Technical Information

Closed Caption (CC)

- For viewing Closed Caption of digital broadcasting, set the aspect ratio to FULL. (If viewing with H-FILL, JUST, ZOOM or 4:3, characters will be cut off.)
- The Closed Caption is not displayed when you use HDMI connection.
- If analog connected equipment is used for displaying or recording, Closed Caption (CC) should be set On/Off on the connected equipment.
 - The CC mode setting of the TV will not affect the analog input.
 - If a digital program is being output in analog format, the CC data will also be output in analog format.

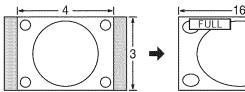
If digital connected equipment is used for input, CC should be set On on either the connected equipment or the TV. If CC is set On on both the connected equipment and the TV, captions from each unit will overlap.

Aspect Ratio

Lets you choose the aspect depending on the format of the received signal and your preference. (p. 21) (e.g.: in case of 4:3 image)

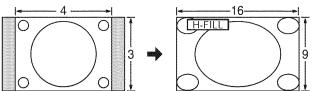
9

FULL



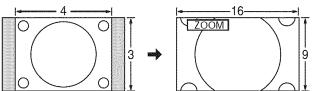
Enlarges the 4:3 image horizontally to the screen's side edges. (Recommended for anamorphic picture)

H-FILL



Enlarges the 4:3 image horizontally to the screen's side edges. The side edges of the image are cut off.

ZOOM



Enlarges the 4:3 image to the entire screen. (Recommended for Letter Box)

Zoom adjust

Vertical image position and size can be adjusted in "ZOOM". ①Select "Zoom adjust" on the "Picture" menu. (p. 28-29) ②V-position: Vertical position adjustment

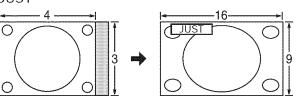




(OK)

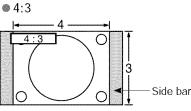
To reset the aspect ratio





Stretches to justify the 4:3 image to the four corners of the screen.

(Recommended for normal TV broadcast)



Standard

(Note that "Image retention" of the side bar may occur from displaying it for a long time.)



- 480i (4:3), 480i (16:9), 480p (4:3), 480p (16:9): FULL, JUST, 4:3 or ZOOM
- 1080p / 1080i / 720p:
- FULL, H-FILL, JUST, 4:3 or ZOOM
- When the signal is 720p/1080i/1080p, the aspect mode automatically defaults to Full after turning off the TV, after changing input mode, or after changed signal resolution other than 720p/1080i/1080p.
- ③ V-size: Vertical size adjustment





	Data for	mat for SD Card browsing
Photo: Data format: Max. number of files: Image resolution:	Baseline JPEG (Sub-samp 9,999 160 x 120 to 10,000,000	digital still cameras compatible with JPEG files of DCF* and EXIF** standards bling: 4:4:4, 4:2:2 or 4:2:0) mera file system): A Japan Electronics and Information Technology Industries Association's standard
Caution		** EXIF (Exchangeable Image File Format)
A JPEG image modifie	ed with a PC may not be dis night be displayed at a redu	
Note		
Folder structure viewe	ed in PC	
DCIM	Created automa	tically
100_PANA		nber + 5-digit arbitrary characters
	02.JPG Stable charac	characters + 4-digit file number cters: 1-byte "a to z", "A to Z", "0 to 9," and "_"
For the suitable SD M		ding on the digital camera used. n the latest information on the following website. n English only)
	SD C	ard warning messages
Mess	age	Meaning
Is memory card in?		The card is not inserted.
No file		The card has no data or this type of data is not supported.
Cannot read file		 The file is broken or unreadable. The TV does not support the format.
	Gallery	Player warning messages
Cannot display ima incorrect ID data.	ge due to	 There is a problem with your TV decoder. If this message appears, please contact Panasonic Service Center for assistance. Refer to page 57, 59 (Limited Warranty), page 58 (Customer Services Directory)
Cannot display ima	ge on SD card.	 There is a problem with the data. Check the data inside the SD card.
	Cautio	ons in handling SD Card:

Do not remove the card while the unit is accessing data (this can damage card or unit).

Do not touch the terminals on the back of the card.

- Do not subject the card to a high pressure or impact.
- Insert the card in the correct direction (otherwise, card may be damaged).
- Electrical interference, static electricity, or erroneous operation may damage the data or card.
- Back up the recorded data at regular intervals in case of deteriorated or damaged data or erratic operation of the unit. (Panasonic is not liable for any deterioration or damage of recorded data.)

DIGITAL AUDIO OUT terminals

You can enjoy your home theater by connecting a Dolby Digital (5.1 channel) decoder and "Multi Channel" amplifier to the DIGITAL AUDIO OUT terminals.

Caution

- Depending on your DVD player and DVD-Audio software the copyright protection function may operate and disable optical output.
- External speakers cannot be connected directly to PROG OUT terminals.
- When an ATSC channel is selected, the output from the DIGITAL AUDIO OUT jack will be Dolby Digital. When an NTSC channel is selected, the output will be PCM.

FAQs, etc.

Technical Information (Continued)

EZ Sync[™] "HDAVI Control[™]"

- HDMI connections to some Panasonic equipment allow you to interface automatically. (p. 32)
- This function may not work normally depending on the equipment condition.
- The equipment can be operated by other remote controls with this function on even if TV is in Standby mode.
- Image or sound may not be available for the first few seconds when the playback starts.
- Image or sound may not be available for the first few seconds when Input mode is switched.
- Volume function will be displayed when adjusting the volume of the equipment.
- If you connect the same kind of equipment at once (for example: one DIGA to HDMI 1 / another DIGA to HDMI 2), EZ Sync™ is available for the terminal with the smaller number.
- If you connect the equipment that has "HDAVI Control 2" function to the TV with HDMI cable, the sound from DIGITAL AUDIO OUT terminal can be output as multi channel surround.

HDMI connection

HDMI (high-definition multimedia interface) allows you to enjoy high-definition digital images and high-guality sound by connecting the TV unit and the devices.

HDMI-compatible equipment (*1) with an HDMI or DVI output terminal, such as a set-top box or a DVD player, can be connected to the HDMI connector using an HDMI compliant (fully wired) cable.

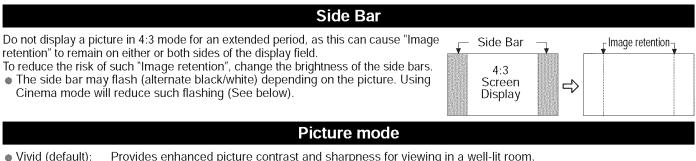
- HDMI is the world's first complete digital consumer AV interface complying with a non-compression standard.
- If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adapter cable (*2).
- When the DVI to HDMI adapter cable is used, connect the audio cable to the audio input terminal.
- Audio settings can be made on the "HDMI 1 in" or "HDMI 2 in" menu screen. (p. 28) Applicable audio signal sampling frequencies (L.PCM): 48 kHz, 44.1 kHz, 32 kHz

Caution

(*1): The HDMI logo is displayed on an HDMI-compliant device. (*2): Enquire at your local digital equipment retailer shop.

Use with a PC is not assumed.

- All signals are reformatted before being displayed on the screen.
- If the connected device has an aspect adjustment function, set the aspect ratio to "16:9".
- This HDMI connector is "type A".
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- A device having no digital output terminal may be connected to the input terminal of either "COMPONENT", "S VIDEO", or 'VIDEO" to receive analog signals.
- The HDMI input terminal can be used with only the following image signals: 480i, 480p, 720p, 1080i and 1080p. Match the output setting of the digital device.
- For details of the applicable HDMI signals, see p. 53.



- Standard: Recommended for normal viewing conditions with subdued room lighting.
- For watching movies in a darkened room. It provides a soft, film-like picture. Cinema:
- Custom (Photo): Customizes each item according to your taste. Photo is displayed in JPEG menu.

Input signal that can be displayed

* Mark: Applicable input signal for Component (Y, PB, PR), HDMI and PC

	horizontal frequency (kHz)	vertical frequency (Hz)	COMPONENT	HDMI	PC
525 (480) / 60i	15.73	59.94	*	*	
525 (480) /60p	31.47	59.94	*	******	*
750 (720) /60p	45.00	59.94	*	*	
1,125 (1,080) /60i	33.75	59.94	*	*	- X
1,125 (1,080) /60p	67.43	59.94		*	
1,125 (1,080) /60p	67.50	60.00	·····	**	*
640 × 400 @70	31.47	70.08			*
640 × 480 @60	31.47	59.94	· · · · · · · · · · · · · · · · · · ·	· ·····	*
Macintosh13" (640 × 480)	35.00	66.67			*
_640 × 480 @75	37.50	75.00		· ·····	**
852 × 480 @60	31.47	59.94			*
800 × 600 @60	37.88	60.32	· · · · · · · · · · · · · · · · · · ·	· ·····	*
_800 × 600 @75	46.88	75.00			*
_800 × 600 @85	53.67	85.08	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	* · · · · · * · · · · · ·
Macintosh16" (832 × 624)	49.73	74.55			*
1,024 × 768 @60	48.36	60.00	· · · · · · · · · · · · · · · · · · ·	· ····	*
1,024 × 768 @70	56.48	70.07			*
_1,024 × 768 @75	60.02	75.03	· · · · · · · · · · · · · · · · · · ·	· ·····	*
1,024 × 768 @85	68.68	85.00			*
Macintosh 21" (1,152 × 870)	68.68	75.06	4	******	*
1,280 × 1,024 @60	63.98	60.02			*
1,366 × 768 @60	48.36	60.00		·····	*

Note

Signals other than above may not be displayed properly.

The above signals are reformatted for optimal viewing on your display.

PC Input Terminals Connection

- Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with IBM PC/AT compatible D-sub 15P terminal.
- The maximum resolution: 1, 280 × 1, 024
- If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity. Signal Names for D-sub 15P Connector

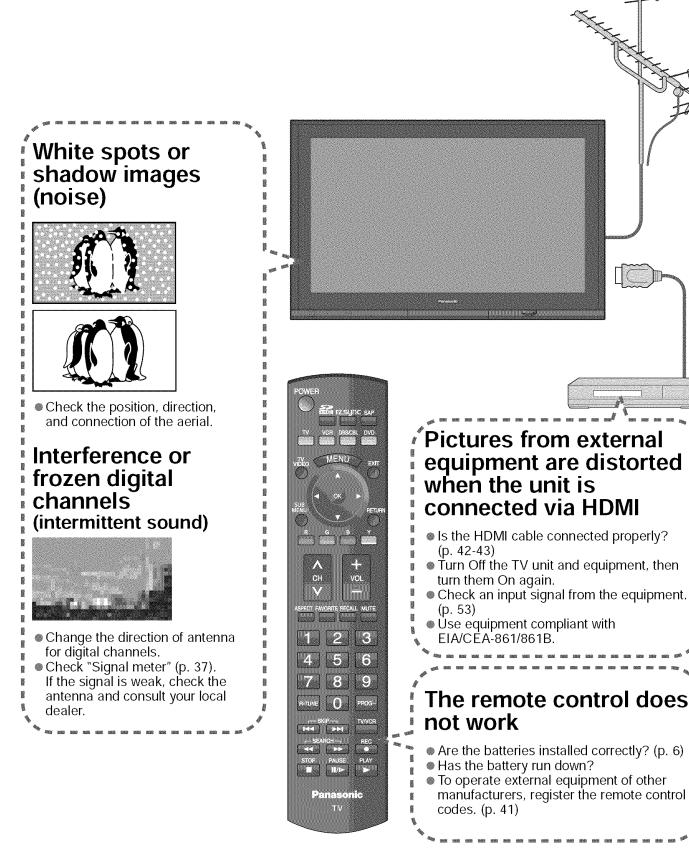
(1) (1) (13 (14 (15)
678910
(12345)

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
(D	R	· · 6 · · ·	GND (Ground)		NC (not connected)
2	G	1. T	GND (Ground)	12	NC
· 3	В	·8	GND (Ground)	13	HD/SYNC
· · · · · · · · · · · · · · · · · · ·	NC (not connected)	¹ 9	NC (not connected)	1. 14	VD
5	GND (Ground)	10	GND (Ground)	15	NC

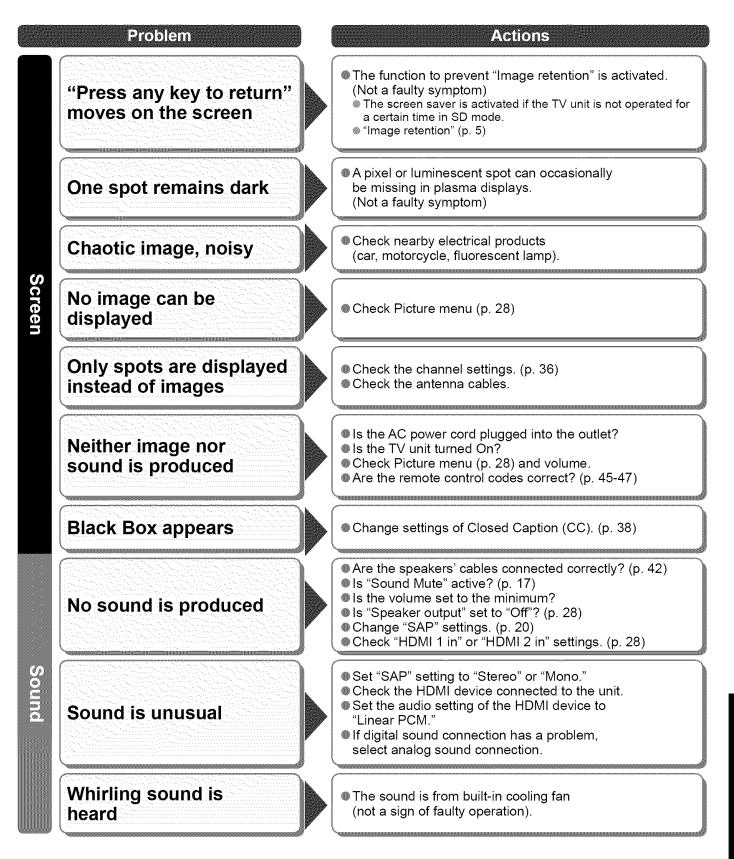
Pin Layout for PC Input Terminal

FAQ

Before requesting service or assistance, please follow these simple guides to resolve the problem. If the problem still persists, please contact your local Panasonic dealer or Panasonic Service Center for assistance. For details (p. 57, 58) For additional assistance, please contact us via the website at: www.panasonic.com/contactinfo www.panasonic.ca



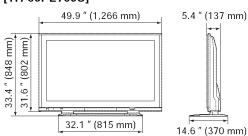
If there is a problem with your TV, please refer to the table below to determine the symptoms, then carry out the suggested check. If this does not solve the problem, please contact your local Panasonic dealer, quoting the model number and serial number (both found on the rear of the TV).



Frequently Asked Questions

Specifications

	TH-50PE700U		
er Source	AC 120 V, 60 Hz		
Maximum	695 W		
Standby condition	0.2 W		
Drive method	AC type		
Aspect Ratio	16:9		
Visible screen size	127 cm		
(W × H × Diagonal)	43.5 " × 24.4 " × 49.9 "		
	(1,106 mm × 622 mm × 1,269 mm)		
(No. of pixels)	2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]		
Audio Output	Super Slim SP (2.5 W) × 2 Woofer (13 W) × 2		
signals	VGA, SVGA, XGA, WXGA, SXGA Horizontal scanning frequency 31 - 69 kHz Vertical scanning frequency 59 - 86 Hz		
nnel Capability ital/Analog)	VHF/ UHF: 2 - 69, CATV: 1 - 135		
rating Conditions	Temperature: 32 °F – 104 °F (0 °C – 40 °C) Humidity: 20 % – 80 % RH (non-condensing)		
INPUT 1-3	VIDEO: RCA PIN Type × 1 1.0 V [p-p] (75 Ω) S-VIDEO: Mini DIN 4-pin Y: 1.0 V [p-p] (75 Ω) AUDIO L-R: RCA PIN Type × 2 0.5 V [rms]		
COMPONENT VIDEO INPUT 1-2	Y: 1.0 V [p-p] (including synchronization) PB, PR: ±0.35 V [p-p] AUDIO L-R: RCA PIN Type × 2 0.5 V [rms]		
HDMI 1-2	TYPE A Connector × 2		
AUDIO IN	 This TV supports "HDAVI Control 2" function. AUDIO L-R: RCA PIN Type × 2 0.5 V [rms] 		
PC	D-SUB 15PIN : R,G,B / 0.7 V [p-p] (75 Ω) HD, VD / 1.0 - 5.0 V [p-p] (high impedance) AUDIO L-R : Stereo Mini Jack (Φ3.5 mm) × 1		
Card slot	SD CARD slot $\times 1$		
AV PROG. OUT	VIDEO: RCA PIN Type × 1 1.0 V [p-p] (75 Ω)		
DIGITAL AUDIO OUT	AUDIO L-R: RCA PIN Týpe × 2 0.5 V [rms]		
1	3D Y/C FILTER CLOSED CAPTION		
TURES	V-Chip BBE VIVA 3D Photo Viewer HDAVI Control 2		
Including pedestal	49.9 ″ × 33.4 ″ × 14.6 ″ (1,266 mm × 848 mm × 370 mm)		
Including pedestal	49.9 ″ × 31.6 ″ × 5.4 ″ (1,266 mm × 802 mm × 137 mm)		
Including pedestal	²¹ 110.3 lb. (50 kg)		
TV Set only	105.9 lb. (48 kg)		



Note

• Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.

Limited Warranty (for U.S.A.)

PANASONIC CONSUMER ELECTRONICS COMPANY, DIVISION OF PANASONIC CORPORATION OF NORTH AMERICA One Panasonic Way Secaucus, New Jersey 07094

PANASONIC SALES COMPANY, DIVISION OF PANASONIC PUERTO RICO, INC. Ave. 65 de Infanteria, Km. 9.5 San Gabriel Industrial Park Carolina, Puerto Rico 00985

Panasonic Color Television Limited Warranty

Limited Warranty Coverage

If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Puerto Rico, Inc. (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("Limited Warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

CATEGORIES	ALL PARTS EXCEPT GLASS PANEL OR CRT	LABOR	GLASS PANEL OR CRT	GLASS PANEL OR CRT LABOR	SERVICE
PLASMA DISPLAY	1 (ONE) YEAR	1 (ONE) YEAR	GLASS PANEL - 2 (TWO) YEARS	1 (ONE) YEAR	IN-HOME OR CARRY-IN

During the "Labor" Limited Warranty period there will be no charge for labor. During the "Parts" Limited Warranty period, there will be no charge for parts.

You must carry-in your product or arrange for in-home service during the Limited Warranty period. If nonrechargeable batteries are included, they are not warranted. This Limited Warranty only applies to products purchased and serviced in the United States or Puerto Rico. This Limited Warranty is extended only to the original purchaser and only covers product purchased as new. A purchase receipt or other proof of the original purchase date is required for Limited Warranty service.

In-Home or Carry-in Service

For In-Home or Carry-In Service in the United States call 1-888-VIEW-PTV(1-888-843-9788). For assistance in Puerto Rico call Panasonic Puerto Rico, Inc. (787)-750-4300 or fax (787)-768-2910.

In-Home service requires clear, complete and easy access to the product by the authorized servicer and does not include removal or re-installation of an installed product. It is possible that certain in-home repairs will not be completed in-home, but will require that the product, or parts of the product, be removed for shop diagnosis and/or repair and then returned.

Limited Warranty Limits And Exclusions

This Limited Warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage, nor does it cover markings or retained images on the picture tube resulting from viewing fixed images (including, among other things, letterbox pictures on standard 4:3 screen TV's, or non-expanded standard 4:3 pictures on wide screen TV's, or onscreen data in a stationary and fixed location). The Limited Warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, bug infestation, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Service Center or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, or travel to and from the servicer. The items listed are not exclusive, but are for illustration only.) ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE LIMITED WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied Limited Warranty lasts, so the exclusions may not apply to you.

This Limited Warranty gives you specific legal rights and you may also have others rights which vary from state to state. If a problem with this product develops during or after the Limited Warranty period, you may contact your dealer or Service Center. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE (INCLUDING COST OF AN IN-HOME SERVICE CALL, WHERE APPLICABLE) WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory (for U.S.A.)

Customer Services Directory

Obtain Product Information and Operating Assistance; locate your nearest Dealer or Service Center; purchase Parts and Accessories; or make Customer Service and Literature requests by visiting our Web Site at:

http://www.panasonic.com/consumersupport

or, contact us via the web at:

http://www.panasonic.com/contactinfo

You may also contact us directly at: 1-888-VIEW-PTV (843-9788) Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST.

■ For hearing or speech impaired TTY users, TTY: 1-877-833-8855

Accessory Purchases

Purchase Parts, Accessories and Instruction Books on line for all Panasonic Products by visiting our Web Site at:

http://www.pstc.panasonic.com

or, send your request by E-mail to:

npcparts@us.panasonic.com

You may also contact us directly at: 1-800-332-5368 (Phone) 1-800-237-9080 (Fax Only) (Monday - Friday 9 am to 8 pm, EST.) Panasonic Service and Technology Company 20421 84th Avenue South, Kent, WA 98032 (We Accept Visa, MasterCard, Discover Card, American Express, and Personal Checks) ■For hearing or speech impaired TTY users, TTY: 1-866-605-1277

Service in Puerto Rico

Panasonic Puerto Rico, Inc. Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985 Phone (787)750-4300, Fax (787)768-2910

Limited Warranty (for Canada)

Panasonic Canada Inc.

PANASONIC PRODUCT - LIMITED WARRANTY

Panasonic Canada Inc. warrants this product to be free from defects in material and workmanship and agrees to remedy any such defect for a period as stated below from the date of original purchase.

Plasma TV / Monitor	In-home service	One (1) year, parts (including Plasma Panel) and labour.
LCD TV (26 in & over)	In-home service	One (1) year, parts (including LCD Panel) and labour.
LCD TV (25 in & under)	Carry-in service only	One (1) year, parts (including LCD Panel) and labour.

In-home Service will be carried out only to locations accessible by roads and within 50 km of an authorized Panasonic service facility.

LIMITATIONS AND EXCLUSIONS

This warranty does not apply to products purchased outside Canada or to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or repaired in any way that affects the reliability or detracts from the performance, nor does it cover any product which is used commercially. Dry cell batteries are also excluded from coverage under this warranty.

This warranty is extended to the original end user purchaser only. A purchase receipt or other proof of date of original purchase is required before warranty service is performed.

THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL PANASONIC CANADA INC. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

In certain instances, some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or the exclusion of implied warranties, so the above limitations and exclusions may not be applicable.

In-home service requires clear, complete and easy access to the product by the Authorized Servicentre and does not include removal or re-installation of an installed product. If removal is required to service the product, it will be at the discretion of the Servicentre and in no event will Panasonic Canada Inc. or the Servicentre be liable for any special, indirect or consequential damages.

WARRANTY SERVICE

For product operation and information assistance, please contact:

Our Customer Care Centre:	Telephone #: 1-800 #: Fax #: Email link:	
	Email inte	eusterner support on <u>www.panaserne.oa</u>

FOR PRODUCT REPAIRS, please locate your nearest Authorized Servicentre at <u>www.panasonic.ca</u>: Link: "Servicentres™ locator" under "Customer support"

IF YOU SHIP THE PRODUCT TO A SERVICENTRE

Carefully pack and send prepaid, adequately insured and preferably in the original carton. Include details of the defect claimed, and proof of date of original purchase.

Customer's Record

The model number and serial number of this product can be found on its back cover. 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

Anotación del cliente

El modelo y el número de serie de este producto se encuentran en su panel posterior. Deberá anotarlos en el espacio provisto a continuación y guardar este manual, más el recibo de su compra, como prueba permanente de su adquisición, para que le sirva de ayuda al identificarlo en el caso de que le sea sustraído o lo pierda, y también para disponer de los servicios que le ofrece la garantía.

Modelo

Número de serie

Panasonic Consumer Electronics Company, Division of Panasonic Corporation of North America One Panasonic Way, Secaucus New Jersey 07094 U.S.A. **Panasonic Puerto Rico, Inc.** Ave. 65 de Infanteria, Km. 9.5 San Gabriel Industrial Park Carolina, Puerto Rico 00985 Panasonic Canada Inc. 5770 Ambler Drive Mississauga, Ontario L4W 2T3 CANADA

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