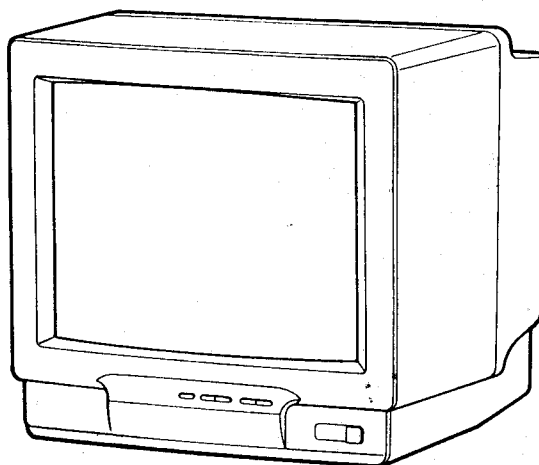


# KV-2185MK

## RM-827S

### SERVICE MANUAL

*OIRT Model*  
Chassis No. SCC-F40A-A



**G3E CHASSIS**

#### MODELS OF THE SAME SERIES

KV-2185MK	

#### SPECIFICATIONS

Power requirements 110-240 V AC, 50/60 Hz  
 Power consumption Indicated on the rear of the TV  
 Color system PAL, PAL60, NTSC<sup>4.43</sup>, NTSC<sup>3.58</sup>, SECAM  
 Television system and Channel coverage

Television system	M	B/G	I	D/K
Low VHF band	A2-A6	E2-E4	--	R1-R5
High VHF band	A7-A13	E5-E12	--	R6-R12
UHF	A14-A79	E21-E69	B21-B68	R21-R60
CATV	--	S01-S03 S1-S20	--	--

Audio output 3 W  
 Inputs Antenna: 75 ohms  
 VIDEO INPUT jacks: phono jacks  
 Video: 1 Vp-p, 75 ohms  
 Audio: 500 mVrms, high impedance  
 Output Earphone jack: mini jack  
 Picture tube Approx. 54 cm (21 inches)  
 Dimensions Approx. 520 × 462.5 × 486 mm (w/h/d)  
 Weight Approx. 24 kg

Design and specifications are subject to change without notice.



**TRINITRON® COLOR TV**  
**SONY®**

## TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>1. GENERAL</b>			<b>4. CIRCUIT ADJUSTMENT</b>		
1-1.	Antenna Connection .....	3	4-1.	A Board Adjustments .....	14
1-2.	Connecting VTR or Other Equipment .....	4			
1-3.	Preset the Channels Automatically .....	4	<b>5. DIAGRAMS</b>		
1-4.	Watching the TV .....	5	5-1.	Circuit Boards Location .....	17
1-5.	Watching the Video Input .....	5	5-2.	Schematic Diagrams and Printed Wiring Boards	
1-6.	Adjustment .....	6	(1)	Schematic Diagram of A Board .....	18
1-7.	Additional Presetting .....	7	(2)	Schematic Diagram of C, F Board .....	24
			5-3.	Semiconductors .....	26
<b>2. DISASSEMBLY</b>			<b>6. EXPLODED VIEW</b> .....		27
2-1.	Rear Cover Removal .....	8	<b>7. ELECTRICAL PARTS LIST</b> .....		28
2-2.	Service Position .....	8			
2-3.	Picture Tube Removal .....	9			
<b>3. SET-UP ADJUSTMENTS</b>					
3-1.	Beam Landing .....	10			
3-2.	Convergence .....	11			
3-3.	Focus .....	13			
3-4.	Screen (G2) and White Balance .....	13			

## 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  $\Delta$  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.

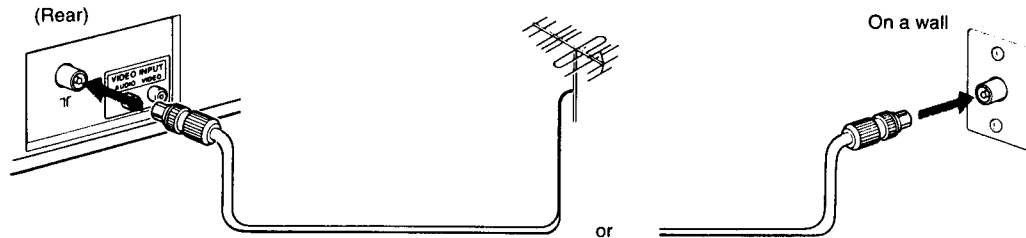
## SECTION 1 GENERAL

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.

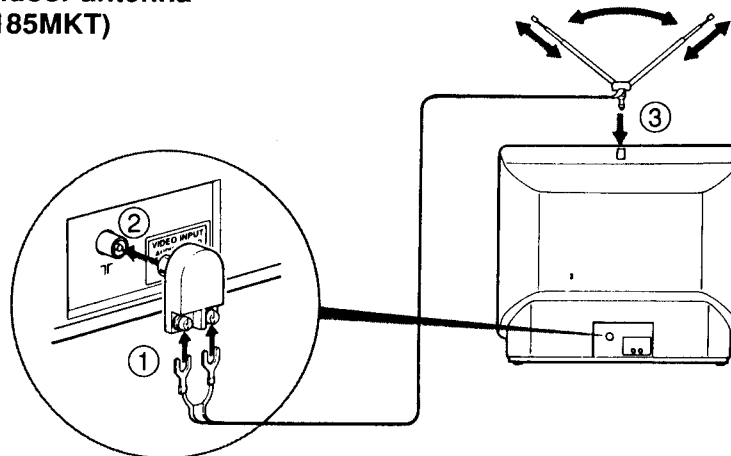
### 1-1. ANTENNA CONNECTION

#### To connect a VHF antenna or a combination VHF/UHF antenna— 75-ohm Coaxial Cable (Round)

Plug the connector into the  $\Gamma$  socket of the TV.

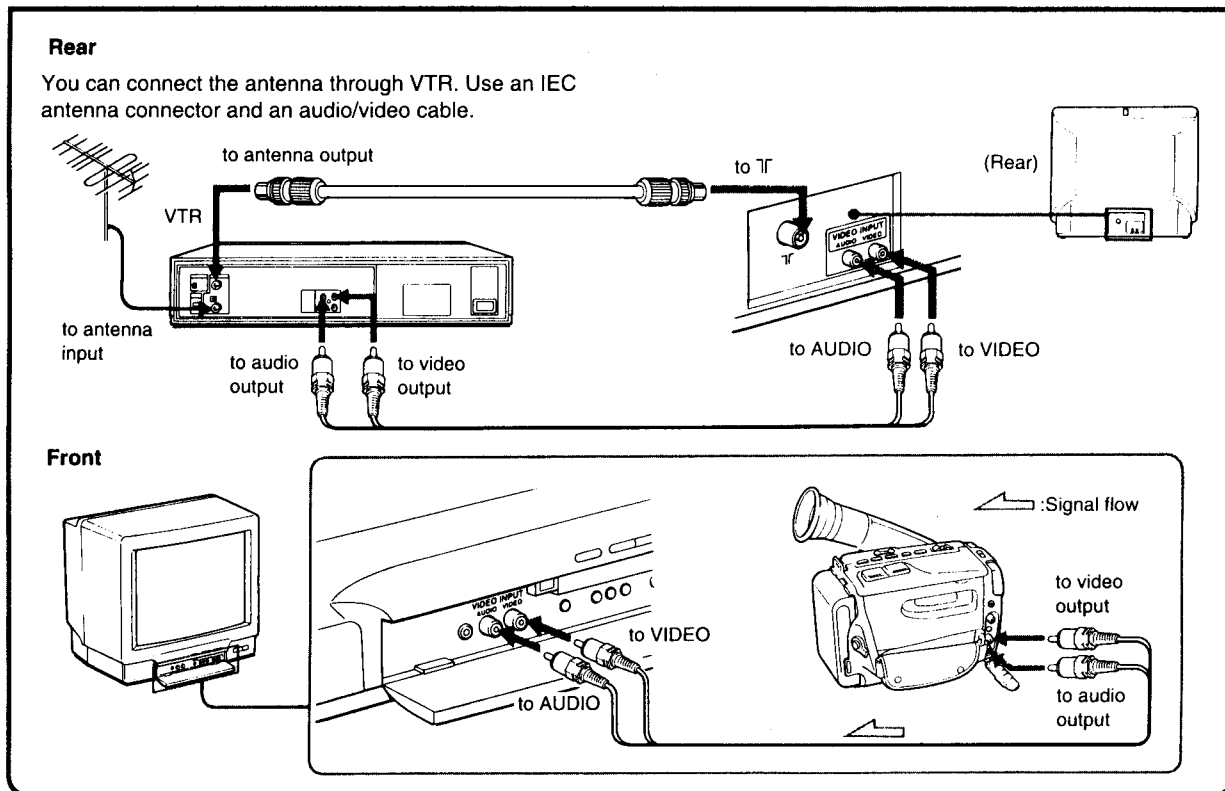


#### To connect the indoor antenna (except for KV-2185MKT)



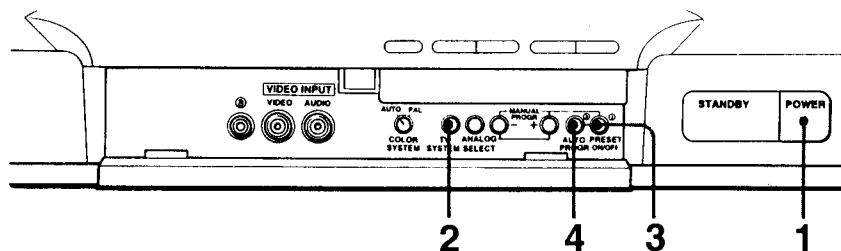
We recommend using an outdoor antenna for better reception.

## 1-2. CONNECTING VTR OR OTHER EQUIPMENT

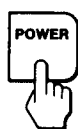


## 1-3. PRESET THE CHANNELS AUTOMATICALLY

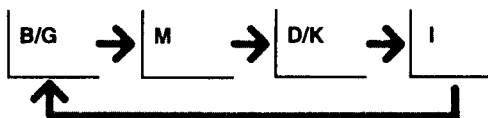
Up to 30 channels (1 to 29, 0) can be preset in numerical sequence from program number 1.



**1** Press the POWER button.



**2** Press the TV SYSTEM button to select your local TV system.



**3** Press the PRESET ON/OFF ① button.

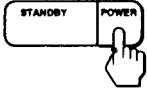


**4** Press the AUTO PROGR ② button.



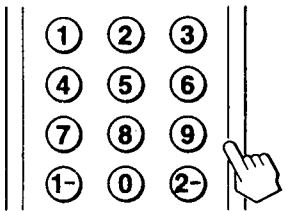
## 1-4. WATCHING THE TV


**To switch on or off the TV**







The power of the TV is turned on, or off completely.

**To select a channel**

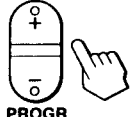


To select 8, 

To select 10,  

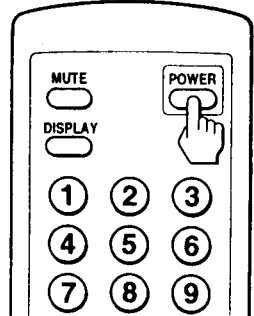
To select 25,  

or



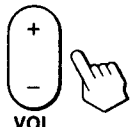
**PROGR**

**To set the TV to standby mode**




To turn on the TV, press again.

**To adjust the volume**



**VOL**

For personal listening, an earphone can be connected to the  jack.

You can operate on the TV using the buttons of the same name.

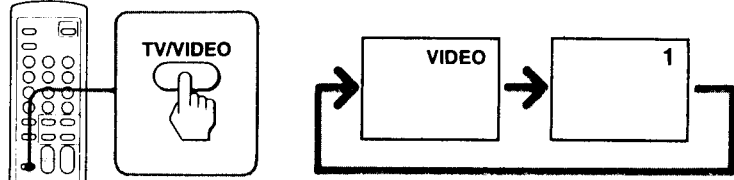
## 1-5. WATCHING THE VIDEO INPUT

**1** Press the TV/VIDEO button.

**2** Set the VTR to playback mode.

**To return to TV mode**  
Press the TV/VIDEO button.

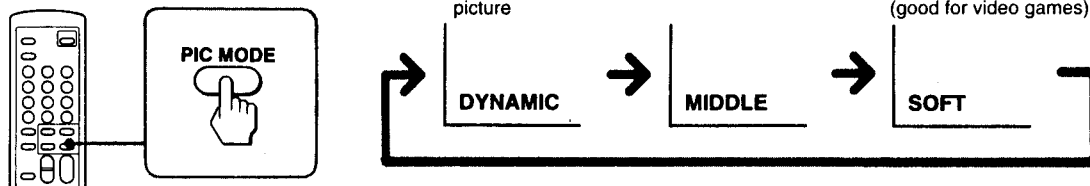
**Note**  
Do not use the VTRs connected to the front and rear A/V connectors simultaneously. When you use a VTR, turn off or disconnect another VTR.



## 1-6. ADJUSTMENT

## Selecting the Picture Mode

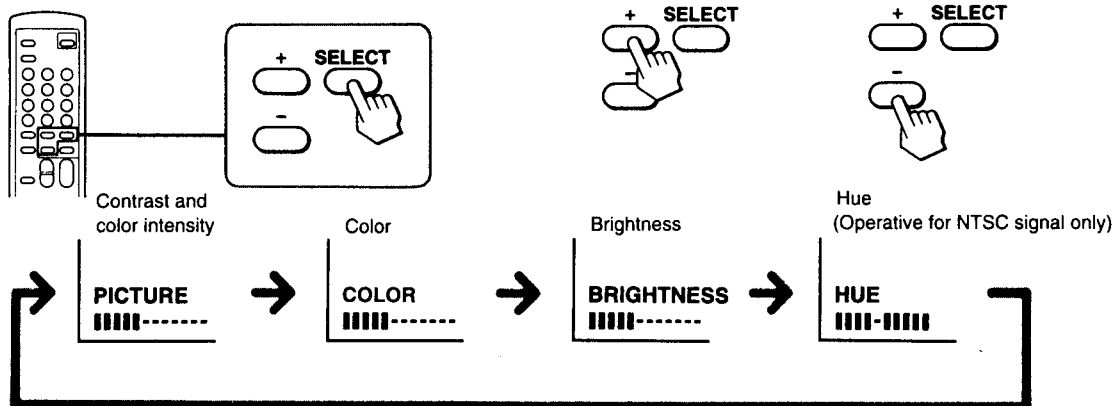
Press the PIC MODE button.



## Adjusting the Picture to Your Preference

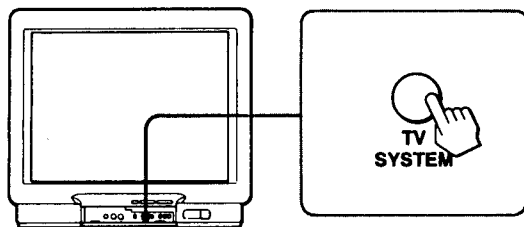
- 1** Select the adjustment item using the SELECT button on the Remote Commander (or ANALOG SELECT button on the TV).

- 2** Adjust using the + and – buttons.

**Note**

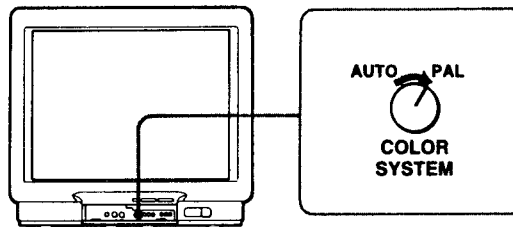
If you change the PIC MODE setting after the above adjustments, the adjustment changes in accordance with the PIC MODE setting.

## To set TV SYSTEM



If the sound is distorted or noisy, or color is abnormal while receiving program through the VHF/UHF terminal, press TV SYSTEM until a clear sound or normal color is obtained. The TV system set by this operation is memorized for the program position.

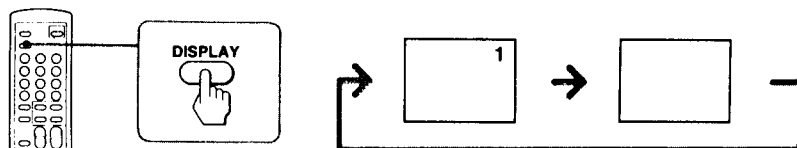
## To set COLOR SYSTEM



Normally set COLOR SYSTEM to AUTO. If the color reproduction is abnormal (for example, the picture turns red or blue) while receiving PAL and PAL 60 playback signal, set to PAL. The picture color will become normal.

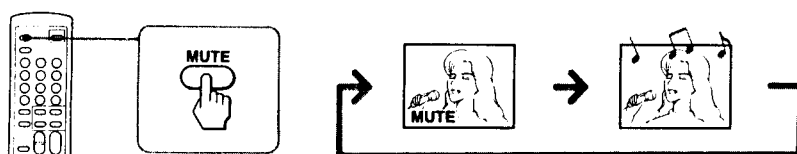
### Turning On or Off the On-screen Display

Press the DISPLAY button.



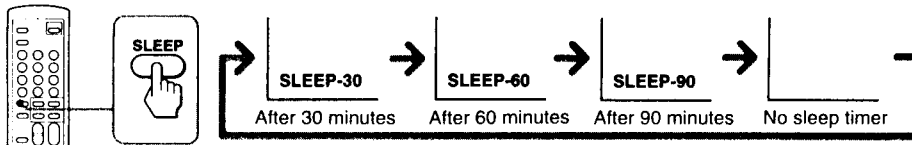
### Muting

Press the MUTE button.



### Setting the Sleep Timer

The TV will be turned off after about 30, 60, or 90 minutes.  
Press the SLEEP button.



#### To cancel the sleep timer

Press the SLEEP button until the sleep indication disappears.

## 1-7. ADDITIONAL PRESETTING

### Manual Presetting

To change the program number for a channel, or to receive a channel of weak signal, preset the channel manually.

Example: To preset a channel in program number 8

- 1** Press the PRESET ON/OFF button.
- 2** Press the PROGR +/- button until "8" appears.
- 3** Press the TV SYSTEM button to select your TV system.
- 4** Press the MANUAL PROGR +/- buttons until the channel you want appears.
- 5** Press the PRESET ON/OFF button.

To preset other channels, repeat steps 1 through 5.

### Skipping Program Positions

You can skip the unused or undesired program position when you are selecting a program using the PROGR +/- buttons.

Example: To skip the program position 8

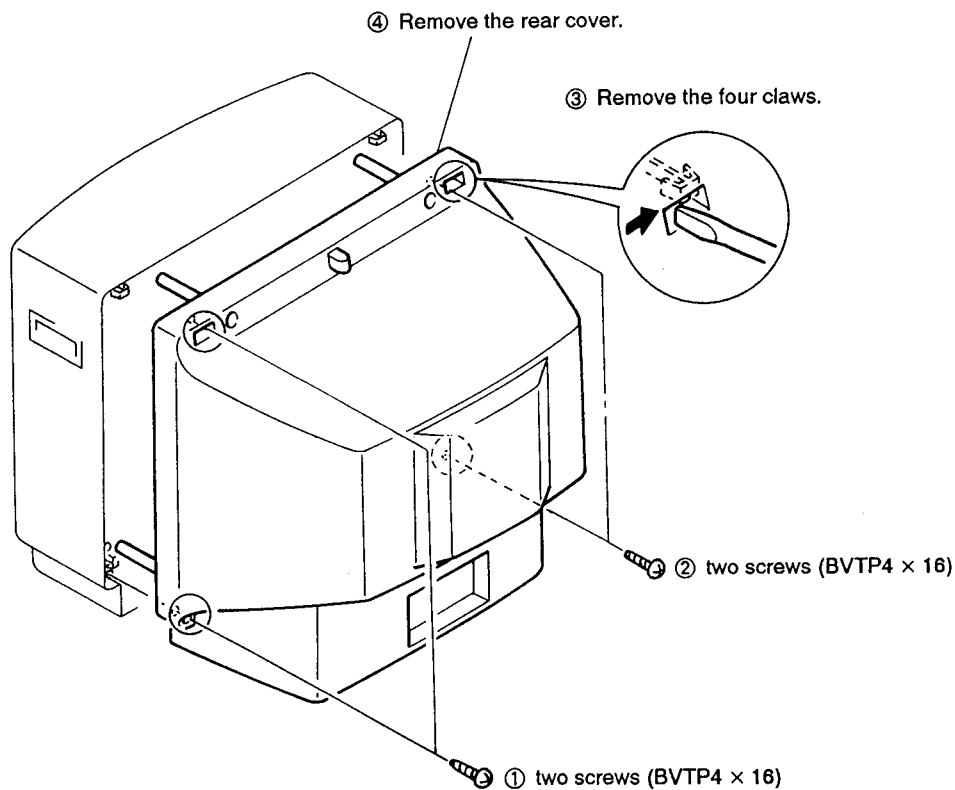
- 1** Press the PROGR +/- buttons until "8" appears.
- 2** Press the PRESET ON/OFF button.
- 3** Press the PIC MODE button on the Remote Commander.  
Repeat steps 1 through 3 to skip other program position.
- 4** Press the PRESET ON/OFF button.

#### To restore the skipped program position

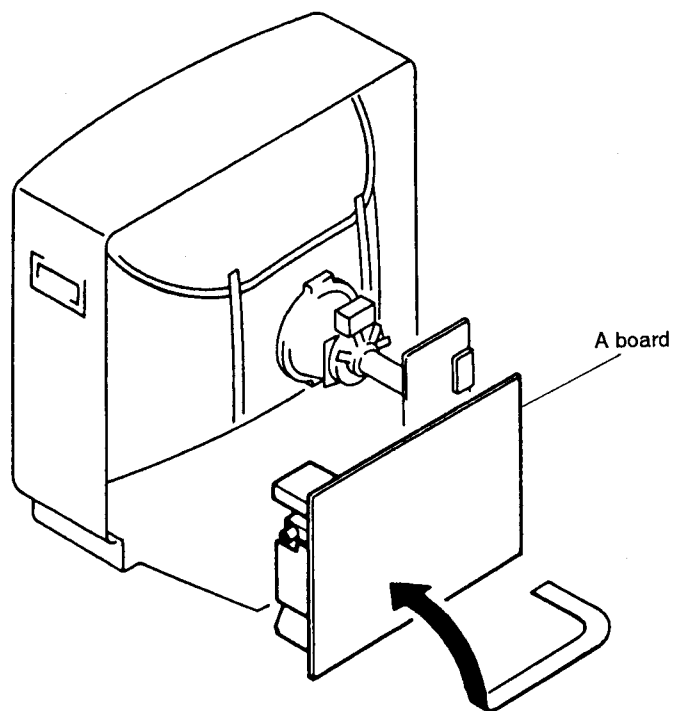
Preset the station manually as described in "Manual Presetting", or preset automatically again.

## SECTION 2 DISASSEMBLY

### 2-1. REAR COVER REMOVAL

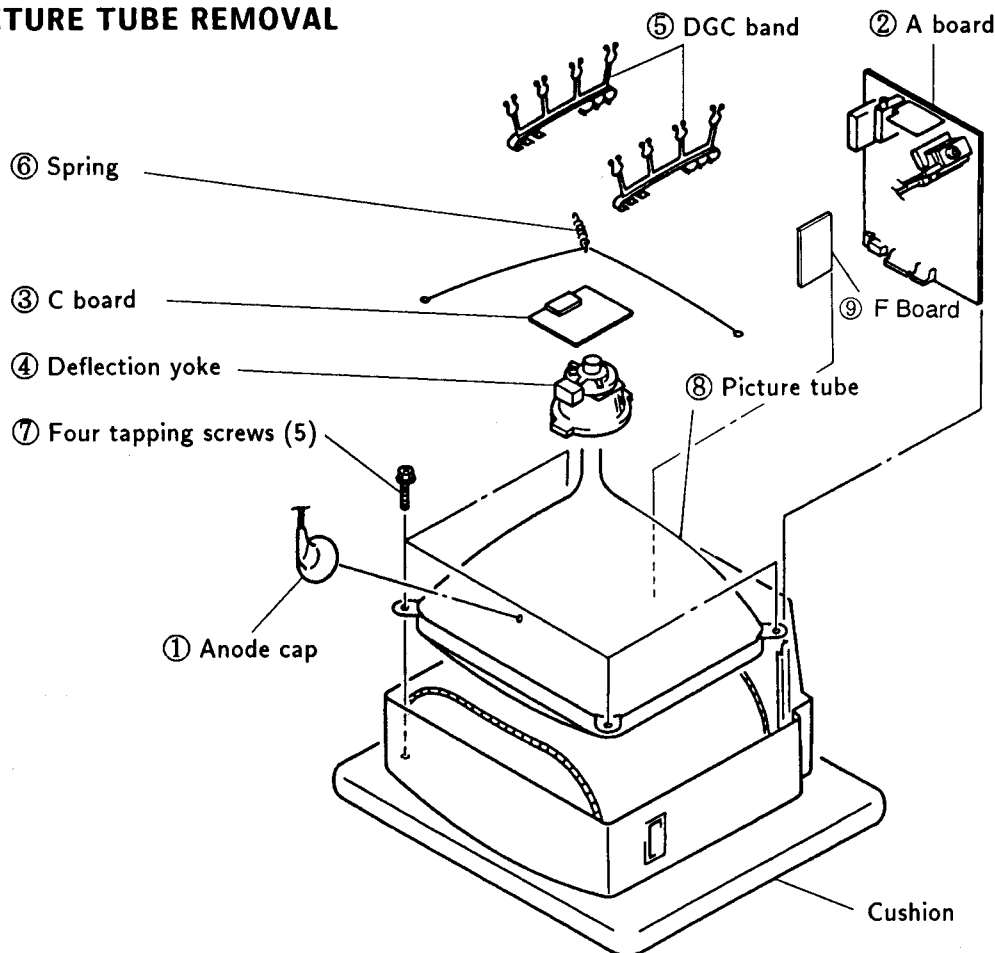


### 2-2. SERVICE POSITION





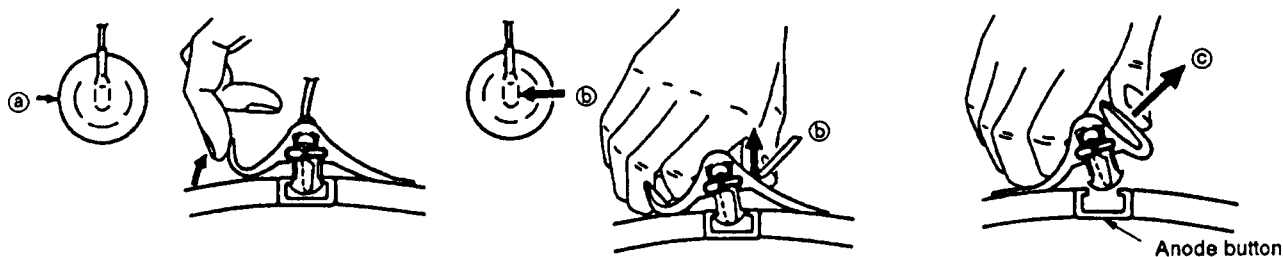
## 2-3. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

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

### • REMOVING PROCEDURES



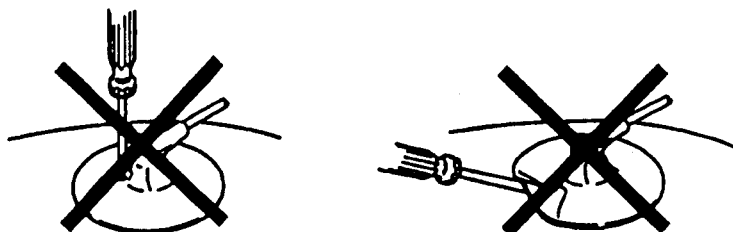
① Turn up one side of the rubber cap in the direction indicated by the arrow ①.

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

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

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick out or hurt the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

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

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

PICTURE control..... normal  
BRIGHTNESS control..... normal

Perform the adjustments in order as follows:

#### Preparation:

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

#### 3-1. BEAM LANDING

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

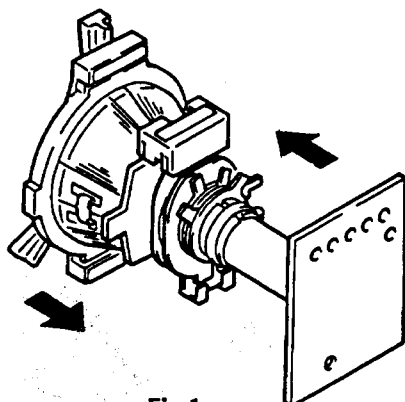


Fig.1

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

**Note:** Test Equipment Required.

1. Color bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter

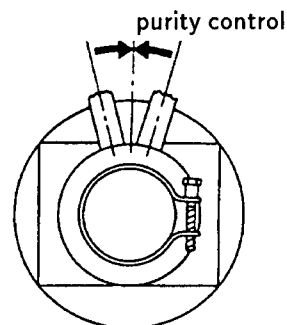


Fig.2

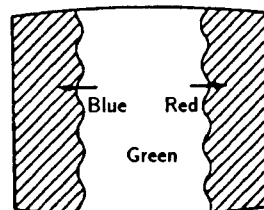


Fig.3

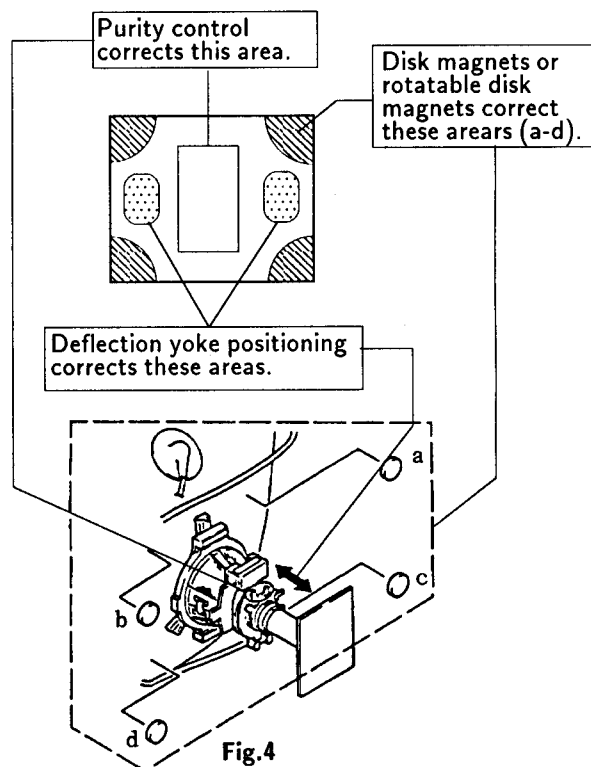


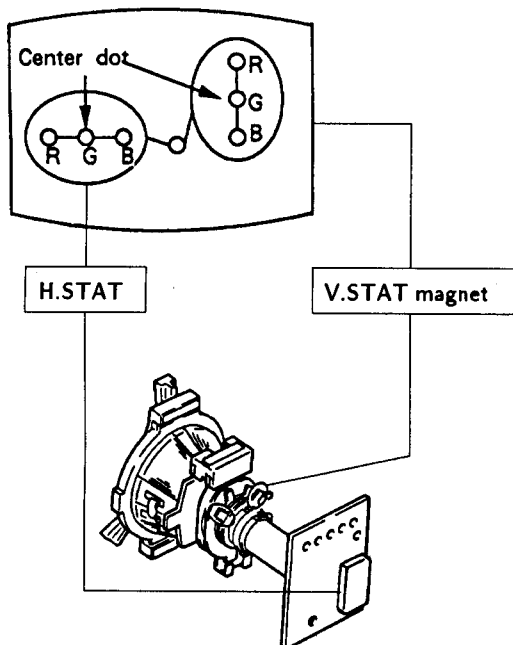
Fig.4

### 3-2. CONVERGENCE

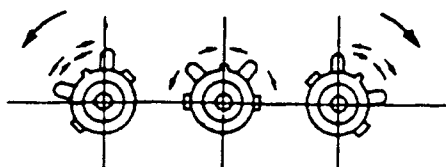
#### Preparation:

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

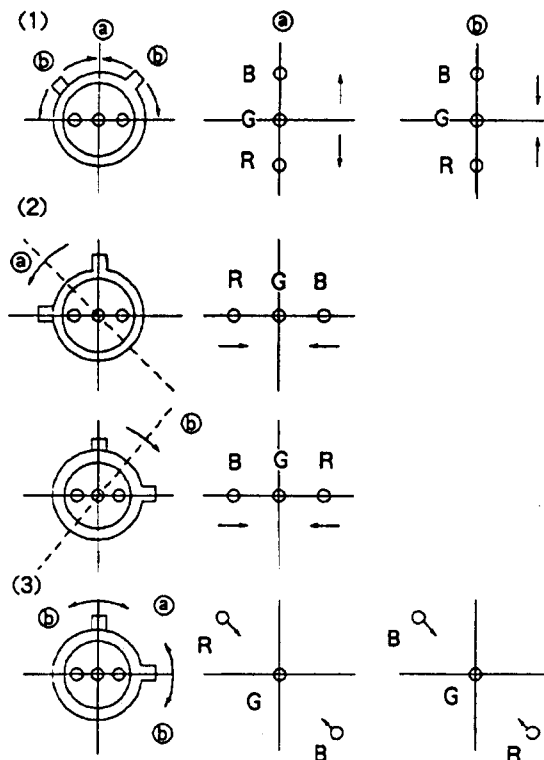
#### (1) Horizontal and Vertical Static Convergence



1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
  2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
  3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizon-tal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4. When the V.STAT magnet is moved in the direction of arrow ② and ③, red, green and blue dots move as shown below.

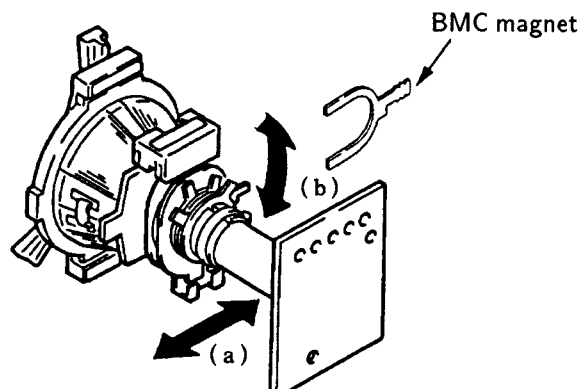


If the blue dot does not converge with red and green dots, perform following steps.

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.



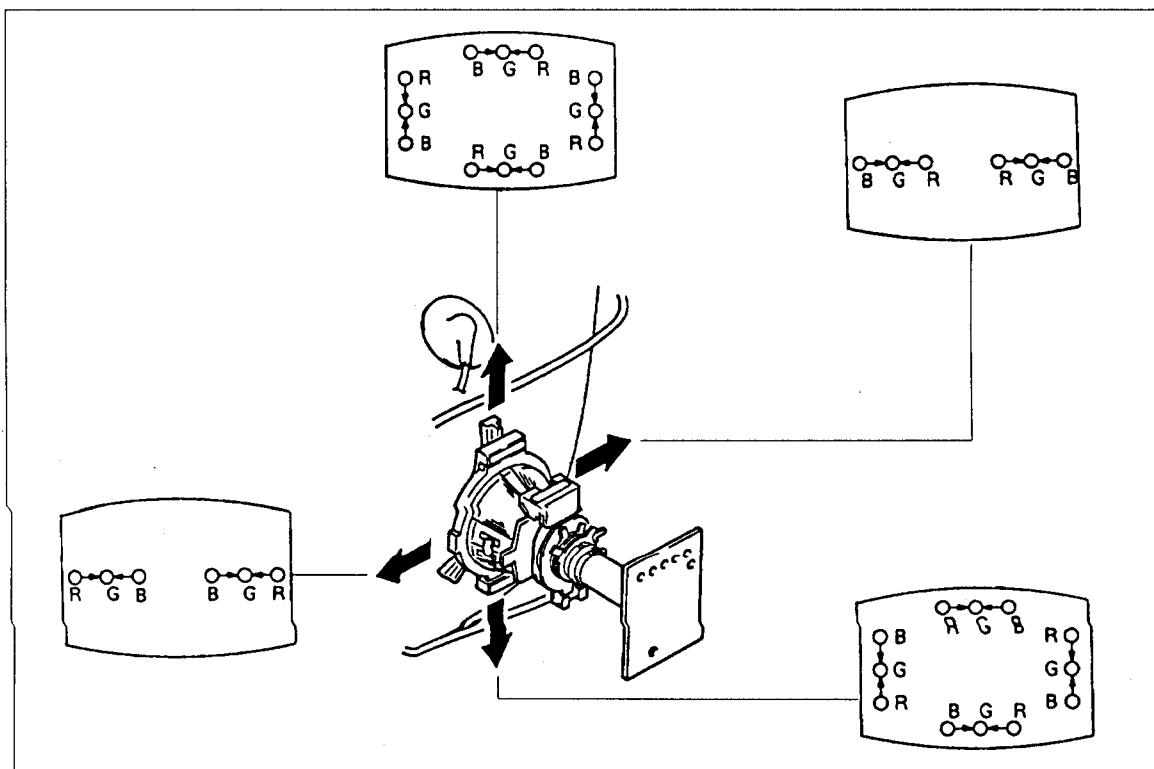
## (2) Dynamic Convergence Adjustment

### Preparation:

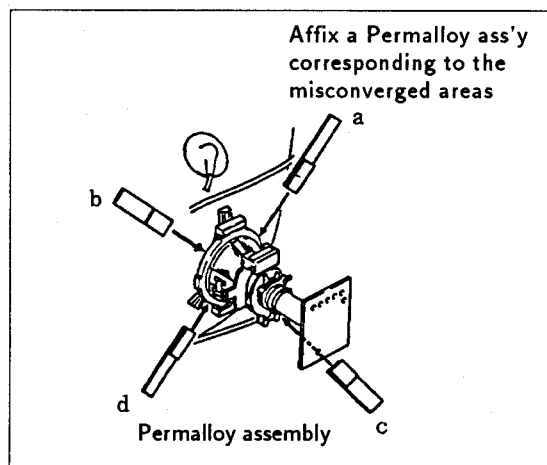
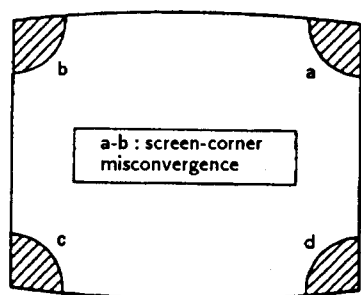
● Before starting perform Horizontal and Vertical static convergence Adjustment.

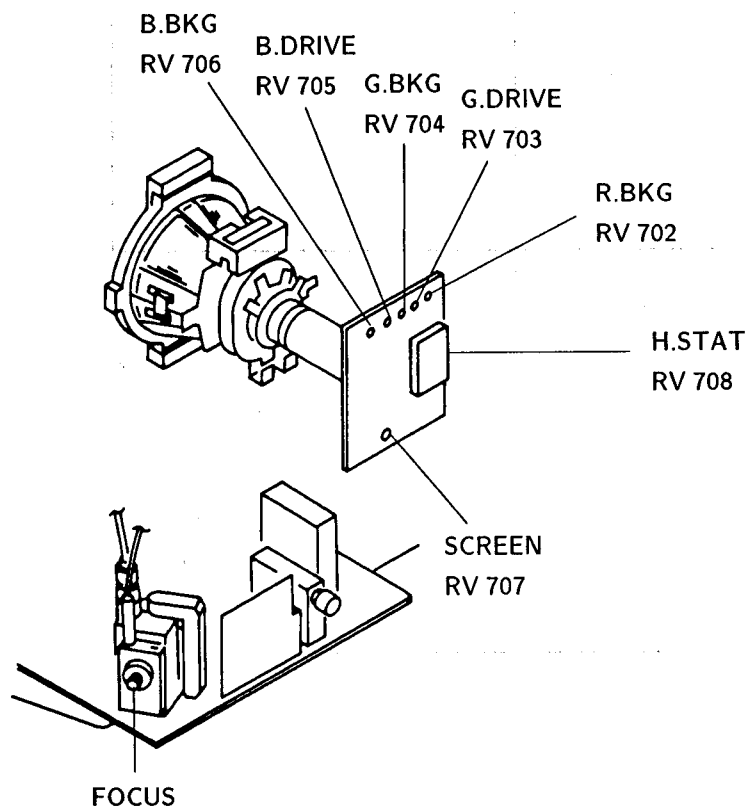
1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.

3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



## (3) Screen-corner Convergence





### 3-3. FOCUS

Adjust FOCUS control for best picture.

### 3-4. SCREEN(G 2) and WHITE BALANCE [SCREEN(G2)]

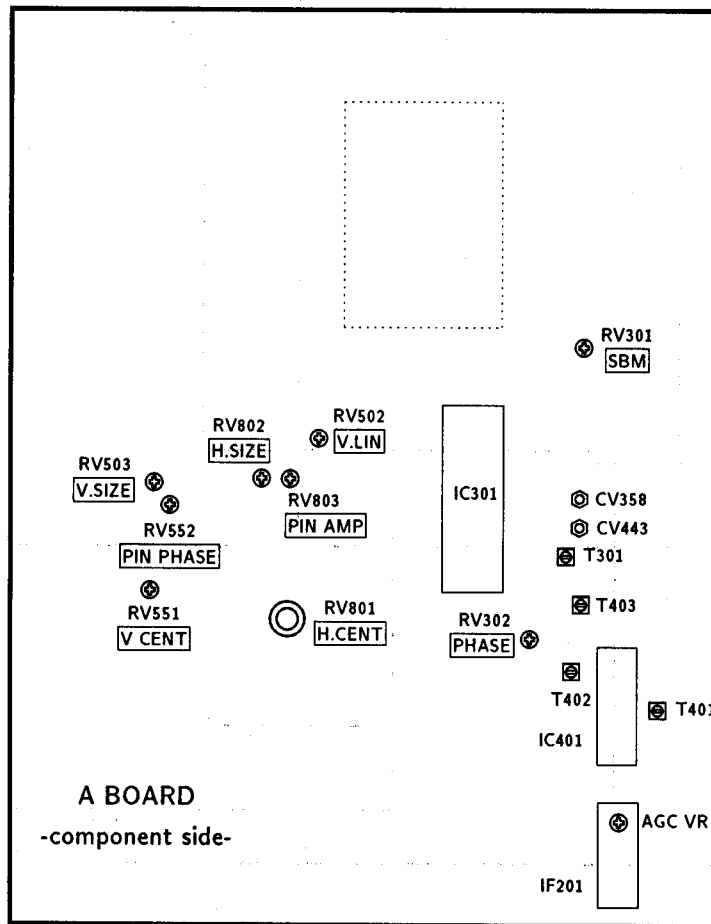
1. Input a dots pattern.
2. Set the PIC, BRT controls at minimum and COLOR control at 50%.
3. Confirm the BKG voltage is less than 165 Vdc when turning RV 706 (B.BKG), RV 704 (G.BKG) and RV 702 (R.BKG).
4. Note the color when becomes visible first when turning RV707 (SCREEN).

### [WHITE BALANCE]

1. Input a all white signl.
2. Set the PIC control to minimum and set the BRT control at normal.
3. Turn RV 703 (G.DRIVE) and RV 705 (B.DRIVE) fully clockwise.
4. Adjust BKG controls for best white balance.
5. Set the PICTURE control to maximum. Observe the screen and adjust the DRIVE controls for best white balance.
6. Repeat steps 4 and 5.

## SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. A BOARD ADJUSTMENTS



#### RF AGC ADJUSTMENT (IF201)

1. Receive a strong off-air signals.
2. Adjust RF AGC VR control so that snow noise and cross-modulation just disappear from the picture.

#### A • P • C ADJUSTMENT (CV443)..... (PAL)

1. Short circuit between pin ④ and pin ④7 of IC301 with jumper.
2. Input the PAL color-bar signal.
3. Set the PIC, COL, and BRT controls to normal.
4. Adjust CV443 for suitable color intensity.
5. Remove a jumper.

#### A • P • C ADJUSTMENT (CV358)..... (NTSC)

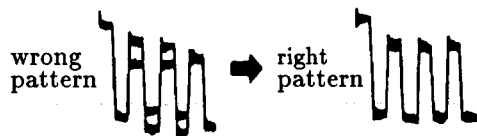
1. Short circuit between pin ④ and pin ④7 of IC301 with a jumper.
2. Input NTSC 3.58 color-bar signal.
3. Set the PIC, COL and BRT controls to normal.
4. Adjust CV358 for suitable color intensity.
5. Remove the jumper.

### ANTI PAL, LINE CRAWLING ADJUSTMENT (RV301,RV302,T301)

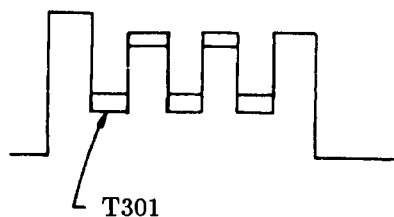
#### • ANTI PAL ADJUSTMENT

1. Input the PAL color-bar signal.
2. Set the PIC,COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust RV301 (DELAY) and RV302(PHASE) to obtain the waveform as shown below.

#### • LINE CRAWLING ADJUSTMENT

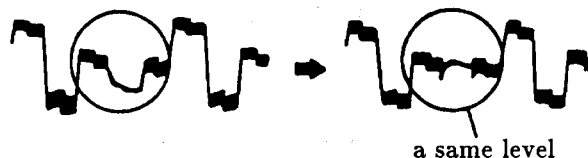


1. Input the PAL color-bar signal.
2. Set the PIC,COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust T301 for minimum line crawling.



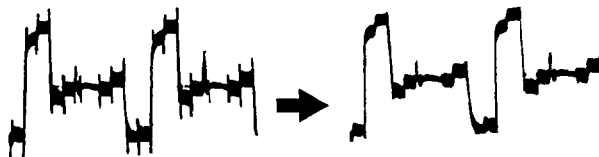
### DISCRI ADJUSTMENT (T401,T402)

1. Input the SECAM color-bar signal.
2. Connect the dual-trace oscilloscope to the pin ⑪ (B-Y) and pin ⑩ (R-Y) of IC401.
3. Adjust T402 (R-Y) and T401 (B-Y) as shown the following figure.



### BELL FILTER ADJUSTMENT (T403)

1. Input the SECAM color-bar signal.
2. Connect the oscilloscope to pin ⑩ (R-Y) of IC 401.
3. Adjust T403 as shown the following figure.



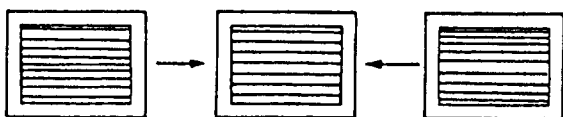
**RV802 H.SIZE (HORIZONTAL SIZE)**



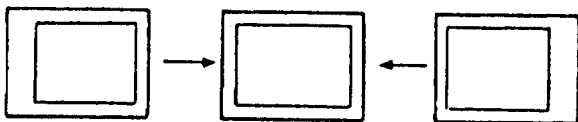
**RV503 V.SIZE (VERTICAL SIZE)**



**RV502 V.LIN (VERTICAL LINEARITY)**



**RV801 H.CENT (HORIZONTAL CENTER)**



**RV551 V.CENT (VERTICAL CENTER)**



**RV552 PIN PHASE (PINCUSHION PHASE)**



**RV803 PIN AMP (PINCUSHION AMPLIFIER)**

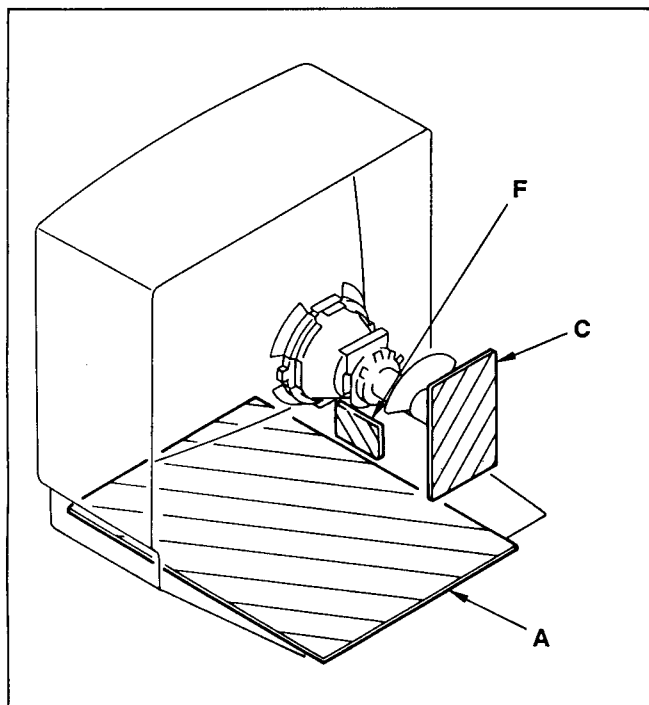




# SECTION 5 DIAGRAMS

(1) 3

## 5-1. CIRCUIT BOARDS LOCATION



## 5-2. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$   
50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $\text{k}\Omega = 1000\Omega$ ,  $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm

Rating electrical power  $\frac{1}{4}$  W

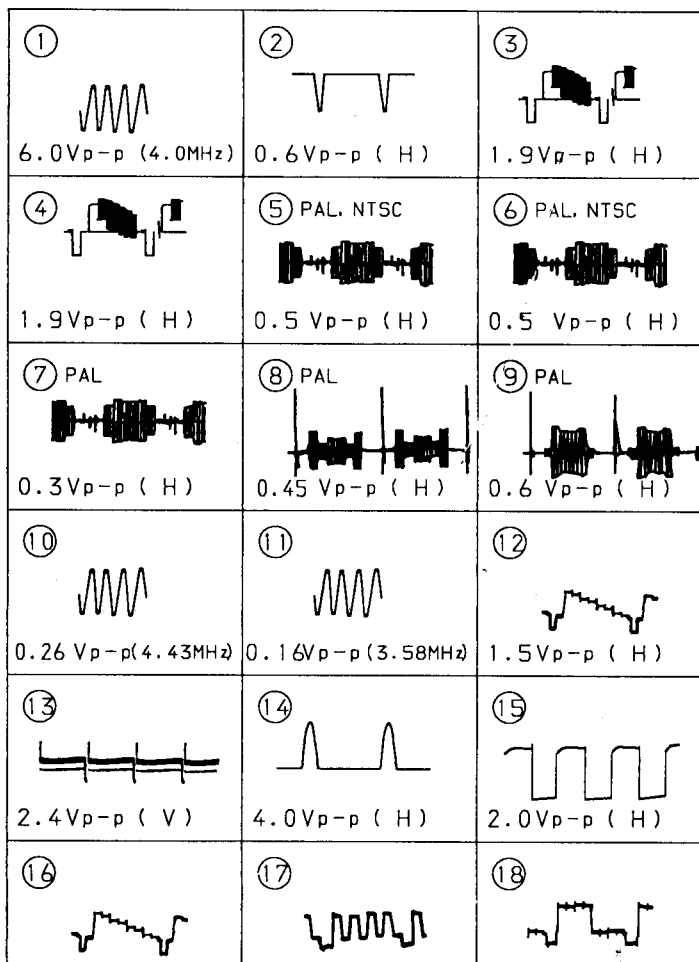
- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-chassis.

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

### Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR

### • A BOARD WAVEFORMS








## 5-2. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  $\text{k}\Omega = 1000\Omega$ ,  $\text{M}\Omega = 1000\text{k}\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.



Pitch: 5 mm  
Rating electrical power  $\frac{1}{4}\text{W}$

-  : nonflammable resistor.
-  : internal component.
-  : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : earth-chassis.













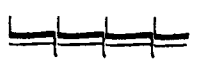

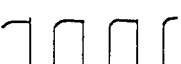






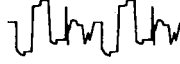



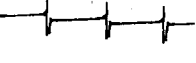
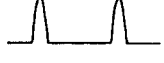
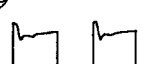

**Note:** The components identified by shading and mark  are critical for safety. Replace only with part number specified.

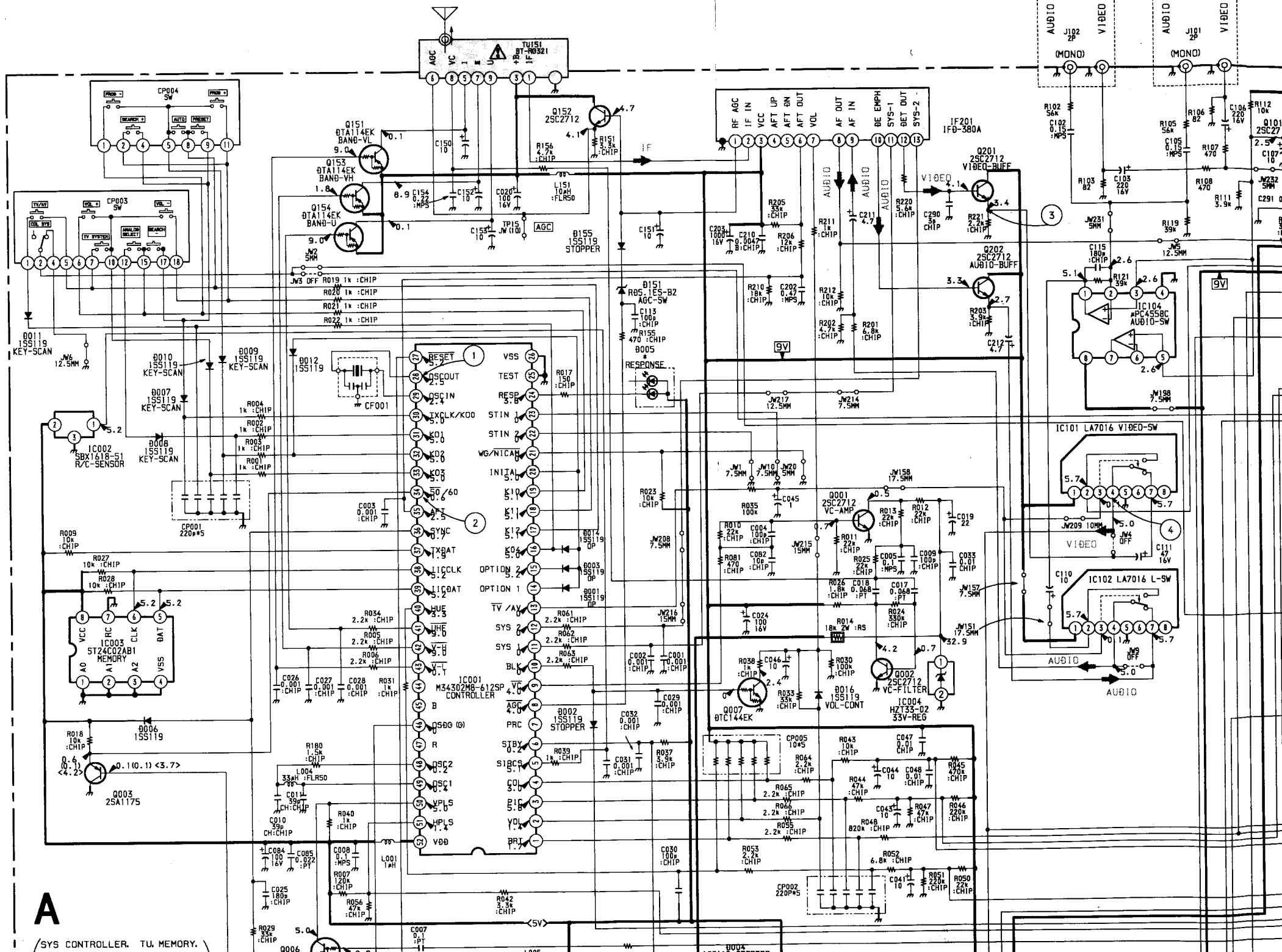
### Reference information

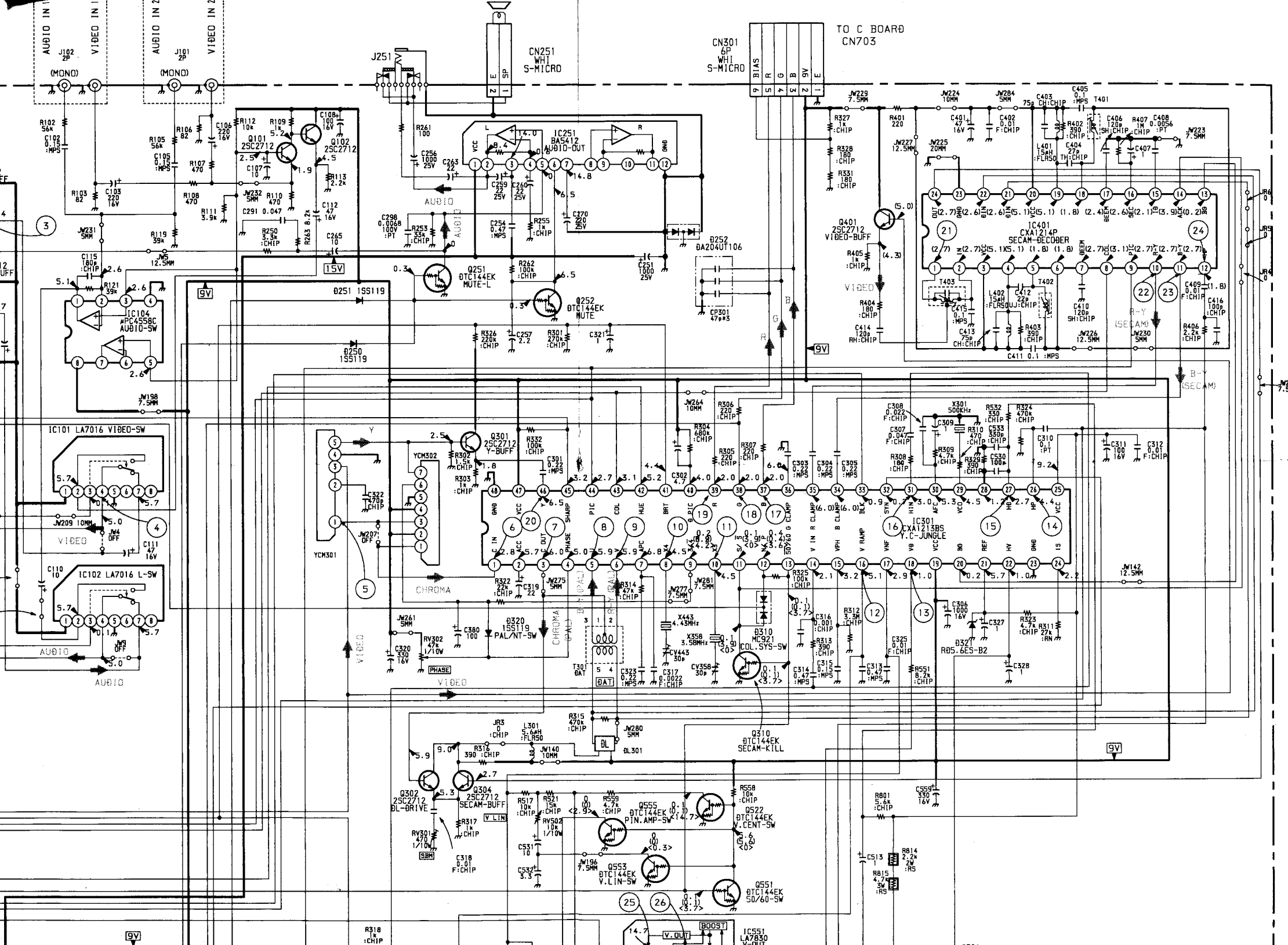
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR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

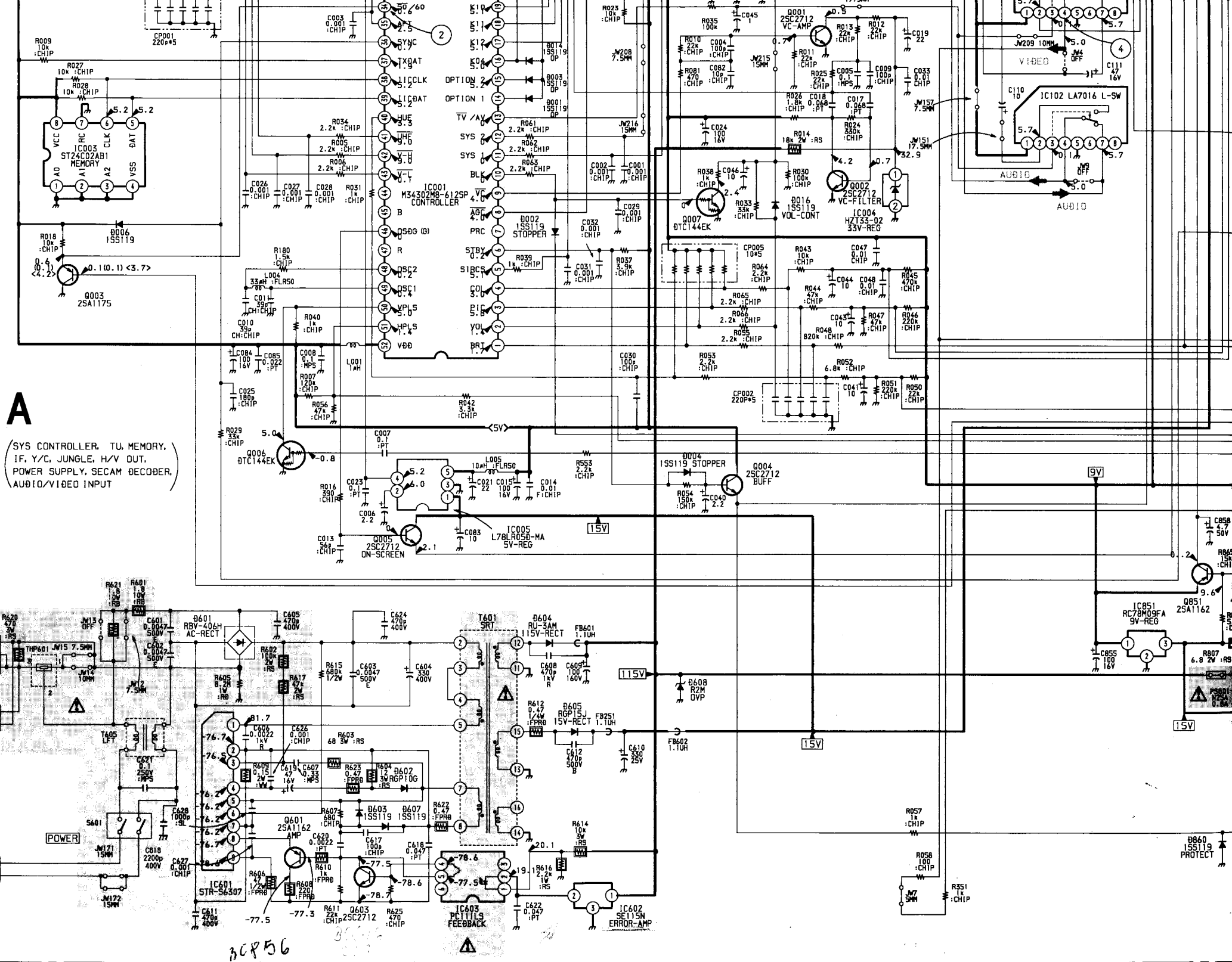
- Readings are taken with a color-bar signal input.  
no mark : with PAL color-bar signal received.  
( ) : with SECAM color-bar signal received.  
< > : with NTSC3.58 color-bar signal received.
- Readings are taken with a  $10\text{M}\Omega$  digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
-  : B+ bus.
-  : signal path. (RF)

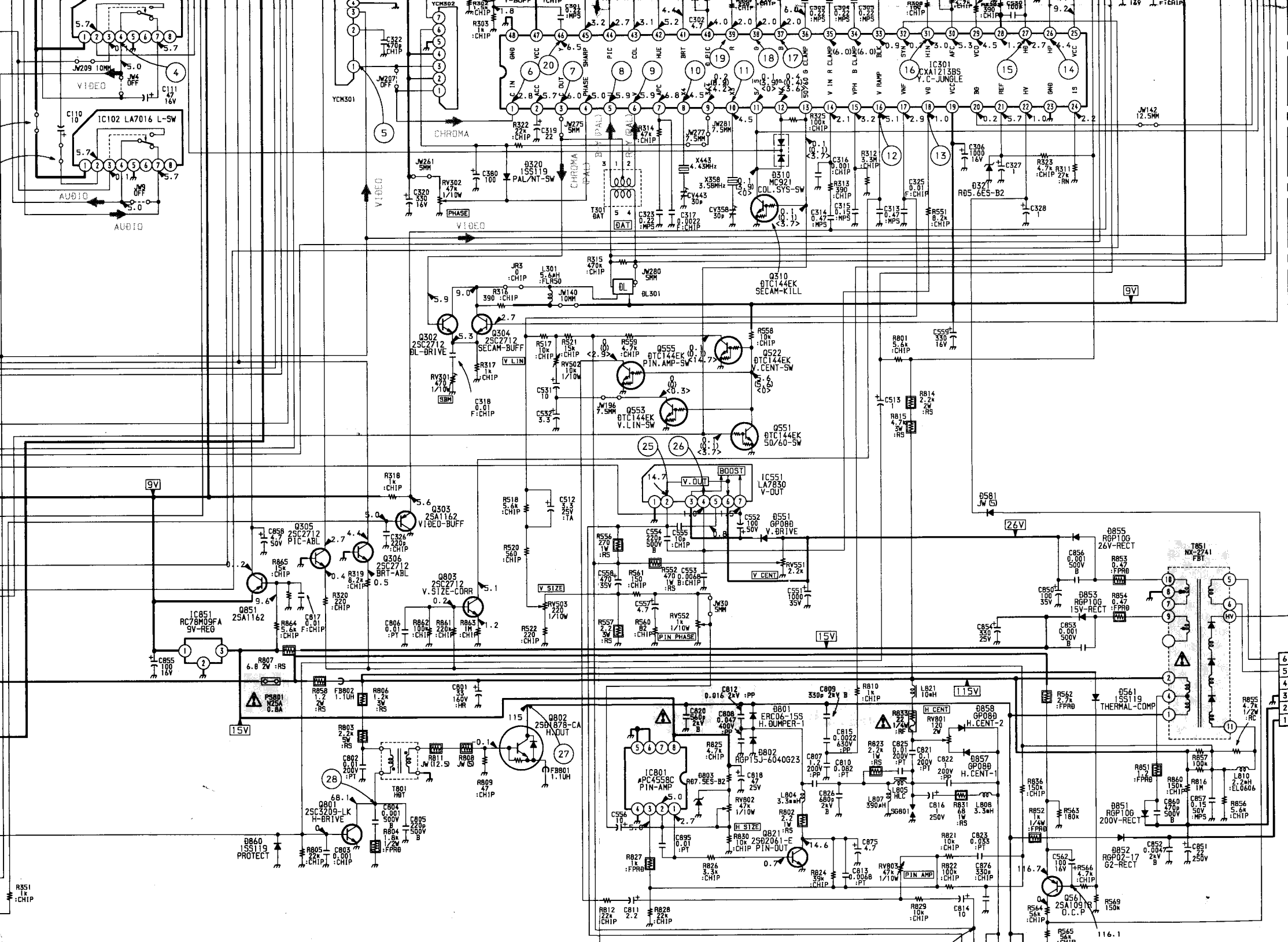
### • A BOARD WAVEFORMS

①  6.0Vp-p (4.0MHz)	②  0.6Vp-p (H)	③  1.9Vp-p (H)
④  1.9Vp-p (H)	⑤ PAL, NTSC  0.5Vp-p (H)	⑥ PAL, NTSC  0.5Vp-p (H)
⑦ PAL  0.3Vp-p (H)	⑧ PAL  0.45Vp-p (H)	⑨ PAL  0.6Vp-p (H)
⑩  0.26Vp-p (4.43MHz)	⑪  0.16Vp-p (3.58MHz)	⑫  1.5Vp-p (H)
⑬  2.4Vp-p (V)	⑭  4.0Vp-p (H)	⑮  2.0Vp-p (H)
⑯  1.8Vp-p (H)	⑰  4.0Vp-p (H)	⑱  4.0Vp-p (H)
⑲  4.0Vp-p (H)	⑳  0.9Vp-p (H)	㉑ SECAM  0.24Vp-p (H)
㉒ SECAM  1.0Vp-p (H)	㉓ SECAM  1.4Vp-p (H)	㉔ SECAM  3.3Vp-p (H)
㉕  50Vp-p (V)	㉖  1.5Vp-p (V)	㉗  900Vp-p (H)
㉘  170Vp-p (H)	㉙  10Vp-p (V)	







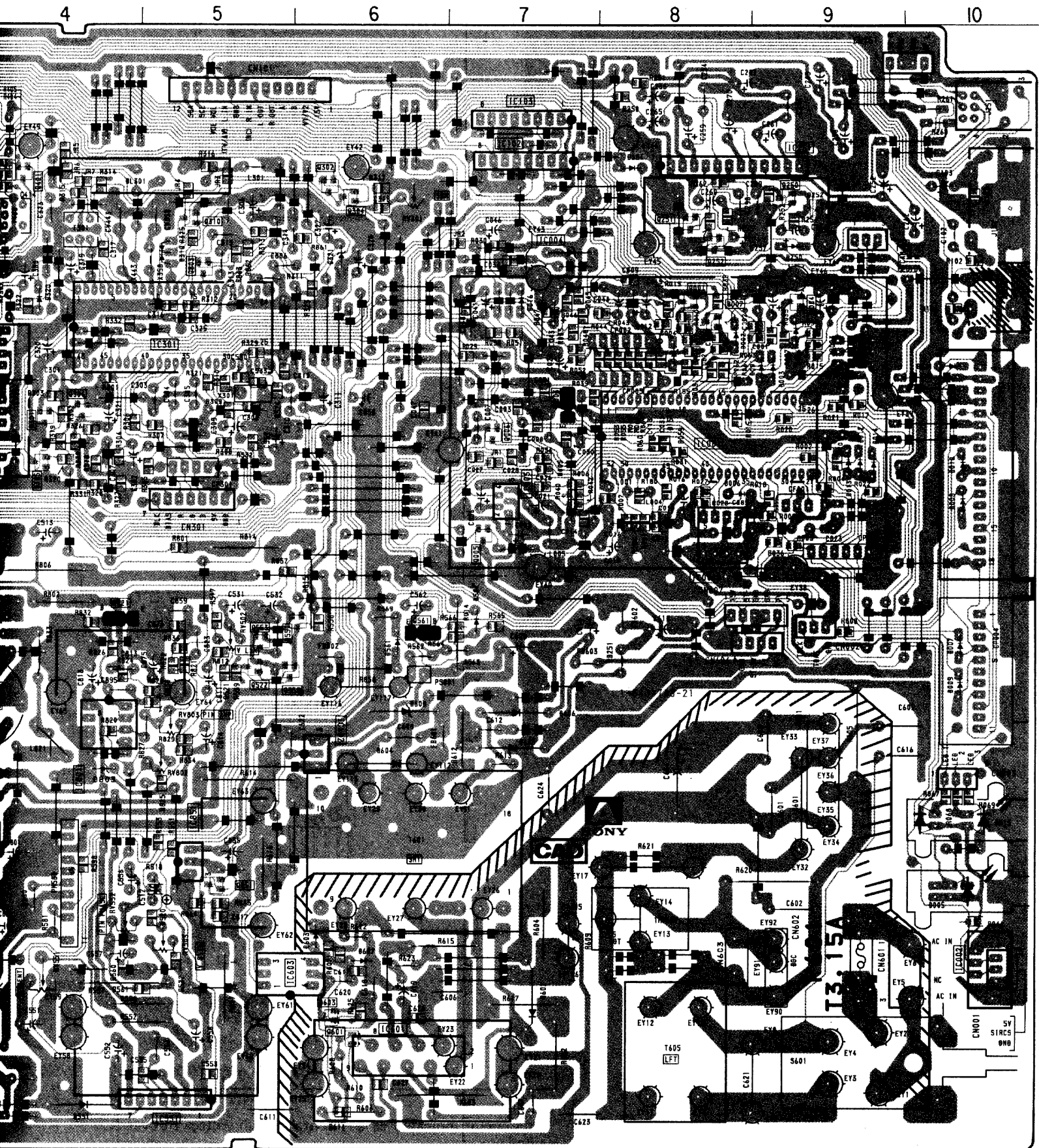




[ SYS CONTROLLER, TU, MEMORY, IF,  
Y/C, JUNGLE, H/V OUT, POWER SUPPLY,  
SECAM DECODER, AUDIO/VIDEO INPUT

**A**

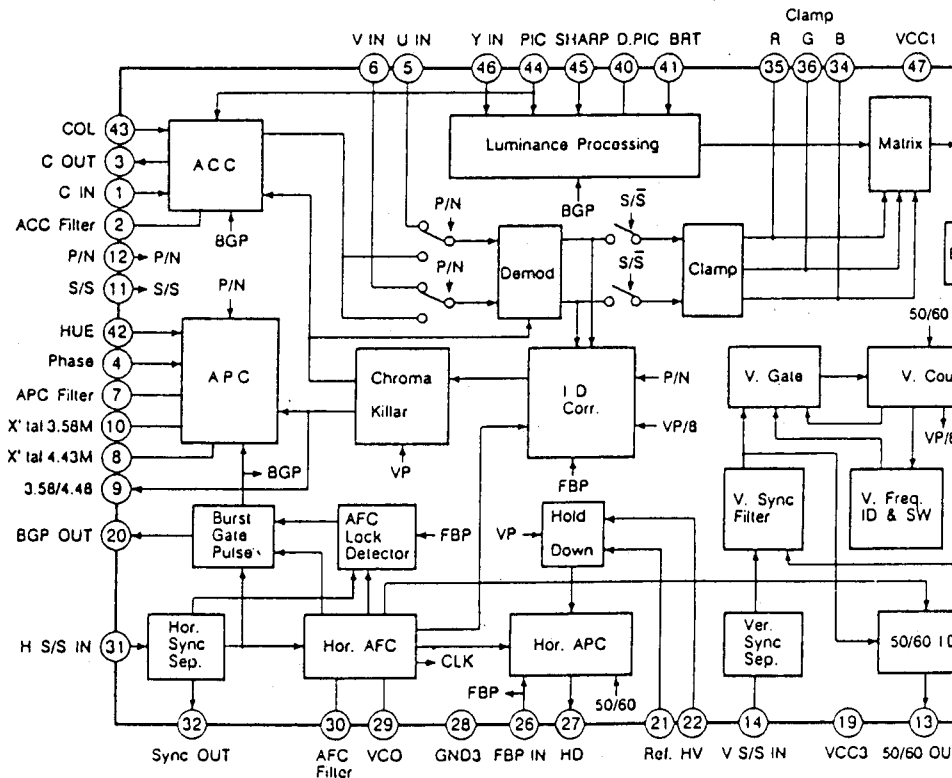
SYS CONTROLLER, TU, MEMORY, IF,  
Y/C, JUNGLE, H/V OUT, POWER SUPPLY,  
SECAM DECODER, AUDIO/VIDEO INPUT



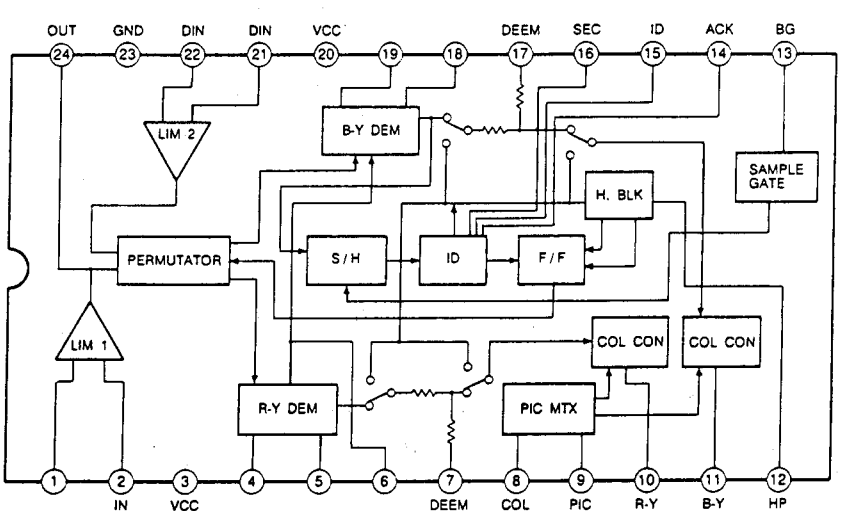


IC		DIODE		VARIABLE RESISTOR	
IC001	C-8	D001	C-9	RV301	B-6
IC002	G-10	D002	C-8	RV302	B-3
IC003	D-8	D003	C-9	RV502	E-5
IC004	B-7	D004	C-9	RV503	G-5
IC005	D-7	D005	F-10	RV551	G-4
IC101	B-1	D006	D-8	RV552	F-4
IC102	A-7	D007	E-10	RV801	E-3
IC104	A-2	D008	D-10	RV802	E-5
IC251	A-9	D009	E-10	RV803	E-5
IC301	C-5	D010	C-10		
IC401	A-3	D011	C-10		
IC551	G-5	D012	C-9		
IC601	G-6	D014	C-9		
IC602	E-6	D016	C-7		
IC603	G-5	D151	C-8		
IC801	E-4	D250	B-9		
IC851	F-5	D251	A-8		
		D252	B-9		
		D310	B-5		
		D320	B-4		
		D321	B-6		
		D551	G-4		
		D561	E-6		
		D601	C-9		
		D602	G-7		
		D603	F-6		
		D604	E-6		
		D605	E-7		
		D607	G-6		
		D608	E-6		
		D801	E-1		
		D802	D-6		
		D803	E-4		
		D851	G-3		
		D852	F-3		
		D853	G-3		
		D855	G-3		
		D857	E-3		
		D858	E-3		
		D860	D-2		
TRANSISTOR					
Q001	B-8				
Q002	B-3				
Q003	C-7				
Q004	B-9				
Q005	D-7				
Q006	C-7				
Q007	B-8				
Q101	A-1				
Q102	A-1				
Q151	C-3				
Q152	C-2				
Q153	D-3				
Q154	D-3				
Q201	B-1				
Q202	A-2				
Q251	B-8				
Q252	B-8				
Q301	C-4				
Q302	B-6				
Q303	C-3				
Q304	B-6				
Q305	C-4				
Q306	C-4				
Q310	B-5				
Q401	A-4				
Q522	E-5				
Q551	D-6				
Q553	E-5				
Q555	E-5				
Q561	D-6				
Q601	G-6				
Q603	G-6				
Q801	D-2				
Q802	E-1				
Q803	B-5				
Q821	D-4				
Q851	F-5				

#### A Board IC301 CXA1213BS

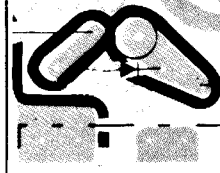


#### A Board IC401 CXA1214P



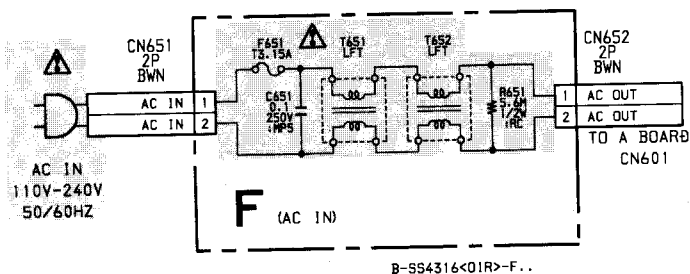
#### NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

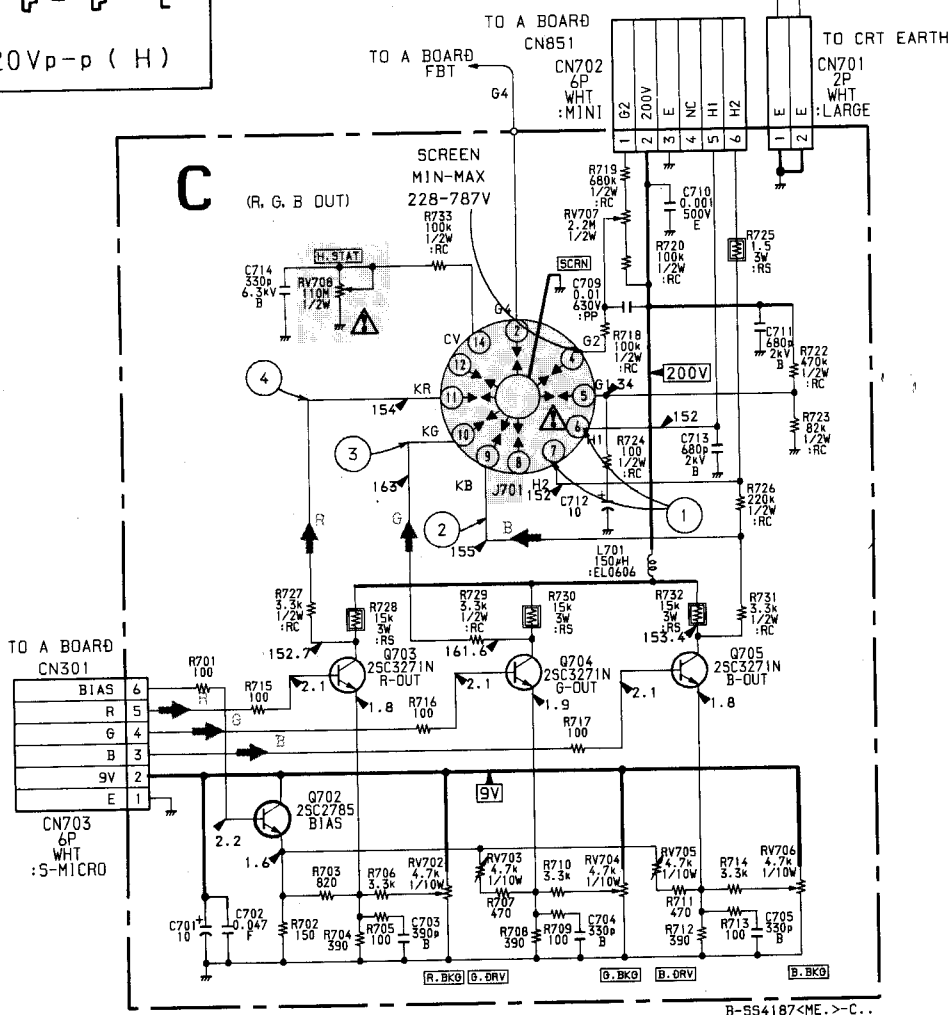
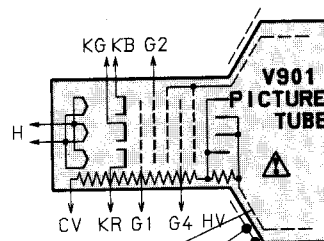
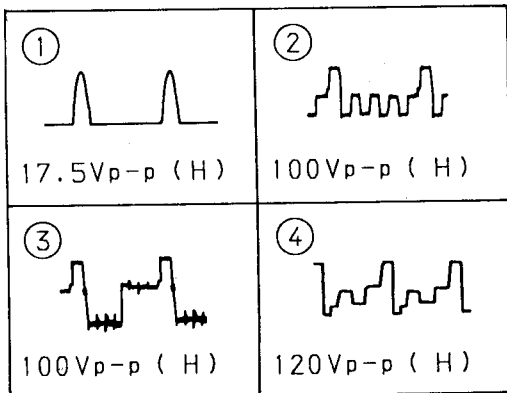




(2) Schematic Diagram of C, F Boards



• C BOARD WAVEFORMS



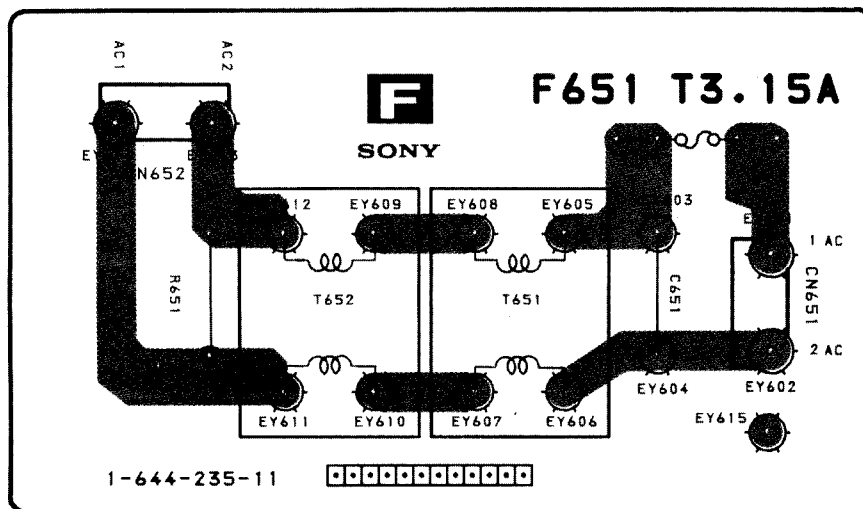
**F**

[AC IN]

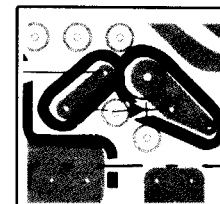
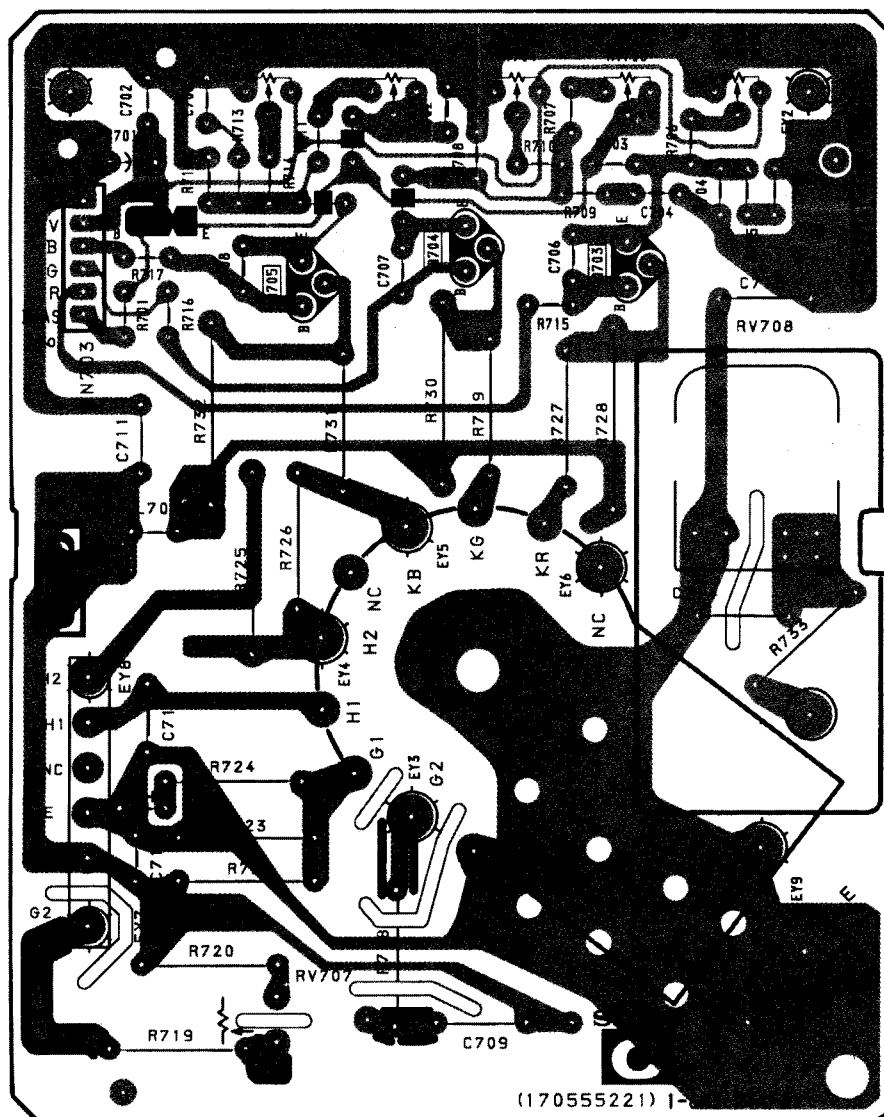
**C**

[R, G, B OUT]

— F Board —



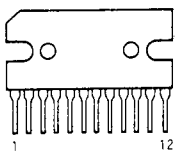
— C Board —



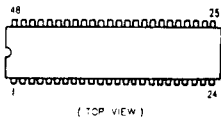
**NOTE:**  
The circuit indicated  
600 Vp-p. Care must  
inspection or repairing

### 5-3. SEMICONDUCTORS

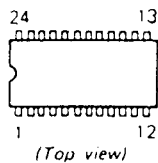
**BA5412**



**CXA1213BS**



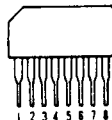
**CXA1214P**



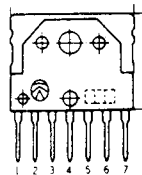
**HZT33-02**  
 $\mu$ PC574J



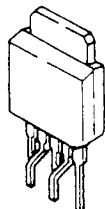
**LA7016**



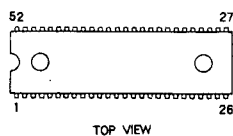
**LA7830**



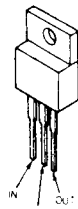
**L78LR05D-MA**



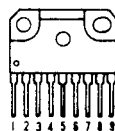
**M34302M8-611SP**



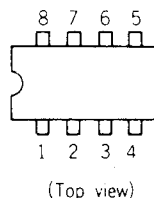
**NJM78M09FA**  
**RC78M09FA**



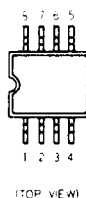
**STR-S6307**



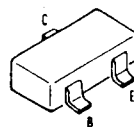
**ST24C02AB1**  
 $\mu$ PC4558C



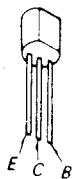
**PC111LS**



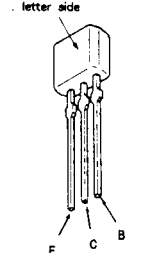
**DTA114EK**  
**DTC144EK**  
**2SA1162-YG**  
**2SC2712-YG**



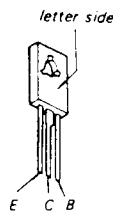
**2SA1091-O**  
**2S1091R**



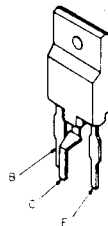
**2SA1175-HFE**  
**2SC2785-HFE**



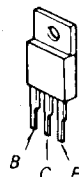
**2SC3271-N**



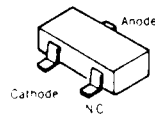
**2SD1878-CA**



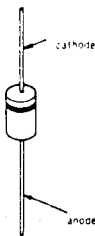
**2SD2012**  
**2SD2061-E**



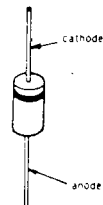
**DA204U**



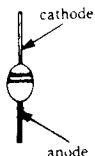
**ERC06-15S**  
**RGP10G**  
**RU-3AM**  
**R2M**



**EGP20G**  
**RGP02-17**  
**RGP15J**



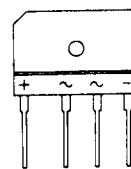
**GP08D**  
**U05G**



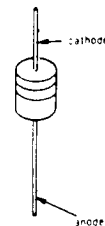
**MC921**



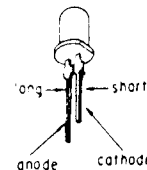
**RBV-406H-01**



**RD5.1ES-B2**  
**RD5.6ES-B2**  
**RD7.5ES-B2**  
**1SS119**



**SEL1222R-C**



Circuit indicated as left contains high voltage of over 100V. Care must be paid to prevent an electric shock in operation or repairing.

## SECTION 6

### EXPLODED VIEW

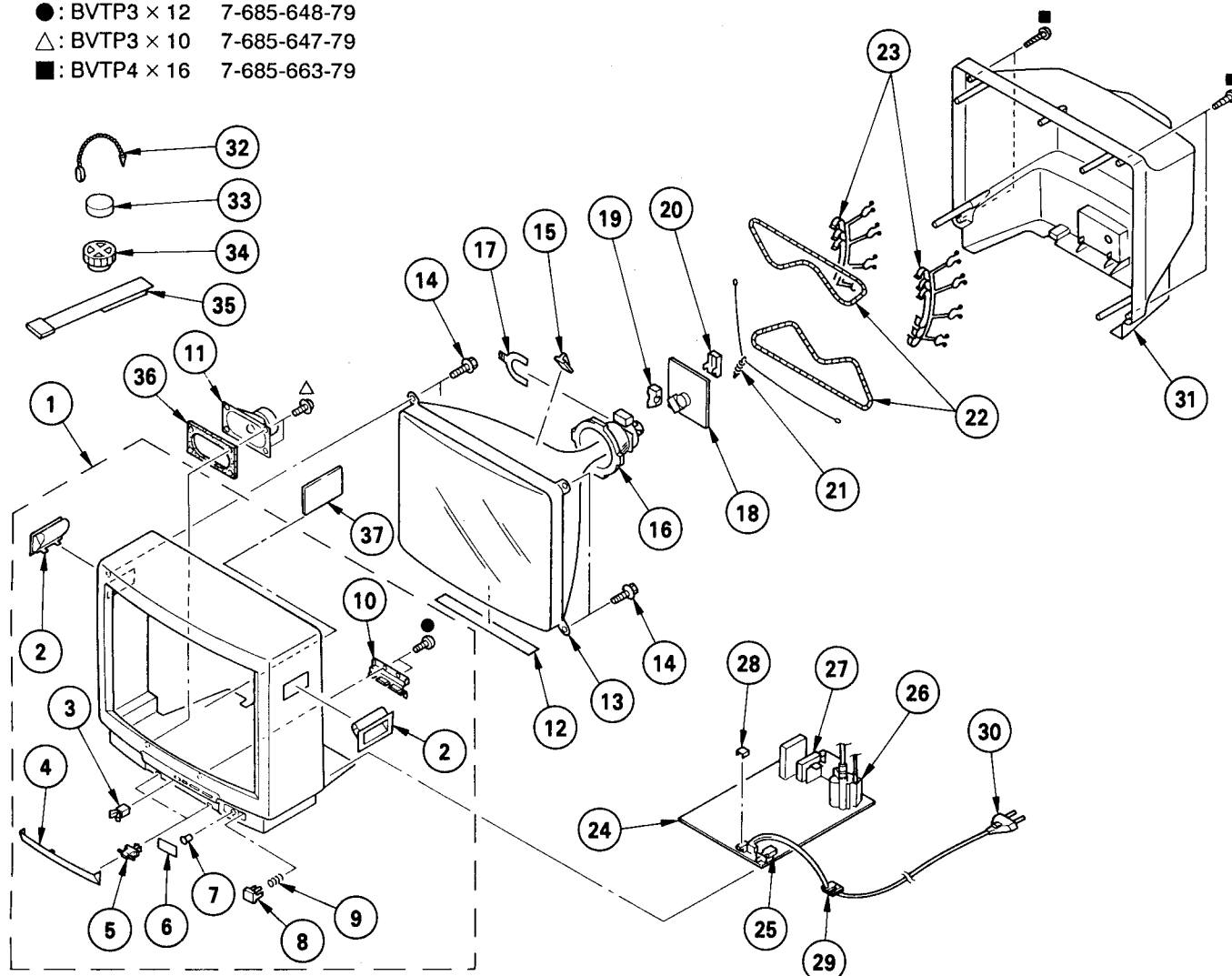
## NOTE:

- 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  $\Delta$  are critical for safety.  
Replace only with part number specified.

- : BVTP3 × 12 7-685-648-79  
 △: BVTP3 × 10 7-685-647-79  
 ■: BVTP4 × 16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	X-4030-598-1	CABINET ASSY (WITH BEZEL ASSY)	2~10	20	*4-390-907-01	COVER (REAR LID), CV	
2	4-313-702-91	HANDLE		21	4-369-318-00	SPRING, TENSION	
3	4-392-036-01	CATCHER, PUSH		22	$\Delta$ 1-426-368-11	COIL, DEMAGNETIZATION	
4	4-036-422-61	DOOR, CONTROL		23	*4-341-778-01	BAND, DEGAUSSING COIL	
5	4-032-761-01	SHART (S), DOOR		24	*A-1297-024-A	A BOARD, COMPLETE	
6	4-036-413-01	WINDOW, ORNAMENTAL		25	$\Delta$ 1-571-433-12	SWITCH, PUSH (AC POWER)	
7	*4-387-890-01	GUIDE, LIGHT		26	$\Delta$ 1-439-536-01	TRANSFORMER ASSY, FLYBACK (NX-2740A1)	
8	4-036-411-01	BUTTON, POWER		27	$\Delta$ 1-693-120-11	TUNER, ET (BT-RG321)	
9	4-036-405-11	SPRING, COMPRESSION		28	*4-387-054-01	COVER, LED HOLDER	
10	4-036-433-01	BUTTON, MULTI		29	$\Delta$ 4-022-115-01	HOLDER, AC CORD	
11	1-544-763-11	SPEAKER (12X5CM)		30	$\Delta$ 1-574-062-22	CORD, POWER (WITH CONNECTOR)	
12	4-372-556-11	SHEET, BLOTING		31	4-036-432-01	COVER, REAR	
13	$\Delta$ 8-738-759-05	PICTURE TUBE (A51JUH11X)		32	4-308-870-00	CLIP, LEAD WIRE	
14	4-365-808-01	SCREW (5), TAPPING		33	1-452-032-00	MAGNET, DISK; 10MM $\phi$	
15	3-704-495-01	SPACER, DY		34	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\phi$	
16	$\Delta$ 1-451-280-11	DEFLECTION YOKE (Y21PXA2)		35	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
17	1-452-277-00	MAGNET, BMC		36	4-037-613-02	CUSHION, SP	
18	*A 1331-210-A	C BOARD, COMPLETE		37	*1-644-235-11	F BOARD	
19	*4-390-911-01	COVER (MAIN), CV					

F A

SECTION 7  
ELECTRICAL PARTS LIST

NOTE:

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

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

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

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

CAPACITORS                      COILS  
• MF :  $\mu$ F, PF :  $\mu$ F            • MMH : mH, UH :  $\mu$ H

RESISTORS

• All resistors are in ohms  
• F : nonflammable

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-644-235-11	F BOARD *****		C006	1-124-925-11	ELECT 2.2MF	20% 50V
	*4-341-751-01	EYELET (EY603~EY612)		C007	1-130-495-00	MYLAR 0.1MF	5% 50V
	*4-341-752-01	EYELET (EY601,EY602,EY613,EY614)		C008	1-136-165-00	FILM 0.1MF	5% 50V
				C009	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C010	1-163-241-11	CERAMIC CHIP 39PF	5% 50V
		<CAPACITOR>		C011	1-163-241-11	CERAMIC CHIP 39PF	5% 50V
C651	<b>A</b> 1-136-548-13	FILM 0.1MF <b>A</b> 20% 250V		C013	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
		<CONNECTOR>		C014	1-163-031-11	CERAMIC CHIP 0.01MF	50V
CN651	*1-580-843-11	PIN, CONNECTOR (POWER)		C015	1-126-101-11	ELECT 100MF	20% 16V
CN652	*1-580-843-11	PIN, CONNECTOR (POWER)		C017	1-130-493-00	MYLAR 0.068MF	5% 50V
		<FUSE>		C018	1-130-493-00	MYLAR 0.068MF	5% 50V
F651	<b>A</b> 1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V		C019	1-126-233-11	ELECT 22MF	20% 50V
	1-533-223-11	CLIP, FUSE; F651		C020	1-126-101-11	ELECT 100MF	20% 16V
		<RESISTOR>		C021	1-126-233-11	ELECT 22MF	20% 50V
R651	<b>A</b> 1-202-916-91	SOLID 5.6M 20% 1/2W		C023	1-130-495-00	MYLAR 0.1MF	5% 50V
		<TRANSFORMER>		C024	1-126-101-11	ELECT 100MF	20% 16V
T651	<b>A</b> 1-424-391-11	TRANSFORMER, LINE FILTER		C025	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
T652	<b>A</b> 1-424-391-11	TRANSFORMER, LINE FILTER		C026	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
		*****		C027	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C028	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C029	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C030	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C031	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C032	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C033	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C040	1-124-925-11	ELECT 2.2MF	20% 50V
				C041	1-124-907-11	ELECT 10MF	20% 50V
				C043	1-124-907-11	ELECT 10MF	20% 50V
				C044	1-124-907-11	ELECT 10MF	20% 50V
				C045	1-124-903-11	ELECT 1MF	20% 50V
				C046	1-124-907-11	ELECT 10MF	20% 50V
				C047	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C048	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C082	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
				C083	1-124-907-11	ELECT 10MF	20% 50V
				C084	1-126-101-11	ELECT 100MF	20% 16V
				C085	1-130-487-00	MYLAR 0.022MF	5% 50V
				C102	1-136-167-00	FILM 0.15MF	5% 50V
				C103	1-124-120-11	ELECT 220MF	20% 16V
				C105	1-136-167-00	FILM 0.15MF	5% 50V
				C106	1-124-120-11	ELECT 220MF	20% 16V
				C107	1-124-907-11	ELECT 10MF	20% 50V
				C108	1-126-101-11	ELECT 100MF	20% 16V
				C110	1-124-907-11	ELECT 10MF	20% 50V
				C111	1-124-910-11	ELECT 47MF	20% 50V
				C112	1-124-477-11	ELECT 47MF	20% 16V
				C113	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
				C115	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
				C150	1-124-907-11	ELECT 10MF	20% 50V
				C151	1-124-907-11	ELECT 10MF	20% 50V
C001	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V				
C002	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V				
C003	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V				
C004	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
C005	1-136-165-00	FILM 0.1MF	5% 50V				

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

KV-2185MK  
RM-827S

5MK  
-827S

A

A

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C152	1-124-907-11	ELECT 10MF	20% 50V	C416	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C153	1-124-907-11	ELECT 10MF	20% 50V	C512	1-131-350-00	TANTALUM 3.3MF	10% 25V
C154	1-136-169-00	FILM 0.22MF	5% 50V	C513	1-124-903-11	ELECT 1MF	20% 50V
C202	1-136-173-00	FILM 0.47MF	5% 50V	C531	1-124-907-11	ELECT 10MF	20% 50V
C203	1-124-360-00	ELECT 1000MF	20% 16V	C532	1-123-382-00	ELECT 3.3MF	20% 50V
C210	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C533	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C211	1-124-927-11	ELECT 4.7MF	20% 50V	C551	1-126-105-11	ELECT 1000MF	20% 35V
C212	1-124-927-11	ELECT 4.7MF	20% 50V	C552	1-124-514-11	ELECT 100MF	20% 50V
C251	1-124-557-11	ELECT 1000MF	20% 25V	C553	1-163-019-00	CERAMIC CHIP 0.0068MF	10% 50V
C254	1-136-173-00	FILM 0.47MF	5% 50V	C554	1-102-244-00	CERAMIC 220PF	10% 500V
C256	1-124-557-11	ELECT 1000MF	20% 25V	C555	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C257	1-124-925-11	ELECT 2.2MF	20% 50V	C556	1-124-907-11	ELECT 10MF	20% 50V
C259	1-126-233-11	ELECT 22MF	20% 25V	C557	1-124-927-11	ELECT 4.7MF	20% 50V
C260	1-126-233-11	ELECT 22MF	20% 25V	C558	1-126-104-11	ELECT 470MF	20% 35V
C263	1-126-233-11	ELECT 22MF	20% 50V	C559	1-124-119-00	ELECT 330MF	20% 16V
C265	1-124-907-11	ELECT 10MF	20% 50V	C562	1-126-101-11	ELECT 100MF	20% 16V
C270	1-124-120-11	ELECT 220MF	20% 25V	C601	$\Delta$ 1-161-830-51	CERAMIC 0.0047MF	500V
C290	1-163-086-00	CERAMIC CHIP 3PF	0.25PF 50V	C602	$\Delta$ 1-161-830-51	CERAMIC 0.0047MF	500V
C291	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C603	1-161-830-00	CERAMIC 0.0047MF	500V
C298	1-130-481-00	MYLAR 0.0068MF	5% 50V	C604	1-125-555-11	ELECT 330MF	20% 400V
C301	1-136-169-00	FILM 0.22MF	5% 50V	C605	$\Delta$ 1-164-497-51	CERAMIC 470PF	20% 400V
C302	1-124-927-11	ELECT 4.7MF	20% 50V	C606	1-104-331-91	CERAMIC 0.0022MF	10% 1KV
C303	1-136-169-00	FILM 0.22MF	5% 50V	C607	1-136-171-00	FILM 0.33MF	5% 50V
C304	1-136-169-00	FILM 0.22MF	5% 50V	C608	1-104-332-91	CERAMIC 470PF	10% 2KV
C305	1-136-169-00	FILM 0.22MF	5% 50V	C609	1-126-600-11	ELECT 100MF	20% 160V
C306	1-124-360-00	ELECT 1000MF	20% 16V	C610	1-124-479-11	ELECT 330MF	20% 25V
C307	1-163-035-00	CERAMIC CHIP 0.047MF	50V	C611	$\Delta$ 1-164-497-51	CERAMIC 470PF	20% 400V
C308	1-163-033-00	CERAMIC CHIP 0.022MF	50V		*4-374-846-11	COVER, CAPACITOR, CAP TYPE; C611	
C309	1-124-903-11	ELECT 1MF	20% 50V	C612	1-102-228-00	CERAMIC 470PF	10% 500V
C310	1-130-495-00	MYLAR 0.1MF	5% 50V	C616	$\Delta$ 1-164-246-51	CERAMIC 0.0022MF	20% 400V
C311	1-126-101-11	ELECT 100MF	20% 16V	C617	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C312	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C618	1-130-491-00	MYLAR 0.047MF	5% 50V
C313	1-136-173-00	FILM 0.47MF	5% 50V	C619	1-126-803-11	ELECT 47MF	20% 16V
C314	1-136-173-00	FILM 0.47MF	5% 50V	C620	1-130-475-00	MYLAR 0.0022MF	5% 50V
C315	1-136-167-00	FILM 0.15MF	5% 50V	C621	$\Delta$ 1-136-548-13	FILM 0.1MF	20% 250V
C316	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C622	1-130-491-00	MYLAR 0.047MF	5% 50V
C317	1-164-161-11	CERAMIC CHIP 0.0022MF	50V	C624	1-161-740-00	CERAMIC 470PF	20% 400V
C318	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C626	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C319	1-126-233-11	ELECT 22MF	20% 50V	C627	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C320	1-124-119-00	ELECT 330MF	20% 16V	C628	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C321	1-124-903-11	ELECT 1MF	20% 50V	C801	1-123-024-21	ELECT 33MF	160V
C322	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C802	1-106-367-00	MYLAR 0.01MF	10% 200V
C323	1-136-169-00	FILM 0.22MF	5% 50V	C803	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C325	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C804	1-162-318-11	CERAMIC 0.001MF	10% 500V
C326	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	C805	1-102-244-00	CERAMIC 220PF	10% 500V
C327	1-124-903-11	ELECT 1MF	20% 50V	C806	1-130-483-00	MYLAR 0.01MF	5% 50V
C328	1-124-903-11	ELECT 1MF	20% 50V	C807	1-136-569-11	FILM 1.2MF	5% 200V
C329	1-216-039-00	METAL GLAZE 390	5% 1/10W	C808	$\Delta$ 1-129-747-51	FILM 0.047MF	10% 400V
C380	1-124-122-11	ELECT 100MF	20% 50V	C809	$\Delta$ 1-162-115-91	CERAMIC 330PF	10% 2KV
C401	1-124-477-11	ELECT 47MF	20% 16V	C810	1-130-494-11	MYLAR 0.082MF	5% 50V
C402	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C811	1-124-925-11	ELECT 2.2MF	20% 50V
C403	1-163-114-00	CERAMIC CHIP 75PF	5% 50V	C812	$\Delta$ 1-136-085-11	FILM 0.016MF	3% 2KV
C404	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C813	1-130-481-00	MYLAR 0.0068MF	5% 50V
C405	1-136-165-00	FILM 0.1MF	5% 50V	C814	1-124-907-11	ELECT 10MF	20% 50V
C406	1-165-376-91	CERAMIC CHIP 120PF	5% 50V	C815	1-129-898-00	FILM 0.0022MF	5% 630V
C407	1-124-903-11	ELECT 1MF	20% 50V	C816	1-124-634-11	ELECT 1MF	20% 250V
C408	1-130-480-00	MYLAR 0.0056MF	5% 50V	C817	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C409	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C818	1-124-477-11	ELECT 47MF	20% 25V
C410	1-165-376-91	CERAMIC CHIP 120PF	5% 50V	C820	$\Delta$ 1-162-135-91	CERAMIC 560PF	10% 2KV
C411	1-136-165-00	FILM 0.1MF	5% 50V	C821	1-106-391-12	MYLAR 0.1MF	10% 200V
C412	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C822	1-136-111-00	FILM 1MF	5% 200V
C413	1-163-114-00	CERAMIC CHIP 75PF	5% 50V	C823	1-130-489-00	MYLAR 0.033MF	5% 50V
C414	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C825	1-106-367-00	MYLAR 0.01MF	10% 200V
C415	1-136-165-00	FILM 0.1MF	5% 50V				



A

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

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C826	1-162-116-00	CERAMIC	680PF 10%	D310	8-719-000-06	DIODE MC921	
C850	1-124-122-11	ELECT	100MF 20%	D320	8-719-911-19	DIODE 1SS119	
C851	1-123-948-00	ELECT	22MF 20%	D321	8-719-109-89	DIODE RD5.6ES-B2	
C852	1-162-114-00	CERAMIC	0.0047MF 2KV	D551	8-719-911-55	DIODE U05G	
C853	1-162-318-11	CERAMIC	0.001MF 10% 500V	D561	8-719-911-19	DIODE 1SS119	
C854	1-124-479-11	ELECT	330MF 20%	D601	8-719-311-72	DIODE RBV-40GH-01	
C855	1-126-101-11	ELECT	100MF 20%	D602	8-719-300-33	DIODE RU-3AM	
C856	1-162-318-11	CERAMIC	0.001MF 10%	D603	8-719-911-19	DIODE 1SS119	
C857	1-136-167-00	FILM	0.15MF 5%	D604	8-719-301-64	DIODE RU4DS	
C858	1-124-927-11	ELECT	4.7MF 20%	D605	8-719-979-85	DIODE EGP20G	
C860	1-102-228-00	CERAMIC	470PF 10%	D607	8-719-911-19	DIODE 1SS119	
C875	1-126-163-11	ELECT	4.7MF 20%	D608	8-719-303-49	DIODE R2M	
C876	1-163-129-00	CERAMIC CHIP	330PF 5%	D801	8-719-945-80	DIODE ERC06-15S	
C895	1-130-483-00	MYLAR	0.01MF 5%	D802	8-719-979-85	DIODE EGP20G	
<FILTER>				D803	8-719-110-03	DIODE RD7.5ES-B2	
CF001	1-577-082-11	VIBRATOR, CERAMIC		D851	8-719-300-33	DIODE RU-3AM	
<CONNECTOR>				D852	8-719-028-71	DIODE ES1F-LF-G2	
CN251	*1-564-506-11	PLUG, CONNECTOR 3P		D853	8-719-300-33	DIODE RU-3AM	
CN301	*1-564-509-11	PLUG, CONNECTOR 6P		D855	8-719-300-33	DIODE RU-3AM	
CN601	*1-580-843-11	PIN, CONNECTOR (POWER)		D857	8-719-911-55	DIODE U05G	
CN602	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		D858	8-719-911-55	DIODE U05G	
CN603	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D860	8-719-911-19	DIODE 1SS119	
CN851	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P		<DELAY LINE>			
CNDY1	*1-580-798-11	CONNECTOR PIN (DY) 6P		DL301	1-415-122-31	DELAY LINE, 1H (PAL)	
<NETWORK>				<FERRITE BEAD>			
CP001	1-236-841-11	NETWORK, C		FB251	1-410-397-21	FERRITE BEAD INDUCTOR	
CP002	1-236-841-11	NETWORK, C		FB601	1-410-397-21	FERRITE BEAD INDUCTOR	
CP003	1-692-200-11	SWITCH BLOCK		FB602	1-410-397-21	FERRITE BEAD INDUCTOR	
CP004	1-692-201-11	SWITCH BLOCK		FB801	1-410-397-21	FERRITE BEAD INDUCTOR	
CP005	1-239-347-21	NETWORK, RES		FB802	1-410-397-21	FERRITE BEAD INDUCTOR	
CP301	1-236-730-11	NETWORK, C		<IC>			
<TRIMMER>				IC001	8-759-082-90	IC M34302M8-612SP	
CV358	1-141-245-00	TRIMMER, CERAMIC		IC002	8-741-100-62	IC SBX1618-51	
CV443	1-141-245-00	TRIMMER, CERAMIC		IC003	8-759-043-86	IC ST24C02AB1	
<DIODE>				IC004	8-759-157-40	IC UPC574J	
D001	8-719-911-19	DIODE 1SS119		IC005	8-759-805-37	IC L78LR05D-MA	
D002	8-719-911-19	DIODE 1SS119		IC101	8-759-800-81	IC LA7016	
D003	8-719-911-19	DIODE 1SS119		IC102	8-759-800-81	IC LA7016	
D004	8-719-911-19	DIODE 1SS119		IC104	8-759-145-58	IC UPC4558C	
D005	8-719-311-89	DIODE SEL1222R-C		IC251	8-759-501-93	IC BA5412	
D006	8-719-911-19	DIODE 1SS119		IC301	8-752-058-64	IC CXA1213BS	
D007	8-719-911-19	DIODE 1SS119		IC401	8-752-056-67	IC CXA1214P	
D008	8-719-911-19	DIODE 1SS119		IC551	8-759-801-98	IC LA7830	
D009	8-719-911-19	DIODE 1SS119		IC601A	8-749-920-67	IC STR-S6307	
D010	8-719-911-19	DIODE 1SS119		IC602	8-749-921-89	IC SE115N	
D011	8-719-911-19	DIODE 1SS119		IC603A	8-719-987-48	PHOTO COUPLER PC111LS	
D012	8-719-911-19	DIODE 1SS119		IC801	8-759-145-58	IC UPC4558C	
D014	8-719-911-19	DIODE 1SS119		IC851	8-759-701-59	IC NJM78M09FA	
D016	8-719-911-19	DIODE 1SS119		<IF BLOCK>			
D151	8-719-109-85	DIODE RD5.1ES-B2		IF201	1-466-138-11	IF BLOCK (IFD-380A)	
D155	8-719-911-19	DIODE 1SS119		<JACK>			
D250	8-719-911-19	DIODE 1SS119		J101	1-695-239-11	JACK BLOCK, PIN 2P	
D251	8-719-911-19	DIODE 1SS119		J102	1-695-238-11	JACK BLOCK, PIN 2P	
D252	8-719-800-76	DIODE 1SS226					

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

KV-2185MK  
RM-827S

A

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
J251	1-562-837-21	JACK		JR1	1-216-295-00	METAL GLAZE	0 5% 1/10W
	<COIL>			JR2	1-216-295-00	METAL GLAZE	0 5% 1/10W
L001	1-408-397-00	INDUCTOR 1UH		JR3	1-216-295-00	METAL GLAZE	0 5% 1/10W
L004	1-410-476-11	INDUCTOR 33UH		JR4	1-216-295-00	METAL GLAZE	0 5% 1/10W
L005	1-410-470-11	INDUCTOR 10UH		JR5	1-216-295-00	METAL GLAZE	0 5% 1/10W
L151	1-410-470-11	INDUCTOR 10UH		JR6	1-216-295-00	METAL GLAZE	0 5% 1/10W
L301	1-408-406-00	INDUCTOR 5.6UH		JR7	1-216-295-00	METAL GLAZE	0 5% 1/10W
L401	1-410-472-41	INDUCTOR 15UH		JW231	1-249-423-11	CARBON	3.3K 5% 1/4W
L402	1-410-472-41	INDUCTOR 15UH		R001	1-216-049-00	METAL GLAZE	1K 5% 1/10W
L804	1-459-075-00	COIL, DYNAMIC CONVERSION CHOKE		R002	1-216-049-00	METAL GLAZE	1K 5% 1/10W
L805	1-459-769-13	COIL, HORIZONTAL LINEARITY		R003	1-216-049-00	METAL GLAZE	1K 5% 1/10W
L807	1-459-390-00	COIL (WITH CORE)		R004	1-216-049-00	METAL GLAZE	1K 5% 1/10W
L808	1-412-553-11	INDUCTOR 3.3MMH		R005	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
L810	1-408-947-00	INDUCTOR 2.2MMH		R006	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
L821	1-459-111-00	COIL, DRAM CORE (CD1)		R007	1-216-099-00	METAL GLAZE	120K 5% 1/10W
	<IC LINK>			R009	1-216-073-00	METAL GLAZE	10K 5% 1/10W
PS801A	1-532-685-91	LINK, IC 0.8A		R010	1-216-081-00	METAL GLAZE	22K 5% 1/10W
	<TRANSISTOR>			R011	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q001	8-729-230-49	TRANSISTOR 2SC2712-YG		R012	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q002	8-729-230-49	TRANSISTOR 2SC2712-YG		R013	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE		R014	1-216-464-11	METAL OXIDE	18K 5% 2W F
Q004	8-729-230-49	TRANSISTOR 2SC2712-YG		R016	1-216-039-00	METAL GLAZE	390 5% 1/10W
Q005	8-729-230-49	TRANSISTOR 2SC2712-YG		R017	1-216-029-00	METAL GLAZE	150 5% 1/10W
Q006	8-729-901-01	TRANSISTOR DTC144EK		R018	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q007	8-729-901-01	TRANSISTOR DTC144EK		R019	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q101	8-729-230-49	TRANSISTOR 2SC2712-YG		R020	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q102	8-729-230-49	TRANSISTOR 2SC2712-YG		R021	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q151	8-729-901-04	TRANSISTOR DTA114EK		R022	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q152	8-729-230-49	TRANSISTOR 2SC2712-YG		R023	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q153	8-729-901-04	TRANSISTOR DTA114EK		R024	1-216-109-00	METAL GLAZE	330K 5% 1/10W
Q154	8-729-901-04	TRANSISTOR DTA114EK		R025	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG		R026	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
Q202	8-729-230-49	TRANSISTOR 2SC2712-YG		R027	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q251	8-729-901-01	TRANSISTOR DTC144EK		R028	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q252	8-729-901-01	TRANSISTOR DTC144EK		R029	1-216-085-00	METAL GLAZE	33K 5% 1/10W
Q301	8-729-230-49	TRANSISTOR 2SC2712-YG		R030	1-216-097-00	METAL GLAZE	100K 5% 1/10W
Q302	8-729-230-49	TRANSISTOR 2SC2712-YG		R031	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q303	8-729-230-46	TRANSISTOR 2SA1162-YG		R033	1-216-085-00	METAL GLAZE	33K 5% 1/10W
Q304	8-729-230-49	TRANSISTOR 2SC2712-YG		R034	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
Q305	8-729-230-49	TRANSISTOR 2SC2712-YG		R035	1-216-097-00	METAL GLAZE	100K 5% 1/10W
Q306	8-729-230-49	TRANSISTOR 2SC2712-YG		R037	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
Q310	8-729-901-01	TRANSISTOR DTC144EK		R038	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q401	8-729-230-49	TRANSISTOR 2SC2712-YG		R039	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q522	8-729-901-01	TRANSISTOR DTC144EK		R040	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q551	8-729-901-01	TRANSISTOR DTC144EK		R042	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
Q553	8-729-901-01	TRANSISTOR DTC144EK		R043	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q555	8-729-901-01	TRANSISTOR DTC144EK		R044	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q561	8-729-200-17	TRANSISTOR 2SA1091-0		R045	1-216-113-00	METAL GLAZE	470K 5% 1/10W
Q601	8-729-230-46	TRANSISTOR 2SA1162-YG		R046	1-216-105-00	METAL GLAZE	220K 5% 1/10W
Q603	8-729-230-49	TRANSISTOR 2SC2712-YG		R047	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q801	8-729-140-50	TRANSISTOR 2SC3209LK		R048	1-216-119-00	METAL GLAZE	820K 5% 1/10W
Q802	8-729-821-87	TRANSISTOR 2SD1878-CA		R050	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q803	8-729-230-49	TRANSISTOR 2SC2712-YG		R051	1-216-105-00	METAL GLAZE	220K 5% 1/10W
Q821	8-729-209-15	TRANSISTOR 2SD2012		R052	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
Q851	8-729-230-46	TRANSISTOR 2SA1162-YG		R053	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
	<RESISTOR>			R054	1-216-101-00	METAL GLAZE	150K 5% 1/10W
				R055	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R056	1-216-089-00	METAL GLAZE	47K 5% 1/10W
				R057	1-216-049-00	METAL GLAZE	1K 5% 1/10W
				R058	1-216-025-00	METAL GLAZE	100 5% 1/10W
				R061	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R062	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
				R063	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W

A

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

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R064	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R331	1-216-031-00	METAL GLAZE	180 5% 1/10W
R065	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R332	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R066	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R351	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R081	1-216-041-00	METAL GLAZE	470 5% 1/10W	R401	1-249-409-11	CARBON	220 5% 1/4W
R102	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R402	1-216-039-00	METAL GLAZE	390 5% 1/10W
R103	1-216-023-00	METAL GLAZE	82 5% 1/10W	R403	1-216-039-00	METAL GLAZE	390 5% 1/10W
R105	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R404	1-216-031-00	METAL GLAZE	180 5% 1/10W
R106	1-216-023-00	METAL GLAZE	82 5% 1/10W	R405	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R107	1-216-041-00	METAL GLAZE	470 5% 1/10W	R406	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R108	1-216-041-00	METAL GLAZE	470 5% 1/10W	R407	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R109	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R517	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R110	1-216-041-00	METAL GLAZE	470 5% 1/10W	R518	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R111	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R520	1-216-043-00	METAL GLAZE	560 5% 1/10W
R112	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R521	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R113	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R522	1-216-033-00	METAL GLAZE	220 5% 1/10W
R119	1-216-689-11	METAL GLAZE	39K 5% 1/10W	R532	1-216-037-00	METAL GLAZE	330 5% 1/10W
R121	1-216-689-11	METAL GLAZE	39K 5% 1/10W	R551	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R151	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R552	1-215-867-00	METAL OXIDE	470 5% 1W F
R155	1-216-041-00	METAL GLAZE	470 5% 1/10W	R553	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R156	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R556	1-216-429-00	METAL OXIDE	270 5% 1W F
R180	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R557	1-216-393-00	METAL OXIDE	2.2 5% 3W F
R201	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R558	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R202	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R559	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R203	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R560	1-216-023-00	METAL GLAZE	82 5% 1/10W
R205	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R561	1-216-029-00	METAL GLAZE	150 5% 1/10W
R206	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R562	1-249-422-11	CARBON	2.7K 5% 1/4W F
R210	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R563	1-247-885-00	CARBON	180K 5% 1/4W
R211	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R564	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R212	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R565	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R220	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R566	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R221	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R569	1-247-883-00	CARBON	150K 5% 1/4W
R250	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R601 $\Delta$	1-205-949-11	WIREWOUND	1.8 5% 10W
R253	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R602 $\Delta$	1-215-904-51	METAL OXIDE	100K 5% 2W F
R255	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R603	1-215-910-00	METAL OXIDE	68 5% 3W F
R261	1-249-405-11	CARBON	100 5% 1/4W	R604	1-216-469-11	METAL OXIDE	12 5% 3W F
R262	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R605 $\Delta$	1-218-265-91	METAL GLAZE	8.2M 5% 1W
R263	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R606	1-247-735-11	CARBON	47 5% 1/2W F
R301	1-216-107-00	METAL GLAZE	270K 5% 1/10W	R607	1-216-045-00	METAL GLAZE	680 5% 1/10W
R302	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W	R608	1-249-409-11	CARBON	220 5% 1/4W F
R303	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R609	1-217-190-21	WIREWOUND	0.15 10% 2W F
R304	1-216-117-00	METAL GLAZE	680K 5% 1/10W	R610	1-249-417-11	CARBON	1K 5% 1/4W F
R305	1-216-033-00	METAL GLAZE	220 5% 1/10W	R611	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R306	1-216-033-00	METAL GLAZE	220 5% 1/10W	R612	1-249-377-11	CARBON	0.47 5% 1/4W F
R307	1-216-033-00	METAL GLAZE	220 5% 1/10W	R614	1-215-923-00	METAL OXIDE	10K 5% 3W F
R308	1-216-031-00	METAL GLAZE	180 5% 1/10W	R615	1-244-941-00	CARBON	680K 5% 1/2W
R309	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R616	1-215-871-11	METAL OXIDE	2.2K 5% 1W F
R310	1-216-041-00	METAL GLAZE	470 5% 1/10W	R617 $\Delta$	1-215-902-51	METAL OXIDE	47K 5% 2W F
R311	1-215-455-00	METAL	27K 1% 1/4W	R620 $\Delta$	1-215-915-51	METAL OXIDE	470 5% 3W F
R312	1-216-133-00	METAL GLAZE	3.3M 5% 1/10W	R621 $\Delta$	1-205-949-11	WIREWOUND	1.8 5% 10W
R313	1-216-039-00	METAL GLAZE	390 5% 1/10W	R622	1-249-377-11	CARBON	0.47 5% 1/4W F
R314	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R623	1-249-377-11	CARBON	0.47 5% 1/4W F
R315	1-216-041-00	METAL GLAZE	470 5% 1/10W	R625	1-216-041-00	METAL GLAZE	470 5% 1/10W
R316	1-216-039-00	METAL GLAZE	390 5% 1/10W	R801	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R317	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R802	1-216-353-00	METAL OXIDE	2.2 5% 1W F
R318	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R803	1-215-944-11	METAL OXIDE	2.2K 5% 5W F
R319	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R804	1-247-755-11	CARBON	1.8K 5% 1/2W F
R320	1-216-033-00	METAL GLAZE	220 5% 1/10W	R805	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R322	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R806	1-216-481-11	METAL OXIDE	1.2K 5% 3W F
R323	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R807	1-216-379-11	METAL OXIDE	6.8 5% 2W F
R324	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R809	1-216-017-00	METAL GLAZE	47 5% 1/10W
R325	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R810	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R326	1-216-105-00	METAL GLAZE	220K 5% 1/10W	R812	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R327	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R814	1-215-894-11	METAL OXIDE	2.2K 5% 2W F
R328	1-216-031-00	METAL GLAZE	180 5% 1/10W				

—33—

C

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

REF.NO.	PART NO.	DESCRIPTION	REMARK
R706	1-249-423-11	CARBON 3.3K 5% 1/4W	
R707	1-249-413-11	CARBON 470 5% 1/4W	
R708	1-249-412-11	CARBON 390 5% 1/4W	
R709	1-249-405-11	CARBON 100 5% 1/4W	
R710	1-249-423-11	CARBON 3.3K 5% 1/4W	
R711	1-249-413-11	CARBON 470 5% 1/4W	
R712	1-249-412-11	CARBON 390 5% 1/4W	
R713	1-249-405-11	CARBON 100 5% 1/4W	
R714	1-249-423-11	CARBON 3.3K 5% 1/4W	
R715	1-249-405-11	CARBON 100 5% 1/4W	
R716	1-249-405-11	CARBON 100 5% 1/4W	
R717	1-249-405-11	CARBON 100 5% 1/4W	
R718	1-202-838-00	SOLID 100K 20% 1/2W	
R719	1-202-883-11	SOLID 680K 20% 1/2W	
R720	1-202-838-00	SOLID 100K 20% 1/2W	
R722	1-202-846-00	SOLID 470K 20% 1/2W	
R723	1-202-837-00	SOLID 82K 20% 1/2W	
R724	1-202-549-00	SOLID 100 20% 1/2W	
R725	1-216-391-11	METAL OXIDE 1.5 5% 3W F	
R726	1-202-842-11	SOLID 220K 20% 1/2W	
R727	1-202-824-00	SOLID 3.3K 20% 1/2W	
R728	1-215-924-00	METAL OXIDE 15K 5% 3W F	
R729	1-202-824-00	SOLID 3.3K 20% 1/2W	
R730	1-215-924-00	METAL OXIDE 15K 5% 3W F	
R731	1-202-824-00	SOLID 3.3K 20% 1/2W	
R732	1-215-924-00	METAL OXIDE 15K 5% 3W F	
R733	1-202-838-00	SOLID 100K 20% 1/2W	

## &lt;VARIABLE RESISTOR&gt;

RV702	1-241-121-11	RES. ADJ. CARBON 4.7K
RV703	1-241-121-11	RES. ADJ. CARBON 4.7K
RV704	1-241-121-11	RES. ADJ. CARBON 4.7K
RV705	1-241-121-11	RES. ADJ. CARBON 4.7K
RV706	1-241-121-11	RES. ADJ. CARBON 4.7K
RV707	1-230-641-11	RES. ADJ. METAL GLAZE 2.2M
RV708	1-230-619-11	RES. ADJ. METAL GLAZE 110M

MISCELLANEOUS  
\*\*\*\*\*

$\Delta$ 1-426-368-11	COIL, DEMAGNETIZATION
$\Delta$ 1-451-280-11	DEFLECTION Yoke (Y21PXA2)
1-452-032-00	MAGNET, DISK; 10MM $\phi$
1-452-094-00	MAGNET, ROTABLE DISK; 15MM $\phi$
1-452-277-00	MAGNET, BMC
1-544-763-11	SPEAKER (12X5CM)
$\Delta$ 1-574-062-22	CORD, POWER (WITH CONNECTOR)
V901 $\Delta$ 8-738-759-05	PICTURE TUBE (A51JUH1IX)

ACCESSORIES AND PACKING MATERIALS  
\*\*\*\*\*

1-417-151-21	MATCHING TRANSFORMER, ANTENNA
1-501-372-81	ANTENNA, TELESCOPIC
3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)
3-755-624-11	MANUAL, INSTRUCTION
*4-036-285-01	CUSHION (UPPER) (ASSY)
*4-036-286-01	CUSHION (LOWER) (ASSY)
*4-036-291-01	INDIVIDUAL CARTON
4-392-003-01	BAND, HOLD
4-392-004-01	CLIP

\*4-395-957-01 BAG, PROTECTION

## REMOTE COMMANDER

1-693-143-11 REMOTE COMMANDER (RM-827S)  
9-902-546-01 COVER, BATTERY (FOR RM-827S)