

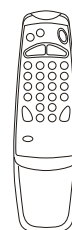
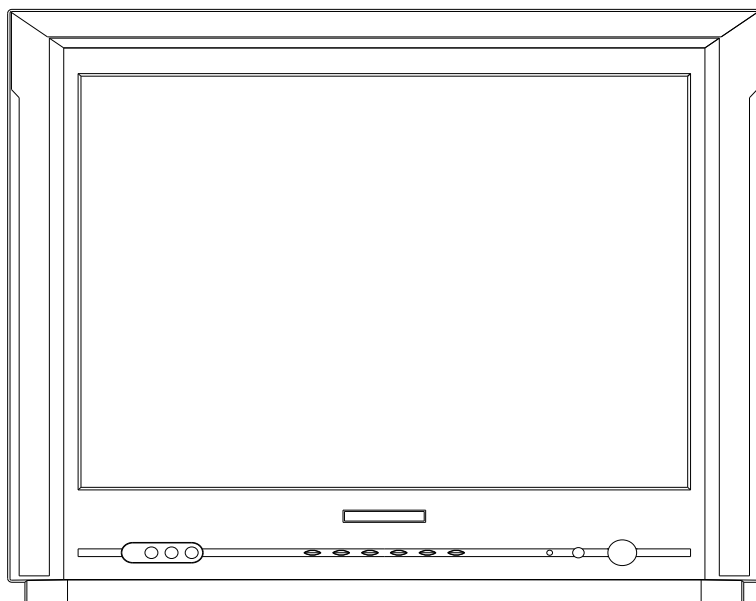


FILE NO.

## SERVICE MANUAL Colour Television

**Model No.PC-R20R2**  
**(USA)**

**Service Ref.No.PC-R20R2-00**



### SPECIFICATIONS

Receiving System	: M
Colour System	: NTSC
Picture Tube	: 20 inch screen
Ext. Antenna	: 75 Ohm Coaxial Cable
Ext. In/Out	: Audio/Video -In/Out
Speaker	: (8 Ohm) x 2
Audio Output	: Maximum 3W
Power Consumption	: AC 120V 60Hz, 84W
Dimension	: 525(W) x 510(D) x 464(H)mm/ 20.7(W)x20.1(D) x 18.3(H)inch
Net Weight	: 22.8 kg/50.26lbs

### REMOTE CONTROL

Transmitting System	: Infrared
Power Supply	: DC 3V (1.5 x 2)
Dimension	: 60(W) x 200(L) x 24(D)mm/ 2.4(W) x 7.9(L) x 0.9(D)inch
Net Weight	: 100 g(approx)/0.22lbs

**Product Code: 1 113 495 46**

**Original Version**

**Chassis Series: 3Y03**

Give complete "SERVICE REF.NO."for parts order or servicing. It is shown on the rating plate at the cabinet back of the unit.

This T.V. Receiver will not work properly in foreign countries where the television transmission system and power source differ from the design specifications. Refer to the Specification table.

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

**REFERENCE NO. SM 2300011**

# Contents

---

Safety Notice.....	2
Chassis Block Diagram.....	3
IC Block Diagram .....	4-7
PCB Top Layer .....	8-9
Service Adjustments .....	10-16
Purity and Convergence Adjustment .....	17
Control Location.....	18
Input and Output Terminals.....	19
Operation Instructions.....	20-21
Mechanical Disassemblies .....	22
Cabinet Parts List .....	23
Circuit Diagram.....	24
Chassis Electrical Parts List.....	25-33

## Safety Notice

---

### SAFETY PRECAUTIONS

- 1:An isolation transformer should be connected in the power line between the receiver and the AC line when a service is performed on the primary of the converter transformer of the set.
- 2:Comply with all caution and safety-related notes provided on the cabinet back, inside the cabinet, on the chassis or the picture tube.
- 3:When replacing a chassis in the cabinet, always be certain that all the protective devices are installed properly, such as, control knobs, adjustment covers or shields, barriers, isolation resistor-capacitor networks etc.. Before returning any television to the customer, the service technician must be sure that it is completely safe to operate without danger of electrical shock.

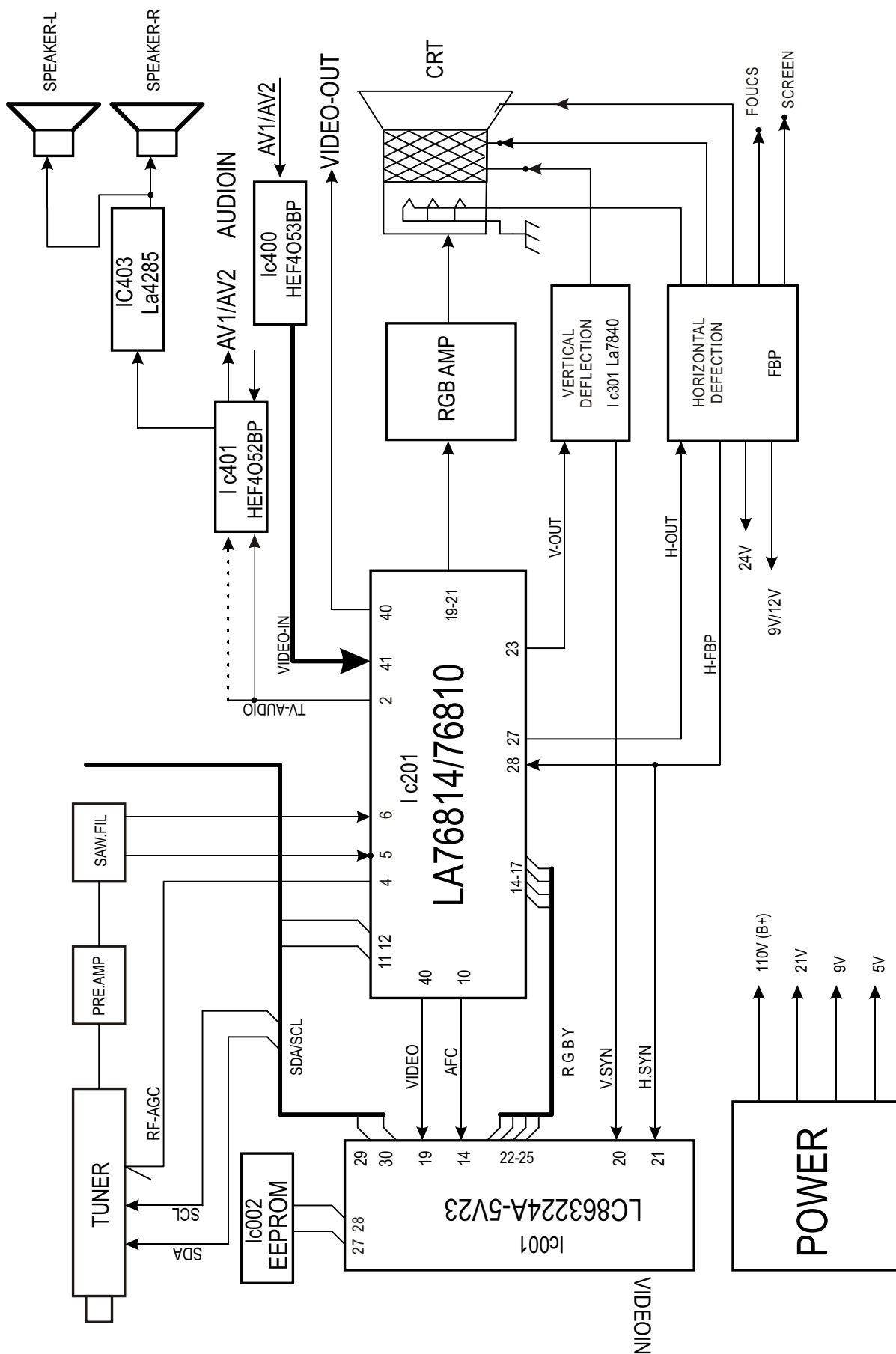
### X-RADIATION PRECAUTION

The primary source of X-RADIATION in television receiver is the picture tube. The picture tube is specially constructed to limit X-RADIATION emissions. For continued X-RADIATION protection, the replacement tube must be the same type as the original including suffix letter. Excessive high voltage may produce potentially hazardous X-RADIATION. To avoid such hazards, the high voltage must be maintained within specified limit. Refer to this service manual, high voltage adjustment for specific high voltage limit. If high voltage exceeds specified limits, take necessary corrective action. Carefully follow the instructions for +B1 volt power supply adjustment, and high voltage check to maintain the high voltage within the specified limits.

### PRODUCT SAFETY NOTICE

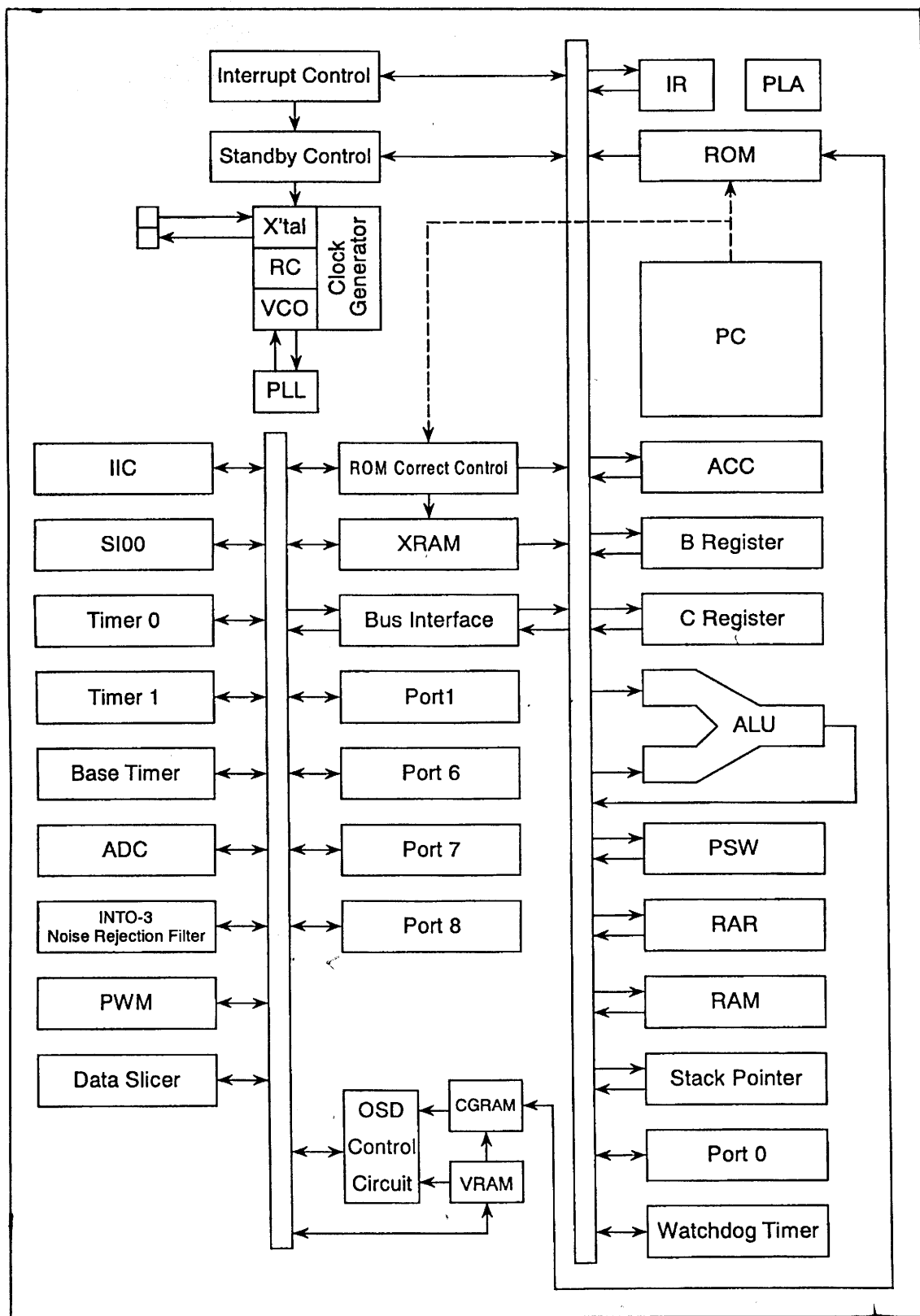
Product safety should be considered when a component replacement is made in any area of a receiver. Components indicated by mark  $\triangle$  in the parts list and the schematic diagram designate components in which safety can be of special significance. It is particularly recommended that only parts designated on the parts list in this manual be used for component replacement designated by mark  $\triangle$ . No deviations from resistance wattage or voltage ratings may be made for replacement items designated by mark  $\triangle$ .

# Chassis Block Diagram



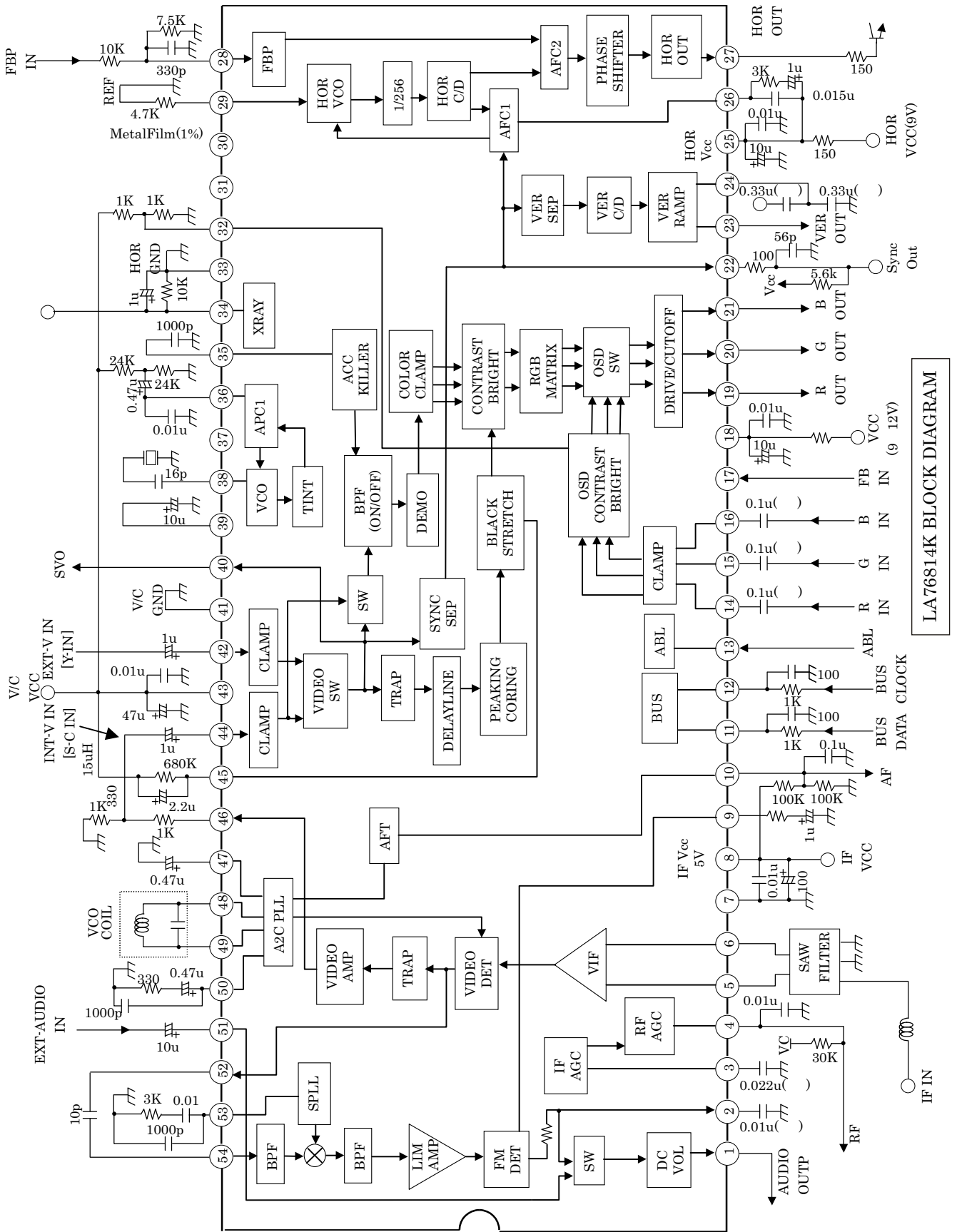
# IC Block Diagram

IC 001 (MULTI SYSTEM COLOR TV CPU) LC863224A



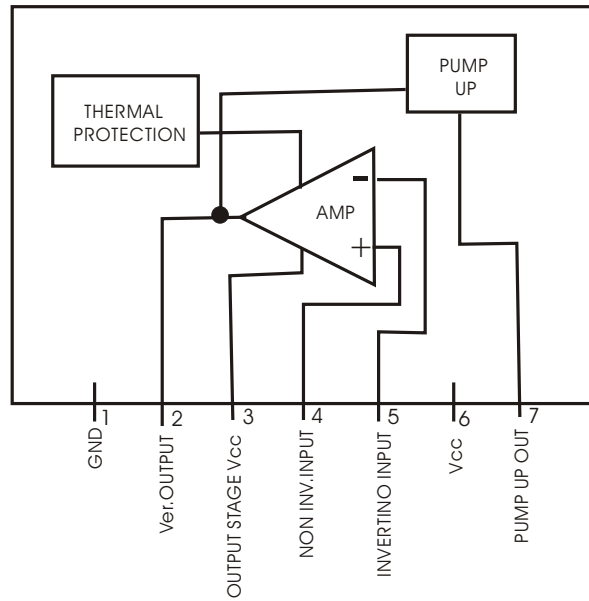
# IC Block Diagram

IC 201 (IIC BUS SINGLE CHIP VIF,SIF,VIDEO CHROMA) LA76814K

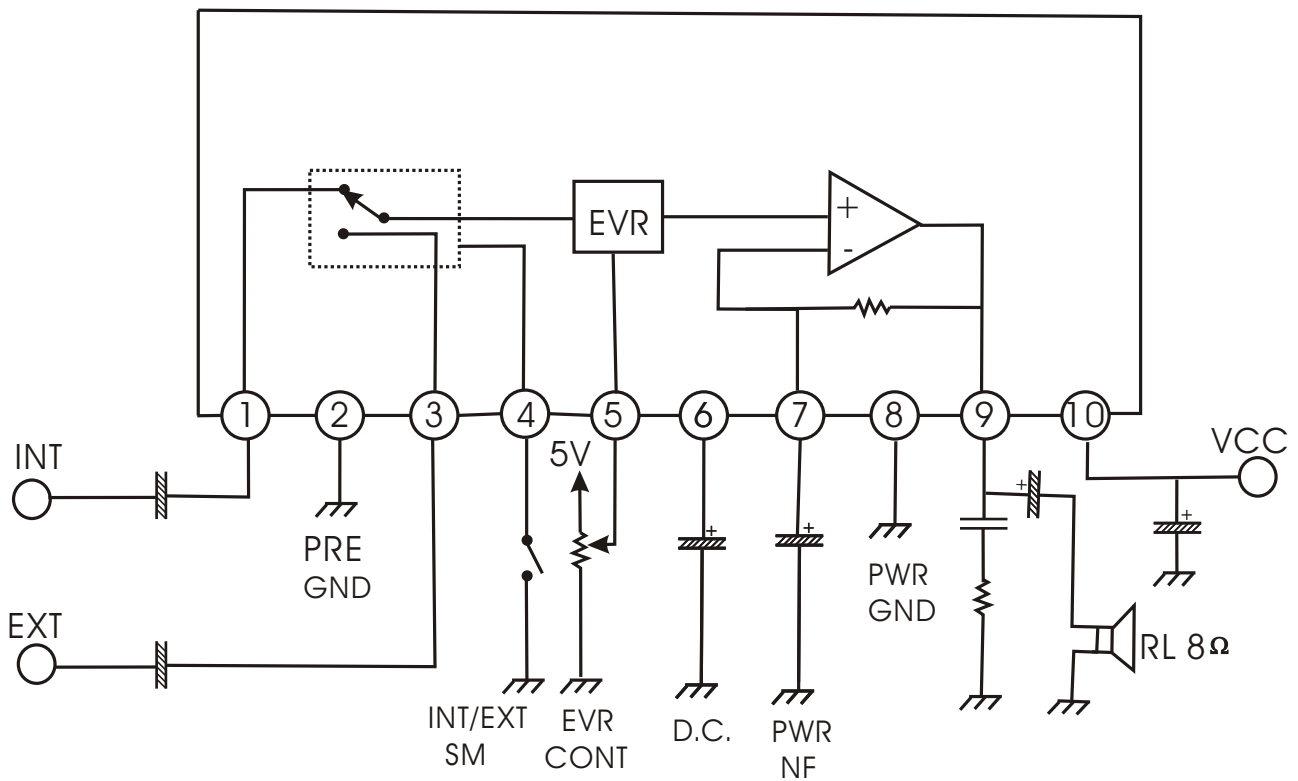


# IC Block Diagram

IC301 <Vertical Output> LA7840

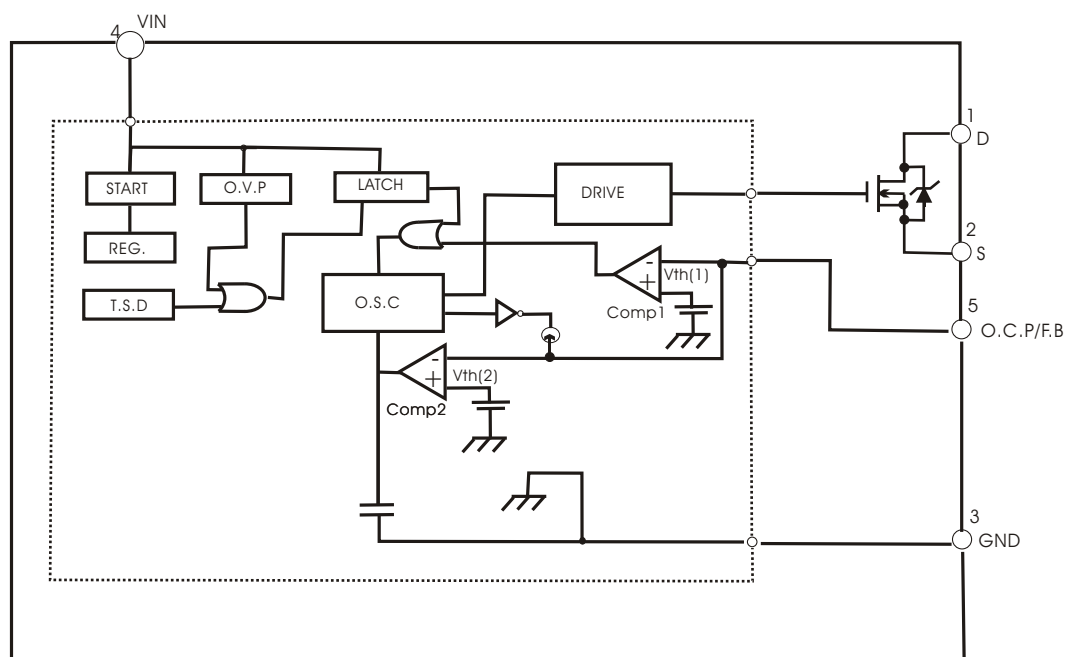


IC 403(3W AUDIO OUTPUT)LA 4285

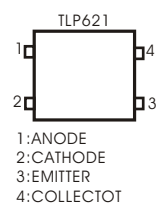


# IC Block Diagram

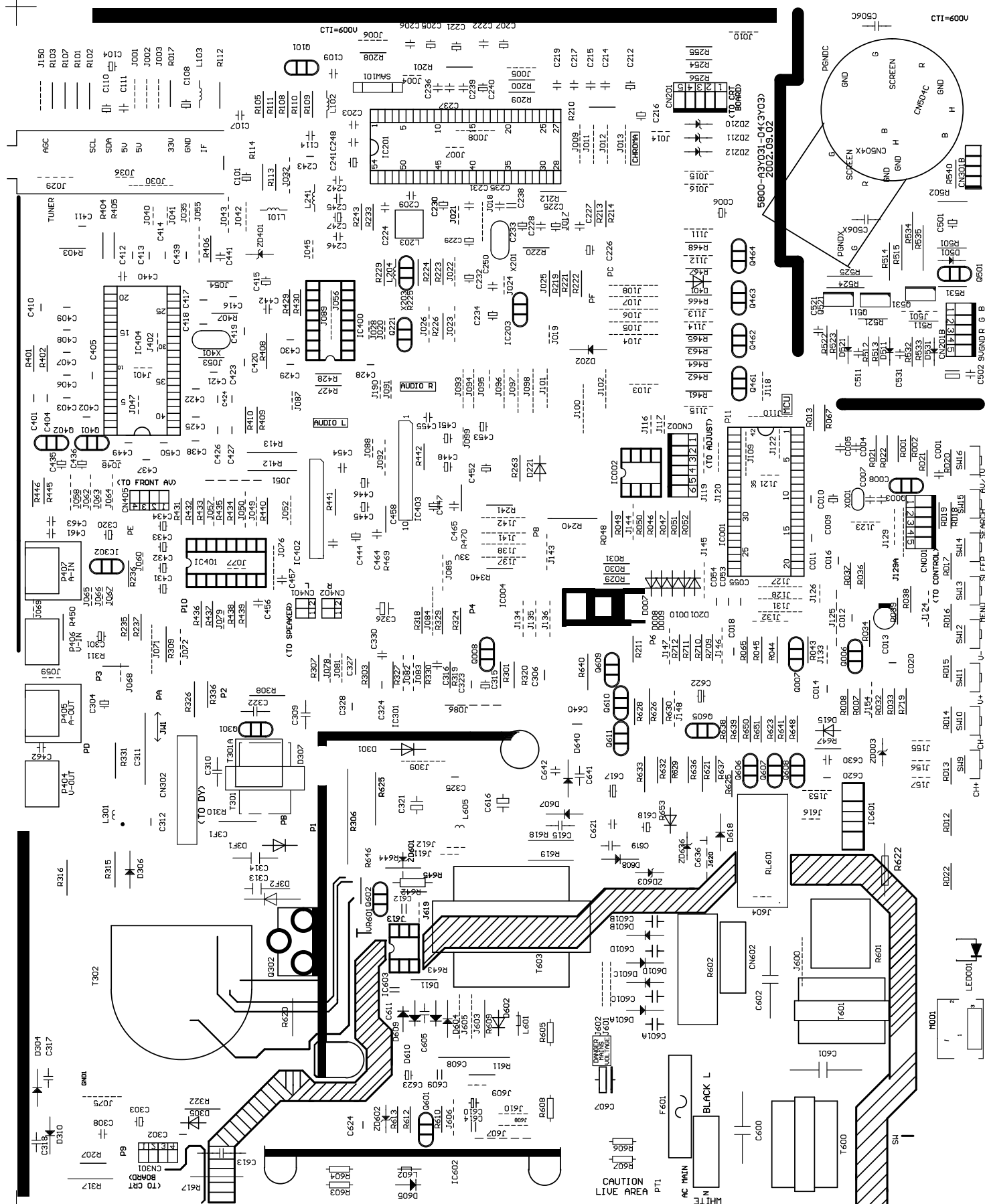
IC602 <POWER > STR-G6653



IC603 <PHOTO TRANSISTOR> TLP621



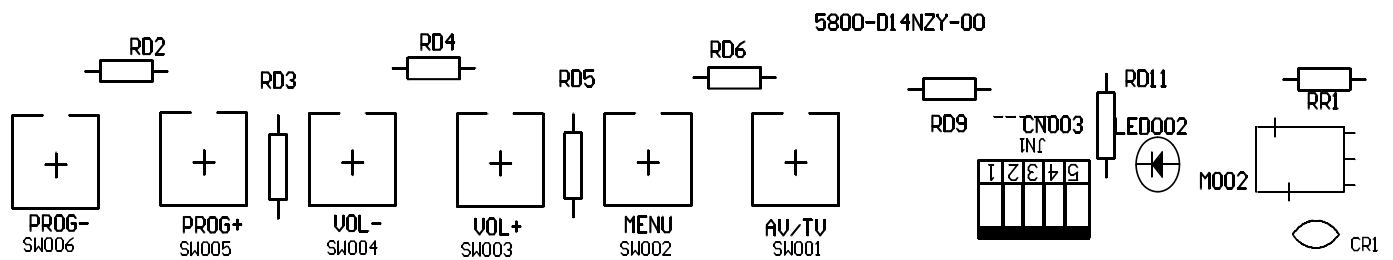
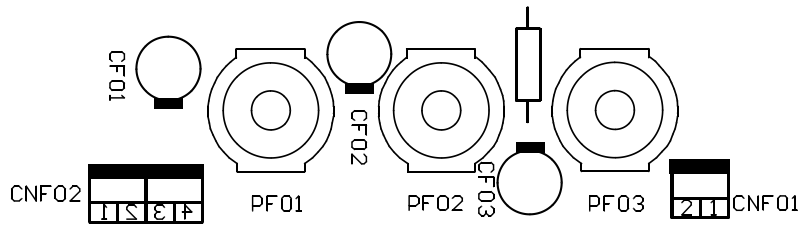
## MAIN PCB Top Layer





# CRT, FRONT AV&CONTROL PCB Top Layer

## FRONT AV & CONTROL PCB TOP LAY



# Service Adjustments

---

## Please notice the following before alignment and equipment

1. Don't short any two soldering points, which should not be shorted and don't touch any components, which should not be touched.
2. Please pull out plug before equipment.
3. For safety reasons, all components equipped or replaced should be identical with BOM.
4. Must be warm up for 30 minutes or more and degauss CRT thoroughly with demagnetizer before alignment.

The data of EEPROM must be stored before the adjustment for main chassis. And EEPROM must be corrected by the correct file [3Y03\\_ROM\\_CORRECT.hex](#) to avoid signal of CH6 weaken. R.bias, G.bias, B.bias, R.drv, G.drv, B.drv should be set to proper values. Sub\_bright is set to 63 usually.

## Tools and equipments for adjustment

1. small  $\square$ - $\square$  screwdriver
2. screwdriver without inductance
3. Pattern Generator
4. DC Regulated power supply
5. Digital Voltmeter
6. Sweep Signal Generator
7. 20MHz 2-channel Oscilloscope

## Signal condition

ITEMS	LOGO	PICTURE CARRIER	PATTERN	SYSTEM	SOUND MODE	REMARK
1	CH14	471.25 MHz	COLOR BAR	NTSC/M	MONO 1KHz	
2	CH3	61.25 MHz	GRAY SCALE	NTSC/M	BTSC 0.3k,3kHz	
3	CH8	181.25 MHz	MONOSCOPE	NTSC/M	MONO MUSIC	
4	CH12	205.25 MHz	CROSS HATCH	NTSC/M	MONO 1KHz	

## Adjust for main chassis

### PIF Adjustment (45.75MHz)

- a. Tuner AGC connects to GND. Pattern Generator outputs 45.75MHz I.F. signal (70db V) and connects to SAW filter output terminal through a capacitor.
- b. Connect Digital voltmeter across C227. DC Regulated power supply positive terminal output +14V to C617.
- c. Adjust L203 coil to obtain 3.6V Digital voltage meter reading.

**NOTE:** To cancel this adjustment, L203 can be adjusted before inserted to the chassis with a special equipment.

# Service Adjustments

---

## B+ adjustment

- Disconnect horizontal load. Connect a bulb (100 W) AC 250V across C321.
- Add 220V AC 50HZ to CN601 and switch on power switch.
- Test the voltage with digital voltage meter between C321 two terminals.
- Adjust VR601 to obtain +110V ± 0.5V.

## AGC alignment

- Receive 60dB RF signal. Connect Digital voltmeter positive terminal to tuner AGC terminal and negative terminal to GND.
- Press [MENU] key, then press [Q.VIEW] key, [MUTE] key in turn on telecontroller. TV SET will go to factory mode. Press [TIMER] key to go to the next factory menu. Go to MENU5 status by this means. Press [MENU] key to exit factory mode.
- Select RF.AGC by pressing [CH+] and [CH-] keys. Adjust [VOL+] and [VOL-] keys to obtain 4V Digital voltage meter reading.

## COMPLETE MACHINE GENERAL ADJUSTMENT

**Go to factory mode according to 4-2-2 before warm up line**

### Focus Adjustment

- Receive monoscope pattern.
- Set TV to work in dynamic status.
- Adjust the focus knob of FBT to get the clearest picture.

### Screen Voltage Adjustment

- Check the R.bias, G.bias, B.bias, R.driv, G.driv, B.driv and sub\_bright. Go to factory mode [MENU2] status according to 4-2-2. Usually G.bias should be same as the value of auto white balance equipment. And SUB\_BRIGHT is 63.
- Set Cross\_BW [3]. Then the picture will be a white [±]. Cross\_BW is in factory menu 3.
- In menu 5, select SUBB.ADJ and set it to [1]. Adjust the screen knob of FBT to get a faintness [±].
- Restore the SUBB.ADJ to [0] and CROSS.BW to [0].

### White Balance Adjustment (Applied in factory)

- Set TV AV status in custom mode(Or other mode need for the adjustment) . Receive black white pattern.
- Insert six-row-wire into CN002.Press adjustment keys, and then go to automatic white balance adjustment.
- PIN DISCRPTIONN OF CN002:**  

1	SDA	2	SCL	3	GND	4	GND	5	SCL	6	SDA
---	-----	---	-----	---	-----	---	-----	---	-----	---	-----
- After adjusting well, pull out six-row-wire.

# Service Adjustments

---

## White balance adjustment (Applied when servicing)

- Set TV AV status and receive GREY SCAL.
- The one sampling tube of CRT color analyzer (CA-100) covers on GREY signal and the another covers on white signal.
- Go to factory mode [MENU2]. Obtain GREY signal X=281 and y=311 by adjusting R-CUT and B-cut. Obtain white signal X=281 and y=311 by adjusting R-DRV and B-DRV. Obtain both X=281 and Y=311 by adjusting the two status repeatedly.

## Sub\_bright adjustment

Receive the gray scale . Get into the menu5 of factory mode. Set SUBB.ADJ to [1]. Then adjust the SUB..BRI option to get a scale to be seen a little brightness(Only two rows can be seen).

## Vertical Size and PinCushion Adjustment

- Receive monoscope pattern. Set TV standard status. Adjust V.size to obtain picture's vertical redisplay ratio more than 90% in factory mode [MENU1].
- Receive cross hatch pattern. Set TV standard status. Adjust V.LINE and V.SC to obtain picture's vertical pin cushion a good status in factory mode [MENU1].
- Receive cross hatch pattern. Set TV standard status. In factory mode [MENU1] adjust V.POS to obtain picture's vertical center at the center of CRT screen.

## Horizontal Center Adjustment and horizontal position of OSD adjustment

- Receive monoscope PATTERN. Set TV standard status. Adjust H.PHASE in menu 1 to obtain horizontal center at the center of CRT screen.
- Adjust the [OSD.HPOS] to get right display position.

## SUB.TINT ADJUSTMENT

Receive the color bar signal of NTSC system. Set the picture mode at normal mode. Adjust the [SUB.TINT] option in menu5 at service mode to get the right hue .

## MTS ADJUSTMENT

Receive the RF CROSS-TALK signals , but FM with BTSC .Enter into the factory mode. Set ADJ.FREQ to 1 in [9852 AUTO.ADJ]. Wait 1 second . Quit factory menu after [ADJUSTING] change to [0].

# Service Adjustments

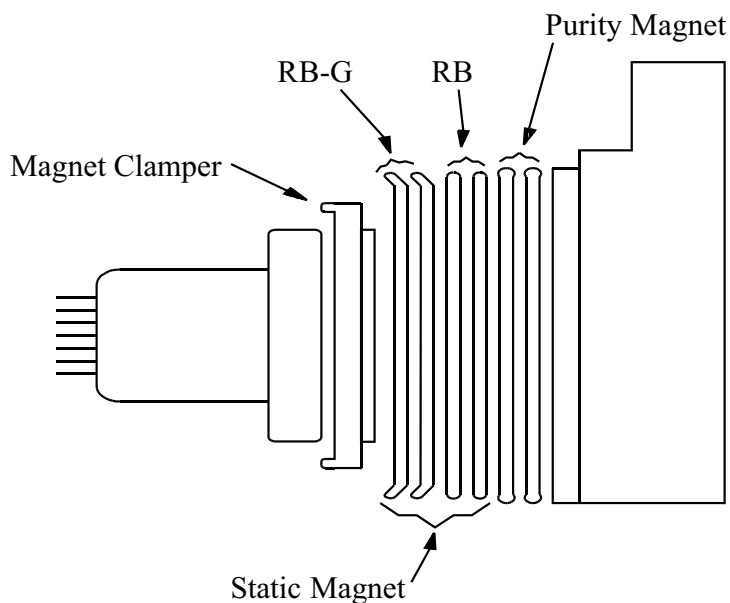
---

## COLOR PURITY ADJUSTMENT

- a. Before color purity adjustment, Warm up the TV set over 15 minutes and fully degauss.
- b. Receive pure white signal in AV status and set the TV receiver dynamic.
- c. Go to factory mode [MENU2]. After write down the values of R-BIAS and B-BIAS, set the values of R-BIAS and B-BIAS zero.
- d. Loosen the clamp screw of the deflection yoke and pull the deflection yoke towards color purity magnetic loop.
- e. Adjust color purity magnetic loop to make the green area at the center of CRT screen.
- f. Slowly push the deflection yoke toward the front of CRT and set it where a uniform green field is obtained. Tighten the clamp screw of the deflection yoke.
- g. Restore the values of R-BIAS, G-BIAS and B-BIAS.

## CONVERGENCE ADJUSTMENT

- a. Receive a dotted pattern. Set the TV receiver dynamic.
- b. Loose the convergence magnet clamber and align red with blue dots at the center of the screen by rotating (R, B) static convergence magnets.
- c. Align Red/Blue with green dots at the center of the screen by rotating (RB-G) static convergence magnet.
- d. Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain the good overall convergence. Fix them after the good overall convergence got.
- e. Fix the convergence magnets by turning the clamber.
- f. If purity error is found, follow [PURITY ADJUSTMENT] instructions.



# Service Adjustments

## APPENDIX

### FACTORY MENU DISCRIPTION

	MENU1	VALUE	DISCRIPTION
1	V.SIZE	101	Align vertical amplitude
2	V.POS	32	Align vertical DC bias
3	V.LINE	16	Align vertical linearity
4	V.SC	0	Align vertical S-correction
5	H.PHASE	8	Align sync to flyback phase
6	H.BLK.RL	4	H-blanking Control(Width /Phase)
7	H.FREQ	22	Align ES Sample horizontal frequency
	<b>MENU2</b>		
1	V.KILL	0	Disable vertical output
2	R.B	138	Align Red out DC level
3	G.B	182	Align Green out DC level
4	B.B	148	Align Blue out DC level
5	R.D	67	Align Red out AC level
6	G.D	8	Align Green out AC level
7	B.D	45	Align Blue out AC level
	<b>MENU3</b>		
1	RG.GAM	1	Disable R/G gamma correction (0/ON; 1/OFF)
2	B.GAM	3	Select and Disable B gamma correction(0~2/ON;3/OFF)
3	R.B.ANG	1	Adjust the demodulation angle of R-Y and B-Y
4	AT.FLESH	0	
5	GRAY.MODE	0	Select Test mode (0/White; 1/Gray)
6	CROSS.BW	0	Service Test mode (0/TV; 1/Black; 2/White; 3/Crosshatch)
7	AFC.GAIN	0	Select Horiz. 1st loop gain & H-sync gate on/off(0/auto;1/enforce)
8	H.BLK.SW	0	H BLK R&L selection(0/right side blanking can be adjusted;1/left)
	<b>MENU4</b>		
1	FILT.SYS	1	Select Y/C filter mode(0,2/3.58 unsymm.; 1,3/3.58 sym.; 4~7/no filt)
2	CORING	1	Enable Luminance coring( 0/Off; 1/ON)
3	OSD.CONT	1	
4	OSD.HPOS	30	Align the horizontal position of OSD
5	BLK.STR.D	0	Disable black stretch
6	BRIABL.T	0	Align brightness ABL threshold
	<b>MENU5</b>		
1	RF.AGC	31	Align RF AGC threshold

# Service Adjustments

	OPTION		
1	2 AV.CH	3	Select AV numbers(0/ No AV; 1/1 AV; 2,3/2AV)
2	SRH.SPEED	0	Select auto search speed(0/fastest, 7/lowest)
3	TDA9852	1	Disable 9852(0/disable; 1/able)
4	TUN.AS.V	1	Select the Tuner address(0/Tuner pin3 to ground; 1/pin3 not used)
<b>9852 AUTO.ADJ</b>			
1	ADJ.FREQ	0	Disable auto adjusting(0/disable; 1/get into autoadjust mode)
2	ADJUSTING	0	
3	FM.LVL	16	
4	76075.VOL	0	
5	L3-L0	0	input level adjust
6	TC2-TC0	0	timing current alignment data
7	A14-A10	0	stereo alignment data for wideband expander
8	A24-A20	0	stereo alignment data for spectral expander
<b>TDA1</b>			
1	VOL.RIGHT	125	volume control right
2	VOL.LEFT	125	volume control left
3	GMU	0	mute control for all outputs (general mute )
4	AVLON	0	auto volume control (with 0.1Vrms-1.1Vrms input to get constant output 0.2Vrms)
5	LOFF	0	switch loudness on/off
6	CCD	0	
7	SC2-SC0	2	selection between line in and line out
8	SAP.ID	0	
<b>TDA2</b>			
1	STERO.ID	1	
2	TZCM	0	zero cross mode in volume operation
3	LMU	0	mute control for line out
4	EF2-EF0	0	selection between mono, stereo linear, spatial stereo and pseudo mode
5	L3-L0	0	input level adjust
6	A14-A10	0	stereo alignment data for wideband expander
7	A24-A20	0	stereo alignment data for spectral expander
8	STS	0	stereo level switch

## Service Adjustments

---

	<b>TDA3</b>		
1	ADJ	0	stereo adjust on/off
2	AT1-AT2	0	attack time at AVL
3	TC2-TC0	0	timing current alignment data
4	WR.ERR	0	
5	RD ERR	0	
6	MANU ADJ	0	
7	STEREO	0	mode selection for line out
8	SAP	0	mode selection for line out

### White Balance address

White Balance address		
Data Name	E2PROM Address	LA76814 ADDRESS #1011 1010B
bright	12H	#0001 0100B
contrast	11H	#0001 0101B
color	10H	#1011 1010B
Sub-bright	24H	#0001 0011B
R.B	1EH	#0000 1101B
G.B	1FH	#0000 1110B
B.B	20H	#0000 1111B
R.D	21H	#0001 0000B
G.D	22H	#0001 0000B
B.D	23H	#0001 0010B



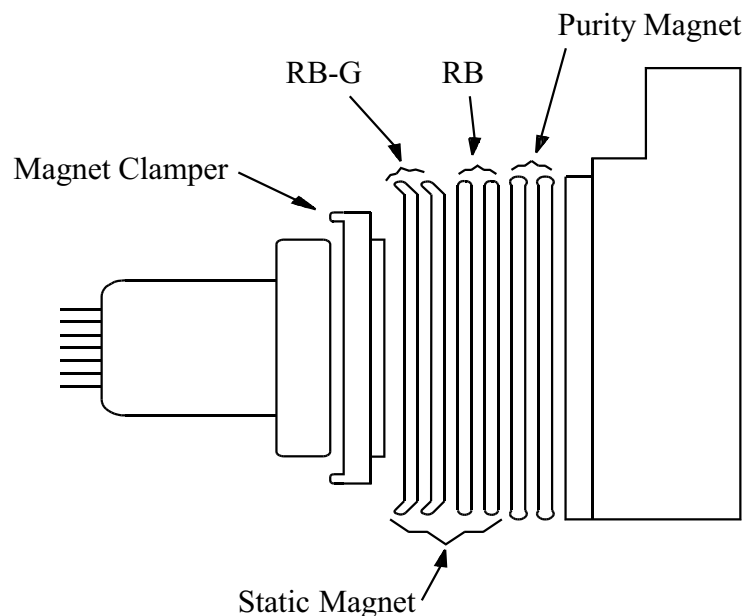
# Purity and Convergence Adjustment

## COLOR PURITY ADJUSTMENT

- (1) Before color purity adjustment, warm up the TV set over 15 minutes and fully degauss.
- (2) Receive pure white signal in AV status and set the TV receiver dynamic.
- (3) Go to factory mod MENU2. After write down the values of R-BIAS and B-BIAS, set the values of R-BIAS and B-BIAS zero.
- (4) Loosen the clamp screw of the deflection yoke and pull the deflection yoke towards color purity Magnetic loop.
- (5) Adjust color purity magnetic loop to make the green area at the center of CRT screen.
- (6) Slowly push the deflection yoke toward the front of CRT and set it where a uniform green field is Obtained. Tighten the clamp screw of the deflection yoke.
- (7) Restore the values of R-BIAS, G-BIAS AND B-BIAS.

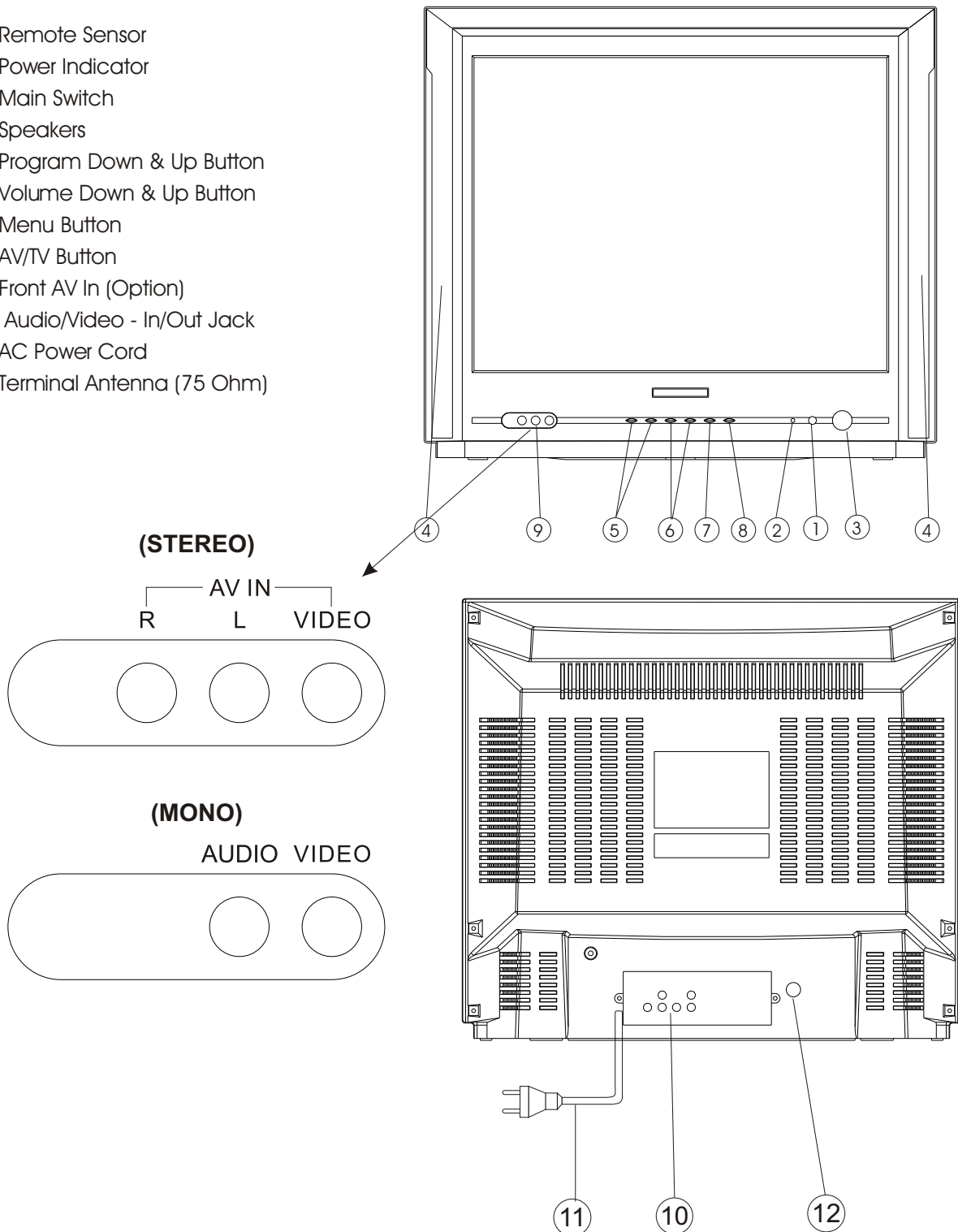
## CONVERGENCE ADJUSTMENT

- (1) Receive a dotted pattern. Set the TV receiver dynamic.
- (2) Loose the convergence magnet clamperrrr and align red with blu dots at the center of the screen by rotating(R,B) static convergence magnets.
- (3) Align Red/Blue with green dots at the center of the screen by rotating(RB-G) static convergence magnet.
- (4) Remove the DY wedges and slightly tilt the deflection yoke horizontally and vertically to obtain the good



# Control Location

1. Remote Sensor
2. Power Indicator
3. Main Switch
4. Speakers
5. Program Down & Up Button
6. Volume Down & Up Button
7. Menu Button
8. AV/TV Button
9. Front AV In (Option)
10. Audio/Video - In/Out Jack
11. AC Power Cord
12. Terminal Antenna (75 Ohm)



# Input and Output Terminals

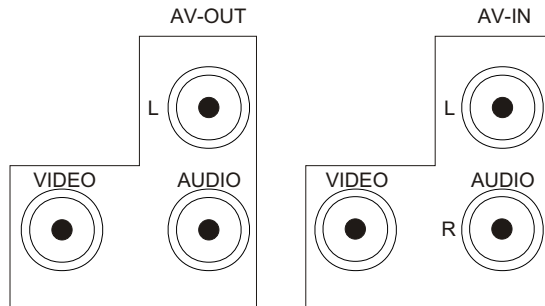
---

## VIDEO AND AUDIO INPUT/OUTPUT TERMINALS

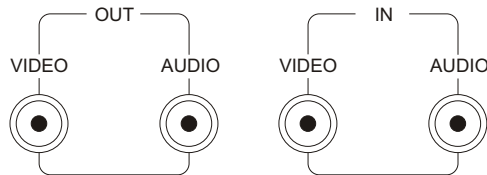
1. Video / Audio input for playback for VCR.
2. Video / Audio output for TV monitor output.

\*Please keep AC cord unplugged when connecting TV system.

### (STEREO)



### (MONO)



### **NOTE:**

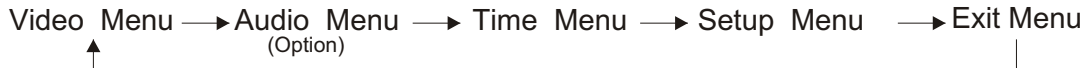
This is a mono CTV even though there are R & L audio input & output jack. These audio R/L input terminals are parallel connected inside and make mixed monaural sound output. There are same monaural audio output come from R/L output terminals.

# Operation Instructions

Turn the TV set on, then power indicator will light up. After a few seconds , the currently program number is displayed on the top right -hand corner of the screen.

## MENU BUTTON

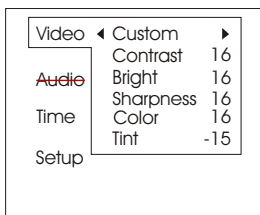
1.Press this button to select menu. VIDEO, TIME, and SETUP menu can be selected cyclically.



2.After enters each menu, you can select the desired adjusting item by the PROG.+/- buttons, and adjust the item by the VOL. +/- buttons.

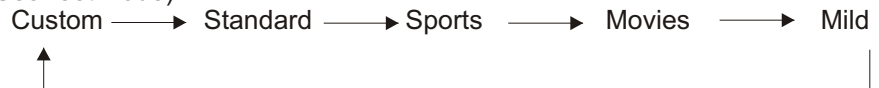
\*When you select a item, symbols ◀ / ▶ will display both sides of the item.

### Video menu



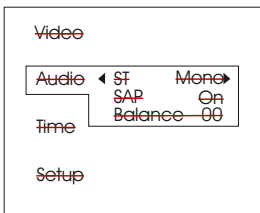
1.Enter the video menu , you can select the picture quality instantly among four preset modes and one user-set mode.

(User-set mode)



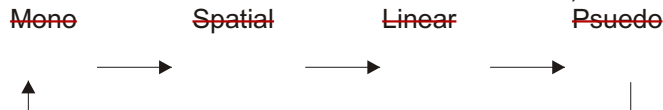
\*You can adjust CONTRAST ,BRIGHT , SHARPNESS , COLOR and TINT items by pressing the VOL. +/- buttons . The adjusted level is stored in Custom mode.

### ~~Audio menu(option)~~



~~1.ST:~~

~~Press the VOL. +/- buttons can select the stereo mode , the order shown below:~~



~~2.SAP:~~

~~You can adjust the SAP ON to SAP OFF by the VOL +/- buttons .~~

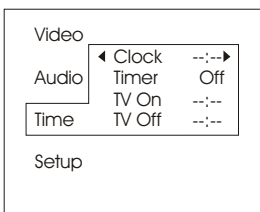
~~You can use the Second Audio Program when you select the SAP ON.~~

~~3.BALANCE:~~

~~Press the VOL +/- buttons can adjust the left or right volume balance.~~

~~\* The MTS/SAP function is only an option for some models.~~

### Time menu



1.CLOCK:

Press the VOL.- button to set hour, and the VOL.+ button set minute .

2.TIMER

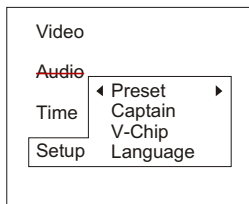
When you select the "Timer ON" mode, you can set the time of TV ON or TV OFF.

\*TV On: The TV will automatically turn on at the preset time.

TV Off: The TV will automatically turn off at the preset time.

# Operation Instructions

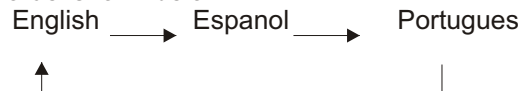
## Setup menu



1.After enters the setup menu, you press the PROG+/-buttons to select PRESET MENU, CCD MENU and V-CHIP MENU.

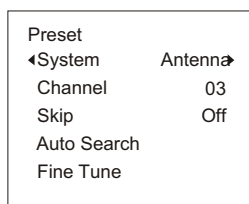
2.Select the Language item by the PROG+/-buttons, and press the VOL.+/- buttons to select the desired language . The screen menu is automatically displayed in that language.

The order shown below:



## PRESET MENU , CCD MENU AND V-CHIP MENU

### PRESET MENU



#### 1.SYSTEM

you can switch two signals :CABLE and ANTENNA.

#### 2. CHANNEL

Select the cable signal ,there are 01~125 channels

Select the antenna signal , there are 02~69 channels .

#### 3.SKIP

Select "Skip ON" by VOL.+/- Buttons to skip unnecessary program number.

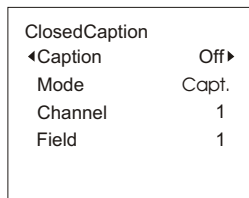
#### 4.AUTO SEARCH

Press VOL.+/-buttons to start auto searching.

#### 5.FINE TUNE

In areas of inferior broadcast conditions where adjustment is necessary for

### CCD MENU



#### 1.CAPTION

Set the caption OFF or ON .

#### 2.MODE

Select the caption mode or teletext mode .

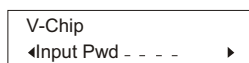
#### 3.CHANNEL

Select channel 1 or channel 2 .

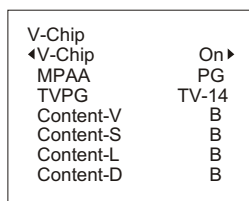
#### 4.FIELD

Select field 1 or field 2 .

### V-CHIP MENU



Input the password 9999 to call up V-Chip, MPAA and TVPG item.



#### 1.V-CHIP

Set the V-Chip OFF or ON .

#### 2.MPAAmovie rating

Select the type of program

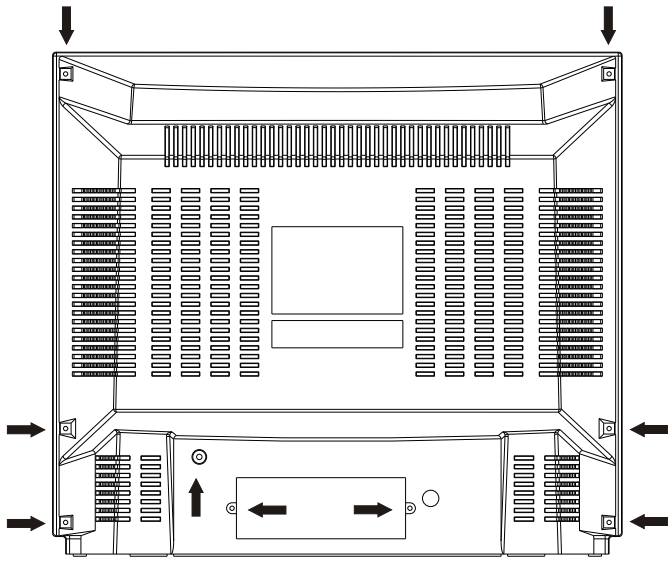
#### 3.TVPG(TV Parental Guidelines)

Parents can guide their children watching some programmes by the item.

# Mechanical Disassemblies

## CABINET BACK REMOVAL

1. Refer to Figure 1, remove 9 screws.
2. Pull off cabinet back and remove.



## CHASSIS REMOVAL

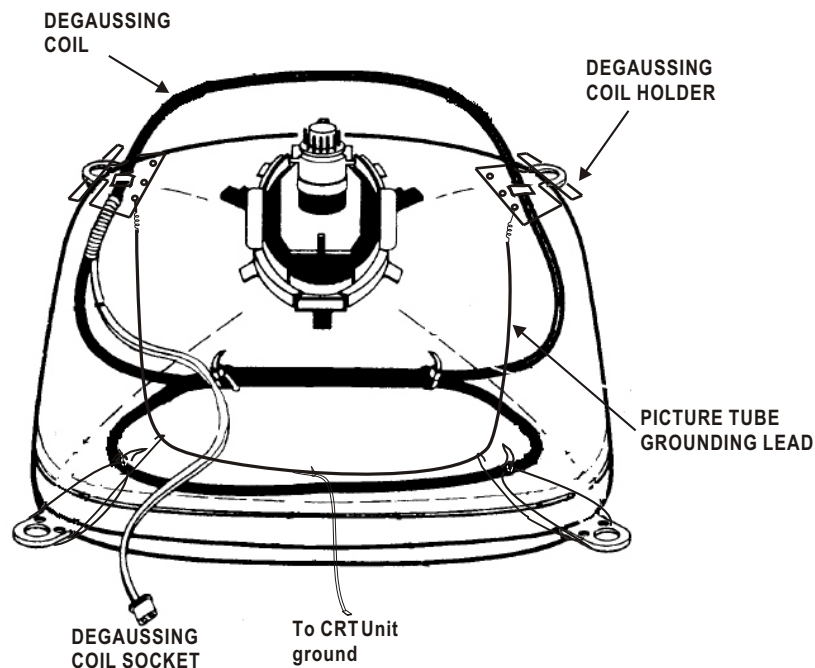
1. Remove cabinet back.
2. Discharge the picture tube anode (2nd anode lead) to the dag coating (picture tube grounding lead).
3. Disconnect Degaussing coil socket (KE), Picture tube socket, Deflection yoke connector (KDY), Speaker connectors (KL and KR), and 2nd anode lead.
4. Remove chassis completely by sliding it straight back.

## PICTURE TUBE REMOVAL

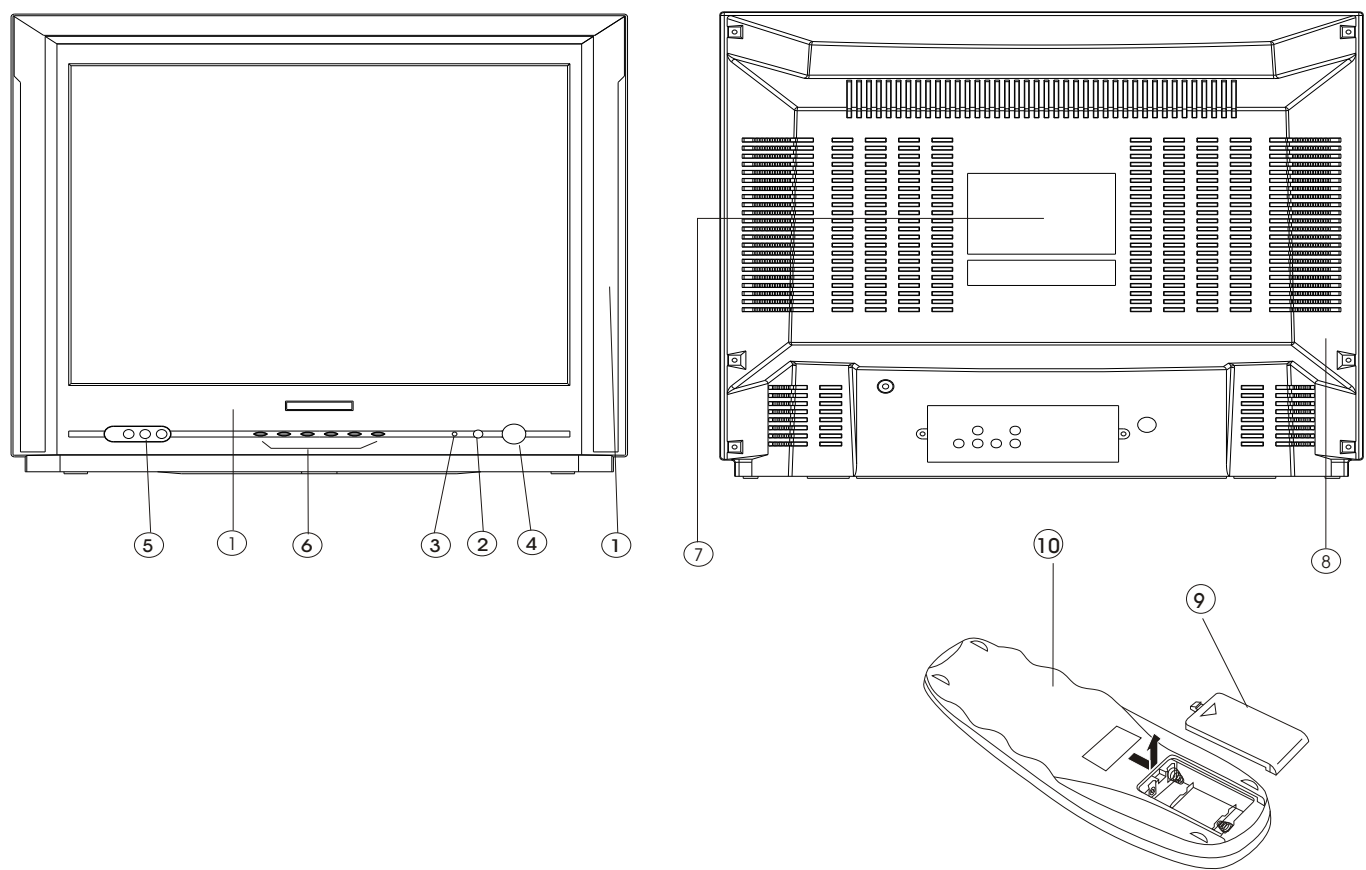
**CAUTION:** Do not disturb the deflection yoke or magnet assembly on the picture tube Neck. Care must be taken to keep these assemblies intact, unless picture tube is being replaced. Discharge the picture tube to the coating before handling the Tube.

1. Remove chassis, referring to Chassis Removal instructions.
2. Place cabinet front face down on the soft surface.
3. Remove the screw on each corner of the picture tube and GENTLY lift the picture tube out of the cabinet.
4. Install a replacement picture tube in reverse order. Properly install the degaussing coil and picture tube grounding lead on the picture tube. See Figure 2.

*Note: If the Picture Tube is being replaced, mount the Degaussing Coil on the picture tube. See following..*

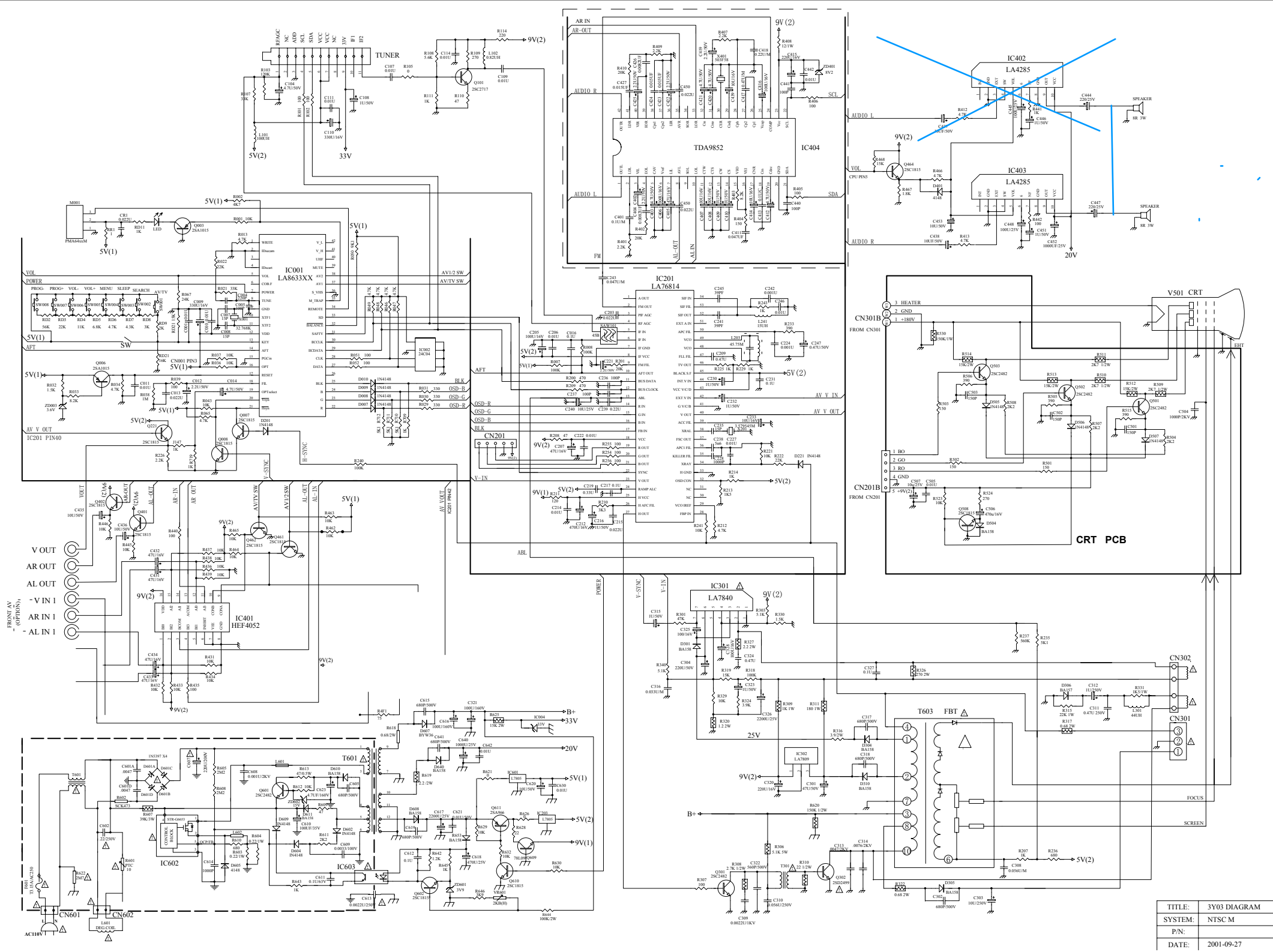


# Cabinet Parts List



Key No.	PartNumber	Description
1	SKCM 0021NZM110	CABINET COLOUR MATCH-METAL SILVER GREY #MSG001(3Y07)(3Y03) FOR SANYO
2	SK100721NZM 002	FRONT LENS (REMOTE CONTROL WINDOW)
3	SK100721NZM 002	FRONT LENS (LED WINDOW)
4	Sk190100821210	POWER KNOB SPRING - DIA.0.6SPRING WIRE
5	SK100425TM 0002	SIDE AV JACK BRACKET-DARK GREY #DG001(ABS)
6	SK100821NZM 001	CONTROL KEY KNOB-ELECTROPLATING SILVER(ABS)
7	SK060121NZM 001	BACK LABEL "SKYWORTH" OVERSEAS ENG
8	SK100221NX0001	BACK CABINET-DARK GREY #DG001
9	SK1016HS080003	BATTERY DOOR-NORMAL GREY #NG001(ABS)
10	SKHS08S0300000	HANDSET-30 KEYS FOR OVERSEAS NORMAL GREY ENG(3Y03)

//  
//





# Chassis Electrical Parts List

location	quantity	description
<b>SK013YA3Y03203M</b>		<b>MAIN ASSEMBLY</b>
&C308	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
&D221	SK4300BE476ET0	ELECTROLYTIC CAPACITOR 47uF 35V +/-20%
&D602	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
&J123	SK4500400056T0	ZENER DIODE 5V6 1/2W
C001	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C004	SK4300AF221CT0	CERAMIC CAPACITOR 220PF 50V +/-5%
C005	SK4300AF101CT0	CERAMIC CAPACITOR 100PF 50V +/-5%
C007	SK4300NF150CT0	NPO CERAMIC CAPACITOR 15PF 50V +/-5%
C008	SK4300NF150CT0	NPO CERAMIC CAPACITOR 15PF 50V +/-5%
C009	SK4300BC337ET0	ELECTROLYTIC CAPACITOR 330uF 16V +/-20%
C010	SK4300AF104HT0	CERAMIC CAPACITOR 0.1uF 50V +80-20%
C011	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C012	SK4300AF223HT0	CERAMIC CAPACITOR 0.022uF 50V +80-20%
C013	SK4300BF225ET0	ELECTROLYTIC CAPACITOR 2.2uF 50V +/-20%
C014	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C016	SK4300EF104DT0	METALLIZED POLYESTER FILM CAPACITOR 0.1UF 63-100V +/-10%
C101	SK4300BC476ET0	ELECTROLYTIC CAPACITOR 47uF 16V +/-20%
C104	SK4300BF475ET0	ELECTROLYTIC CAPACITOR 4.7uF 50V-100V +/-20%
C107	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C108	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C109	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C110	SK4300BC337ET0	ELECTROLYTIC CAPACITOR 330uF 16V +/-20%
C111	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C114	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C203	SK4300MG223DT0	MYLAR CAPACITOR 0.022uF 100V +/-10%
C205	SK4300BC107ET0	ELECTROLYTIC CAPACITOR 100uF 16V +/-20%
C206	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C207	SK4300BC476ET0	ELECTROLYTIC CAPACITOR 47uF 16V +/-20%
C209	SK4300EF474DT0	METALLIZED POLYESTER FILM CAPACITOR 0.47UF 63-100V +/-10%
C212	SK4300BC477ET0	ELECTROLYTIC CAPACITOR 470uF 16V +/-20%
C214	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C215	SK4300MG223DT0	MYLAR CAPACITOR 0.022uF 100V +/-10%
C216	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C217	SK4300EF104DT0	METALLIZED POLYESTER FILM CAPACITOR 0.1UF 63-100V +/-10%
C219	SK4300EF334DT0	METALLIZED POLYESTER FILM CAPACITOR 0.33uF 63-100V +/-10%
C221	SK4300BF225ET0	ELECTROLYTIC CAPACITOR 2.2uF 50V +/-20%
C222	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C224	SK4300MG102DT0	MYLAR CAPACITOR 0.001uF 100V +/-10%
C225	SK4300BF474ET0	ELECTROLYTIC CAPACITOR 0.47uF 50V-100V +/-20%
C227	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C228	SK4300MG102DT0	MYLAR CAPACITOR 0.001uF 100V +/-10%
C230	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C231	SK4300AF104HT0	CERAMIC CAPACITOR 0.1uF 50V +80-20%
C232	SK4300LF105ET0	NONPOLAR ELECTROLYTIC CAPACITOR 1UF 50V+/-20%
C233	SK4300BC106ET0	ELECTROLYTIC CAPACITOR 10UF 16V +/-20%
C234	SK4300BC476ET0	ELECTROLYTIC CAPACITOR 47uF 16V +/-20%
C235	SK4300NF150CT0	NPO CERAMIC CAPACITOR 15PF 50V +/-5%
C236	SK4300AF101CT0	CERAMIC CAPACITOR 100PF 50V +/-5%
C237	SK4300AF101CT0	CERAMIC CAPACITOR 100PF 50V +/-5%

location	quantity	description
C238	SK4300MG562DT0	MYLAR CAPACITOR 0.0056uF 100V +/-10%
C239	SK4300EF224DT0	METALLIZED POLYESTER FILM CAPACITOR 0.22UF 63-100V +/-10%
C240	SK4300BD106ET0	ELECTROLYTIC CAPACITOR 10uF 25V +/-20%
C241	SK4300NF390CT0	NPO CERAMIC CAPACITOR 39PF 50V +/-5%
C242	SK4300MG102DT0	MYLAR CAPACITOR 0.001uF 100V +/-10%
C245	SK4300NF390CT0	NPO CERAMIC CAPACITOR 39PF 50V +/-5%
C246	SK4300MG103DT0	MYLAR CAPACITOR 0.01UF 100V +/-10%
C247	SK4300BF474ET0	ELECTROLYTIC CAPACITOR 0.47uF 50V-100V +/-20%
C250	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C301	SK4300BF476ET0	ELECTROLYTIC CAPACITOR 47uF 50V +/-20%
C302	SK4300AM681DT0	CERAMIC CAPACITOR 680PF 500V +/-10%
C303	SK4300BJ106EC0	ELECTROLYTIC CAPACITOR 10uF 250V +/-20%(FORMED, PITCH=5mm)
C304	SK4300BF227ET0	ELECTROLYTIC CAPACITOR 220uF 50V +/-20%
C306	SK4300BE477E00	ELECTROLYTIC CAPACITOR 470UF 35V +/-20%
C308	SK4300EJ563C01	METALLIZED POLYESTER FILM CAPACITOR 0.056uF 250V +/-5%
C309	SK4300AR222DT0	CERAMIC CAPACITOR 0.0022uF 1KV +/-10%
C310	SK4300EJ563C01	METALLIZED POLYESTER FILM CAPACITOR 0.056uF 250V +/-5%
C312	SK4300BJ475EC0	ELECTROLYTIC CAPACITOR 4.7UF 250V +/-20%(FORMED,PITCH=5mm)
C315	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C316	SK4300MG333DT0	MYLAR CAPACITOR 0.033uF 100V +/-10%
C317	SK4300AM681DT0	CERAMIC CAPACITOR 680PF 500V +/-10%
C318	SK4300AM681DT0	CERAMIC CAPACITOR 680PF 500V +/-10%
C320	SK4300BC227ET0	ELECTROLYTIC CAPACITOR 220uF 16V +/-20%
C321	SK4300BH107EC1	ELECTROLYTIC CAPACITOR 100uF 160V +/-20%(FORMED, PITCH=7.5mm)
C322	SK4300AM561DT0	CERAMIC CAPACITOR 560PF 500V +/-10%
C323	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C324	SK4300EF474DT0	METALLIZED POLYESTER FILM CAPACITOR 0.47UF 63-100V +/-10%
C325	SK4300BE107ET0	ELECTROLYTIC CAPACITOR 100uF 35V +/-20%
C326	SK4300BD228E00	ELECTROLYTIC CAPACITOR 2200uF 25V +/-20%(16 X 25mm)
C328	SK4300BC107ET0	ELECTROLYTIC CAPACITOR 100uF 16V +/-20%
C430	SK4300BC476ET0	ELECTROLYTIC CAPACITOR 47uF 16V +/-20%
C431	SK4300BC476ET0	ELECTROLYTIC CAPACITOR 47uF 16V +/-20%
C435	SK4300BF106ET0	ELECTROLYTIC CAPACITOR 10uF 50V-63V +/-20%
C438	SK4300BF106ET0	ELECTROLYTIC CAPACITOR 10uF 50V-63V +/-20%
C447	SK4300BD227E00	ELECTROLYTIC CAPACITOR 220uF 25V +/-20%
C448	SK4300BD107ET0	ELECTROLYTIC CAPACITOR 100uF 25V +/-20%
C451	SK4300BF105ET0	ELECTROLYTIC CAPACITOR 1uF 50V +/-20%
C452	SK4300BD108E00	ELECTROLYTIC CAPACITOR 1000uF 25V +/-20%
C453	SK4300BF106ET0	ELECTROLYTIC CAPACITOR 10uF 50V-63V +/-20%
C455	SK4300MG103DT0	MYLAR CAPACITOR 0.01UF 100V +/-10%
C465	SK4300EF104DT0	METALLIZED POLYESTER FILM CAPACITOR 0.1UF 63-100V +/-10%
C601A	SK4300AM472DT0	CERAMIC CAPACITOR 0.0047uF 500V +/-10%
C601D	SK4300AM472DT0	CERAMIC CAPACITOR 0.0047uF 500V +/-10%
C602	SK4300FW224D00	AC CAPACITOR 0.22uF AC250V-500V +/-10%
C605	SK4300AM681DT0	CERAMIC CAPACITOR 680PF 500V +/-10%
C607	SK4300BI227EC1	ELECTROLYTIC CAPACITOR 220uF 200V +/-20%(FORMED, PITCH=7.5mm)
C608	SK4300ET102C00	METALLIZED POLYPROPYLENE FILM CAPACITOR0.001uF 2KV +/-5%
C609	SK4300MG152DT0	MYLAR CAPACITOR 0.0015UF 100V +/-10%
C610	SK4300BE107ET0	ELECTROLYTIC CAPACITOR 100uF 35V +/-20%
C611	SK4300EF104DT0	METALLIZED POLYESTER FILM CAPACITOR 0.1UF 63-100V +/-10%
C612	SK4300AF104HT0	CERAMIC CAPACITOR 0.1uF 50V +80-20%
C613	SK4300SX222E00	SAFETY CERAMIC CAPACITOR 0.0022uF AC250V-400V +/-20%
C614	SK4300AF471CT0	CERAMIC CAPACITOR 470PF 50V +/-5%
C615	SK4300AM681DC1	CERAMIC CAPACITOR 680PF 500V +/-10% (FORMED,PITCH=7.5mm)

location	quantity	description
C616	SK4300BH107EC1	ELECTROLYTIC CAPACITOR 100uF 160V +/-20%(FORMED, PITCH=7.5mm)
C617	SK4300BD108E00	ELECTROLYTIC CAPACITOR 1000uF 25V +/-20%
C618	SK4300BD477E00	ELECTROLYTIC CAPACITOR 470uF 25V +/-20%
C619	SK4300AM681DT0	CERAMIC CAPACITOR 680PF 500V +/-10%
C620	SK4300BF106ET0	ELECTROLYTIC CAPACITOR 10uF 50V-63V +/-20%
C621	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C623	SK4300BH475ET0	ELECTROLYTIC CAPACITOR 4.7uF 160V +/-20%
C630	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C640	SK4300BD108E00	ELECTROLYTIC CAPACITOR 1000uF 25V +/-20%
C641	SK4300AM681DT0	CERAMIC CAPACITOR 680PF 500V +/-10%
C642	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
CN002	SK540092500006	WAFER 2.5mm H X 6 PIN
CN302	SK540095000005	WAFER 5MM TV-50P-05-V1 5 PIN
CN402	SK540092500002	WAFER 2.5mm H X 2 PIN
CN405	SK540092500003	WAFER 2.5mm H X 3 PIN
CN601	SK540091000002	WAFER 10mm 2.35mm TJC1-2A 2 PIN
CN602	SK540091000002	WAFER 10mm 2.35mm TJC1-2A 2 PIN
D007	SK4100AD5110T0	CARBON FILM RESISTOR 510 OHM 1/4W +/-5%
D008	SK4100AD5110T0	CARBON FILM RESISTOR 510 OHM 1/4W +/-5%
D009	SK4100AD5110T0	CARBON FILM RESISTOR 510 OHM 1/4W +/-5%
D010	SK4100AD5110T0	CARBON FILM RESISTOR 510 OHM 1/4W +/-5%
D221	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D301	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D304	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D305	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D306	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D310	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D401	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D601A	SK450015397000	NORMAL RECTIFIER DIODE 1N5397 1.5A/600V(DO-15)
D601B	SK450015397000	NORMAL RECTIFIER DIODE 1N5397 1.5A/600V(DO-15)
D601C	SK450015397000	NORMAL RECTIFIER DIODE 1N5397 1.5A/600V(DO-15)
D601D	SK450015397000	NORMAL RECTIFIER DIODE 1N5397 1.5A/600V(DO-15)
D602	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D604	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D605	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D607	SK45052BYW3600	HIGH SPEED RECTIFIER DIODE BYW36 2A/600V TELEFUNKEN
D608	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D609	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D610	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D611	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D640	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
F601	SK600135000100	FUSE T3.15A 250V W/APPROVAL MARKING HOLLYLAND
IC001	SK4703L8624142	I.C. LC863224A-5V23 SANYO (8-BIT SINGLECHIP MICROCOMPUTER) DIP PACKAGE
IC002	SK4707C24C0408	I.C. ST24C04 OR M24C04 SGS (EEPROM)
IC004	SK4709KA33VT02	I.C. KA33V SAM SUNG (VT)
IC201	SK4703L7681454	I.C. LA76814B SANYO (ONE CHIP IC FOR NT SC ONLY)
IC203	SK4707L7805E03	I.C. L7805CV SGS (STABILIZING)
IC301	SK4703L7840007	I.C. LA7840 SANYO (VERTICAL DEFLECTION)
IC302	SK4707L7809003	I.C. L7809CV SGS (STABILIZING) OR 4717-L78090-03
IC400	SK4707H4052016	I.C. HCF4052BF SGS (4CH SWITCH) OR 4701-A40520-16
IC401	SK4707H4052016	I.C. HCF4052BF SGS (4CH SWITCH) OR 4701-A40520-16
IC403	SK4703L4285010	I.C. LA4285 SANYO (3W AUDIO OUTPUT)
IC601	SK4707L7805E03	I.C. L7805CV SGS (STABILIZING)
IC602	SK4704R6653005	I.C. STR-G6653 SANKEN (FLYBACK SWITCHINGREGULATOR 650V 120W)

location	quantity	description
IC603	SK4701T6210J04	I.C. TLP621 TOSHIBA (PHOTO TRANSISTOR)
J058	SK4100AD6800T0	CARBON FILM RESISTOR 68 OHM 1/4W +/-5%
J147	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
L101	SK4800011010T0	PEAKING COIL 100uH +/-10%
L102	SK480001008200	PEAKING COIL 0.82uH
L203	SK480020457500	PIF AND AFC COIL FOR NTSC 45.75MHz TDA8222 I.C. USE
L241	SK4800011500T0	PEAKING COIL 15uH +/-10%
L601	SK640003004100	FERRITE BEAD 3.5 X 1 X 9 W/JUMPER FOR 5T01
L602	SK640003004100	FERRITE BEAD 3.5 X 1 X 9 W/JUMPER FOR 5T01
P404	SK610016032040	RCA JACK H=8mm YELLOW H-TYPE
P405	SK610016215092	RCA JACK X 2 H-TYPE W/MOUNTING BOSS(PCB-MTG PITCH=15mm) WHITE,RED
P406	SK610016032040	RCA JACK H=8mm YELLOW H-TYPE
P407	SK610016215092	RCA JACK X 2 H-TYPE W/MOUNTING BOSS(PCB-MTG PITCH=15mm) WHITE,RED
PCB	SK5800A3Y03104	MAIN P.C.BOARD 304 X 246 X 1.6mm FOR 3Y03 CHASSIS W/CRT BOARD
PE-PF	SK5900E2022260	MULTI TWIST WIRE AWG22 UL1015 BLUE 200mm
Q003	SK4600A10150T0	TRANSISTOR 2SA1015Y/2PA1015
Q006	SK4600A10150T0	TRANSISTOR 2SA1015Y/2PA1015
Q007	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q008	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q101	SK4600C27170T0	TRANSISTOR 2SC2717
Q221	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q301	SK4600C24822T0	TRANSISTOR 2SC2482/3DG2482Y
Q302	SK4601D2499000	TRANSISTOR 2SD2499 TOSHIBA (FOR HOR. DEFLECTION)
Q402	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q461	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q462	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q464	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q601	SK4600C24822T0	TRANSISTOR 2SC2482/3DG2482Y
Q602	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q609	SK4707L78L0903	I.C. L78L09CZ SGS TO-92 (POSITIVE VOLTAGE REGULATOR)
Q610	SK4600C18150T0	TRANSISTOR 2SC1815Y/2PC1815
Q611	SK4600A0966000	TRANSISTOR 2SA966Y
R001	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R002	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R007	SK4100AD1040T0	CARBON FILM RESISTOR 100K OHM 1/4W +/-5%
R008	SK4100AD1040T0	CARBON FILM RESISTOR 100K OHM 1/4W +/-5%
R013	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R021	SK4100AD3330T0	CARBON FILM RESISTOR 33K OHM 1/4W +/-5%
R022	SK4100AD2230T0	CARBON FILM RESISTOR 22K OHM 1/4W +/-5%
R029	SK4100AD3310T0	CARBON FILM RESISTOR 330 OHM 1/4W +/-5%
R030	SK4100AD3310T0	CARBON FILM RESISTOR 330 OHM 1/4W +/-5%
R031	SK4100AD3310T0	CARBON FILM RESISTOR 330 OHM 1/4W +/-5%
R032	SK4100AD1520T0	CARBON FILM RESISTOR 1.5K OHM 1/4W +/-5%
R033	SK4100AD8220T0	CARBON FILM RESISTOR 8.2K OHM 1/4W +/-5%
R034	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R036	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R037	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R038	SK4100AD1050T0	CARBON FILM RESISTOR 1M OHM 1/4W +/-5%
R039	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R043	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R044	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R046	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R047	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R048	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%

location	quantity	description
R049	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R050	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R051	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R052	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R065	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R067	SK4100AD2430T0	CARBON FILM RESISTOR 24K OHM 1/4W +/-5%
R101	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R102	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R103	SK4100AD1240T0	CARBON FILM RESISTOR 120K OHM 1/4W +/-5%
R107	SK4100AD3330T0	CARBON FILM RESISTOR 33K OHM 1/4W +/-5%
R108	SK4100AD5620T0	CARBON FILM RESISTOR 5.6K OHM 1/4W +/-5%
R109	SK4100AD2710T0	CARBON FILM RESISTOR 270 OHM 1/4W +/-5%
R110	SK4100AD4700T0	CARBON FILM RESISTOR 47 OHM 1/4W +/-5%
R111	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R114	SK4100AD2210T0	CARBON FILM RESISTOR 220 OHM 1/4W +/-5%
R200	SK4100AD4710T0	CARBON FILM RESISTOR 470 OHM 1/4W +/-5%
R201	SK4100AD2030T0	CARBON FILM RESISTOR 20K OHM 1/4W +/-5%
R207	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R208	SK4100AD4700T0	CARBON FILM RESISTOR 47 OHM 1/4W +/-5%
R209	SK4100AD4710T0	CARBON FILM RESISTOR 470 OHM 1/4W +/-5%
R210	SK4100AD3320T0	CARBON FILM RESISTOR 3.3K OHM 1/4W +/-5%
R211	SK4100AD1210T0	CARBON FILM RESISTOR 120 OHM 1/4W +/-5%
R212	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R213	SK4100AD1520T0	CARBON FILM RESISTOR 1.5K OHM 1/4W +/-5%
R214	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R219	SK4100AD2430T0	CARBON FILM RESISTOR 24K OHM 1/4W +/-5%
R220	SK4100AD2430T0	CARBON FILM RESISTOR 24K OHM 1/4W +/-5%
R221	SK4100D1272000	METAL OXIDE FILM RESISTOR 2.7K OHM 1/4W+/-1%
R222	SK4100D11040T0	METAL OXIDE FILM RESISTOR 100K OHM 1/4W+/-1%
R225	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R226	SK4100AD2220T0	CARBON FILM RESISTOR 2.2K OHM 1/4W +/-5%
R229	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R233	SK4100AD3910T0	CARBON FILM RESISTOR 390 OHM 1/4W +/-5%
R235	SK4100AD5120T0	CARBON FILM RESISTOR 5.1K OHM 1/4W +/-5%
R240	SK4100AD1040T0	CARBON FILM RESISTOR 100K OHM 1/4W +/-5%
R241	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R243	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R254	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R255	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R256	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R301	SK4100AD4730T0	CARBON FILM RESISTOR 47K OHM 1/4W +/-5%
R303	SK4100AD5120T0	CARBON FILM RESISTOR 5.1K OHM 1/4W +/-5%
R306	SK4100DK512001	METAL OXIDE FILM RESISTOR 5.1K OHM 5W+/-5%
R307	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R308	SK4100AF2720T0	CARBON FILM RESISTOR 2.7K OHM 1/2W +/-5%
R310	SK4100AF2200T0	CARBON FILM RESISTOR 22 OHM 1/2W +/-5%
R311	SK4100DG181001	METAL OXIDE FILM RESISTOR 180 OHM 1W+/-5%
R315	SK4100DG223001	METAL OXIDE FILM RESISTOR 22K OHM 1W+/-5%
R319	SK4100AD1530T0	CARBON FILM RESISTOR 15K OHM 1/4W +/-5%
R322	SK4100DH006801	METAL OXIDE FILM RESISTOR 0.68 OHM 2W+/-5%
R324	SK4100AD3920T0	CARBON FILM RESISTOR 3.9K OHM 1/4W +/-5%
R327	SK4100DH022001	METAL OXIDE FILM RESISTOR 2.2 OHM 2W+/-5%
R330	SK4100AD1520T0	CARBON FILM RESISTOR 1.5K OHM 1/4W +/-5%
R340	SK4100AD5120T0	CARBON FILM RESISTOR 5.1K OHM 1/4W +/-5%



location	quantity	description
R413	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R427	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R428	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R429	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R430	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R436	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R437	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R438	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R439	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R440	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R442	SK4100AD1010T0	CARBON FILM RESISTOR 100 OHM 1/4W +/-5%
R446	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R450	SK4100AD7500T0	CARBON FILM RESISTOR 75 OHM 1/4W +/-5%
R462	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R463	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R464	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R465	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R466	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
R467	SK4100AD1820T0	CARBON FILM RESISTOR 1.8K OHM 1/4W +/-5%
R468	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R470	SK4100AF0220T0	CARBON FILM RESISTOR 2.2 OHM 1/2W +/-5%
R601	SK4100KZ120002	P.T.C. THERMISTOR RESISTOR 12 OHM +0-20%MAX INPUT 270V
R602	SK4100FK040001	WIRE WOUND RESISTOR 4 OHM 5W +/-5%
R603	SK4100DG002201	METAL OXIDE FILM RESISTOR 0.22 OHM 1W +/-5%
R604	SK4100DG002201	METAL OXIDE FILM RESISTOR 0.22 OHM 1W +/-5%
R605	SK4100HF2250T0	HIGH-VOLT RESISTOR 2.2M OHM 1/2W +/-5%
R607	SK4100DI393001	METAL OXIDE FILM RESISTOR 39K OHM 3W +/-5%
R608	SK4100HF2250T0	HIGH-VOLT RESISTOR 2.2M OHM 1/2W +/-5%
R609	SK4100AD4700T0	CARBON FILM RESISTOR 47 OHM 1/4W +/-5%
R610	SK4100AD6810T0	CARBON FILM RESISTOR 680 OHM 1/4W +/-5%
R611	SK4100AD2220T0	CARBON FILM RESISTOR 2.2K OHM 1/4W +/-5%
R612	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R613	SK4100DF470001	METAL OXIDE FILM RESISTOR 47 OHM 1/2W +/-5%
R618	SK640003004101	FERRITE BEAD 3.5 X 1 X 9.5mm W/JUMPER PITCH=15mm
R619	SK640003004101	FERRITE BEAD 3.5 X 1 X 9.5mm W/JUMPER PITCH=15mm
R620	SK4100DF154001	METAL OXIDE FILM RESISTOR 150K OHM 1/2W +/-5%
R622	SK4100HG8250T0	HIGH-VOLT RESISTOR 8.2M OHM 1W +/-5%
R625	SK4100DH153001	METAL OXIDE FILM RESISTOR 15K OHM 2W +/-5%
R629	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R630	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R632	SK4100AD1220T0	CARBON FILM RESISTOR 1.2K OHM 1/4W +/-5%
R642	SK4100AD2020T0	CARBON FILM RESISTOR 2K OHM 1/4W +/-5%
R643	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R644	SK4100DH104001	METAL OXIDE FILM RESISTOR 100K OHM 2W +/-5%
R645	SK4100AD3910T0	CARBON FILM RESISTOR 390 OHM 1/4W +/-5%
R646	SK4100AD3920T0	CARBON FILM RESISTOR 3.9K OHM 1/4W +/-5%
R653	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
R709	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R710	SK4100AD5120T0	CARBON FILM RESISTOR 5.1K OHM 1/4W +/-5%
R711	SK4100AD5120T0	CARBON FILM RESISTOR 5.1K OHM 1/4W +/-5%
R712	SK4100AD5120T0	CARBON FILM RESISTOR 5.1K OHM 1/4W +/-5%
R719	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
RD21	SK4100AD1530T0	CARBON FILM RESISTOR 15K OHM 1/4W +/-5%
SAW101	SK490030062500	NTSC-M SAW FILTER Q062QSM 45.75MHz FOR VIDEO

location	quantity	description
T301	SK510004100000	HORIZONTAL DRIVE TRANSFORMER F OR LOW VOLTAGE
T601	SK480006300500	LINE FILTER 30mH X 2
TUNER	SK5200457W0200	M/N 181CH WORLD STANDARD FS TUNER IF45.75MHz FOR 5V W/O AFT AGC 4V F-TYPE
VR601	SK420022020000	SEMI-FIXED RESISTOR 2KB (H)
X001	SK490013275200	CRYSTAL 32.768000KHz JU38 CL:12.5PF +/-20PPM
X201	SK490013584200	CRYSTAL 3.579545MHz HC-49/U CL:16PF
ZD003	SK4500400036T5	ZENER DIODE 3V6 1/2W +/-5%
ZD210	SK4500400082T0	ZENER DIODE 8V2 1/2W
ZD211	SK4500400082T0	ZENER DIODE 8V2 1/2W
ZD212	SK4500400082T0	ZENER DIODE 8V2 1/2W
ZD601	SK4500400039T0	ZENER DIODE 3V9 1/2W
ZD602	SK4500400150T0	ZENER DIODE 15V 1/2W
<b>SK033YC3Y04200M</b>		<b>CRT BOARD ASSEMBLY</b>
C501	SK4300BC477E00	ELECTROLYTIC CAPACITOR 470uF 16V +/-20%
C502	SK4300AF103HT0	CERAMIC CAPACITOR 0.01uF 50V +80-20%
C503	SK4300BD106E00	ELECTROLYTIC CAPACITOR 10UF 25V +/-20%
C506C	SK4300AT222DT0	CERAMIC CAPACITOR 0.0022UF 2KV +/-10%
C511	SK4300AF471CT0	CERAMIC CAPACITOR 470PF 50V +/-5%
C521	SK4300AF471CT0	CERAMIC CAPACITOR 470PF 50V +/-5%
C531	SK4300AF471CT0	CERAMIC CAPACITOR 470PF 50V +/-5%
CN201	SK540092500005	WAFER 2.5mm H X 5 PIN
CN201B	SK540102046205	PIN 05 + HOUSING 05 (TJC3) + 460mm FLATCABLE UL2468 AWG24
CN301	SK540092500004	WAFER 2.5mm H X 4 PIN
CN301B	SK540102040204	PIN 04 + HOUSING 04 (TJC3) + 400mm FLATCABLE (3C) UL2468 AWG22
CN504C	SK610006010829	CRT SOCKET GZS10-2-108 E/E 15-18KV FOR 21"-29"
D501	SK4500215800T0	HIGH SPEED RECTIFIER DIODE BA158 600V/1A
D511	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D521	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
D531	SK4500141481T0	NORMAL RECTIFIER DIODE 1N4148 150mA/100V
J501	SK5900G4010600	COPPER JUMPER 0.6MM DIA. L=40mm
PGNDC	SK540090000001	WAFER 2.35mm 1 PIN
Q501	SK4600C24822T0	TRANSISTOR 2SC2482/3DG2482Y
Q511	SK4600C2482201	TRANSISTOR 2SC2482
Q521	SK4600C2482201	TRANSISTOR 2SC2482
Q531	SK4600C2482201	TRANSISTOR 2SC2482
R501	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R502	SK4100AD2710T0	CARBON FILM RESISTOR 270 OHM 1/4W +/-5%
R511	SK4100AD1510T0	CARBON FILM RESISTOR 150 OHM 1/4W +/-5%
R512	SK4100AD2720T0	CARBON FILM RESISTOR 2.7K OHM 1/4W +/-5%
R513	SK4100AD3310T0	CARBON FILM RESISTOR 330 OHM 1/4W +/-5%
R514	SK4100BF2720T0	CARBON COMPOSITION RESISTOR 2.7K OHM 1/2W +/-5%
R515	SK4100DH123001	METAL OXIDE FILM RESISTOR 12K OHM 2W+/-5%
R521	SK4100AD1510T0	CARBON FILM RESISTOR 150 OHM 1/4W +/-5%
R522	SK4100AD2720T0	CARBON FILM RESISTOR 2.7K OHM 1/4W +/-5%
R523	SK4100AD3310T0	CARBON FILM RESISTOR 330 OHM 1/4W +/-5%
R524	SK4100BF2720T0	CARBON COMPOSITION RESISTOR 2.7K OHM 1/2W +/-5%
R525	SK4100DH123001	METAL OXIDE FILM RESISTOR 12K OHM 2W+/-5%
R531	SK4100AD1510T0	CARBON FILM RESISTOR 150 OHM 1/4W +/-5%
R532	SK4100AD2720T0	CARBON FILM RESISTOR 2.7K OHM 1/4W +/-5%
R533	SK4100AD3310T0	CARBON FILM RESISTOR 330 OHM 1/4W +/-5%
R534	SK4100BF2720T0	CARBON COMPOSITION RESISTOR 2.7K OHM 1/2W +/-5%
R535	SK4100DH123001	METAL OXIDE FILM RESISTOR 12K OHM 2W+/-5%
R540	SK4100DG154001	METAL OXIDE FILM RESISTOR 150K OHM 1W+/-5%

location	quantity	description
<b>SK043YD21NZY01M CONTROL ASSEMBLY</b>		
CN001	SK540092500005	WAFER 2.5mm H X 5 PIN
CN0011	SK540142036205	90 DEGREE PIN 05+HOUSING 05(TJC3)+360mmFLAT CABLE UL2468 AWG26
CR1	SK4300AF223HT0	CERAMIC CAPACITOR 0.022uF 50V +80-20%
LED002	SK570015012000	LED LIGHT EMISSION 3.1mm RED LONG LEAD
M002	SK530014261100	INFRARED RECEIVER MODULE 38KHz GP1U261R/GP1UA261RK 90 DEGREE PIN
PCB	SK5800D21NZY00	CONTROL P.C.BOARD 215 X 34 X 1.6mm 8 KEYS FOR 21NZ 3Y07
RD11	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
RD2	SK4100AD5630T0	CARBON FILM RESISTOR 56K OHM 1/4W +/-5%
RD3	SK4100AD2230T0	CARBON FILM RESISTOR 22K OHM 1/4W +/-5%
RD4	SK4100AD1130T0	CARBON FILM RESISTOR 11K OHM 1/4W +/-5%
RD5	SK4100AD6820T0	CARBON FILM RESISTOR 6.8K OHM 1/4W +/-5%
RD6	SK4100AD4720T0	CARBON FILM RESISTOR 4.7K OHM 1/4W +/-5%
RD7	SK4100AD4320T0	CARBON FILM RESISTOR 4.3K OHM 1/4W +/-5%
RD8	SK4100AD3020T0	CARBON FILM RESISTOR 3K OHM 1/4W +/-5%
RD9	SK4100AD2020T0	CARBON FILM RESISTOR 2K OHM 1/4W +/-5%
RR1	SK4100AD1000T0	CARBON FILM RESISTOR 10 OHM 1/4W +/-5%
SW1	SK550011015000	TACT SWITCH VERTICAL TYPE H = 5mm KPT-1105A 4 PINS
SW2	SK550011015000	TACT SWITCH VERTICAL TYPE H = 5mm KPT-1105A 4 PINS
SW3	SK550011015000	TACT SWITCH VERTICAL TYPE H = 5mm KPT-1105A 4 PINS
SW4	SK550011015000	TACT SWITCH VERTICAL TYPE H = 5mm KPT-1105A 4 PINS
SW5	SK550011015000	TACT SWITCH VERTICAL TYPE H = 5mm KPT-1105A 4 PINS
SW6	SK550011015000	TACT SWITCH VERTICAL TYPE H = 5mm KPT-1105A 4 PINS
<b>SK073YG21NZY03M FRONT AV IN ASSEMBLY</b>		
CF01	SK4300BB106E00	ELECTROL YTIC CAPACITOR 10uF 10V +/-20% (4 X 5mm)
CF02	SK4300BB106E00	ELECTROLYTIC CAPACITOR 10uF 10V +/-20% (4 X 5mm)
CF03	SK4300BB476E00	ELECTROLYTIC CAPACITOR 47UF 10V +/-20%
CNF01	SK540142360203	90 DEGREE PIN 03 + HOUSING 03 (TJC3) + 600mm SHIELD UL2547 AWG24
PCB	SK5800G21NZY00	FRONT AV IN P.C.BOARD 83 X 30 X 1.6mm FOR 21NZ 3Y07
PF01	SK610016195121	RCA JACK H=19.5mm RED VERTICAL TYPE 3 PINS W/SW
PF02	SK610016195191	RCA JACK H=19.5mm WHITE VERTICAL TYPE 3PINS W/SW
PF03	SK610016195141	RCA JACK H=19.5mm YELLOW VERTICAL TYPE 3PINS W/SW
<b>SK2021T3Y03102M TABLE ASSEMBLY</b>		
C311	SK4300EJ474C00	METALLIZED POLYPROPYLENE FILM CAPACITOR0.47uF 250V +/-5%
C313	SK4300ET192C00	METALLIZED POLYPROPYLENE FILM CAPACITOR0.0019uF 2KV +/-5%
C314	SK4300ET762C00	METALLIZED POLYPROPYLENE FILM CAPACITOR0.0076uF 2KV +/-5%
C327	SK4300EF334C00	METALLIZED POLYESTER FILM CAPACITOR 0.33UF 63-100V +/-5%
CRT	SK500351000B02	21" SEG-HITACHI COLOR PICTURE TUBE A51JFC82 X 13(C) NTSC TYPE NORTH 29.1mm
H301	SK540025040205	HOUSING 05 + 400mm WIRE X 4 1=RED 3=BLUE4=YELLOW 5=GREEN UL1015 AWG22
H501	SK540021511301	HOUSING 01 + 380mm 1015#20 WIRE + 1060mmKNITTING COPPER WIRE (FOR 21" TV)
H602	SK480008230002	DEGAUSSING COIL FOR 21" TV L=2300mm T=70110V-260V
J143	SK4100DH220001	METAL OXIDE FILM RESISTOR 22 OHM 2W +/-5%
L301	SK480004440213	LINEAR COIL 44uH 13mm W/BACKET FOR 14"-21" TV (SHORT LEAD PITCH=5mm)
R236	SK4100AD1020T0	CARBON FILM RESISTOR 1K OHM 1/4W +/-5%
R237	SK4100AD5640T0	CARBON FILM RESISTOR 560K OHM 1/4W +/-5%
R309	SK4100DG102001	METAL OXIDE FILM RESISTOR 1K OHM 1W+/-5%
R316	SK4100DH039001	METAL OXIDE FILM RESISTOR 3.9 OHM 2W+/-5%
R317	SK4100DH012001	METAL OXIDE FILM RESISTOR 1.2 OHM 2W+/-5%
R318	SK4100AD1040T0	CARBON FILM RESISTOR 100K OHM 1/4W +/-5%
R320	SK4100DH012001	METAL OXIDE FILM RESISTOR 1.2 OHM 2W+/-5%
R326	SK4100DH181001	METAL OXIDE FILM RESISTOR 180 OHM 2W +/-5%
R329	SK4100AD1030T0	CARBON FILM RESISTOR 10K OHM 1/4W +/-5%
R331	SK4100DG152001	METAL OXIDE FILM RESISTOR 1.5K OHM 1W +/-5%



location	quantity	description
R628	SK4100AD2200T0	CARBON FILM RESISTOR 22 OHM 1/4W +/-5%
T302	SK510105110000	20" FLYBACK TRANSFORMER MULTI-LAYER JF0501-0500B FOCUS 23-31%
T603	SK510006350000	SWITCHING TRANSFORMER BCK-35-087A FOR 3Y03
<b>SK273Y21NZNM00M</b>		<b>NON COMMON PARTS FOR MODEL 21NANM</b>
H601	SK5900A2231820	AC LINE CORD 2200mm (105C) W/HOLDER + 2PIN HOUSING X 1 + UL PLUG (GMU01)
SP-	SK5900B7832200	MULTI TWIST WIRE #AWG22 1007 BLACK 780mm
SP+	SK5900B7832290	MULTI TWIST WIRE #AWG22 1007 WHITE 780mm
SPL	SK560011605401	SPEAKER 16 OHM 5W 2 1/4 X 5 INCH FOR TV-2188
SPLINE	SK540122050202	HOUSING 02 (TJC3) + 500mm WIRE X 2 1=BLACK 2=WHITE UL1007 AWG24
SPR	SK560011605401	SPEAKER 16 OHM 5W 2 1/4 X 5 INCH FOR TV-2188
SW	SK550021010400	TACT SWITCH FOR NTSC POWER ON/OFF

## Miscellaneons

location	quantity	description
SK100521990001	1	JACK PLATE BRACKET - BLACK (HIPS)
SK190200821810	2	GROUNDING WIRE SPRING - FOR KNITTING WIRE
SK190300821810	2	GROUNDING WIRE - DIA. 0.6 SPRING WIRE



---

SANYO Electric Co.,Ltd  
Osaka,Japan