

AUDINAC

Color Television

Chassis : CM-001SA

Model : DTH-141C

DTH-201C

DTO-141C

DTO-201C

MANUAL DE SERVICIO

AUG. 2005

TABLE OF CONTENTS

Safety Precautions	2
Product safety servicing guidelines for audio - video products	2
Product safety servicing guidelines for color television receivers	3
Specifications	5
User's Instruction	6
Block Diagram	19
Alignment Instructions	20
Service mode adjustments	20
Assembly adjustments	22
Schematic Diagram	25
Printed Circuit Board	26
Exploded View	28
Service Parts List	32
Appendix ("Appendix is Provided only by internet [http://svc.dwe.co.kr]")	
IC Description	38
The Table of Contents	42
Troubleshooting Guide	45
No power	45
No picture	46
No sound	47
No color	48
No vertical deflection	48
Remote control does not operate	49

PRODUCT SAFETY SERVICING GUIDELINES FOR AUDIO -VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

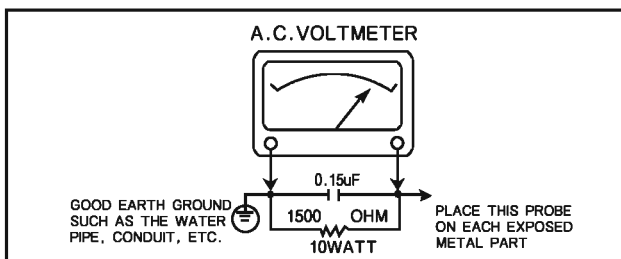
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED, A CHECK SHOULD BE MADE OF THE FOLLOWING :

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE, THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OF SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTOR, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES. DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET. (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS, HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST. USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER : CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150V A.C. TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED .75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C. ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION ON SERVICE LITERATURE.

SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS X-RAY SHIELD IN COLOR SETS. ALWAYS RE-INSTALL THEM.
3. IT IS ESSENTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD. SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED, THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE, AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV, B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT : IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRAL IMPLOSION PROTECTION SYSTEM. BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION. AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE, OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS : OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERALLY APPROVED FOR USE WITH T.V.S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

PRODUCT SAFETY SERVICING GUIDELINES FOR COLOR TELEVISION RECEIVERS

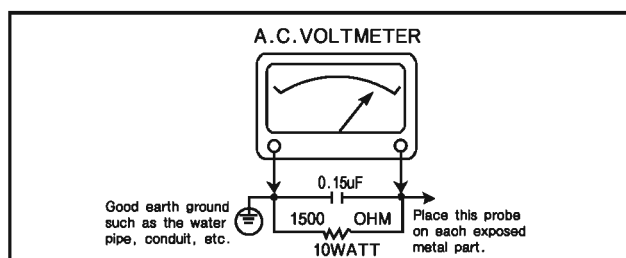
CAUTION : Do not attempt to modify this product in any way. Unauthorized modifications will not only void the warranty, but may lead to your being liable for any resulting property damage or user injury. Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines. To do otherwise, increases the risk of potential hazards and injury to the user.

SAFETY CHECKS

After the original service problem has been corrected, a check should be made of the following :

SUBJECT : FIRE & SHOCK HAZARD

1. Be sure that all components are positioned in such a way as to avoid possibility of adjacent component shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Never release a repair unless all protective devices such as insulators, barriers, covers, shields, strain reliefs, and other hardware have been reinstalled per original design.
3. Soldering must be inspected to discover possible cold solder joints, frayed leads, damaged insulation (including A.C. cord), solder splashes or sharp solder points. Be certain to remove all loose foreign particulates.
4. Check for physical evidence of damage or deterioration to parts and components, and replace if necessary follow original layout, lead length and dress.
5. No leads or components should touch a receiving tube or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. All critical components such as fuses, flameproof resistors, capacitors, etc. must be replaced with exact factory types. Do not use replacement components other than those specified or make unrecommended circuit modifications.
7. After re-assembly of the set always perform an A.C. leakage test on all exposed metallic parts of the cabinet, (the channel selector knob, antenna terminals, handle and screws) to be sure the set is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this test. Use an A.C. voltmeter, having 5000 ohms per volt or more sensitivity, in the following manner : connect a 1500 ohm 10 watt resistor, paralleled by a 15 mfd. 150V A.C. type capacitor between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the A.C. voltage across the combination of 1500 ohm resistor and 0.15 MFD capacitor. Reverse the A.C. plug and repeat A.C. voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts R.M.S. This corresponds to 0.5 milliamp A.C. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



GRAPHIC SYMBOLS :



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the service personnel to the presence of uninsulated "dangerous voltage" that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the service personnel to the presence of important safety information in service literature.



Fuse symbol is printed on pcb adjacent to the fuse, with "RISK OF FIRE REPLACE FUSE AS MARKED". The symbol is explained in the service manual with the following wording or equivalent.

"CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE (4A, 125V)" and "ATTENTION : AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET DE " 4A, 125V".

SUBJECT : X-RADIATION

1. Be sure procedures and instructions to all service personnel cover the subject of X-rays in current T.V. receivers is the picture tube. However, this does not emit X-rays when the high voltage is at the factory specified level. The proper value is given in the applicable schematic. Operation at higher voltages may cause a failure of the picture tube or high voltage supply and, under certain circumstances, may produce radiation in excess of desirable levels.
2. Only factory specified C.R.T. anode connectors must be used. Degaussing shields also serve as X-ray shield in color sets. Always re-install them.
3. It is essential that the serviceman has available an accurate and reliable high voltage meter. The calibration of the meter should be checked periodically against a reference standard. Such as the one available at your distributor.
4. When the high voltage circuitry is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be run up and down while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly. We suggest that you and your service organization review test procedures so that voltage regulation is always checked as a standard servicing procedure. And that the high voltage reading be recorded on each customer's invoice.
5. When troubleshooting and making test measurements in a receiver with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage compartment. Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.
6. Refer to HV, B+ and Shutdown adjustment procedures described in the appropriate schematic and diagrams (where used).

SUBJECT : IMPLOSION

1. All direct viewed picture tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage during installation. Avoid scratching the tube. If scratched, replace it.
2. Use only recommended factory replacement tubes.

SUBJECT : TIPS ON PROPER INSTALLATION

1. Never install any receiver in closed-in recess, cubbyhole or closely fitting shelf space over, or close to heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as : Outdoor patio installations where dew is a factor. Near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct rear venting. The customer should also avoid the use of decorative scarves or other coverings which might obstruct ventilation.
4. Wall and shelf mounted installations using a commercial mounting kit, must follow the factory approved mounting instructions. A receiver mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom , bolts or screws used for fasteners must not touch and parts or wiring. Perform leakage test on customized installations.
5. Caution customers against the mounting of a receiver on sloping shelf or a tilted position, unless the receiver is properly secured.
6. A receiver on a roll-about cart should be stable on its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against the use of a cart or stand which has not been listed by underwriters laboratories, inc. For use with their specific model of television receiver or generically approved for use with T.V.'s of the same or larger screen size.

Specifications

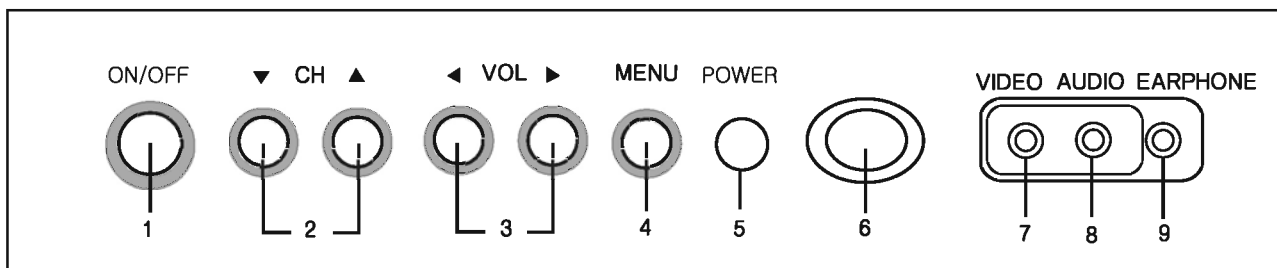
ITEMS	MODEL	DTO-141C DTH-141C	DTO-201C DTH-201C	REMARKS
TV STANDARD		NTSC-M, PAL N/M		
POWER INPUT		AC220V, 50/60 Hz		
POWER CONSUMPTION		14"=50W , 20"=60W		
TUNING SYSTEM		Frequency Synthesizer (FS) Tuning System		
TUNING RANGES		VHS : 2~13 (12) UHF : 2~13 (56) CATV : 1~125 (125)		
SOUND OUTPUT		2 W + 2 W (U1 Series) 2 W (V1 Series)		
SPEAKER		3 W 16 ohm		
ANTENNA INPUT IMPEDANCE		75 ohm Unbalanced		
AUXILIARY INPUT TERMINAL		Front : Video, Audio, Ear phone Rear : Video, Audio		
INTERMEDIATE FREQUENCIES		Picture IF Carrier Frequency : 45.75 MHz Sound IF Carrier Frequency : 45.25 MHz Color Sub-Carrier Frequency : 42.17 MHz		
REMOTE CONTROL		R-43A08		
SPCEIAL FUNCTIONS		3-Language OSD With CAPTION Wake-up/Off Time Sleep Timer Power Restore		

User's Instruction

Overview of Your Equipment

Your TV comes with a remote control. The section below summarizes the buttons, controls, and terminals that you will use with your TV.

Your TV's Front Panel



1 POWER

Use this button to turn your TV on or off.

2 ▼ CH ▲

Use these buttons to change channels on your TV, or to select items in the menu system.

3 ◀ VOL ▶

Use these buttons to change your TV's volume, to activate selections in the menu system, or to change audio and video settings.

4 MENU

Use this button to turn the TV's menu system on and off.

5 STAND-BY (red) indicator

This indicator lights up when the AC power cord is connected to a power source.

6 Remote Control Receiver

This receiver receives a signal from your remote control. Do not block it.

7 VIDEO IN jack

Use this jack to receive a video signal from another A/V component.

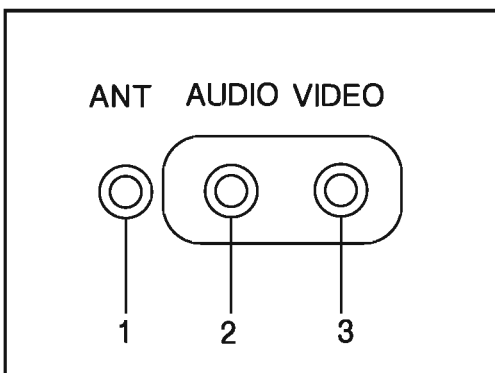
8 AUDIO IN jack

Use this jack to receive an audio signal from another A/V component.

9 EARPHONE jack

Use this jack to receive an audio signal from your TV.

Your TV's Back Panel



1 Antenna terminal (ANT)

Use this terminal to attach an antenna or cable system to your TV.

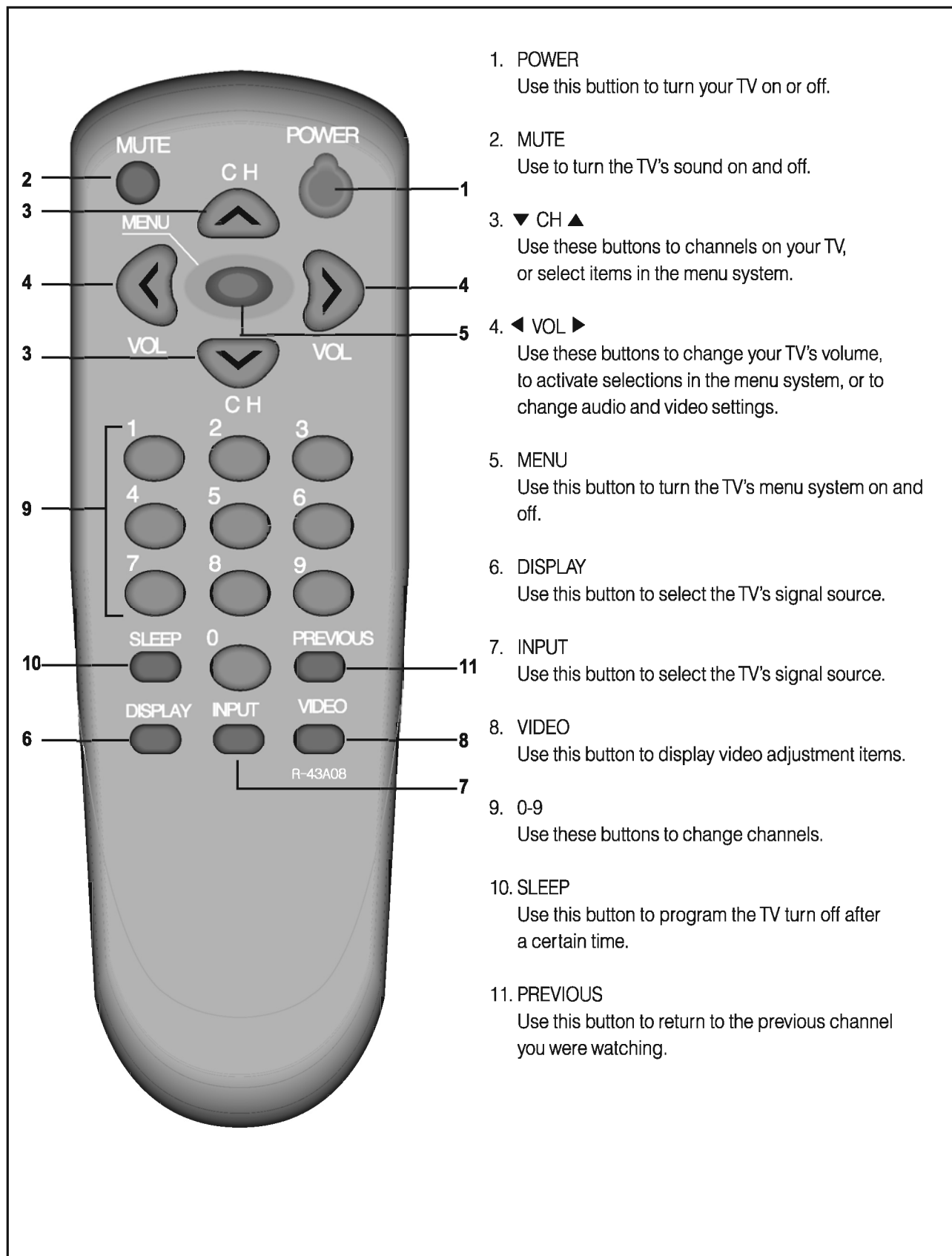
2 AUDIO IN

This terminal allows the TV to receive an audio signal from another component, such as a VCR.

3 VIDEO IN

This terminal allows the TV to receive a video signal from another component, such as a VCR.

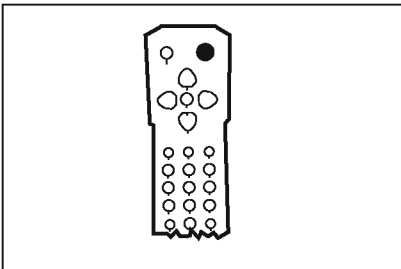
Your Remote Control



Operating Your TV

Once you have connected your TV to an antenna or cable system, plugged the TV in, and put batteries in the remote, you are ready to use the TV. The first thing you should do is program your TV so it memorizes all of available channels.

Turning Your TV On



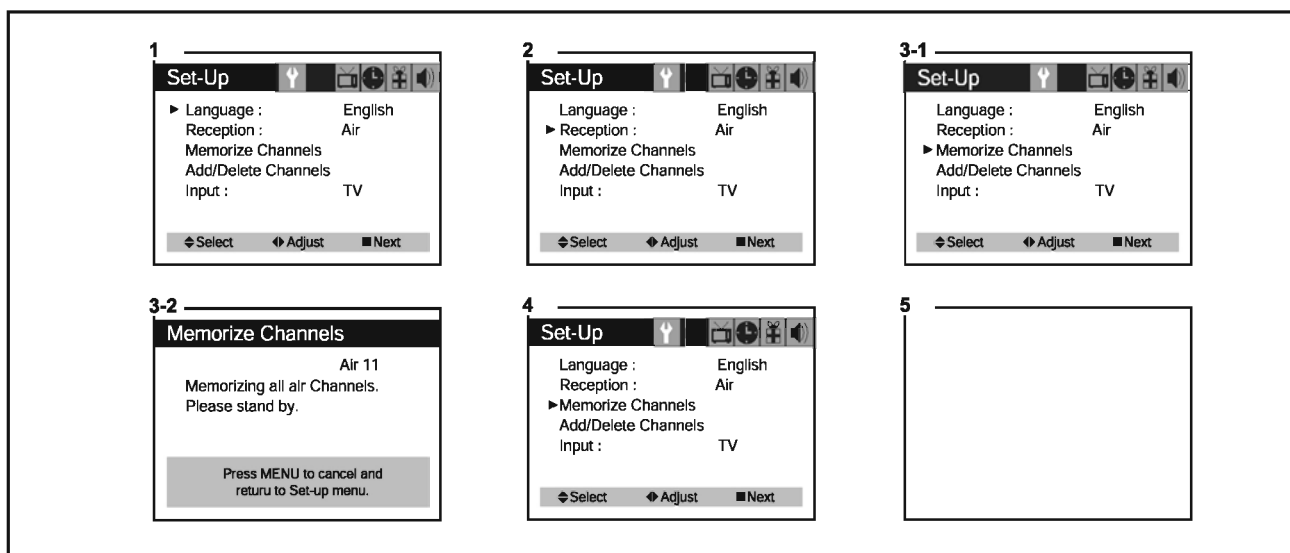
- 1 To turn your TV, press the POWER button on the front panel then. press the ▼CH▲, ◀VOL▶ or MENU button.
You can also use the POWER button on the remote control.
Make sure your TV is plugged in before you try to turn it on.

Programming Your TV's Channel Memory

Your TV's memory determines the channels that are available using the ▼CH▲ buttons. If a channel is not in memory, you can tune to it with the number buttons, but not with the ▼CH▲ buttons. Follow these steps to program your TV's memory :

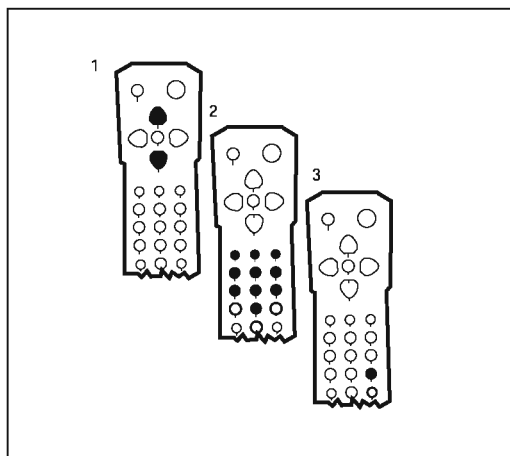
- 1 With the TV on, press the MENU button twice, then " Set-Up " menu will appear.
- 2 Use the ▼CH▲ buttons to select " Reception ", then use the ◀VOL▶ button to select 'Air' or 'Cable'. If you connected an antenna to your TV, select 'Air' : If you connected a cable system, select 'Cable'
- 3 Use the ▼CH▲ buttons to select " Memorize Channels ", then use the ◀VOL▶ button to enter the " Memorize Channels " process. Again press the ◀VOL▶ button to begin.
- 4 Press the MENU button to return to Set-Up menu.
- 5 Press the MENU button three times to return to normal TV viewing.

Your TV's channel memory will not be affected by a power outage. You will not need to re-program the memory unless you change the type of cable or antenna connected to your TV.



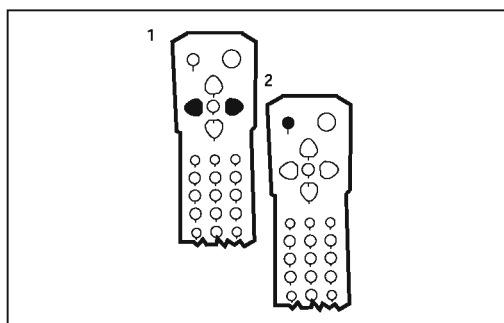
Changing Channels

You can change channels in three ways :



- 1 The ▲CH▼ buttons will take you through all memorized channels, one by one. The ▲CH▼ buttons will not access channels that have not been programmed into the TV's memory. For more information about programming channels into memory, see the section "Programming your TV's Channel Memory" on the previous page.
- 2 The number buttons (0-9) will take you to any channel, even if it has not been memorized. To change to a channel, enter its number : the TV will tune to the new channel when you enter the second digit of the channel.
- 3 The PREVIOUS button will take you instantly to the last channel you were watching.

Changing the Volume



- 1 The change the volume of the TV set, use the ◀ VOL ▶ buttons on the remote or on the front panel.
- 2 To quickly turn off the sound, press the MUTE button on the remote. The 'MUTE' will appear on screen, colored green. To return the volume to its previous level, press MUTE again.

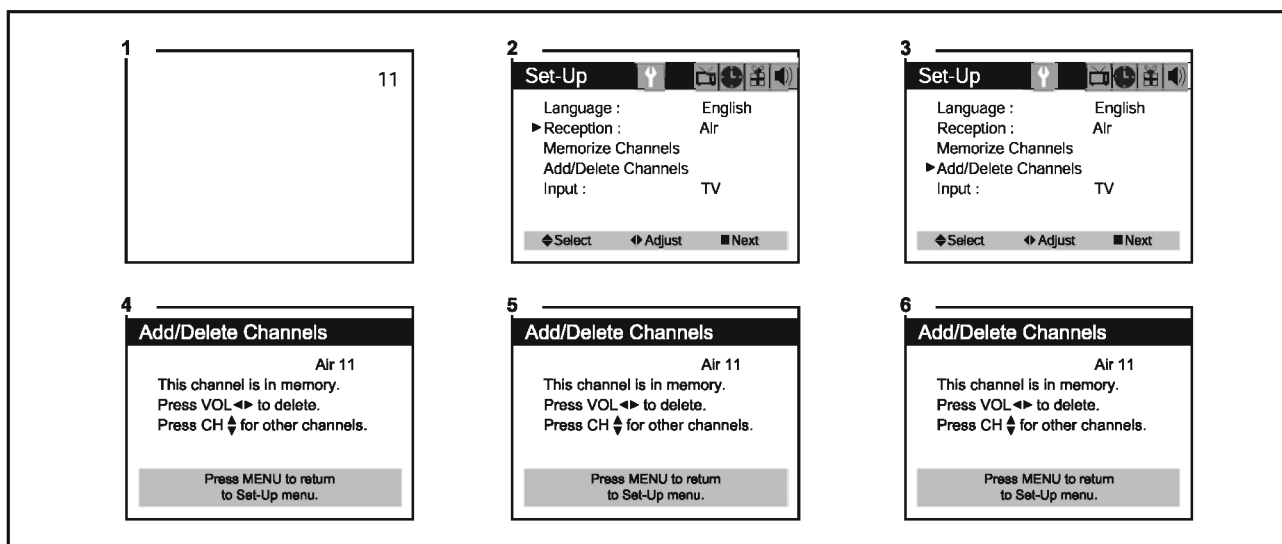
Changing the TV's Channel Memory

Your TV's memory determines the channels that are available using the ▲CH▼ buttons. You can add channels to this memory or remove them from memory. If a channel is removed from memory, you can tune to with the number buttons, but you cannot tune to it with the ▲CH▼ buttons.

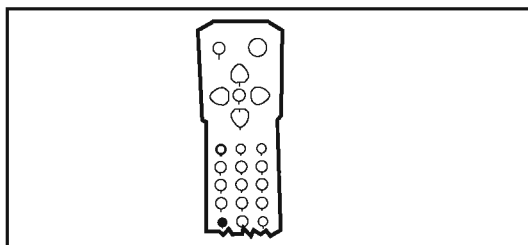
If there are just one channel memorized, then the Add/Delete Channels function will search the whole channels. But if there are two or more channel memorized, then the Add/Delete Channels function will search the memorized channels only.

Adding/Deleting a channel to memory

- 1 Use the number buttons to tune to the channel.
- 2 Press the MENU button twice, then "Set-Up" menu will display.
- 3 Use the ▲CH ▼ buttons to select "Add/Delete Channels", then use the ◀ VOL ▶ button to enter the "Add/Delete Channels" process.
- 4 If the channel is not in memory, then use the ◀ VOL ▶ button to add the channel from memory.
- 5 If the channel is in memory, then use the ◀ VOL ▶ button to delete the channel from memory.
- 6 If you are going to delete other channel, then press the ▲CH ▼ buttons until desired channel is selected. And press the ◀ VOL ▶ button to delete the channel.
- 7 Wait 10 seconds, or press the MENU button four times to exit.



Displaying the Current Channel



- 1 To quickly see the current channel number and status, press DISPLAY button on the remote control. The current channel number and status will be displayed.

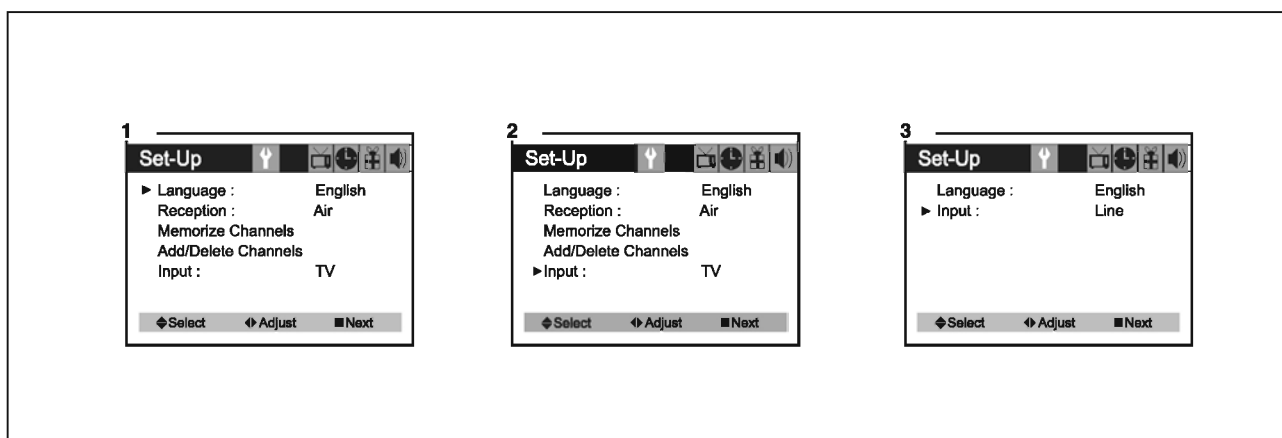
Changing the TV's Input

Normally, your TV displays the signal coming through the antenna terminal.

However, If you've connected another component to your TV(such as a VCR) using the Video/Audio input, you will want to be able to view the signal from the component.

To do this, you will need to switch from the 'TV' input to the 'Line' Input, as follows.

- 1 With the TV on, press the MENU button twice, then "set-up" menu will appear.
- 2 Use the ▲CH▼ buttons to select "Input".
- 3 Press the ◀VOL▶ buttons to change from 'TV' to 'Line'.
- 4 Wait 10 seconds, or press the MENU button to return to normal TV viewing.

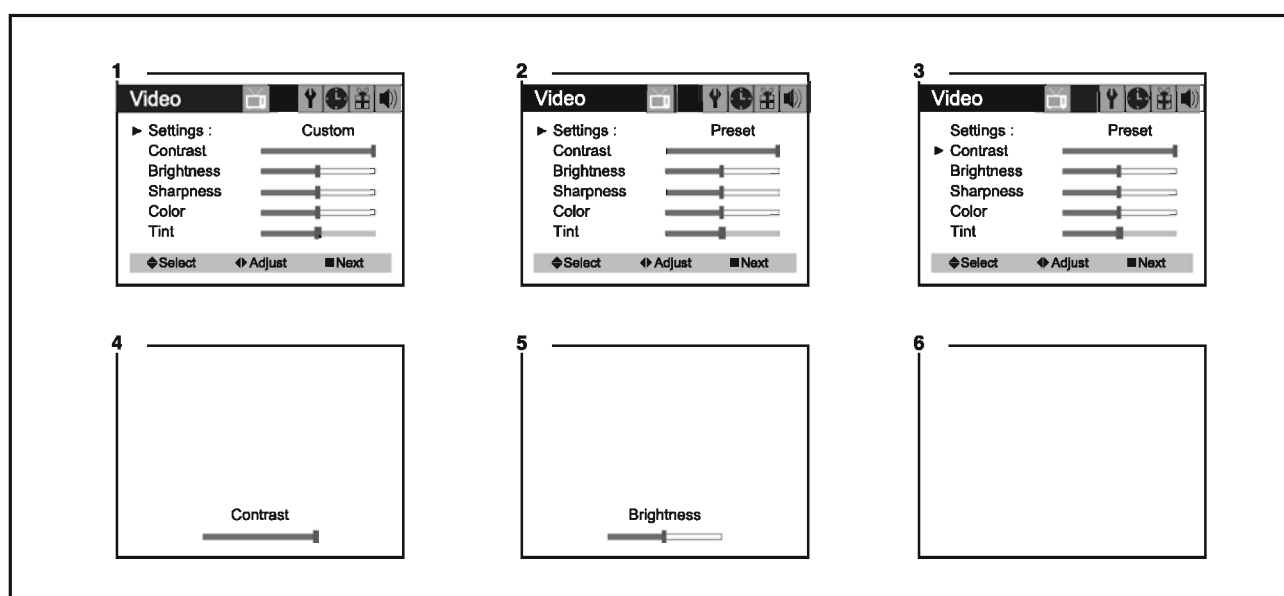


When it connected an Video/Audio cable from the Video/Audio out jack on the VCR to the Video/Audio in jack on the front your TV, and your 'TV's back panel at the same time, the latter takes precedence of the former.

Adjusting Video Settings

You may wish to adjust the video settings (e. g. contrast or color) to obtain the most pleasing picture. To do so, follow these directions:

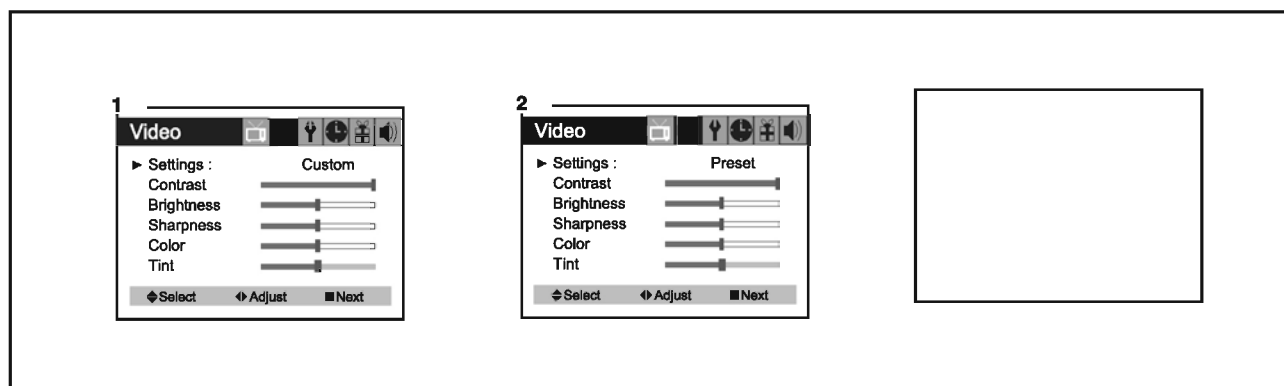
- 1 With the TV on, press the MENU button. then "Video" menu will appear.
- 2 The "Settings" item will be selected. Use the ◀ VOL ▶ buttons to turn Settings to Preset or Custom.
- 3 Use the ▲ CH ▼ buttons to select the video setting you wish to adjust. Descriptions of the video settings are on the next page.
- 4 Use the ◀ VOL ▶ buttons to adjust the video setting to the level you prefer.
- 5 Use the ▲ CH ▼ buttons to select another video setting to adjust.
- 6 When you are finished, press the MENU button until menu OSD will be disappeared.



Returning to the factory settings

If you would like to return to the original video settings, as they were calibrated at the factory, follow these steps :

- 1 With the TV on, pres the MENU button. then "Video" menu will appear.
 - 2 Press the ◀ VOL ▶ buttons to set the "Settings" to 'Preset'.
- The TV will remember the 'Custom' settings you had previously chosen. When you set "Settings" to "Custom" agin, your previous custom settings will be restored.



Descriptions of video settings

The contrast setting controls the relation between the light and black areas of the screen. If the light areas are too bright and are losing details, press the ◀ VOL button ; if the picture is gray and lacks contrast, press the VOL ▶ button.

The brightness settings controls the overall amount of light in the picture. If the picture is tooo bright, press the ◀ VOL button ; if the picture is too dark, press the VOL ▶ button.

Sharpness controls how the TV displays edges of objects on-screen. If the TV shows multiple vertical lines at the edges of an object, press the ◀ VOL button ; if the vertical edges of on-screen objects are fuzzy, press the VOL ▶ button.

The color setting controls the intensity of color. If the color is over-saturated, press the VOL ▶ button ; if the color is washed out, press the VOL ▶ button.

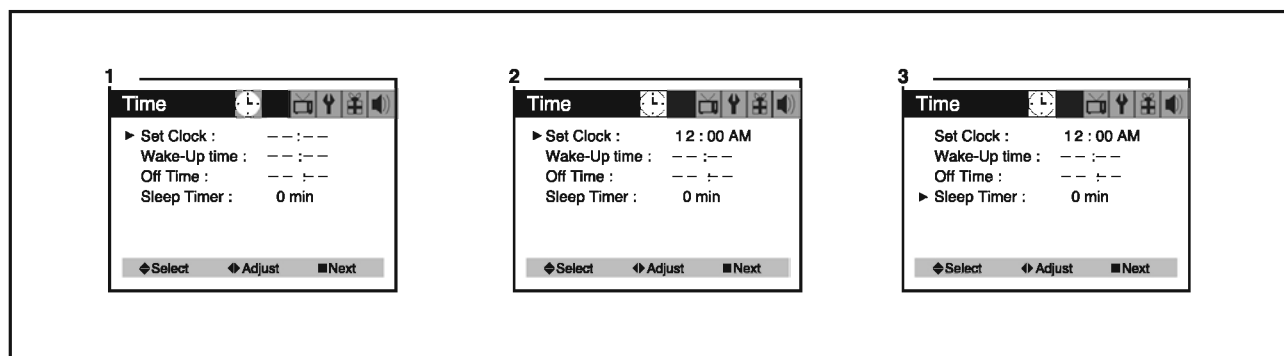
The tint setting controls the relationship of red and green in a picture. Tint is especially noticeable in flesh tones. If flesh tones seem too red or purple, press the VOL ▶ button ; if flesh tones are too green, press the VOL ▶ button.

Using Timer Functions

Your TV has a built in-clock, and you can set the TV to turn on and off at times that you select. You can also set your TV to turn off after counting down a certain amount of time.

Setting the Clock

- 1 With the TV turned on, press the MENU button until "Time" menu will be displayed.
- 2 The "Set Clock" item will be selected. Press the ◀ VOL ▶ buttons to set the clock. If you hold down either ◀ VOL or VOL ▶ button, the corresponding numbers will change more quickly.
- 3 When the clock is set correctly, use the ▲ CH ▼ buttons to select another "Time" function, or press the MENU button until menu OSD will be disappeared.

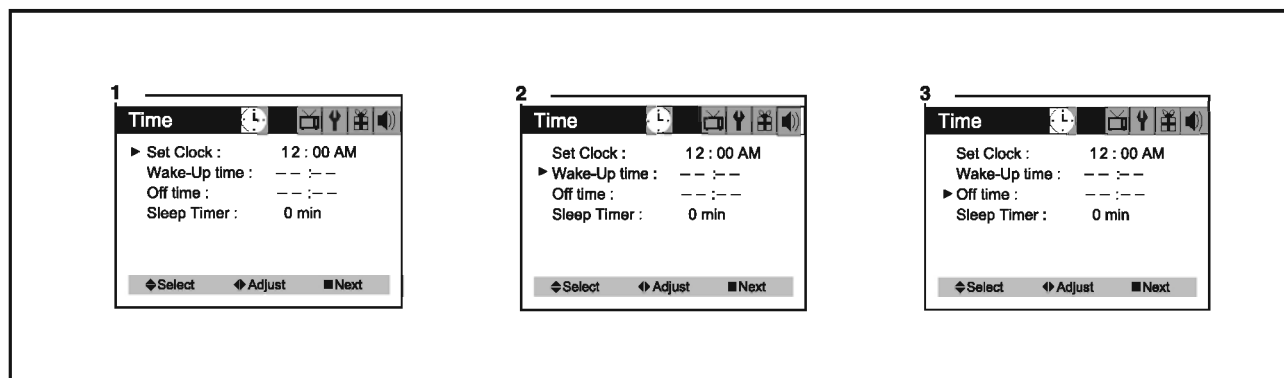


Settings the Wake-up timer

If you enter a time in the "Wake-up time" setting, your TV will automatically turn on at that time. Follow these instructions to set the "Wake-up time".

After Wake-up Timer turned on the TV set, if user do not input the user control (e.g. remote CH or VOL key) within 15 minutes, the TV set will turn off automatically. If user input the user control within 15 minutes, the TV set will turn on continuously. It is safety feature for prevent from any kind of problem without human control.

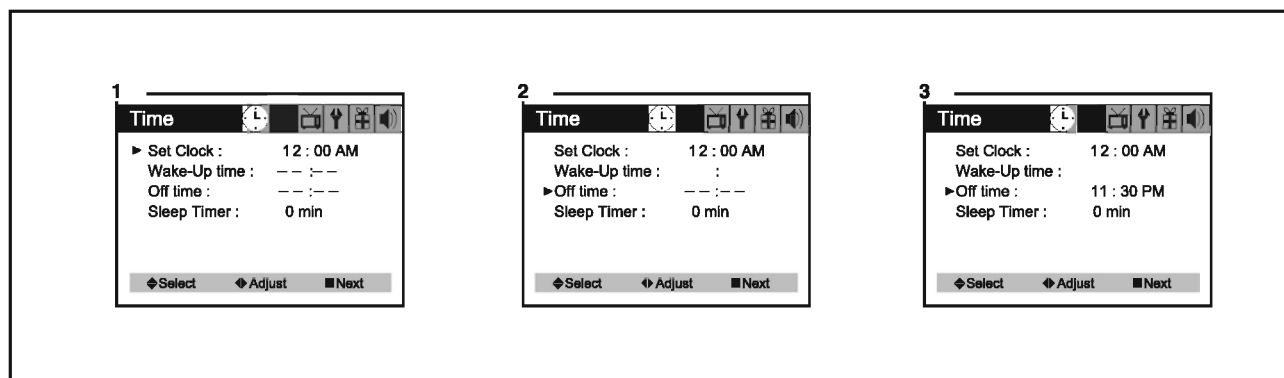
- 1 With the TV turned on, press the MENU button until "Time" menu will be displayed.
- 2 Use the ▲CH▼ buttons to select "Wake-up time" item.
- 3 If you hold down either ◀VOL or VOL▶ button, the corresponding numbers will change more quickly.
- 4 When the setting is corret, use the ▲CH▼ buttons to select another "Time" function, or press the MENU button until menu OSD will be disappeared.



Setting Off Timer

If you enter a time in the "Off time" setting, your TV will automatically turn off at that time. Follow these instructions to set the "Off time".

- 1 With the TV turned on, press the MENU button until "Time" menu will be displayed.
- 2 Use the ▲CH▼ buttons to select "Off time" item.
- 3 If you hold down either ◀VOL or VOL▶ button, the corresponding numbers will change more quickly.
- 4 When the setting is correct, use the ▲CH▼ buttons to select another "Time" function, or press the MENU button until menu OSD will be disappeared.



Canceling the Wake-up Timer of Off Timer

If you would like to cancel the Wake-up Timer or the Off Timer, Press the ◀VOL▶ buttons until the timer settings return to "- :-:-".

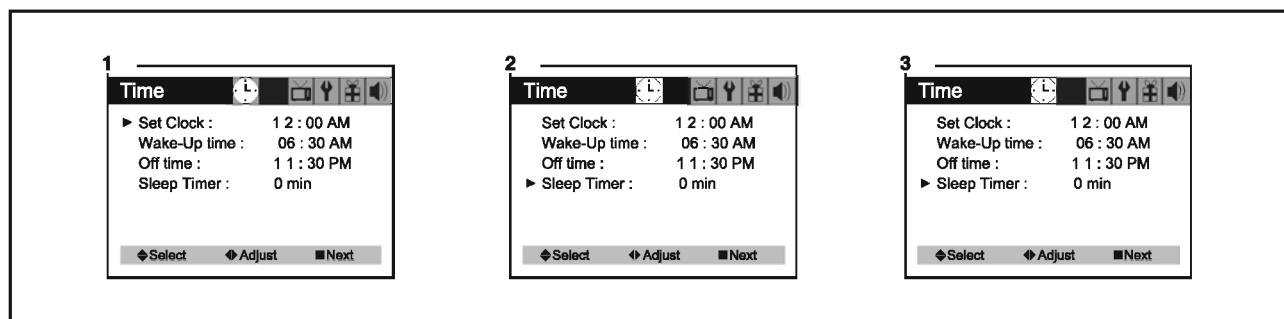
The Wake-up Timer and Off Timer will not function correctly unless the clock has been set.

Setting the Sleep Timer

The sleep timer allows you to set an amount of time from 15 minutes to 120 minutes. TV will count down the amount of time you set, then turn itself off. To set the sleep timer :

- 1 With the TV turned on, press the MENU button until "Time" menu will be displayed.
- 2 Use the ▲ CH ▼ buttons to select "Sleep timer" item.
- 3 Use the ◀ VOL ▶ buttons to set the sleep time. Each time you press VOL, you step between the available sleep times : 15min, 30min, 45min, 60min, 90min, or 120min.
- 4 When the setting is correct, use the ▲ CH ▼ buttons to select another "Time" function, or press the MENU button until menu OSD will be disappeared.
- 5 You can also set the "Sleep Timer" during normal TV viewing, simply by pressing the SLEEP button on the remote control. This button steps through the available sleep times (see step 3), one by one.

To cancel the Sleep timer, turn the TV off, or set the sleep time to "0" using one of the methods described above.



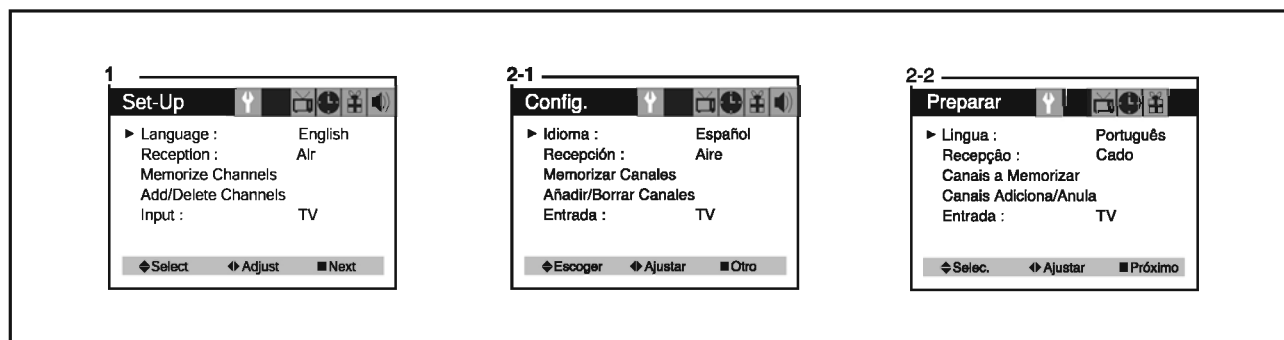
Additional Features

This section contains descriptions of the more advanced features of your TV.

Changing the Language of the On-screen Menus

You can choose to display the on-screen menus in English, Spanish, French. To change the on-screen language :

- 1 With the TV on, press the MENU button twice, then "Set-Up" menu will appear.
- 2 The "Language" item will be selected. Press the ◀ VOL ▶ buttons to select the language you want to use : English, Spanish, French.
- 3 To return normal TV viewing, press the MENU button until menu OSD will be disappeared.

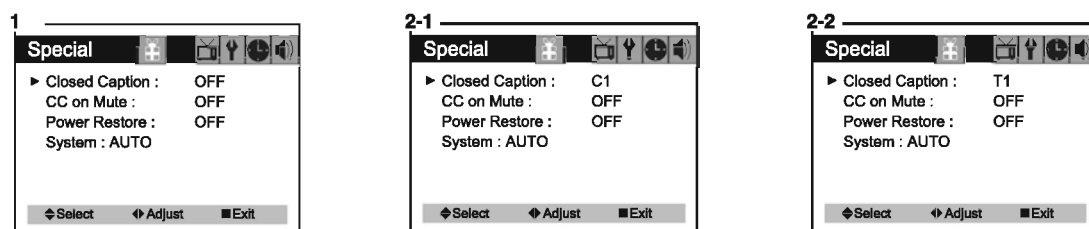


Captioning

Many TV shows contains "closed captions". These captions are hidden words that can be displayed on your TV screen. There are two types of these words : "captions" usually follow the action on-screen, providing a written version of the dialogue, narration, and sound effects ; "text" is not usually related to the action on-screen, often providing information such as news or weather. A TV program might be providing more than one set of captions or one set of text.

To set your TV to display captions or text.

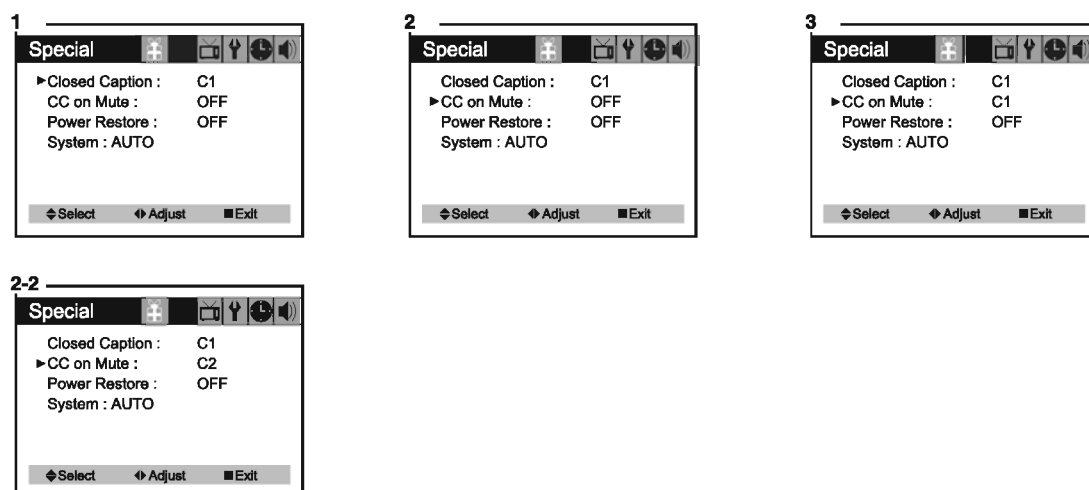
- 1 With the TV turned on, press the MENU button until "Special" menu will be displayed.
- 2 The "Closed Caption" item be selected. To turn captioning on, use the ◀VOL▶ buttons to select Captions (C1 or C2) or Text (T1 or T2). At the time these instructions were written, only C1 is normally available, but feel free to try the other selections.
- 3 Wait 10 seconds, or press the MENU button to return to normal TV viewing. Your setting will remain intact until you change it.



CC on Mute

When the sound is muted, user can select the caption display. It will display the caption content instead of sound mute.

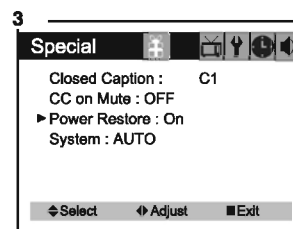
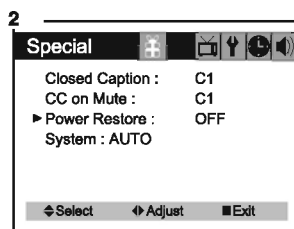
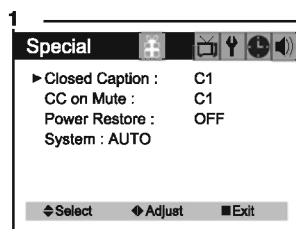
- 1 With the TV turned on, press the MENU button until "Special" menu will be displayed.
- 2 Use the ▲CH▼ buttons to select "CC on Mute" item.
- 3 Use the ◀VOL▶ buttons to select "C1" or "C2".



Power Restore

User can select the On/Off status when the power cord put into the wall outlet. If user have a cable box with AC outlet, then user can connect the TV power cord to the AC outlet and control the TV without TV remote control. This function is rarely used for home use, so special care is needed while using.

- 1 With TV turned on, press the MENU button until "Special" menu will be displayed.
- 2 Use the ▲CH▼ buttons select "Power Restore" item.
- 3 Use the ◀VOL▶ buttons to select "On" or "Off".

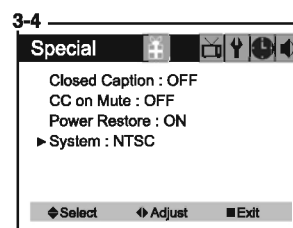
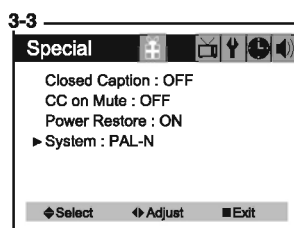
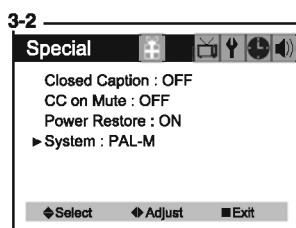
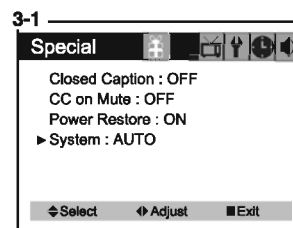
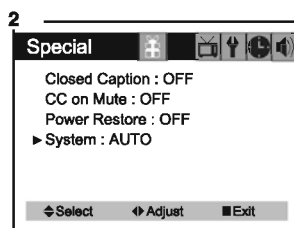
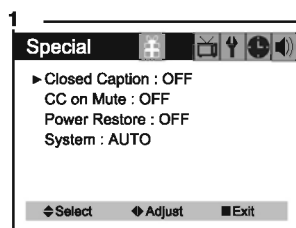


System

User can select the AUTO/PAL-M/PAL-N/NTSC color system modes.

If you have no color problem when see the FF mode of VCR or non standard signal, you must choose the NTSC of color system modes.

1. With the TV turned on, press the MENU button until "Special" menu will be displayed.
2. Use the ▲CH▼ buttons select "system" item.
3. Use the ◀VOL▶ buttons to select "AUTO", "PAL-M", "PAL-N" or "NTSC"



WARRANTY

Daewoo Electronics Corporation of America warrants each new electronic product manufactured by it to be free from defective material and workmanship and agrees to remedy any such defect or to furnish a new part (at the Company's option) in exchange for any part of any unit of its manufacture which under normal installation, use, and service disclosed such defect, provided the unit is delivered by the owner to us or to our authorized distributor from whom purchased or authorized service station, intact for our examination with all transportation charges prepaid to our factory. To establish and receive warranty service at our factory or authorized service facilities, proof of purchase/dated sales invoice is required

Return authorization must be obtained before any merchandise is returned to the factory.

This warranty does not extend to any of our electronic products which have been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, unauthorized modification, or to use in violation of instructions furnished by us, nor units which have been repaired or altered outside of our factory, nor to cases where the serial number thereof has been removed, defaced, or changed.

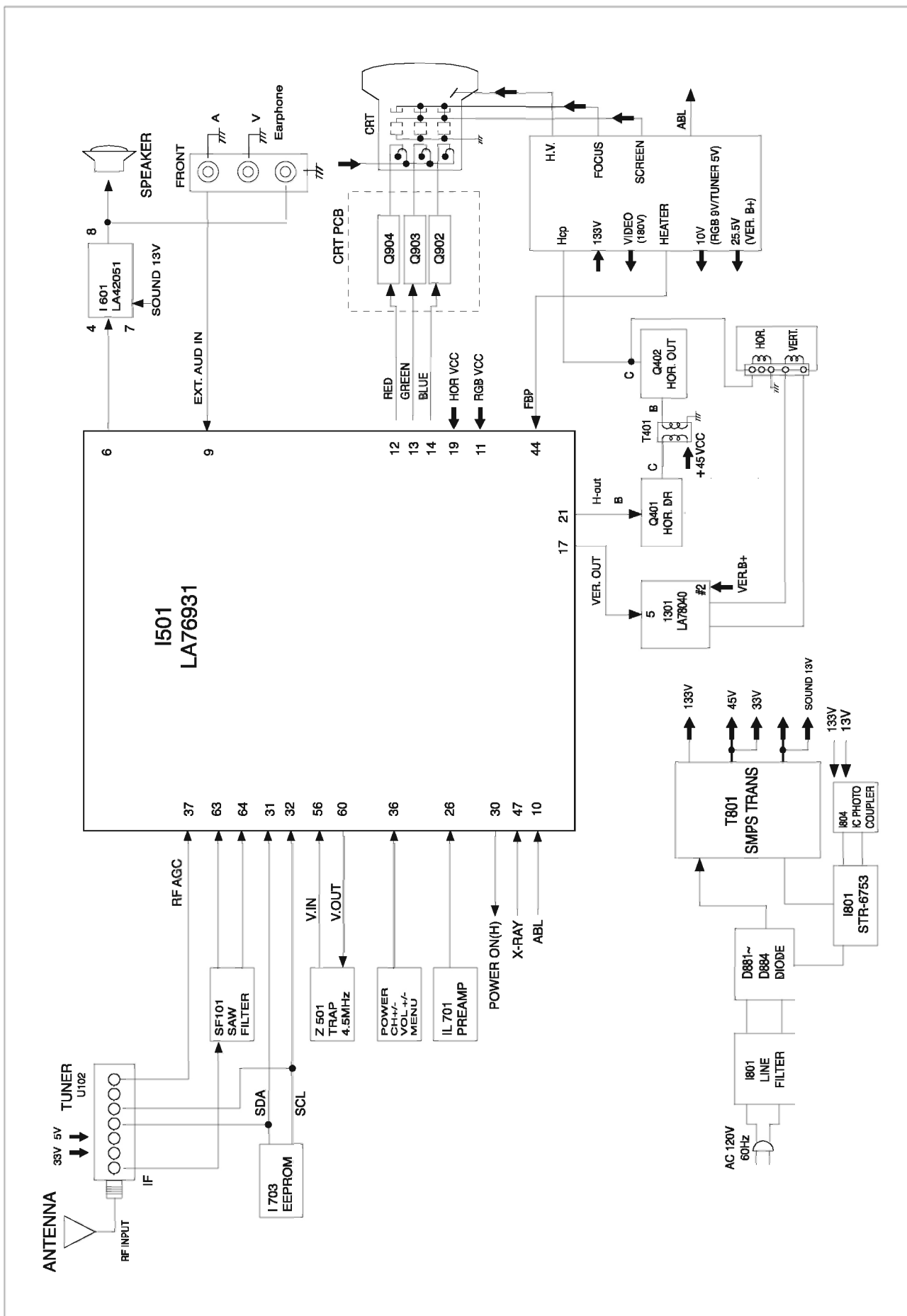
This warranty is in lieu of all warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our electronic products.

Over-the-counter exchange for units that are initially defective

*Initially defective is described as when the dealer opens the unit and finds that it is inoperative or a customer opens a new unit and finds that it is inoperable. This unit may be returned to the factory by the dealer for exchange. Under no circumstances will the customer be permitted to return the defective unit directly to the factory. Exchange must be directly with the dealer.

Model	Parts	Labor	Picture Tube
DTH- 141C	1 year	90 days	2 years
DTH- 201C	1 year	90 days	2 years
DTO- 141C	1 year	90 days	2 years
DTO- 201C	1 year	90 days	2 years

Block Diagram



Alignment Instructions

1. SERVICE MODE ADJUSTMENTS

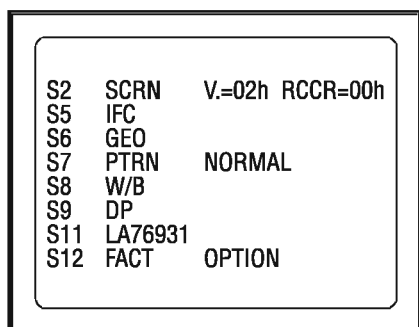
Follow the steps below whenever service adjustment is required. See Table-A and Table-B to determine if service adjustments are required.

1) How to enter the service mode using the user remote control.

- Turn the set on.
- Direct the remote control to the reception window of TV.
- Push buttons of remote control in sequence as follows.

1 ---> MUTE ---> DISPLAY ---> MUTE

- Then, the screen will appear as follows.



- Using the channel up or channel down button, select the item you wish to adjust.
(The color of selected item turns into the red.)
- Press the volume up or down button to enter in the service mode you wish to adjust.

2) How to memorize the adjusted values in the service mode.

- Must press **DISPLAY** button the state which the screen is displaying each of service menus after all adjustments are completed each of all service menu.

Table-A : Adjust the values of service mode when a part is replaced.

PART REPLACED	ADJUSTMENT		NOTES								
	NECESSARY	UNNECESSARY									
I701 (U-COM)		O	Data is stored in I703.								
I101 (MAIN)		O									
I703 (EEPROM)	O		Initial setting values are written from I701. Adjusting Items <table><tr><td>S5</td><td>RFAGCD</td></tr><tr><td>S6</td><td>H.PHASE.V.POSI/V.SIZE</td></tr><tr><td>S8</td><td>RD/BD/RB/GB/BB</td></tr><tr><td>S9</td><td>Subbrightness</td></tr></table>	S5	RFAGCD	S6	H.PHASE.V.POSI/V.SIZE	S8	RD/BD/RB/GB/BB	S9	Subbrightness
S5	RFAGCD										
S6	H.PHASE.V.POSI/V.SIZE										
S8	RD/BD/RB/GB/BB										
S9	Subbrightness										
CRT	O		Adjust items related to picture tube only. (White Balance adjustment)								

Table-B

MODE	ADJUSTMENT ITEMS		DATA				REMARKS
			INITIAL		RANGE		
SVC5	IF CONTROL						
	Auto RFAGC	AGC ST	START	57	0~63	0~63	Align RF AGC threshold
	VIDEOL		0		0~7		
	RFAGCD						
	AGC Point		3.75		3.25/3.5/3.75/4.0		Select AGC reference voltage
	MANUAL SYSTEM		YES		YES		
	AGC CH NO		6		ALL CH		AGC Adjust CH
SVC6	GEOMETRY	OFFSET					
	H.SHI 60HZ	60-50HZ	20	5	0~31	0~31	
	V.POZ 60HZ	50-60HZ	4	4	0~7	0~7	
	V.SIZ 60HZ	50-60HZ	50(14') 75(20')	10	0~127	0~127	
	V.LIN 60HZ	50-60HZ	18	3	0~31	0~31	
	V.SC		8		0~31	0~31	
	NO SD OFF	VER.01.27.	YES		YES		Automatically turn off in 15min for no received signal
SVC7	TEST PATTERN						
SVC8 (1 input)	RD		96		0~127		Align RED OUT AC Level
	GD		10 REF		0~15		Must be set to 10(reference)
	BD		96		0~127		Align BLUE OUT AC Level
	RB		128		0~255		Align RED OUT DC Level
	GB		128		0~255		Align GREEN OUT DC Level
	BB		128		0~255		Align BLUE OUT DC Level
SVC8 (2 input)	SCR R-BIAS		0		0~255		
	SCR G-BIAS		128		0~255		
	SCR B-BIAS		0		0~255		
	SCR R-DRIV		83		0~127		
	SCR G-DRIV		10		0~127		
	SCR B-DRIV		83		0~127		
	SCR BRIGHT		90 (14')	120(20')	0~127		Screen Voltage Adjustment
SVC9	D.P.						
	Subbrightness		64		0~127		
	Contrast		25		0~27		
	Tint		30		0~77		
	Color		30		0~77		
	Sharp		3		0~23		
SVC10	SHARP TABLE		1		0~2		
	POWER WHITE		0		0~127		
	CHANNEL MUTE		1		0,1		
SVC11 (1 input)	T.DIS	V.KILL	1	0	0,1	0,1	
	AFC G&G	H BLK L	0	2	0,1	0~3	
	H.FREQ	H BLK R	63	1	0~63	0~3	
	V.TRANS	V.SHIFT (V POSI)	0		0,1		
	A.MUTE	V.TEST	0	0	0,1	0~3	
	V.MUTE	V. COMP	0	3	0,1	0~3	
	S.KILL	C.DWN.M	0	0	0,1	0~7	
SVC11 (2 input)	VNSYNC	DRIVE.T	0	0	0,1	0,1	
	VBLK.SW	HALF NT	1	1	0,1	0~3	
	FBPB.SW	BLANK.D	1	0	0,1	0,1	
	FSC OR C	OSD.CNT	1	1	0,1	0~3	
	GRAYMOD	CONT.T	0	0	0,1	0,1	
	C.B/W	B.A.DEF	0	0	0~3	0~3	
	RGB T4	M.S.DEF	0	1	0,1	0,1	
SVC11 (3 input)	RGBT.SW	O.S.ADJ	1	2	0,1	0~3	
	B.A.THR	YGAMMAS	7	3	0~7	0~3	
	C.GAIN	DC.REST	0	1	0~3	0~3	
	S.TRAPT	B.S.ST	4	0	0~7	0~3	
	FIL.SYS	B.S.GAI	0	2	0~15	0~3	
	Y APF	C.TRAPA	0	4	0,1	0~7	
	P.S.ADJ	C.BFP.T	0	1	0~3	0~3	
SVC11 (4 input)	TINT.T	COL.SYS	0	1	0,1	0,1	
	COLOR.T	C. VCO.A	0	4	0,1	0~7	
	A.FALSEH	CBCR IN	0	0	0,1	0,1	
	C.EXT	PAPC.SW	0	0	0,1	0,1	
	C BYPAS	C.K.OPE	1	4	0,1	0~7	
	CKILLON	RYBYG B	0	8	0,1	0~15	
	CKILLOF	RYBY A	0	8	0,1	0~15	

Alignment Instructions

MODE	ADJUSTMENT ITEMS		DATA				REMARKS
			INITIAL		RANGE		
SVC11 (5 input)	BY DC L	STRAP SW	8	0	0~15	0,1	
	RY DC L	VIF.SYS	8	3	0~15	0~3	
	GY ANG.	VCO FRE	0	32	0,1	0~63	
	AUDIO SW	O.MD.SW	0	0	0,1	0,1	
	VOL.FIL	O.MD.LV	0	8	0,1	0~15	
	FM.MUTE	AMONISW	0	0	0,1	0,1	
	IF.AGC	DEEN.TC	0	0	0,1	0,1	
SVC11 (6 input)	FM.GAIN	Y GAIN	0	0	0,1	0~3	
	SIF.SYS	R WIDTH	0	0	0~3	0~3	
	VCO T	R OFFSET	0	0	0~3	0~3	
	VIDEOSW	B WIDTH	0	0	0~3	0~3	
	SPL T	B OFFSET	0	0	0,1	0~3	
	TINT.TH		0		0,1		
	Y TH		0		0~3		
S12	Factory outgoing Mode						Factory Initialization

* indicates the items with different settings each of sets

2. ASSEMBLY ADJUSTMENTS

1) SCREEN ADJUSTMENT (S2)

- Enter the service mode and select service adjustment S2.
- You can see the one horizontal line on the screen.
- Adjust the Screen Control Volume (located on FBT) so that the horizontal line onscreen may be disappeared.
- Press the volume up or down button to exit in the screen adjustment mode.

NOTE

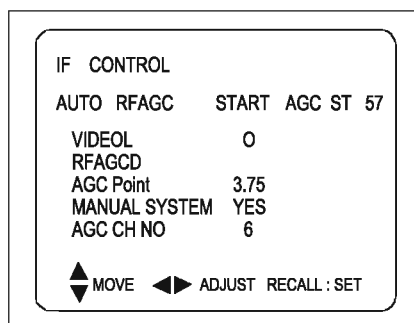
IN THE SCREEN ADJUSTMENT MODE, DONT PRESS OTHER BUTTONS EXCEPT VOLUME UP OR DOWN BUTTON.

2) FOCUS ADJUSTMENT

- Turn is a local station and adjust the Focus Control knob (located on FBT) for best picture details at high condition.

3) RF AGC DELAY ADJUSTMENT (S5)

- Receive a good local channel.
- Enter the service mode and select service adjustment S5.
- You can see the OSD as shown in below.





- Select RFAGCD item, press the volume up or down button until noise or beat in picture disappears.
- Press the DISPLAY button to memorize the data.

4) GEOMETRIC ADJUSTMENTS (S6)

- Enter the service mode and select service adjustment S7.
- Whenever you select the "S7" using the volume up or down button, the screen is changing like this.

NORMAL → BLACK → WHITE100 → WHITE60 → CROSS

- Using the volume up or down button, select internal cross pattern.
- Select service adjustment S6
- You can see the OSD as shown in below.

GEOMETRY			OFFSET	
H. SHI	60Hz	21	60 ~ 50Hz	5
V. POS	60Hz	5	50 ~ 60Hz	4
V. SIZ	60Hz	75	50 ~ 60Hz	10
V. LIN	60Hz	19	50 ~ 60Hz	3
V. SC		8		
NO SD OFF NO			Ver. 01.27	
<div> MOVE  ADJUST RECALL : SET</div>				

4-1. Horizontal Position Adjustment

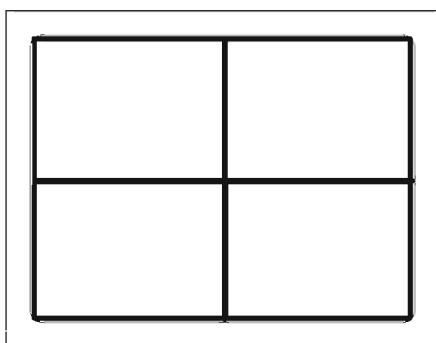
- Select H.PHASE item, adjust H.PHASE data value to obtain proper horizontal centering of the internal cross pattern at the left and right of the screen.

4-2. Vertical Position Adjustment

- Select V.POSI item, adjust V.POSI data value to center the raster properly on the screen.



4-3. Vertical Size Adjustment

- Select "V.SIZE" item, adjust "V.SIZE" data value to proper vertical size as follows.



5) WHITE BALANCE ADJUSTMENT (S8)

- Receive a good local channel.
- Enter the service mode and select service adjustment S8.
- You can see the OSD as shown in below.

RD	96
GD	10 REF
BD	96
RB	128
GB	128
BB	128
 MOVE  ADJUST RECALL : SET	

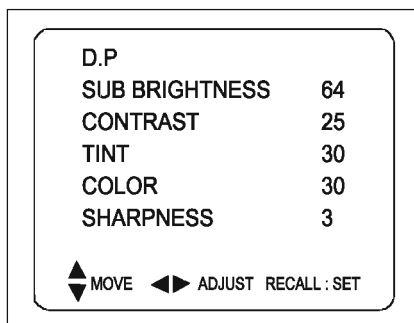
Alignment Instructions

- Using volume up or volume down, adjust service adjustment data of RD/GD/BD and RB/GB/BB until a good gray scale with normal whites is obtained. ALIGNMENT INSTRUCTIONS
- Press the DISPLAY button to memorize the data.

6) DIGITAL PRESET (D.P) ADJUSTMENTS (S9)

SUBBRIGHTNESS ADJUSTMENT

- Receive a good local channel.
- Enter the service mode and select service adjustment S9.
- You can see the OSD as shoown in below.



- Select Subbrightness item, adjust Subbrightness data value to obtain normal brightness level.
- Press the DISPLAY button to memorize the data.

CONTRAST

- Fixed value = 25

TINT

- Fixed value = 30

COLOR

- Fixed value = 30

SHARPNESS

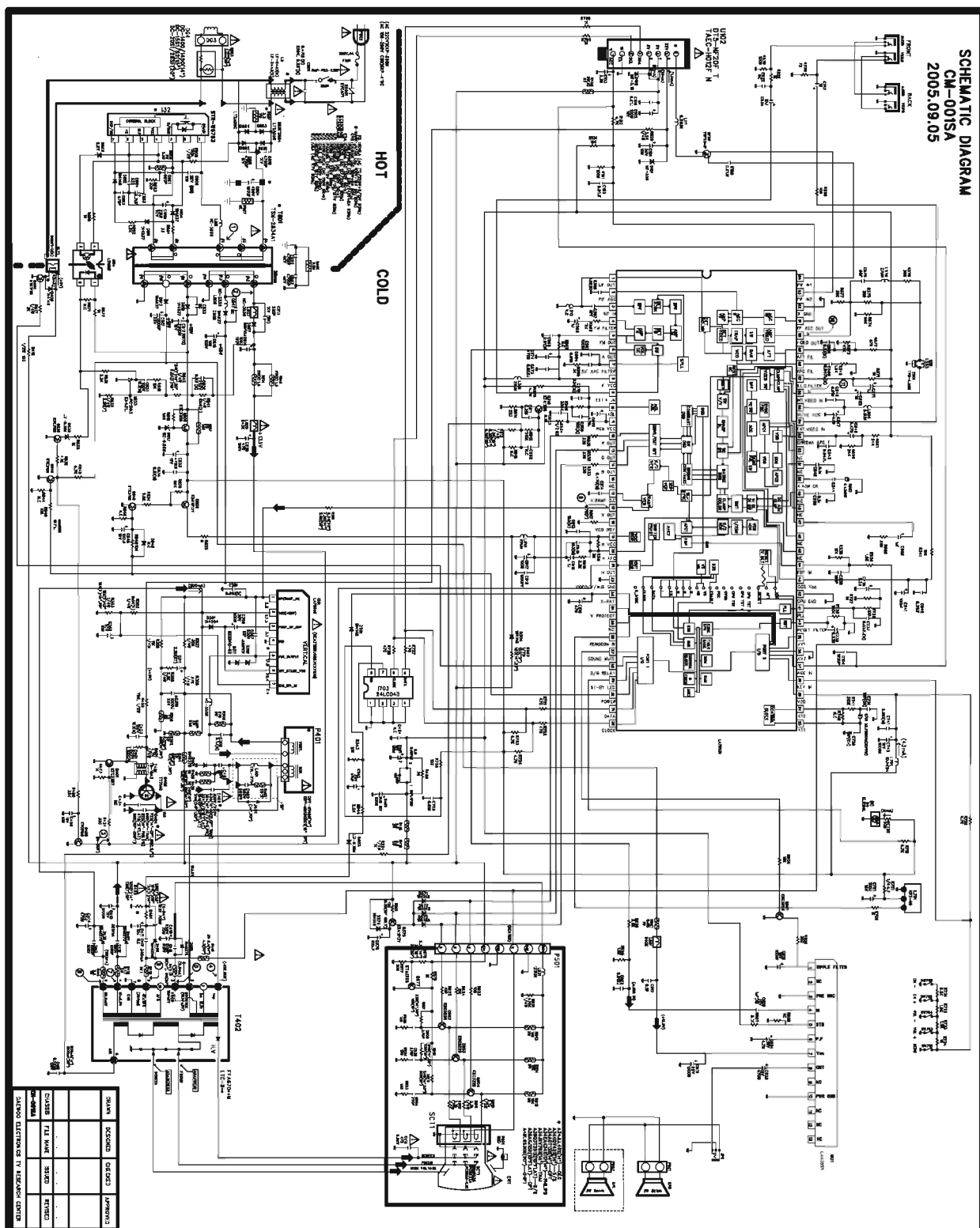
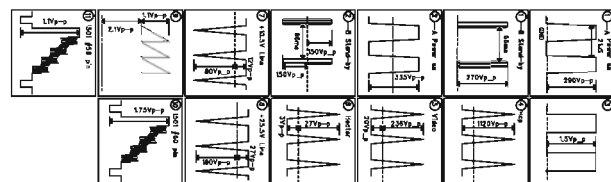
- Fixed value = 3

7) FACTORY OUTGOING MODE (S12 : FACT)

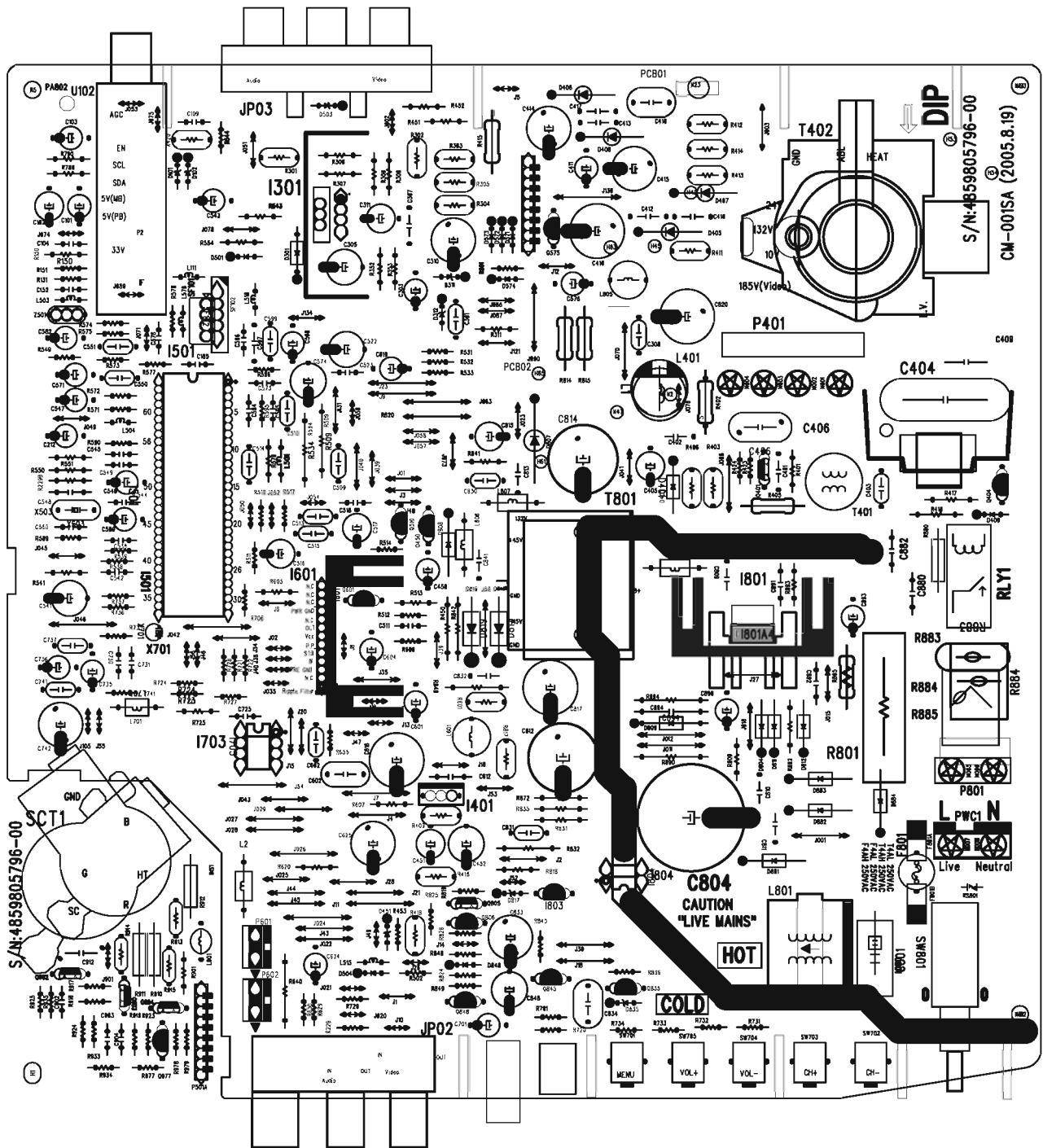
- If you select the S12, then the set becomes factory outgoing status.
- You can see the OSD "outgoing OK"

Schematic Diagram

CAUTION
 1. CAUTION
 2. CAUTION
 3. CAUTION
 4. CAUTION
 5. CAUTION
 6. CAUTION
 7. CAUTION
 8. CAUTION
 9. CAUTION
 10. CAUTION
 11. CAUTION
 12. CAUTION
 13. CAUTION
 14. CAUTION
 15. CAUTION
 16. CAUTION
 17. CAUTION
 18. CAUTION
 19. CAUTION
 20. CAUTION
 21. CAUTION
 22. CAUTION
 23. CAUTION
 24. CAUTION
 25. CAUTION
 26. CAUTION
 27. CAUTION
 28. CAUTION
 29. CAUTION
 30. CAUTION
 31. CAUTION
 32. CAUTION
 33. CAUTION
 34. CAUTION
 35. CAUTION
 36. CAUTION
 37. CAUTION
 38. CAUTION
 39. CAUTION
 40. CAUTION
 41. CAUTION
 42. CAUTION
 43. CAUTION
 44. CAUTION
 45. CAUTION
 46. CAUTION
 47. CAUTION
 48. CAUTION
 49. CAUTION
 50. CAUTION
 51. CAUTION
 52. CAUTION
 53. CAUTION
 54. CAUTION
 55. CAUTION
 56. CAUTION
 57. CAUTION
 58. CAUTION
 59. CAUTION
 60. CAUTION
 61. CAUTION
 62. CAUTION
 63. CAUTION
 64. CAUTION
 65. CAUTION
 66. CAUTION
 67. CAUTION
 68. CAUTION
 69. CAUTION
 70. CAUTION
 71. CAUTION
 72. CAUTION
 73. CAUTION
 74. CAUTION
 75. CAUTION
 76. CAUTION
 77. CAUTION
 78. CAUTION
 79. CAUTION
 80. CAUTION
 81. CAUTION
 82. CAUTION
 83. CAUTION
 84. CAUTION
 85. CAUTION
 86. CAUTION
 87. CAUTION
 88. CAUTION
 89. CAUTION
 90. CAUTION
 91. CAUTION
 92. CAUTION
 93. CAUTION
 94. CAUTION
 95. CAUTION
 96. CAUTION
 97. CAUTION
 98. CAUTION
 99. CAUTION
 100. CAUTION



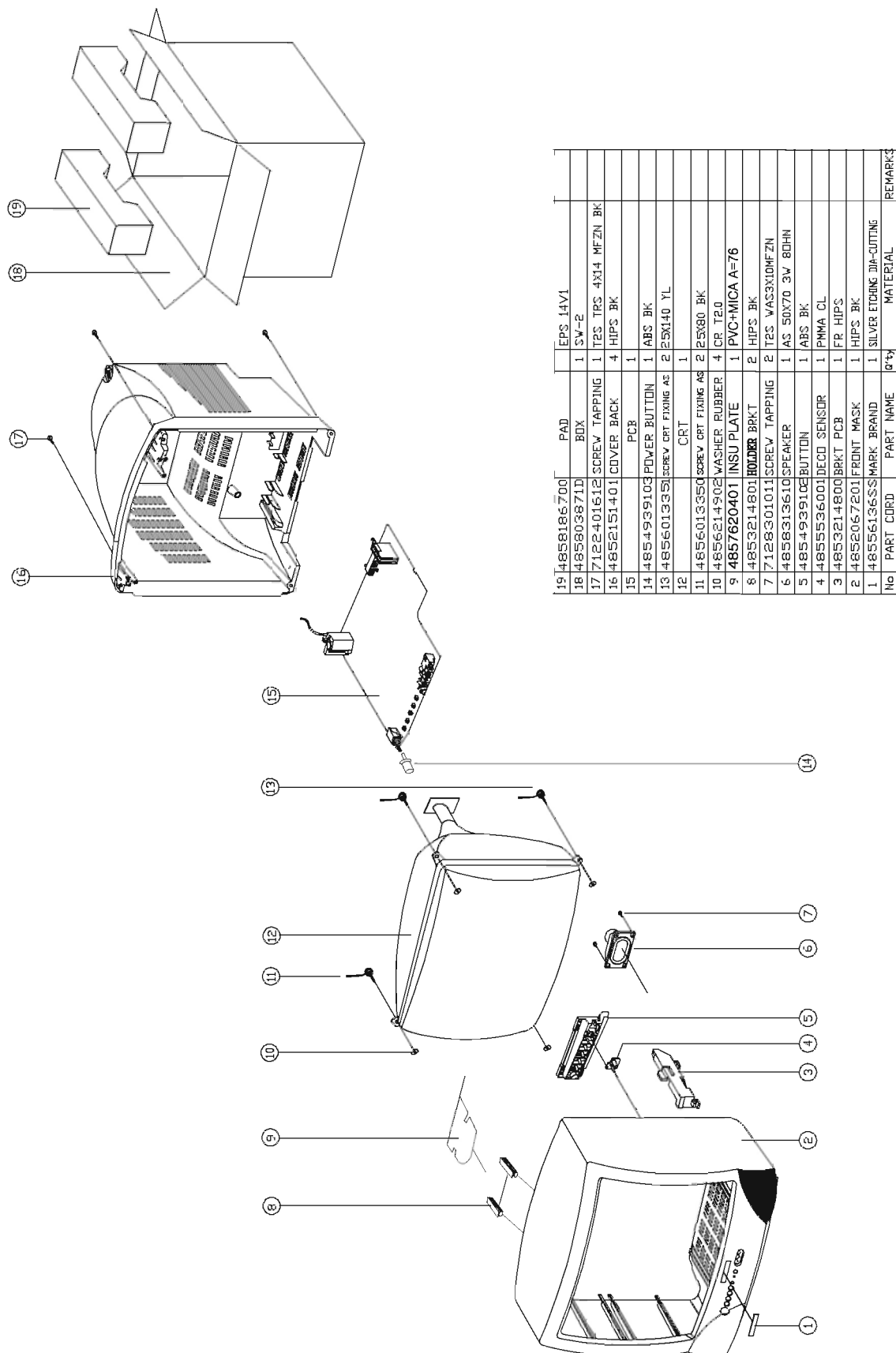
Printed Circuit Board



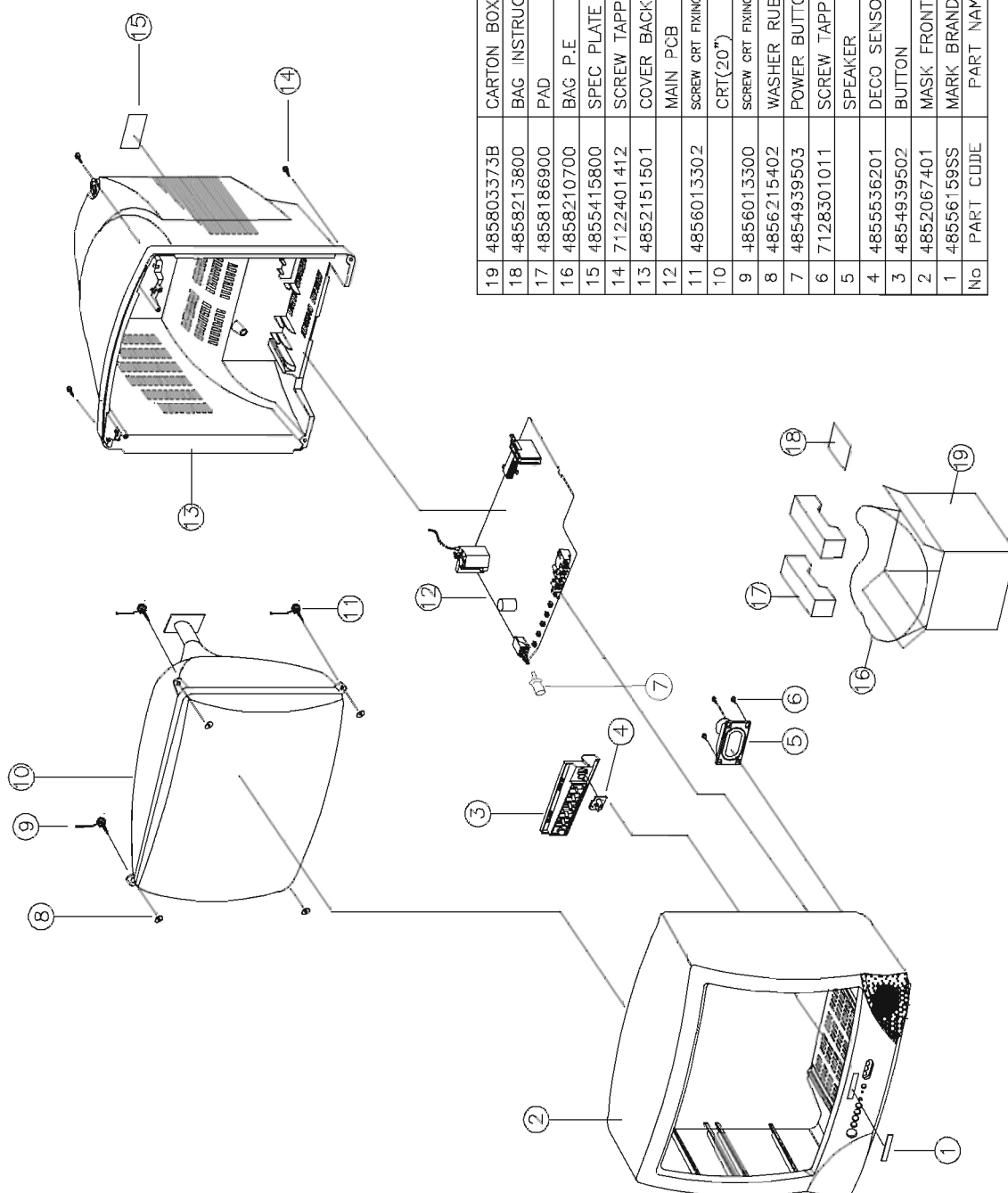


EXPLODED VIEW

1. DTO-141C

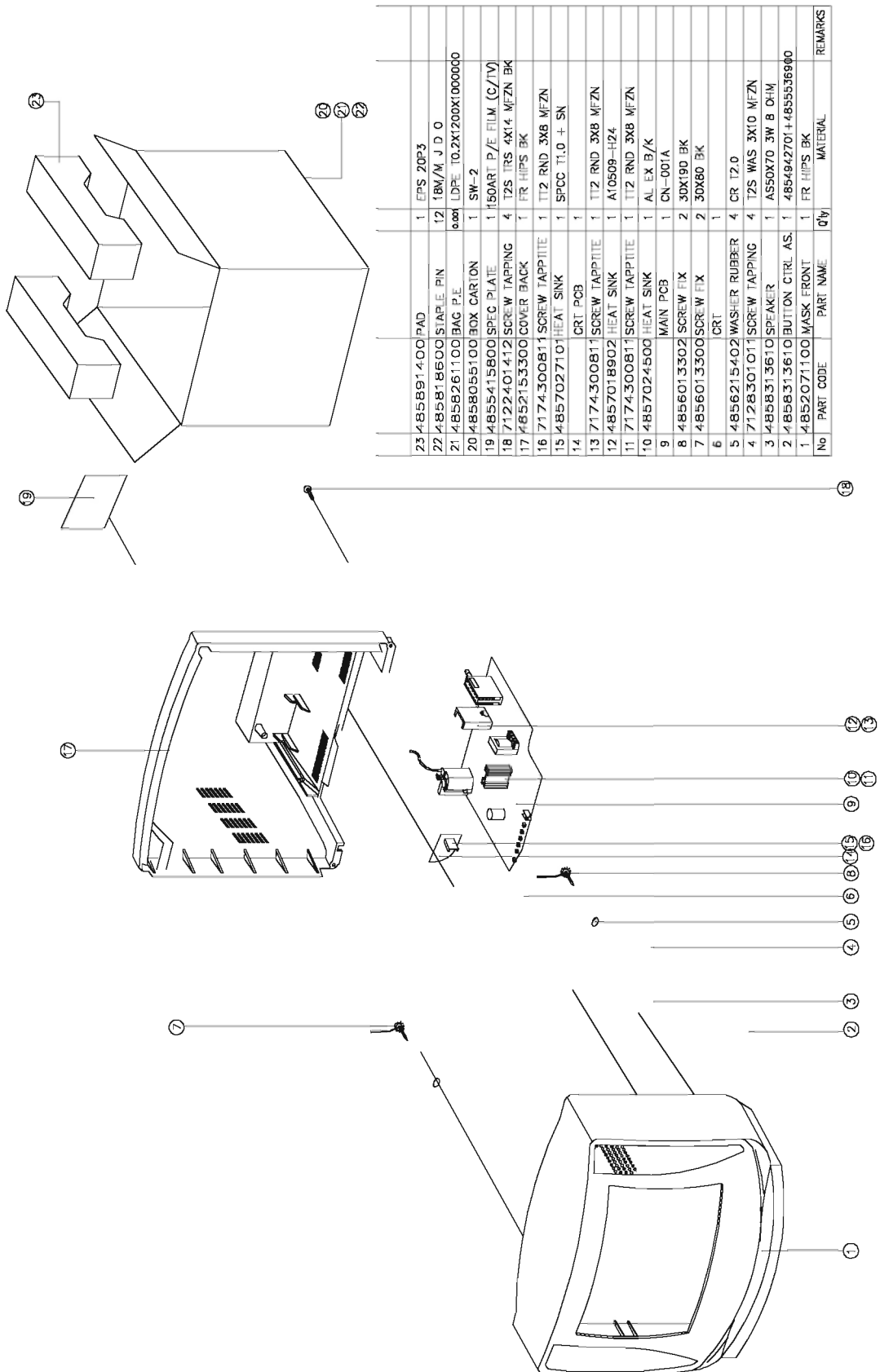


2. DTO-201C



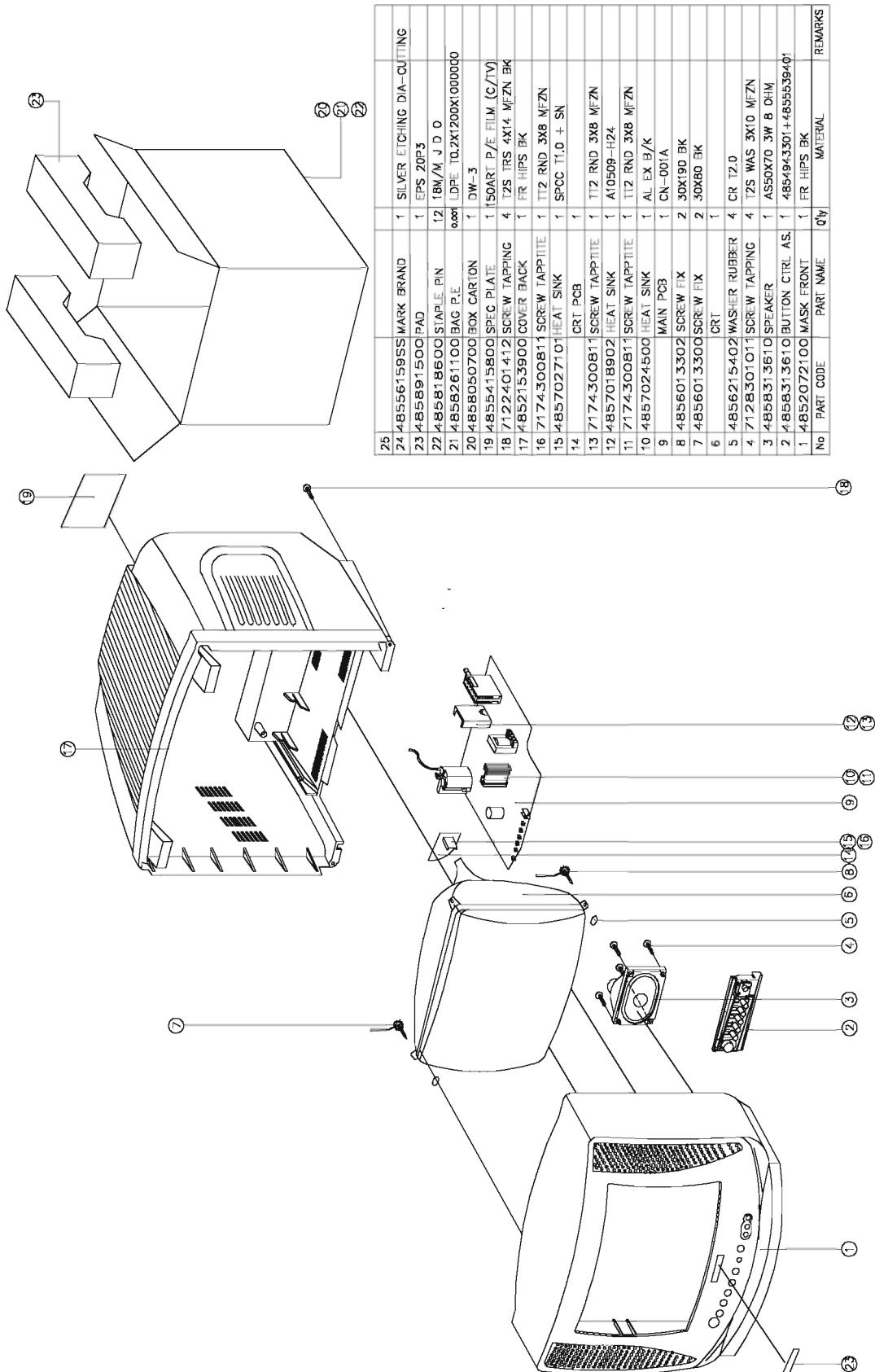
19	485803373B	CARTON BOX	1	DW-3A	
18	4858213800	BAG INSTRUCTION	1	LDPE T0.05X250X400	
17	4858186900	PAD	1	EPS 20V1	
16	4858210700	BAG P.E	0.0010	LDPE T0.05X1200X1000000	
15	4855415800	SPEC PLATE	1	150 ART P/E FILM(C/TV)	
14	7122401412	SCREW TAPPING	4	T2S TRS 4X14 MFZN BK	
13	4852151501	COVER BACK	1	HIPS BK	
12		MAIN PCB	1	CN-001A	
11	4856013302	SCREW CRT FIXING AS	2	30X190YL	
10		CRT(20")	1		
9	4856013300	SCREW CRT FIXING AS	2	30X80BK	
8	4856215402	WASHER RUBBER	4	CR T2.0	
7	4854939503	POWER BUTTON	1	ABS BK	
6	7128301011	SCREW TAPPING	4	T2S WAS 3X10 MFZN	
5		SPEAKER	1		
4	4855536201	DECO SENSOR	1	PMMA CL	
3	4854939502	BUTTON	1	ABS BK	
2	4852067401	MASK FRONT	1	FR HIPS BK	
1	48556159SS	MARK BRAND	1	SILVER ETCHING DIA-CUTTING	
No	PART CODE	PART NAME	Qty	MATERIAL	REMARKS

3. DTH-141C



EXPLODED VIEW

4. DTH-201C



No	PART CODE	PART NAME	Q'ty	MATERIAL	REMARKS
25	4855615955	MARK BRAND	1	SILVER ETCHING DIA-CUTTING	
24	4855891500	PAD	1	EPS 20P3	
23	485818600	STAPLE PIN	12	18M/M J.D.O	
22	4858261100	BAG P.E.	0000	LDPE 10.2X1200X1000000	
21	4858050700	BOX CARTON	1	DW-3	
20	4855415800	SPEC PLATE	1	150ART P/E FILM (C/TV)	
19	7122401412	SCREW TAPPING	4	T2S TRS 4X14 M/ZN BK	
18	4852153900	COVER BACK	1	FR HIPS BK	
17	7174300811	SCREW TAPPTITE	1	T12 RND 3X8 M/ZN	
16	4857027101	HEAT SINK	1	SPOC T1.0 + SN	
15	7174300811	SCREW TAPPTITE	1	T12 RND 3X8 M/ZN	
14	4857018902	HEAT SINK	1	A10509-H24	
13	7174300811	SCREW TAPPTITE	1	T12 RND 3X8 M/ZN	
12	4857024500	HEAT SINK	1	AL EX B/K	
11	4856013302	SCREW FIX	2	30X190 BK	
10	4856013300	SCREW FIX	2	30X80 BK	
9	4856215402	WASHER RUBBER	4	CR T2.0	
8	7128301011	SCREW TAPPING	4	T2S WAS 3X10 M/ZN	
7	4858313610	SPEAKER	1	AS50X70 3W B OHM	
6	4858313610	BUTTON CTRL AS	1	4854943301+485539401	
5	4852072100	MASK FRONT	1	FR HIPS BK	
4					
3					
2					
1					

Service Parts List

CAUTION

“ ® ” Parts recommended for stock.

“ ⚠ ” Safety critical component, Replace only with genuine Daewoo safety part.

LOC	PART CODE	PART NAME	DESCRIPTION	
ZZ100	48B434A08	TRANSMITTER REMOCON	R-43A08 (AA)	
ZZ110	PTACPDH729	ACCESSORY AS	DTH-14U1SSA	⚠
00010	4850A02510	ANT ROD	S3BW216B (L=600 MM)	
00030	4850Q00810	BATTERY	R6P/LN	
00040	4850A00650	TRANS ANT MATCHING	YSC-T-07 BR	®
00050	48586003S1	MANUAL INSTRUCTION	SPAIN	
M821	4858213803	BAG INSTRUCTION	L.D.P.E T0.05X250X400(+20)	
ZZ120	PTBCSHH429	COVER BACK AS	DTH-14U1FS	
M211	4852153300	COVER BACK	FR HIPS	
M211A	4857817612	CLOTH BLACK	FELT 250X20X0.7	
ZZ130	PTPKCPH429	PACKING AS	DTH-14U1FS	
10	6520010100	STAPLE PIN	AUTO W65	
M801	4858055100	BOX CARTON	SW-2	
M811	4858191400	PAD	EPS 14U1	
M821	4858210601	BAG P.E	L.D.P.E T0.03X1000X900	
ZZ131	48519A7310	CRT GROUND NET	1403S-1015-1P	
ZZ132	58G0000170	COIL DEGAUSSING	DC-1450 AL	⚠
ZZ140	PTCACA729	CABINET AS	DTH-14U1SSA	
CRT1	PTRTPDH529	CRT AS	DTH-14V1FSN	⚠
V01	58D0000082	COIL DY	ODY-M1489	⚠
V04	2224050029	BOND SILICON	LDC7091 CARTRIDGE	
V05	4850PM001-	PCM	NY-225 (MINI NECK)	
V06	48A96R004-	RUBBER WEDGE	HMR 28 SR (0X54)	
V901	48A96314C5	CRT BARE	A34AGT13X (R)	
M191	4851933611	BUTTON CTRL	4942711+5536900	
M191A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
M201A	4856017302	SCREW CRT FIX	5X25 L80 BK	
M201B	4856017306	SCREW CRT FIX	5X25 L140 YL	
M211A	7172401412	SCREW TAPPTITE	TT2 TRS 4X14 MFZN BK	
M211B	7172401412	SCREW TAPPTITE	TT2 TRS 4X14 MFZN BK	
M491	4854942711	BUTTON	ABS GY	
M541	4855415800	SPEC PLATE	150ART P/E FILM (C/TV)	⚠
M561	4855613600	MARK BRAND	COPPER T0.4	
M591	4855930900	DECO TERM	PVC CL T0.2	
M681	4856812001	TIE CABLE	NYLON66 DA100	
M781	4857821105	CLOTH BLACK	FELT 90X10X1.5	
SP01A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
SP02A	7178301011	SCREW TAPPTITE	TT2 WAS 3X10 MFZN	
ZZ200	PTFMSJH707	MASK FRONT AS	DTH-14U1SSN	
M201	4852071111	MASK FRONT	HIPS GY	
ZZ202	PTSPPDH729	SPEAKER AS	DTH-14U1SSA	
PA601	4850703S51	CONNECTOR	YH025-03+35098+ULW=300	
PA602	4850703S52	CONNECTOR	YH025-03+35098+ULW=400	
SP01	4858314010	SPEAKER	SP-5070F01 3W 8 OHM	
SP02	4858314010	SPEAKER	SP-5070F01 3W 8 OHM	
ZZ290	PTMPMSH729	PCB MAIN MANUAL AS	DTH-14U1SSA	
10	2193110001	SOLDER WIRE	SN-3.0AG(NP303T) Φ3.0	
30	2291050620	FLUX SOLDER	DF-2810U (0.810)	
40	2291050301	FLUX SOLVENT	IM-1000	
C404	CMYH3C722H	C MYLAR	1.6KV BUP 7200PF H	

LOC	PART CODE	PART NAME	DESCRIPTION	
C801	CL1UC3104M	C LINE ACROSS	WORLD AC250V 0.1UF M R.47	⚠
C804	CEYD2W151D	C ELECTRO	450V FHS 150MF (25X40)	
C880	CH1BFE472M	C CERA AC	AC400V 4700PF M U/C/V	⚠
C882	CH1BFE472M	C CERA AC	AC400V 4700PF M U/C/V	⚠
D703	DLH2PR---	LED BLOCK	LH-2P-R	
I301	PTE2SW7100	HEAT SINK ASS'Y	1LA78040-- + 7174300811	
00001	1LA78040--	IC VERTICAL	LA78040	
0000A	4857027100	HEAT SINK	SPCC T1.0+SN	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I401	1S7805P1C-	IC REGULATOR	S7805PIC 5.0V 1.0A T0-220F-3SL S/LEAD	
I501	1DW7693SM1	IC MICOM	DW76931-SM1(56T8)	
I601	PTG2SW4607	HEAT SINK ASS'Y	1LA42051-- + 7174300811	
00001	1LA42051--	IC AUDIO AMP	LA42051-E	
0000A	4857024607	HEAT SINK	AL EX DG	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I703	124LC04B--	IC MEMORY	24LC04B	
I801	PTF2SW4607	HEAT SINK ASS'Y	1STRW6753- + 7174300811	
00001	1STRW6753-	IC POWER	STR-W6753	
0000A	4857024607	HEAT SINK	AL EX DG	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
I804	1LTV817C--	IC PHOTO COUPLER	LTV-817C	⚠
IL701	1KRT30---	IC PREAMP	KRT30	
JP02	4859109950	JACK PIN BOARD	PH-JB-9710A	
JP03	4859110150	JACK PIN BOARD	YS01-9615D	
L801	5PLF24A2--	FILTER LINE	LF-24A2	
M682	4856812001	TIE CABLE	NYLON66 DA100	
M683	4856812001	TIE CABLE	NYLON66 DA100	
P401	4859240020	CONN WAFER	YFW500-05	
P501A	4850709N02	CONNECTOR	YBNH250-09YBNT025+ULW=300	
P801	4859242220	CONN WAFER	YFW800-02	
PWC1	4859909110	CORD POWER AS	LP-16+H03VH2-F+HOU=2600	⚠
PWCAB	4859242220	CONN WAFER	YFW800-02	
Q402	PTF2SW7201	HEAT SINK ASS'Y	TTT2140--- + 7174300811	
00001	TTT2140---	TR	TT2140	
0000A	4857027201	HEAT SINK	AL T1.0	
0000B	7174300811	SCREW TAPPTITE	TT2 RND 3X8 MFZN	
R801	RX07B229JQ	R CEMENT	7W 2.2 OHM J BEN 25MM 4P	
RLY1	5SC0101339	SW RELAY	SDT-S-105LMR	⚠
RS801	DSVC471D14	VARISTOR	SVC471D14A (BULK)	⚠
SCT1	4859303930	SOCKET CRT	ISMG03S INCHANG	⚠
SF101	5PTSF5241P	FILTER SAW	TSF5241P	
SW801	5S40101146	SW POWER PUSH	SS-160-7-B	⚠
T401	50D10A3---	TRANS DRIVE	TD-10A3	⚠
T402	50H0000243	FBT	LTC-519	⚠
T801	50M2834A3-	TRANS SMPS	TSM-2834A3	⚠
U102	4859726730	TUNER VARACTOR	TAEC-H012F(A)	
X701	5XYR03276C	CRYSTAL QUARTZ	C-001R 32.768000KHZ 20PPM	
ZZ200	PTMPJH729	PCB MAIN (RHU) AS	DTH-14U1SSA	
C310	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP	
C406	CMXF2E434J	C MYLAR	250V MPP 0.43MF J (TP)	

LOC	PART CODE	PART NAME	DESCRIPTION
C410	CEXF2E220V	C ELECTRO	250V RSS 22MF (13X20) TP
C414	CEXF1V471V	C ELECTRO	35V RSS 470MF (10X20) TP
C415	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C616	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
C625	CEXF1C471V	C ELECTRO	16V RSS 470MF (8X12)TP
C742	CEXF1C102V	C ELECTRO	16V RSS 1000MF (10X20) TP
C809	CBXB3D102K	C CERA SEMI	2KV BL(N) 1000PF K (T)
C810	CH1BEE472M	C CERA AC	U/C/V 2.5KV 4700PF TP
C811	CH1BEE472M	C CERA AC	U/C/V 2.5KV 4700PF TP
C812	CEXF1E222V	C ELECTRO	25V RSS 2200MF (16X25) TP
C813	CBXB3D221K	C CERA SEMI	2KV BL(N) 220PF K (T)
C814	CEXF2C101V	C ELECTRO	160V RSS 100MF (16X25) TP
C817	CEXF1E102V	C ELECTRO	25V RSS 1000MF (13X20) TP
C820	CEXF2C470V	C ELECTRO	160V RSS 47MF (13X25) TP
C841	CBXB3D471K	C CERA SEMI	2KV BL(N) 470PF K (T)
C912	CH1BEE472M	C CERA AC	U/C/V 2.5KV 4700PF TP
R883	DDT140M290	POSISTOR	ECPAD140M290
ZZ200	PTMPJBH729	PCB MAIN M-10 AS	DTH-14U1SSA
10	2TM18006BE	TAPE MASKING	6.2X500
P601	485923162S	CONN WAFER	YW025-03 (STICK)
P602	485923162S	CONN WAFER	YW025-03 (STICK)
R415	RS02Z249JS	R M-OXIDE FILM	2W 2.4 OHM J SMALL
R805	RS02Z398JS	R M-OXIDE FILM	2W 0.39 OHM J SMALL
R814	RS02Z159JS	R M-OXIDE FILM	2W 1.5 OHM J SMALL
R815	RS02Z159JS	R M-OXIDE FILM	2W 1.5 OHM J SMALL
ZZ200	PTMPJRH729	PCB MAIN RADIAL AS	DTH-14U1SSA
C101	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C102	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C103	CEXF1H339V	C ELECTRO	50V RSS 3.3MF (5X11) TP
C212	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C301	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
C303	CEXF1H100C	C ELECTRO	50V RUS 10MF (5X11) TP
C305	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP
C307	CXSL2H100D	C CERA	500V SL 10PF D (TAPPING)
C308	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C311	CEXD1H229Q	C ELECTRO	50V RT 2.2MF (6.3X11) TP
C401	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C402	CCXB2H561K	C CERA	500V B 560PF K (TAPPING)
C403	CMXL2A103J	C MYLAR	MEU 100V 0.01MF J
C405	CEXF2C109V	C ELECTRO	160V RSS 1MF (6.3X11) TP
C411	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C412	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C413	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C416	CCXB2H102K	C CERA	500V B 1000PF K (TAPPING)
C418	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C450	CEXF1C220V	C ELECTRO	RSS 16V 22MF 5*11
C451	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C452	CEXF1C221C	C ELECTRO	16V RUS 220MF (8X11.5) TP
C509	CMXM2A102J	C MYLAR	100V 1000PF J (TP)
C510	CMXL1J334J	C MYLAR	63V MEU 0.33MF J (TP)
C513	CMXM2A153J	C MYLAR	100V 0.015MF J (TP)
C514	CMXL1J474J	C MYLAR	63V MEU 0.47MF J
C515	CMXM2A153J	C MYLAR	100V 0.015MF J (TP)
C516	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C517	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C522	CEXE1C471E	C ELECTRO	16V RM 470MF (10X12.5) TP

LOC	PART CODE	PART NAME	DESCRIPTION
C541	CEXF1H101V	C ELECTRO	50V RSS 100MF (8X11.5) TP
C543	CEXF1E470V	C ELECTRO	RSS 25V 47MF 5X11 P5.0 TA
C546	CEXF1H478V	C ELECTRO	50V RSS 0.47MF (5X11) TP
C547	CEXF1E470V	C ELECTRO	RSS 25V 47MF 5X11 P5.0 TA
C550	CMXM2A473J	C MYLAR	100V 0.047MF J (TP)
C551	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C571	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C574	CEXE1C471E	C ELECTRO	16V RM 470MF (10X12.5) TP
C576	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C582	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C589	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C597	CXCH1H809D	C CERA	50V CH 8PF D (TAPPING)
C598	CEXF1H109V	C ELECTRO	50V RSS 1MF (5X11) TP
C599	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
C601	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C602	CMXL1J105J	C MYLAR	63V MEU 1MF J
C604	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
C634	CEXF1H100V	C ELECTRO	50V RSS 10MF (5X11) TP
C662	CMXM2A123J	C MYLAR	100V 0.012MF J (TP)
C701	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C735	CEXF1H338V	C ELECTRO	50V RSS 0.33MF (5X11) TP
C736	CEXF1H229V	C ELECTRO	50V RSS 2.2MF (5X11) TP
C737	CMXM2A333J	C MYLAR	100V 0.033MF J (TP)
C741	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
C815	CEXF2A100V	C ELECTRO	100V RSS 10MF (6.3X11) TP
C819	CEXF1H470V	C ELECTRO	50V RSS 47MF (6.3X11) TP
C830	CMXL2E104K	C MYLAR	250V MEU 0.1MF K
C831	CMXM2A103J	C MYLAR	100V 0.01MF J (TP)
C833	CEXE1C471E	C ELECTRO	16V RM 470MF (10X12.5) TP
C834	CMXM2A104J	C MYLAR	100V 0.1MF J (TP)
C848	CEXF1C101V	C ELECTRO	16V RSS 100MF (6.3X11) TP
C890	CEXF1H220V	C ELECTRO	50V RSS 22MF (5X11) TP
C893	CEXF1H479V	C ELECTRO	50V RSS 4.7MF (5X11) TP
F801	5FWPS4022L	FUSE	WIDE TL 250V 4A CASE
I803	1K1A431B--	IC REGULATOR(SHUNT)	KIA431B 2.495V 0.5% TO-92
L601	58CX430599	COIL CHOKE	AZ-9004Y 940K TP
L805	58CX430599	COIL CHOKE	AZ-9004Y 940K TP
L901	5CPX121J--	COIL PEAKING	120UH J (RADIAL)
Q401	TKTC3207--	TR	KTC3207 (TP)
Q404	TKTC3198Y-	TR	KTC3198Y
Q450	TKTC3198Y-	TR	KTC3198Y
Q510	TKTA1266Y-	TR	KTA1266Y (TP)
Q575	TKSA1013Y-	TR	KSA1013Y (TP)
Q601	TKTC3198Y-	TR	KTC3198Y
Q805	TKTC3205Y-	TR	KTC3205Y (TP)
Q806	TKSA1013Y-	TR	KSA1013Y (TP)
Q835	TKTC3198Y-	TR	KTC3198Y
Q845	TKTC3198Y-	TR	KTC3198Y
Q848	TKTC3198Y-	TR	KTC3198Y
Q902	TKTC3207--	TR	KTC3207 (TP)
Q903	TKTC3207--	TR	KTC3207 (TP)
Q904	TKTC3207--	TR	KTC3207 (TP)
Q977	TKTA1266Y-	TR	KTA1266Y (TP)
R301	RN02B561JS	R METAL FILM	2W 560 OHM J SMALL
R302	RN02B561JS	R METAL FILM	2W 560 OHM J SMALL
R303	RN02B129JS	R METAL FILM	2W 1.2 OHM J SMALL

Service Parts List

LOC	PART CODE	PART NAME	DESCRIPTION
R305	RN02B271JS	R METAL FILM	2W 270 OHM J SMALL
R403	RN02B123JS	R METAL FILM	2W 12K OHM J SMALL
R406	RN02B123JS	R METAL FILM	2W 12K OHM J SMALL
R409	RN02B560JS	R METAL FILM	2W 56 OHM J SMALL
R411	RN02B150JS	R METAL FILM	2W 15 OHM J SMALL
R412	RN01B109JS	R METAL FILM	1W 1 OHM J SMALL
R413	RN02B478JS	R METAL FILM	2W 0.47 OHM J SMALL
R414	RN01B229JS	R METAL FILM	1W 2.2 OHM J SMALL
R418	RN02B569JS	R METAL FILM	2W 5.6 OHM J SMALL
R419	RN02B569JS	R METAL FILM	2W 5.6 OHM J SMALL
R420	RN02B620JS	R METAL FILM	2W 62 OHM J SMALL
R601	RN02B688JS	R METAL FILM	2W 0.68 OHM J SMALL
R817	RN02B391JS	R METAL FILM	2W 390 OHM J SMALL
R913	RN02B153JS	R METAL FILM	2W 15K OHM J SMALL
R914	RN02B153JS	R METAL FILM	2W 15K OHM J SMALL
R915	RN02B153JS	R METAL FILM	2W 15K OHM J SMALL
SW701	5S50101090	SW TACT	THVH472GCA
SW702	5S50101090	SW TACT	THVH472GCA
SW703	5S50101090	SW TACT	THVH472GCA
SW704	5S50101090	SW TACT	THVH472GCA
SW705	5S50101090	SW TACT	THVH472GCA
X503	5XE4R4336C	CRYSTAL QUARTZ	HC-49/U 4.433619MHZ 20PPM
Z501	5PX0T4R5MB	FILTER CERA	XT 4.5MB-TP
ZZ200	PTMPJAH729	PCB MAIN AXIAL AS	DTH-14U1SSA
10	2TM14006LB	TAPE MASKING	3M #232 6.0X2000M
20	2TM10006LB	TAPE MASKING	3M #232-MAP-C 6.2X2000M
A001	4859805796	PCB MAIN	246X246 S1B
C104	CCZB1H102K	C CERA	50V B 1000PF K (AXIAL)
C109	CCZF1H103Z	C CERA	50V F 0.01MF Z
C152	CCZF1H103Z	C CERA	50V F 0.01MF Z
C185	CCZF1H103Z	C CERA	50V F 0.01MF Z
C511	CCZB1H222K	C CERA	50V B 2200PF K AXIAL
C518	CCZB1H102K	C CERA	50V B 1000PF K (AXIAL)
C523	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z
C538	CCZB1H181K	C CERA	50V B 180PF K (AXIAL)
C542	CCZF1H103Z	C CERA	50V F 0.01MF Z
C544	CZCH1H160J	C CERA	50V CH 16PF J (AXIAL)
C545	CCZB1H473K	C CERA	HIKB 50V 0.047MF K AXIAL
C548	CCZF1H103Z	C CERA	50V F 0.01MF Z
C549	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z
C560	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z
C573	CCZF1H223Z	C CERA	50V F 0.022MF Z
C578	CZSL1H560J	C CERA	50V SL 56PF J (AXIAL)
C594	CCZF1H103Z	C CERA	50V F 0.01MF Z
C595	CCZB1H102K	C CERA	50V B 1000PF K (AXIAL)
C596	CCZF1H223Z	C CERA	50V F 0.022MF Z
C612	CBZF1H104Z	C CERA SEMI	50V F 0.1MF Z
C725	CCZF1H103Z	C CERA	50V F 0.01MF Z
C730	CZCH1H180J	C CERA	50V CH 18PF J (AXIAL)
C731	CZCH1H180J	C CERA	50V CH 18PF J (AXIAL)
C891	CCZB1H821K	C CERA	50V B 820PF K AXIAL
C892	CCZB1H471K	C CERA	50V B 470PF K (AXIAL)
C894	CCZB1H333K	C CERA	50V B 0.033MF K AXL
C902	CCZB1H271K	C CERA	50V B 270PF K
C903	CCZB1H271K	C CERA	50V B 270PF K
C904	CCZB1H271K	C CERA	50V B 270PF K

LOC	PART CODE	PART NAME	DESCRIPTION
D101	DUZ33B----	DIODE ZENER	UZ-33B
D102	DUZ5R1BM--	DIODE ZENER	UZ-5.1BM
D301	D1N4004S--	DIODE	1N4004S
D311	DBZX55C62-	DIODE ZENER	BZX55C-62
D312	85801060GY	WIRE COPPER	1/0.6 TIN COATING
D401	D1N4937G--	DIODE	1N4937G (TAPPING)
D405	D1N4937G--	DIODE	1N4937G (TAPPING)
D406	D1N4937G--	DIODE	1N4937G (TAPPING)
D407	D1N4937G--	DIODE	1N4937G (TAPPING)
D408	D1N4937G--	DIODE	1N4937G (TAPPING)
D409	D1N4148---	DIODE	1N4148 (TAPPING)
D501	D1N4148---	DIODE	1N4148 (TAPPING)
D503	DUZ9R1BM--	DIODE ZENER	UZ-9.1BM
D504	D1N4148---	DIODE	1N4148 (TAPPING)
D571	D1N4148---	DIODE	1N4148 (TAPPING)
D572	D1N4148---	DIODE	1N4148 (TAPPING)
D573	D1N4148---	DIODE	1N4148 (TAPPING)
D574	D1N4148---	DIODE	1N4148 (TAPPING)
D804	D1N4937G--	DIODE	1N4937G (TAPPING)
D807	DRGP15J---	DIODE	RGP15J DO-204AC 600V 1.5A
D808	D1N4937G--	DIODE	1N4937G (TAPPING)
D809	DMTZJ6R8C-	DIODE ZENER	MTZJ 6.8C
D811	D1N4937G--	DIODE	1N4937G (TAPPING)
D812	D1N4148---	DIODE	1N4148 (TAPPING)
D813	D1N4937G--	DIODE	1N4937G (TAPPING)
D817	DMTZJ5R6B-	DIODE ZENER	MTZJ 5.6B
D819	D1N4937G--	DIODE	1N4937G (TAPPING)
D835	DUZ9R1BM--	DIODE ZENER	UZ-9.1BM
D848	D1N4148---	DIODE	1N4148 (TAPPING)
D881	DLT2A05G--	DIODE	LT2A05G (TP)
D882	DLT2A05G--	DIODE	LT2A05G (TP)
D883	DLT2A05G--	DIODE	LT2A05G (TP)
D884	DLT2A05G--	DIODE	LT2A05G (TP)
J001	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J002	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J003	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J01	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J011	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J012	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J015	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J016	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J02	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J020	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J021	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J022	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J023	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J024	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J025	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J026	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J027	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J028	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J029	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J035	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J039	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J040	85801060GY	WIRE COPPER	1/0.6 TIN COATING
J041	85801060GY	WIRE COPPER	1/0.6 TIN COATING

LOC	PART CODE	PART NAME	DESCRIPTION	
J042	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J043	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J045	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J046	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J049	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J050	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J051	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J052	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J053	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J054	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J056	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J057	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J058	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J063	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J070	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J071	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J073	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J074	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J076	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J078	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J086	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J087	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J088	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J089	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J090	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J1	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J10	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J105	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J11	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J12	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J121	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J13	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J130	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J131	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J134	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J14	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J15	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J16	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J18	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J19	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J2	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J20	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J21	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J23	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J26	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J27	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J28	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J3	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J30	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J34	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J35	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J38	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J39	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J4	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J40	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J43	85801060GY	WIRE COPPER	1/0.6 TIN COATING	

LOC	PART CODE	PART NAME	DESCRIPTION	
J44	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J45	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J46	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J47	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J48	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J49	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J52	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J53	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J54	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J55	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J56	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J6	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J7	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J8	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J9	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
J901	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
L111	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
L2	5MC0000100	COIL BEAD	HC-3550	
L501	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)	
L503	5CPZ100K02	COIL PEAKING	10UH K (AXIAL 3.5MM)	
L504	5CPZ569K02	COIL PEAKING	5.6UH K (AXIAL 3.5MM)	
L515	5CPZ220K02	COIL PEAKING	22UH K (AXIAL 3.5MM)	
L578	5CPZ270K02	COIL PEAKING	27UH K (AXIAL 3.5MM)	
L701	5CPZ100K04	COIL PEAKING	10UH 10.5MM K (LAL04TB)	
L806	5MC0000100	COIL BEAD	HC-3550	
L807	5MC0000100	COIL BEAD	HC-3550	
L811	5MC0000100	COIL BEAD	HC-3550	
R131	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J	
R150	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R151	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J	
R229	RD-AZ750J-	R CARBON FILM	1/6 75 OHM J	
R306	RD-4Z273J-	R CARBON FILM	1/4 27K OHM J	
R307	RD-4Z303J-	R CARBON FILM	1/4 30K OHM J	
R308	RD-4Z222J-	R CARBON FILM	1/4 2.2K OHM J	
R309	RD-4Z113J-	R CARBON FILM	1/4 11K OHM J	
R311	RD-AZ752J-	R CARBON FILM	1/6 7.5K OHM J	
R352	RN-4Z1803F	R METAL FILM	1/4 180K OHM F	
R353	RN-4Z1502F	R METAL FILM	1/4 15K OHM F	
R401	RD-4Z472J-	R CARBON FILM	1/4 4.7K OHM J	
R405	RD-2Z751J-	R CARBON FILM	1/2 750 OHM J	
R416	RD-2Z121J-	R CARBON FILM	1/2 120 OHM J	
R417	RD-4Z302J-	R CARBON FILM	1/4 3K OHM J	
R423	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R424	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J	
R450	RD-AZ333J-	R CARBON FILM	1/6 33K OHM J	
R451	RN-4Z1502F	R METAL FILM	1/4 15K OHM F	
R452	RN-4Z1202F	R METAL FILM	1/4 12K OHM F	
R501	RD-AZ153J-	R CARBON FILM	1/6 15K OHM J	
R502	RD-AZ151J-	R CARBON FILM	1/6 150 OHM J	
R509	RD-AZ334J-	R CARBON FILM	1/6 330K OHM J	
R511	RD-AZ205J-	R CARBON FILM	1/6 2M OHM J	
R512	RD-AZ514J-	R CARBON FILM	1/6 510K OHM J	
R513	RD-4Z822J-	R CARBON FILM	1/4 8.2K OHM J	
R514	RD-AZ221J-	R CARBON FILM	1/6 220 OHM J	
R516	RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J	
R517	RN-AZ4701F	R METAL FILM	1/6 4.7K OHM F	

Service Parts List

LOC	PART CODE	PART NAME	DESCRIPTION	
R531	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J	
R532	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J	
R533	RD-AZ331J-	R CARBON FILM	1/6 330 OHM J	
R534	RD-2Z820J-	R CARBON FILM	1/2 82 OHM J	
R538	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R539	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J	
R541	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R543	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R544	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J	
R549	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J	
R550	RD-AZ243J-	R CARBON FILM	1/6 24K OHM J	
R551	RD-4Z243J-	R CARBON FILM	1/4 24K OHM J	
R554	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J	
R571	RD-AZ105J-	R CARBON FILM	1/6 1M OHM J	
R572	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R573	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R574	RD-AZ681J-	R CARBON FILM	1/6 680 OHM J	
R575	RD-AZ391J-	R CARBON FILM	1/6 390 OHM J	
R576	RD-4Z475J-	R CARBON FILM	1/4 4.7M OHM J	
R577	RD-AZ391J-	R CARBON FILM	1/6 390 OHM J	
R578	RD-AZ361J-	R CARBON FILM	1/6 360 OHM J	
R589	RD-AZ391J-	R CARBON FILM	1/6 390 OHM J	
R590	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R595	RD-AZ302J-	R CARBON FILM	1/6 3K OHM J	
R596	RD-AZ123J-	R CARBON FILM	1/6 12K OHM J	
R605	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R606	RD-AZ301J-	R CARBON FILM	1/6 300 OHM J	
R607	RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J	
R620	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J	
R629	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R630	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J	
R640	RD-2Z241J-	R CARBON FILM	1/2 240 OHM J	
R655	RD-AZ182J-	R CARBON FILM	1/6 1.8K OHM J	
R701	RD-AZ479J-	R CARBON FILM	1/6 4.7 OHM J	
R706	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R720	RD-AZ201J-	R CARBON FILM	1/6 200 OHM J	
R721	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R722	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R723	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R724	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R725	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R727	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R728	RD-AZ471J-	R CARBON FILM	1/6 470 OHM J	
R729	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R731	RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J	
R732	RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J	
R733	RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J	
R734	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R735	RD-AZ104J-	R CARBON FILM	1/6 100K OHM J	
R736	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R737	RD-AZ105J-	R CARBON FILM	1/6 1M OHM J	
R741	RD-AZ514J-	R CARBON FILM	1/6 510K OHM J	
R789	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J	
R790	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J	
R809	RD-4Z184J-	R CARBON FILM	1/4 180K OHM J	
R818	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	

LOC	PART CODE	PART NAME	DESCRIPTION	
R819	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J	
R820	RD-4Z392J-	R CARBON FILM	1/4 3.9K OHM J	
R824	RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J	
R825	85801060GY	WIRE COPPER	1/0.6 TIN COATING	
R826	RD-AZ563J-	R CARBON FILM	1/6 56K OHM J	
R831	RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J	
R832	RN-AZ2201F	R METAL FILM	1/6 2.2K OHM F	
R835	RD-AZ561J-	R CARBON FILM	1/6 560 OHM J	
R836	RD-AZ473J-	R CARBON FILM	1/6 47K OHM J	
R841	RN-4Z1003F	R METAL FILM	1/4 100K OHM F	
R842	RN-AZ1502F	R METAL FILM	1/6 15K OHM F	
R845	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R846	RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J	
R848	RD-AZ103J-	R CARBON FILM	1/6 10K OHM J	
R872	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R880	RC-2Z565KP	R CARBON COMP	1/2 5.6M OHM K	△
R890	RD-4Z102J-	R CARBON FILM	1/4 1K OHM J	
R892	RD-AZ152J-	R CARBON FILM	1/4 1.5K OHM J	
R893	RD-AZ331J-	R CARBON FILM	1/4 330 OHM J	
R894	RD-4Z330J-	R CARBON FILM	1/4 33 OHM J	
R901	RD-AZ474J-	R CARBON FILM	1/4 470K OHM J	
R910	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J	
R911	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J	
R912	RD-2Z332J-	R CARBON FILM	1/2 3.3K OHM J	
R917	RD-AZ201J-	R CARBON FILM	1/6 200 OHM J	
R918	RD-AZ241J-	R CARBON FILM	1/6 240 OHM J	
R919	RD-AZ241J-	R CARBON FILM	1/6 240 OHM J	
R923	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R924	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R925	RD-AZ101J-	R CARBON FILM	1/6 100 OHM J	
R933	RD-AZ121J-	R CARBON FILM	1/6 120 OHM J	
R934	RD-AZ121J-	R CARBON FILM	1/6 120 OHM J	
R935	RD-AZ121J-	R CARBON FILM	1/6 120 OHM J	
R977	RD-AZ201J-	R CARBON FILM	1/6 200 OHM J	
R978	RD-AZ102J-	R CARBON FILM	1/6 1K OHM J	
R979	RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J	

OPTION LIST

CM-001SA 14"20" DIFFERENT PARTS LIST

LOC	PARTS NAME	DTH-14U1SSA		DTH-20U1SSA	
		PARTS_CODE	PARTS_DESC	PARTS_CODE	PARTS_DESC
00001	TR	TTT2140—	TT2140		
00001	TR HORI	TKTD2499—	KTD2499		
C404	C MYLAR	CMYH3C722H	1.6KV BUP 7200PF H	CMYH3C662H	1.6KV BUP 6600PF H
C406	C MYLAR	CMXF2E434J	250V MPP 0.43MF J (TP)	CMXF2E514J	250V MPP 0.51MF J (TP)
CRT1	CRT AS	PTRTPWH529	DTH-14V1FSN		
CRT1	CRT			4859630461	A48JLL91X50 M16
V901	CRT BARE	48A96314C5	A34AGT13X (R)		
V01	COIL DY	58D0000082	ODY-M1489		
PA601	CONNECTOR	4850703S51	YH025-03+35098+ULW=300	4850703S52	YH025-03+35098+ULW=400
PA602	CONNECTOR	4850703S52	YH025-03+35098+ULW=400	4850703S55	YH025-03+35098+ULW=700
Q402	HEAT SINK ASS'Y	PTF2SW7201	TTT2140— + 7174300811	PTJ2SW7201	TKTD2499— + 7174301011
R311	R CARBON FILM	RD-AZ752J-	1/6 7.5K OHM J	RD-AZ822J-	1/6 8.2K OHM J
R411	R METAL FILM	RN02B150JS	2W 15 OHM J SMALL	RN02B560JS	2W 56 OHM J SMALL
R415	R M-OXIDE FILM	RS02Z249JS	2W 2.4 OHM J SMALL	RS02Z439JS	2W 4.3 OHM J SMALL
R452	R METAL FILM	RN-4Z1202F	1/4 12K OHM F	RN-4Z1002F	1/4 10K OHM F
R513	R CARBON FILM	RD-4Z822J-	1/4 8.2K OHM J	RD-4Z622J-	1/4 6.2K OHM J
ZZ131	CRT GROUND NET	48519A7310	1403S-1015-1P	48519A7510	2003S-1015-1P
ZZ132	COIL DEGAUSSING	58G0000170	DC-1450 AL	58G0000186	DC-20SF AL

IC Description

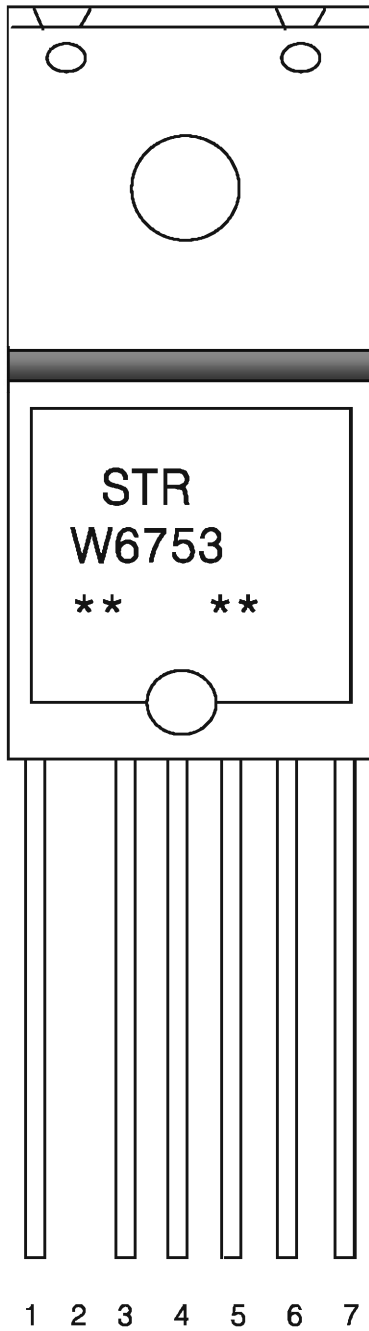
I501

LA76931 : One chip IC (CHROMA + Micom)

MAIN IC PIN ASSIGN

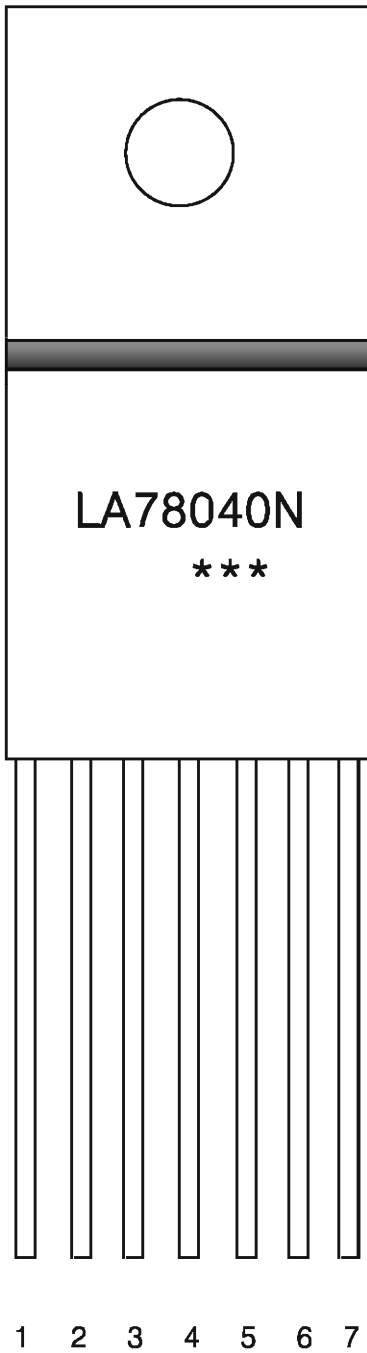
SIF Output	1	SIF Output	VIF Input1	64	VIF Input1
VIF AGC	2	VIF AGC	VIF Input2	63	VIF Input2
SIF Input	3	SIF Input	IF Ground	62	IF Ground
FM FILTER	4	FM FILTER	RF AGC Output	61	RF AGC Output
FM Output	5	FM Output	VIDEO Output	60	VIDEO Output
Audio Output	6	Audio Output	AFT Filter	59	AFT Filter
SIF APC Filter	7	SIF APC Filter	APC Filter	58	APC Filter
IF Vcc	8	IF Vcc	Black Level Det. Filter	57	Black Level Det. Filter
EXT. AUDIO Input	9	EXT. AUDIO Input	Internal Video Input	56	Internal Video Input
ABL	10	ABL	Video/Vertical Vcc	55	Video/Vertical Vcc
RGB Vcc	11	RGB Vcc	External Video Input	54	External Video Input
Red Output	12	Red Output	Chroma APC Filter	53	Chroma APC Filter
Green Output	13	Green Output	Selected Video Out put or fsc Out	52	NC
Blue Output	14	Blue Output	Cr Input	51	NC
NC	15	NC	3.58MHz Crystal	50	3.58MHz Crystal
V. Ram Osc. Capacitor	16	V. Ramp Osc. Capacitor	Cb Input	49	NC
Vertical Output	17	Vertical Output	DVD- Y	48	NC
VCO IREF	18	VCO IREF	X- RAY	47	X- RAY Protect
Horizontal/Bus Vcc	19	Horizontal/Bus Vcc	YC- Y	46	NC
Horizontal AFC Filt	20	Horizontal AFC Filter	YC- C	45	NC
Horizontal Output	21	Horizontal Output	Flyback Pulse In put	44	Flyback Pulse Input
Video/Vertical/BUS Ground	22	Video/Vertical/BUS Ground	CCD VCC	43	CCD VCC
Protect (OCP, Beam)	23	P00/INT0	CPU Ground	42	CPU Ground
NC	24	P01/INT1	PLL	41	PLL
Auto Search Control	25	P02	RES	40	Reset Filter
Remocon Input	26	P03/INT3	P07/AN7	39	AV1(NC)
Sound Mute	27	P14/PWM1	P06/AN6	38	AV2
D/G Relay	28	P15/PWM2	P05/AN5	37	AGC Input
NC	29	P17	P04/AN4	36	Key Input
Power	30	P16/PWM3	VDD	35	VDD
IIC DATA	31	P12/SDA1	XT2	34	XT1
IIC CLOCK	32	P13/SCK1	XT1	33	XT1

I801 POWER IC



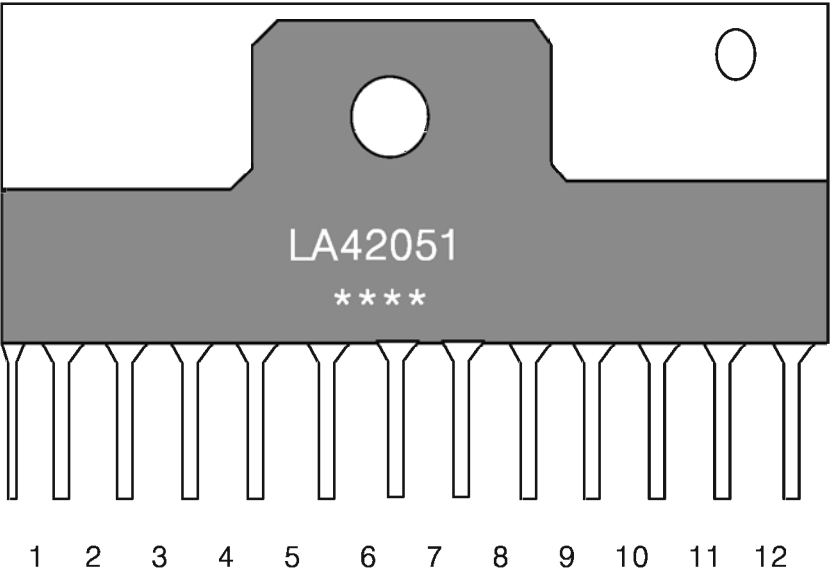
PIN NO	DESCRIPTION
1	DRAIN
2	SOURCE/GROUND
3	
4	VCC
5	OLP(OVER LOAD PROTECTOR)
6	FEED BACK
7	OCP(OVER CURRENT PROTECTOR)

I401 VERTICAL IC



PIN NO	DESCRIPTION
1	RAMP IN
2	VCC(26V)
3	PUMP UP OUT
4	GND
5	VERTICAL OUT PUT
6	OUT_STAGE- VCC
7	NON-INV-IN

I601 SOUND AMP



PIN NO	DESCRIPTION
1	RIPPLE FILTER
2	NC
3	PRE GND
4	IN
5	STB
6	P.P
7	VCC
8	OUT
9	NC
10	POWER GND
11	NC
12	NC
13	NC

The Table of Contents

I.MICOM Outline.

1. Abstract.

This specification is 1-Tuner Mono Model for North America, CCD 1-Chip MICOM LA76931A

It is developing software specification for tuning 3-System for South America

2. H/W Outline

1) ROM: 32K x 8bits.tsc

2) RAM: 1152 x 8bits

3) OSD Function

- Screen Display.: 32 characters x 2 lines.
- Characters
 - 254 patterns programmable
- Character display area
 - CC mode : 16 x 26 dots
- Character color: 8 colors
- Attribute
 - CC mode : smooth italic, underline, flash, automatic solid space
 - OSD mode : border
- Display position
 - Horizontal : 128 levels
 - Vertical: 512 levels

3. System Feature

- The system for TV tuning is Frequency Synthesis type
- Closed Caption' s function is built in IC
- On Screen Display' s function is built in IC
- Package.: 64 PINDIP
- Tuner (Pre-scaler.): I2C Bus--- 115-B-B9015AU
- Remote: R-43A01 OR 48C04 Series
- E2PROM.: 24C04(I2C Bus) à Apply one byte Read/Write mode
- 6-Local Key.: A/D Input Control.(Power, Ch Up/Down, Vol Up/Down, Menu)
- OptionS/W: Port Input Option Check
- IF/V/C/D IC:LA76931(3System:PAL M/N, NTSC)

4. Function

1) CCDfunction.

- A section of CCDoperates FCC based specification

2) CCDcontrolled function

- Closed Caption Mode(Off<--->C1<--->C2<--->T1<--->T2<--->Off)
- CC On Mute.(Off / On)
- When CC On Mute is On, Output is selected a item of Closed Caption Modes

3) Tuning Function

- I2C Bus
- PLL IC Interface
- FS 181 Channel (AIR 2-69CH, CABLE 1-125CH)
- AFT Operation(Fine Tuning) -2.5 ~ Fn ~ +2.5MHz
- AIR/CABLE (STD, HRC, IRC)Only Cable 5,6CH is that AFT range is cover over broad-band-2.5MHz ~ Fn ~ +3.5MHz

- Auto Program.(If a channel is broadcasting, the channel is memorized.)
- Direct Tuning(0 ~ 9KEY)
- Channel Up/Down.(Memorized Channels) -> The Ch Up/Down buttons on the Remote and on the front panel are same function
- Search Channel Up/Down.(If No-Memory or only 1CH is Memory)
- Channel Memory.(ADD/DELETE)
- Channel Review Function
- Last Channel Memory Function

4) OSD Function

- In Video Mode, Things(Items) that is concerned with Air and Cable disappear in the Menu
- Channel, AV display
- Volume, Picture Control --> I2C Bus Control

5) The Others Function

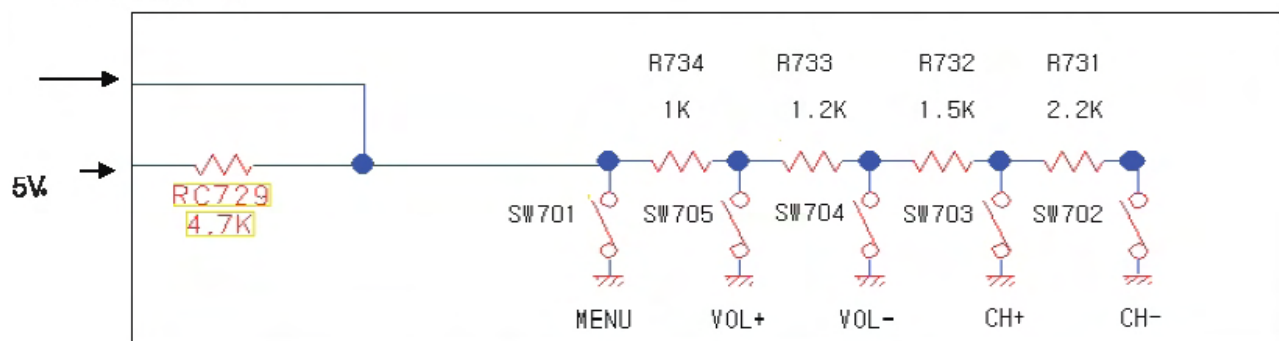
- Video/Audio Mute Function
- If a Channel is no signal, it is Auto-Power Off Function after 15 minutes
- Heat Run Function--- OSD White Background
- Sleep Timer, Wake-Up Time, Off Time Function.
- .Audio Mode :Mono
- 3-Language.(North America : ENG/SPA/PORT).
- E2PROM Interface (I2C Bus Control)
- CH 6 TRAP Function.(IS-31 對應)
- PLL IC Band Data.(Control Byte 2--->P3~P0)
 - VHF L : 1 / VHF H: 2 / CH6 TRAP : 5 (IS-31) AIR(Cable) CH 6 OnlyUHF : 8

5. The Table of Option and Schedule(SOFT OPTION)

NO	OPTION	FUCTION	Remarks
			SVC REMOCON S11 KEY 입력
1	NO SD BLUE BACK	NO SIGNAL : BLUE BACK	NO SD BLUE BACK : 0
		NO SIGNAL : NOISE	NO SD BLUE BACK : 1
2	TV ONLY	Video Model	TV ONLY OPTION : 0
		No Video Model	TV ONLY OPTION : 1

6. KEY Matrix

• MICOM #36(KEY IN)



	Key	Function	VALUE(V)
1	SW701	MENU	0~0.55
2	SW705	VOL +	0.87~1.19
3	SW704	VOL -	1.59~1.9
4	SW703	CH +	2.2~2.5
5	SW702	CH -	2.79~3.1
NC	NC	NC	3.52~3.9

II. PIN ASSIGN

PIN	FUNCTION	비 고	PIN	FUNCTION	비 고
1	SIF Output		64	PIF Input1	
2	VIF AGC		63	PIF Input2	
3	SIF Input		62	IF Ground	
4	FM FILTER		61	RF AGC Output	
5	FM Output/Selected Audio output		60	Video Output	
6	AUDIO Output		59	AFT Filter	
7	SIF APC Filter		58	APC Filter	
8	IF Vcc		57	Black Level Det.Filter	
9	EXT. AUDIO Input		56	Internal Video Input	
10	ABL		55	Video / Vertical Vcc	
11	RGB Vcc		54	External Video Input	
12	Red Output		53	Chroma APC Filter	
13	Green Output		52	NC	
14	Blue Output		51	NC	
15	NC		50	4.43MHz Crystal	
16	V. Ramp Osc. Capacitor		49	NC	
17	Vertical Output		48	NC	
18	VCO IREF		47	NC	
19	Horizontal/Bus Vcc		46	NC	
20	Horizontal AFC Filter		45	NC	
21	Horizontal Output		44	Flyback Pulse Input	
22	Video/Vertical/BUS Ground		43	CCD VCC	
23	X-RAY		42	CPU Ground	
24	NC		41	PLL	
25	NC		40	Reset Filter	
26	Remocon Input		39	NC	
27	Sound Mute		38	GND	
28	D/G Relay		37	AGC Input	
29	ST-BY LED		36	Key Input	
30	Power		35	VDD	
31	IIC DATA		34	XT2	
32	IIC CLOCK		33	XT1	

III. Remote Keys.

1. The Code Table of RemoteController Code (Custom Code = 14h).

Data code	KEY name	Function
00 – 09	0 – 9	Direct Tuning
0D	SLEEP	Sleep Timer
11	DISPLAY	Recall
12	MUTE	No Sound
13	VOL UP	Vol up / Adjust +key in Menu
14	VOL DOWN	Vol down / Adjust –key in Menu
15	POWER	Power on/off
16	INPUT	TV <–> Line
17	CH UP	Memory CH UP
18	CH DOWN	Memory CH Down
1A	VIDEO	Picture Control
20	PREVIOUS	Change to Previous Channel
22	MENU	Menu Display
9C	SVC1	Heat-run
9D	SVC2	Screen Adjust
9E	SVC3	Volume min –> center –> max
9F	SVC4	Monitor
58	SVC5	RF–AGC START, RF_DELAY, VIF Video out Gain
59	SVC6	Geometry
5A	SVC7	Test Pattern
5B	SVC8	White Balance (W/B)
5B	SVC8–2	Screen White Balance (W/B)
5C	SVC9	D.P mode
5E	SVC11	Chroma Data
5F	SVC12	工場出荷 "Outgoing OK"

2. Factory Mode RemoteController Code

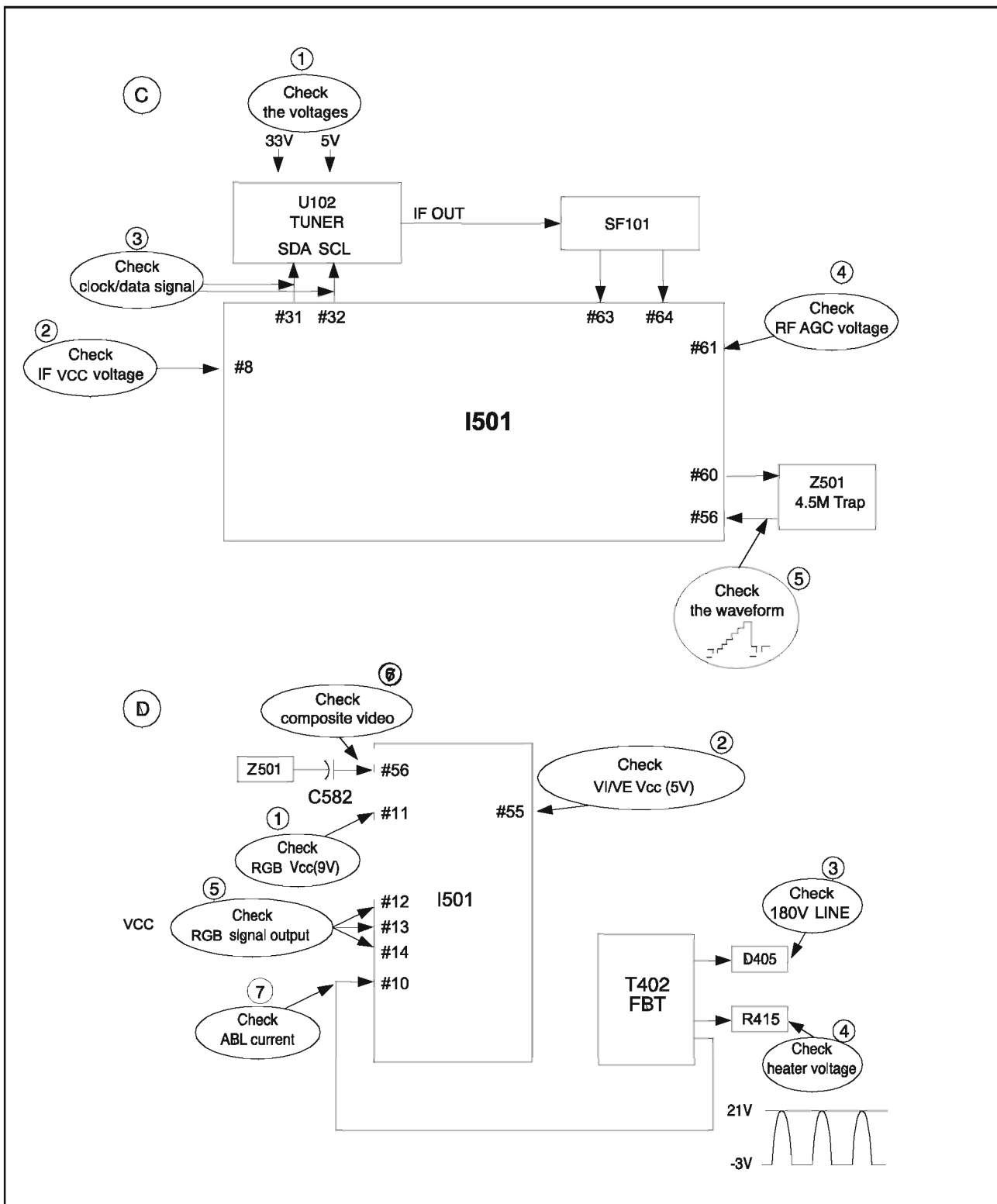
Custom	Data	KEY-NAME	FUNCTION
14h	FBh	FACTORY ON	Factory Auto W/B & GEO Adjustment Start
FCh	FCh	FACTORY OFF	– Factory Auto W/B & GEO Adjustment End
80h	00 – FFh	F_R_BIAS	Controls R Bias for Factory W/B Adjustment
81h	00 – FFh	F_G_BIAS	Controls G Bias for Factory W/B Adjustment
82h	00 – FFh	F_B_BIAS	Controls B Bias for Factory W/B Adjustment
83h	00 – FFh	F_R_DRIVE	Controls R Drive for Factory W/B Adjustment
84h	00 – FFh	F_G_DRIVE	Controls G Drive for Factory W/B Adjustment
85h	00 – FFh	F_B_DRIVE	Controls B Drive for Factory W/B Adjustment
A4h	00 – FFh	F_BRIGHT	Controls Bright for Factory W/B adjustment
A8h	00 – FFh	F_SUB_BR	Controls Sub-Bright for Factory W/B Adjustment
90h	00 – FFh	F_V_SHIFT	Controls V–Center for Factory GEO adjustment
91h	00 – FFh	F_H_CENTER	Controls H–Center for Factory GEO Adjustment
94h	00 – FFh	F_V_SIZE	Controls V–Size for Factory GEO Adjustment
A0h	02 – 3Fh	F_CA_CH	Factory Mode Direct tuning (CATV, 2 – 63ch)
A1h	02 – 3Fh	F_CH	Factory Mode Direct tuning (Normal RF, 2–63ch)
A3h	A3H	F_RFAGC	RFAGC Adj.
B0h	B0h	S_BUS_STOP	SOFTWARE BUS–STOP

MICOM POWER

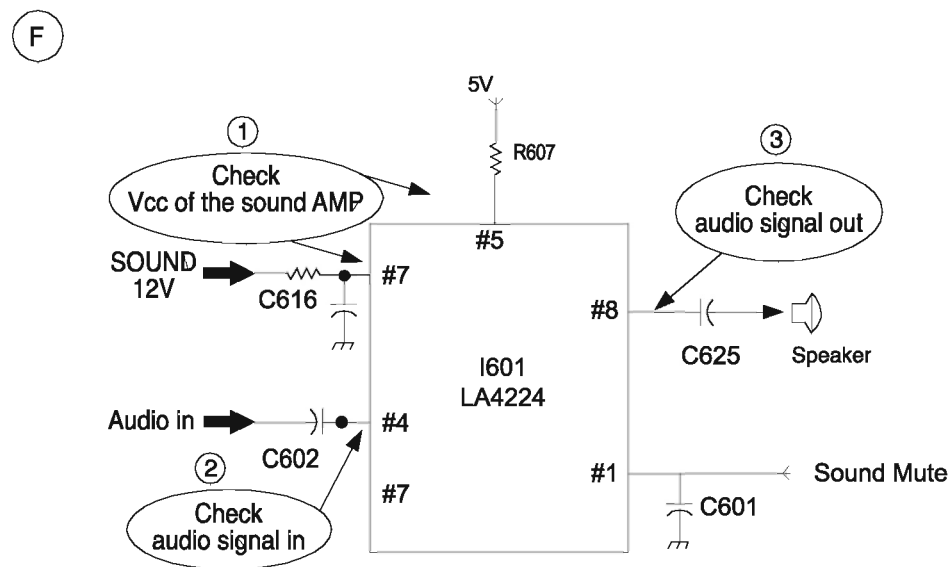
(PWR on : H)
(PWT off : L)

2. NO PICTURE

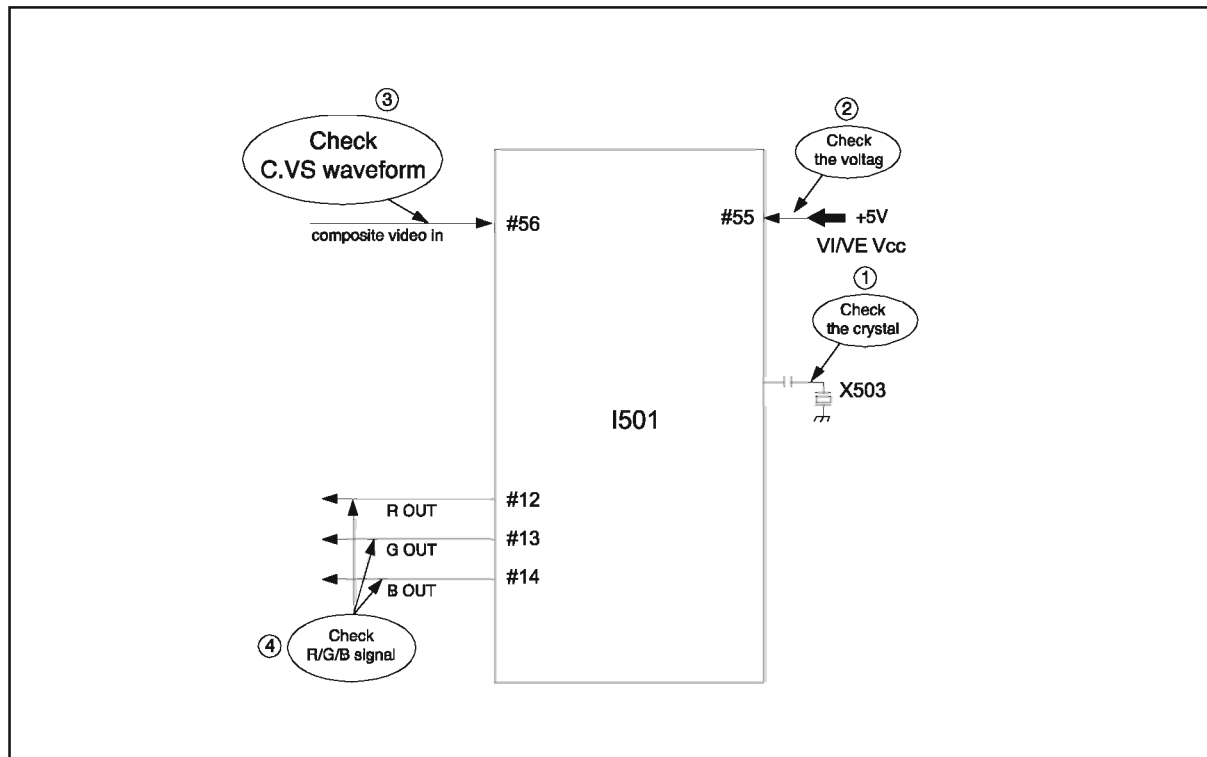
Check the waveform of I101 #58	NG : GO to the figure ㉓
	OK : Go to the figure ㉔



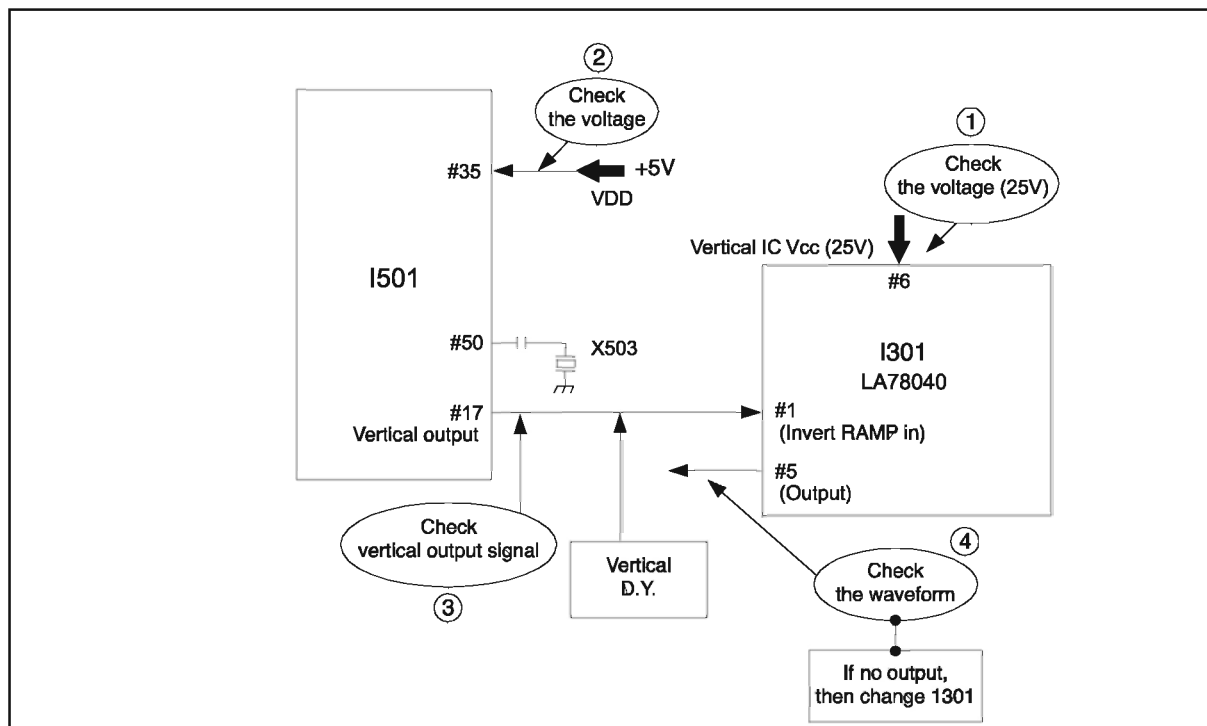
Check audio output signal of I501 #6	NG : Go to the figure ㉔
	OK : Go to the figure ㉕



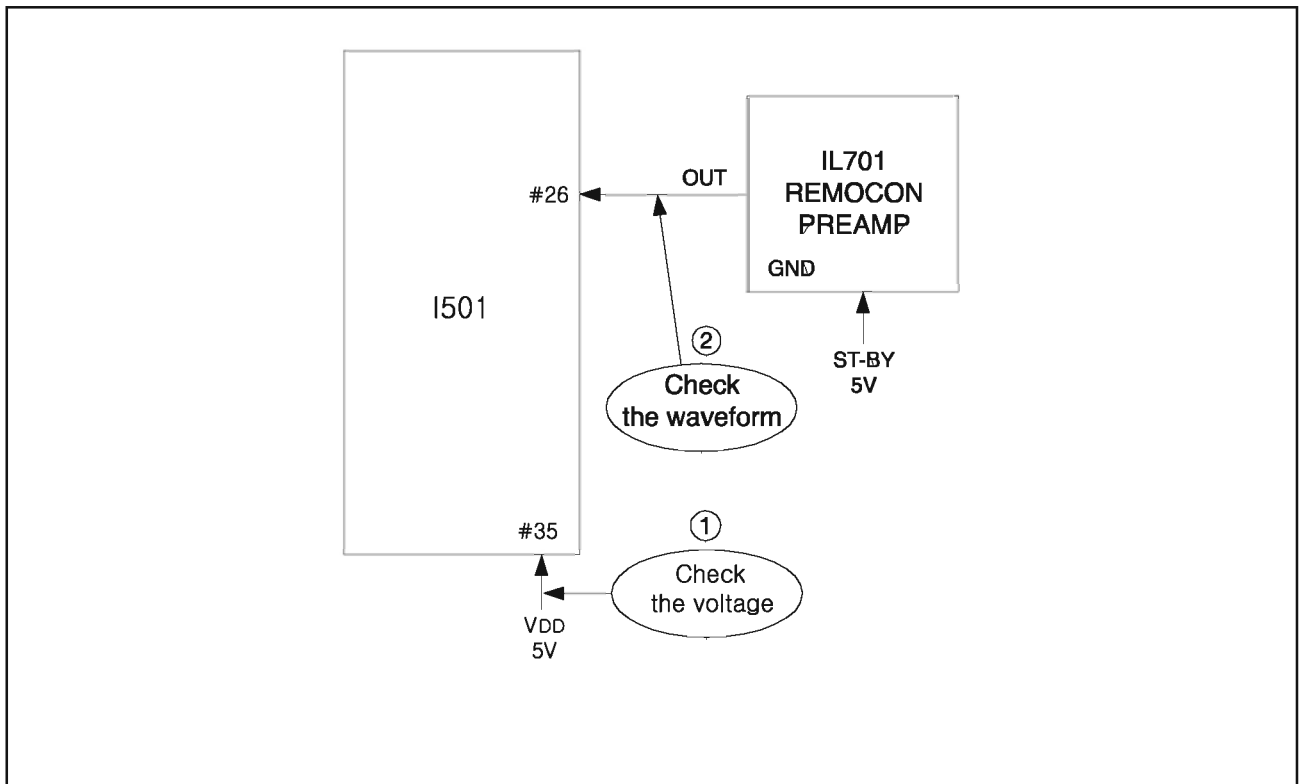
4. NO COLOR



5. NO VERTICAL DEFLECTION



6. REMOTE CONTROL DOES NOT OPERATE





DAEWOO ELECTRONICS CORP.

686, AHYEON-DONG, MAPO-GU,
SEOUL, KOREA.

C.P.O. BOX 8003 SEOUL KOREA

PRINTED DATE : AUG. 2005