(1) Horizontal and Vertical Static Convergence



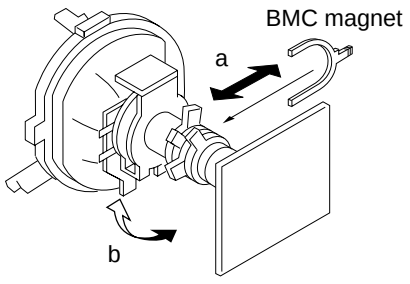
1. (Moving vertically), adjust the V.STAT magnet so that the red, green and blue dots are on top of each other at the center of the screen.
2. (Moving horizontally), adjust the H.STAT VR so that the red, green and blue dots are on top of each other at the center of the screen.



- 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.
  In either case, repeat Beam Landing Adjustment.

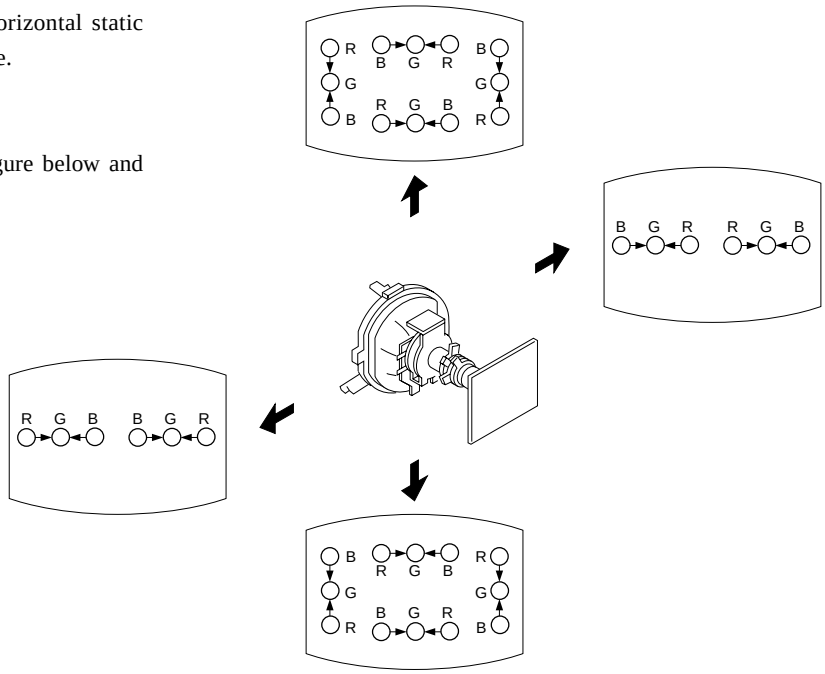


(2) Dynamic Convergence Adjustment

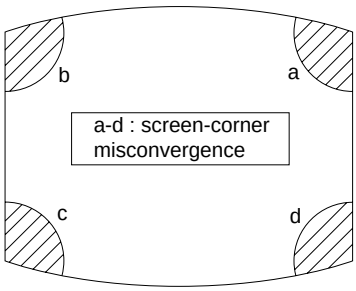
Preparation :

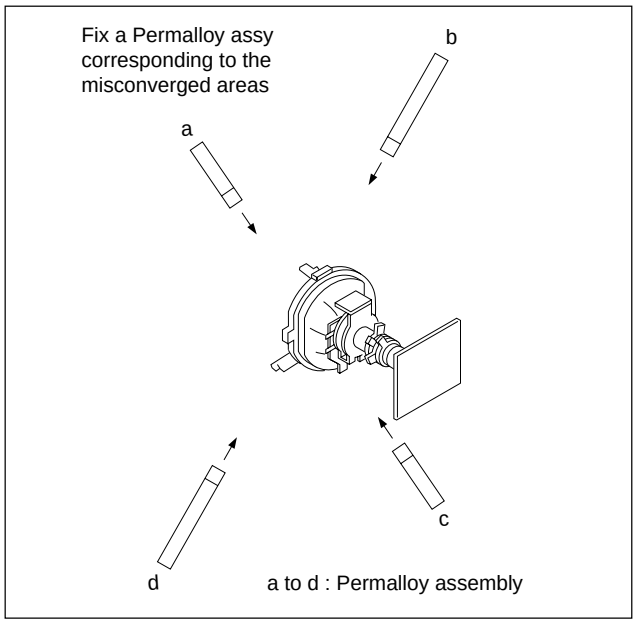
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

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.



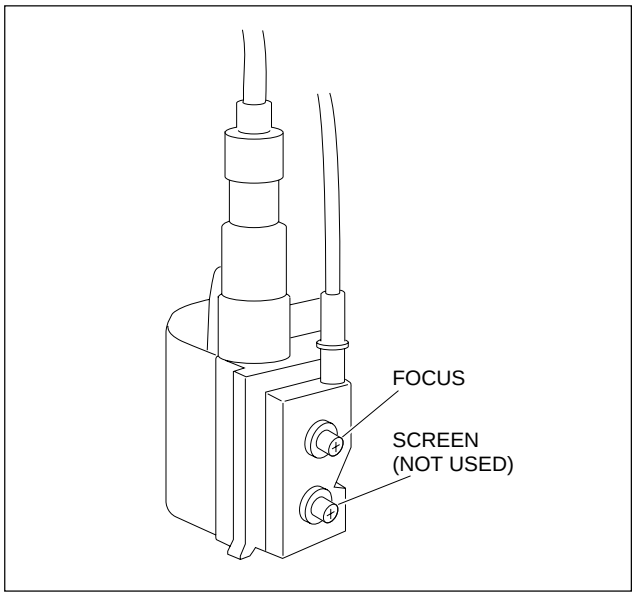
(3) Screen-corner Convergence





3-3. FOCUS ADJUSTMENT

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



Note: Screen VR is not used.

3-4. REMOTE COMMANDER ADJUSTMENT

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

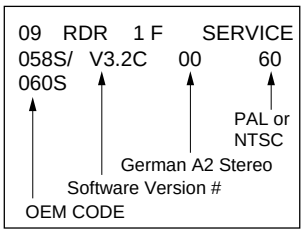
Set the standby condition (Press POWER button on the commander) and then press POWER button again, hereupon it becomes TV mode.

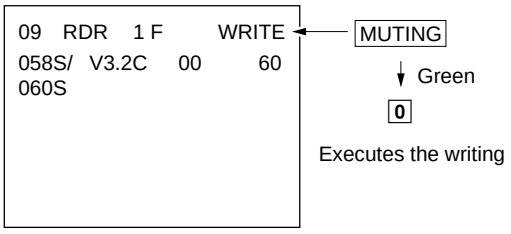
c. METHOD OF WRITE FOR MEMORY

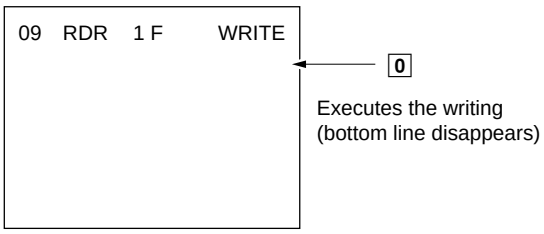
1) Set to Service Mode.
2) Press 1 (UP) and 4 (DOWN) to select an item of adjustments.
3) Press MUTING button and it will indicate WRITE on screen.
4) Press 0 button to write into memory.

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.



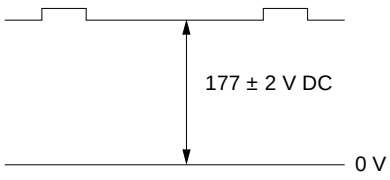




3-5. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

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 25 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
CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-869 that comes with this unit.

Entering service mode

With the unit on standby

↓

DISPLAY

↓

5

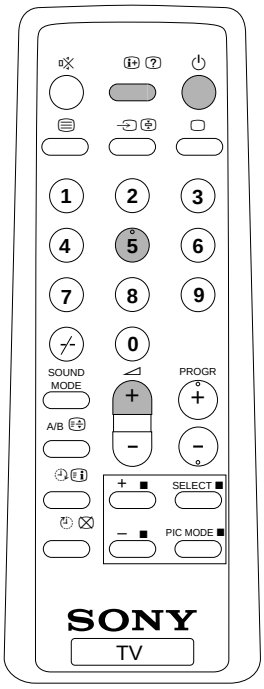
↓

VOL (+)

↓

POWER

The operation sequence puts the unit into service mode.



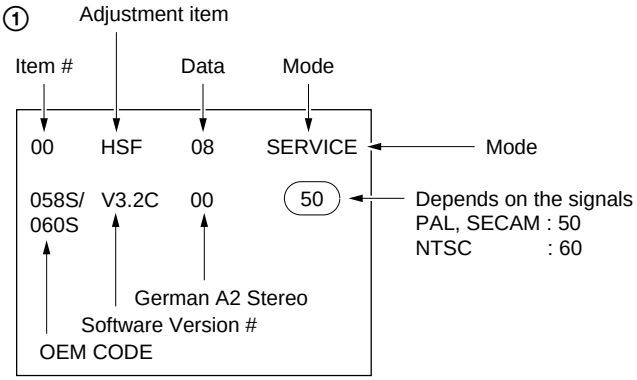
RM-869

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

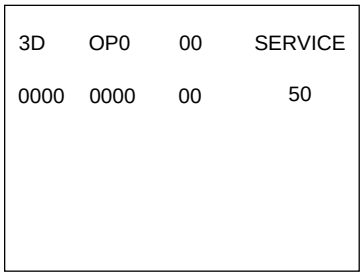
7, 0	All data becomes the values in memory
8, 0	All user control goes to the standard state
5, 0	Service data initialization (Be sure not to use usually.)
2, 0	Write 50Hz adjustment data to 60Hz, or viceversa.

The screen display is :

①



②



(Bit options adjustable)

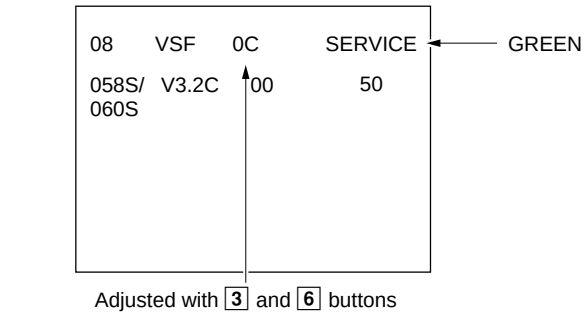
1, 4	Select the adjustment item.
↓	
3, 6	Raise/lower the data.
↓	
MUTING	Writes
↓	
0	Executes the writing.

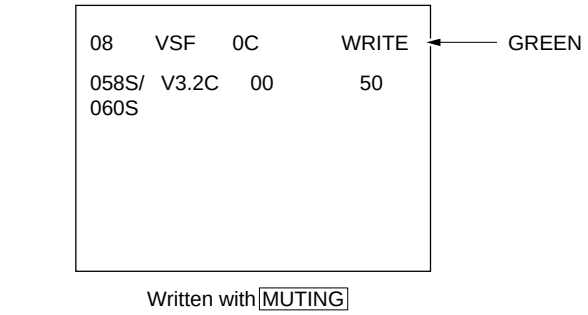
4-2. ADJUSTMENT METHOD

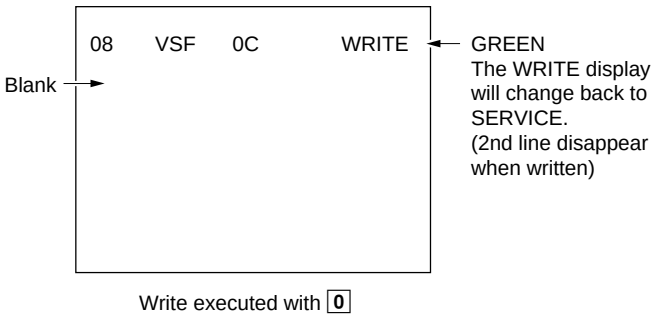
Item Number 08

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 00-40. Use 1 and 4 to select the adjustment item, use 3 and 6 to adjust, write with MUTING, then execute the write with 0.

Adjustment Item Table

No.	Item (OSD)	Data Range Max.	Data Range Min.	Initial Data	Function	Note for Different Data	Device/Category (Slave Address)	Register No. (bit)
00	HSF	3F	00	0	H Shift [2C/33/31/38]	50/60Hz/RGB50/RGB60	TDA8375(8A)	03 (5-0)
01	HSZ	3F	00	0	HSize [35/35/35/35]	50/60Hz/RGB50/RGB60		04 (5-0)
02	PAP	3F	00	0	Pin Amplitude [25/25]	50/60Hz		05 (5-0)
03	CNP	3F	00	0	Corner Pin [10/0C]	50/60Hz		06 (5-0)
04	TLT	3F	00	0	Tilt [20/2D]	50/60Hz		07 (5-0)
05	VSL	3F	00	0	V Slope [1F/1F]	50/60Hz		08 (5-0)
06	VAP	3F	00	0	V Amplitude [1C/1B]	50/60Hz		09 (5-0)
07	SCR	3F	00	0	S Correction [16/16]	50/60Hz		0A (5-0)
08	VSF	3F	00	0	V Shift [10/10]	50/60Hz		0B (5-0)
09	RDR	3F	00	28	R Drive			0C (5-0)
0A	GDR	3F	00	20	G Drive			0D (5-0)
0B	BDR	3F	00	20	B Drive			0E (5-0)
0C	FO	03	00	0	ø1 Time Constant [00/00/00]	TV/Video/Teletext		00 (3-2)
0D	AGC	3F	00	0	AGC Take Over [28/28/28]	TV/Video/Teletext		13 (5-0)
0E	VSW	1	0	0	Video Mute Switch [0/1/0]	TV/Video/Teletext		13 (6)
0F	FOR	03	00	03	Forced Field Frequency			01 (7-6)
10	DL	1	0	0	De-interlace			01 (5)
11	POC	1	0	0	Fixed ø1 Synchro. mode			01 (3)
12	COR	1	0	0	Noise Coring [01/00/00]	TV/Video/Teletext		10 (6)
13	VPX	FF	00	00	Extra Bits (see below)			
14	PMX	3F	00	27	Picture Maximum Data	TV/Video/Teletext [28/28/28]		12 (5-0)
15	PMI	3F	00	04	Picture Minimum Data			12 (5-0)
16	SBR	7F	00	4B	Sub Brightness			10 (6-0)
17	SHU	0F	00	07	Sub Hue			02 (3-0)
18	SSH	03	00	0	Sub Sharpness [01/03]	TV/Video		0F (1-0)
19	SC1	3F	00	0	Sub Color Lower [26/29]	50/60Hz		11 (5-0)
1A	SC2	3F	00	0	Sub Color Higher [0C/0D]	50/60Hz		11 (5-0)
1B	AIP	7F	00	3C	Adjustment IF-PLL			15 (6-0)
1C	VZM	3F	00	19	Vertical Zoom			16 (5-0)
1D	WST	FF	00	15	W/G Stereo Threshold		MSP3410D(80)	
1E	WBT	FF	00	EA	W/G Bilingual Threshold			
1F	WLL	FF	00	05	W/G Monaural Threshold			
20	ACG	1	0	1	AGC Switch auto/constant			BB (7)
21	CDB	3F	00	28	AGC Gain at Constant Mode			BB (6-1)
22	FGP	7F	00	1B	FM Prescale for B/G, I, D/K			0E (7-0)
23	FMP	7F	00	32	FM Prescale for M			0E (7-0)
24	FMH	7F	00	36	FM Prescale for HDEV (non-M)			0E (7-0)
25	FMM	7F	00	65	FM Prescale for HDEV (M)			0E (7-0)
26	WGP	7F	00	2A	W/G Prescale			0E (7-0)
27	NIP	7F	00	6D	NICAM Prescale			10 (7-0)
28	SCP	7F	00	3B	SCART Input Prescale			0D (7-0)
29	SCV	7F	00	2A	SCART Output Prescale			07 (7-0)
2A	CRM	1	0	0	Carrier Muting on/off			BB (9)
2B	ACO	1	0	1	Audio Clock-out on/off			83 (5)
2C	WAC	0F	00	00	W/G Agreement Count			
2D	NFT	FF	00	50	Auto FM Switch Threshold			21 (10-3)
2E	DLG	FF	00	30	W/G Search Delay			
2F	DLN	FF	00	20	NICAM Search Delay			
30	DLS	FF	00	10	Stereo Status Read Delay		MSP3410D(80)	
31	SMX	7F	00	0	DFP Volume Maximum 72			00 (14-8)
32	ING	0F	00	00	Input Gain [03/00/00]	M system/non-M/Video	TDA7438(88)	01 (3-0)
33	VOM	3F	00	01	Volume Output Gain	M system only		02 (5-0)
34	TXH	03	00	01	Teletext Horizontal Position		SAA5261(58)	16 (1-0)

Adjustment Item Table

No.	Item (OSD)	Data Range Max.	Data Range Min.	Initial Data	Function	Note for Different Data	Device/Category (Slave Address)	Register No. (bit)
35	BKP	3F	00	00	Picture Data at Blanking OFF		Other Control	
36	ODL	FF	00	10	Power ON Delay			
37	OFR	0F	00	00	RGB Output Time (STBY OFF)			
38	OFM	0F	00	00	RGB Output Time (AC OFF)			
39	OSH	3F	00	0A	OSD H Position			
3A	DKS	1	0	1	D/K Stereo enable/disable			
3B	MUT	1	0	0	Muting on/off at No Sync			
3C	ABL	1	0	0	Bright ABL Switch			
3D	SCM	1	0	0	SECAM Trap active/ inactive			
3E	FBT	1	0	1	FBT L/S C /M Strict/plain			
3F	OP0	FF	00	2F	Optional Flags 0 (see below)			
40	OP1	FF	00	0F	Optional Flags 1 (see below)			
41	OP2	FF	00	00	Optional Flags 2 (see below)			

NOTE

- Note for Different 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
- Note for Different Data listed on the adjustment item table are reference values, therefore it is different for every model.

Option Note

Item No 13 VPX

Item	HCO	EVG	SBL	PRD	–	–	–	VID
G21MW3	0	0	0	0	0	0	0	0
G21QW3	0	0	0	0	0	0	0	0

HCO	EHT Tracking Mode	1 = on V and E–W.	0 = only on V	0A (7)
EVG	Enable Vertical Guard	1 = enable.	0 = disable	0A (6)
SBL	Service Blanking	1 = active.	0 = inactive	0B (7)
PRD	Over-voltage Protection Detection		1 = enable. 0 = disable	0B (6)
VID	Video Ident Mode	1 = not for ø1-loop	0 = for ø1-loop	09 (7)

Item No. 3F OP0

Item	No TOP	AV input		AVMUT	B/G	I	D/K	M
G21MW3	0	0	1	0	1	1	1	1
G21QW3	0	0	1	0	1	0	0	0

AV Input 0 0 no AV input model 0 1 1 AV input model
1 0 2 AV input model 1 1 2 AV input and RGB input model
No TOP (for teletext model) 1 = only FLOF available. 0 = both FLOF and TOP available
AV MUT 1 = AV multi is always muted if no signal input. 0 = not muted always
Other optional bits are effective if set to 1.

Item No. 40 OP1

Item	No NICAM	–	HDEV	1 V-Curve	XTAL SEL		SECAM	2nd Lang.
G21MW3	0	0	0	0	1	1	1	1
G21QW3	0	0	0	0	0	0	1	1

XTAL SEL 0 0 only 4.43 XTAL 0 1 only 3.58 XTAL
1 0 (not used) 1 1 both 4.43 and 3.58 XTAL
1 V-Curve (for monaural model)
1 = using common volume curve for every mode and every TV system
0 = another volume curve available for video mode and M system
HDEV 1 = High Deviation Mode switch available. 0 = not available
No NICAM 1 = NICAM search is disabled in any TV system, 0 = NICAM search operates
Other optional bits are effevctive if set to 1.

Item No. 41 OP2

Item	–	–	No Bal.	TV Out	Hotel	VM	D.B.F.B.	Thai Bil.
G21MW3	0	0	0	0	0	0	0	0
G21QW3	0	0	0	0	0	0	0	0

No Bal. (for AV stereo model) 1 = no balance in analog select items. 0 = balance included
Other optional bits are effective if set to 1.
Hotel TV mode should be switched with remote commander from STBY condition as below.
Hotel TV on : push “display”. “8”. “vol +” and “power” sequentially
Hotel TV off : push “display”. “8”. “vol –” and “power” sequentially

Operation Guide

How to set up new NVM (or initialize already written one)

(1) AC On
(2) Enter Service Mode – describing below how to enter
(3) Push the commander button “5” and “0” sequentially (only set initial data into RAM, but not write them into NVM yet)
(4) Push the commander button “2” and “0” sequentially (copy the data into all NVM area – all wide modes and 50/60Hz respectively)
(5) Push the commander button “8” and “0” sequentially (initialize user data, select program 1 and exit Service Mode)
(6) Select TV system and execute Auto Preset

How to enter Service Mode

- At power ON, push the commander button “test” and “TV ON” sequentially
- At stand-by, push the commander button “display”, “5”, “vol +” and “power” sequently

How to exit Service Mode

Push the commander button “other ON” or power (AC) OFF

How to increment/decrement items and data

- Items : push the commander button “1”/”4”
- Data : push the commander button “3”/”6” (not write into NVM)

Other operations

- Write data into NVM - push the commander button “mute” and “0” sequentially
- Read data from NVM - push the commander button “7” and “0” sequentially
- Copy 50Hz data into 60Hz area - push the commander button “display” and “0” sequentially

Modification Note

[V3.2] • “4 S-Mode” optional bit was added in “OP2” for 4 sound modes available for ME market.

[V3.3] • “FBT” was added for the switch of strict and plain FBT layer short C/M operation.

[V3.4] • “4 S-Mode” optional bit in “OP2” was removed for 4 modes available for all destinations.

[V3.6] • “TXH” is now available in teletext mode and “TXV” was deleted due to no need.

[3.9] • “No NICAM” optional bit in “OP1” was added to disable NICAM search in A2 stereo area.

[V4.2] • “HSF” and “HSZ” for RGB input (50/60Hz) were made to be independent.

[V4.4] • “FMM” was added for FM prescale of high deviation forced monaural in M system.

[V4.7] • Initial data were changed for some service items.

4-3. 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]).

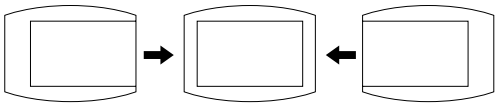
4. Select item numbers “3F” (OP0), “40” (OP1) and “41” (OP2) and respectively set the bit per model with command buttons [3] and [6].

5. Press commander buttons [8] and [0] (Test Normal) to return to the data that was set on shipment from the factory.
   (= Cancel Service Mode.)

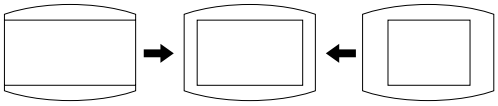
4-4. PICTURE DISTORTION ADJUSTMENT

Item Number 00 – 08

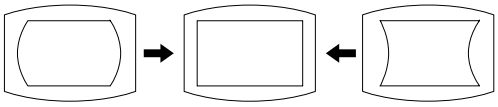
00 HSF (H SHIFT)



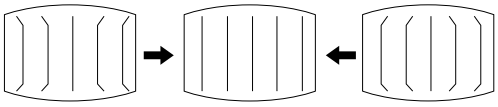
01 HSZ (H SIZE)



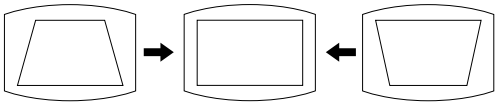
02 PAP (PIN AMPLITUDE)



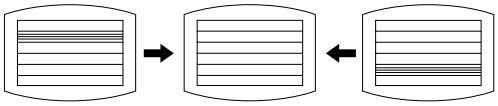
03 CNP (CORNER PIN)



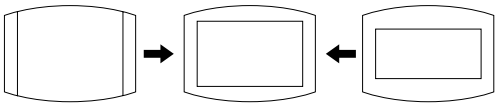
04 TLT (TILT)



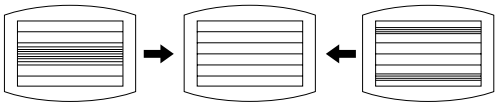
05 VSL (V SLOPE)



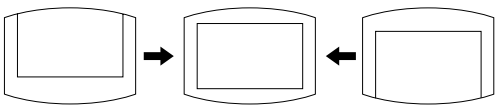
06 VAP (V AMPLITUDE)



07 SCR (S CORRECTION)



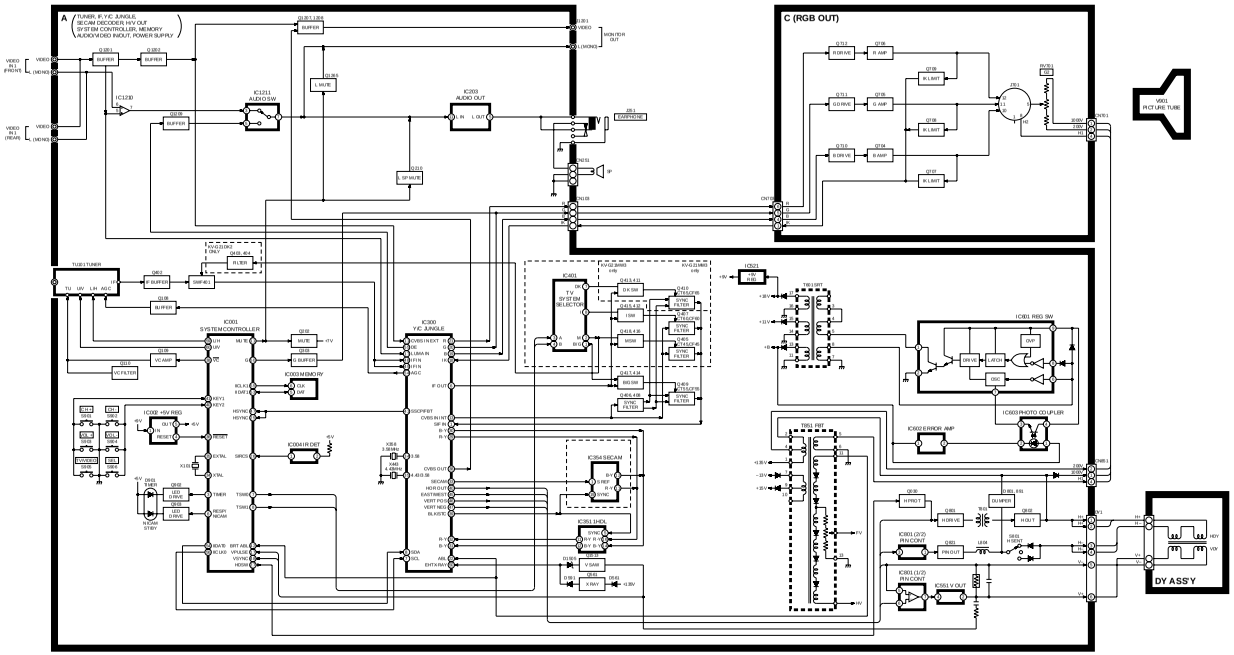
08 VSF (V SHIFT)



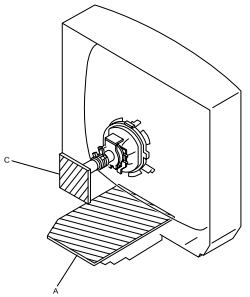
KV-G21MW3/G21QW3 RM-869

SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted.
- All electrolytic capacitors are rated at 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance which does not have rating electrical power is as follows.

Pitch: 5 mm
Rating electrical power 1/4W (CHIP: 1/10W)

- : nonflammable resistor.
- : internal component.
- : panel designation or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B unless otherwise noted.
- **Readings are taken with a color-bar signal input.**
  no mark : PAL
  ( ) : SECAM
  [ ] : NTSC 3.58
  « » : NTSC 4.43
- **Readings are taken with a 10 MΩ digital multimeter.**
- **Voltage is dc with respect to ground unless otherwise noted.**
- **Voltage variations may be noted due to normal production tolerances.**
- **All voltages are in V.**
- **: Cannot be measured.**
- **Circled numbers are waveform reference.**
- **: B + bus.**
- **: B – bus.**
- **: signal path.**

Reference information

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

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

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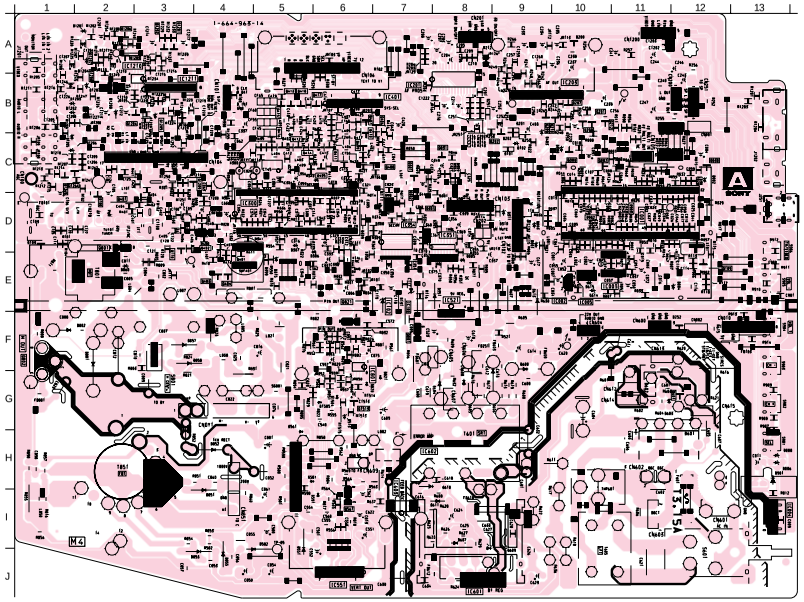
A BOARD

IC			
IC001	D-11	Q821	E-6
IC002	E-10	Q902	D-10
IC003	E-10	Q903	D-11
IC004	I-13	Q1201	A-3
IC005	E-10	Q1202	A-3
IC100	E-7	Q1203	A-2
IC102	E-7	Q1204	B-2
IC201	B-7	Q1205	B-3
IC203	B-10	Q1206	A-2
IC300	B-4	Q1207	A-2
IC351	D-8	Q1208	B-2
IC354	D-7	Q1209	C-4
IC401	B-7	Q1264	C-1
IC521	E-8	Q1265	C-1
IC551	J-6	Q1513	G-6
IC601	J-8		
IC602	H-7	**DIODE**	
IC603	H-7	D001	D-9
IC801	G-6	D002	C-12
IC1210	A-2	D003	C-10
IC1211	B-3	D004	E-12
		D005	E-8
TRANSISTOR		D006	H-13
		D007	E-10
Q001	F-7	D008	H-13
Q002	C-10	D101	C-9
Q030	C-12	D102	C-9
Q031	C-8	D103	D-1
Q108	D-2	D200	A-10
Q109	E-12	D201	B-9
Q110	E-3	D202	C-9
Q201	B-10	D251	B-8
Q202	C-9	D252	F-11
Q207	B-10	D253	C-9
Q208	B-10	D300	D-4
Q209	B-9	D301	D-8
Q210	B-9	D302	C-8
Q212	B-11	D304	C-8
Q300	C-10	D305	D-7
Q301	C-7	D306	E-6
Q302	D-7	D307	D-5
Q303	D-7	D308	C-10
Q401	D-2	D309	D-6
Q402	D-4	D310	D-9
Q403	E-4	D311	D-9
Q404	E-4	D312	C-5
Q405	C-6	D315	E-5
Q406	B-7	D351	E-8
Q407	B-6	D399	E-5
Q408	C-7	D401	E-4
Q409	C-6	D402	C-5
Q410	B-6	D403	C-9
Q411	C-6	D513	B-6
Q412	C-5	D551	J-5
Q413	B-5	D561	G-5
Q414	C-5	D562	F-6
Q415	B-5	D581	H-5
Q416	B-5	D582	I-5
Q417	B-6	D591	I-5
Q418	B-5	D600	F-9
Q561	I-6	D601	H-12
Q601	G-11	D602	G-11
Q801	D-2	D603	G-11
Q802	F-1	D604	G-7
		D605	G-8
		D606	G-8
		D607	I-8
		D609	J-9
		D610	H-8
		D611	I-7
		D613	E-9
		D614	E-10
		D615	E-10
		D801	F-2
		D802	F-2
		D803	D-9
		D820	G-6
		D821	G-7
		D851	I-4
		D852	H-4
		D853	J-3
		D855	J-4
		D857	F-3
		D858	F-4
		D860	E-2
		D901	H-13
		D1201	A-2
		D1202	B-1
		D1203	B-2
		D1204	A-2
		D1205	C-1
		D1206	C-2
		D1207	B-2
		D1208	B-2
		D1209	B-3
		D1504	G-6
		D1505	G-6

PRINTED WIRING BOARD

A [SYSTEM CONTROLLER, Y/C JUNGLE, DEFLECTION, TUVIF, FRONT AMP, POWER SUPPLY]

– A Board –



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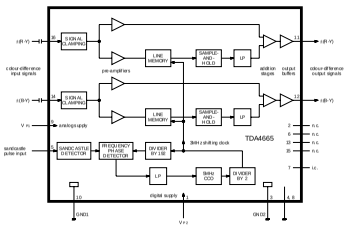
A BOARD WAVEFORMS

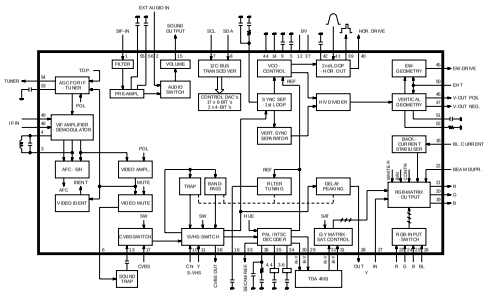
① 5.0Vp-p	② 2.7Vp-p	③ PAL 0.7Vp-p (H)	④ SECAM 0.7Vp-p (H)	⑤ NTSC 1.3Vp-p (H)	⑥ PAL 0.9Vp-p (H)
⑦ SECAM 0.6Vp-p (H)	⑧ NTSC 1.0Vp-p (H)	⑨ PAL/SECAM PAL : 1.4Vp-p (H) SECAM : 1.3Vp-p (H)	⑩ NTSC 1.5Vp-p (H)	⑪ PAL 1.1Vp-p (H)	⑫ SECAM 1.2Vp-p (H)
⑬ NTSC 1.0Vp-p (H)	⑭ PAL/SECAM PAL : 2.7Vp-p (H) SECAM : 2.0Vp-p (H)	⑮ NTSC 2.6Vp-p (H)	⑯ PAL/SECAM PAL : 2.6Vp-p (H) SEC-AM : 2.6Vp-p (H)	⑰ NTSC 2.7Vp-p (H)	⑱ PAL/SECAM 2.5Vp-p (H)
⑲ NTSC 2.3Vp-p (H)	⑳ PAL 2.2Vp-p (H)	㉑ SECAM 2.2Vp-p (H)	㉒ NTSC 2.4Vp-p (H)	㉓ PAL 0.9Vp-p (H)	㉔ SECAM 1.3Vp-p (H)
㉕ NTSC 1.0Vp-p (H)	㉖ PAL 0.7Vp-p (H)	㉗ SECAM 0.7Vp-p (H)	㉘ NTSC 1.3Vp-p (H)	㉙ PAL 0.9Vp-p (H)	㉚ SECAM 0.6Vp-p (H)
㉛ NTSC 1.0Vp-p (H)	㉜ 1.48Vp-p	㉝ 1030Vp-p	㉞ 1.5Vp-p (V)		

NOTE:
The circuit indicated at left contains high voltage of over 600 Vp-p. Please pay attention when inspecting or repairing it to prevent an electric shock.

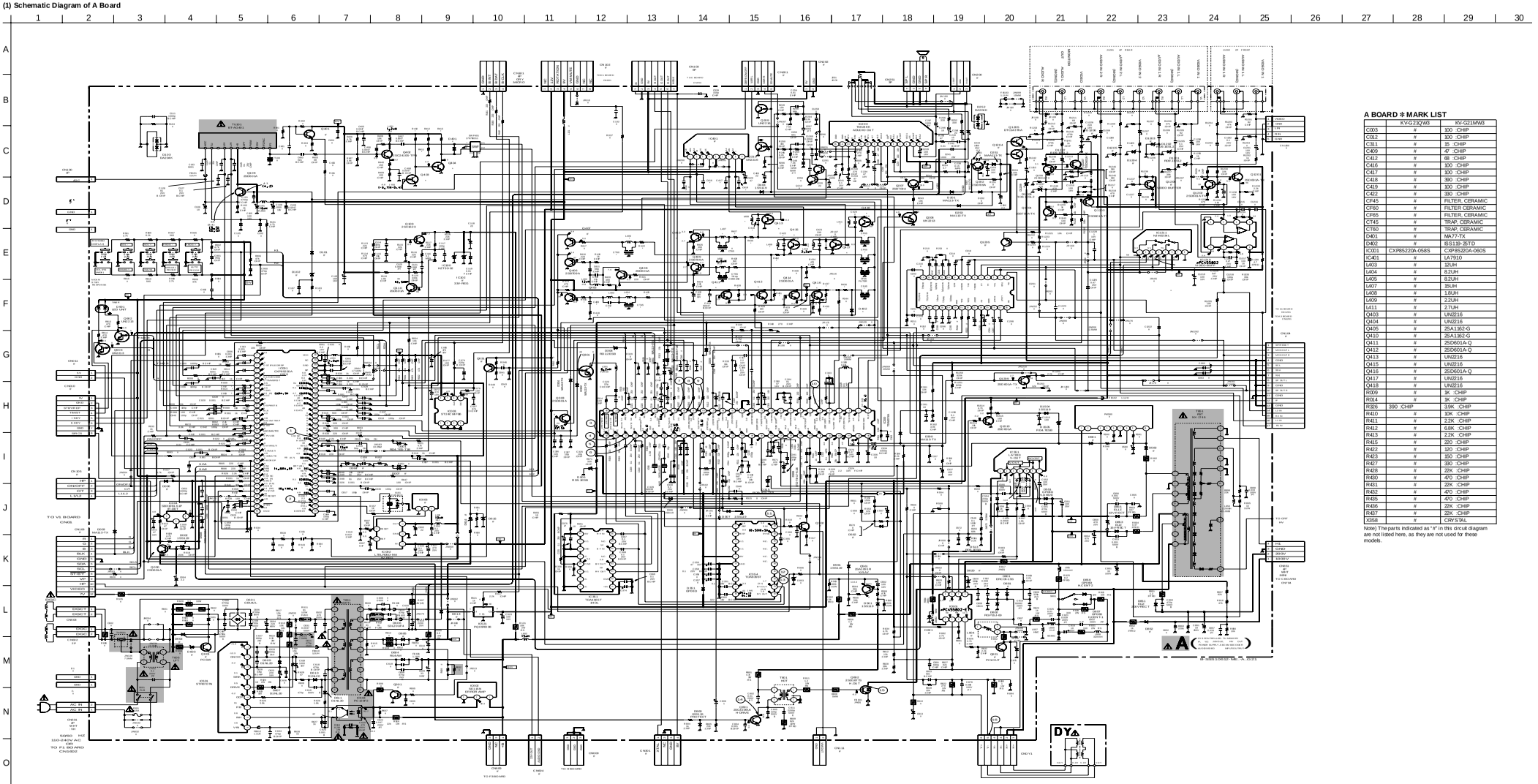
IC300 TDA46657-T



IC351 TDA8375A



(1) Schematic Diagram of A Board

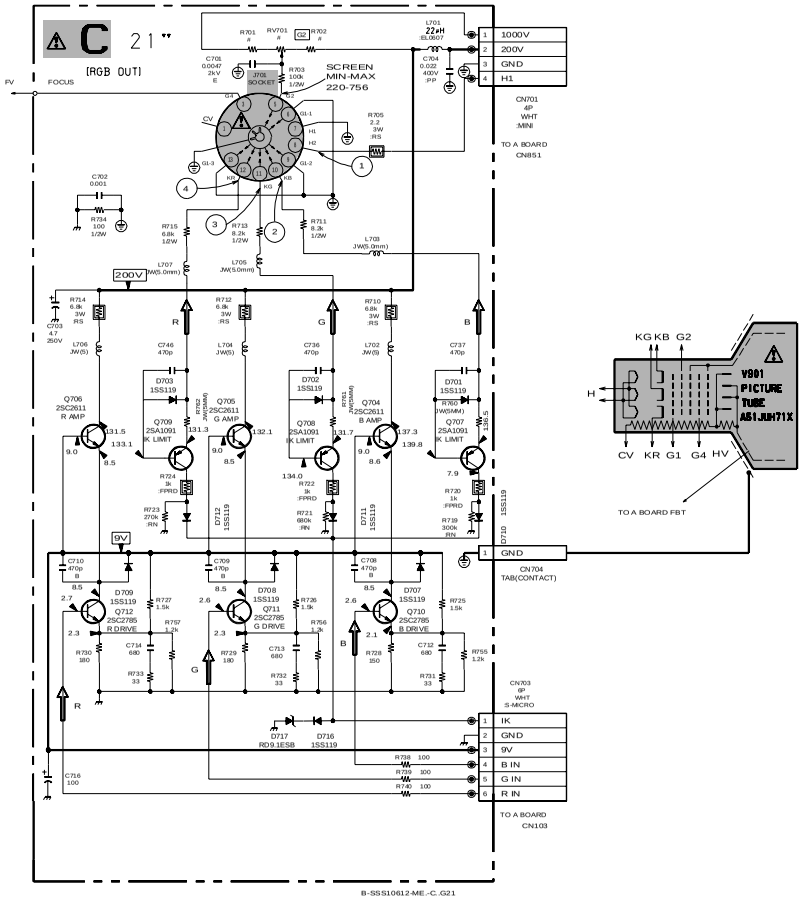


A BOARD ✻ MARK LIST

	KV-G21QW3	KV-G21MW3
C003	#	100 CHIP
C012	#	100 CHIP
C311	#	35 CHIP
C409	#	47 CHIP
C412	#	68 CHIP
C416	#	100 CHIP
C417	#	100 CHIP
C418	#	390 CHIP
C419	#	100 CHIP
C422	#	390 CHIP
CF45	#	FILTER, CERAMIC
CF66	#	FILTER, CERAMIC
CF65	#	FILTER, CERAMIC
CT45	#	TRAP, CERAMIC
CT60	#	TRAP, CERAMIC
D401	#	MA77-TX
D402	#	ISS139-JSTD
IC001	CXP85220A-058S	CXP85220A-060S
IC401	#	LA7910
L403	#	82UH
L404	#	8.2UH
L405	#	8.2UH
L407	#	68UH
L408	#	1.8UH
L409	#	2.2UH
L411	#	2.7UH
Q403	#	UN2216
Q404	#	UN2216
Q405	#	2SA1362-G
Q410	#	2SA1362-G
Q411	#	2SD601A-Q
Q412	#	2SD601A-Q
Q413	#	UN2216
Q415	#	UN2216
Q416	#	2SD601A-Q
Q417	#	UN2216
Q418	#	UN2216
R039	#	2K CHIP
R014	#	1K CHIP
R026	390 CHIP	3.9K CHIP
R410	#	30K CHIP
R411	#	2.2K CHIP
R412	#	6.8K CHIP
R413	#	2.2K CHIP
R415	#	220 CHIP
R422	#	120 CHIP
R423	#	150 CHIP
R427	#	330 CHIP
R428	#	22K CHIP
R430	#	470 CHIP
R431	#	22K CHIP
R432	#	470 CHIP
R435	#	470 CHIP
R436	#	22K CHIP
R437	#	22K CHIP
X958	#	CRYSTAL

Note) The parts indicated as "#" in this circuit diagram are not listed here, as they are not used for these models.

(2) Schematic Diagram of C Board

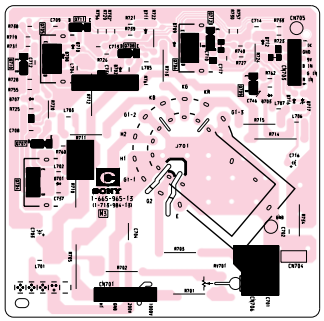


B-SSS10612-ME -C_G21

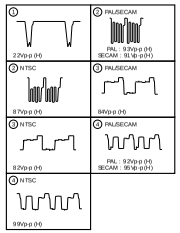
PRINTED WIRING BOARD

C [RGB OUT]

– C Board –



C BOARD WAVEFORMS

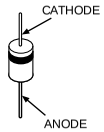


KV-G21MW3/G21QW3
RM-869

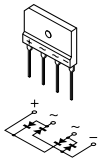
5-4. SEMICONDUCTORS

DIODE

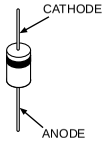
DINL20-TA
EL1Z
EGP20G
NNCD8.2A-T1
NNCD9.1A-T1



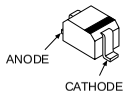
D4SB60L



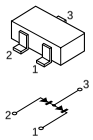
ERC06-15S
S3L20UF4



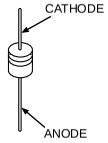
DTZ9-1
MA113-TX



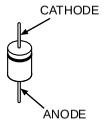
DA204K



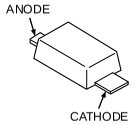
HZS9.1NB2
RD2.2ES-B2
RD5.1ES-B1
RD4.7ESB2
RD5.6ESB2
1SS119-25



RU4DS

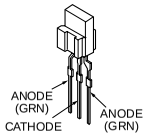


MA77



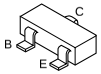
LED

SPB-26MVWF

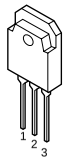


TRANSISTOR

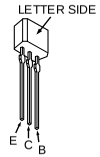
UN2211
UN2213
UN2216
2SA1162-G
2SD601A-Q



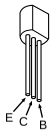
2SD1878-CA



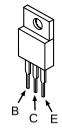
2SC2785-HFE
2SC2410SN



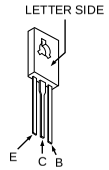
2SA1091-0



2SD2012

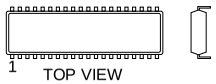


2SC2611



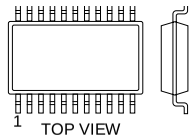
IC

CXP85220A-058S (64PIN)
CXP85220A-060S (64PIN)
ST24C04FB6 (8 PIN)
TDA4665T/V5-118
TDA8375A



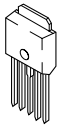
Dual In-line Package
Pin 6~98

TDA8375T/N3 (20PIN)
µPC4558G2 (8PIN)

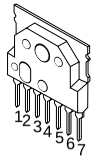


Single In -line Package
Pin 6~98

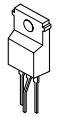
L78LR05D-MA



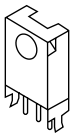
LA7830



SE-115

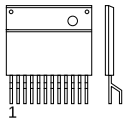


SBX3081-01(30)



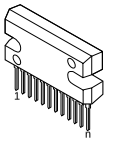
STR-S60707N

MARKING SIDE VIEW

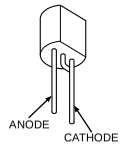


Zig-zag In -line Package
Pin 6~99

TA8248K

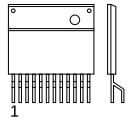


µPC574J



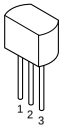
NJM2234L

MARKING SIDE VIEW

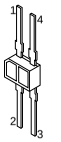


Zig-zag In -line Package
Pin 6~99

LA7910



PQ09RD08



KV-G21MW3/G21QW3
RM-869

SECTION 6
EXPLODED VIEW

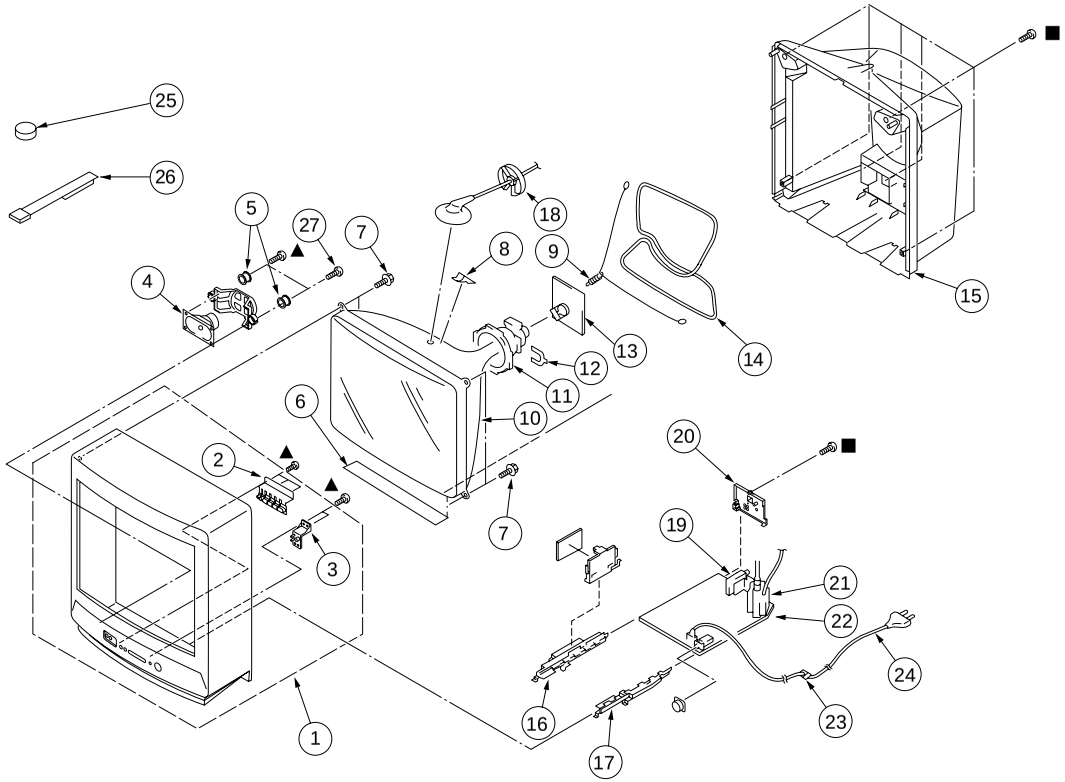
NOTE:

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

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

6-1. CHASSIS

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



REF.NO.		PART NO.	DESCRIPTION	REMARK
1		X-4037-882-1	BEZNET ASSY (KV-G21QW3)	2-3
		X-4037-883-1	BEZNET ASSY (KV-G21MW3)	
2		4-056-187-01	BUTTON, MULTI	
3		4-056-188-01	PLATE, GUIDE LIGHT	
4		1-505-740-11	SPEAKER (5X9CM)	
5		3-947-764-11	CUSHION, SPEAKER	
6		4-072-569-21	SHEET, BLOTTING	
7		4-365-808-12	SCREW (5), TAPPING	
8		3-703-961-01	SPACER, DY	
9		4-369-318-61	SPRING, TENSION	
10	⚠	8-738-774-05	PICUTRE TUBE (21PXD (SDS)(SD-169/1BR))	
11		8-451-280-33	DEFLECTION YOKE (Y21PXA2)	
12		1-452-277-01	MAGNET, BMC	
13	*	A-1331-688-A	C BOARD, COMPLETE	
14	⚠	1-409-942-11	COIL, DEMAGNETIZATION	
15	⚠	4-049-740-21	COVER, REAR	
16	*	4-055-840-01	RAIL (R), GUIDE	
17	*	4-055-841-01	RAIL (L), GUIDE	
18	*	3-704-372-11	HOLDER, HV CABLE	
19		8-598-323-50	TUNER, VSS BT-AG401	
20		4-059-710-01	BRACKET, TERMINAL BOARD	
21	⚠	1-453-250-11	TRANSFORMER ASSY, FLYBACK (NX-1746//M3A)	
22	*	A-1298-258-A	A BOARD, COMPLETE (KV-G21QW3)	
	*	A-1298-259-A	A BOARD, COMPLETE (KV-G21MW3)	
23	⚠	4-022-115-00	HOLDER, AC CORD	
24	⚠	1-574-062-61	CORD, POWER (WITH CONNECTOR) 2.5A/250V	
25		4-051-736-41	MAGNET, DISC	
26		4-051-736-41	PIECE A(90), CONV. CORRECT	
27		4-302-404-03	SCREW (WASHER HEAD) (+P 4X16)	

SECTION 7
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ 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.
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF : µF, PF : µµF

COILS
- MMH : mH, UH : µH

REF. NO.	PART NO.	DESCRIPTION			REMARK
	* A-1299-259-A	A BOARD COMPLETE (KV-G21MW3)			
	* A-1299-258-A	A BOARD COMPLETE (KV-G21QW3)			
		**********			
	1-533-223-11	CLIP, FUSE			
	* 4-059-711-01	HOLDER, FBT			
	7-685-648-79	SCREW +BVTP	3X12 TYPE2 IT-3		
		<CAPACITOR>			
C001	1-163-011-11	CERAMIC CHIP	0.0015UF	10.00% 50V	
C002	1-126-965-11	ELECT	22UF	20.00% 50V	
C003	1-163-117-00	CERAMIC CHIP (KV-G21MW3)	100PF	5.00% 50V	
C004	1-126-961-11	ELECT	2.2UF	20.00% 50V	
C006	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C007	1-126-959-11	ELECT	0.47UF	20.00% 50V	
C008	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C009	1-163-133-00	CERAMIC CHIP	470PF	5.00% 50V	
C010	1-163-037-11	CERAMIC CHIP	0.022UF	10.00% 50V	
C011	1-104-664-11	ELECT	47UF	20.00% 16V	
C012	1-163-117-00	CERAMIC CHIP (KV-G21MW3)	100PF	5.00% 50V	
C013	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C014	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C015	1-101-884-00	CERAMIC	56PF	5.00% 50V	
C016	1-101-884-00	CERAMIC	56PF	5.00% 50V	
C017	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C018	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C019	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C020	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C021	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C022	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C023	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C024	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C025	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C026	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C027	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C028	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C029	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C034	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C035	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C036	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C037	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C038	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C040	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C042	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C044	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C045	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C046	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C047	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C048	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C049	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C050	1-126-960-11	ELECT	1UF	20.00% 50V	
C051	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C052	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C053	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C054	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C055	1-126-925-11	ELECT	470UF	20.00% 10V	
C056	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C057	1-163-243-11	CERAMIC CHIP	47PF	5.00% 50V	
C058	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C059	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C060	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C061	1-164-505-11	CERAMIC CHIP	2.2UF	16V	
C064	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C072	1-126-925-11	ELECT	470UF	20.00% 10V	
C074	1-163-001-11	CERAMIC CHIP	220PF	10.00% 50V	
C101	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V	
C103	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C105	1-104-665-11	ELECT	100UF	20.00% 16V	
C106	1-126-964-11	ELECT	10UF	20.00% 50V	
C108	1-126-767-11	ELECT	1000UF	20.00% 16V	
C109	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V	
C111	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V	
C114	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C115	1-163-093-00	CERAMIC CHIP	10PF	5.00% 50V	
C116	1-136-165-00	MYLAR	0.1UF	5.00% 50V	
C117	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V	
C118	1-126-965-11	ELECT	22UF	20.00% 50V	
C119	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V	
C120	1-130-493-00	MYLAR	0.068UF	5.00% 50V	
C121	1-130-493-00	MYLAR	0.068UF	5.00% 50V	
C122	1-104-665-11	ELECT	100UF	20.00% 16V	
C124	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C125	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C127	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C128	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V	
C220	1-126-965-11	ELECT	22UF	20.00% 50V	
C233	1-104-664-11	ELECT	47UF	20.00% 16V	
C234	1-104-664-11	ELECT	47UF	20.00% 16V	
C235	1-104-665-11	ELECT	100UF	20.00% 16V	
C236	1-104-666-11	ELECT	220UF	20.00% 25V	
C237	1-104-665-11	ELECT	100UF	20.00% 16V	
C238	1-136-167-00	MYLAR	0.15UF	5.00% 50V	
C239	1-104-665-11	ELECT	100UF	20.00% 16V	
C240	1-136-167-00	MYLAR	0.15UF	5.00% 50V	

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REF. NO.	PART NO.	DESCRIPTION		REMARK
C241	1-126-942-61	ELECT	1000UF	20.00% 25V
C242	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V
C243	1-126-964-11	ELECT	10UF	20.00% 50V
C244	1-126-942-61	ELECT	1000UF	20.00% 25V
C246	1-126-964-11	ELECT	10UF	20.00% 50V
C247	1-126-942-61	ELECT	1000UF	20.00% 25V
C252	1-126-961-11	ELECT	2.2UF	20.00% 50V
C253	1-104-665-11	ELECT	100UF	20.00% 16V
C254	1-163-037-11	CERAMIC CHIP	0.022UF	10.00% 50V
C255	1-163-037-11	CERAMIC CHIP	0.022UF	10.00% 50V
C257	1-136-167-00	MYLAR	0.15UF	5.00% 50V
C258	1-136-167-00	MYLAR	0.15UF	5.00% 50V
C300	1-104-664-11	ELECT	47UF	20.00% 16V
C301	1-126-964-11	ELECT	10UF	20.00% 50V
C304	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C305	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C306	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C307	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C308	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C309	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C310	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C311	1-163-231-11	CERAMIC CHIP (KV-G21MW3)	15PF	5.00% 50V
C312	1-163-231-11	CERAMIC CHIP	15PF	5.00% 50V
C313	1-104-665-11	ELECT	100UF	20.00% 16V
C314	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00% 50V
C315	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V
C316	1-102-125-00	CERAMIC	0.0047UF	10.00% 50V
C317	1-164-505-11	CERAMIC CHIP	2.2UF	16V
C319	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C320	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C321	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C322	1-216-295-91	SHORT	0	
C323	1-163-235-11	CERAMIC CHIP	22PF	5.00% 50V
C324	1-164-505-11	CERAMIC CHIP	2.2UF	16V
C325	1-163-093-00	CERAMIC CHIP	10PF	5.00% 50V
C326	1-163-095-00	CERAMIC CHIP	12PF	5.00% 50V
C327	1-163-093-00	CERAMIC CHIP	10PF	5.00% 50V
C328	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V
C329	1-163-016-00	CERAMIC CHIP	0.0039UF	10.00% 50V
C330	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C331	1-126-964-11	ELECT	10UF	20.00% 50V
C332	1-136-165-00	MYLAR	0.1UF	5.00% 50V
C333	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C334	1-164-182-11	CERAMIC CHIP	0.0033UF	10.00% 50V
C335	1-102-973-00	CERAMIC	100PF	5.00% 50V
C336	1-126-964-11	ELECT	10UF	20.00% 50V
C337	1-104-665-11	ELECT	100UF	20.00% 16V
C338	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V
C339	1-163-121-00	CERAMIC CHIP	150PF	5.00% 50V
C340	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V
C341	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V
C342	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C344	1-126-964-11	ELECT	10UF	20.00% 50V
C349	1-126-964-11	ELECT	10UF	20.00% 50V
C350	1-104-664-11	ELECT	47UF	20.00% 16V
C351	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C352	1-164-489-11	CERAMIC CHIP	0.22UF	10.00% 16V

REF. NO.	PART NO.	DESCRIPTION		REMARK
C358	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C359	1-104-665-11	ELECT	100UF	20.00% 16V
C361	1-163-009-11	CERAMIC CHIP	0.001UF	10.00% 50V
C362	1-163-235-11	CERAMIC CHIP	22PF	5.00% 50V
C367	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C368	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C369	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C370	1-164-004-11	CERAMIC CHIP	0.1UF	10.00% 25V
C374	1-104-664-11	ELECT	47UF	20.00% 10V
C375	1-104-664-11	ELECT	47UF	20.00% 10V
C376	1-107-823-11	CERAMIC CHIP	0.47UF	10.00% 16V
C402	1-163-021-91	CERAMIC CHIP	0.01UF	10.00% 50V
C403	1-126-965-11	ELECT	22UF	20.00% 50V
C405	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V
C406	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V
C407	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V
C408	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V
C409	1-163-109-00	CERAMIC CHIP (KV-G21MW3)	47PF	5.00% 50V
C410	1-163-103-00	CERAMIC CHIP	27PF	5.00% 50V
C411	1-163-113-00	CERAMIC CHIP	68PF	5.00% 50V
C412	1-163-113-00	CERAMIC CHIP (KV-G21MW3)	68PF	5.00% 50V
C413	1-104-665-11	ELECT	100UF	20.00% 16V
C414	1-163-117-00	CERAMIC CHIP	100PF	5.00% 50V
C415	1-163-017-00	CERAMIC CHIP	0.0047UF	10.00% 50V
C416	1-163-117-00	CERAMIC CHIP (KV-G21MW3)	100PF	5.00% 50V
C417	1-163-117-00	CERAMIC CHIP (KV-G21MW3)	100PF	5.00% 50V
C418	1-163-131-00	CERAMIC CHIP (KV-G21MW3)	390PF	5.00% 50V
C419	1-163-117-00	CERAMIC CHIP (KV-G21MW3)	100PF	5.00% 50V
C420	1-104-664-11	ELECT	47UF	20.00% 16V
C422	1-163-129-00	CERAMIC CHIP (KV-G21MW3)	330PF	5.00% 50V
C423	1-163-129-00	CERAMIC CHIP	330PF	5.00% 50V
C424	1-163-133-00	CERAMIC CHIP	470PF	5.00% 50V
C501	1-102-228-00	CERAMIC	470PF	10.00% 500V
C523	1-104-665-11	ELECT	100UF	20.00% 16V
C548	1-106-220-00	MYLAR	0.1UF	10.00% 100V
C551	1-126-968-11	ELECT	100UF	20.00% 35V
C552	1-126-968-11	ELECT	100UF	20.00% 35V
C553	1-163-019-00	CERAMIC CHIP	0.0068UF	10.00% 50V
C554	1-102-244-00	CERAMIC	220PF	10.00% 500V
C555	1-101-804-00	CERAMIC	10PF	5.00% 500V
C562	1-104-665-11	ELECT	100UF	20.00% 16V
C602	1-161-830-00	CERAMIC	0.0047UF	99% 500V
C603	1-161-830-00	CERAMIC	0.0047UF	99% 500V
C604	1-117-752-11	ELECT(BLOCK)	330UF	20.00% 450V
C605	1-161-830-00	CERAMIC	0.0047UF	99% 500V
C606	1-161-830-00	CERAMIC	0.0047UF	99% 500V
C607	1-161-830-00	CERAMIC	0.0047UF	99% 500V
C608	1-104-332-11	CERAMIC	470PF	10.00% 2KV
C609	1-123-024-21	ELECT	33UF	160V
C611	⚠ 1-113-900-11	CERAMIC	470PF	10.00% 250V
C613	1-102-824-00	CERAMIC	470PF	5.00% 50V

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REF. NO.		PART NO.	DESCRIPTION			REMARK
C614		1-126-943-11	ELECT	2200UF	20.00%	25V
C616		1-102-228-00	CERAMIC	470PF	10.00%	500V
C617		1-126-941-11	ELECT	470UF	20.00%	25V
C618		1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
C619		1-162-116-00	CERAMIC	680PF	10.00%	2KV
C621	⚠	1-104-705-11	MYLAR	0.1UF	20.00%	250V
C622		1-106-383-00	MYLAR	0.047UF	10.00%	200V
C623		1-126-934-11	ELECT	220UF	20.00%	16V
C624		1-107-884-11	ELECT	1000UF	20.00%	16V
C625		1-102-074-00	CERAMIC	0.001UF	10.00%	50V
C627		1-162-116-00	CERAMIC	680PF	10.00%	2KV
C628		1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C630	⚠	1-113-900-11	CERAMIC	470PF	10.00%	250V
C631		1-161-830-00	CERAMIC	0.0047UF	99%	500V
C632		1-113-900-11	CERAMIC	470PF	10.00%	250V
C633		1-161-754-00	CERAMIC	0.001UF	10.00%	3KV
C634		1-163-005-11	CERAMIC CHIP	470PF	10.00%	50V
C801		1-123-024-21	ELECT	33UF		160V
C802		1-107-364-11	MYLAR	0.01UF	10.00%	200V
C804		1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
C805		1-102-244-00	CERAMIC	220PF	10.00%	500V
C806		1-126-960-11	ELECT	1UF	20.00%	50V
C807		1-136-569-11	FILM	1.2UF	5.00%	200V
C808		1-129-746-00	FILM	0.039UF	5.00%	400V
C809		1-162-115-00	CERAMIC	330PF	10.00%	2KV
C810		1-106-365-00	MYLAR	0.0082UF	99%	200V
C811		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C812		1-117-646-11	FILM	12000PF	3.00%	1.2KV
C816		1-107-943-11	ELECT	10UF	20.00%	160V
C820		1-161-754-00	CERAMIC	0.001UF	10.00%	2KV
C821		1-104-999-11	MYLAR	0.1UF	10.00%	200V
C822		1-136-111-00	FILM	1UF	5.00%	200V
C823		1-163-021-91	CERAMIC CHIP	0.01UF	10.00%	50V
C825		1-107-364-11	MYLAR	0.01UF	10.00%	200V
C850		1-124-480-11	ELECT	470UF	20.00%	25V
C853		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C854		1-124-480-11	ELECT	470UF	20.00%	25V
C856		1-162-318-11	CERAMIC	0.001UF	10.00%	500V
C857		1-136-159-00	MYLAR	0.033UF	5.00%	50V
C860		1-102-228-00	CERAMIC	470PF	10.00%	500V
C861		1-107-654-11	ELECT	33UF	20.00%	250V
C875		1-128-562-11	ELECT	47UF	20.00%	100V
C876		1-107-369-11	MYLAR	0.068UF	10.00%	100V
C891		1-163-007-11	CERAMIC CHIP	680PF	10.00%	50V
C898		1-137-150-11	MYLAR	0.01UF	10.00%	100V
C900		1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C901		1-163-133-00	CERAMIC CHIP	470PF	5.00%	50V
C1201		1-104-665-11	ELECT	100UF	20.00%	16V
C1202		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1204		1-104-665-11	ELECT	100UF	20.00%	16V
C1205		1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1210		1-104-665-11	ELECT	100UF	20.00%	16V
C1213		1-126-960-11	ELECT	1UF	20.00%	50V
C1214		1-104-665-11	ELECT	100UF	20.00%	16V
C1217		1-104-665-11	ELECT	100UF	20.00%	16V
C1218		1-163-123-00	CERAMIC CHIP	180PF	5.00%	50V
C1219		1-104-665-11	ELECT	100UF	20.00%	16V

REF. NO.	PART NO.	DESCRIPTION			REMARK
C1221	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1225	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1226	1-126-934-11	ELECT	220UF	20.00%	16V
C1228	1-164-346-11	CERAMIC CHIP	1UF		16V
C1229	1-164-005-11	CERAMIC CHIP	0.47UF		25V
C1230	1-164-004-11	CERAMIC CHIP	0.1UF	10.00%	25V
C1259	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C1260	1-164-161-11	CERAMIC CHIP	0.0022UF	10.00%	50V
C1513	1-126-968-11	ELECT	100UF	20.00%	50V

<FILTER>

CF45	1-527-943-00	FILTER, CERAMIC (KV-G21MW3)
CF55	1-567-099-00	FILTER, CERAMIC
CF60	1-567-100-00	FILTER, CERAMIC (KV-G21MW3)
CF65	1-567-101-11	FILTER, CERAMIC (KV-G21MW3)

<CONNECTOR>

CN100	*	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P
CN101	*	1-508-797-00	PIN, CONNECTOR 4P
CN103	*	1-564-509-11	PLUG, CONNECTOR 6P
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
CN851		1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P

<TRIMMER>

CT45	1-579-690-11	TRAP, CERAMIC (KV-G21MW3)
CT55	1-404-801-11	TRAP, CERAMIC
CT60	1-767-918-21	TRAP, CERAMIC (KV-G21MW3)
CT65	1-767-917-21	TRAP, CERAMIC

<DIODE>

D001	8-719-109-81	DIODE RD4.7ES-T1B
D002	8-719-911-19	DIODE 1SS119-25TD
D003	8-719-041-97	DIODE MA113-(TX)
D005	8-719-109-84	DIODE RD5.1ES-T1B
D008	8-719-109-89	DIODE RD5.6ES-T1B2
D103	8-719-914-49	DIODE DA204K
D201	8-719-041-97	DIODE MA113-(TX)
D202	1-216-295-91	SHORT 0
D251	8-719-041-97	DIODE MA113-(TX)
D252	8-719-914-49	DIODE DA204K
D253	8-719-041-97	DIODE MA113-(TX)
D300	8-719-041-97	DIODE MA113-(TX)
D301	8-719-041-97	DIODE MA113-(TX)
D305	8-719-041-97	DIODE MA113-(TX)
D306	8-719-911-19	DIODE 1SS119-25TD
D307	8-719-911-19	DIODE 1SS119-25TD
D308	8-719-109-54	DIODE RD2.2ES-T1B
D310	8-719-041-97	DIODE MA113-(TX)
D311	8-719-109-54	DIODE RD2.2ES-T1B
D312	8-719-070-15	DIODE NNCD8.2A-T1
D315	8-719-070-16	DIODE NNCD9.1A-T1
D351	8-719-908-03	DIODE GP08DPKG23

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REF. NO.	PART NO.	DESCRIPTION	REMARK
D399	8-719-056-86	DIODE DTZ9.1	
D401	8-719-421-40	DIODE MA77-TX (KV-G21MW3)	
D402	8-719-911-19	DIODE 1SS119-25TD (KV-G21MW3)	
D403	8-719-911-19	DIODE 1SS119-25TD	
D513	8-719-109-84	DIODE RD5.1ES-T1B	
D551	8-719-908-03	DIODE GP08DPKG23	
D561	8-719-911-19	DIODE 1SS119-25TD	
D591	8-719-911-19	DIODE 1SS119-25TD	
D601	8-719-305-07	DIODE D4SB60L	
D604	8-719-053-31	DIODE RU4DS	
D606	8-719-052-52	DIODE S3L20UF4	
D607	8-719-076-08	DIODE D1NL20-TA	
D609	8-719-076-08	DIODE D1NL20-TA	
D610	8-719-076-08	DIODE D1NL20-TA	
D611	8-719-076-08	DIODE D1NL20-TA	
D801	8-719-945-80	DIODE ERC06-15STP11	
D802	8-719-979-85	DIODE RGP15J-6040G23	
D851	8-719-302-43	DIODE RGP10GPKG23	
D853	8-719-302-43	DIODE RGP10GPKG23	
D855	8-719-302-43	DIODE RGP10GPKG23	
D857	8-719-908-03	DIODE GP08DPKG23	
D858	8-719-908-03	DIODE GP08DPKG23	
D860	8-719-911-19	DIODE 1SS119-25TD	
D901	1-810-039-11	LED UNIT	
D1201	8-719-070-16	DIODE NNCD9.1A-T1	
D1202	8-719-070-16	DIODE NNCD9.1A-T1	
D1207	8-719-070-16	DIODE NNCD9.1A-T1	
D1208	8-719-070-16	DIODE NNCD9.1A-T1	
D1504	8-719-911-19	DIODE 1SS119-25TD	
D1505	8-719-109-81	DIODE RD4.7ES-T1B	
		<FUSE>	
F601	1-532-237-00	FUSE, TIME-LAG (BET) 3.15A/250V	
		<FERRITE BEAD>	
FB101	1-410-397-21	FERRITE 1.1UH	
FB102	1-410-397-21	FERRITE 1.1UH	
FB103	1-410-397-21	FERRITE 1.1UH	
FB601	1-410-397-21	FERRITE 1.1UH	
FB603	1-410-397-21	FERRITE 1.1UH	
FB610	1-410-397-21	FERRITE 1.1UH	
FB612	1-410-397-21	FERRITE 1.1UH	
FB801	1-410-397-21	FERRITE 1.1UH	
		<IC>	
IC001	8-752-891-61	IC CXP85220A-060S (KV-G21MW3)	
IC001	8-752-891-28	IC CXP85220A-058S (KV-G21QW3)	
IC003	8-759-380-51	IC ST24C04FB6	
IC004	8-759-180-30	HYB IC SBX3081-51(30)	
IC100	8-759-157-40	DIODE HZT33-02TE	
IC203	8-759-339-60	IC TA8248K	
IC300	8-759-365-26	IC TDA8375A	
IC351	8-759-565-20	IC TDA4665T/V5-118	
IC354	8-759-430-79	IC TDA8395T	
IC401	8-759-800-65	IC LA7910 (KV-G21MW3)	
IC521	8-759-650-98	IC PQ09RD08	
IC551	8-759-801-98	IC LA7830	
IC601	8-749-014-00	IC STR-S6707N	
IC602	8-749-921-89	IC SE115N	
IC603 ⚠	8-749-010-64	PHOTO COUPLER PC123F2	
IC801	8-759-151-08	IC UPC4558G2	
IC1210	8-759-151-08	IC UPC4558G2	
IC1211	8-759-711-23	IC NJM2234L	
		<JACK>	
J251	1-770-786-21	JACK	
J1201	1-779-849-11	JACK BLOCK, PIN 4P	
J1202	1-779-205-11	JACK, PIN 2P	
		<CHIP CONDUCTOR>	
JR050	1-216-295-91	SHORT 0	
JR052	1-216-295-91	SHORT 0	
JR101	1-216-295-91	SHORT 0	
JR112	8-719-041-97	DIODE MA113-(TX)	
JR113	1-216-295-91	SHORT 0	
JR115	1-216-295-91	SHORT 0	
JR116	1-216-295-91	SHORT 0	
JR117	1-216-295-91	SHORT 0	
JR118	1-216-295-91	SHORT 0	
JR124	1-216-295-91	SHORT 0	
JR125	1-216-295-91	SHORT 0	
JR126	1-216-295-91	SHORT 0	
JR251	1-216-295-91	SHORT 0	
		<COIL>	
L001	1-408-591-11	INDUCTOR 1UH	
L002	1-410-509-11	INDUCTOR 10UH	
L003	1-408-605-31	INDUCTOR 15UH	
L101	1-410-470-11	INDUCTOR 10UH	
L301	1-408-602-31	INDUCTOR 8.2UH	
L401	1-410-498-11	INDUCTOR 1.2UH	
L402	1-410-510-11	INDUCTOR 12UH	
L403	1-410-510-11	INDUCTOR 12UH (KV-G21MW3)	
L404	1-410-508-11	INDUCTOR 8.2UH (KV-G21MW3)	
L405	1-410-508-11	INDUCTOR 8.2UH (KV-G21MW3)	
L406	1-410-507-11	INDUCTOR 6.8UH	
L407	1-410-511-11	INDUCTOR 15UH (KV-G21MW3)	
L408	1-410-500-11	INDUCTOR 1.8UH (KV-G21MW3)	
L409	1-410-501-11	INDUCTOR 2.2UH (KV-G21MW3)	
L410	1-410-501-11	INDUCTOR 2.2UH	
L411	1-410-502-11	INDUCTOR 2.7UH (KV-G21MW3)	
L802	1-412-527-11	INDUCTOR 15UH	
L804	1-459-075-11	COIL,DYNAMIC CONVERSION CHOKE	
L805	1-459-769-13	COIL, HORIZONTAL LINEARITY	
L807	1-459-390-00	INDUCTOR 390UH	
L808	1-412-552-11	INDUCTOR 2.2MH	
L821	1-459-111-00	INDUCTOR 10MH	
L850	1-408-947-00	INDUCTOR 2.2MH	

A

REF. NO.	PART NO.	DESCRIPTION	REMARK
		<TRANSISTOR>	
Q030	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q108	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q109	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q110	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q202	8-729-424-02	TRANSISTOR 2SA1162-G	
Q207	8-729-424-02	TRANSISTOR 2SA1162-G	
Q208	8-729-421-17	TRANSISTOR UN2213	
Q209	8-729-424-69	TRANSISTOR UN2216	
Q210	8-729-424-69	TRANSISTOR UN2216	
Q301	8-729-421-20	TRANSISTOR UN2211	
Q303	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q402	8-729-922-66	TRANSISTOR 2SC2410S-TPN	
Q403	8-729-424-69	TRANSISTOR UN2216 (KV-G21MW3)	
Q404	8-729-424-69	TRANSISTOR UN2216 (KV-G21MW3)	
Q405	8-729-424-02	TRANSISTOR 2SA1162-G (KV-G21MW3)	
Q406	8-729-424-02	TRANSISTOR 2SA1162-G	
Q407	8-729-404-02	TRANSISTOR 2SA1162-G	
Q408	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q409	8-729-424-02	TRANSISTOR 2SA1162-G	
Q410	8-729-424-02	TRANSISTOR 2SA1162-G (KV-G21MW3)	
Q411	8-729-422-26	TRANSISTOR 2SD601A-Q (KV-G21MW3)	
Q412	8-729-422-26	TRANSISTOR 2SD601A-Q (KV-G21MW3)	
Q413	8-729-424-69	TRANSISTOR UN2216 (KV-G21MW3)	
Q414	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q415	8-729-424-69	TRANSISTOR UN2216 (KV-G21MW3)F	
Q416	8-729-422-26	TRANSISTOR 2SD601A-Q (KV-G21MW3)	
Q417	8-729-424-69	TRANSISTOR UN2216 (KV-G21MW3)	
Q418	8-729-424-69	TRANSISTOR UN2216 (KV-G21MW3)	
Q561	8-729-200-17	TRANSISTOR 2SA1091R-TPE2	
Q801	8-729-140-50	TRANSISTOR 2SC3209LK-TP	
Q802	8-729-821-87	TRANSISTOR 2SD1878-CA	
Q821	8-729-906-96	TRANSISTOR 2SD2012	
Q902	8-729-421-17	TRANSISTOR UN2213	
Q903	8-729-421-17	TRANSISTOR UN2213	
Q1201	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q1202	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q1203	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q1204	8-729-424-02	TRANSISTOR 2SA1162-G	
Q1207	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q1208	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q1209	8-729-422-26	TRANSISTOR 2SD601A-Q	
Q1265	8-729-424-69	TRANSISTOR UN2216	
Q1513	8-729-422-26	TRANSISTOR 2SD601A-Q	

REF. NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R001	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R002	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R003	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R004	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R007	1-216-073-00	RES-CHIP	10K	5%	1/10W
R008	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R009	1-216-049-91	RES-CHIP (KV-G21MW3)	1K	5%	1/10W
R010	1-216-049-91	RES-CHIP	1K	5%	1/10W
R012	1-216-017-91	RES-CHIP	47	5%	1/10W
R013	1-216-049-91	RES-CHIP	1K	5%	1/10W
R014	1-216-049-91	RES-CHIP (KV-G21MW3)	1K	5%	1/10W
R015	1-216-043-91	RES-CHIP	560	5%	1/10W
R016	1-216-049-91	RES-CHIP	1K	5%	1/10W
R017	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R018	1-216-033-00	RES-CHIP	220	5%	1/10W
R019	1-216-101-00	RES-CHIP	150K	5%	1/10W
R021	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R022	1-216-295-91	SHORT	0		
R025	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R026	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R027	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R028	1-216-025-91	RES-CHIP	100	5%	1/10W
R029	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R031	1-216-049-91	RES-CHIP	1K	5%	1/10W
R033	1-216-049-91	RES-CHIP	1K	5%	1/10W
R035	1-216-049-91	RES-CHIP	1K	5%	1/10W
R036	1-216-049-91	RES-CHIP	1K	5%	1/10W
R038	1-216-033-00	RES-CHIP	220	5%	1/10W
R040	1-216-033-00	RES-CHIP	220	5%	1/10W
R041	1-216-025-91	RES-CHIP	100	5%	1/10W
R042	1-216-039-00	RES-CHIP	390	5%	1/10W
R045	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R047	1-216-025-91	RES-CHIP	100	5%	1/10W
R048	1-216-025-91	RES-CHIP	100	5%	1/10W
R053	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R054	1-216-073-00	RES-CHIP	10K	5%	1/10W
R057	1-216-049-91	RES-CHIP	1K	5%	1/10W
R060	1-216-037-00	RES-CHIP	330	5%	1/10W
R061	1-216-049-91	RES-CHIP	1K	5%	1/10W
R062	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R063	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R065	1-216-033-00	RES-CHIP	220	5%	1/10W
R066	1-216-033-00	RES-CHIP	220	5%	1/10W
R068	1-216-025-91	RES-CHIP	100	5%	1/10W
R071	1-216-037-00	RES-CHIP	330	5%	1/10W
R072	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R076	1-216-025-91	RES-CHIP	100	5%	1/10W
R077	1-216-025-91	RES-CHIP	100	5%	1/10W
R090	1-216-073-00	RES-CHIP	10K	5%	1/10W
R101	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R102	1-216-049-91	RES-CHIP	1K	5%	1/10W
R113	1-216-081-00	RES-CHIP	22K	5%	1/10W
R114	1-216-041-00	RES-CHIP	470	5%	1/10W
R115	1-216-081-00	RES-CHIP	22K	5%	1/10W
R116	1-216-081-00	RES-CHIP	22K	5%	1/10W
R117	1-216-081-00	RES-CHIP	22K	5%	1/10W
R118	1-216-081-00	RES-CHIP	22K	5%	1/10W
R119	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R120	1-216-109-00	RES-CHIP	330K	5%	1/10W
R131	1-216-464-11	METAL OXIDE	18K	5%	2W
R180	1-216-033-00	RES-CHIP	220	5%	1/10W
R181	1-216-033-00	RES-CHIP	220	5%	1/10W
R182	1-216-033-00	RES-CHIP	220	5%	1/10W
R240	1-216-035-00	RES-CHIP	270	5%	1/10W
R242	1-216-035-00	RES-CHIP	270	5%	1/10W
R243	1-216-073-00	RES-CHIP	10K	5%	1/10W
R244	1-216-073-00	RES-CHIP	10K	5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION			REMARK
R245	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R246	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R247	1-216-073-00	RES-CHIP	10K	5%	1/10W
R248	1-216-073-00	RES-CHIP	10K	5%	1/10W
R249	1-216-077-91	RES-CHIP	15K	5%	1/10W
R250	1-216-077-91	RES-CHIP	15K	5%	1/10W
R251	1-216-295-91	SHORT	0		
R252	1-249-411-11	CARBON	330	5%	1/4W
R253	1-216-073-00	RES-CHIP	10K	5%	1/10W
R254	1-249-389-11	CARBON	4.7	5%	1/4W
R255	1-249-389-11	CARBON	4.7	5%	1/4W
R256	1-249-411-11	CARBON	330	5%	1/4W
R257	8-719-041-97	DIODE MA113-(TX)			
R264	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R265	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R266	1-216-073-00	RES-CHIP	10K	5%	1/10W
R301	1-216-073-00	RES-CHIP	10K	5%	1/10W
R302	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R303	1-216-025-91	RES-CHIP	100	5%	1/10W
R304	1-216-025-91	RES-CHIP	100	5%	1/10W
R305	1-216-025-91	RES-CHIP	100	5%	1/10W
R306	1-216-025-91	RES-CHIP	100	5%	1/10W
R307	1-216-025-91	RES-CHIP	100	5%	1/10W
R308	1-216-033-00	RES-CHIP	220	5%	1/10W
R309	1-216-033-00	RES-CHIP	220	5%	1/10W
R310	1-216-097-91	RES-CHIP	100K	5%	1/10W
R311	1-216-075-00	RES-CHIP	12K	5%	1/10W
R312	1-216-025-91	RES-CHIP	100	5%	1/10W
R313	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R314	1-216-025-91	RES-CHIP	100	5%	1/10W
R315	1-216-295-91	SHORT	0		
R318	1-216-099-00	RES-CHIP	120K	5%	1/10W
R319	1-216-123-11	RES-CHIP	1.2M	5%	1/10W
R320	1-216-083-00	RES-CHIP	27K	5%	1/10W
R321	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R322	1-216-083-00	RES-CHIP	27K	5%	1/10W
R325	1-216-295-91	SHORT	0		
R326	1-216-039-00	RES-CHIP (KV-G21QW3)	390	5%	1/10W
R326	1-216-063-91	RES-CHIP (KV-G21MW3)	3.9K	5%	1/10W
R327	1-216-295-91	SHORT	0		
R328	1-216-295-91	SHORT	0		
R329	1-216-295-91	SHORT	0		
R330	1-216-043-91	RES-CHIP	560	5%	1/10W
R331	1-216-117-00	RES-CHIP	680K	5%	1/10W
R332	1-216-033-00	RES-CHIP	220	5%	1/10W
R333	1-216-077-91	RES-CHIP	15K	5%	1/10W
R335	1-216-073-00	RES-CHIP	10K	5%	1/10W
R336	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R338	1-216-295-91	SHORT	0		
R339	1-216-036-00	RES-CHIP	300	5%	1/10W
R340	1-216-035-00	RES-CHIP	270	5%	1/10W
R341	1-216-049-91	RES-CHIP	1K	5%	1/10W
R351	1-216-001-00	RES-CHIP	10	5%	1/10W
R355	1-216-001-00	RES-CHIP	10	5%	1/10W
R356	1-216-049-91	RES-CHIP	1K	5%	1/10W
R360	1-208-291-11	RES-CHIP	4.7M	5%	1/10W

REF. NO.	PART NO.	DESCRIPTION			REMARK
R403	1-216-021-00	RES-CHIP	68	5%	1/10W
R406	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R407	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R408	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R409	1-216-025-91	RES-CHIP	100	5%	1/10W
R410	1-216-073-00	RES-CHIP (KV-G21MW3)	10K	5%	1/10W
R411	1-216-057-00	RES-CHIP (KV-G21MW3)	2.2K	5%	1/10W
R412	1-216-069-00	RES-CHIP (KV-G21MW3)	6.8K	5%	1/10W
R413	1-216-057-00	RES-CHIP (KV-G21MW3)	2.2K	5%	1/10W
R414	1-216-041-00	RES-CHIP	470	5%	1/10W
R415	1-216-033-00	RES-CHIP (KV-G21MW3)	220	5%	1/10W
R416	1-216-033-00	RES-CHIP	220	5%	1/10W
R417	1-216-033-00	RES-CHIP	220	5%	1/10W
R418	1-216-045-00	RES-CHIP	680	5%	1/10W
R419	1-216-049-91	RES-CHIP	1K	5%	1/10W
R420	1-216-039-00	RES-CHIP	390	5%	1/10W
R421	1-216-033-00	RES-CHIP	220	5%	1/10W
R422	1-216-027-00	RES-CHIP (KV-G21MW3)	120	5%	1/10W
R423	1-216-029-00	RES-CHIP (KV-G21MW3)	150	5%	1/10W
R424	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R425	1-216-039-00	RES-CHIP	390	5%	1/10W
R426	1-216-029-00	RES-CHIP	150	5%	1/10W
R427	1-216-037-00	RES-CHIP (KV-G21MW3)	330	5%	1/10W
R428	1-216-081-00	RES-CHIP (KV-G21MW3)	22K	5%	1/10W
R429	1-216-031-00	RES-CHIP	180	5%	1/10W
R430	1-216-041-00	RES-CHIP (KV-G21MW3)	470	5%	1/10W
R431	1-216-081-00	RES-CHIP (KV-G21MW3)	22K	5%	1/10W
R432	1-216-041-00	RES-CHIP (KV-G21MW3)	470	5%	1/10W
R433	1-216-081-00	RES-CHIP	22K	5%	1/10W
R434	1-216-041-00	RES-CHIP	470	5%	1/10W
R435	1-216-041-00	RES-CHIP (KV-G21MW3)	470	5%	1/10W
R436	1-216-081-00	RES-CHIP (KV-G21MW3)	22K	5%	1/10W
R437	1-216-081-00	RES-CHIP (KV-G21MW3)	22K	5%	1/10W
R440	1-216-029-00	RES-CHIP	150	5%	1/10W
R521	1-216-049-91	RES-CHIP	1K	5%	1/10W
R552	1-216-101-00	RES-CHIP	150K	5%	1/10W
R553	1-216-081-00	RES-CHIP	22K	5%	1/10W
R554	1-163-009-11	CERAMIC CHIP	0.001UF	10.00%	50V
R555	1-249-429-11	CARBON	10K	5%	1/4W
R556	1-216-049-91	RES-CHIP	1K	5%	1/10W
R557	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R560	1-216-295-91	SHORT	0		
R561	1-249-421-11	CARBON	2.2K	5%	1/4W
R562	1-249-419-11	CARBON	1.5K	5%	1/4W
R563	1-260-126-11	CARBON	180K	5%	1/2W

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

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REF. NO.		PART NO.	DESCRIPTION			REMARK
R564		1-216-091-00	RES-CHIP	56K	5%	1/10W
R565		1-216-091-00	RES-CHIP	56K	5%	1/10W
R566		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R569		1-260-125-11	CARBON	150K	5%	1/2W
R570		1-216-295-91	SHORT	0		
R571		1-216-033-00	RES-CHIP	220	5%	1/10W
R601		1-202-961-11	CEMENTED	1.8	5%	10W
R602		1-202-961-11	CEMENTED	1.8	5%	10W
R605		1-216-396-11	METAL OXIDE	3.9	5%	3W
R606		1-215-915-11	METAL OXIDE	470	5%	3W
R610		1-215-924-00	METAL OXIDE	15K	5%	3W
R611		1-202-933-61	FUSIBLE	0.1	10%	1/2W
R613		1-219-134-11	FUSIBLE	0.1	10%	1/4W
R614		1-215-877-11	METAL OXIDE	22K	5%	1W
R615		1-249-389-11	CARBON	4.7	5%	1/4W
R616	⚠	1-218-265-11	METAL	8.2M	5%	1W
R617		1-215-924-00	METAL OXIDE	15K	5%	3W
R619		1-219-134-11	FUSIBLE	0.1	10%	1/4W
R622		1-217-192-21	WIREWOUND	0.22	10%	2W
R623		1-247-807-31	CARBON	100	5%	1/4W
R624		1-216-446-00	METAL OXIDE	18	5%	2W
R625		1-249-424-11	CARBON	3.9K	5%	1/4W
R626		1-249-420-11	CARBON	1.8K	5%	1/4W
R627		1-249-417-11	CARBON	1K	5%	1/4W
R628		1-249-417-11	CARBON	1K	5%	1/4W
R629		1-249-399-11	CARBON	33	5%	1/4W
R632	⚠	1-249-381-11	CARBON	1	5%	1/4W
R636		1-215-924-00	METAL OXIDE	15K	5%	3W
R801		1-215-920-11	METAL OXIDE	3.3K	5%	3W
R802		1-249-385-11	CARBON	2.2	5%	1/4W
R803		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R804		1-216-049-91	RES-CHIP	1K	5%	1/10W
R805		1-216-081-00	RES-CHIP	22K	5%	1/10W
R809		1-247-756-11	CARBON	2.2K	5%	1/2W
R811		1-216-343-00	METAL OXIDE	0.33	5%	1W
R812		1-216-075-00	RES-CHIP	12K	5%	1/10W
R816		1-249-435-11	CARBON	33K	5%	1/4W
R820		1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R821		1-215-911-11	METAL OXIDE	100	5%	3W
R822		1-216-429-00	METAL OXIDE	270	5%	1W
R823		1-249-931-11	CARBON	2.2K	5%	1/4W
R825		1-249-392-11	CARBON	8.2	5%	1/4W
R826		1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R827		1-216-095-00	RES-CHIP	82K	5%	1/10W
R828		1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R829		1-216-053-00	RES-CHIP	1.5K	5%	1/10W
R831		1-215-886-11	METAL OXIDE	100	5%	2W
R832		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R834		1-216-073-00	RES-CHIP	10K	5%	1/10W
R851		1-249-382-11	CARBON	1.2	5%	1/4W
R853		1-249-377-11	CARBON	0.47	5%	1/4W
R854		1-249-377-11	CARBON	0.47	5%	1/4W
R855		1-202-818-00	SOLID	1K	20%	1/2W
R856		1-249-429-11	CARBON	10K	5%	1/4W
R857		1-249-438-11	CARBON	56K	5%	1/4W
R858		1-216-370-11	METAL OXIDE	1.2	5%	2W
R860		1-247-887-00	CARBON	220K	5%	1/4W
R881		1-216-043-91	RES-CHIP	560	5%	1/10W

REF. NO.		PART NO.	DESCRIPTION			REMARK
R882		1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R883		1-216-121-91	RES-CHIP	1M	5%	1/10W
R895		1-216-349-00	METAL OXIDE	1	5%	1W
R898		1-249-421-11	CARBON	2.2K	5%	1/4W
R902		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R906		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R907		1-216-043-91	RES-CHIP	560	5%	1/10W
R908		1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R909		1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R910		1-216-043-91	RES-CHIP	560	5%	1/10W
R911		1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R912		1-216-071-00	RES-CHIP	8.2K	5%	1/10W
R913		1-216-041-00	RES-CHIP	470	5%	1/10W
R914		1-216-041-00	RES-CHIP	470	5%	1/10W
R1201		1-216-023-00	RES-CHIP	82	5%	1/10W
R1202		1-216-049-91	RES-CHIP	1K	5%	1/10W
R1203		1-216-089-91	RES-CHIP	47K	5%	1/10W
R1205		1-216-023-00	RES-CHIP	82	5%	1/10W
R1206		1-216-089-91	RES-CHIP	47K	5%	1/10W
R1211		1-216-021-00	RES-CHIP	68	5%	1/10W
R1212		1-216-049-91	RES-CHIP	1K	5%	1/10W
R1215		1-216-113-00	RES-CHIP	470K	5%	1/10W
R1216		1-216-113-00	RES-CHIP	470K	5%	1/10W
R1218		1-216-041-00	RES-CHIP	470	5%	1/10W
R1219		1-216-073-00	RES-CHIP	10K	5%	1/10W
R1220		1-216-049-91	RES-CHIP	1K	5%	1/10W
R1221		1-216-073-00	RES-CHIP	10K	5%	1/10W
R1227		1-216-689-11	RES-CHIP	39K	5%	1/10W
R1228		1-216-049-91	RES-CHIP	1K	5%	1/10W
R1229		1-216-041-00	RES-CHIP	470	5%	1/10W
R1230		1-216-073-00	RES-CHIP	10K	5%	1/10W
R1231		1-216-049-91	RES-CHIP	1K	5%	1/10W
R1232		1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R1233		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1235		1-216-689-11	RES-CHIP	39K	5%	1/10W
R1239		1-249-389-11	CARBON	4.7	5%	1/4W
R1240		1-216-025-91	RES-CHIP	100	5%	1/10W
R1241		1-216-049-91	RES-CHIP	1K	5%	1/10W
R1243		1-216-025-91	RES-CHIP	100	5%	1/10W
R1245		1-216-037-00	RES-CHIP	330	5%	1/10W
R1246		1-216-037-00	RES-CHIP	330	5%	1/10W
R1247		1-216-041-00	RES-CHIP	470	5%	1/10W
R1248		1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R1249		1-216-041-00	RES-CHIP	470	5%	1/10W
R1250		1-216-119-00	RES-CHIP	820K	5%	1/10W
R1251		1-216-119-00	RES-CHIP	820K	5%	1/10W
R1252		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1253		1-216-051-00	RES-CHIP	1.2K	5%	1/10W
R1255		1-216-073-00	RES-CHIP	10K	5%	1/10W
R1513		1-216-073-00	RES-CHIP	10K	5%	1/10W
R1514		1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1515		1-216-025-91	RES-CHIP	100	5%	1/10W

<SWITCH>

S601	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)
S801		1-572-707-11	SWITCH, LEVER
S901		1-571-532-21	SWITCH, TACTIL

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

A C

REF. NO.		PART NO.	DESCRIPTION	REMARK
S902		1-571-532-21	SWITCH, TACTIL	
S903		1-571-532-21	SWITCH, TACTIL	
S904		1-571-532-21	SWITCH, TACTIL	
S905		1-571-532-21	SWITCH, TACTIL	
S906		1-571-532-21	SWITCH, TACTIL	
			<SPARK GAP>	
SG801		1-519-422-11	GAP, SPARK	
			<######### >	
SWF401		1-760-771-11	FILTER, SURFACE WAVE	
			<TRANSFORMER>	
T601	⚠	1-429-137-21	TRANSFORMER, CONVERTER (SRT)	
T605	⚠	1-424-682-11	TRANSFORMER, LINE FILTER	
T801		1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
T851	⚠	1-453-250-11	TRANSFORMER ASSY, FLYBACK (NX-1746//M3A)	
			<THERMISTOR>	
THP601	⚠	1-808-059-31	THERMISTOR, POSITIVE	
			<TUNER>	
TU101	⚠	8-598-323-50	VSS TUNER BT-AG401	
			<CRYSTAL>	
X101		1-577-358-21	VIBRATOR, CERAMIC	
X300		1-411-752-11	COIL	
X358		1-567-505-11	OSCILLATOR, CRYSTAL (KV-G21MW3)	
X443		1-567-504-11	OSCILLATOR, CRYSTAL	

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* A-1331-688-A C BOARD MOUNTED
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<CAPACITOR>

C701	1-162-114-00	CERAMIC	0.0047UF	2KV
C702	1-102-074-00	CERAMIC	0.001UF	10.00% 50V
C703	1-107-651-11	ELECT	4.7UF	20.00% 250V
C704	1-130-202-00	FILM	0.022UF	5.00% 400V
C708	1-102-114-00	CERAMIC	470PF	10.00% 50V
C709	1-102-114-00	CERAMIC	470PF	10.00% 50V
C710	1-102-114-00	CERAMIC	470PF	10.00% 50V
C712	1-102-116-00	CERAMIC	680PF	10.00% 50V
C713	1-102-116-00	CERAMIC	680PF	10.00% 50V
C714	1-102-116-00	CERAMIC	680PF	10.00% 50V
C716	1-126-933-11	ELECT	100UF	20.00% 16V
C717	1-101-880-00	CERAMIC	47PF	5.00% 50V
C736	1-102-114-00	CERAMIC	470PF	10.00% 50V
C737	1-102-114-00	CERAMIC	470PF	10.00% 50V
C746	1-102-114-00	CERAMIC	470PF	10.00% 50V

<CONNECTOR>

CN701		1-508-766-00	PIN, CONNECTOR (5MM PITCH) 4P
CN703	*	1-564-509-11	PLUG, CONNECTOR 6P
CN704		1-695-915-11	TAB (CONTACT)

<DIODE>

D701	8-719-911-19	DIODE 1SS119-25TD
D702	8-719-911-19	DIODE 1SS119-25TD
D703	8-719-911-19	DIODE 1SS119-25TD
D707	8-719-911-19	DIODE 1SS119-25TD
D708	8-719-911-19	DIODE 1SS119-25TD
D709	8-719-911-19	DIODE 1SS119-25TD
D710	8-719-911-19	DIODE 1SS119-25TD
D711	8-719-911-19	DIODE 1SS119-25TD
D712	8-719-911-19	DIODE 1SS119-25TD
D716	8-719-911-19	DIODE 1SS119-25TD
D717	8-719-929-15	DIODE RD9.1ES-T1B

<JACK>

J701	⚠	1-251-732-11	SOCKET, CRT

<COIL>

L701	1-410-667-31	INDUCTOR	22UH

<TRANSISTOR>

Q704	8-729-326-11	TRANSISTOR 2SC2611
Q705	8-729-326-11	TRANSISTOR 2SC2611
Q706	8-729-326-11	TRANSISTOR 2SC2611
Q707	8-729-200-17	TRANSISTOR 2SA1091O-TPE2
Q708	8-729-200-17	TRANSISTOR 2SA1091O-TPE2
Q709	8-729-200-17	TRANSISTOR 2SA1091O-TPE2
Q710	8-729-119-78	TRANSISTOR 2SC2785TP-HFE
Q711	8-729-119-78	TRANSISTOR 2SC2785TP-HFE
Q712	8-729-119-78	TRANSISTOR 2SC2785TP-HFE

<RESISTOR>

R703	1-249-496-11	CARBON	100K	5%	1/2W
R705	1-216-393-00	METAL OXIDE	2.2	5%	3W
R710	1-215-922-11	METAL OXIDE	6.8K	5%	3W
R711	1-247-762-11	CARBON	6.8K	5%	1/2W
R712	1-215-922-11	METAL OXIDE	6.8K	5%	3W
R713	1-247-762-11	CARBON	6.8K	5%	1/2W
R714	1-215-922-11	METAL OXIDE	6.8K	5%	3W
R715	1-247-762-11	CARBON	6.8K	5%	1/2W
R719	1-215-480-00	METAL	300K	1%	1/4W
R720	1-249-923-11	CARBON	1K	5%	1/4W
R721	1-215-489-00	METAL	680K	1%	1/4W
R722	1-249-923-11	CARBON	1K	5%	1/4W

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

C

REF. NO.	PART NO.	DESCRIPTION			REMARK
R723	1-215-479-00	METAL	270K	1%	1/4W
R724	1-249-923-11	CARBON	1K	5%	1/4W
R725	1-249-419-11	CARBON	1.5K	5%	1/4W
R726	1-249-419-11	CARBON	1.5K	5%	1/4W
R727	1-249-419-11	CARBON	1.5K	5%	1/4W
R728	1-249-407-11	CARBON	150	5%	1/4W
R729	1-249-408-11	CARBON	180	5%	1/4W
R730	1-249-408-11	CARBON	180	5%	1/4W
R731	1-249-399-11	CARBON	33	5%	1/4W
R732	1-249-399-11	CARBON	33	5%	1/4W
R733	1-249-399-11	CARBON	33	5%	1/4W
R734	1-247-739-11	CARBON	100	5%	1/2W
R738	1-247-807-31	CARBON	100	5%	1/4W
R739	1-247-807-31	CARBON	100	5%	1/4W
R740	1-247-807-31	CARBON	100	5%	1/4W
R755	1-249-418-11	CARBON	1.2K	5%	1/4W
R756	1-249-418-11	CARBON	1.2K	5%	1/4W
R757	1-249-418-11	CARBON	1.2K	5%	1/4W

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MISCELLANEOUS
****

⚠	1-409-942-11	COIL, DEMAGNETIZATION
	1-452-032-00	MAGNET,DISC
	1-452-277-00	MAGNET, BMC
	1-505-740-11	SPEAKER (5X9CM)
	1-473-159-21	CAP ASSY, HIGH-VOLTAGE
⚠	1-574-062-11	CORD, POWER (WITH CONNECTOR) 2.5A/250V
	1-900-212-58	LEAD ASSY, FOCUS
	1-501-372-81	ANTENNA, TELESCOPIC
⚠	8-451-280-33	DEFLECTION YOKE (Y21PXA2)
⚠	8-738-774-05	PICTURE TUBE (21PXD(SDS)(SD-169/IBR))

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ACCESSORIES AND PACKING MATERIALS
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	A-1028-509-A	PACKING GROUP (SET) (KV-G21MW3)
	A-1028-508-A	PACKING GROUP (SET) (KV-G21QW3)
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
*	4-063-809-01	INDIVIDUAL CARTON
*	4-063-798-01	CUSHION (UPPER) (ASSY)
*	4-063-804-01	CUSHION (LEFT UPPER)
*	4-063-805-01	CUSHION (RIGHT UPPER)
*	4-063-799-01	CUSHION (LOWER) (ASSY)
*	4-063-797-01	CUSHION (RIGHT LOWER)
*	4-063-806-01	CUSHION (LEFT LOWER)
*	4-395-957-01	BAG, PROTECTION
	4-076-975-11	MANUAL, INSTRUCTION
	4-392-003-11	BAND, HOLD
	4-392-004-11	CLIP

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REMOTE COMMANDER
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	1-475-358-11	REMOTE COMMANDER (RM-869)
	9-939-697-01	BATTERY COVER, REMOTE COMMANDER

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