

Model No. TX-40CX680B TX-50CX680B TX-55CX680B

### English

### Operating Instructions LCD Television



# VIEſA

For more detailed instructions, please refer to [eHELP] (Built-in Operating Instructions).



● How to use [eHELP] → (p. 15)

Thank you for purchasing this Panasonic product. Please read these instructions carefully before operating this product and retain them for future reference. Please carefully read the "Safety Precautions" of this manual before use.

The images shown in this manual are for illustrative purposes only.



M0215-0

# DOLBY DIGITAL PLUS



• For information about the trademarks, refer to [eHELP] (Support > Licence).

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# Notice for DVB / Data broadcasting / IPTV functions

This TV is designed to meet the standards (as of August, 2014) of digital services.

- Not all the features are available depending on the country, area, broadcaster, service provider and network environment.
- Compatibility with future services is not guaranteed.
- Check the latest information on the available services at the following website.

http://panasonic.net/viera/support

Panasonic does not guarantee operation and performance of peripheral devices made by other manufacturers; and we disclaim any liability or damage arising from operation and/or performance from usage of such other maker's peripheral devices.

This product is licensed under the AVC patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard ("AVC Video") and/or (ii) decode AVC Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use.

Additional information may be obtained from MPEG LA, LLC.

See http://www.mpegla.com.

Transport only in upright position.

# **Safety Precautions**

To help avoid risk of electrical shock, fire, damage or injury, please follow the warnings and cautions below:

### Mains plug and lead

### Warning

If you detect anything unusual, immediately switch off the mains supply switch and remove the mains plug.



### IMPORTANT: THE MOULDED MAINS PLUG FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This TV is supplied with a moulded 3-pin mains plug for your safety and convenience.

A 5 amp fuse is fitted in this mains plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a 5 amp rating and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the fuse body.

If the mains plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover, the mains plug must not be used until a replacement cover is obtained.

A replacement fuse cover may be purchased from your local dealer.

Do not cut off the mains plug.

Do not use any other type of mains lead except the one supplied with this TV.

The supplied mains lead and moulded plug are designed to be used with this TV to avoid interference and for your safety.

If the mains socket in your home is not suitable, get it changed by a qualified electrician.

If the plug or mains lead becomes damaged, purchase a replacement from an authorised dealer.

### How to replace the fuse:

### For plug type shown in example 1

Lift out the removable fuse cover with a screwdriver and replace the fuse, then refit it securely into the mains plug.

### For plug type shown in example 2

Lift open the fuse cover in the mains plug with a screwdriver and replace the fuse, then press the fuse cover down securely.



Example 2

Π

- This TV is designed to operate on AC 220-240 V, 50 / 60 Hz.
- Insert the mains plug fully into the mains socket.
- Ensure that the mains plug is easily accessible.
- Disconnect the mains plug when cleaning the TV.
- Do not touch the mains plug with wet hands.
- Do not damage the mains lead.
  - Do not place a heavy object on the lead.



 Do not place the lead near a high temperature object.



- Do not pull on the lead. Hold onto the mains plug body when disconnecting the plug.
- Do not move the TV with the lead plugged into a mains socket.
- Do not twist the lead, bend it excessively or stretch it.
- Do not use a damaged mains plug or mains socket.
- · Ensure the TV does not crush the mains lead.
- Do not use any mains lead other than that provided with this TV.

### Take care

### Warning

 Do not remove covers and never modify the TV yourself as live parts are accessible when they are removed. There are no user serviceable parts inside.



 Do not expose the TV to rain or excessive moisture. This TV must not be exposed to 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 insert foreign objects into the TV through the air vents.
- Do not use an unapproved pedestal / mounting equipment. Be sure to ask your local Panasonic dealer to perform the setup or installation of approved wall-hanging brackets.
- Do not apply any strong force or impact to the display panel.
- Ensure that children do not climb on the TV.
- Do not place the TV on sloping or unstable surfaces, and ensure that the TV does not hang over the edge of the base.



 Do not expose 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

### Suffocation / Choking Hazard

### Warning

 The packaging of this product may cause suffocation, and some of the parts are small and may present a choking hazard to young children. Keep these parts out of reach of young children.

### Pedestal

### Warning

Do not disassemble or modify the pedestal.

### Caution

- Do not use any pedestal other than the one provided with this TV.
- Do not use the pedestal if it becomes warped or physically damaged. If this occurs, contact your nearest Panasonic dealer immediately.
- During setup, make sure that all screws are securely tightened.
- Ensure that the TV does not suffer any impact during installation of the pedestal.
- Ensure that children do not climb onto the pedestal.
- Install or remove the TV from the pedestal with at least two people.
- Install or remove the TV according to the specified procedure.

### Radio waves

### (Warning)

- Do not use the TV in any medical institutions or locations with medical equipment. Radio waves may interfere with the medical equipment and may cause accidents due to malfunction.
- Do not use the TV near any automatic control equipment such as automatic doors or fire alarms. Radio waves may interfere with the automatic control equipment and may cause accidents due to malfunction.
- Keep at least 22 cm away from the TV if you have a cardiac pacemaker. Radio waves may interfere with the operation of the pacemaker.
- Do not disassemble or alter the TV in any way.

This TV is designed for table-top use.

### Built-in wireless LAN

### Caution

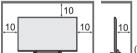
- Do not use the built-in wireless LAN to connect to any wireless network (SSID\*) for which you do not have usage rights. Such networks may be listed as a result of searches. However, using them may be regarded as illegal access.
  - \*SSID is a name for identifying a particular wireless network for transmission.
- Do not subject the built-in wireless LAN to high temperatures, direct sunlight or moisture.
- Data transmitted and received over radio waves may be intercepted and monitored.
- The built-in wireless LAN uses 2.4 GHz and 5 GHz frequency bands. To avoid malfunctions or slow response caused by radio wave interference when using the built-in wireless LAN, keep the TV away from other devices that use 2.4 GHz and 5 GHz signals such as other wireless LAN devices. microwave ovens, and mobile phones.
- When problems occur due to static electricity, etc., the TV might stop operating to protect itself. In this case, turn the TV off at the Mains power On / Off switch. then turn it back on
- Additional information for the wireless LAN and access point may be on the following website. http://panasonic.net/viera/support

### Ventilation

### Caution

Allow sufficient space around the TV in order to help prevent excessive heat, which could lead to early failure of some electronic components.

Minimum distance:





 Ventilation should not be impeded by covering the ventilation openings with items such as newspapers. tablecloths and curtains.



· Whether you are using a pedestal or not, always ensure the vents at the bottom of the TV are not blocked and there is sufficient space to enable adequate ventilation.

### Moving the TV

### Caution

Before moving the TV, disconnect all cables.

Move the TV with at least two people.

### When not in use for a long time

### Caution

This TV will still consume some power even in the Off mode, as long as the mains plug is still connected to a live mains socket.

 Remove the mains plug from the wall socket when the TV is not in use for a prolonged period of time.

### Excessive volume

### Caution

 Do not expose your ears to excessive volume from the headphones. Irreversible damage can be caused.



 If you hear a drumming noise in your ears, turn down the volume or temporarily stop using the headphones.

### Battery for the Remote Control

### Caution

- Incorrect installation may cause battery leakage. corrosion and explosion.
- Replace only with the same or equivalent type.
- Do not mix old and new batteries.
- Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable batteries (Ni-Cd. etc.).
- 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.
- Remove the battery from the unit when not using for a prolonged period of time to prevent battery leakage, corrosion and explosion.

### LCD Television

# $( \in \mathbb{O})$

### Declaration of Conformity (DoC)

"Hereby, Panasonic Corporation declares that this TV is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC." If you want to get a copy of the original DoC of this TV, please visit the following website:

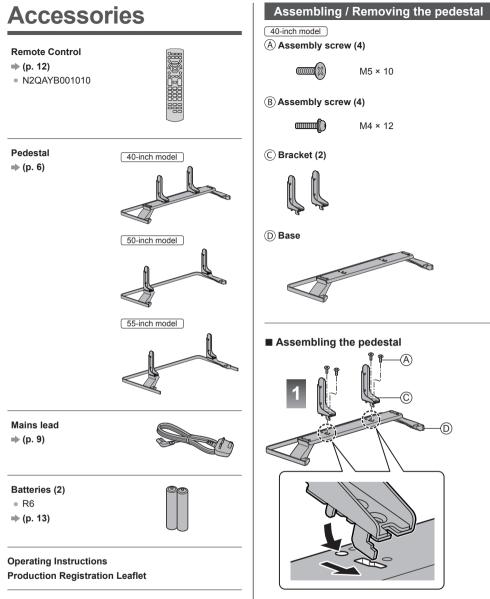
http://www.doc.panasonic.de

Authorized Representative: Panasonic Testing Centre Panasonic Marketing Europe GmbH Winsbergring 15, D-22525 Hamburg, Germany

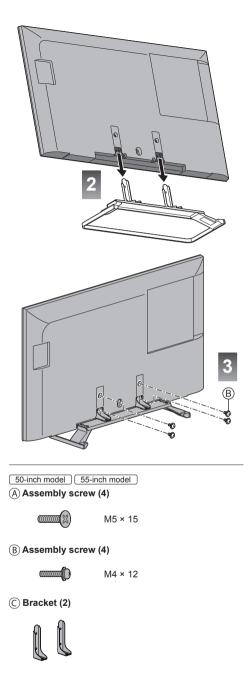
This TV is intended to be used in the following countries.

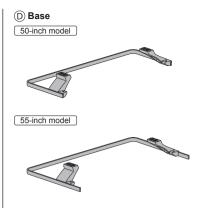
Ireland, United Kingdom

The wireless LAN feature of this TV shall exclusively be used inside buildings.

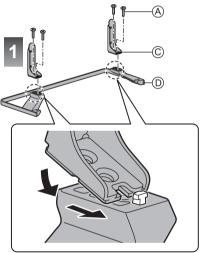


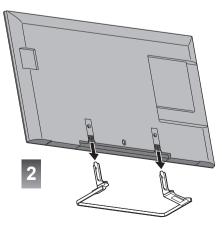
- Accessories may not be placed all together. Take care not to throw them away unintentionally.
- For information about the optional accessories, refer to [eHELP] (Support > Optional accessories).

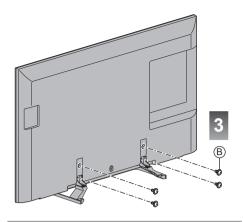




Assembling the pedestal







### Removing the pedestal from the TV

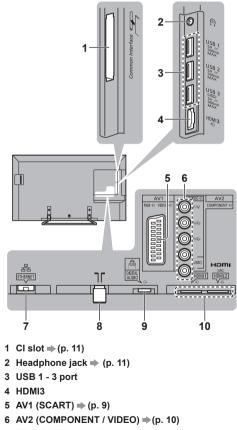
Be sure to remove the pedestal in the following way when using the wall-hanging bracket or repacking the TV.

- 1 Remove the assembly screws <sup>®</sup> from the TV.
- 2 Pull out the pedestal from the TV.
- 3 Remove the assembly screws (a) from the bracket.

# Connections

- External equipment and cables shown are not supplied with this TV.
- Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any cables.
- Check the terminal type and cable plugs are correct for connection.
- Use a fully wired HDMI compliant cable.
- Use a fully wired SCART cable.
- Keep the TV away from electronic equipment (video equipment, etc.) or equipment with an infrared sensor, otherwise distortion of image / sound may occur or operation of other equipment may be affected.
- Please also read the manual of the equipment being connected.

### Terminals



- 7 ETHERNET ⇒ (p. 10)
- 8 Terrestrial terminal → (p. 9)

### 9 DIGITAL AUDIO

### 10HDMI1 - 2 ⇒ (p. 9, 10)

To watch content in 4K format, use HDMI terminal.

 (p. 10)

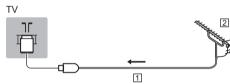
# Basic connections Mains lead AC 220-240 V 50 / 60 Hz Mains lead (supplied)

### Insert the mains plug firmly into place.



• When disconnecting the mains lead, be absolutely sure to disconnect the mains plug from the mains socket first.

### Aerial

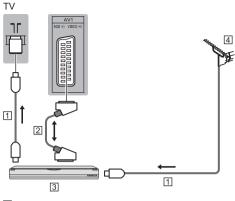


1 RF cable

- 2 Terrestrial aerial
- For DVB, Analogue

### AV devices

### DVD Recorder / VCR

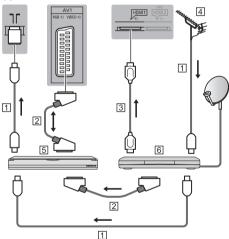


1 RF cable

- 2 SCART cable
- 3 DVD Recorder / VCR

4 Terrestrial aerial

■ DVD Recorder (VCR) / Satellite receiver



1 RF cable

- 2 SCART cable
- 3 HDMI cable
- 4 Terrestrial aerial
- 5 DVD Recorder / VCR
- 6 Satellite receiver

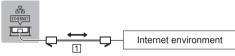
### Network

A broadband network environment is required to be able to use internet services.

- If you do not have any broadband network services. please consult your retailer for assistance.
- Prepare the internet environment for wired connection or wireless connection.
- Setup of the network connection will start when first using the TV. (p. 14)

### Wired connection

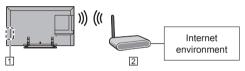
### τv



1 LAN cable (Shielded)

• Use Shielded Twist Pair (STP) LAN cable.

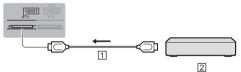
### Wireless connection



- 1 Built-in wireless LAN
- 2 Access point

### **Connections for 4K compatible** equipment

τv



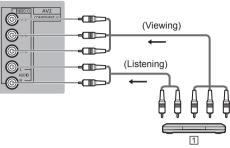
- 1 HDMI cable
- 2 4K compatible equipment
- Connect the 4K compatible equipment to HDMI terminal and you can watch contents of 4K format.
- When connecting to HDMI terminal, use a 4K compatible cable.

### Other connections

### DVD Plaver

(COMPONENT equipment)

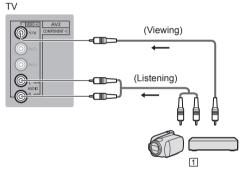
### тν



### 1 DVD Player

### Camcorder / Game equipment (VIDEO equipment)

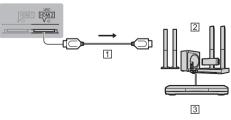




- 1 Camcorder / Game equipment
- Amplifier (listening with external speakers)
- Use HDMI2 to connect the TV to an amplifier which has ARC (Audio Return Channel) function. If connecting to an amplifier without ARC function,
- use DIGITAL AUDIO. To enjoy multi-channel sound from external equipment (e.g. Dolby Digital 5.1ch), connect the equipment to the amplifier. For information about the connections, read the manuals of the equipment and

### τv

amplifier.



### 1 HDMI cable

- 2 Amplifier with speaker system
- 3 External equipment (DVD Player, etc.)

### Headphones

• For information about the volume settings, refer to [eHELP] (Settings > Sound).



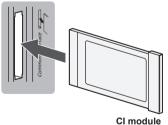
### Common Interface

- Turn the TV off with Mains Power On / Off switch whenever inserting or removing the CI module.
- If a smart card and a CI module come as a set, first insert the CI module, then insert the smart card into the CI module.
- Insert or remove the CI module completely in the correct direction as shown.
- Normally encrypted channels will appear. (Viewable channels and their features depend on the CI module.)

If encrypted channels do not appear [Common Interface] in the Setup Menu

- There might be some CI modules in the market with older firmware versions that do not work fully interoperable with this new CI+ v1.3 TV. In this case, please contact your content provider.
- For details, refer to [eHELP] (Functions > Common Interface), read the manual of the CI module, or check with the content provider.

TV



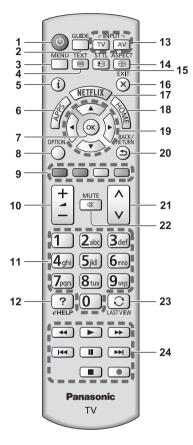
### CIIII

### VIERA Link

- Use HDMI1 3 for VIERA Link connection.
- For details, refer to [eHELP] (Functions > VIERA Link "HDAVI Control™").

# **Identifying Controls**

### **Remote Control**



### 1 Standby On / Off switch

- 2 TV Guide
  - Displays Electronic Programme Guide.
- 3 [Main Menu]
  - Press to access Picture, Sound, Network, Timer, Setup and Help Menus, etc.

### 4 Text service button

- 5 Information
  - Displays channel and programme information.
- 6 APPS
  - Displays applications list.
- 7 OK
  - Confirms selections and choices.
  - Press after selecting channel positions to quickly change channel.

- 8 [Option Menu]
  - Easy optional setting for viewing, sound, etc.
- 9 Coloured buttons

### (red-green-yellow-blue)

- Used for the selection, navigation and operation of various functions.
- 10 Volume Up / Down

### 11 Numeric buttons

- Changes channel and teletext pages.
- Sets characters.
- When in Standby mode, switches TV on.

### 12 [eHELP]

• Displays [eHELP] (Built-in Operating Instructions).

### 13 Input mode selection

- TV switches to DVB / Analogue mode.
- AV switches to AV input mode from Input Selection list.

### 14 Aspect

- Changes aspect ratio.
- 15 Subtitles
  - Displays subtitles.

### 16 Exit

• Returns to the normal viewing screen.

### 17 Netflix

- Accesses NETFLIX service directly.
- A broadband network environment is required to be able to use this function fully.
- This service may be stopped or changed without notice.

### 18 HOME

- Displays Home screen.
- For details, refer to [eHELP] (Read first > Features).

### 19 Cursor buttons

• Makes selections and adjustments.

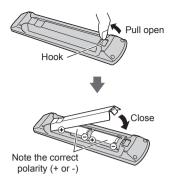
### 20 Return

- Returns to the previous menu / page.
- 21 Channel Up / Down

### 22 Sound Mute On / Off

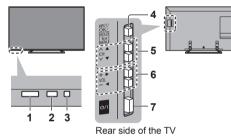
- 23 Last view
  - Switches to previously viewed channel or input mode.
- 24 Operations for contents, connected equipment, etc.

### Installing / Removing batteries



### Indicator / Control panel

 When pressing 4, 5, 6 buttons, the control panel guide appears on the right side of the screen for 3 seconds to highlight which button has been pressed.



### 1 Remote control signal receiver

• Do not place any objects between the TV remote control signal receiver and remote control.

### 2 Ambient sensor

 Senses brightness to adjust picture quality when [Ambient Sensor] in the Picture Menu is set to [On].

### 3 Power LED

Red: Standby

### Green: On

Orange: Standby with some functions (network function, etc.) active

• The LED blinks when the TV receives a command from the remote control.

### 4 Input mode selection

Press repeatedly until you reach the desired mode.

### [Main Menu]

- Press and hold for about 3 seconds to display main menu.
- OK (when in the menu system)

### 5 Channel Up / Down

Cursor Up / Down (when in the menu system)

### 6 Volume Up / Down

- Cursor Left / Right (when in the menu system)
- 7 Mains power On / Off switch
  - Use to switch the mains power.

# First time Auto Setup

When the TV is turned on for the first time, it will automatically search for available TV channels and give options to set up the TV.

- These steps are not necessary if the setup has been completed by your local dealer.
- Please complete connections (p. 8 11) and settings (if necessary) of the connected equipment before starting Auto Setup. For information about the settings for the connected equipment, read the manual of the equipment.

### 1 Plug the TV into a live mains socket and turn the power on



Takes a few seconds to be displayed.



### 2 Select the following items

Set up each item by following the on-screen instructions.

### Example:

Please select your viewing	environment.
Home	Shop

### ■ How to use the remote control

Move the cursor



Access the item / store the setting



Return to the previous item (if available)

### Select [Home]

Select [Home] for use in a home viewing environment.

- [Shop] is for shop display.
- To change the viewing environment later on, the set will need to have all settings initialised by accessing Shipping Condition.

### Set up the network connection

### Select your country

Select your region UK only

Auto Setup is now complete and the TV is ready for viewing.

If tuning has failed check the RF cable, and the network connection, and then follow the on-screen instructions.

### Note

- The TV goes into Standby mode when no operation is performed for 4 hours if [Auto Standby] in the Timer Menu is set to [On].
- The TV goes into Standby mode when no signal is received and no operation is performed for 10 minutes if [No signal Power off] in the Timer Menu is set to [On].
- To retune all channels
   [Auto Setup] in [Tuning Menu] (Setup Menu)
- To add the available TV signal mode later
- ➡ [Add TV Signal] in [Tuning Menu] (Setup Menu)
- To initialise all settings
  - [Shipping Condition] in [System Menu] (Setup Menu)

# Watching TV

### 1 Turn power on



or

(Remote Control)

 Mains power On / Off switch should be on. (p. 13)

Displays information bar on the edge of screen for several seconds.

 For information about the operation and settings, refer to [eHELP]. (Read first > Features)

### 2 Select the mode



• Selectable modes vary depending on the stored channels and selected country.

### 3 Select a channel



- 1 2.0 3.0 4.0 5.1 6.0 7.0 8.0 9.0 0
- DVB channel position begins from number 1 upward. Analogue channel position numbers are in the 0 - 99 range.

# How to Use eHELP

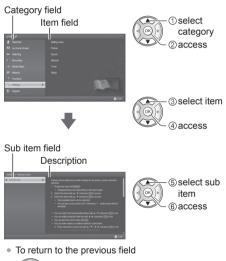
[eHELP] is the detailed operating instructions built into the TV, and gives a more detailed explanation for a better understanding of the operation of each feature.

### 1 Display [eHELP]



 If the [eHELP] has been accessed previously since the TV was turned on, the confirmation screen is displayed to select whether to go to the [First page] or to the [Last viewed page].

### 2 Select the category and item



- .
- To scroll the description (if more than 1 page)
   While the description is highlighted



 To display the menu related to the description (only for some descriptions)



 To check the features of this TV Read first > Features Before requesting service or assistance, please follow these simple guides to solve the problem.

For details, refer to [eHELP] (Support > FAQs).

### The TV does not switch on

- Check the mains lead is plugged into the TV and the mains socket.
- The fuse in the mains plug may have blown. Replace it with one of an identical rating. → (p. 3)

### The TV goes into Standby mode

Auto power standby function is activated.

### The remote control does not work or is intermittent

- Has the TV been switched on?
- The batteries may be running low. Replace them with new ones.
- Point the remote control directly at the TV's remote control signal receiver (within about 7 m and a 30 degree angle of the signal receiver).
- Situate the TV away from sunshine or other sources of bright light so they do not shine on the TV's remote control signal receiver.

### No image is displayed

- Check the TV is turned on.
- Check the mains lead is plugged into the TV and the mains socket.
- Check the correct input mode is selected.
- Check the setting of [AV2] ([COMPONENT] / [VIDEO]) in [Input Selection] to match the signal being output by the external equipment.
- Is [Backlight], [Contrast], [Brightness] or [Colour] in the Picture Menu set to the minimum?
- Check all required cables and connections are firmly in place.

### An unusual image is displayed

- This TV has a built-in Self Test. Makes a diagnosis of picture or sound problems.
  - ➡ [TV Self Test] (Help Menu)
    Turn the TV off with Maine power
- Turn the TV off with Mains power On / Off switch, then turn it on again.
- If the problem persists, initialise all settings.
   [Shipping Condition] in [System Menu] (Setup Menu)

### Parts of the TV become hot

 Parts of the TV may become hot. These temperature rises do not pose any problems in terms of performance or quality.

### When pushed with a finger, the display panel moves slightly and makes a noise

 There is a little gap around the panel to prevent damage to the panel. This is not a malfunction.

Check you can get Freeview HD in your area. Text your postcode, followed by your house number or name to **80560**\*. Or visit **freeview. co.uk** 

\*e.g. NW96NY1 (Costs no more than a normal text.)

To get the most up to date service from Freeview it is important for Freeview customers to retune from time to time.

### How do I re-tune my Freeview TV ?

This is a quick reference. If you have any problems, check the Operating Instructions or ask a friend or family member to show you how. Alternatively, go to your local electrical retailer, contact your local Panasonic dealer or visit freeview.co.uk/retune

Re-tuning only takes a few minutes, just follow the steps below:

- 1. Press the TV button to select DVB mode.
- 2. Press the MENU button to open the main menu.
- 3. [Setup] → [DVB Tuning Menu] → [Auto Setup]

Please note: most digital TV recorders will keep your original recordings after running a re-tune but you will need to reset any future recordings.

# First, remove the mains plug from the mains socket.

### **Display panel, Cabinet, Pedestal**

### Regular care:

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

### For stubborn dirt:

- (1) First clean the dust from the surface.
- (2) Dampen a soft cloth with clean water or diluted neutral detergent (1 part detergent to 100 parts water).
- (3) Wring out the cloth firmly. (Please note, do not let liquid enter the TV inside as it may lead to product failure.)
- (4) Carefully wipe moisten and wipe away the stubborn dirt.
- (5) Finally, wipe away all the moisture.

### 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 surfaces 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.

### Mains plug

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

# Specifications

### TV

### Model No.

40-inch model : TX-40CX680B
50-inch model : TX-50CX680B
55-inch model : TX-55CX680B

### Dimensions (W × H × D)

### 40-inch model

904 mm × 560 mm × 202 mm (With Pedestal) 904 mm × 518 mm × 47 mm (TV only)

50-inch model

- 1 126 mm × 693 mm × 202 mm (With Pedestal)
- 1 126 mm × 652 mm × 47 mm (TV only)

55-inch model

1 242 mm × 761 mm × 292 mm (With Pedestal)

1 242 mm × 719 mm × 56 mm (TV only)

### Mass

### 40-inch model

13.5 kg Net (With Pedestal)

- 11.5 kg Net (TV only)
- 50-inch model

18.5 kg Net (With Pedestal)

- 17.0 kg Net (TV only)
- 55-inch model

21.0 kg Net (With Pedestal) 19.5 kg Net (TV only)

### **Power source**

AC 220-240 V, 50 / 60 Hz

### Panel

LED LCD panel

### Sound

Speaker output

20 W (10 W + 10 W)

### Headphones

M3 (3.5 mm) stereo mini Jack × 1

### **Connection terminals**

### AV1 input / output

SCART (Audio/Video in, Audio/Video out, RGB in)

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AV2 input (COMPONENT / VIDEO) VIDEO

> RCA PIN Type × 1 1.0 V[p-p] (75 Ω)

### AUDIO L - R

RCA PIN Type × 2 0.5 V[rms]

### Υ

1.0 V[p-p] (including synchronisation) Pb/Cb, Pr/Cr

±0.35 V[p-p]

### HDMI 1 / 2 / 3 input

TYPE A Connectors HDMI1 / 3: 4K, Content Type, Deep Colour, x.v.Colour™ HDMI2: 4K, Content Type, Audio Return Channel, Deep Colour, x.v.Colour™ This TV supports "HDAVI Control 5" function

This TV supports "HDAVI Control 5" function.

### Card slot

Common Interface slot (complies with CI Plus) × 1

### ETHERNET

RJ45, IEEE802.3 10BASE-T / 100BASE-TX

### USB 1 / 2 / 3

USB1 / 2: DC 5 V, Max. 500 mA [Hi-Speed USB (USB 2.0)] USB3: DC 5 V, Max. 900 mA [SuperSpeed USB

(USB 3.0)]

### DIGITAL AUDIO output

PCM / Dolby Digital, Fibre optic

### Receiving systems / Band name

Check the latest information on the available services at the following website.

http://panasonic.net/viera/support

DVB-T / T2

Digital terrestrial services

### UK)

PAL I UHF E21 - 68 (Ireland) PAL I VHF A - J CATV S1 - S20

UHF E21 - E69

CATV S21 - S41 (Hyperband)

### PAL 525/60

Playback of NTSC tape from some PAL Video recorders (VCR) or NTSC disc playback from DVD player and recorder

MINTSC

Playback from M.NTSC Video recorders (VCR)

### NTSC (AV input only)

Playback from NTSC Video recorders (VCR)

### Aerial input

UK UHF Ireland VHF / UHF

### **Operating conditions**

Temperature 0 °C - 35 °C Humidity 20 % - 80 % RH (non-condensing)

### Built-in wireless LAN

### Standard compliance and Frequency range\*

IEEE802.11a/n 5.180 GHz - 5.320 GHz, 5.500 GHz - 5.580 GHz, 5.660 GHz - 5.700 GHz IEEE802.11b/g/n 2.412 GHz - 2.472 GHz

### Security

WPA2-PSK (TKIP/AES) WPA-PSK (TKIP/AES) WEP (64 bit/128 bit)

\*: The frequency and channel differ depending on the country.

### Note

- Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.
- For information about the power consumption, display resolution, etc., refer to Product fiche.
- For information about the open source software, refer to [eHELP] (Support > Licence).

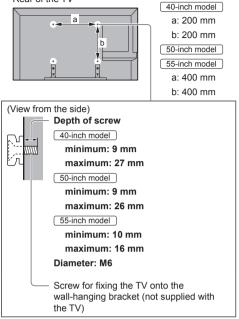
 This equipment complies with the EMC standards listed below.

EN55032, EN55020, EN55024, EN61000-3-2, EN61000-3-3

### When using the wall-hanging bracket

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

Holes for wall-hanging bracket installation
 Rear of the TV



### **Disposal of Old Equipment and Batteries**

### Only for European Union and countries with recycling systems



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste.

For proper treatment, recovery and recycling of old products and batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



### Note for the battery symbol (bottom symbol):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

### Sales and Support Information

### **Customer Communications Centre**

- For customers within the UK: 0344 844 3899
- For customers within Ireland: 01289 8333
- Monday Friday 9:00am 5:00pm, (Excluding public holidays).
- For further support on your product, please visit our website: www.panasonic.co.uk

### **Direct Sales at Panasonic UK**

- Order accessory and consumable items for your product with ease and confidence by phoning our Customer Communications Centre Monday Friday 9:00am 5:00pm, (Excluding public holidays).
- Or go on line through our Internet Accessory ordering application at www.pas-europe.com.
- · Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK.
- · It couldn't be simpler!
- Also available through our Internet is direct shopping for a wide range of finished products. Take a browse on our website for further details.

### **Customer's Record**

The model number and serial number of this product may be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

### Model Number

Serial Number

English

Panasonic UK, a branch of Panasonic Marketing Europe GmbH Willoughby Road, Bracknell, Berkshire, RG12 8FP Web Site: http://www.panasonic.com