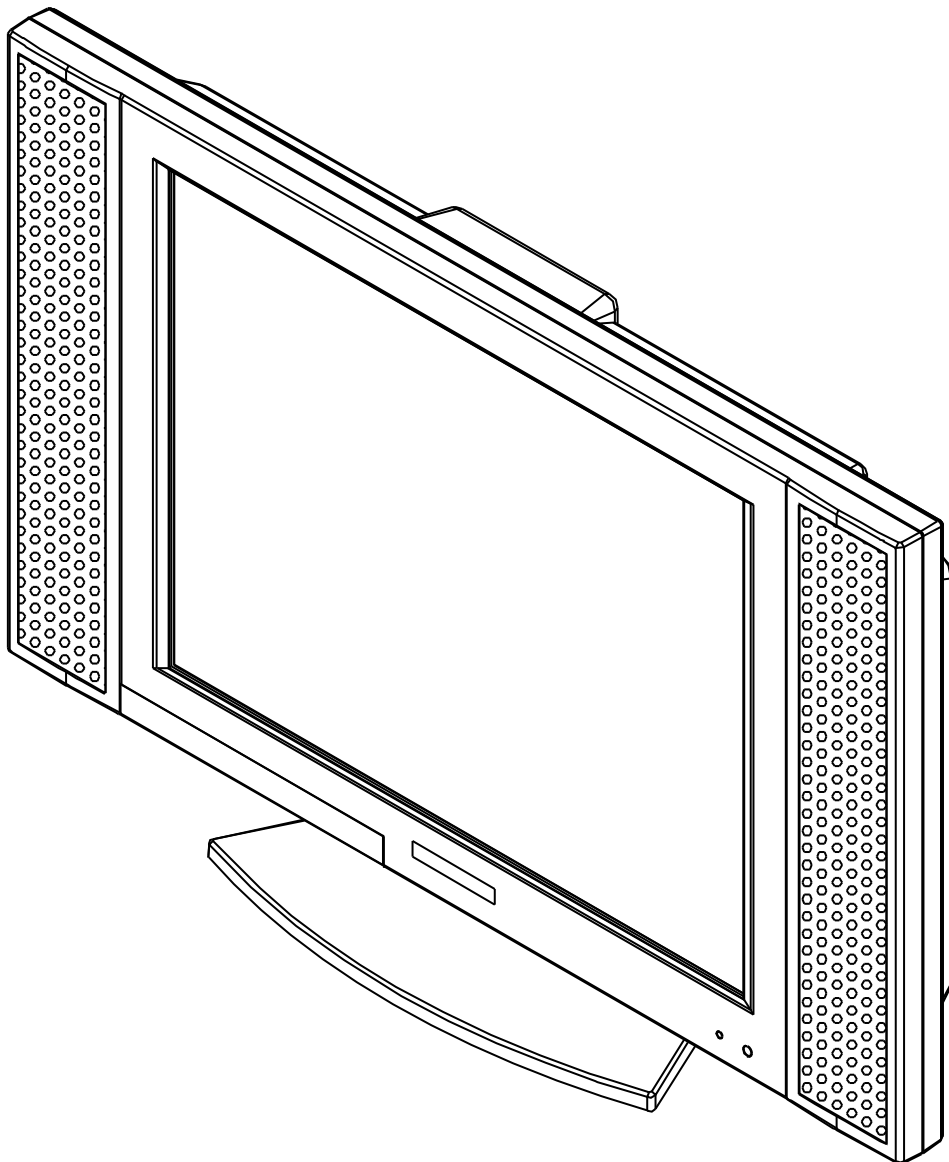


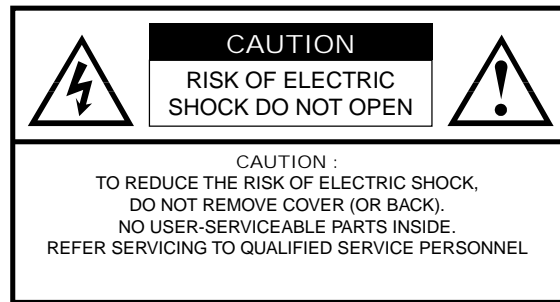
# USER MANUAL

## Color TFT-LCD MONITOR

MODEL SERIESTL20



# Safety Instructions



The Lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "DANGEROUS VOLTAGE" within the product's enclosure that may be of sufficient magnitude to constitute a risk or electric shock to persons.



The Exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing instructions in the literature accompanying the product).

## Important Safety Instructions

- Read Instructions - All the safety and operating instructions should be read before the product is operated.
- Retain Instructions - The safety and operating instructions should be retained for future references.
- Heed Warnings - All Warnings on the product and in the operation instructions should be adhered to.
- Follow Instructions - All Operating and user instructions should be followed.
- Cleaning - Unplug this product from the wall outlet before cleaning. DO NOT use liquid cleaners or aerosol cleaners. Use damp Cloth for cleaning.
- Attachments - DO NOT use attachments not recommended by the product manufacturer they may cause hazards.
- Keep Away From Heated Areas - Do not place the TL20 TV near heat; for example, near a radiator, stove, or other heating device.
- DO NOT use this apparatus near water. For example: Avoid placing it near bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
- NEVER push objects or any kind into this unit through the cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. NEVER spill liquid of any kind on the LCD TV.
- DO NOT block any ventilation openings. Install in accordance with manufacture's instructions. Slots and openings in the cabinet and the back and bottom are provided for ventilation, and to ensure reliable operation of the LCD TV and to protect it from Overheating. These openings must NOT be blocked or covered. There should be at least 10cm of space from these openings. The openings should never be blocked by placing the LCD TV on a bed, rug or other similar surface. This product should NOT be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

- Grounding or Polarization - This product may be equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. DO NOT defeat the safety purpose of the polarized plug.
- Power - Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.
- UL Safety Remark (AC Adaptor) - This product is intended to be supplied by a Listed power unit marked "class 2", "Limited Power Source" or "LPS" and output rated +12 Vdc, 5.0 A or equivalent statement provided in operating manual, if power unit is not provided with product.
- Power Sources - This product should be operated only from the type of power source indicated on the rear panel. If you are not sure of the type of power supply to your home consult your product dealer or local power company.
- Lightning - For added protection for this product during a lightning storm, or when it is left unattended and unused for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power - line surges.
- Power Lines - An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- Overloading - DO NOT overload wall outlets, extension cords or integral convenience receptacles as this can result in a risk of fire or electric shock.
- Damages Requiring Service - Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
  - (a) When the power-supply cord or plug is damaged.
  - (b) If liquid has been spilled, or objects have fallen into the product.
  - (c) If the product has been exposed to rain or water.
  - (d) If the product does not operate normally after following the operating instructions.
 

Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
  - (e) If the product has been dropped or damaged in any way.
  - (f) When the product exhibits a distinct change in performance - this indicates a need for service.

- Replacement parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. UNAUTHORIZED substitution may result in fire, electric shock or other hazards.
- Safety Check - Upon completion of any service or repair to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
- Heat - The Product should be situated away from heat source such as radiators, heat registers, stoves or other products (including amplifiers) that produce heat.
- DO NOT place this product on an unstable cart, stand, tripod, bracket, or table.  
The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the product. Any mounting of this product should follow the manufacture's instructions, and should use a mounting accessory recommended by the manufacturer.
- Do not apply excessive force to operate the switch, control key and connector. Disconnect the power plug from the AC outlet before you move the unit.
- Do not touch the screen directly with your fingers. You may damage the screen, oil from your skin is difficult to remove.
- Do not apply pressure to screen. The LCD is very delicate.
- Please install the TL20 in a cool, dry and clean area, avoid heat, or excessive vibration, dust, humidity, extreme cold and magnetic devices.

Important Information Regarding Use of Video Games, Computer, Captions or other Fixed Image Displays.

The extended use of a fixed image program material can cause permanent "Shadow Image" on the LCD Panel.

The background image is viewable on normal programs in the form of stationary fixed image.

This type of irreversible LCD panel deterioration can be limited by observing.

A. Reduce the brightness/contrast setting to a minimum viewing level.

B. DO NOT display the fixed image for extended periods of time.

C. Turn the power off when not in actual use.

This product utilizes tin-lead solder, and has a fluorescent lamp containing a small amount of mercury. Disposal of these materials may be regulated in your community due to environmental considerations.

For disposal or recycling information please contact you local authorities, or the Electronics Industries Alliance: <http://www.eiae.org>

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# 1. INTRODUCTION

## Product Description

Thank you for choosing the TL20 TFT-LCD Color TV/Monitor and for your continued support and use of our products.

The TL20 combines the features of a TV/MONITOR with a THIN FILM TRANSISTOR liquid crystal display (TFT-LCD).

This new generation of TFT-LCD incorporates a high quality display in a light weight module.

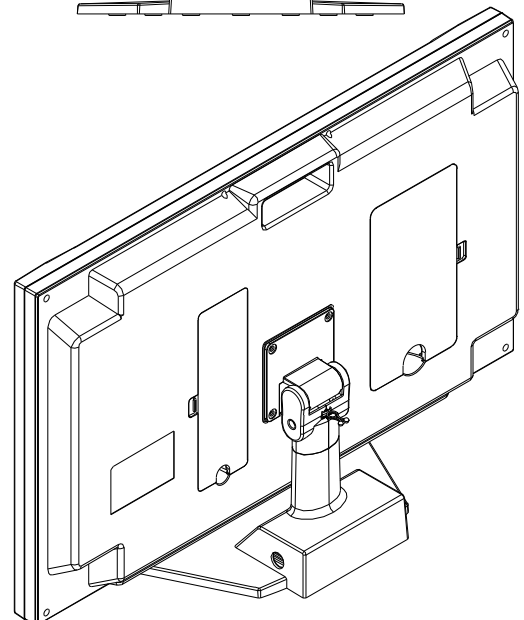
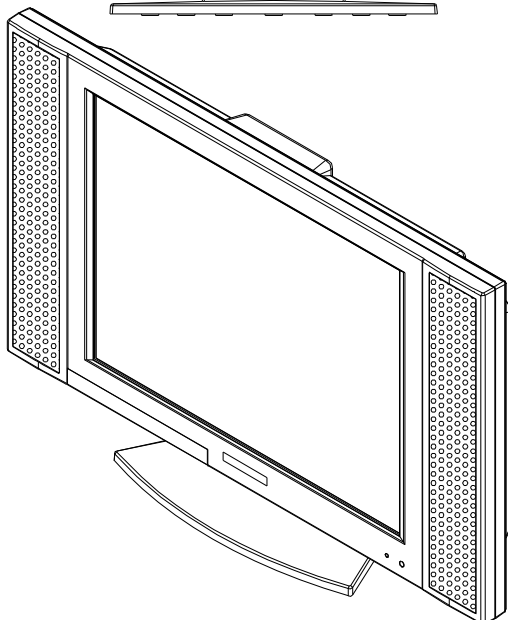
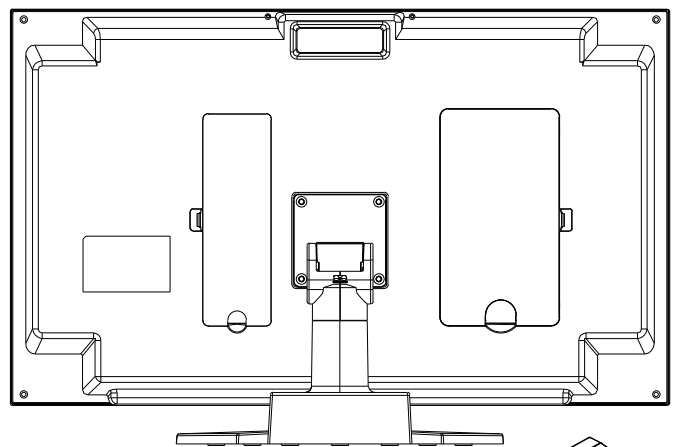
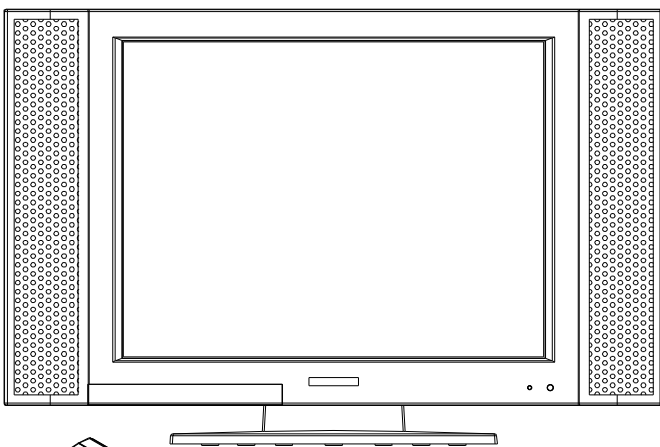
As such the unit has power-saving capabilities and emits no X-ray radiation. There are many benefits from this TFT-LCD namely comfort, safety, and environmental protection.

The TL20 features a 20" color-active matrix, Thin-Film-Transistor (TFT) Liquid Crystal Display (LCD) to provide superior display performance. A maximum resolution of 800x600 is ideal for displaying complex graphics and high definition images from your computer. Other outstanding features include freedom from video oscillations and selection of various choices of digital video and audio signal inputs.

You will get the feeling that the large-sized surface of operation with the Video - On - Video (VOV) feature, together with the high-quality stereo speakers and remote high-level amplifiers

connections, provides a coherent, top-of-the-line Audio and Video systems for viewing pleasure.

In addition the TFT-LCD display allows "Plug & Play" connection to your PC and has a built-in On Screen Display (OSD) functions that can operate from the convenience of a remote control.

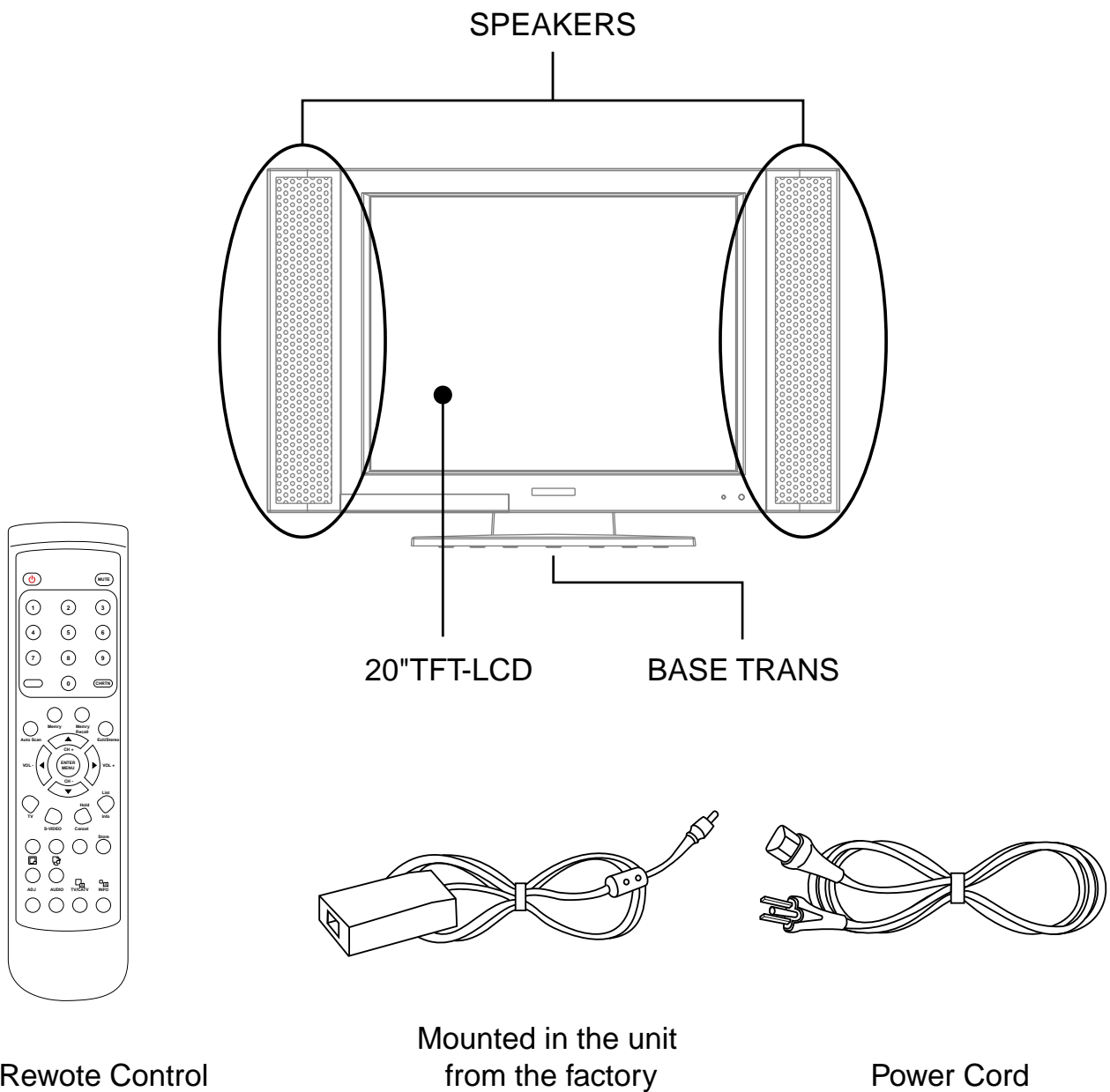


## Product Features:

- 20" Color-Active Matrix, Thin-Film-Transistor (TFT)Liquid Crystal Display (LCD).
- Maximum Resolution Of 800x600(SVGA) Ideal For Displaying High Definition Images.
- 1,440,000 Pixels High-Resolution Provides Greater Details.
- 500 cd/m<sup>2</sup> High-Brightness Panel Offers Clear Visuals.
- Super Wide Viewing Angle: Horizontal: 160° ; Vertical: 160°
- Low power Consumption; Saving 50% Power Than Conventional TV.
- 9300° Color Temperature For More Choices Of Display Color.
- Full Frequency Channel Receiver Capability.
- AV-Terminal Input and S-Video Input For High-Quality Pictures.
- Slim Space-Saving Design, 70% Smaller Than CRT Monitors.
- 500:1 High Contrast Ratio Provides Optimal Picture Quality.
- Multiple Input Terminals offers Greater Convenience.
- Supports Video-On-Video.
- Power Saving Feature VESA DPMS Compatible, Automatically Enters Power-Save Mode To Reduce Power Consumption.
- User-Friendly On Screen Display Function
- Full Function Remote Control.
- Optional TV Module.

## Package Contents

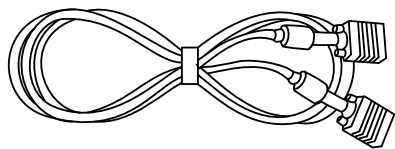
Please check the TL20 Package to make sure it contains the following items :



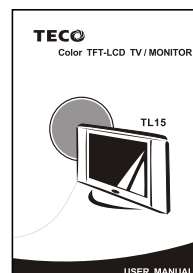
Rewote Control

Mounted in the unit  
from the factory

Power Cord



VGA Cable



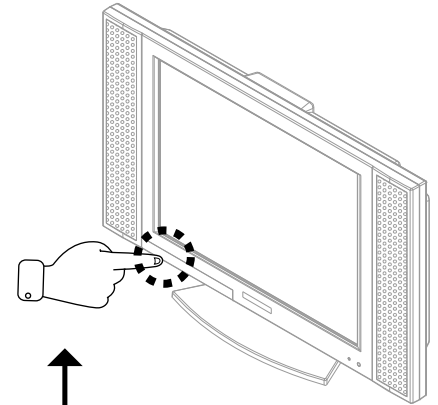
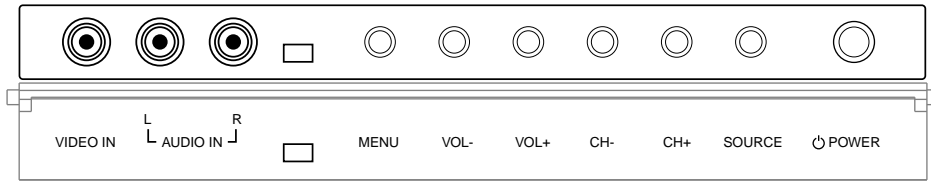
User Manual



## 2. SYSTEM SETUP

### Top Panel & Remote Control Function

#### TOP PANEL :



**POWER** : Power Button : Power on/off control

**SOURCE** : Selects Input source

**CH +** : Channel up Button : Increases setting channel

**CH -** : Channel down Button : Decreases setting channel

**VOL +** : Volume up Button : Increases volume

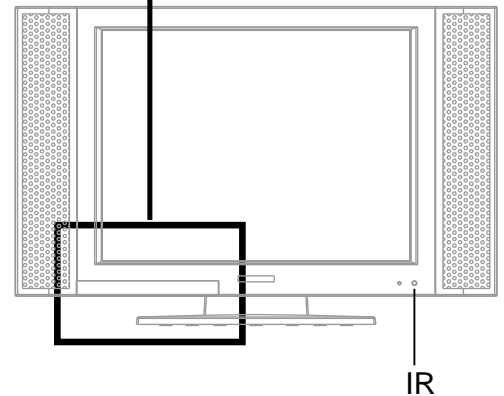
**VOL -** : Volume down Button : Decreases volume

**MENU** : Menu Button : Selects command function

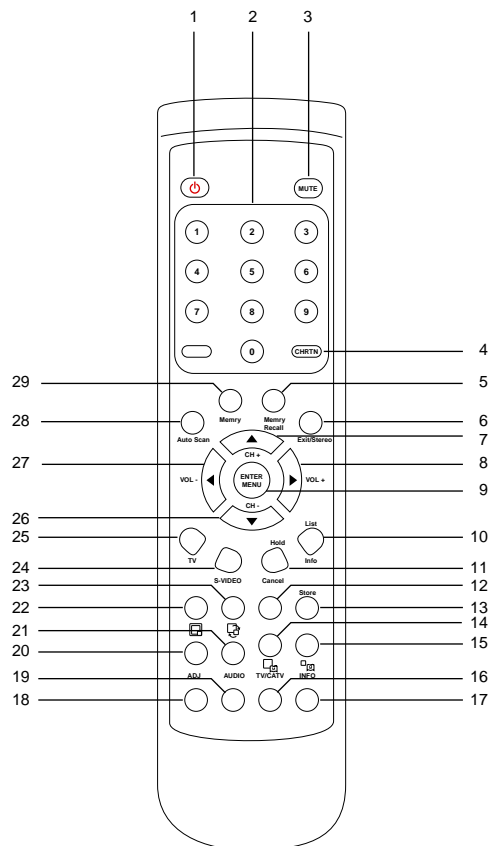
**AUDIO IN** : Connects to external audio source

**VIDEO IN** : Connects to external video source

**IR** : Remote IR detect window : Receives IR signal from remote control



#### Remote Control Unit :



## Remote Control Buttons:

1. POWER - Power on or off/On.
2. NUMBER KEYS - Press these buttons to select items. (Support TV and Teletext function)
3. MUTE - Turns volume off.
4. CHRTN - Recalls the last channel that was viewed. (Only for TV)
5. Memory Recall - If you have selected the Memory function, you can press Memory Recall button and then select your favorite channel with Number Keys. (Only for TV)
6. Exit/Stereo -
  - 6.1 Exit: When the OSD (On-Screen-Display) displayed, press this button to exit the main menu.
  - 6.2 Stereo: Select Main/Sub/Stereo/Mono. (Only for TV)
7. CH+ - Increase TV channel setting. With the OSD (On-Screen-Display) displayed, press this button to select up.
8. VOL+ - Use to increase volume. With the OSD (On-Screen-Display) displayed, press this button to select right.
9. ENTER/MENU - Display the Main Menu on the screen and Press the button to confirm functions.
10. List or Info - With the Teletext page displayed, this key is for Teletext function used.
  - 10.1 List: Switch on/off List mode. (for Teletext function)
  - 10.2 Info: Display the signal source of the current channel.
11. Hold - Toggle to hold on and off for current Teletext page. (Only for Teletext function)
12. Cancel - The Teletext page number boxed in the top left of the screen as arrival of the updated page. (Only for Teletext function)
13. Store - Store the current Teletext page. (Only for Teletext function)
14. Subtitle or Main Disp Switch - With the Teletext page displayed, this key is for Teletext function used.
  - 14.1 Subtitle: To select to subtitle page. (for Teletext function)
  - 14.2 Main Disp Switch: Choose main display of TV, AV, SV, Y Cb Cr or PC mode.
15. Sub Disp Switch - Choose sub display of TV, AV, SV or Y Cb Cr mode. (VGA not supported in Sub Display)
16. Y - Yellow
17. C - Cyan

18. R - Red

19. G - Green

Item# 16~17: Request the associated page in the acquisition mode. The color keys' functions would follow the bottom row of the screen in corresponding modes. (Only for Teletext function)

20. Reveal or Sub Disp Move -With the Teletext page displayed, this key is for Teletext function used.

20.1 Reveal: Display any hidden characters once the Teletext function is on.

20.2 Sub Disp Move: Sub picture shift its position to four view in TV.

21. Subcode or Main/Sub Swap - With the Teletext page displayed, this key is for Teletext function used.

21.1 Subcode

21.2 Main/Sub Swap: Switch VOV in the TV window. (VGA not supported in VOV)

22. Update - Update the information of the Teletext page. (Only for Teletext function)

23. Size - Select the size of the current Teletext page. (Only for Teletext function used)

24. Index - Only for Teletext function used.

24.1 In Fastext mode: Request the index page.

24.2 In Top mode: Toggle the system between Hilist Menu and current display page.

25. Mix or Auto Scan - With the Teletext page displayed, this key is for Teletext function used.

25.1 Mix: Switch to Text mode and Mix display. (for Teletext function)

25.2 Auto Scan: Once the CATV or AIR TV is displayed press the Auto Scan button to begin scanning for valid TV signals and placing them into memory. (for TV function)

26. CH- - Decrease TV channel setting. With the OSD (On-Screen-Display) displayed, press this button to select down.

27. VOL- - Use to decrease volume. With the OSD (On-Screen-Display) displayed, press this button to select left.

28. TXT/TV - Switch the Remote function to operate Teletext or TV functions.

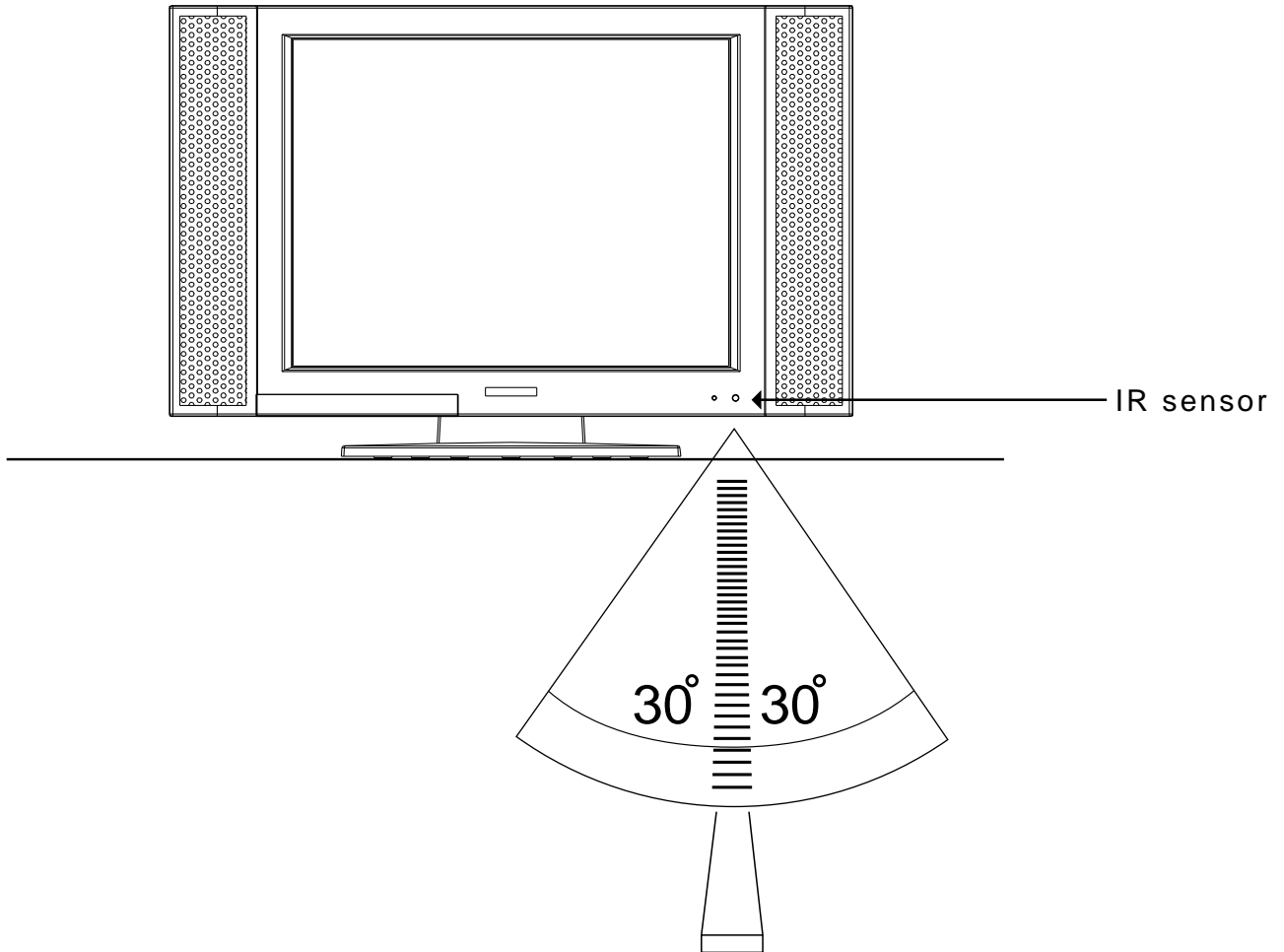
29. Memory - You can select your favorite channel. For example, the TV display is Channel 51, please press Memory button and then press the Number Keys (0~9) to be your favorite channel. (Only for TV)

30. Sleep - Press this button to set to turn the unit off automatically. (you can choose off, 10, 20, 30, 60, 120 minutes)

### Remote Control Operating Instruction:

The Remote Control Transmission consists of an Infrared (IR) Signal.

Make sure the line-of-sight between Remote Control and LM2010 is clear of objects that could interfere with the remote IR signal. Always point the Remote Control directly at the TL20 sensor.



### CAUTION !!

Avoid damaging the Remote Control by :

- Applying excessive pressure when pressing buttons
- Exposing to extreme Low or High temperatures
- Exposing to excessive Moisture
- Mishandling to Dropping

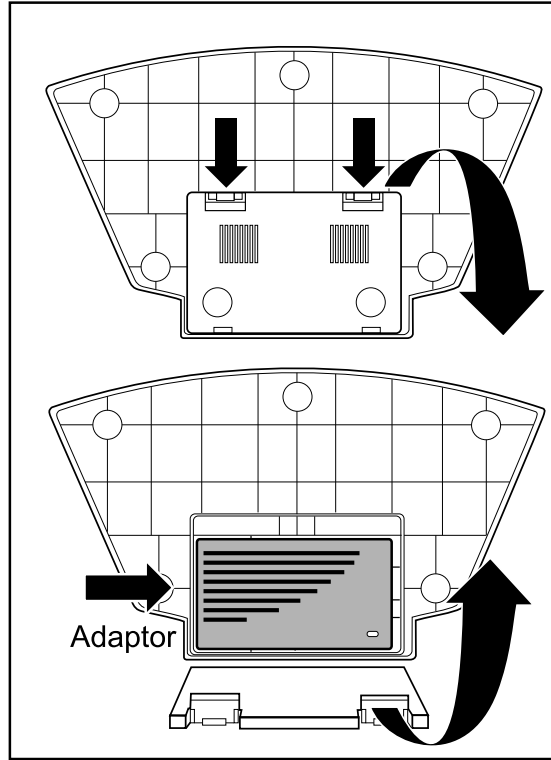
# Assembly and Connection

Assembly of the TFT-LCD

1.3.Speaker 2.Monitor and 4.Stand

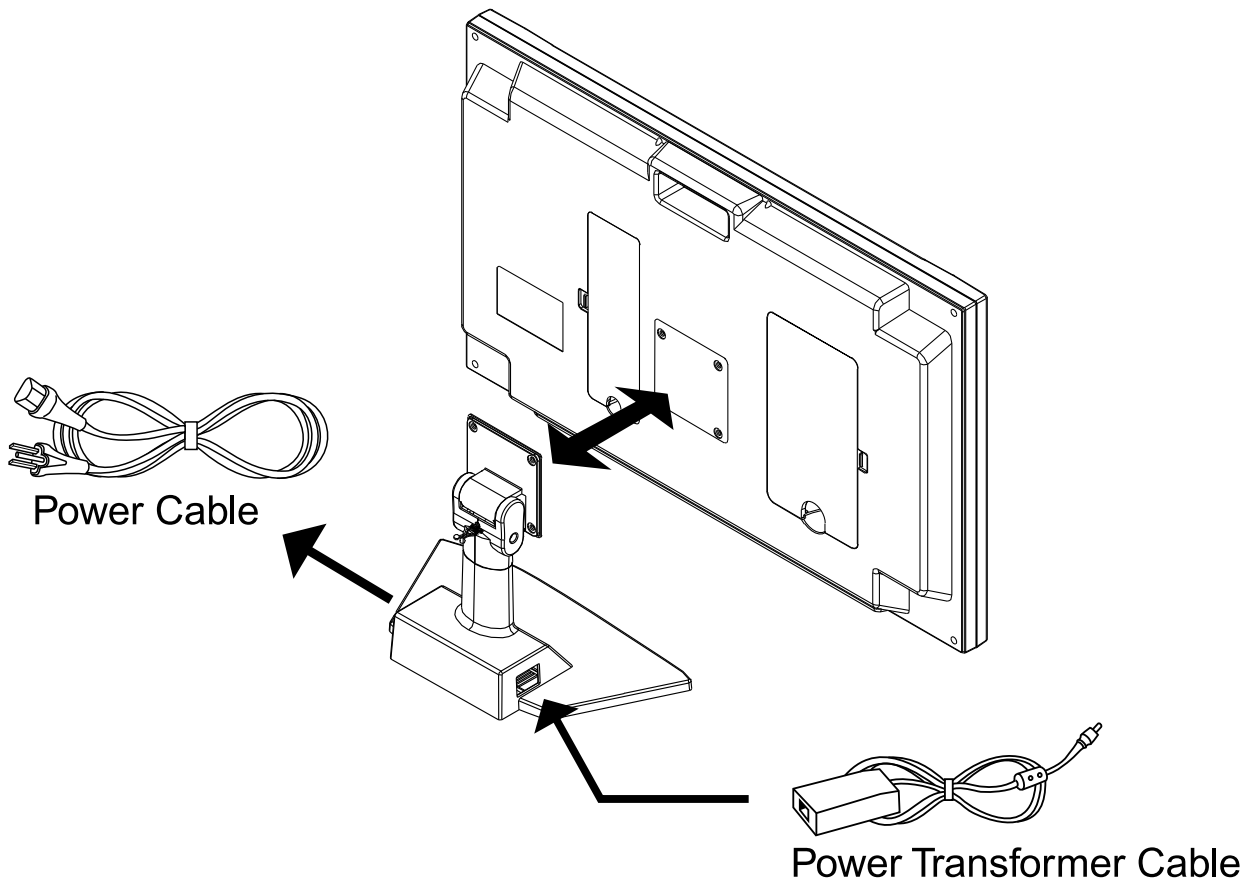
## DISPLAY BRACKET MOUNTING

How to unfold the stand on the bottom when you mounting to wall.

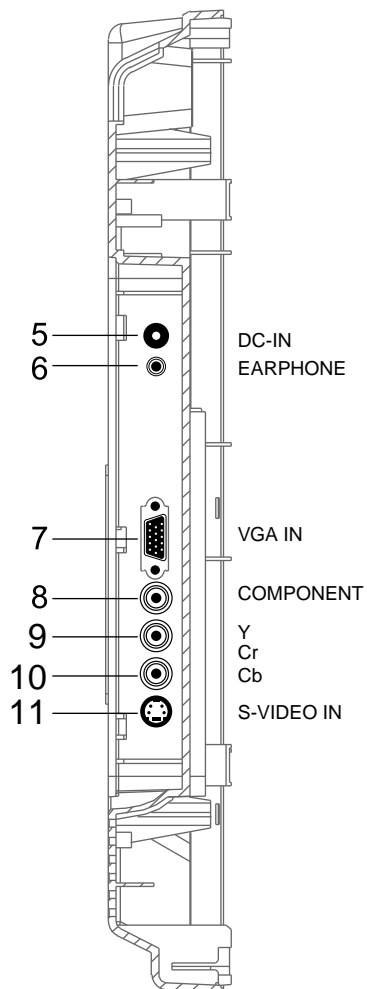
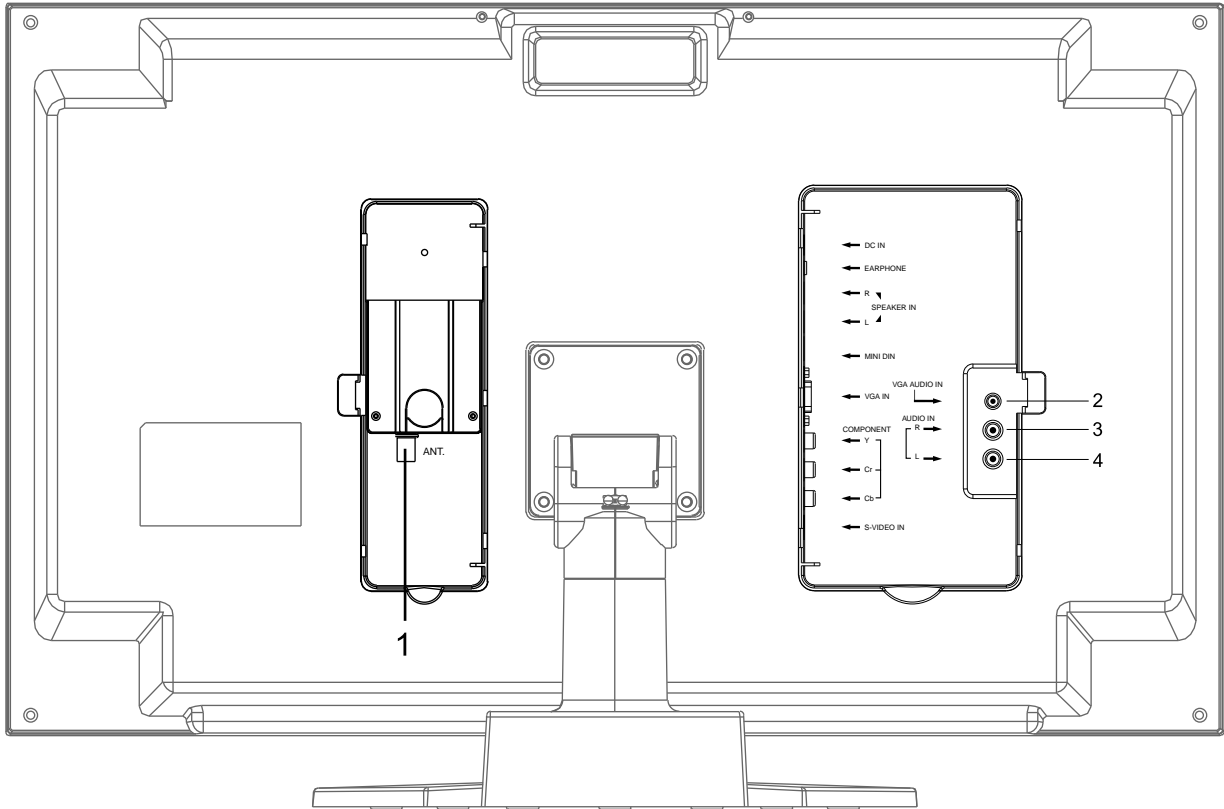


**Caution :**

You must complete assembly prior to power application

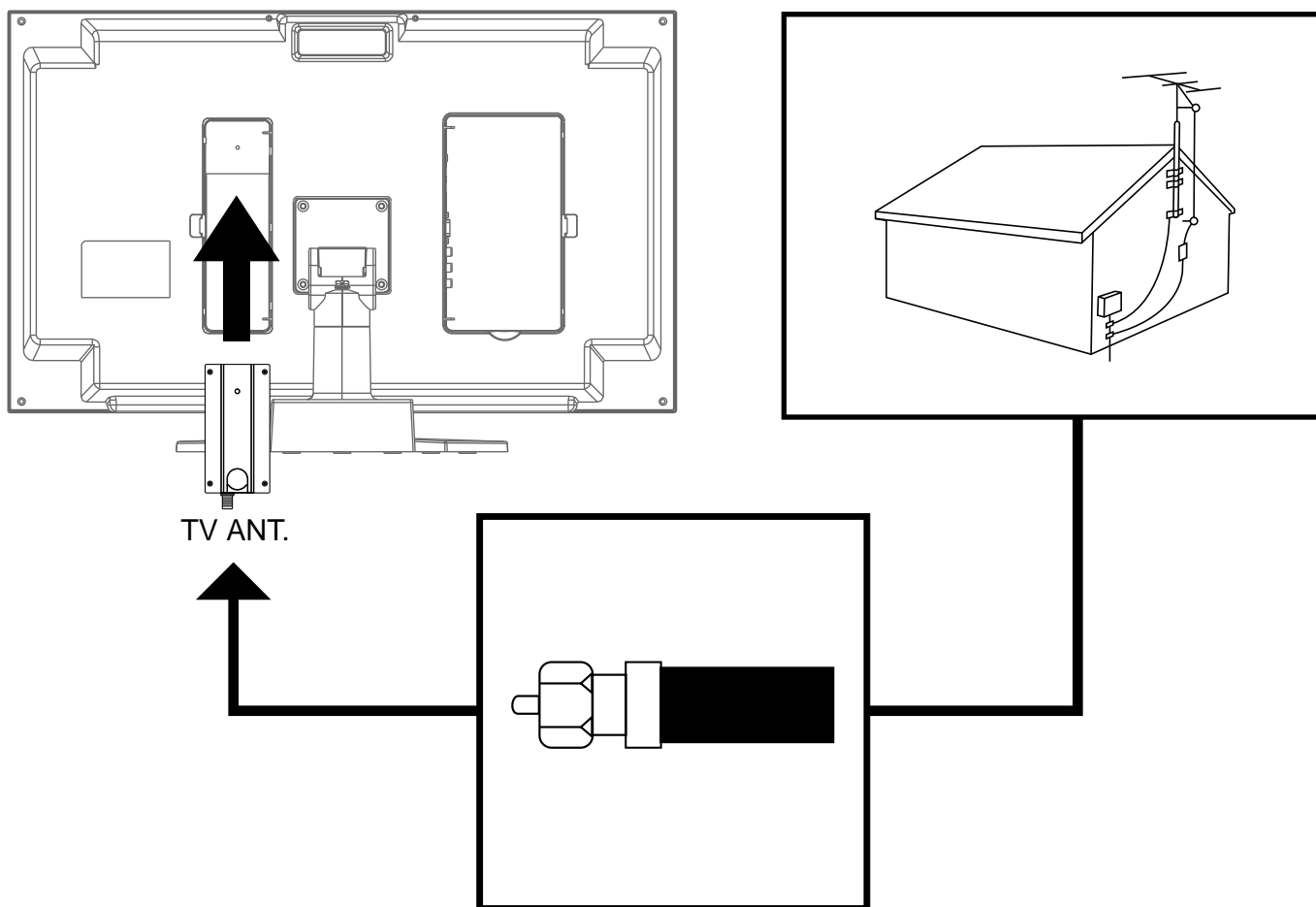


# Input/Output Signal Connections

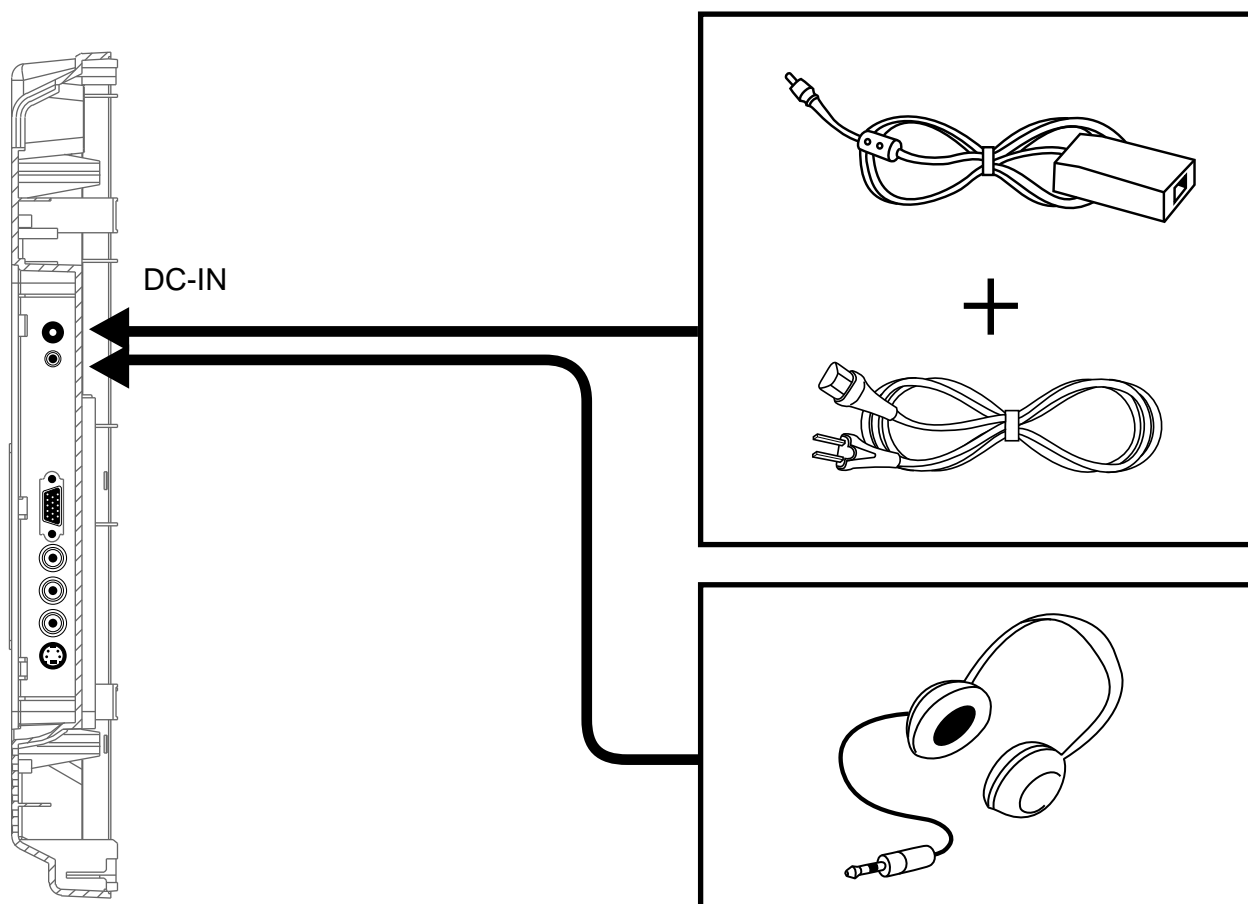


1. ANT. CABLE INPUT
2. VGA AUDIO IN
3. RIGHT AUDIO INPUT
4. LEFT AUDIO INPUT
5. POWER ADAPTER INPUT
6. EARPHONE OUTPUT
7. VGA INPUT
8. Y
9. Cr
10. Cb
11. S-VIDEO INPUT

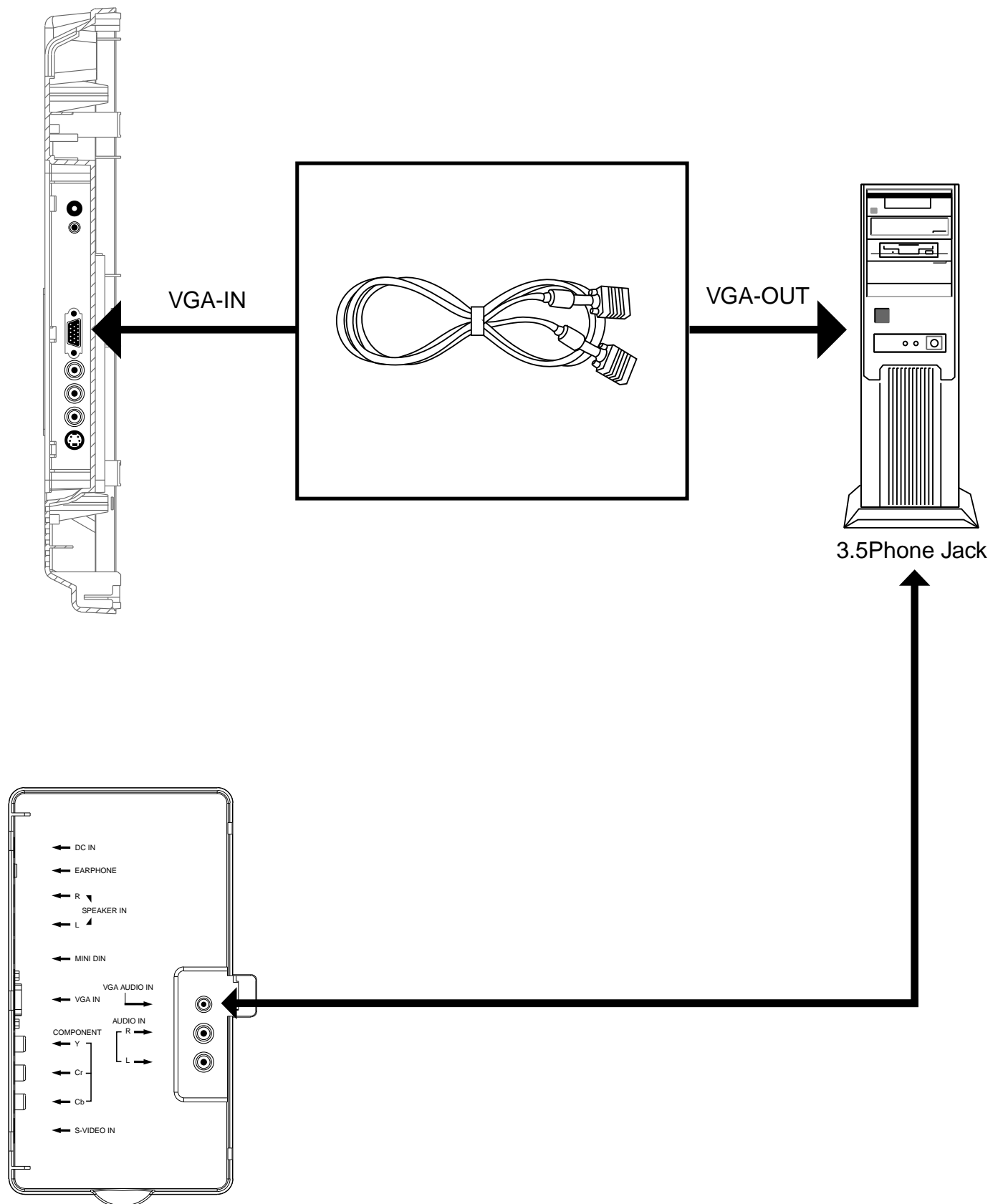
## Connecting TV Cable



## DC Power Socket

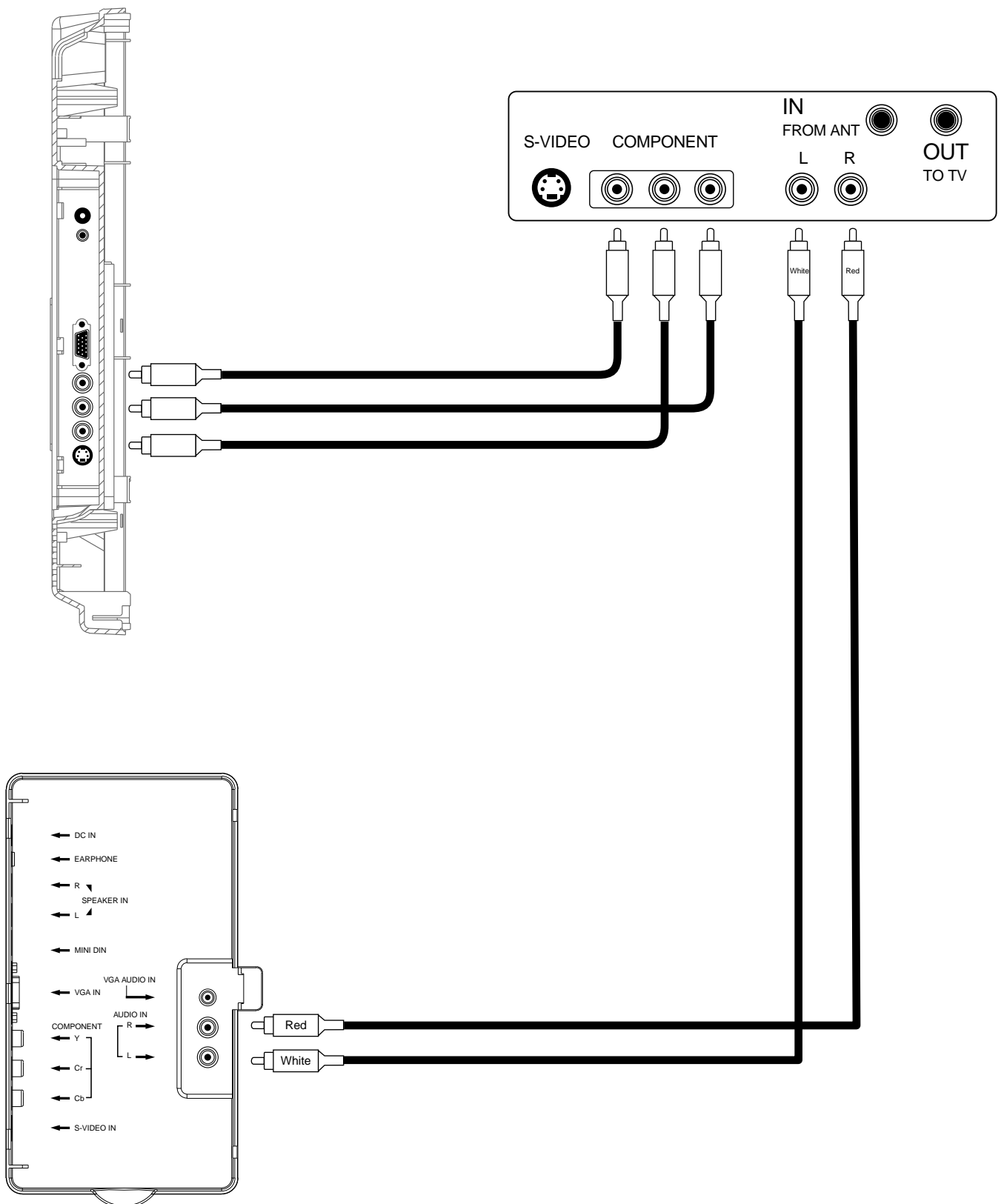


# Connecting to 15-PIN VGA from a PC

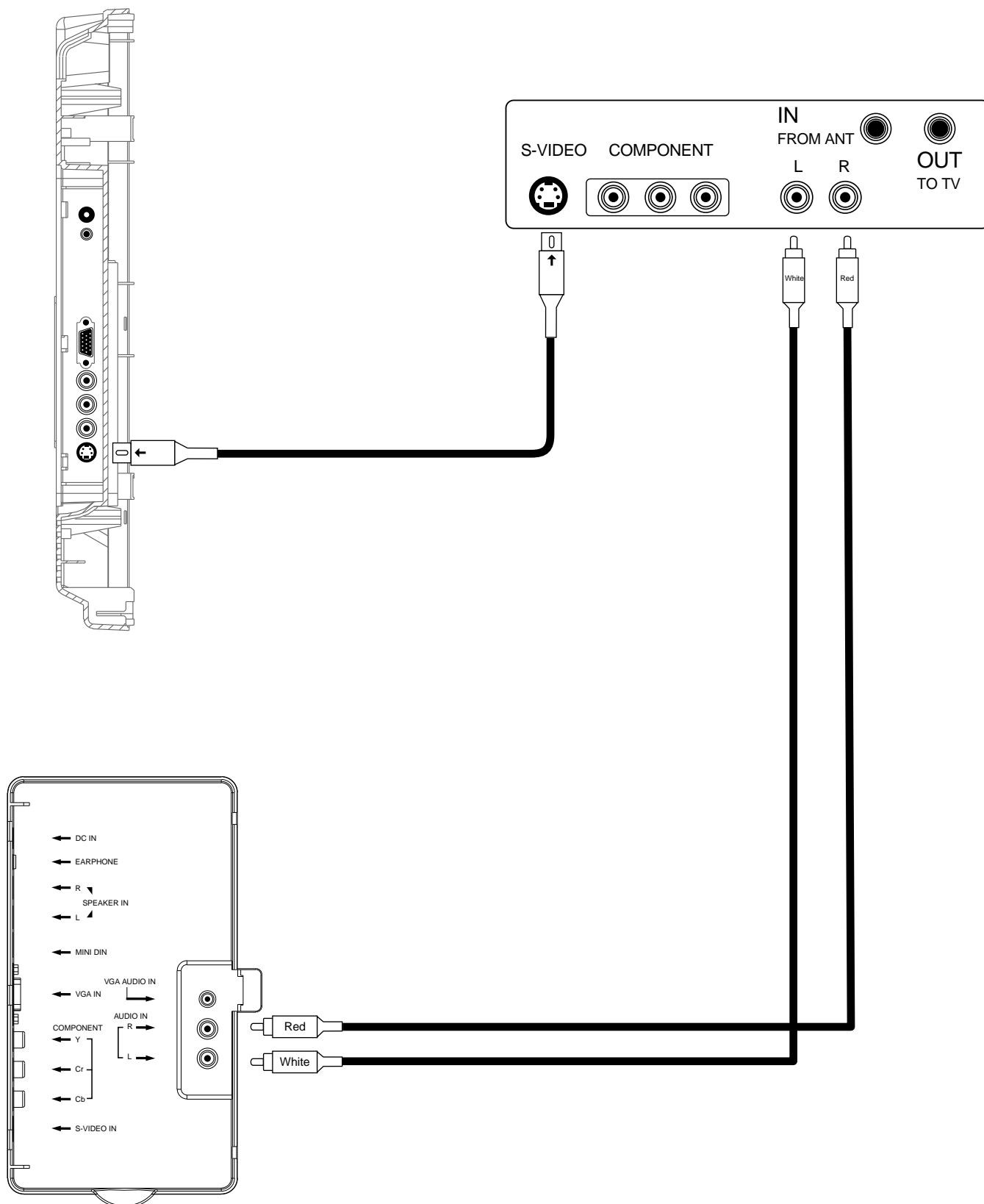




Connecting to AV-terminal equipment such as DVD, VCR, and Gaming Console.



Connecting to S-video terminal equipment such as DVD, VCR or Gaming Console.

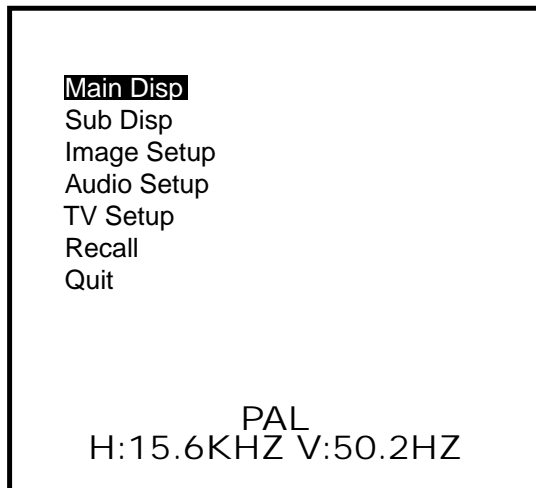


### 3. LM20 OPERATING INSTRUCTIONS

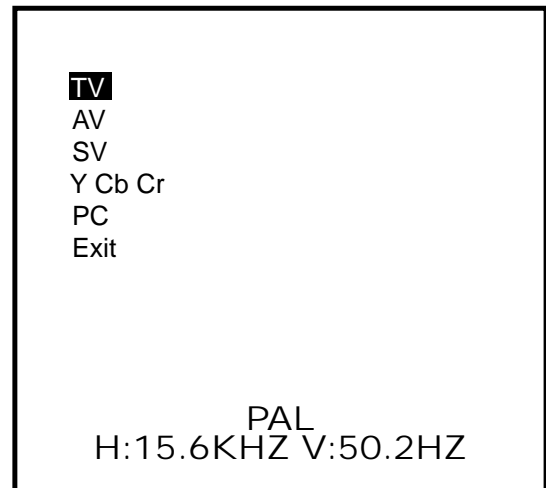
#### TV and AV/SV/Component Operating Instructions

##### Main Disp

Press and release the ENTER/MENU button to display the following Main Menu for TV and AV functions:



Press and release the ENTER/MENU button again to access the Main Disp menu:



##### MAIN DISPLAY OPTIONS:

1. Main Display
2. Sub Display
3. Image Setup
4. Audio Setup
5. TV Setup
6. Recall
7. Quit

##### NOTE:

The TV Setup options will appear in the Main Menu when a TV program has been accessed using the Main Display or Sub Display.

**NOTE :**  
**Screen Resolution**  
**(Will vary)**

##### INPUT SIGNAL SELECTIONS:

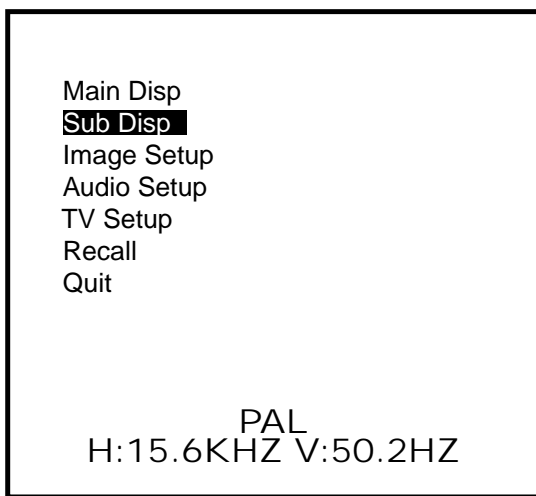
1. TV - TV Input Signal
2. AV - A-Video Input Signal
3. SV - S-Video Input Signal
4. Y Cb Cr - Component Input Signal
5. PC - Computer Input Signal
6. Exit - Return to Previous Menu

Sub Disp (sub display)

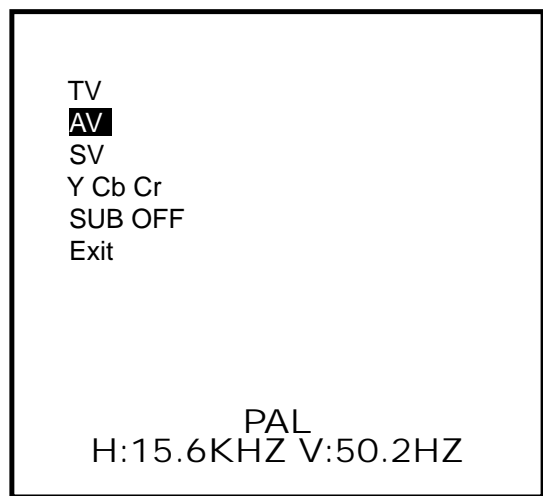
Sub Disp has four signal inputs - TV, AV, SV and Y Cb Cr (Component). These inputs are used to connect to a DVD-Player, VCR etc.



1. TV
2. AV (AV-Terminal)
3. SV (S-Terminal)
4. Y Cb Cr (Component-Terminal)
5. Sub off - Close the Sub Display
6. Exit - Return to Previous Menu

With the Main Menu displayed, Press and release the  button to highlight SUB DISP



Press and release the MENU button to display the SUB DISP Menu :



Use the  and  buttons to select mode. Then Press and release the ENTER/MENU button to display Sub Display (Video-On-Video) viewing.

