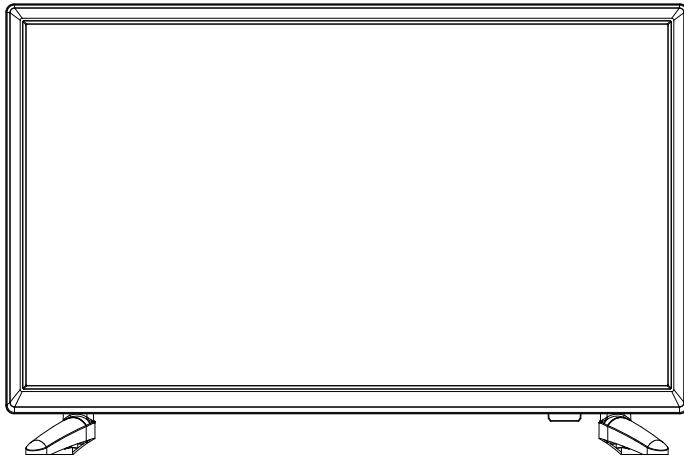


TuTu

USER'S MANUAL

22" FHD LED TV



TUB22T1FN

22"

Contents

- **Introduction**
- **Warning**
- **Caution**
- **Main Unit Description**
- **Remote Control**
- **OSD Basic Adjustment**
- **Troubleshooting**
- **Specifications**
- **Warranty**

Introduction

Thank you very much for purchasing your LED TV. It serves as a normal colour TV and a PC monitor. To enjoy your set fully from the very beginning, read this manual carefully and keep it handy for future reference.

PERSONAL SAFETY NOTICE

- ALWAYS read and follow all instructions for the installation and use of the TV.
- Place the TV in a location that is level and sturdy.
- DO NOT place the TV on a furniture with drawers that can be used as steps by small children.
- DO NOT allow children to pull the TV or climb on the furniture where the TV is placed.
- DO NOT allow children to play in front of or around the TV.
- ALWAYS route all the cables connecting to the TV so the cables cannot be easily pulled and grabbed by children.
- When installing the TV on a wall, please purchase a TV mount recommended by a professional TV installer, and follow the installation instructions that come with the TV mount.
- Before installing the TV on a wall, please check to make sure the wall structure can support the weight of the TV and the mount. If in doubt, please ask the advice from a professional TV installer.
- People should not be turning on the TV before checking that the power cord is inserted “well”.
- People should be checking the voltage of the AC power receptacle and the TV before plugging in the TV.

INSTALLATION

- ① Locate the receiver in the room where direct light does not strike the screen. Total darkness or a reflection on the picture screen can cause eyestrain. Soft and indirect lighting is recommended for comfortable viewing.
- ② Allow enough space between the receiver and the wall to permit ventilation.
- ③ Avoid excessively warm locations to prevent possible damage to the cabinet or premature component failure.
- ④ This TV can be connected to AC 100-240V~ 50/60Hz.
- ⑤ Do not install the TV in a location near heat sources such as radiators, air ducts, direct sunlight, or in closed compartments and closed areas. Do not cover the ventilation openings when using the TV.
- ⑥ The indicator light will last for about 30 seconds after the power has been turned off. Wait until the indicator light goes out before repowering the TV.



The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.



Manufactured under license from Dolby Laboratories. Dolby, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Warning



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO AVOID THE RISK OF ELECTRIC SHOCK.
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol is intended to alert the user to avoid the risk of electric shock. This equipment may only be disassembled by qualified service personnel.

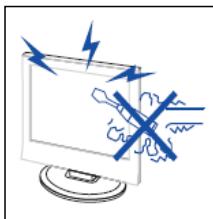


This symbol is intended to alert the user to the presence of important operation and maintenance instructions in the literature accompanying the equipment.



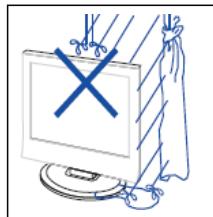
Class II structures of equipment should be connected to the grid power output with a protective earth connection on the socket. Power plug as a broken appliance, broken installations should be easy to operate.

Caution



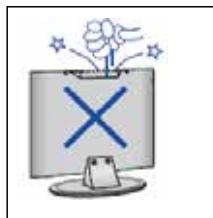
Caution

High voltages are used in the operation of this product. Do not open the product's casing. Refer servicing to qualified service personnel.



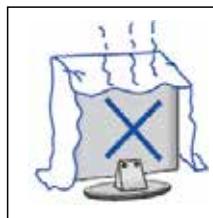
Caution

To prevent fire or electrical shock hazard, do not expose the main unit to rain or moisture, do not place objects filled with liquids, such as vases, on the apparatus.



Caution

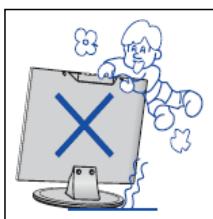
Do not drop or push objects into the television cabinet slots or openings. Never spill any kind of liquid on the television receiver.



Caution

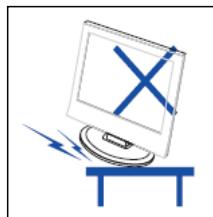
Avoid exposing the main unit to direct sunlight and other sources of heat. Do not stand the television receiver directly on other products which give off heat: e. g. video cassette players and audio amplifiers. Do not block the ventilation holes in the back cover. Ventilation is essential to prevent failure of electrical components. Do not squash the power supply cord under the main unit or other heavy objects.

Caution



Caution

Never stand on, lean on or suddenly push the product or its stand. You should pay special attention to children.



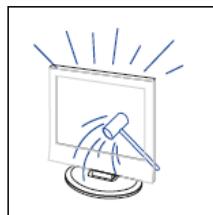
Caution

Do not place the main unit on an unstable cart stand, shelf or table. Serious injury to an individual and damage to the television may result if it should fall.



Caution

When the product is not used for an extended period of time, it is advisable to disconnect the AC power from the AC outlet.

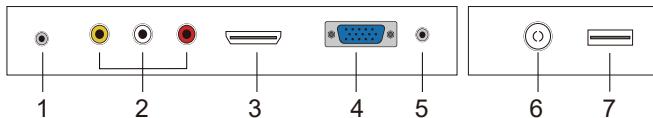


Caution

The LED panel used in this product is made of glass and is therefore breakable. This product must not be dropped or banged. If the LED Panel breaks be careful of being injured by broken glass.

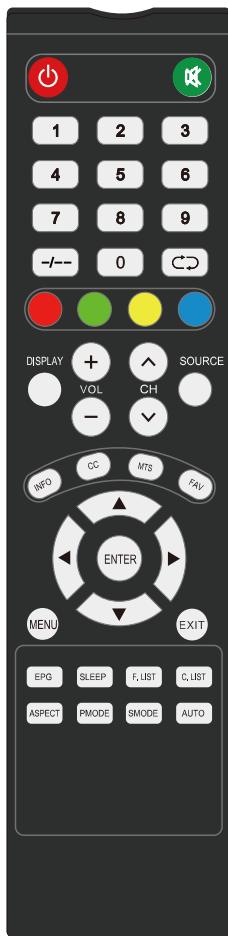
Main unit description

TV Terminal Connections



1. Earphone terminal.
2. AV IN input terminal.
3. HDMI input terminal.
4. VGA input terminal.
5. PC AUDIO input terminal.
6. RF antenna.
7. USB terminal.

Remote control



POWER: Power on/off button, press once to turn the TV on and press again to turn the TV off.

MUTE: Press this button to mute or restore sound.

0-9: Select and switch to a channel using 0 - 9.

-/-: Switch the program digit.

 : Switch back and front between the current and previous channels.

RED, GREEN, YELLOW, CYAN: These control function of these buttons do not apply to this model.

DISPLAY: Display TV information.

VOL+/VOL-: Adjust the volume.

CH+/CH-: Change the channel.

SOURCE: Press to change signal source.

INFO: Display some information of current program in TV mode.

CC: Press this key to select the CC ,ON or OFF mode and CC on Mute .

MTS/AUDIO: When stereo program is received, press this key to switch sound system between mono and stereo.

When SAP program is received, press this button to switch sound system between mono and SAP

When stereo and SAP program is received, press this key to switch among mono, stereo and SAP.

Press this key to show the list of audio languages available for the current channel in ATSC.

FAV: Switch between custom set "Favorite List"

ENTER: Enter the selected option or perform the selected operation.

MENU: Press this button to enter the main menu.

EXIT: Exit the OSD (On-screen display).

EPG: Enter electronic program guide. (only DTV)

SLEEP: Set the sleep timer.

F.LIST: Press this key to display the Favorite List mode.

C.LIST: Press this key to display the channel list mode.

ASPECT: Press to adjust picture ratio.

PMODE: Select picture mode.

SMODE: Select sound mode.

AUTO: This button does not apply to this product.

SELECT INPUT SOURCE



Press **INPUT** button to display the input source list. Press **▼ / ▲** button to select the input source you want. Press **ENTER** button to enter the input source.

Press **EXIT** button to quit.

Note: The pictures are for reference only, and the channel is subject to actual configuration.

Main Menu



Press **MENU** to display the main menu or return to the previous menu or close the main menu. Press **◀/▶** to highlight the desired menu icon, and press **ENTER** to select.

If no buttons are pressed, the menu will close automatically after about 10 seconds.

Main Menu Operation

Picture Menu

Press **MENU** to enter the main menu, Press **◀ / ▶** button to select.

Press **ENTER / ▼** to enter.

Press **MENU** again to exit or back to parent menu.



Press **▼ / ▲** button to select among Picture Mode / Brightness/Contrast / Color / Tint/ Sharpness /Color Temperature/ Advanced Settings.

Press **ENTER / ▼** to enter.

Press **◀ / ▶** button to adjust.

Press **MENU** again or back to parent menu.

【Picture Mode】

Adjust picture mode to change picture appearance.

Press **◀ / ▶** button to select(Standard / Dynamic / Soft / User/Power Saving).

Note: The brightness, contrast, color, tint and sharpness are only available in User mode, you can adjust as you like.

【Brightness】

Adjust the visual perception output of the entire picture, it will effect the luminousness of the picture.

Press **◀ / ▶** button to adjust.

【Contrast】

Adjust the highlight intensity of the picture, but the shadow of the picture is invariable.

Press **◀ / ▶** button to adjust.

【Color】

Adjust the saturation of the color based on your own like.

Press **◀ / ▶** button to adjust.

【Tint】

Adjust the hue(Red,Green,Blue) of the picture.

Press **◀ / ▶** button to adjust.

【Sharpness】

Adjust the peaking in the detail of the picture.

Press **◀ / ▶** button to adjust.

【Color Temperature】

Increase or reduce warm color of the picture personally(red),and the cool color personally(blue) according to your like.

【Advanced Settings】

Adjust advanced video features to fine tune the picture. Press **▶** button to enter sub-menu.

Sound Menu

Press MENU to enter the main menu, Press **◀ / ▶** button to select. Press **ENTER / ▼** to enter.
Press MENU again to exit or back to parent menu.



Press **▼ / ▲** button to select among Sound Mode/Treble/Bass/Balance/MTS/Audio Language/Digital Audio Output/ Surround Sound/AVL/Voice Guidance/Video Description.

Press **ENTER / ▼** to enter.

Press **◀ / ▶** button to adjust.

Press **MENU** again or back to parent menu.

【Sound Mode】

Select a sound mode to achieve ideal sound.

Note: The bass, treble and balance are only available in **User** mode, you can adjust as you like.

【Treble】

Adjust the treble effect. Increases or decreases high-pitched sounds.

Press **◀ / ▶** button to adjust.

【Bass】

Adjust the bass effect. Increases or decreases lower-pitched sounds.

Press **◀ / ▶** button to adjust.

【Balance】

Adjust the balance between left and right speakers to adapt to your listening position. Press **◀ / ▶** button to adjust.

【MTS】

Configures the multi-track sound. It is only available in TV.

Press **◀ / ▶** button to select(Mono/Stereo/SAP).

【Audio Language】

Select the language supported by the chosen digital channel. It is available Only in TV. Press **◀ / ▶** button to select (English / French / Spanish)

【Digital Audio Output】

Send digital audio to external audio system. Press **◀ / ▶** button to select.

【Surround Sound】

Select the speaker sound effect to be surround or not. Default is Off.

Press **▼ / ▲** button to select Surround Sound, then press **◀ / ▶** button to select(On/Off)

【AVL】

Set the auto volume control.

Press **◀ / ▶** button to select(On/Off).

【Voice Guidance】

Select the auto voice guidance control. Press **◀ / ▶** button to select(On / Off).

【Video Description】

Change from the main audio to the secondary audio stream that contains video description, and vice versa.

NOTE:

Balance: This item can balance the left and right channels.

AVL: This item uses for reducing the difference between channel and program's volume automatically. This function reduces the fluctuation of the sound.

Time Menu

Press MENU to enter the main menu, Press **◀ / ▶** button to select.

Press ENTER / **▼** to enter.

Press MENU again to exit or back to parent menu.



Press **▼ / ▲** button to select among Sleep Timer / Time Zone/Daylight Saving Time/Time Format/Auto Clock/Clock.

Press ENTER / **▼** to enter.

Press **◀ / ▶** button to adjust.

Press MENU again or back to parent menu.

【Sleep Timer】

Set a timer for the TV to turn off automatically.

Press **◀ / ▶** button to select(Off / 5min/10min/15min/ 30min / 60min / 90min / 120min/180min/240min).

【Time Zone】

Select your time zone.

Press **◀ / ▶** button to select(Eastern / Central / Mountain / Pacific / Alaska / Hawaii / Atlantic).

【Daylight Saving Time】

Set the daylight saving time for your area.

Press **◀ / ▶** button to select(On / Off).

【Time Format】

Select your time format.

Press **◀ / ▶** button to select(12-hour / 24-hour).

【Auto Clock】

Use to synchronize the display automatically.

Press **◀ / ▶** button to select(On / Off)

Setup Menu

Press MENU to enter the main menu, Press **◀ / ▶** button to select.

Press ENTER / **▼** to enter.

Press MENU again to exit or back to parent menu.



Press ▼ / ▲ button to select among Menu Language / Transparent / OSD Timeout / Closed Caption / Over Scan/ Input Label / Other settings / Restore Default / Setup Wizard/CEC.

Press ENTER / ▼ to enter.

Press ▲ / ▾ button to adjust.

Press MENU again or back to parent menu.

【Menu language】

Select an OSD menu language can be displayed.Default English is selected as menu language.

Press ▲ / ▾ button to select language(English / Français / Español).

【Transparent】

Adjust the transparency of the OSD (on screen display) menu.

Press ▲ / ▾ button to select.(0%,25%,50%,75%,100%)

【OSD Time out】

Adjust the duration of the OSD (on screen display) menu.

Press ▲ / ▾ button to select.(5 Sec./15Sec./30Sec./45Sec./60Sec.)

【Closed Caption】

Adjust Closed Captioning settings. Only available under TV and AV source. Press ENTER / ▶ button to enter.

【CC Mode】

Turn Closed Captioning on/off. Press ▲ / ▾ button to select(CC Off / CC On/C C OnMute).

【Analog CC】

Set Closed Captioning for standard(analog) program.

Press ▲ / ▾ button to select(Off / CC1 / CC2 / CC3 / CC4 / Text1 / Text2 / Text3 / Text4).

【Digital CC】

Set Closed Captioning for digital program.

Press ▲ / ▾ button to select(Off / Service1 / Service2 / Service3 / Service4 / Service5 / Service6).

【Option】

Adjust the digital Closed Captioning setting.

Press ▶ button to enter.

【Restore Default】

Change power on options or reset TV to factory default. Press ENTER / ▶ button to enter.

【Setup Wizard】

Set the first time installation. Press ENTER / ▶ button to enter.

【CEC】

Press ENTER / ▶ button to enter.

Press ▼ / ▲ button to select the items you want to adjust, and press ▲ / ▾ to select or enter the sub-menu.

Lock Menu

Press MENU to enter the main menu.Press ▲ / ▾ button to select.

Press ENTER / ▾ to enter.

Press MENU again to exit or back to parent menu.

Press ▼ / ▲ button to select Change Password/Key Lock / System Lock / Input Block / US Rating / Canada Rating / RRT Setting / Reset RRT/Hotel Menu.

Press **ENTER / ▼** to enter.

Press **◀ / ▶** button to adjust.

Press **MENU** again or back to parent menu.

Enter your 4-digital password. Default password is 0000, and if forget what you set, please call the service center.



【Change Password】

Enter a new 4-digital password then re-enter it to confirm. Press button to enter.

【System Lock】

Lock or unlock the buttons on the TV. Press **◀ / ▶** button to select(Off / On).

【Input Block】

Block or unblock the input sources.

Press **▶** button to enter.

Press **◀ / ▶** button to select(Unblock / Block).

【US Rating】

Restrict movie and TV programs by US Ratings. Only available when "System Lock" is "on". Press **▶** button to enter.

【Canada Rating】

Restrict movie and TV programs by Canadian Ratings.Only available when "System Lock" is "on".

Press **▶** button to enter.

【RRT Setting】

Display an advance V-Chip rating table for digital channels.

The item is available only When current stream has downloadable rating data.

【Reset RRT】

Reset the RRT to default.

The item is available only When current stream has downloadable rating data.

【Hotel Menu】

Press **▼ / ▲** button to select Hotel mode.

Note:The following settings work only when Hotel Mode is set to be on. Press **◀ / ▶** button to select(On/Off).



Channel Menu

Press **MENU** to enter the main menu, Press **◀ / ▶** button to select.

Press **ENTER / ▼** to enter.

Press **MENU** again to exit or back to parent menu.



Press **▼ / ▲** button to select among Air/Cable / Auto Scan / Favorite/Channel List / Show/Hide / Channel Number / Channel Label .

Press **ENTER / ▼** to enter.

Press **◀ / ▶** button to adjust.

Press **MENU** again or back to parent menu.

[Air/Cable]

Select signal type.

Press **◀ / ▶** button to select(Air/Cable).

[Auto Scan]

Automatically search for channels. Press **ENTER / ▶** button to enter.

[Favorites]

Add channels to create a favorite list.

Press **▶** button to enter.

[Channel List]

Display your program list. Press **▶** button to enter.

[Show/Hide]

Show or hide the channels in your program list. Press **▶** button to enter.

【Channel Number】

Show the channel number. Press **◀ / ▶** button to adjust.select(5.1/5.2/6.0)

【Channel Label】

Create labels for channels ,up to 7 characters. Press **◀ / ▶** button to adjust.

Media OPERATION

Note: Before operating **Media** menu,Plug in USB device, then press **INPUT** button to set the Input Source to **Media** . Press **◀ / ▶** button to select **Media** in the Source menu, then press **Enter** button to enter.



Press **◀ / ▶** button to select the option you want to select in the main **Media** menu, then press **Enter** button to enter.

Photo Menu

Press **◀ / ▶** button to select PHOTO in the main menu, then press **Enter** button to enter.

Press **Menu** button to return back to the previous menu and exit menu to quit.

Press **◀ / ▶** button to select drive disk you want to watch, then press **Enter** button to enter.

Press **◀ / ▶** button to select return option to back to the previous menu.

Press **◀ / ▶** button to select the file you want to watch in the file selecting menu, then press **Enter** button to display picture.

When highlighting the option you select, the file information will appear on the right and picture will be previewed in the center.



Press **< / >** button to select the file folder you want to search in the file selecting menu, then press **Enter** button on your remote control to enter sub-menu.

Press **< / >** button to select the file you want to delete in the file selecting menu, then press red button on your remote control and press **Enter** button to delete files.

Music Menu

Press **< / >** button to select MUSIC in the main menu, then press **Enter** button to enter.

Press **Menu** button to return back to the previous menu and exit menu to quit.

Press **< / >** button to select drive disk you want to watch, then press **Enter** button to enter.

Press **< / >** button to select return option to back to the previous menu.

Press **< / >** button to select the file you want to watch in the file selecting menu, then press **Enter** button to add the file to play list, press media button to display and operate file details.

When highlighting the option you select, the file information will appear on the right.



Press **< / >** button to select menu in the bottom you want to run, then press **Enter** button to operate.

Press **Menu** button to back to the previous menu and exit button to quit the entire menu.

Press **▼** button to hide the menu in the bottom.

Text Menu

Press **◀/▶** button to select TEXT in the main menu, then press Enter button to enter.

Press menu button to return back to the previous menu and exit menu to quit.

Press **◀/▶** button to select drive disk you want to watch, then press Enter button to enter.

When reading Text books, press FF button of remote to next page, press FR button of remote to previous page. Press Next button of remote to next part or chapter, press PREV button of remote to previous part or chapter. Press the EXIT button of remote to return submenu.



Support format: TXT for Text. MP3 for music. JPG, JPEG, BMP and PNG for photo.

NOTE: It can not play video format.

Troubleshooting

The following table contains the common problems and the solutions to these problems. Please check this list before you contact the technicians.

Problems	Solutions
NO PICTURE	Connect power cord correctly.
	Turn on power.
	Connect video cable correctly.
	Select the input signal source with proper cable connection with the source button.
ABNORMAL COLORS	Match the colors on the cables to the ports off the back of the television. I.E. red cable to red colored port.
PICTURE IS TOO DARK	Adjust your contrast, brightness and lamp settings from the OSD Menu. For adjust controls
AUDIO ONLY NO PICTURE	Make sure you have connected both your video and audio cables.
	The TV's tuner signal must not be lower than 65 %.
PICTURE ONLY NO AUDIO	Make sure the audio cable is connected.
	Readjust your volume via the remote control.
	The TV's tuner signal must not be lower than 65 %.
REMOTE CONTROL DOES NOT WORK	Turn off the TV, unplug it from the socket. Remove the batteries out of the remote for 30 minutes. Press the remote buttons and the power button randomly for a good 2 seconds, and then reinstall the batteries. Try the remote to see if it works. For battery removal instructions.
	The TV's remote sensor is also housed in the same place as the power indicator light. Please make sure there is line of sight from the remote control's front sensor to the remote sensor of the TV.
CANNOT RECEIVE SUFFICIENT CHANNELS THROUGH THE ATSC/NTSC TUNER	The TV's tuner signal must not be lower than 65 %. Change the direction of your antenna and rescan your channels. If you have cable call up your cable company and ask about signal strength of your local cable.
NO COLOR	Please adjust your picture setup and make sure the saturation and the RGB are not turned all the way down. For adjustment controls.
	The TV's tuner signal must not be lower than 65 %. Check your signal.
WEAK SIGNAL OR NO PROGRAM SYMBOL ON SCREEN	The TV's tuner signal must not be lower than 65 %. Change the direction of your antenna and rescan your channels. If you have cable call up your cable company and ask about signal strength of your local cable.

Problems	Solutions
TV CHANNELS ARE BLOCKED	Check your auto lock function's settings inside the OSD. You may have locked up some channels but forgot about them.
THE TV TURNS ON OR OFF SLOWLY AND THE SCREEN SHOWS UP SLOWLY	This TV is a High Definition liquid crystal display panel TV. It requires a few more seconds than normal TVs to power up and show the picture.
HDCP VIDEO SAYS NO HDCP SUPPORT	Reboot your HDCP video device but turning them off and unplugging the power cord. Wait up to 8 minutes to plug the power back in to see if it works or not.
HDCP VIDEO HAS NO AUDIO	Make sure you have a 3.5 mm mini-jack cable connected from your HDCP video device's sound output to the TV's VGA STEREO INPUT. If your HDCP video device uses RCA AUDIO jacks, you'll need to obtain a RCA audio converted into 3.5 mm mini-jack cable.
PICTURE IS DISTORTED OR HAS ABNORMAL SOUND	This might be from interference from large electrical appliances, cars, motorcycles, or fluorescent lights. If the TV is close to the wall, try moving the TV to another room in your house to see if the problem still occurs.
PICTURE DOES NOT COVER THE ENTIRE SCREEN	If you're using HDMI or a TV digital channel make sure you use the ASPECT button to switch to 16:9 format. If you are using VGA, use the AUTO ADJUST function to adjust to the screen. Please Note : If you are using regular analog TV, AV, or component in 480i resolution, use the ASPECT button to switch to 16:9 in order to fill up the screen. Please Note : This note this feature will distort the picture.
PICTURE QUALITY IS HORRIBLE!!	For best image quality, view HD widescreen programs where possible. If HD content is not available view "Standard Definition" from a digital source. Standard, analog TV will always be noticeable inferior to HD because your TV has video that is many times better than old TV's and so you can see interference and deficiencies you did not KNOW you had.
PICTURE HAS PIXELS THAT ARE ALWAYS DISPLAYING THE SAME COLOR	Your TV is manufactured using an extremely high level of precision technology, however, sometimes some pixels of your TV may not display. Pixels defects within industry specifications are inherent to this type of product and do not constitute a defective product.
I CANNOT CHANGE THE TIME MANUALLY	Your TV syncs time automatically according to your local TV channel. This function only works while the TV's tuner is connected to an ANTENNA.
BIG BLACK BOX IN THE MIDDLE OF SCREEN	You have turned on closed captioning and are using TEXT1 – TEXT4. Change the setting to CC1 or turn off closed captioning and the box will disappear.

Problems	Solutions
SWITCHING CHANNEL SOURCE CHANGES THE VOLUME	A Different channels and inputs will sometimes have this effect because the channel signal's own volume is already loud. There is no way remove this completely. The TV has an AUTO VOLUME LEVEL function that can combat this type of effect. Please make sure that function is turned on.
THERE IS NOISE OR TRASH PIXELS ON THE SCREEN	When your TV's resolution is higher than the digital channel's broadcast resolution, the signal is up-converted to match your TV's resolution. Up-converting can cause this type of effect.
TIPS FOR HIGH DEFINITION USERS	The TV is an ideal platform for viewing High Definition Content. The best image quality can be achieved by HDMI, YPbPr (Component). However, due to variances in broadcast practices, it is possible some image distortions can occur.
TIPS FOR LETTERBOX CONTENT USERS	Letterboxed (Widescreen) versions of DVD movies are most commonly formatted for standard 4:3 TVs. The TV has the capability of expanding this content so the entire screen is filled at the expense of the image proportion. To use this function press the aspect button on the remote control and cycle among the available options.
I CANNOT FIND THE VOLUME AND CHANNEL CHANGING BUTTONS	The buttons are represented by the ▲▼◀▶ buttons located on the remote control. ▲▼ changes the channels and ◀▶ changes the volume.
TV TURNS OFF AUTOMATICALLY AFTER 5 MINUTES	The TV features a power saving mode which will automatically turn off the TV, if there's no signal provided for more than 5 minutes.
MY TV PICTURE IS VERY DIM	Check to see if you are under POWER SAVING mode for your picture mode. Keep pressing the PICTURE button on the remote control to cycle out of POWER SAVING.

Specifications

Display panel	
Item	Illustration
Active Area/ Screen Size	Diagonal 22 inches
Aspect Ratio	Widescreen 16:9
Pixel Pitch	0.51 (H) x RGB x 0.51 (V) um per one triad
Max. of Pixels (Resolution)	FHD (1920x1080 pixels) resolution
Brightness	170 nits (Typical)
Contrast	1000:1 (Typical) with Auto Contrast Enhancement
Response Time	5ms (gray to gray)
Viewing Angle	Typical 170/160 Degree (Horizontal/Vertical)
Lamp Life of Backlight	> 30,000hrs
TV DISPLAY	
Dimension	20.0" x 5.7" x 13.2" (with stand) 20.0" x 3.5" x 12.2" (without stand)
Weight	5.1 lbs
Power input	100 - 240V~, 60/50 Hz, 3A(Max.)
Function	
(1)Video	
Frame recover	3:2
Aspect ratio	Wide, Normal, Cinema, Zoom
Gamma	Fixed Gamma
Lamp adjust	Yes
Picture mode	Standard / soft / Power Saving / User/Dynamic
Video adjust	Brightness / Contrast / Color / Tint / Sharpness

(2) Audio	
Sound Mode	Music/Standard/ Movie/User/Sport
Auto Volume Control	Yes
(3) General	
Hybrid TV Tuner	NTSC / ATSC / QAM (Digital Cable Ready)
Channel auto scan	Yes
Sleep timer	Off/5mins/10mins/15mins/30mins/60mins/90mins/120mins/180mins/240mins
Standby power	Under 1W
Timing support•Video	480i / 480p / 720p / 1080i / 1080p
PC timing	1920*1080@60 Hz (NATIVE) 1360*768@60 1024*768@60 800*600@60 640*480@60 720x400@70
(4) NTSC/ATSC	
NTSC	Sound: Mono / Stereo / SAP
	Favorite Channel
	V-chip
	Closed caption (CC1~CC4, Text 1~Text 4)
	Favorite Channel
ATSC	V-chip
	Video input format: 1080i, 720p, 480p, 480i
	Analog closed caption: (CC1~CC4, Text 1~Text 4)
	Digital closed caption: (Service 1~Service 6)
(5) I/O	
	1 input x AV 1 input x HDMI 1 input x USB 1 output x Earphone 1 input x RF 1 input x PC AUDIO 1 input x VGA

*The product's specifications may change without notice or obligation.

**This manual's pictures and words are for references only and are subject to change without notice or obligation.

To make a warranty claim, please email service-us@tutuelec.com

1 Year Warranty

This product is warranted to be free from defects in material and workmanship for a period of one (1) year from the date of original purchase. During this period, your exclusive remedy is repair or replacement of this product or component found to be defective, at our option; however, you are responsible for all costs associated with returning the product to us. If the product or component is no longer available, we will replace with a similar one of equal or greater value. Prior to a replacement being sent, the product must be rendered inoperable or returned to us.

This warranty does **not** cover glass, filters, wear from normal use, use not in conformity with the printed directions., or damage to the product resulting from accident, alteration, abuse, or misuse. This warranty extends only to the original consumer purchaser or gift recipient. Keep the original sales receipt, as proof of purchase is required to make a warranty claim. This warranty is void if the product is used for other than single-family household use or subjected to any voltage and waveform other than as on the specified rating on the label (e.g., 120V~60Hz).

We exclude all claims for special, incidental, and consequential damages caused by breach of express or implied warranty. All liability is limited to the amount of the purchase price. **Every implied warranty, including any statutory warranty or condition of merchantability or fitness for a particular purpose, is disclaimed except to the extent prohibited by law, in which case such warranty or condition is limited to the duration of this written warranty.** This warranty gives you specific legal rights. You may have other legal rights that vary depending on where you live. Some states or provinces do not allow limitations on implied warranties or special, incidental, or consequential damages, so the foregoing limitations may not apply to you.

For faster service, locate the model, type, and serial numbers on your appliance.

90 Day Warranty

Remote controls are warranted from date of purchase for a period of ninety (90) days, provided remote has been used as intended and free from damage.

ATTACH YOUR PROOF OF PURCHASE HERE, PROOF OF PURCHASE IS REQUIRED TO OBTAIN WARRANTY SERVICE.

Please have the following information available when you contact the Support Team:

- Name, address and telephone number.
- Model number and serial number.
- A clear, detailed description of the problem.
- Proof of purchase including dealer or retailer name, address and date of purchase.