



Operating Instructions

LED TV

English

TN-43W70BGZ
TN-50W70BGZ
TN-55W70BGZ
TN-65W70BGZ
TN-75W70BGZ



(Image: TN-50W70BGZ)

Thank you for purchasing this Panasonic product.
Please read these instructions carefully before operating this product
and retain them for future reference.
The images shown in this manual are for illustrative purposes only.

Table of Contents

Chapter 1: Introduction

- Warning 3
- Use Environment 4
- Cleaning 4
- Hanging the TV Set on the Wall 4
- Caution 4
- Symbol 6
- Precautions for Using Remote Control 6
- Installing/Removing Remote's Batteries 6
- Standard Accessories 7
- Optional Accessories 7
- Pedestal Installation..... 8

Chapter 2: Basic Features

- TV Terminals 9
- TV Controls10
- Remote Control..... 11
- How to Pair Bluetooth Remote Control with the TV12
- Initial Setup 12
- Selecting the Input Source 16
- Settings 16
- Quick Button 19

Chapter 3: Smart Features

- Home Page..... 20
- Google Assistant..... 20
- Google Cast..... 20
- Disclaimer about Using Google TV 22
- Multimedia Player 22

Chapter 4: Technical Information

- Maintenance 24
- Troubleshooting 24
- Specifications 25
- OSS license26

Chapter 1: Introduction

Warning

Handling the mains plug and lead

Insert the mains plug fully into the socket outlet. (If the mains plug is loose, it could generate heat and cause fire.)

Ensure that the mains plug is easily accessible.

Do not touch the mains plug with a wet hand. (This may cause electrical shock.)

Do not use any mains lead other than that provided with this TV. (This may cause fire or electrical shock.)

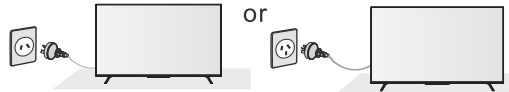
Do not damage the mains lead. (A damaged lead may cause fire or electrical shock.)

- Do not move the TV with the lead plugged in the socket outlet.
- Do not place a heavy object on the lead or place the lead near a high-temperature object.
- Do not twist the lead, bend it excessively or stretch it.
- Do not pull on the lead. Hold onto the mains plug body when disconnecting the lead.
- Do not use a damaged mains plug or socket outlet.
- Use the TV in moderate climates.

If you find any abnormality, remove the mains plug immediately!



110 - 240V ~ 50 / 60 Hz



- Mains plug types vary between countries.

Power source

- This TV is designed to operate on
- 110 - 240V ~ 50/60 Hz
- Table-top use / Wall hanging

Do not insert external objects into the TV

- Do not allow any objects to drop into the TV through the air vents. (Fire or electrical shock may result)

Do not use external voltage stabilizer with the TV set

- Inferior quality stabilizer may cause damage to the TV.
- Warranty is not valid if external stabilizer is used.

Do not place the TV on sloped or unstable surfaces, and ensure that the TV does not hang over the edge of the base

- The TV may fall off or tip over.

Do not remove covers and never modify the TV by yourself

- Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside. (High-voltage components may cause serious electrical shock.)
- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.
- Please refer the information on exterior back enclosure for electrical and safety information before installing or operating the apparatus.
- The mains plug is used as disconnect device, the disconnect device shall remain readily operable.

Use only the dedicated pedestals/ mounting equipments

- Use an unapproved pedestal or other fixtures may make the TV unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- When mounting the TV on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer. This is a safety feature.
- Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery, etc.).

Do not expose to rain or excessive moisture

- To prevent damage which might result in electrical shock or fire, do not expose this TV to rain or excessive moisture. This TV must not be exposed dripping or splashing water and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

Do not expose to direct sunlight and other sources of heat

- Avoid exposing the TV to direct sunlight and other sources of heat.



To prevent the spread of fire, keep candles or other open flames away from this product at all times.

Use Environment

Warning: Stability Hazard

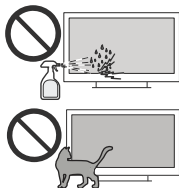
A television set may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- ALWAYS use cabinets or stands or mounting methods recommended by the manufacturer of the television set.
- ALWAYS use furniture that can safely support the television set.
- ALWAYS ensure the television set is not overhanging the edge of the supporting furniture.
- ALWAYS educate children about the dangers of climbing on furniture to reach the television set or its controls.
- ALWAYS route cords and cables connected to your television so they cannot be tripped over, pulled or grabbed.
- NEVER place a television set in an unstable location.
- NEVER place the television set on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television set to a suitable support.
- NEVER place the television set on cloth or other materials that may be located between the television set and supporting furniture.
- NEVER place items that might tempt children to climb, such as toys and remote controls, on the top of the television or furniture on which the television is placed.

If the existing television set is being retained and relocated, the same considerations as above should be applied.

Cleaning

- Do not spray water or detergent directly on TV screen for cleaning purpose. Leaking liquid substance will cause damage to TV.
- Be careful of cats, rats or other animals that may urinate on the TV (front and rear). It may lead to TV failure.
- Do not use sharp or hard objects (finger nails, knife and etc.) on TV screen. This may cause damage to the screen surface.



Hanging the TV Set on the Wall

- Check that the wall can support the weight of the TV set and wall mount assembly.
- Follow the mounting instructions provided with the wall mount.
- The TV set must be installed on a vertical wall.
- Make sure to use only screws suitable for the material of the wall.
- Make sure that the TV set cables are placed so that there is not danger of tripping over them.

All other safety instructions about our TV sets are also applicable here.

Warning: This operation requires two people.

To ensure a safe installation, observe the following safety.

Caution

1.Read these instructions---All operating instructions must be read and understood before the product is operated.

2.Keep these instructions---These safety and operating instructions must be kept in a safe place for future reference.

3.Read all warnings---All warnings on the product and in the instructions must be observed closely.

4.Follow all instructions---All operating instructions must be followed.

5.Attachments---Only use attachments/ accessories specified by the manufacturer. Do not use attachments not recommended by the manufacturer. Use of improper attachments can result in accidents.

6.Power source---This product is intended to be supplied by a listed power supply indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For added protection 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 cable system.

Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

7.Power cord protection---Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

8.Overloading---Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in a risk of fire or electric shock.

9.Servicing---Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

10.Damage requiring service---If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.

a. When the power cord or plug is damaged.

b. When a liquid is spilled on the product or when objects have fallen into the product.

c. When the product has been exposed to rain or water.

d. When the product does not operate properly as described in the operating instructions.

Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.

e. If the product has been dropped or the cabinet has been damaged in any way.

f. When the product displays an abnormal condition or exhibits a distinct change in performance. Any noticeable abnormality in the product indicates that the product needs servicing.

11. Replacement parts---In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.

12. Safety checks---Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.

13. Stand---Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. Do not place the product on an unstable trolley, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.



14. Careful move---When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. Sudden stops, excessive force and uneven floor surfaces can cause the product to fall from the trolley.

Never attempt to move the TV unless the AC power cord has been disconnected.

15. Lightning---Unplug this apparatus during lightning storms or when unused for long periods of time.

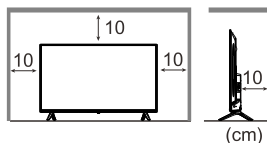
For added protection for this television equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the equipment due to lightning and power-line surges.

16. Panel protection---The display panel used in this product is made of glass. Therefore, it can break when the product is dropped or impacted upon by other objects. Be careful not to be injured by broken glass pieces in case the display panel breaks.

17. Pixel defect---The display panel is a very high technology product, giving you finely detailed pictures. Occasionally, a few non-active pixels may appear on the screen as a fixed point of blue, green or red. Please note that this does not affect the performance of your product.

18. Do not block the rear air vents

- Adequate ventilation is essential to prevent failure of electronic components.
 - Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths and curtains.
 - We recommended that a gap of at least 10 cm is left all around this TV even when placed inside a cabinet or between shelves.
 - When using the pedestal, keep the space between the bottom of the TV and the surface where the TV is set.
 - If pedestal is not used, ensure the vents is the bottom of the TV are not blocked.
 - Do not install this equipment in a confined or building-in space such as a book case or similar unit, and remain a well ventilation conditions at open site.
- Minimum distance



Note: The picture is only for reference.

19. Do not ingest the battery, Chemical Burn Hazard---

Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children. If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

20. Listening— Listening to music at high volume levels and for extended durations can damage one's hearing. In order to reduce the risk of damage to hearing, one should lower the volume to a safe, comfortable level, and reduce the amount of time listening at high levels.

21. Damages

- Excepting cases where responsibility is recognised by local regulations, Panasonic accepts no responsibility for malfunctions caused by misuse or use of the product, and other problems or damages caused by use of this product.
 - Panasonic accepts no responsibility for the loss, etc., of data caused by disasters.
 - External devices separately prepared by the customer are not covered by the warranty. Care for the data stored in such devices is the responsibility of the customer.
- Panasonic accepts no responsibility for abuse of this data.

Symbol

- For the terminals marked with symbol of "⚡" may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.



- Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection. (Only for Class I appliance)

- If the product has the symbol in its rating label and the power cord has two pins, it means that the equipment is a Class II or double insulated electrical appliance. It has been designed in such a way that it does not require a safety connection to electrical earth.

- The following information are recommended to be included where applicable:

~ Refers to alternating current(AC).

— Refers to direct current(DC).



Refers to Class II equipment.



Refers to stand-by.



Refers to power ON.



Refers to dangerous voltage.



Refers to Class I equipment.



- This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

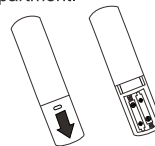
- To reduce the risk of electric shock. Do not remove cover (or back). No user serviceable parts inside. Refer to qualified service personnel.
- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.

Precautions for Using Remote Control

- Use the remote control by pointing it towards the remote sensor. The items between the remote control and the remote sensor will interfere the normal operation.
- Do not make remote control vibrate violently. Also, do not splash liquid on the remote control, also do not put the remote control in high humidity place.
- Do not place remote control under direct sunlight which will cause deformation of the unit by heat.
- When the remote sensor is under direct sunlight or strong lighting, the remote control will do not work. If so please change the lighting or TV's position, or operate the remote control closer to the remote sensor.

Installing/Removing Remote's Batteries

Place two AAA size batteries in the remote control's battery compartment, making sure to match the polarity markings inside the compartment.



Note: The picture is only for reference.



Caution

- Incorrect installation may cause battery leakage and corrosion, resulting in damage to the remote control.
- Do not mix old and new batteries.
- Replace only with same or equivalent type. Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable (Ni-Cd) batteries.
- Do not burn or break up batteries.
- Do not expose batteries to excessive heat such as sunshine, fire or the like.
- Make sure you dispose of batteries correctly.
- Ensure batteries are replaced correctly with the same or equivalent type, there is danger of explosion and fire if battery is reversed or incorrectly replaced.
- Do not disassemble or modify the remote control.

Standard Accessories

Remote Control



Pedestal (2)



Screws (4)



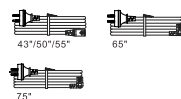
Batteries (2) (AAA size)



Operating Instructions



AC Power Cord



Note:

- 1) The pictures are only for reference.
- 2) Accessories may not be placed all together. Take care not to throw them away unintentionally.
- 3) This product contains possibly dangerous parts (such as plastic bags), that can be breathed in or swallowed by young children accidentally. Keep these parts out of reach of young children.

Optional Accessories

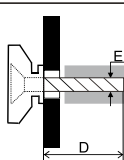
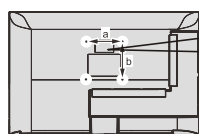
Please contact your local Panasonic dealer to purchase the recommended optional accessories. For additional details, please read the manual of optional accessories.

Wall-hanging bracket

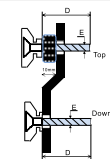
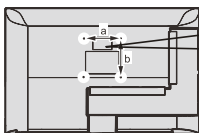
Please contact your local Panasonic dealer to purchase the recommended wall-hanging bracket.

Note: The graphics are only for reference.

• Screw Specifications



Screw Spec.		43"		50"		55"		65"	
		Top	Down	Top	Down	Top	Down	Top	Down
E "Diameter" (mm)		M6	M6	M6	M6	M6	M6	M6	M6
D "Depth" (mm)	Max.	15	15	15	15	15	15	28	28
	Min.	6	6	10	10	10	10	22	22
Quantity		2	2	2	2	2	2	2	2



Screw Spec.		75"	
		Top	Down
E "Diameter" (mm)		M6	M6
D "Depth" (mm)	Max.	35	25
	Min.	28	18
Quantity		2	2

• VESA

Size	43"	50"	55"	65"	75"
a (mm)	200	200	200	400	600
b (mm)	200	200	200	200	400

⚠ Warning

- Failure to use a Panasonic bracket or choosing to mount the unit yourself will be done at the risk of the consumer. Always be sure to ask a qualified technician to carry out set up. Incorrect fitting may cause equipment to fall, resulting in injury and product damage. Any damage resulting from not having a professional installer mount your unit will void your warranty.
- When any optional accessories or wall hanging brackets are used, always ensure that the instructions provided are followed fully.
- Do not mount the unit directly below ceiling lights (such as spotlights or halogen lights) which typically give off high heat. Doing so may warp or damage plastic cabinet parts.
- Take care when fixing wall brackets to the wall. Wall mounted equipment shall not be grounded by metal within the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging bracket.
- To prevent fall and injury, remove the TV from its fixed wall position when it is no longer in use.
- For the TV sets with terminals facing towards the wall, in order to connect external devices, a 30mm-high plastic spacer is used together with each screw to fix the wall mount.

Pedestal Installation



Warning

Do not disassemble or modify the pedestal.

- Otherwise the TV may fall over and become damaged, and personal injury may result.



Caution

Do not use any pedestal other than the one provided with this TV.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Do not use the pedestal if it becomes warped or physically damaged.

- If you use the pedestal while it is physically damaged, personal injury may result. Contact your local Panasonic dealer immediately.

During set-up, make sure that all screws are securely tightened.

- If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

Ensure that the TV does not fall over.

- If the TV is knocked or children climb onto the pedestal with the TV installed, the TV may fall over and personal injury may result.

Two or more people are required to install and remove the TV.

- If two or more people are not present, the TV may be dropped, and personal injury may result.

When removing the pedestal from the TV, do not remove the pedestal by the methods other than the specified procedure.

- Otherwise the TV and / or pedestal may fall over and become damaged, and personal injury may result.

Appearance of the product in illustrations may differ from your actual product, and is for reference purposes only.

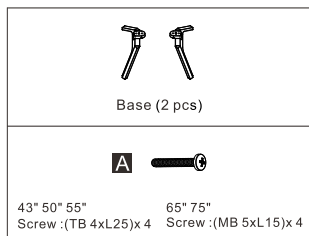
Removing the pedestal from the TV

Be sure to remove the pedestal in the following way when using the wall-hanging bracket or repacking the TV.

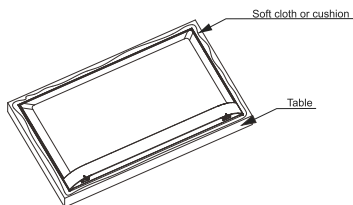
- 1 Remove the assembly screws from the TV.
- 2 Remove the pedestal from the TV.

Note: The pictures are only for reference.

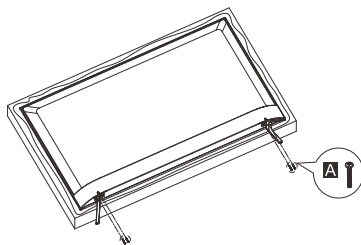
1. Please take out the accessory bag from the package and check if all bellow parts exist without missing, if not, please contact your local dealer.



2. Take out the TV and carefully put it (screen downward) on a stable and flat table with a soft cloth or cushion on it.



3. Connect the TV and base by putting and fastening matched screws into the holes.



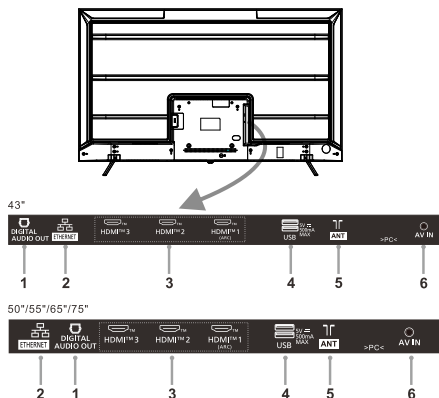
Chapter 2: Basic Features

TV Terminals

Note:

- 1) The pictures are only for reference.
- 2) The positions of terminals may vary by different models.

Back View



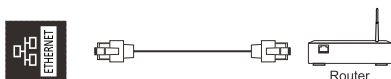
1. DIGITAL AUDIO OUT

connect an optical cable to output the TV's digital audio signal to a compatible audio receiver.



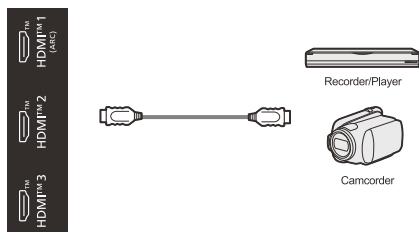
2. ETHERNET

Wired network port.



3. HDMI IN

Receive HDMI input signal from the connected HDMI device.



Note:

- 1) If the external device has a DVI output only, use a DVI to HDMI adapter cable to connect to the HDMI terminal.

2) HDMI1 supports ARC(Audio Return Channel) function, and you can connect ARC-enabled device with the TV by HDMI1 terminal.

4. USB

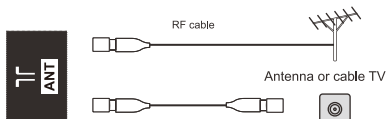
Connect USB devices to the TV.



Note: Never remove the USB device or turn off the TV while using the USB device.

5. ANTENNA IN

Connect a coaxial cable to receive signal from the antenna or cable.

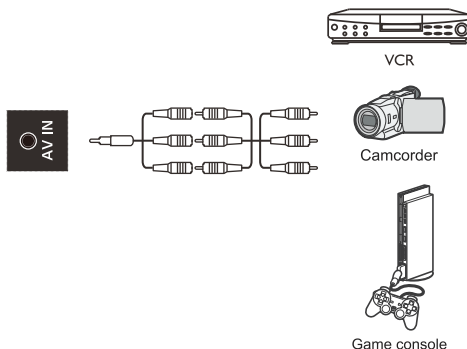


Note:

- 1) Do not place the RF cable under the TV.
- 2) To obtain the optimum quality of picture and sound, an aerial, the correct cable (75Ω coaxial) and the correct terminal are required.
- 3) If a community antenna system is used, you may require the correct connection cable and plug between the wall aerial socket and the TV.
- 4) Your local Television Service Center or dealer may be able to assist you in obtaining the correct aerial system for your particular area and the accessories required.
- 5) Any matters regarding aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the customer.

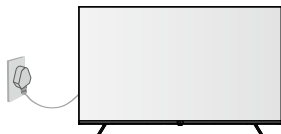
6. AV IN

Receive audio and video signal from signal source such as DVD.



TV Controls

■ Power Connection



Note: The picture is only for reference.

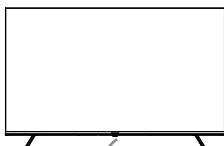
Connect the power cord to the TV and the power outlet (110-240V ~ 50/60Hz).

■ Turn on or turn off the TV

1. Connect the power cord to the power outlet and the TV.
2. In standby mode, press **POWER**  button to turn on the TV.
3. In working status, press **POWER**  button to turn the TV to standby mode.
4. Disconnect the power cord to power off the TV completely.

■ Power Indicator

Front View



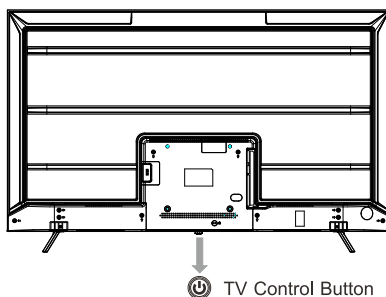
Power Indicator

Note: The picture is only for reference.

- **Lit in Red:** Standby mode.
- **Lit in Green:** Working status.
- **Unlit:** Power off.

■ TV Control Button

Back View



Note: The picture is only for reference.

TV Control Button (Located under this icon)

* In standby mode:

Tap TV control button to turn on the TV.

* In working status:

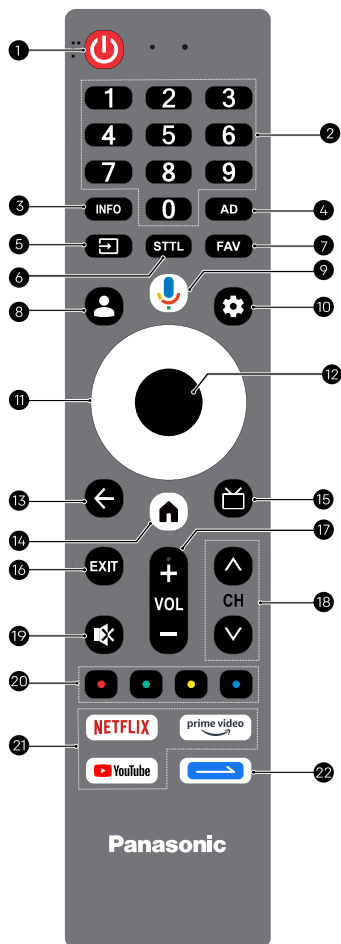
Tap TV control button to call out the following menu of soft keyboard. Inside it, tap TV control button to move the cursor and select the desired item. Long press (for more than 3 seconds) TV control button to enter or execute the selected item.



Remote Control

Note:

- 1). The picture is only for reference.
- 2). The image, buttons or functions of remote control may vary depending on the region, model, app or source.
- 3). Some DTV-related buttons may not be applicable due to non-availability of DTV signal in some areas.



1. POWER (): Turn on the TV, or turn the TV to fast boot / standby mode.

2. Number Buttons (0~9):

Select the channel directly, or input a number.

3. INFO: Access the INFO interface.

4. AD: Adjust audio settings including audio language, sound tracks, audio type, and so on.

5. SOURCE (): Access the source menu.

6. STTL: Quickly open the subtitle on LiveTV.

7. FAV: Access the list of favorite channels.

8. ACCOUNT (): Sign in with your Google account to get the entertainment you love.

9. MIC (): Start using the near field voice function.

- Short press MIC button to wake up the voice assistant.

- Long press MIC button to start receiving your voice command. After your speaking, release MIC button to run voice function.

10. Dashboard (): Access the dashboard of your Google TV.

11. UP/DOWN/LEFT/RIGHT

Navigate the menu to select the content you need, or press UP/DOWN button to change channels.

12. OK: Confirm, enter or execute the selected item, or access the channel list.

13. BACK (): Return to upper-level content, or exit the current screen.

14. HOME (): Access the home screen.

15. GUIDE (): Switch to the TV mode, or access the Electronic Program Guide in DTV mode.

16. EXIT: Exit the current operation.

17. Volume Up/Down (VOL +/-): Adjust the sound volume.

18. Channel Up/Down ( / ): Switch channels.

19. MUTE (): Mute or restore the TV sound.

20. Color Buttons (RED/GREEN/YELLOW/BLUE):

Execute the prompt function in specific mode.

21. Application Buttons: Access specific applications quickly and directly.

22. Compound Button:

- Short press to set or start the function of shortcut key.

- Long press to open the virtual keyboard including number buttons, color buttons, and so on.

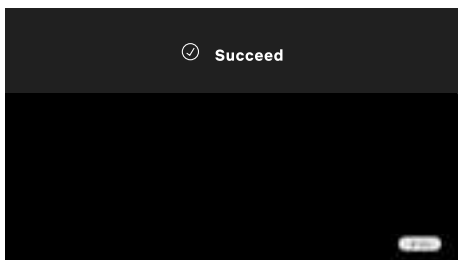
How to Pair Bluetooth Remote Control with the TV

Note:

- 1) The pictures are only for references.
- 2) Some screens may vary depending on software version.
- 3) This is a Bluetooth remote control. Before using it, please pair it with the TV.

■ Pair Bluetooth Remote Control with the TV

Press Remote control  button to enter pairing with TV. Once has been connected ,will show "Succeed" as following picture.



Initial Setup

When you turn on the TV for the first time, there will show a wizard to guide you to finish the following initial settings:

Step 1: Press button  Connect the Bluetooth remote control.



Step 2: Select the menu language as you need.

Note: You can choose English (Australia)



Step 3: Select to Set up Google TV or Set up basic TV.



Step 4: Select using Android phone or remote control to enter your Google account. Next page has the instructions for Android phone set up. Go to page 14 for instructions for remote control set up.



< Instructions to Setup the TV with Your Android Phone >

- Turn on the Bluetooth functions of your Android phone, then find and open “Home” application on your phone.



Remark: Before operate following steps, please firstly using your Android Phone to log into your Google Account and create the new home “House” or other which you like.

- Click + → Set up device → New device.



- Choose created “House” ,click “Next” , looking for Google TV device, then click “Yes” to next step.



- Scan the QR code or input Setup code Shown on Google TV device to connecting the Google TV device



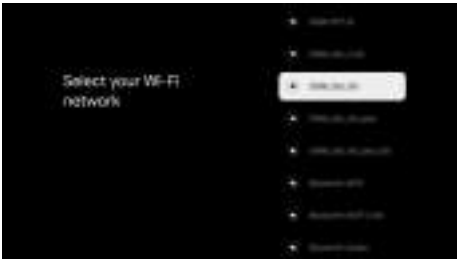
- Read and accept the Google terms of service and privacy policy. Follow the step to choose or create a location for Google TV.



- Connect to Wi-Fi.



- Follow the guide to step by step until signed in to Google with your Google Account.



Step 4 (b) Enter your Google account and password.
 You need to be signed in to a Google account in order to use Google services. If you don't already have a Google account you can set up an account by choosing "Create account" option.



Step 4 (c) Acceptance of Google terms of service
 Read to accept the Google terms of service and privacy policy.



Note:
 1) The pictures are only for references.
 2) Some screens may vary depending on your operating with Android phone.

You can also use the remote control to set up your TV and log in to your Google account or create a new Google account.

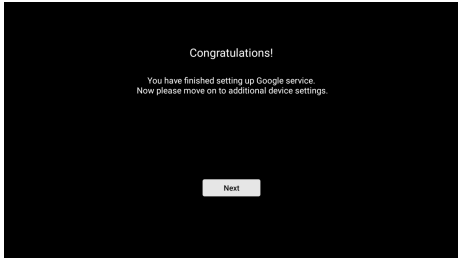
Step 4 (a) Connect your TV to a network.
 Select your network and press OK to connect to it.
 Enter your password for the network.



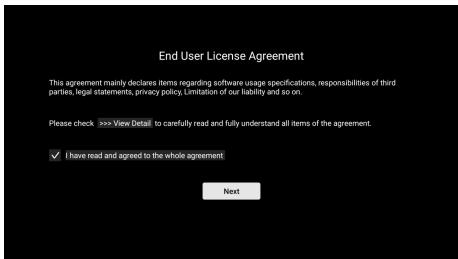
Step 4 (e) Search across all your TV apps.



Step 5: Follow the wizard to finish setting up Google service.

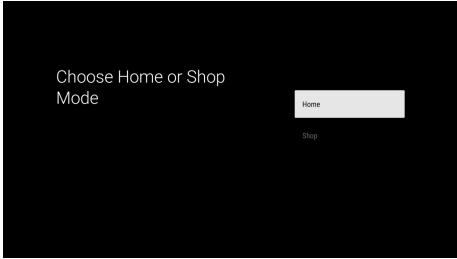


Step 6: Read the end user license agreement.

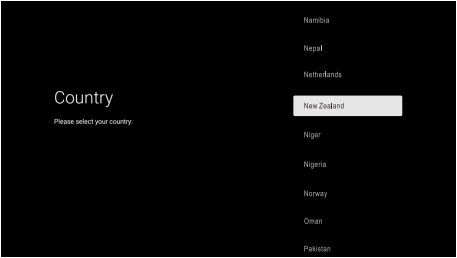


Step 7: Choose the TV usage environment between “Home” and “Shop”.

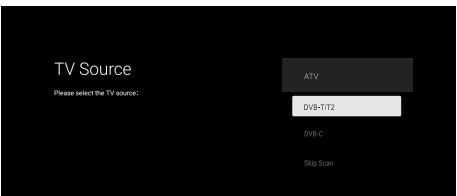
Note: “Home” mode is recommended for home viewing, while “Shop” mode is used to demonstrate the TV in a shop and the like. It will consume more energy in “Shop” mode.



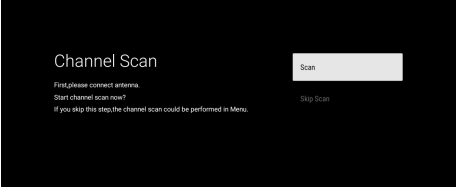
Step 8: Select your country. Scroll down to New Zealand.



Step 9: Select the TV source. Program type is free and LCN Switch is ON.



Step 10: Select whether or not to start “Channel Scan”.



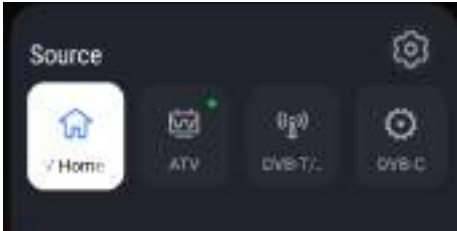
Step 11: Install your apps and be ready for your Google TV.



Note:
1) Different choices with different screens. The pictures are only for references, please refer to actual screens of your Google TV .
2) Initial settings may change without notice, which depends on Google requirements. You need to finish all initial settings according to what is indicated on the screen.
3) If you want to restart the initial setup after the first time, please Press “**SETTING**” button into Settings → System → About → Reset .

Selecting the Input Source

- 1. Press **SOURCE** button to access the list of input sources.
- 2. Press **LEFT/RIGHT** button to select the desired input source.
- 3. Press **OK** button to access the selected input source.



Note:
1) The picture is only for reference.
2) The source of **Google TV Home** will be available only after you update the TV system, connect the TV to the network, and login to your Google account.

Settings

- Step 1:** Press **SETTING** button to enter settings.
Step 2: Press **OK** buttons to general settings.
Step 3: Press **UP/DOWN/LEFT/RIGHT** and **OK** buttons to select and adjust an item.
Step 4: Press **BACK** button to back to the upper-level menu.



Note:
1) The pictures are only for references.
2) Some settings may vary depending on the region, model or input source.

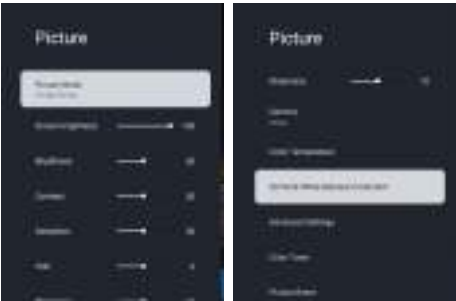
Channels and Inputs: Select to enter Channels or Inputs.



Display & Sound: Set Picture, Screen, Sound , Audio output



Picture:



Picture Mode	Select the picture mode. Choices are Vivid, Standard, Sport, User, Movie, etc., which may vary by different input sources.
Screen brightness	Adjust the lightness of the screen.
Brightness	Adjust the lightness of the picture.
Contrast	Adjust the difference between light and dark areas of the picture.
Saturation	Adjust the colorfulness of the color relative to its own brightness.
HUE	Adjust the color tint of the picture.

Sharpness	Adjust the edge of the picture.
Gamma	Adjust the light intensity of original image. Choices are Dark, Middle and Bright.
Color Temperature	Adjust the overall color tone of the picture.
20 Point White Balance Correction	Adjust white balance.
Advanced Settings	Reduce the Digital noise, set the local contrast control, etc.
Color Tuner	Adjust Hue, Saturation and Brightness.
Picture Reset	Reset picture settings.

Screen:



Display Off	Turn off the display.
-------------	-----------------------

Sound:



Sound mode	Select the sound mode. Choices are Standard, Music, Sport and Movie.
Balance	Control the sound balance between left and right speakers.
Bass	Adjust the low frequency of the sound.

Treble	Adjust the high frequency of the sound.
DTS Studio Sound	Turn on or turn off the sound system of DTS Studio Sound.
Auto Volume	Turn on to adjust the sound volume automatically depending on the input signal.
Speaker	Turn on or turn off the TV speaker.
Audio Type	Select the type of audio output. Choices are Normal and Visually Impaired.
Visually Impaired	Adjust Speaker and Volume to help the visually-impaired viewers understand and enjoy the program. It is available only after "Visually Impaired" has been selected in "Audio Type".
Dialogue Enhancer	Select Dialogue Enhancer, choices are Off, Low, Medium and High.
Sound Reset	Reset sound settings.

Audio output:



Digital Audio Output	Set Digital Audio output, choice are Off, Auto, Dolby Digital, PCM, etc.
Digital Audio Delay	Set Digital Audio Delay value.

Network & Internet:Connect the TV to the wireless or wired network.



Accounts & Sign-in: Manage your Google Account.



Privacy: Set Device settings, Account settings and APP settings.



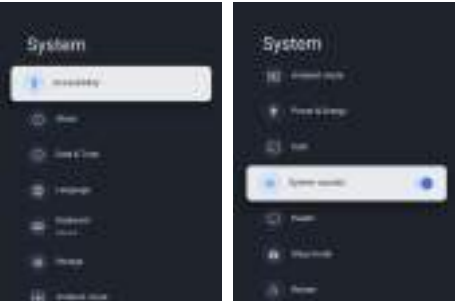
Apps: Show the list of recently opened, and all installed apps.Setup specific app permissions.



System: Set system.



System:



Accessibility	Set Captions, Text, Accessibility shortcut, TalkBack, etc.
About	System update, Device information (Including software version), Factory reset, etc.
Date & Time	Set date , time and time zone.
Language	Choose the language you want.
Keyboard	Manage the Keyboards.
Storage	Show Device storage information.
Ambient mode	Choose the photos channel, more settings about Weather, Time , Personal photo data,etc.
Power & Energy	Choice Power on behaviors, Energy saver, Sleep timer, etc.
Cast	Cast notification control.
System sounds	When operating Remote Control, a short sound appear from the device.
Health	Choices are Night mode, Eye Protection and Auto Volume Control.
Shop mode	Choose Shop or Home mode.
Restart	Restart the device.

Remotes & Accessories: Turn on or off Bluetooth devices or Pair other accessories.

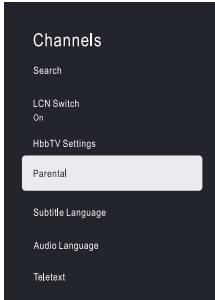


Help & Feedback: Send feedback to Google .



Quick Button

In ATV or DTV mode, Press **OK** button to access Quick Button.



Channels >Parental >Please enter password , the default password is 0000.

Chapter 3: Smart Features

Home Page

Please press Home button () to enter the home page to enjoy the following functions.



Note: The picture is only for reference.

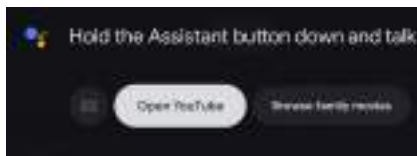
1. **Search:** Use Google Assistant or typing words to search what you desire.
2. **For you:** Recommend the content lists of Top picks, Your apps, Continue watching, Popular movies, etc.
3. **Movies:** Show Popular movies, New movies, Movies from your watch list, Trending on Google, etc.
4. **Shows:** Show Popular shows, New shows, Shows from your watch list, Trending on Google, etc.
5. **Apps:** Show Your apps, App categories, Apps from my other devices, etc.
6. **Library:** Show purchased movies and shows, Watch list, etc.

Note:

- 1) The functions or contents of "Home Page" may vary by different countries or models.
- 2) Before using network functions in home page like network applications and so on, please connect the TV to the network firstly.
- 3) Icon copyrights are owned by the application providers.

Google Assistant

■ Google Assistant is available on your Google TV as your virtual personal helper. Press **MIC** button on your remote control to start and enjoy it. It is so wonderful that you will love it instantly! With Google Assistant, you can get what you want easily and quickly by using the power of your voice.



- Before using Google Assistant, please make sure that you have connected your TV to the network, and that you have paired your Bluetooth remote control with the TV successfully, and also that you have signed in to your Google Account.

Note:

- 1) The pictures are only for reference.
- 2) Google Assistant is only available in some regions or some languages. Before using it, please make sure that you have paired your Bluetooth remote control with the TV successfully.

Google Cast



■ **Definiton of Google Cast**

"Google Cast" is a casting technology developed by Google that enables your mobile device or personal computer to initiate and control playback of internet-streamed audio/video content on the TV.

■ **How to Cast Content**

"Google Cast" offers two methods to cast content:

- * The first employs mobile device and web apps that support Google Cast technology.
- * The second allows mirroring of content from the web browser "Google Cast" (with cast extension) running on a personal computer. In both cases, playback is initiated through the cast icon "  " on the sender device.

■ Cast Screen/Audio (like Google Home)

Cast your mobile device's screen and audio to the TV.

- Step 1:** Connect your phone and the TV to the same wireless network successfully.
- Step 2:** Select and access “Home” application from your phone, then click existed “Bedroom TV” , Which is set up in **Initial Setup**.



- Step 3:** Click “Cast my screen ”, then the contents on the screen of your phone has been cast onto the TV screen. You can cast picture, audio, movie , etc. to Google TV screen. Click “Stop mirroring” to stop casting.



■ Cast Live streams and Videos (like YouTube)

Cast your mobile device's live streams and videos to the TV.

- Step 1:** Connect your phone and the TV to the same wireless network successfully.
- Step 2:** Select and access “YouTube” application from your phone.
- Step 3:** Select the content you like, click cast icon “” and connect to a device you want , then to cast the content to the TV for playing the content by the TV instead of your phone. Click cast icon “” again to show a menu (including Voice search , Remote, Close and Disconnect) , You can select the operation you want.



(May not be available depending on the actual remote control) Below buttons you can use on remote control while playing videos:

OK	Play / Pause
< / >	Fast Backward / Fast Forward

- Note:**
- 1) The pictures are only for references, and please refer to actual screens of your Android phone for clear images and correct contents.
- 2) For above YouTube cast feature, both smart phone & the TV Should be connected to the same network.

Disclaimer about Using Google TV

Network application contents and services are controlled by network application providers by means of networks and transmission facilities, which are subject to alteration, suspension, removal, termination or interruption, or invalid access at any time without further notice in that the manufacturer is unable to control or to be informed of the aforesaid change. The manufacturer makes a further declaration that it disclaims any responsibility or liability arising from customer's failure to use the network application contents and services caused by, including but not limited to, failure of network connection or communication lines, technological updates, or the alteration, suspension, interruption, termination, disabling, or removal of any contents or services by the network application providers etc.

Note:

- Some USB storage devices may not be compatible to operate smoothly with this TV.
- Back up all of the data in the USB storage device in case data was lost due to an unexpected accident.
- We do not assume any liability for the losses by misuse or malfunction. Data backup is consumer's responsibility.
- For large file sizes, the loading speed may be slightly longer.
- The recognition speed of a USB storage device may depend on each device.
- When connecting or disconnecting the USB storage device, ensure that the TV is not in USB mode otherwise the USB storage device or the files stored in it may be damaged.
- Please use only a USB storage device which is formatted in FAT16, FAT32, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility program which is not supported by Windows, it may not be recognized.
- When using a USB Hard Disk Drive which requires electric power source, ensure its rated power does not exceed the current marked at the USB terminal. If the power of the USB hard Disk exceeds the marked current, the TV system will be changed into standby mode, then you must pull away the USB Hard Disk and restart the TV system.
- An "Unsupported File" message will be displayed if the file format is unsupported or corrupted.
- FHD big picture needs longer time to process, which is not caused by the TV. Please be patient to wait.
- This TV may not support some multimedia files changed and upgraded as the change of encoding format or other technical advances.
- Use high-quality mobile device to record HD programs, otherwise the videos will be jammed during the playback. Back up all of the data in the USB storage device in case data was lost due to an unexpected accident.
- We do not assume any liability for the losses by misuse or malfunction. Data backup is consumer's responsibility.
- Do not power off the TV during the software upgrading process, otherwise the TV may not work, and the customer should be responsible.

- Manufacturer does not guarantee the operation of third-party web browsers. Third-party apps that have been downloaded and installed from the Google Play are supported by the company or developer who produced them.
- The browser may not support some web pages or videos due to network, region, format or internet service provider, which has nothing to do with the TV.
- Each trade mark indicated on this TV are the property of each trademark right holder, and all rights are reserved by them.
- The browser may stop responding, if the size of website is too large.
- For better & smooth experience, please delete web browser history regularly.

Multimedia Player

■ Preparation

- Insert your USB device on the TV to view compatible photo and movie on the TV screen or play compatible music through the TV.
- If the connected USB hard disk does not have an external power source, it may not be detected. Be sure to connect the external power source.
- To avoid losing the data on your USB device or damaging your USB device, it is recommended that you back up all data on your USB device.
- The control menu displays in media player may differ by different regions or models. And please take your actual TV as the standard.
- If you want to pull out your USB device, please exit USB mode firstly.
- For instructions on using your USB device, refer to the owner's manual of your USB device.
- Never remove the USB device or turn off the TV while using the USB device. Doing so may result in loss of data or damage to the USB device or the TV.
- Certain types of USB devices may not be compatible with the TV.

■ Media Operation

- Step 1:** Connect your USB device to the TV.
- Step 2:** Press **SOURCE** button to enter the ShortCuts → USB Device.
- Step 3:** Press **UP/DOWN/LEFT/RIGHT** and **OK** button to select and play the desired media file.
- Step 4:** Press **OK** button to start the playback.
- Step 5:** Press **BACK** button to exit the playback.

■ Watch Movies

While watching a movie, press the following buttons to control the movie playback.

Button	Function
OK	Without control bar, call out the control bar.
	With control bar, pause or play.
▲	Access movie menu settings.
▼	Show the movie playlist.
< / >	Fast backward or fast forward.

■ Play Music

While playing music, press the following buttons to control the music playback.

Button	Function
OK	Pause or play.
▲	Show Playlist and Play Sequence.
▼	Show the music playlist.
< / >	Fast backward or fast forward.

■ Browse Photos

While browsing a photo, press the following buttons to control the photo playback.

Button	Function
OK	Access photo menu settings.
▲ / ▼	Show the photo playlist.
< / >	Skip to previous or next photo.

■ Supported File Formats in Multimedia Player

Type	Formats
Video	Video Codec: H.263, H.264, HEVC/H.265, VP8, VP9, AV1, MPEG1/2, MPEG4
	File Extension Name: avi, dat, mpeg, mpe, mpg, vob, mp4, mov, mkv, ts, tp, tp, m2ts, mts, m4v, f4v, flv, asf, 3gp, webm
Audio	Audio Codec: AC3(Dolby Digital), EAC3(Dolby Digital), HEAAC
	File Extension Name: mp3, AAC, m4a, flac, amr, mp2, mpga, ogg, AC3, wav
Photo	JPEG, PNG, BMP

Note:

- Under the following conditions, this system cannot decode the file and the file cannot be played normally:
-The parameters of file, such as the pixel of picture, code rate of audio and video file, sampling rate of audio file, exceed the limit of the system;
-The format of file is not matched or the file is harmed.
Note: The code rate this system supports does not exceed 20Mbps.
- Hot plug: Do not disconnect when the system is reading or transmitting data, avoid damaging the system or the device.
- Pay attention to the power supply of the device when you are using a mobile hard disk or a digital camera. If the power supply is not sufficient or not stable, you may encounter problems during operating or can not operate at all. In this case, please restart the device, or unplug the device and plug it again, and ensure that its power supply is normal.
- The system supports standard USB1.1, USB2.0 and USB3.0 devices, such as standard U-disks, MP3 players, mobile hard disks, etc..
- For obtaining better audio and video quality, It is suggested to use the external device which accords with USB2.0 standard.
- When playing the video with high compression ratio, these phenomenons, such as picture standstill and menu long time response, are normal.
- For some USB device with power supply, such as large size hard disk, MP4, etc., Suggest using it with power to avoid electric power shortage. -The parameters of file, such as the pixel of picture, code rate of audio and video file, sampling rate of audio file, exceed the limit of the system.
- The file may not be played normally because its parameters , such as the pixel of picture, code rate of audio and video file, sampling rate of audio file, exceed the limit of the system.
- Some files may not be played back even if they fulfil these conditions.
- The device may become unusable with this TV if the file or folder names are changed.

Chapter 4: Technical Information

Maintenance

First, remove the mains plug from the socket outlet.

Regular care:

Gently wipe the surface of the display panel, cabinet, or pedestal by using a soft cloth to clean the dirt or fingerprints.

For stubborn dirt:

First clean the dust on the surface. Dampen a soft cloth with clean water or diluted neutral detergent (1 part detergent to 100 parts water).

Wring the cloth and wipe the surface.

Finally, wipe away all the moisture.

Mains plug

Wipe the mains plug with a dry cloth at regular intervals. Moisture and dust may lead to fire or electrical shock.



Caution

Do not use a hard cloth or rub the surface too hard, otherwise this may cause scratches on the surface.

- Take care not to subject the TV' surfaces to water or detergent. Liquid inside the TV could lead to product failure.
- Take care not to subject the surface to insect repellent, solvent, thinner or other volatile substances. This may degrade surface quality or cause peeling of the paint.
- The surface of the display panel is specially treated and may be easily damaged. Take care not to tap or scratch the surface with your fingernail or other hard objects.
- Do not allow the cabinet and pedestal to make contact with a rubber or PVC substance for a long time. This may degrade surface quality.

Troubleshooting

Most problems you encounter with your TV can be corrected by consulting the following troubleshooting list.

No picture, no sound

- Check if the fuse or circuit breaker is working.
- Plug another electrical device into the outlet to make sure it is working or turned on.
- Power plug is in a bad contact with the outlet.
- Check the signal source.

No colour

- Adjust the saturation.

Remote control does not work

- Change the batteries.
- Batteries are not installed correctly.
- Main power is not connected.

No picture, normal sound

- Adjust the brightness and contrast.

Normal picture, no sound

- Press the Vol+ button to increase volume.
- Volume is set to mute, press the mute button to restore sound.

Radio frequency interference

This interference produces moving ripples or diagonal streaks, and in some case, loss of contrast in the picture. Find out and remove the radio interference source.

Bluetooth remote control can't be paired successfully

- Retry to pair remote control for more times.
- Change the batteries.

Can't sign in Google account

- Retry to sign in again.
- Use another device to check if there is something wrong with the network.
- Use another Android device to check if there is something wrong with the Google server.

Can't use Google Assistant

- Check if the Bluetooth remote control has been paired successfully.
- Use another device to check if there is something wrong with the network.
- Use another Android device to check if there is something wrong with the Google server.

Specifications

Model No.		TN-43W70BGZ	TN-50W70BGZ	TN-55W70BGZ	TN-65W70BGZ	TN-75W70BGZ
Power Source		110 - 240 V ~ 50/60 Hz	110 - 240 V ~ 50/60 Hz	110 - 240 V ~ 50/60 Hz	110 - 240 V ~ 50/60 Hz	110 - 240 V ~ 50/60 Hz
Power Consumption	Power Rating	100 W	120 W	150 W	200 W	300 W
	Standby Condition	< 0.5W	< 0.5W	< 0.5W	< 0.5W	< 0.5W
Display Panel	Visible Screen Size	108 cm	126 cm	139 cm	164 cm	190 cm
	Resolution	3840 X 2160	3840 X 2160	3840 X 2160	3840 X 2160	3840 X 2160
Dimensions (L X B X H)	with Pedestal TV only	95.7 X 23.3 X 62.3 cm	111.0 X 23.3 X 70.7 cm	122.5 X 23.3 X 77.6 cm	144.5 X 27.2 X 90.5 cm	166.8 X 36.3 X 103.4 cm
		95.7 X 8.7 X 56.4 cm	111.0 X 9.0 X 64.9 cm	122.5 X 9.1X 71.8 cm	144.5 X 9.7 X 83.7 cm	166.8 X 8.4 X 96.4 cm
Net Weight		6.3 kg (with Pedestal) 6.2 kg (TV only)	8.0 kg (with Pedestal) 7.9 kg (TV only)	11.3 kg (with Pedestal) 11.2 kg (TV only)	18.1 kg (with Pedestal) 17.8 kg (TV only)	29.4 kg (with Pedestal) 28.8 kg (TV only)
Gross Weight		9.3 kg	11.3 kg	16.1 kg	24.5 kg	37.6 kg
Sound	Speaker	6 Ω	6 Ω	6 Ω	6 Ω	6 Ω
	Audio Output	10 W + 10 W	10 W + 10 W	10 W + 10 W	10 W + 10 W	10 W + 10 W
TV System		DTV: DVB-T/T2/C				
		ATV: PAL BG/I/DK				
Connection Terminals	AV IN	Mini AV Connector x 1 (Need AV converting cable)				
	ANTENNA IN	Aerial Connector x 1				
	HDMI	HDMI Connector x 3				
	USB	USB 2.0 Connector x 2, DC 5 V, Max. 500mA				
	DIGITAL AUDIO OUT	Optical x 1				
	LAN IN	Network Connector x 1				
Connectivity	WiFi Type	ieee 802.11 a/b/g/n/ac 2.4G+5G 2T2R				
	Bluetooth Ver.	V5.1				

Note

1. Design and Specifications are subject to change without notice.
2. Weight and Dimensions shown herein are approximate
3. The graphics in this manual are only for reference.
4. Your TV may be slightly different from that shown in this manual.
5. In dry environment due to static electricity, the product may restart and return to the main OSD interface, USB player interface or the previous source mode. It is normal and please continue to operate the TV. .

This product incorporates the following software:

- (1) The software developed independently by or for Panasonic Entertainment & Communication Co., Ltd.,
- (2) The software owned by third party and licensed to Panasonic Entertainment & Communication Co., Ltd.,
- (3) The software licensed under the GNU General Public License, Version 2.0 (GPL V2.0),
- (4) The software licensed under the GNU LESSER General Public License, Version 2.1 (LGPL V2.1), and/or
- (5) Open source software other than the software licensed under the GPL V2.0 and/or LGPL V2.1.

The software categorized as (3) - (5) are distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY, without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. Please refer to the detailed terms and conditions thereof 【 Settings >System >About > Legal information > Open source licenses 】

At least three (3) years from delivery of this product, Panasonic will give to any third party who contacts us at the contact information provided below, for a charge no more than our cost of physically performing source code distribution, a complete machine-readable copy of the corresponding source code covered under GPL V2.0, LGPL V2.1 or the other licenses with the obligation to do so, as well as the respective copyright notice thereof.
Contact Information: osd-cd-request@gg.jp.panasonic.com



Google TV is the name of this device's software experience and a trademark of Google LLC. Google, YouTube, and Google cast and other related marks are trademarks of Google LLC.



Dolby, Dolby Vision, Dolby Atmos, Dolby Audio, and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Manufactured under license from Dolby Laboratories. Copyright © 1992-2024 Dolby Laboratories. All rights reserved.



The Adopted Trademarks HDMI, HDMI High-Definition Multimedia Interface, HDMI trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.



For DTS patents, see <http://patents.dts.com>. Manufactured under license from DTS, Inc. or DTS Licensing Limited. DTS, TruSurround, and the DTS logo are registered trademarks or trademarks of DTS, Inc. in the United States and other countries. © 2021 DTS, Inc. ALL RIGHTS RESERVED.



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Panasonic Entertainment & Communication Co., Ltd. is under license. Other trademarks and trade names are those of their respective owners.



Covered by one or more claims of the HEVC patents listed at patentlist.accessadvance.com.