

Panasonic



HOLLYWOOD TO YOUR HOME



HOME ENTERTAINMENT SPRING 2018

TENTATIVE



PANASONIC HOME ENTERTAINMENT 2018

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HOME IS WHERE THE ART IS

With its 2018 home entertainment range, Panasonic brings the artist's vision into your home like never before.

When a filmmaker or musician creates a film or song, they know exactly how they want it to look or sound. Unfortunately, though, this artistic vision all too often gets lost in the long journey from the mastering suite or recording studio to your home. Panasonic is on a mission to change this. They are working harder than ever to develop advanced technologies that will help its audio and video products realise the dream of letting you enjoy from the comfort of your favourite armchair exactly the same quality of picture or sound that an artist had in mind when they created their masterpiece. Nowhere is this more apparent than the 2018 Panasonic TV range. The latest OLED and LED Panasonic TVs feature a brand new HCX (Holly-

wood Cinema Experience) processor that's got 'Hollywood' running through its DNA. At the new HCX system's heart, for instance, are colour, contrast and brightness enhancements built on years of experience working with film and TV industry creatives through the Panasonic Hollywood Laboratory in Los Angeles. The system has even been tuned by leading Hollywood colourists, making it no surprise that Panasonic OLED TVs are now being used as large-format client reference monitors by some of the largest post-production companies in Hollywood. The new Panasonic FZ950 OLED series combines OLED's peerless handling of dark scenes with new HDR-friendly levels of brightness, an Absolute

Black Filter to minimise screen reflections and enhance dark shades, and unprecedented levels of colour refinement and accuracy. Furthermore, the 2018 Panasonic 4K PRO TV range also support the new HDR10+ high dynamic range standard, which provides scene-by-scene information to help TVs exploit every last drop of picture quality from an HDR source. Staying true to a director's vision is also key to the new Panasonic Ultra HD/4K Blu-ray™ player range. By introducing HDR10+ support for the first time, for instance, models such as the UB420 can deliver extra instructions provided by film-makers to help TVs play each scene more accurately. The new decks also carry Panasonic's high

precision chroma processing for enhanced textures and image depth, and a new HDR optimiser feature designed to improve HDR bright detailing and light balance even with TVs and projectors that aren't bright enough to normally handle HDR well. Panasonic wants films to sound as good as they look, too. Its HTB250 soundbar, for instance, combines a practical, space-saving design with a powerful, bass-rich sound rounded out by a wireless subwoofer you can hide pretty much anywhere without compromising its sound. The 2018 Panasonic audio range strongly focusing on combining all the convenience features of today's audio world, such as wireless multi-room and online streaming support, with real sound quality.

The SC-GA10, for instance, is the first true hi-fi smart speaker. Google Assistant provides all the convenience of simply talking to the GA10 when you want it to play something, look up something online or even turn your smart lights or heating on. But it also contains a hi-fi grade tweeter and driver combination capable of delivering a truly room-filling sound. Similarly, the Panasonic RP-HTX80B headphones provide support for convenience features such as Bluetooth sound and 20-hour battery life, but also feature unusually powerful drivers able to maintain a rich, dynamic sound. Panasonic has even created a great modern twist on the conventional hi-fi - again without com-

promising sound. Its wall-mountable SC-HC2020 and SC-HC300 both support CD playback as well as Bluetooth® and Wi-Fi, with the HC2020 even carrying built-in Chromecasting, for easy playback from any Chromecast source. With the new improved Panasonic Music Streaming app makes it easier than ever to get the most from all these great new Panasonic audio options, we are proud to say the 2018 Panasonic AV product range really does have something for everyone.

HOLLYWOOD TO YOUR HOME



PANASONIC TELEVISIONS PRESENT
THE STUDIO COLOUR HCX PROCESSOR
TUNED IN HOLLYWOOD
FOR A TRULY CINEMATIC PICTURE
DRAMATIC HIGHLIGHTS AND SHADOWS
STUNNING LEVELS OF DETAIL
A BILLION BREATHTAKING COLOURS
MASTERED FOR ACCURACY



4K^{PRO}
HDR

OLED



HOLLYWOOD TO YOUR HOME

By combining the stunning contrast and colour of OLED technology with professional-grade processing, Panasonic has delivered its most accurate and detailed picture ever.

MASTER HDR OLED TECHNOLOGY – MAKING THE BEST BETTER

At the heart of the Panasonic drive to recreate at home exactly what film or TV show creators were seeing in the mastering room lies OLED screen technology. With OLED screens, every single pixel can create its own light and colour, independently of its neighbours. As a result, OLED TVs can deliver peerless light control and contrast, as well as incredible colour and detail precision. Great though OLED's innate qualities are, though, it still takes powerful processing and decades of picture know-how to unlock the technology's full potential. Which is where Panasonic comes in. For instance, the latest 'HCX' Panasonic video processing engine uses even more direct input from Hollywood creatives to get closer than ever to reproducing the filmmaker's vision by covering almost the full DCI (Digital Cinema Initiative) colour space.

The 2018 models even introduce new Dynamic Scene Optimizer and automatic brightness enhancement features, to ensure today's gorgeous high dynamic range pictures look as punchy and natural as possible at all times. Panasonic OLED TVs also use an 'Absolute Black Filter' to reflect light away so that you can see deeper, richer, more detailed black areas and dark colours. Finally, the brand's long experience with plasma TVs results in uniquely delicate control of the 'near black' picture areas some other OLED TVs can struggle with.



MASTER HDR OLED

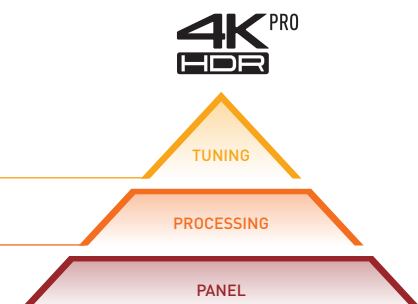
OLED is a self-illuminating panel technology which individually illuminates each pixel. As it needs no backlight like LCD TVs, when the signal level is reduced to zero, black parts of the screen are real pitch black.

ULTIMATE PICTURE QUALITY:

Collaboration with Hollywood

Unique image processing technologies

Next generation OLED technology



THE CHOICE OF HOLLYWOOD PROFESSIONALS

It's not just Panasonic which believes its latest televisions are uniquely talented at showing pictures in the way they were created to be seen.

Some of the film and TV industry's biggest names now use Panasonic OLED televisions as an essential part of their work processes.

At the heart of the close relationship Panasonic has with the heart of the global film-making industry is the Panasonic Hollywood Laboratory. Set up more than 20 years ago to forge closer ties with Hollywood creatives, the PHL has worked with professionals from every part of the movie world to gain a better understanding of what goes into creating a film or TV show, and what the people making those shows want from a video display.

This knowledge has filtered directly into Panasonic professional displays and televisions. In fact, the brand's latest televisions use so many of the premium technologies once reserved for professional monitors that they're truly erasing the space between the creation and playback ends of the film-making journey. Since 2017 Panasonic has been working closely with Hollywood giant Deluxe, to ensure that the technical accuracy of their award winning OLED TVs matches

the filmmakers' creative intent. Top colourists, image scientists and engineers at Deluxe's Company 3, EFILM, and Encore post-production companies worked with Panasonic to tune and test the 4K Pro EZ1000 and EZ950 OLED TVs, and will be involved in tuning 2018 OLED models too. Deluxe is a global partner to content creators and distributors enabling creative visions to come to life.

World-renowned film industry veteran Technicolor has been working closely with Panasonic since 2015, when one of its senior colourists, Mike Sowa, 'tuned and approved' the Panasonic CZ950 and DX900 TVs to 'Hollywood' standards. Furthermore many semi-professional features suggested by Technicolor have found their way onto Panasonic TVs – most recently, two additional white balance and gamma calibration points have been added to premium models in response to a Technicolor suggestion.



One further seal of film and TV industry approval for Panasonic televisions comes from THX. This independent quality assurance group has tested the accuracy and performance of Panasonic OLED and high-end LCD TVs using more than 400 measurements, and every model has passed these stringent tests with flying colours.



STUDIO COLOUR HCX

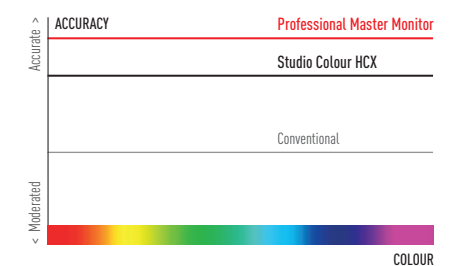
Decades of TV picture quality experience combined with unprecedented amounts of Hollywood collaboration resulted in the Panasonic HCX (Hollywood Cinema Experience) video processor. This incredibly powerful system works on colour, black level and brightness to deliver pictures that get as close as possible to the way they looked in the mastering suite. An 8000 registry point 3D look-up table system, for instance, with enhanced reproduction of white improves tonal accuracy in both light and dark areas.

The HCX system also lets Panasonic's OLED TVs achieve better detailing and smoother blends in the darkest picture areas without compromising the quality of black colours, as well as bringing out more subtle details and blends in even the brightest high dynamic range picture areas.



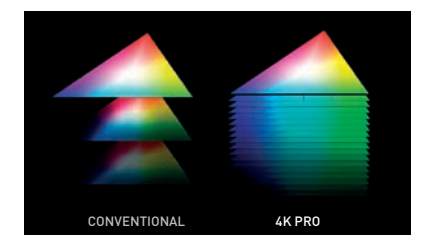
MORE DETAILED PICTURE ADJUSTMENT

Finally, in response to requests from Hollywood's professional users, Panasonic has extended the range and reduced the interval between calibration steps at the darkest end of the RGB and gamma scales. This can be adjusted by the user via Panasonic's Colour Management System. The FZ950 and FZ800 support Imaging Science Foundation (ISF) calibration settings and new calibration points at 5 per cent and – in an industry first – just 2.5 per cent luminance, providing the greatest control to users where it is most needed, just above complete blackness in low-lit scenes. These new industry-first calibration points will also be supported by Portrait Displays' CalMAN software with AutoCal functionality. Panasonic FZ950 and FZ800 are now CalMAN Ready.



DELTA ZERO (Δ0) COLOUR ACCURACY

This feature identifies and compensates for variations in specific colours caused by the individual characteristics of an OLED TV's panel. It combines with the extra brightness and gradation steps of 2018's OLED TVs to help them to get even closer to master monitor levels of colour accuracy.



3D LOOK-UP TABLES (3D LUT)

Top-tier Panasonic TVs use advanced 3D look-up tables to reproduce colours in extremely fine brightness steps, ensuring that tones look accurate at virtually any brightness level.

PICTURE QUALITY

TRULY CINEMATIC
PICTURE

DRAMATIC HIGHLIGHTS
AND SHADOWS

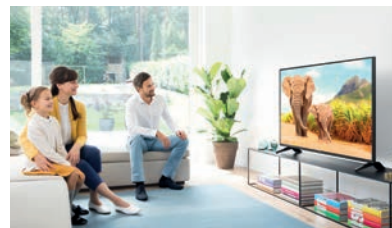
A BILLION BREATH-
TAKING COLOURS

STUNNING LEVEL
OF DETAIL

AS NATURE INTENDED

High dynamic range 4K UHD screens join forces with decades of Hollywood know-how to make the latest Panasonic televisions feel like windows on a bold and beautiful new world.

HIGH DYNAMIC RANGE



PANASONIC CONVENTIONAL

4K HDR GAME AND SPORT MODE

To deliver the best picture quality at all times, televisions need to adapt to different types of content. This is why 2018 Panasonic TVs include special Game and Sport picture modes. The game mode makes the TV produce pictures faster to reduce input lag for better gaming experience. The sport mode boosts colours to make pitches look more life-like, and raises contrast levels to make players' uniforms look more vivid. It even partners its dramatic pictures with a stadium-like sound setting.



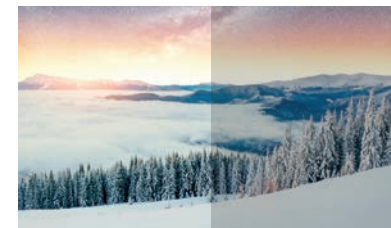
HDR TELEVISION: REAL LIFE BRIGHTNESS AND COLOUR

High dynamic range televisions can display a much wider range of brightness and colour than the TV's we're used to. The result is punchy, vivid pictures that look much more like the way our eyes see the real world. The 2018 Panasonic TV range leaves no stone unturned in its quest to deliver a thrilling HDR experience. For instance, its OLED TVs now go brighter without losing their beautifully rich black colours, while its LCD TVs use sophisticated backlight controls to deliver HDR's huge contrast range with spectacular impact.

Panasonic HDR TVs also provide peace of mind by supporting three different HDR formats: The so-called HDR10 industry standard found on almost all video streaming services and 4K Blu-rays; the Hybrid Log Gamma (HLG) platform used for HDR broadcasting; and the HDR10+ standard, which optimises the picture on a scene-by-scene basis to help TVs make HDR look even better. In addition, Panasonic is introducing a new Dynamic Scene Optimizer on 4K PRO TVs that applies advanced picture analysis to basic HDR10 signals to emulate the sort of scene-by-scene impact normally only possible with HDR10+.



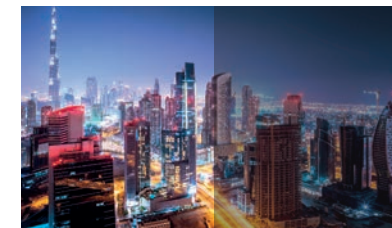
LED TV – CINEMA DISPLAY



PANASONIC CONVENTIONAL

PEAK BRIGHTNESS

New ultra-transmissive LCD cells let the latest Panasonic TVs deliver much greater brightness without using significantly more power. The high brightness required for HDR is achieved by high quality LED backlight technology that provides stable average brightness all over the screen. As a result, Cinema Displays are perfectly suited to playback of high dynamic range content.



PANASONIC CONVENTIONAL

WIDE COLOUR SPECTRUM

Wide Colour Phosphor technology lets you experience more vibrant, nuanced and natural colour tones – especially during dark scenes – than you get with normal LCD screens. This technology combines advanced LED backlighting with a new colour filter system to deliver a wider colour range that covers more than 90% of the Digital Cinema Initiative (DCI) colour spectrum.



PANASONIC CONVENTIONAL

LOCAL DIMMING PRO

High dynamic range pictures aren't just about brightness; they also deliver deeper, richer dark scenes. Some 2018 Panasonic LCD TVs use new Local Dimming Pro backlight technology to ensure both the brightest and darkest parts of HDR images look equally good. It works by combining independent control of different sections of each TV's LED lights with an array of shutters behind the screen that can constantly adjust the amount of light let through their part of the image.





THE BRAINS BEHIND THE BEAUTY

Look beyond the pretty exterior of Panasonic TVs and you'll find an ultra smart heart ready, willing and able to help you find and share content across all the myriad sources available in today's multimedia world.

VOD STREAMING:
Stream your favourite movies and videos whenever you want.



FINDING SOMETHING TO WATCH HAS NEVER BEEN SO EASY



MY HOME SCREEN 3.0

The new streamlined My Home Screen smart TV system helps you find your favourite content in just seconds – be it on live TV, a streaming app, or another device on your home network. You can create your own customised, graphically rich landing page, and even map your most used app to a dedicated remote control button. Thanks to **Panasonic Bluetooth® Audio Link** feature you can connect compatible headphones or playback your favourite music on your TV* from your mobile device via Bluetooth®.

*FX700 series and above



HOME NETWORK INTEGRATION

IP Home Networking means you can now add your Panasonic TV to home automation systems (such as Control4). You can then control your TV from your central 'whole home' device, and include your TV in macro command systems that let you, for instance, turn the TV on, adjust your lighting, boost the heating and activate your audio system at the press of a single button.



VOD STREAMING

With more and more of us binging on streamed TV these days, the latest Panasonic My Home Screen 3.0 platform not only makes it simple to stream shows and clips from Amazon, Netflix and YouTube, but also lets you watch video from those key sources in both 4K and high dynamic range quality*. The latest Panasonic Media Player 2.0 platform, meanwhile, lets you view your photo, video and music collections by date, and on 4K TVs can automatically recognise and play HDR files.

*Depending on availability and broadband speed.



WATCH TV WHENEVER AND WHEREVER YOU WANT TO



TWIN HD TUNER

If your Panasonic TV has more than one tuner, you could watch one programme while recording another; watch two programmes simultaneously on the TV; or keep watching TV while browsing other channels via a small window in the electronic programme guide.



TV ANYWHERE

Ever wished you could watch TV broadcasts and recordings on your phone or tablet when you're away from home? With TV Anywhere*, you can. This ground-breaking feature also lets you set recordings while you're out; add TV shows to your smart device playlists; and even enjoy high-quality video if your smart device is on a fast enough network.

*not available in the UK



MULTI-ROOM TV WITHOUT CABLES

Once upon a time you had to find a way of getting an aerial, satellite or cable feed into every TV in your home. **In-house TV Streaming** makes multiroom TV* life much easier by letting you stream broadcasts via your home router from one main server TV to other compatible Panasonic TVs. Client TVs are able to receive and handle those IP signals so you can enjoy TV broadcasts everywhere in your home.

*not available in the UK





CLASS IN GLASS

Turning your TV into a window on the world.

The glass frames around the new FX780/FX740 create a dazzling impression of beautiful pictures emerging as if from nowhere. Their seamless 360 degrees design and the elegantly minimalist appearance looks stunning in any room, and by removing the traditional sense of the 'technology' behind the pictures, they make it easier to become totally immersed in what you're watching.

Art&Interior
Glass



GLASS DESIGN

CABLE MANAGEMENT

INTRO

TV

VIDEO

SPECS
CONS





A NEW ERA OF PICTURE QUALITY

Introducing the full Panasonic television range for 2018.



EZ1000 SERIES



FZ950 SERIES



FZ800 SERIES



FX780 SERIES



FX740 SERIES



FX700 SERIES



FX600 SERIES



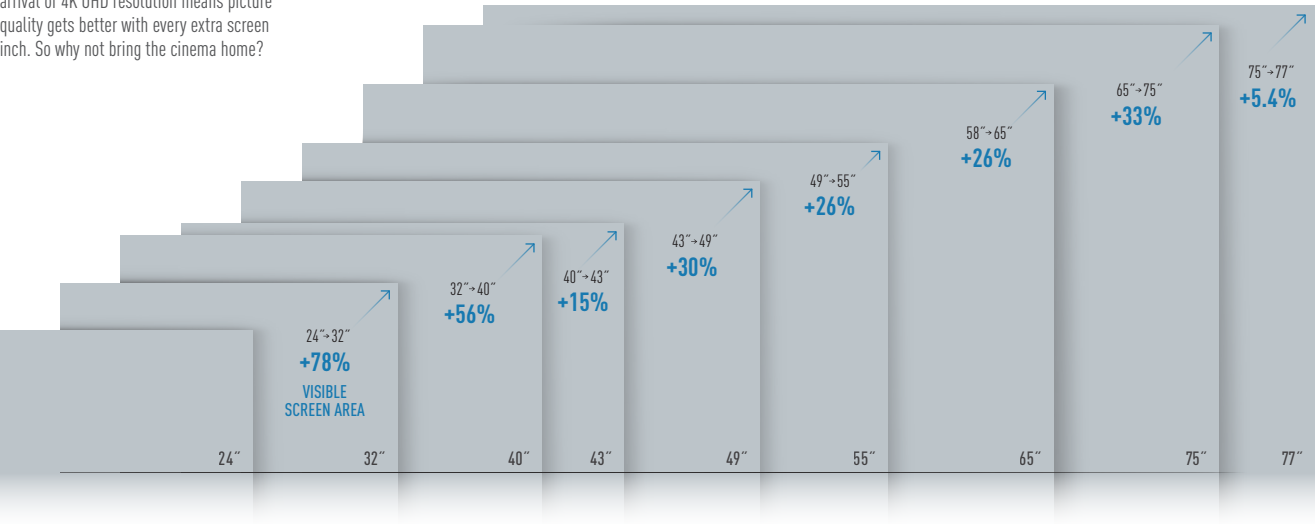
FS500 SERIES



FS400 SERIES

THE BIGGER THE SCREEN, THE GREATER THE ENTERTAINMENT

There's never been a better time to think bigger for your next TV. Ultra-slim designs make large screens easier to fit in your living room, big-screen TVs are vastly more affordable than they used to be, and the arrival of 4K UHD resolution means picture quality gets better with every extra screen inch. So why not bring the cinema home?



MASTER HDR OLED TV



'DYNAMIC BLADE' AUDIO SYSTEM DELIVERS A TRUE HOME CINEMA SOUND EXPERIENCE

Tuned by **Technics**

DARK AND ELEGANT METALLIC FINISH WITH SEAMLESS CONSTRUCTION AND CABLE MANAGEMENT

Art&Interior

BIG SCREEN BIG ENTERTAINMENT

77"
195cm



'DYNAMIC BLADE' AUDIO SYSTEM DELIVERS A TRUE HOME CINEMA SOUND EXPERIENCE

Tuned by **Technics**



EZ1000
SERIES

TX-77EZ1000 ●

ULTRAHD™
PREMIUM

OLED

4K PRO
HDR

Ultimate Picture Quality – Hollywood To Your Home

- Master HDR OLED** – original Panasonic driving technology and unique black filter to maximize OLED advantages
- Studio Colour HCX² Processor** – professional 3D look-up tables deliver accurate colours for Hollywood Cinema Experience
- Peak Brightness** – extreme brightness boost delivers vivid HDR experience with astounding highlights
- Absolute Black** – zero level black expression for highly precise black gradation
- Picture Tuned in Hollywood** – tuned by Hollywood colourist to deliver an accurate cinema experience true to the filmmaker's vision

*1 Scale: A++ to G

ENERGY
EFFICIENCY
CLASS **B**



INTRO
TV
VIDEO
AUDIO
ICONS
SPECS

MASTER HDR OLED TV



PANASONIC'S ART&INTERIOR DESIGN CONCEPT MEANS THE FZ950s LOOK MORE LIKE WORKS OF ART THAN TELEVISIONS, WHILE THE BUILT-IN TECHNICS-TUNED SPEAKER COMBINES ELEGANT LINES WITH POWERFUL SOUND.

Art&
Interior

PERFECTION FROM HOLLYWOOD



65"
164cm

55"
139cm



A NEW 'DYNAMIC BLADE' AUDIO SYSTEM COMBINES ELEGANT LINES WITH OUTSTANDINGLY POWERFUL SOUND.

Tuned by **Technics**



FZ950
SERIES

- TX-65FZ950 ●
- TX-55FZ950 ●

A Truly Cinematic Experience – With Sound Tuned By Technics



Master HDR OLED – Panasonic unlocks OLED's maximum potential with unique screen filtering and panel driving technologies.
Studio Colour HCX Processor – new Hollywood-approved processor (incl. a 3D look-up table) delivers unprecedentedly accurate, natural pictures.
High Brightness – OLED's pixel-precise lighting together with Panasonic processing deliver a premium HDR experience with dazzling highlights.
Tuned by Technics – the powerful speaker under the TV has had its sound optimised by one of the audio world's most respected brands.
Picture Tuned in Hollywood – a Hollywood colourist has calibrated images so that you see exactly what the film-maker wanted you to see.

*1 Scale: A++ to G



INTRO

TV

VIDEO

AUDIO

ICONS

SPECS



THE FZ800'S STUNNING, MINIMALISTIC DESIGN IS ENHANCED BY AN EXCEPTIONALLY SLIM NEW PEDESTAL DESIGN AND STYLISH 'NECK' CONNECTION TO THE SCREEN.

Art&
Interior



AS THE DIRECTOR INTENDED

65"
164cm

55"
139cm



THE FZ800'S INCREDIBLY THIN BEZEL LETS YOU BECOME MORE IMMERSSED IN THE PICTURES YOU'RE WATCHING.



FZ800
SERIES

- TX-65FZ800 ●
- TX-55FZ800 ●

OLED

4K
HDR

A True Movie Experience – Pictures As Accurate As They Are Beautiful



- Master HDR OLED** – Panasonic unlocks OLED's maximum potential with unique screen filtering and panel driving technologies.
- Studio Colour HCX Processor** – new Hollywood-approved processing (incl. a 3D look-up table) delivers unprecedentedly accurate, natural pictures.
- Multi HDR Support** – wide compatibility with the various HDR systems used by different HDR sources.
- THX Certified** – the TV has passed a battery of stringent picture quality tests run by independent quality assurance company THX.
- Picture Tuned in Hollywood** – a Hollywood colourist has fine-tuned images so that you see exactly what the film-maker wanted you to see.

*1 Scale: A+++ to G



LED TV EVOLVED

- 75" 189cm
- 65" 164cm
- 55" 139cm
- 49" 123cm



WITH ITS ELEGANTLY UNDERSTATED DESIGN AND GLASS-RICH BUILD QUALITY, THE FX780 ENHANCES ANY ROOM.



FX780

Premium Picture Quality With 'Art & Interior Glass' Design



- TX-75FX780
- TX-65FX780
- TX-55FX780
- TX-49FX780

4K LED TV with 2200Hz – this premium Cinema Display uses high quality processing to enhance motion, colour and contrast.
Studio Colour HCX Processor – new Hollywood-approved processing (incl. a 3D look-up table) delivers stunningly accurate, natural pictures.
Local Dimming Pro – advanced backlight control delivers light only where it's needed, greatly enhancing contrast and gradation.
Super Bright Panel – high transmittance panel with ultra-efficient backlight produces clear bright images in HDR.
Art & Interior Glass design*2 – seamless, 360 degrees designs, ultra-slim glass frames perfectly suited to any interior design.

*1 Scale: A++ to G, *2 Depending on screen size, not available for 75"



CLASS IN GLASS

- 65" 164cm
- 55" 139cm
- 49" 123cm



THE SPACE-SAVING, WELL-BUILT DESIGN BLENDS WITH ANY DECOR AND NEVER DISTRACTS YOU FROM WHAT YOU'RE WATCHING.



FX740

Amazing HDR Picture And 'Art & Interior Glass' Design



- TX-65FX740
- TX-55FX740
- TX-49FX740

4K LED TV with 1600Hz – this impressive, ultra-crisp TV uses high quality processing to enhance motion, colour and contrast.
Wide Colour Spectrum – advanced colour reproduction and processing delivers more natural, vivid pictures – especially with HDR sources.
Multi HDR Support – wide compatibility with the various HDR systems used by different HDR sources.
Local Dimming – optimised backlight control delivers light only where it's needed, enhancing contrast and gradation.
Art & Interior Glass design – seamless, 360 degrees designs, ultra-slim glass frames perfectly suited to any interior design.

*1 Scale: A++ to G



SWITCH IT UP



65"
164cm

55"
139cm

49"
123cm

THE FX700'S SLEEK METAL FINISH AND HANDY ADJUSTABLE FEET ARE A PERFECT MATCH FOR ANY DECOR OR FURNITURE.



FX700 SERIES

Outstanding HDR Images And Flexible 'Switch' Design

- TX-65FX700 ●
- TX-55FX700 ●
- TX-49FX700 ●

4K LED TV with 1600Hz – this impressive TV unlocks 4K's potential with high quality processing to enhance motion, colour and contrast.

Wide Colour Spectrum – advanced colour reproduction and processing delivers more natural, vivid pictures – especially with HDR sources.

Multi HDR Support – wide compatibility with the various HDR systems used by different HDR sources.

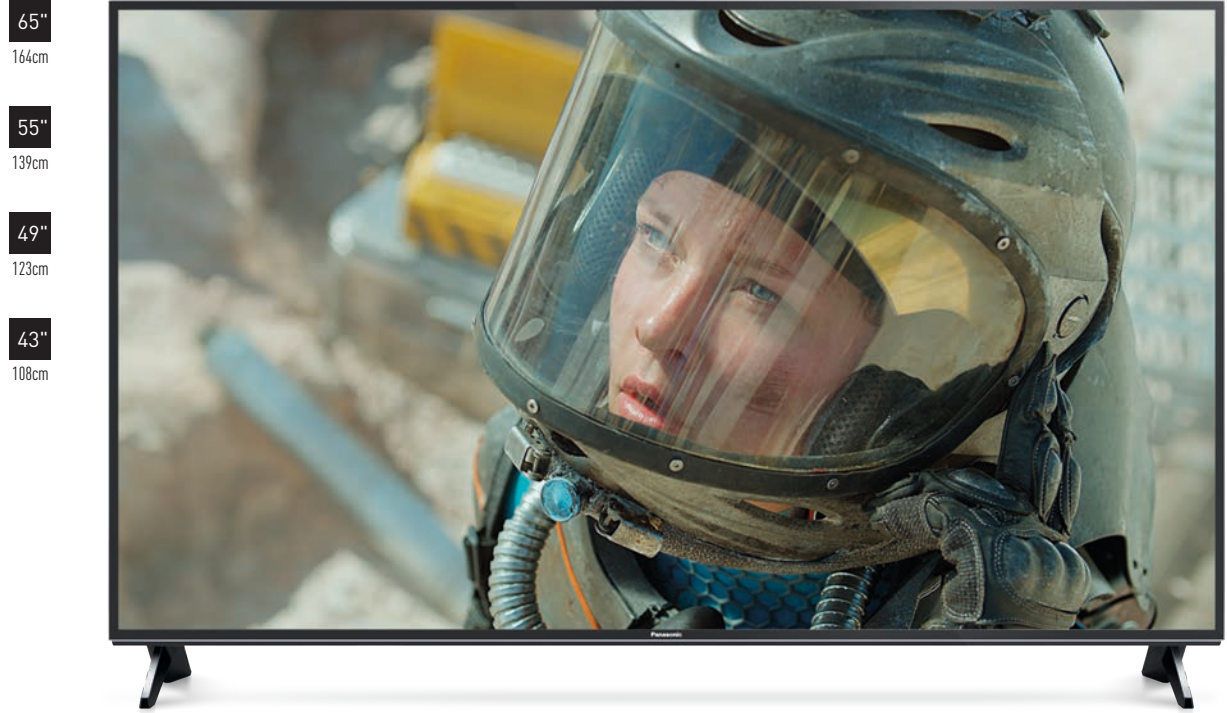
Local Dimming – optimised backlight control delivers light only where it's needed, enhancing contrast and gradation.

Switch design – able to adapt to your furniture and style thanks to its adjustable feet.

*1 Scale: A++ to G



SMART LOOKS, SHARP PICTURES



65"
164cm

55"
139cm

49"
123cm

43"
108cm

THE FX600'S FEET CAN BE FITTED UNDER THE SCREEN'S CORNERS OR MID SECTION, DEPENDING ON YOUR TASTES AND THE SIZE OF FURNITURE YOU'RE PUTTING THE TV ON.



FX600 SERIES

4K Meets HDR With Smart Entertainment

- TX-65FX600 ●
- TX-55FX600 ●
- TX-49FX600 ●
- TX-43FX600 ●

4K LED TV with 1300Hz – powerful motion processing and a high quality panel reveal all the detail that 4K resolution makes possible.

Multi HDR Support – wide compatibility with the various HDR systems used by different HDR sources.

Adaptive Backlight Dimming Plus – the TV's backlighting is continually optimised to deliver rich contrast and immersive dark scenes.

Switch Design^{*2} – able to adapt to your furniture and style thanks to its adjustable feet.

My Home Screen 3.0 – it's now easier than ever to make your own customised home page for fast access to your favourite smart TV apps.

*1 Scale: A++ to G, *2 Depending on screen size, not available for 43"



HIGH-DEF HDR HERO

- 49" 123cm
- 40" 100cm
- 32" 80cm
- 24" 60cm



FS500 SERIES

- TX-49FS500
- TX-40FS500
- TX-32FS500
- TX-24FS500

Full HD HDR Images And Extensive Smart Functionality

Full HD¹ LED TV with 600Hz – high speed panel for brilliant high definition motion picture clarity.
Adaptive Backlight Dimming – the TV's backlighting is continually optimised to deliver rich contrast and immersive dark scenes.
In-House TV Streaming³ – stream programmes from a dedicated server to TVs placed anywhere in your home.
My Home Screen 3.0 – it's now easier than ever to make your own customised home page for fast access to your favourite smart TV apps.
HDR Support – become captivated by the outstanding brightness for more enhanced HDR viewing.

¹ Scale: A++ to G, ² Depending on screen size: 32" and 24" HD ready, ³ Not available in the UK



CUTTING-EDGE SMARTS

- 40" 100cm
- 32" 80cm



FS400 SERIES

- TX-40FS400
- TX-32FS400

Full HD HDR Image With Classic Design

Full HD¹ LED TV with 600Hz – enjoy clear motion quality and bright pictures in Full HD resolution.
Swipe and share – the Panasonic TV Remote app makes it easy to show pictures, movies and music from iOS and Android smartphones on your TV.
In-House TV Streaming³ – stream programmes from a dedicated server to TVs placed anywhere in your home.
My Home Screen 3.0 – it's now easier than ever to make your own customised home page for fast access to your favourite smart TV apps.
HDR Support – become captivated by the outstanding brightness for more enhanced HDR viewing.

¹ Scale: A++ to G, ² Depending on screen size: 32" HD ready, ³ Not available in the UK





EZ1000 SERIES

77" 195cm
OLED
ULTRA HD™ PREMIUM



FZ950 SERIES

65" 164cm 55" 139cm
OLED



FZ800 SERIES

65" 164cm 55" 139cm
OLED



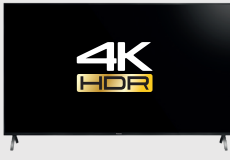
FX780 SERIES

75" 189cm 65" 164cm 55" 139cm 49" 123cm



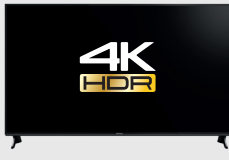
FX740 SERIES

65" 164cm 55" 139cm 49" 123cm



FX700 SERIES

65" 164cm 55" 139cm 49" 123cm



FX600 SERIES

65" 164cm 55" 139cm 49" 123cm 43" 108cm



FS500 SERIES

49" 123cm 40" 100cm 32" 80cm 24" 60cm



FS400 SERIES

40" 100cm 32" 80cm

TECHNOLOGY COMPARISON

	Series	EZ1000	FZ950	FZ800	FX780	FX740	FX700	FX600	FS500	FS400
RESOLUTION	Technology	4K ^{PRO} HDR	4K ^{PRO} HDR	4K ^{PRO} HDR	4K ^{PRO} HDR	4K ^{PRO} HDR	4K ^{PRO} HDR	4K ^{PRO} HDR	FULL HD ¹ 1080p	FULL HD ¹ 1080p
PICTURE & SOUND QUALITY	Motion (Hz)	OLED SUPERB MOTION DRIVE	OLED SUPERB MOTION DRIVE	OLED SUPERB MOTION DRIVE	2200 ^{Hz} INTELLIGENT FRAME INTERPOLATION 4K	1600 ^{Hz} INTELLIGENT FRAME INTERPOLATION 4K	1600 ^{Hz} INTELLIGENT FRAME INTERPOLATION 4K	1300 ^{Hz} INTELLIGENT FRAME INTERPOLATION 4K	600 ^{Hz} Backlight Motion Rate	600 ^{Hz} Backlight Motion Rate
	Contrast	ULTIMATE CONTRAST	ULTIMATE CONTRAST	ULTIMATE CONTRAST	SUPREME CONTRAST	BRILLIANT CONTRAST	BRILLIANT CONTRAST	HIGH CONTRAST	HIGH CONTRAST	HIGH CONTRAST
	Sport & Game Mode	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE	SPORT MODE GAME MODE
	Brightness	MASTER HDR	MASTER HDR	MASTER HDR	SUPER BRIGHT PANEL	BRIGHT PANEL PLUS	BRIGHT PANEL PLUS	BRIGHT PANEL	BRIGHT PANEL	BRIGHT PANEL
	Sound	Tuned by Technics	Tuned by Technics	CINEMA SURROUND PLUS	CINEMA SURROUND	CINEMA SURROUND	CINEMA SURROUND	CINEMA SURROUND	CINEMA SURROUND	CINEMA SURROUND
	Pure Direct	4K PURE DIRECT	4K PURE DIRECT	4K PURE DIRECT	4K PURE DIRECT		4K PURE DIRECT	4K PURE DIRECT	1000P PURE DIRECT	1000P PURE DIRECT
	Rendering Processor / Engine	STUDIO COLOUR HCX 2	STUDIO COLOUR HCX 2	STUDIO COLOUR HCX 2	STUDIO COLOUR HCX 2					
	Local Dimming	ABSOLUTE BLACK	ABSOLUTE BLACK	ABSOLUTE BLACK	LOCAL DIMMING	LOCAL DIMMING	LOCAL DIMMING	ADAPTIVE BACKLIGHT DIMMING	ADAPTIVE BACKLIGHT DIMMING	ADAPTIVE BACKLIGHT DIMMING
	Enhanced Colour	WIDE COLOUR SPECTRUM	WIDE COLOUR SPECTRUM	WIDE COLOUR SPECTRUM	WIDE COLOUR SPECTRUM	WIDE COLOUR SPECTRUM	WIDE COLOUR SPECTRUM			
	THX Certification	THX SPOKESPLAY	THX SPOKESPLAY	THX SPOKESPLAY						
	HDR	HDR MULTI HDR SUPPORT	HDR MULTI HDR SUPPORT	HDR MULTI HDR SUPPORT	HDR MULTI HDR SUPPORT	HDR MULTI HDR SUPPORT	HDR MULTI HDR SUPPORT	HDR MULTI HDR SUPPORT	HDR HIGH DYNAMIC RANGE	HDR HIGH DYNAMIC RANGE
	ISF Calibration	ISF	ISF	ISF						
	Design	Art&Interior	Art&Interior	Art&Interior	Art&Interior Glass	Art&Interior Glass	SWITCH DESIGN	SWITCH DESIGN		
ECO	Energy Efficiency Class ⁴ (tentative)	ENERGY EFFICIENCY CLASS B	ENERGY EFFICIENCY CLASS B	ENERGY EFFICIENCY CLASS B	ENERGY EFFICIENCY CLASS A+	ENERGY EFFICIENCY CLASS A	ENERGY EFFICIENCY CLASS A	ENERGY EFFICIENCY CLASS A	ENERGY EFFICIENCY CLASS A+	ENERGY EFFICIENCY CLASS A

¹ Depending on screen size: 32" and 24" HD ready / ² Depending on screen size: 32" HD ready / ³ not for TX-75FX780E / ⁴ Scale: A++ to G

	Series	EZ1000	FZ950	FZ800	FX780	FX740	FX700	FX600	FS500	FS400
SMART FEATURES	Media Player	MEDIA PLAYER 2.0	MEDIA PLAYER 2.0	MEDIA PLAYER 2.0	MEDIA PLAYER 2.0	MEDIA PLAYER 2.0	MEDIA PLAYER 2.0	MEDIA PLAYER 2.0	MEDIA PLAYER	MEDIA PLAYER
	Smart TV	INTERNET APPS	INTERNET APPS	INTERNET APPS	INTERNET APPS	INTERNET APPS	INTERNET APPS	INTERNET APPS	INTERNET APPS	INTERNET APPS
	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN	Wireless LAN
	Web Browser	Web Browser	Web Browser	Web Browser	Web Browser	Web Browser	Web Browser	Web Browser	Web Browser	Web Browser
	Easy Mirroring	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING	EASY MIRRORING
	In-house TV Streaming (except UK)	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING	IN-HOUSE TV STREAMING
	Quattro Tuner	QUATTRO TUNER (4K)	QUATTRO TUNER (4K)	QUATTRO TUNER (4K)	QUATTRO TUNER (4K)					
	USB Recording	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC	USB HDD RECORDING 4K REC
	IP Home Network	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK	IP HOME NETWORK
EASY OPERATION	Processing	QUAD-CORE PRO	QUAD-CORE PRO	QUAD-CORE PRO	QUAD-CORE PRO	QUAD-CORE PRO	QUAD-CORE PRO	QUAD-CORE PRO	VERA1	VERA1
	My Home Screen	my Home Screen	my Home Screen	my Home Screen	my Home Screen	my Home Screen	my Home Screen	my Home Screen	my Home Screen	my Home Screen
	Voice Assistant	VOICE ASSISTANT	VOICE ASSISTANT	VOICE ASSISTANT	VOICE ASSISTANT	VOICE ASSISTANT	VOICE ASSISTANT	VOICE ASSISTANT	VOICE GUIDANCE	VOICE GUIDANCE
	Panasonic TV Remote 2 app	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2	REMOTE APP 2
	Swipe & Share	4K SWIPE & SHARE	4K SWIPE & SHARE	4K SWIPE & SHARE	4K SWIPE & SHARE	4K SWIPE & SHARE	4K SWIPE & SHARE	4K SWIPE & SHARE	SWIPE & SHARE	SWIPE & SHARE
	TV Anywhere (except UK)	TV ANYWHERE	TV ANYWHERE	TV ANYWHERE	TV ANYWHERE	TV ANYWHERE	TV ANYWHERE	TV ANYWHERE		
	Panasonic Bluetooth® Audio Link		AUDIO LINK	AUDIO LINK	AUDIO LINK	AUDIO LINK	AUDIO LINK			



DEFINING SOUND AND VISION

Leading picture and sound quality for an overwhelming variety of movie and music sources, supported by cutting edge voice assistant technology.



HI-FI SMART SPEAKER



CONNECTED HI-FI AUDIO SYSTEMS



SOUNDBARS



COMPACT MUSIC SYSTEMS



HEADPHONES

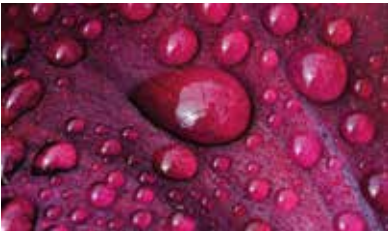


BLU-RAY™ RECORDER & PLAYERS



BLU-RAY™ GOES ULTRA HD

Enter a whole new world of picture and sound quality with Panasonic's Ultra HD Blu-ray™ Players.



UNLOCK THE FULL BEAUTY OF 4K

Normal Blu-ray™ players only output video with a resolution of 1,920 x 1,080px. Today's 4K UHD TVs, however, show pictures with resolutions of 3,840 x 2,160px. So when they're fed a standard HD Blu-ray™ picture, they 'upconvert' it to their higher resolutions. They deliver even more purity when you use a true 4K source. The new generation of Ultra HD Blu-ray™ Players from Panasonic deliver pictures to your UHD TV with a native 3,840 x 2,160px resolution, giving you pixel-for-pixel clarity.



COMPREHENSIVE HDR SUPPORT

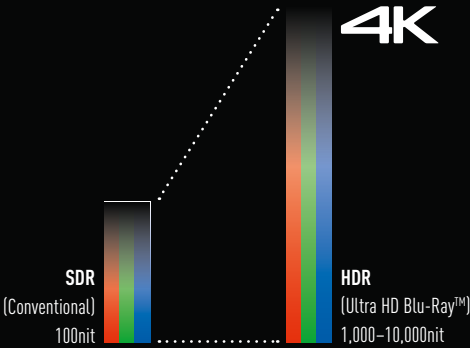
Panasonic 2018 4K Blu-ray™ players play every key HDR format. These comprise the AV world's core HDR10 format; the broadcast-friendly HLG system, which automatically optimises its pictures to any type of television; plus, finally, the HDR10+ and (on the UB820 flagship model) Dolby Vision 'dynamic' HDR systems, which provide extra scene by scene information to help TVs optimise their HDR performance.



ALWAYS GET THE BEST FROM HDR

The quality of a high dynamic range picture experience can be greatly affected by the characteristics of your TV. The HDR Optimiser counters this inconsistency by adapting the brightest parts of HDR images to the brightness capabilities of the TV the Panasonic UHD Blu-Ray™ player is connected to. The result is a substantial increase in the amount of visible detail in peak HDR picture areas.

EXCLUSIVE PICTURE QUALITY



The 2018 Panasonic 4K Blu-ray™ players are uniquely qualified to unlock the full potential of the AV world's premium video source. The new HCX processor introduces the spectacular HDR10+ format to 4K Blu-ray™ for the first time, and uses advanced processing to better adapt both high and standard dynamic range pictures to different TVs and room environments. Working with filmmakers through the Panasonic Hollywood Labs, meanwhile, has helped create exclusive chroma processing and upscaling systems capable of delivering gorgeously nuanced, natural and colour-rich pictures from both 4K and HD Blu-ray™ discs.



INTRO

TV

VIDEO

AUDIO

ICONS

SPECS



HIGH-QUALITY SOUND

Panasonic Ultra HD Blu-ray players are packed with high-end audio technology. All 2018 models feature proprietary stabilizing technology to enhance sound clarity, and play high-resolution DSD and ALAC files as well as conventional WAV, FLAC, AAC, and WMA formats. The UB820 and UB420 additionally use a 192kHz/32-bit DAC to enhance playback of subtle sound details, and carry two HDMI outputs that keep the video and audio signals separate for extra clarity and quality.



4K STREAMING SUPPORT

Panasonic 4K Blu-ray players won't just play 4K video from Ultra HD Blu-ray discs. Our models will also support playback of native 4K content from the likes of Netflix and YouTube. What's more, each online source will have its picture quality taken to a whole new level by being run through Panasonic's 4K High-Precision Chroma Processor before it's passed to your TV.



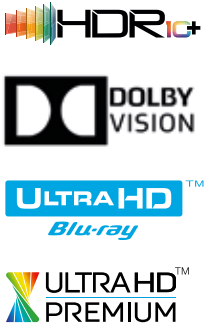
IT'S GOOD TO TALK

Wouldn't it be great if you could just tell your home electronics what you wanted them to do, rather than always having to find the remote control? Well, with the latest Panasonic 4K Blu-ray™ players, you can. They support both the Amazon Alexa and the Google Assistant systems, so that when they're connected to a compatible speaker you can get them to perform a range of operations simply by saying what you want them to do.





PERFECT PICTURES EVERY TIME



UB820

Premium Quality Ultra HD Blu-ray™ Player for Perfect Playback Every Time

DMP-UB820 ●



Ultimate Ultra HD home cinema – Panasonic’s high-end picture and audio technologies unlock the full potential of the peerless 4K Blu-ray™ format
Made in Hollywood – the new HCX processor draws on real film industry experience to ensure you see the filmmaker’s true vision
Multi-format support – Playback of all the key HDR10, HDR10+, and Dolby Vision high dynamic range formats
Uncompromising sound – carries a dedicated HDMI audio output, a 7.1-channel analogue output and high resolution audio format support
Voice control – compatible with the Amazon Alexa and Google Assistant voice assistant systems



UB420

DMP-UB420 ●



Spectacular 4K Entertainment that’s Tuned in Hollywood

Brilliant home cinema pictures – Panasonic’s high-end picture technologies unlock the full potential of 4K and HDR
Made in Hollywood – new HCX processor draws on real film industry experience to ensure you see the filmmaker’s true vision
Premium HDR support – plays the spectacular new dynamic HDR10+ HDR format as well as the industry standard HDR10 system
HDR Optimizer – unique Panasonic processing that uses advanced tone mapping to make sure HDR looks great on any TV
Voice control – Compatible with the Amazon Alexa and Google Assistant systems



High Precision
Chroma Processor



UB320/330

DMP-UB320 ●
DMP-UB330 ●



UB330



UB320

A Breathtaking 4K Experience Every Single Time

Pristine 4K – precise Chroma Processing unlocks pristine detail from 4K discs, while advanced upscaling makes HD discs look 4K too
HCX Processor with HDR – supervised by Panasonic Hollywood Laboratory to deliver picture quality true to the filmmaker’s intent
4K Video On Demand – support for 4K streaming services like Netflix and Amazon Video
High resolution audio – playback of the high quality DSD, ALAC, FLAC, WAV and AIFF music formats
Quick start – from powering up to playback takes just seconds

*DMP-UB330 only with Wi-Fi Built-In.



High Precision
Chroma Processor

FROM SILVER SCREEN TO SILVER DISC



BDT380/381

Sleek Blu-ray™ Player Delivering 4K and 3D Content

DMP-BDT380 ● ●
DMP-BDT381 ● ●



BDT380

Premium Ultra HD entertainment – thanks to 4K Ultra HD Up-Scaling and 4K JPEG playback
Breathtaking images – marvel at stunning movies or favourite series on Blu-ray™ in perfect Full HD 2D and 3D quality
Wireless networking – built-in Wi-Fi for access to Internet apps, Video on Demand like Amazon Video and Netflix
Ease of use – enjoy fast and convenient control via HDMI and the Dual Core Processor
Wide flexibility – play back films, photos and music within your home network or from a USB storage device or PC/NAS



BDT280/281

Compact Blu-ray™ Player for 4K Up-Scaling and 3D Entertainment

DMP-BDT280 ● ●
DMP-BDT281 ● ●



BDT281

Spectacular home cinema – in Ultra HD via 4K Ultra HD Up-Scaling or in breathtaking 3D picture quality
Full entertainment access – enjoy exciting Internet apps like Amazon Instant Video, Netflix or YouTube
Essential flexibility – play back films, photos and music within your home network via DMLA or from a USB storage device
Easy networking – easily hook up to your home network via the LAN port
Ease of use – enjoy fast and convenient control via HDMI and the Dual Core Processor



BDT180/181

Stylish Blu-ray™ Player Gets You Started with 4K Up-Scaling

DMP-BDT180 ● ●
DMP-BDT181 ● ●



BDT181

Spectacular home cinema – in Ultra HD via 4K Ultra HD Up-Scaling or in breathtaking 3D picture quality
Full entertainment access – enjoy exciting Internet apps like Amazon Instant Video, Netflix or YouTube
Essential flexibility – play back films, photos and music within your home network via DMLA or from a USB storage device
Easy networking – easily hook up to your home network via the LAN port
Ease of use – enjoy fast and convenient control via HDMI and the Dual Core Processor





BDT168



BDT167

BDT167/168

- DMP-BDT167 ●
- DMP-BDT168 ●



BDT168

High-Quality Blu-ray™ Player Delivering Great 3D Images

- Breathtaking images** – marvel at stunning movies or your favourite series on Blu-ray™ in perfect Full HD 2D and 3D quality
- Home cinema feeling** – turn any DVD into Full HD with Full HD Up-Scaling
- Full entertainment access** – enjoy exciting Internet apps like Amazon Video, Netflix or YouTube
- Easy networking** – easily hook up to your home network via the LAN port
- Highly flexible** – conveniently play back films, photos and music from a USB storage device or external hard disk drive



BD84

- DMP-BD84 ● ●



Essential Blu-ray™ Player for Great Full HD Home Cinema

- Amazing images** – marvel at stunning movies or your favourite series on Blu-ray™ in perfect picture quality
- Home cinema feeling** – turn any DVD into Full HD with Full HD Up-Scaling
- Full entertainment access** – enjoy exciting Internet apps like Amazon Video, Netflix or YouTube
- Easy networking** – easily hook up to your home network via the LAN port
- Highly flexible** – conveniently play back films, photos and music from a USB storage device or external hard disk drive



STUNNING RECORDINGS,
PIXEL-PERFECT 4K PLAYBACK



UBC90

4K BLU-RAY™
RECORDERS

With 2TB, 1TB, 500GB or 250GB Storage Capacity

- DMR-UBS90*, DVB-S, 2TB ●
- DMR-UBS80*, DVB-S, 1TB ●
- DMR-UBS70*, DVB-S, 500GB ●
- DMR-UBC90*, DVB-C, 2TB ●
- DMR-UBC86*, DVB-C, 1TB ●
- DMR-UBC80*, DVB-C, 1TB ●
- DMR-UBC70*, DVB-C, 500GB ●



UBS90

- Ultimate picture quality** – stunningly detailed images from Ultra HD Blu-ray discs™, 4K TV programs and 4K streaming services
- Multi-record** – receive and record up to two or three* channels simultaneously
- Huge memory** – built-in hard drive can hold hundreds of hours of time-shifted TV
- Made in Hollywood** – new HCX processor draws on the experience of real filmmakers to optimise 4K and HDR playback



DMR-UBS90 / DMR-UBC90	•	•	•	•	•	•
DMR-UBS80 / DMR-UBC80	•	•	•	•	•	•
DMR-UBS70 / DMR-UBC70	•	•	•	•	•	•
DMR-UBC86	•	•	•	•	•	•

*DMR-UBS90 and DMR-UBC90 only. / *1For Germany, Austria and Switzerland only. / *2For Nordics only.



BRILLIANT RECORDING MADE EASY



2K BLU-RAY™ RECORDERS

- DMR-BCT84**1, DVB-T, 1TB ●
- DMR-BCT76**1, DVB-T, 500GB ●
- DMR-BWT850**1*2, DVB-T, 1TB ●
- DMR-BWT745*3, DVB-T, 500GB ●
- DMR-BWT640*2, DVB-T, 250GB ●



BST855

With 2TB, 1TB, 500GB or 250GB Storage Capacity

- Ultimate viewing and recording** – experience Full HD entertainment in 3D and 4K, and archive onto Blu-ray Disc™
- Entertainment everywhere** – with TV Anywhere watch both recorded programmes and live broadcasts on your smartphone/tablet
- Many recording options** – simultaneously record up to three programmes in stunning HD with the Triple or Twin HD Tuner
- Remote control** – use your smartphone/tablet anywhere to set up timer-recording of TV programmes via Remote Recording

	4K ULTRA HD UPSCALING	INTERNET APPS	TV Anywhere	Wi-Fi Built-in	High Res SOUND
DMR-BCT84	•	•	•	• [1x]	•
DMR-BCT76	•	•	•	• [1x]	•
DMR-BWT850	•	•	•	•	•
DMR-BWT745	•	•	•	•	•
DMR-BWT640	•	•		(Wi-Fi ready)	

*1 For UK only, Freeview Play Function supported. / *2 For France and Spain only. / *3 For France only. / **4 For Nordics only.

HDD RECORDER

- DMR-PWT655*2, DVB-T, 1TB ●
- DMR-PWT535*1, DVB-T, 250GB ●
- DMR-PWT550*2, DVB-T, 500GB ●



PWT550



PWT550

With 1TB, 500GB or 250GB Storage and 3D Blu-ray™ Player

- Outstanding viewing and recording** – experience Full HD entertainment in 2D or 3D and store onto the built-in HDD
- Highly convenient** – view the EPG on your smartphone or tablet and set up recordings, all while watching TV
- Full flexibility** – record two programmes simultaneously in HD with the Twin HD Terrestrial Tuner
- Numerous online applications** – enjoy exploring entertainment options via Internet Apps

	4K ULTRA HD UPSCALING	REMOTE RECORDING	Wi-Fi Built-in	INTERNET APPS	DLNA CERTIFIED	BD DVD CD PLAYBACK
DMR-PWT655*2	•	•	•	•	•	•
DMR-PWT535*1		•	•	•	•	•
DMR-PWT550*2	•	•	•	•	•	•

*1 For France and Spain only. / *2 For UK only, Freeview Play Function supported.

HDD RECORDER

- DMR-HWT250*1, DVB-T, 1TB ●
- DMR-HWT150*1, DVB-T, 500GB ●
- DMR-HWT130*1, DVB-T, 500GB ●



HWT250

With 1TB or 500GB Storage Capacity

- Excellent recording** – store 2D and 3D High Definition entertainment onto the built-in HDD
- Highly convenient** – view the EPG on your smartphone or tablet and set up recordings, all while watching TV
- Full flexibility** – record two programmes simultaneously in HD with the Twin HD Terrestrial Tuner
- Numerous online applications** – enjoy exploring entertainment options via Internet Apps

	REMOTE RECORDING	Wi-Fi Built-in	INTERNET APPS	DLNA CERTIFIED	MKV PLAYBACK
DMR-HWT250*	•	•	•	•	•
DMR-HWT150*	•		•	•	•
DMR-HWT130*	•	(Wi-Fi ready)		•	•

*1 For UK only, Freeview Play Function supported.



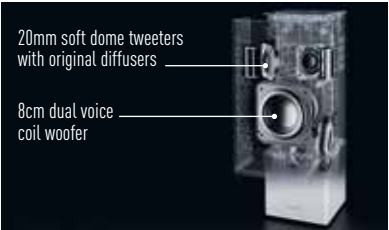
SOUNDS GREAT, THINKS SMART

Proof at last that you really can combine smart speaker functionality with truly great sound.



SOUND QUALITY

Tucked inside the GA10's space-saving form is a seriously uncompromising speaker system. Two angled 20mm soft dome tweeters with proprietary diffuser technology fill your room 180 degrees of spectacular, ultra-clear, stereo sound. Also, an 8cm dual voice coil woofer and long port bass reflex system deliver the rich, robust bass so often missing from other smart speaker designs.



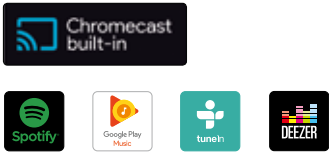
HIGH FASHION

The GA10's distinctive tower-style design combines elegant, modern simplicity with enough physical space to house a collection of truly high-performance speakers. Its sleek aluminium case can be partnered with black or white speaker fabric colour options, too, making it flexible enough to fit in with any living room style.



WELL CONNECTED

Thanks to its support of both Google Chromecast and Bluetooth®, the GA10 can play back music from almost any source. Various streaming services, internet radio stations, smartphones and tablets, basically if a device has got music on it and can be attached to a Bluetooth® or Wi-Fi network, the GA10 will be able to play songs from it.



You speak,
the GA10 listens

Say goodbye to remote controls. You can simply use your voice to ask the Assistant on your GA10 Speaker to play your music. Or you can ask it about the weather, your schedule, general knowledge - anything, really. You can even use it to voice control other compatible smart home devices, such as smart lights and thermostats.



OK Google, play some jazz.



Alright. Check out this jazz radio mix on Spotify.

GA10

SC-GA10 ● ○



Panasonic Sound Prowess Meets Smart Speaker Flexibility

- Google Assistant Voice Control** – simply tell your GA10 what you want it to do
- Hi-Fi Sound** – fantastic audio via two 20mm Soft Dome Tweeters, an 8cm Dual Voice Coil Woofer, and a Long Port Back Bass Reflex System
- Elegant Design** – its minimalist, compact shape, subtle colour schemes and refined materials complement any decor
- Wide content support** – playback from all major streaming apps, including Spotify, Google Play Music, Tune-In Radio, Deezer and the BBC
- Room-filling audio** – 180-degree coverage ensures that everyone enjoys the GA10's outstanding sound quality



MUSICAL MASTERPIECE

The latest Panasonic range of audio products look great, sound great, and make perfect partners for today's connected generation.



GOOGLE CHROMECAST AND STREAMING

The HC2020 carries built-in support for Google Chromecast. This makes it as easy as pressing a single button to stream songs from streaming music services eg. Spotify, Deezer and SoundCloud and smartphones. In combination with a speaker with Google Assistant function it can be voice controlled. Because Chromecast works over Wi-Fi you can simultaneously connect multiple devices to the HC2020, while multi-room sync functionality lets you play the same song through multiple speakers.



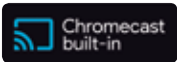
THE ART OF GREAT SOUND

The HC2020 manages to deliver its distinctively stylish design without compromising sound quality. First, it uses 8cm full-range drivers. Second, it can adapt its sound according to whether it's mounted on a wall or a shelf. Finally, it applies a unique Twisted Acoustic Port speaker design to enhance bass. Finally, it carries the latest LincsD-Amp system, which prevents sound from being affected by any sorts of mechanical interference.



WALL FLOWER

The HC2020 squeezes a triumph of design. It's minimalistic enough to harmonise with any room design, yet subtly blends different textures to create a sophisticated, three-dimensional appearance that clearly defines the system's speaker and front panel elements. Its remarkably thin body has also been optimised for hanging on a wall for the ultimate in space-saving hi-fi chic.



HC2020

SC-HC2020 ●



Style Meets Function with this Stunning Slimline Hi-Fi

Google Chromecast built in – easily stream, music services and radio stations from mobile devices. Supports high resolution audio
Wide source support – play music via CD, USB, DAB radio, Bluetooth® or Wi-Fi (including Spotify, Deezer and SoundCloud)
A fantastic listening experience – unique Panasonic technologies fill your room with beautifully natural Hi-Fi sound
Works with Google Assistant – control by voice when connected with your speaker with Goggle Assistant
Space-saving design – slim profile means you can place it on a narrow shelf or even hang it on the wall



CINEMA SOUND FOR YOUR HOME

Advanced technologies for excellent sound quality

Featuring two 10x4 cm full-range speakers designed to match the shape of the body, this speaker system includes a high-output amp that achieves a maximum 80W of power. The H.BASS function also reinforces the low-frequency range to deliver incredible bass sound that's almost unimaginable for such a compact size. Virtual Surround fills the entire listening space and Sound modes let you choose the sound that best suits the picture.



HTB250

SC-HTB250 ●



High Quality 2.1 Sound from a Compact Design

- Space saving style** – sits comfortably beneath Panasonic TV screens and minimalist design doesn't distract you from what you're watching
- Wireless subwoofer** – place it freely anywhere in your room - vertically or horizontally
- Cinematic sound** – brings movies to life with 120W of audio power from a pair of large full-range drivers and a 14cm subwoofer
- Wireless music steaming** – easily stream music from your tablet or smartphone via Bluetooth®
- HDMI connection** – easy hook up to your TV. Delivers high quality pictures and control of the soundbar and TV via the same remote handset

2.1ch
System

Total Output Power
120W

Sound
Mode

Bluetooth

Wireless
Subwoofer

HDMI

Optical
Input

HTB200

SC-HTB200 ●



Compact Soundbar with Powerful Sound

- Space saving style** – sits comfortably beneath Panasonic TV screens and stylish minimalist design doesn't distract you from what you're watching
- Bold, clear audio** – two 10x4cm full-range speakers deliver a dynamic and precise sound
- Bring movies to life** – 80W of power, a bass reflex design and virtual surround modes create an immersive home cinema experience
- Wireless subwoofer** – place it freely anywhere in your room - vertically or horizontally
- HDMI connection** – gives you high quality pictures and control of the soundbar and TV via the same remote handset

2.1ch
System

Total Output Power
80W

Sound
Mode

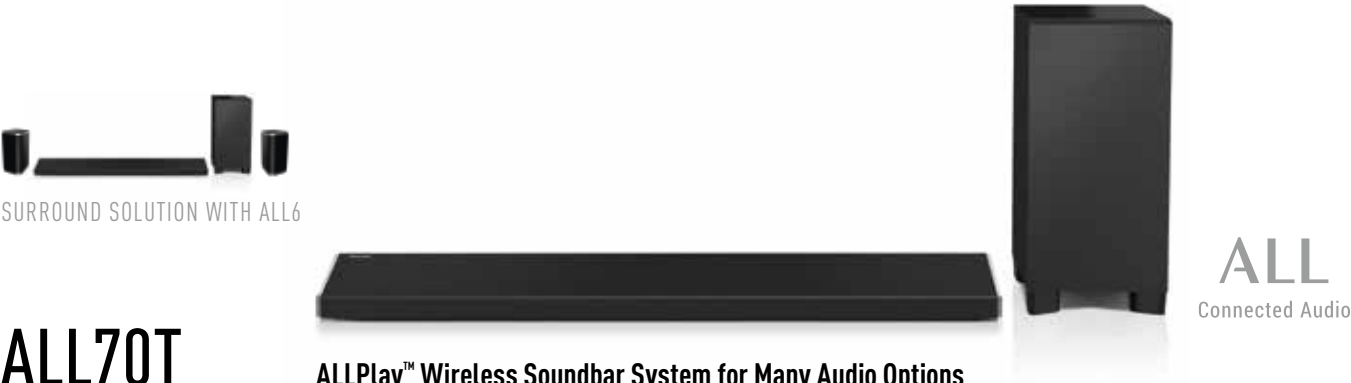
Bluetooth

HDMI

Optical
Input



SOUNDBARS



ALL70T

SC-ALL70T ●



ALLPlay™ Wireless Soundbar System for Many Audio Options

- Impressive sound** – 3.1-channel soundbar system with wireless subwoofer and 350W (RMS) power output
- Full TV action** – send the TV's audio to other ALL Series speakers* anywhere in your home
- 4K capability** – with 4K signal pass-through via a 4K Blu-ray™ Player to your 4K TV with only one HDMI cable
- Easy connectivity** – simply pair up with your smartphone thanks to NFC and stream music via Bluetooth®
- More powerful sound** – boost your perfect home cinema sound to a 5.1 system, with two ALL2 or ALL6 speakers for the rear

*Other ALL Series speakers are optional and not included.



HTB688

SC-HTB688 ●



Enjoy Impressive 3.1-Channel Surround and Convenience

- Impressive listening** – 3.1-channel surround soundbar system with wireless subwoofer and 300W (RMS) power output
- Perfect match** – designed to be a perfect fit with Panasonic TVs of 40 inches or larger
- Easy streaming** – simply pair up with your smartphone and enjoy your favourite music via Bluetooth®
- Full convenience** – enjoy easy set-up and home cinema entertainment with HDMI (ARC)



HTB488

SC-HTB488 ●



Powerful 2.1-Channel Sound for Your Home Cinema

- Breathtaking experience** – 2.1-channel soundbar system with wireless subwoofer and 200W (RMS) power output
- Elegant match** – designed to be a perfect fit with Panasonic TVs of 40 inches or larger
- Easy streaming** – simply pair up with your smartphone and enjoy your favourite music via Bluetooth®
- Fast connectivity** – hook up any compatible device via the optical digital audio input



HTB18

SC-HTB18 ●



High-Quality 2.1-Channel Sound in a Slim Design

- Transform your TV sound** – enjoy impressive 120 Watts (RMS) of power output and deep bass from the wireless subwoofer
- Stylish design** – subtle Delta Form Design makes for an attractive living room appearance
- Wireless music streaming** – stream your music in high quality thanks to built-in Bluetooth® capability
- Convenient connectivity** – connect to other AV devices via 1x optical and 1x AUX input ports



HTB8

SC-HTB8 ●



Small in Size with Big 2-Channel Sound

- Compact soundbar** – enjoy stereo sound with 80 Watts (RMS) of output power
- Fast connectivity** – hook up to any compatible device via the optical digital audio input slot
- Wireless music streaming** – stream your music in high quality thanks to built-in Bluetooth® capability
- Perfect size** – fits best under TVs ranging in size from 32" to 42" diagonal



THE SOUND OF MUSIC

ALL
Connected Audio



PMX150

SC-PMX150 ●



Hi-Fi Music System with Superb Music Quality

- High-resolution sound** – Hi-Fi system delivering excellent sound quality, also compatible with ALL Connected Audio compatible speakers
- Powerful audio** – high quality 3-way speaker using a 100kHz super sonic tweeter and boasting 120 W power output
- High-end sound technologies** – implemented virtual battery operation, LincsD-Amp 3rd generation, Variable Gain Digital Amp and Power Conditioner
- Ultimate flexibility** – enjoy popular online streaming services such as Spotify, TuneIn, Napster and more
- Great diversity** – enjoy your CDs, favourite music or DAB+ digital radio* via Bluetooth®, AirPlay, DLNA, USB or Stereo Cinch

*Functionality varies from country to country.



PMX80

SC-PMX80 ● ●



Hi-Fi Music System with High-Res Music Playback

- Hi-Fi system** – delivers impressive sound in high-resolution thanks to new LincsD-Amp technology
- Rich audio** – revel in the music through high-quality 3-way speakers delivering 120 Watts (RMS) of power output
- Easy connectivity** – effortlessly pair the system with your smartphone thanks to NFC and Bluetooth® music streaming
- Great diversity** – enjoy your CDs, favourite music or DAB+ digital radio* via Bluetooth®, AirPlay, DLNA, USB or Stereo Cinch

*Functionality varies from country to country.



PM600

SC-PM600 ● ●



Hi-Fi Music System Delivers Impressive Sound

- Outstanding sound** – enjoy a clear sound experience with 40 Watts (RMS) of output power and 2-way Bass Reflex speakers
- Wireless connectivity** – stream music from any compatible device to the system easily via Bluetooth®
- Flexibility** – play your music stored on a USB storage device easily and effortlessly thanks to the integrated USB port
- Highly diverse** – includes a built-in CD player and radio featuring RDS station/music information



PM250

SC-PM250 ● ●



Hi-Fi Music System Essential for the Home

- Compact design** – perfect for virtually any room thanks to a built-in CD player, radio and 20 Watts (RMS) of output power
- Many options** – enjoy any number of stations and programmes in clear quality thanks to digital (DAB+)* and UKW radio
- Wireless connectivity** – stream music from any compatible device to the system easily via Bluetooth®
- Flexibility** – play your music stored on a USB storage device easily and effortlessly thanks to the integrated USB port

*Functionality for PM250D only



HC400/402

SC-HC400 ● ●
SC-HC402 ● ●



HC402



HC400

Compact Music System with Slim and Stylish Design for Any Room

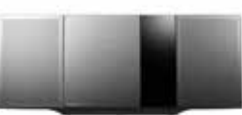
Elegant, slim design – wall-mountable CD system with fabric mesh that blends into any interior
Easy connectivity – simply pair the system with your smartphone thanks to Bluetooth® music streaming
More listening pleasure – play your music from a USB device or listen to FM/AM/digital DAB+* radio services
Clear, dynamic listening – thanks to the Lincsd-Amp digital amplifier and Twisted acoustic port

*SC-HC402 only.



HC395/397

SC-HC395 ● ● ●
SC-HC397 ● ● ●



HC395



HC397

Compact Music System with Elegant Fully Flat Design

Elegant, slim design – CD system that blends into any interior and offers 40 Watts (RMS) of quality power output
Easy connectivity – simply pair the system with your smartphone thanks to NFC and Bluetooth® music streaming
More listening pleasure – play your music on a USB device or listen to the radio offering FM/AM and digital DAB+*
Clear, dynamic listening – thanks to the Lincsd-Amp digital amplifier and Nano Bamboo speaker

*SC-HC397 only.



HC300/302

SC-HC300 ● ●
SC-HC302 ● ●



HC300



HC300

Sleek, Powerful, Bass-rich Way of Enjoying your CD, USB or Bluetooth® Music

Stylish design – slimline, wall-mountable system featuring an integrated CD player and 20W (RMS) of power output
Easy wireless connectivity – stream music easily from your smartphone or tablet thanks to NFC and Bluetooth® support
Wide source support – you can also play music from USB devices, the AUX input or the RDS-capable radio*¹
More than just a Hi-Fi – the system's distortion-free, bass-rich sound is backed up by a built-in clock/timer

*SC-HC302 only. / *¹E6 only.



HC200

SC-HC200 ● ○



Enjoy your CD, USB and Bluetooth® Music in Style

Stylish design – slimline system featuring an integrated CD player and 20W (RMS) of power output
Easy connectivity – stream music easily from your smartphone or tablet thanks to Bluetooth®
Pure, distortion-free sound – thanks to two 8cm full-range speakers, the digital amplifier and Bluetooth remastering processing
Wide source support – you can also play music from USB devices or the RDS-capable radio*

*Continental version only.



D100

RF-D100BT ● ●



Authentic Radio with Premium Sound

Timeless design – a beautifully authentic, classic style fashioned from luxurious aluminium and wood
Rich sound – 2.5-inch drivers mounted in rigid wooden enclosures with a bass reflex structure produce a beautifully rounded, robust tone
Wide source support – Bluetooth®, FM Radio with RDS, DAB radio, auxiliary line input
Easy to use – simple twin rotating knob controls with a dot matrix display ...or use the memory button



D20

RF-D20 ● ○



DAB+ Portable Radio with Bluetooth®

Modern radio reception – excellent digital quality with DAB/DAB+
Convenient – personalise your listening with a five channel memory
Easy connectivity – Bluetooth® music streaming from smartphone
Splashproof – perfect for by the pool or on the beach



D10

RF-D10 ● ○



Compact and Stylish DAB/DAB+ Portable Radio

Modern radio reception – excellent digital quality with DAB/DAB+
Convenient, easy operation – customise with ten channel memory
High-quality sound – powerful 10cm speaker and 5 equaliser presets
Easy viewing – backlight LCD for lighting conditions



ACE OF BASS

UA3/UA4

SC-UA3 ○
SC-UA4 ○



Compact Powerful Party Music System

Ultra powerful sound – your beats sound great from large 16cm subwoofers with 300W (RMS) output power
One box style – make the best out of any party thanks to the horizontal style and carry handle design
Powerful bass – get a clear, powerful sound even at a high volume thanks to two low-frequency woofer units
Party fun – versatility of the Local Preset Equaliser and wide-ranging media connectivity that includes CD & USB
Transportable – easy to carry thanks to the handle

*SC-UA4 only.



THE WAY TO GROOVE



EASY OPERATION

Operate your SC-UA7 with the Panasonic MAX Juke App remotely. You can easily handle basic operations and are even able to create a shared playlist with friends.

ELEGANCE MEETS POWERFUL SOUND

The Urban Audio System SC-UA7 combines an elegant, minimal design with dynamic sound. The one-box speaker layout has been designed carefully to deliver an amazingly dynamic and wide directional 180 degree sound. Additionally, the AIRQUAKE Bass ensures perfect sound for any party.



UA7

SC-UA7 ●



Elegant Urban Audio System for Ultimate Party Fun

Powerful sound – fill the whole room with powerful sound thanks to the multidirectional positioning of its 4 woofers and 4 tweeters
Stylish design – the hexagonal box design saves space while producing a dynamic and widely dispersed sound
Powerful system – enjoy loud party music from dual 16cm subwoofers with 1700W (RMS) power output and AIRQUAKE Bass
Enhance TV sound – with the newly added Voice Expansive Mode, the sound seems to spread naturally from the TV screen
Wide compatibility – Bluetooth®, FM Radio and 2x USB built-in



UX102

UX100/102

SC-UX100 ●
SC-UX102 ●



UX100

Compact High-Power Music System

Outstanding sound – your beats sound great from large 13cm subwoofers with 300W (RMS) output power
Wireless connectivity – enjoy music wirelessly in your room via Bluetooth®
Fun atmosphere – enjoy DJ Effects with easy smartphone control
Party time – request songs from USB using the MAX Jukebox App
Powerful and impressive design – enhanced surface texture with hairline and matte finish create a simple but luxurious design

*SC-UX102 only.



PARTY ENTERTAINERS



MAX3500

SC-MAX3500 ○

MAX System Blasting out 2400W of Power for Any Party

- Colossal power** – get the party rocking with 2400W (RMS) of bass-rich sound
- Source flexibility** – play music from CD, two USB ports, or Bluetooth®
- Huge built-in memory** – store music received via CD, Bluetooth®, or USB onto 4GB of built-in memory
- Be the ultimate DJ** – create a true club atmosphere with DJ Jukebox (Crossfade/Mix)*, Jukebox Request, DJ Sample and DJ Effect features
- The heart of the party** – take things to another level with versatile exciting light effects

*Available with the MAX Juke App through Bluetooth® Wireless Technology. To use MAX Juke App, OS Version 4.1 or later, Android™ device compatible. App is available on Google Play™.



CMAX5

SC-CMAX5 ●



Transportable MAX System with Big Sound from a Compact Size

- Powerful system** – compact in size but big on party with 1000W (RMS) output power and full portability
- Highly flexible** – your music via Bluetooth®, 2x USB (Rec/Play), 2x audio input or 1x audio output
- Pure entertainment** – have fun with the karaoke function via two microphone inputs (1x for guitar connection)
- Party atmosphere** – fun is yours with the 25cm subwoofer featuring D.Bass Beat and six-colour party lighting



AKX710

SC-AKX710 ●



Music System with Robust AIRQUAKE Bass

- Power trip** – get the party rocking with 2000W (RMS) of bass-rich sound
- Be the ultimate DJ** – create a true club atmosphere with DJ Jukebox (Crossfade/Mix)*, Jukebox Request, DJ Sample and DJ Effect features
- Huge built-in memory** – Store music received via CD, Bluetooth®, or USB onto 4GB of built-in memory
- Airquake Bass** – a huge 20cm woofer delivers low frequencies galore without compromising the rest of the sound

*Available with the MAX Juke App through Bluetooth® Wireless Technology. To use MAX Juke App, OS Version 4.1 or later, Android™ device compatible. App is available on Google Play™.



AKX200

SC-AKX200 ●



Compact Music System with Bold Design

- Compact design, big sound** – don't be fooled by its space-saving looks; it can pump out 400W (RMS) of audio power
- Bass galore** – a large 16cm woofer ensures that the sound is as clear as it is powerful
- Songs on request** – the MAX Jukebox app lets you request songs you want to play, or set up playlists
- Flexible friend** – enjoy your favourite tunes via CD, Bluetooth®, 2x USB, AUX-IN, with FM/AM radio tuner



BLUETOOTH® LIFESTYLE



YOUR COLOUR. YOUR SOUND. YOUR STYLE.



HTX80B

RP-HTX80B ●●●●●

Street Fashion Wireless Headphones

Fashionable and fun to wear – unisex design and single colours for any fashion style
Vibrant sound delivered wirelessly – sharp, dynamic bass with Acoustic Bass Control
Never run out of music – 24 hours of playback with Bluetooth® and 150 min playback with 15 min Quick Charge

It is possible to activate Siri or other voice functions using button on headphones. *Siri is a trademark of Apple Inc.



PREMIUM SOUND



HD10

RP-HD10 ●

Premium Headphones Offering Full Listening Pleasure

High-resolution sound – handles 4Hz–50kHz frequencies with multi-layer film diaphragm
Premium build – 50mm HD driver unit produces low bass sounds and extraordinarily clear treble
Optimum fit – ergonomic 3D-designed ear pads and horizontal slide adjustment



INTRO

HD6M

RP-HD6M ●

Experience Genuine High-Res Audio for Hours

Dynamic sound – hear even finest details with 4Hz to 40Hz frequency range and antivibration frame
Advanced built – 40mm HD driver unit produces low bass sounds and extraordinarily clear trebles
Greater comfort – enjoy extended listening pleasure thanks to horizontal slide adjustment



TV

VIDEO

HDE10

RP-HDE10 ●

Earphones for Hi-Fi Lovers with Sound-Enhancing Tech

Expansive sound – get subtle details with 4Hz–50kHz frequency range, Dual Axial Drive and 11.5mm driver unit
Ingenious design – aluminium housing, oxygen-free copper cord and horn-type earpiece for immersive listening
Ready for everything – easy portability with supplied carrying case, with a mic and switch for mobile call control



AUDIO

ICONS

HDE5M

RP-HDE5M ●

Premium High-Res in Full Aluminium Style

Premium sound – handles 5Hz to 45kHz frequencies with extra control magnet and multi-layer film diaphragm
Elegant design – full metal finish, compact and stylish design
Comfortable and stable fit – easy portability with supplied carry case, plus mic and switch for mobile call control



SPECS

HDE3M

RP-HDE3M ●

Premium Earphones with High-Res Experience

Premium sound – handles frequencies from 5Hz to 40kHz with extra control magnet
Ease of use – attach to any device with the long 1.2m cable and microphone
Stylish design – aluminium compact body parts and stylish design





SPORTS

BTS55

RP-BTS55 ● ○

Iconic Sports Earphones in Comfortable, Stylish Design

Perfect for sports – enjoy a secure, comfortable fit with water-resistant housing
Premium sound – with a 9mm dynamic driver and aptX® compatibility
AIR-Light Fit Design – sleek form with 3D Flex Sport clips and Blue EDGE LEDs



BTS35

RP-BTS35 ● ○ ● ●

Fashionable and Comfortable Sports Earphones

Perfect for sports – enjoy a secure, comfortable fit with water-resistant housing
High-quality sound – with an advanced 9mm driver unit
AIR-Light Fit Design – sleek form with 3D Flex Sport clips

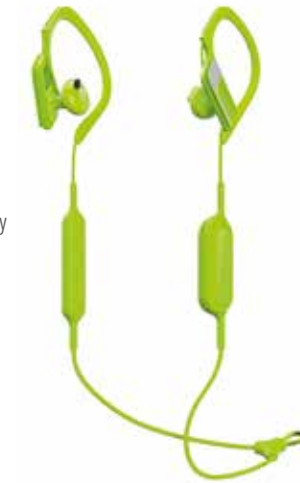


BTS10

RP-BTS10 ● ○ ● ●

Sport Bluetooth® Earphones with Secure Fit

Rich bass – thanks to an advanced 14.3mm driver unit
Perfect for sports – enjoy a super lightweight, comfortable fit with flexible Ear Clips and quick charge
Wireless freedom – enjoy music anywhere thanks to Bluetooth® functionality and 4 hours 20 minutes of battery



HS35M

RP-HS35M ● ○ ● ●

Essential Sports Earphones for Sound on the Run

Portability – extremely lightweight with sweat/water-resistant design
High-quality sound – Inner Temple Cord ensures clearer music
Optimum fit – adjustable hanger for more comfortable listening



YOUR COLOUR.
YOUR SOUND.
YOUR STYLE.

ENTRY



BTD5

RP-BTD5 ●

Cutting-Edge Bluetooth® Stereo



HF400B

RP-HF400B ● ○

Powerful Bluetooth® Sound



HF500M

RP-HF500M ● ○

Powerful, Clear Sound



HF300M

RP-HF300M ● ○ ● ●

Sound that Fits Your Style



HF100M

RP-HF100M ● ○ ● ●

Sound that Fits Your Style



NJ300B

RP-NJ300B ● ○ ●

Small and Light



HJX6M

RP-HJX6M ●

Big Music from a Small Package



TCM360

RP-TCM360 ● ○ ●

Pure Sound in Round Edge Design



TCM115

RP-TCM115 ● ○ ● ●

Clear Smartphone Music



TCM55

RP-TCM55 ● ○

Smart-Design for Your Tunes



TECHNOLOGY COMPARISON

4K ULTRA HD™ Blu-ray		UHD BLU-RAY™ DISC PLAYERS			BLU-RAY™ DISC PLAYERS			UHD BLU-RAY™ DISC RECORDERS			BLU-RAY™ DISC RECORDERS	
		UB820	UB420	UB330/320	BDT380/81 BDT280/81 BDT180/81	BDT167 BDT168	BD84	UBS90 UBS80 UBS70	UBC90 UBC80 UBC70 UBC86	BCT84 BCT76	8WT850 8WT745 8WT640	
HIGH-QUALITY PICTURE & SOUND	HCX Processor											
	Ultra HD Blu-Ray											
	Ultra HD Premium											
	HDR Optimizer											
	4K Upscaling											
	4K Networking											
	High Res Sound											
EASY OPERATION	HDMI CEC											
	Remote Recording											
	Keyword Recording											
	TV Anywhere											
SMART NETWORKING	Internet Apps											
	USB											
	HDMI™											
	Wireless LAN											
	Receiver											
	Triple HD Tuner											
	Twin HD Tuner											
	TV > IP											
	Common Interface Plus											

*1 For 8WT850 only / *2 For UBS90 only / *3 For UBC90 only / *4 For UBS80/70 only / *5 For UBC80/70 only

HI-FI AUDIO SYSTEMS										SOUNDBARS		
		GA10	HC2020	HC400 HC402	HC300 HC302	HC200	PMX150 PMX152	PMX80 PMX82	HTB250	HTB200	HTB688	
GENERAL	Panasonic Streaming App											
	Total Output Power											
	Special Features											
SOUND FEATURES	Digital Amp Solution (3rd generation)											
	Bass System											
	FLAC											
	Wall Mount Mode											
SMART NETWORKING	Wireless LAN											
	Bluetooth®											
	USB											
	Google Compatibility											
TUNER	RDS**											
	DAB Plus											
	FM											

LOGO & ICON GLOSSARY: TV

TECHNOLOGY

4K PRO HDR / 4K HDR: High-end Panasonic 4K PRO TVs are designed from the bottom up and tuned in Hollywood to deliver picture quality accurate to the filmmaker's original intentions. Equipped with both cutting-edge Panasonic 4K Studio Colour HCX^{*} Processor with professional-quality colour management technology and the OLED next-generation panel, 4K PRO TVs capture every nuance and detail of the original film.

Ultra HD: The Ultra HD (UHD) logo is the official industry logo developed by DIGITAL EUROPE. TVs featuring this official logo must meet UHD requirements, like all 4K UHD Panasonic TVs. They are proven to provide true Ultra HD picture quality and connectivity in line with the high standards.

Full HD: Full High Definition (HD) offers an amazing resolution of 1,920 x 1,080 – in contrast, PAL offers 720 x 576 and NTSC 720 x 480. This means you can enjoy Full HD programmes and films with sharp, dynamic images and brilliant colour.

Master HDR OLED: Panasonic's OLED panels are dubbed 'Master' panels as they are able to produce deeper silky blacks and we are able to control them with more granularity than ever before. This means that thanks to Panasonic's renowned picture quality craftsmanship, together with input from a Hollywood Colourist, we are able to tune them to the utmost of their potential.

HDR10+: New HDR format with dynamic metadata adds extra scene by scene information to help TVs deliver the best true to life pictures.

LED TV: Panasonic panel featuring LED backlight technology and a slim chassis with narrow bezel. The panel provides excellent motion picture quality while consuming less energy, complemented by a design that delivers style to any interior.

The UHDA's **ULTRA HD PREMIUM™** logo identifies products and services that meet or exceed specified performance levels for resolution (4K – 4 times sharper than HD), High Dynamic Range (HDR – brilliant brights, deepest darks), Wide Colour Spectrum (more lifelike colours), and recommendations for immersive audio (multi-dimensional sound) among other performance advances, which enable certified televisions, content and other devices to fully replicate the richness of life's sights and sounds and allow viewers to more accurately experience the content creator's vision. The logo enables consumers to identify TVs, content and other devices that can deliver the high standard for performance and immersive experience set by the UHDA.

PICTURE QUALITY

Cinema Display: Our new Cinema Display is designed to ensure that you see exactly what the filmmakers intended. They combine wide cinematic colours, local dimming to deliver inky blacks alongside subtle gradations, and outstanding levels of brightness.

Picture Tuned in Hollywood: Panasonic's high-end 4K PRO HDR TVs are designed from the bottom up and tuned in Hollywood to deliver picture quality true to the filmmakers' vision. Equipped with Panasonic's cutting-edge Studio Colour HCX^{*} processor with professional 3D look-up table colour management technology and the OLED next-generation panel, 4K PRO HDR TVs capture every nuance and detail of the original film.

THX 4K Display: With Panasonic panels featuring THX 4K Display, you can be sure of experiencing the original image quality of a movie just as the filmmakers intended – in spectacular 4K. These Panasonic TVs have cleared the high standards for 4K set by the THX® Certified Display Programme.

Sport Mode/Game Mode: Picture presets optimised for a premium sport and gaming picture performance. Sport mode provides realistic stadium sound and colours while Game mode reduces the input lag for ultimate gaming experience.

Local Dimming: To ensure robust blacks and delicate gradation with any film genre, a range of Panasonic TVs feature Local Dimming. Rich gradation is achieved by matching the backlight control and optimising the brightness level to each area. This enables deeper black expression and displays even tiny details in dark scenes with crisp clarity.

Adaptive Backlight Dimming: Thanks to Adaptive Backlight Dimming you can enjoy crisp dark scenes and high-contrast pictures with a constantly optimised backlight.

Bright Panel: Everything from colour vibrancy and naturalism to sharpness and clarity benefits from extra brightness. So Bright Panel technology injects more brightness into pictures by putting high-efficiency LED lights behind an exceptionally transmissive LCD panel.

Super Bright Panel: Even when the sunlight is fully shining through your living room window, you will enjoy a clear picture on your Panasonic TV screen, featuring Super Bright Panel technology. This high-transmittance panel combines with a high-efficiency LED backlight to produce sharp, crisp images and HDR.

Studio Colour HCX^{*} Processor: Provides Hollywood-tuned picture processing for unprecedented 'as the director intended' accuracy. Built on colour, black level and brightness know-how learned from our reference-quality plasma TVs and professional broadcast equipment, the system has also been tuned by a Hollywood colourist to deliver picture quality true to the filmmakers' vision picture quality true to the film-makers' vision.

Multi HDR Support: Panasonic TVs support now multiple HDR formats, such as HDR10 the standard HDR format for films and UHD Blu-ray discs, and now also Hybrid Log Gamma, the HDR format for broadcast TV developed by the BBC and Japan's NHK.

Up to 2200Hz BMR^{2} 4K IFC:** Enjoy extremely smooth fast-motion 4K images thanks to the high-speed panel and Intelligent Frame Creation paired with advanced backlight scanning technology.

Up to 600Hz BMR: With a Panasonic TV featuring up to 600Hz (BMR), you are assured of smooth, jitter-free reproduction of fast motion images. This drive technology combines advanced backlight technology with enhanced, high-speed drive performance to provide outstanding sports or action movies.

3D: If you want to enjoy hassle-free 3D films at home, then Panasonic has the ideal solution for you. Opt for a high-grade LED TV featuring 3D rendering, and you'll get brilliant 3D entertainment with HD image quality.

ISF CalMAN: The FZ950 and FZ800 support Imaging Science Foundation (ISF) calibration settings and new calibration points at 5 per cent and – in an industry first – just 2.5 per cent luminance, providing the greatest control to users where it is most needed, just above complete blackness in low-lit scenes. These new industry-first calibration points will also be supported by Portrait Display's® CalMAN® software with AutoCal functionality. Panasonic FZ950 and FZ800 are now CalMAN Ready.™

Wide Colour Spectrum: By using special Wide Colour Phosphor Technology or OLED panel capable of producing a wider colour range, the spectrum of colour covers more than 90% of DCI standards. Wide Colour Spectrum TVs / Studio Master Colour TVs give you a more subtle, naturally toned colour palette which, unlike most LCD TVs, still looks authentic in any scene.

Absolute Black: To deliver true depth and gradation, this self-illuminating method illuminates each pixel individually, enabling the pixels to control their own luminance to reproduce absolute black.

^{*} HCX stands for Hollywood Cinema Experience / ^{**2} BMR: Backlight Motion Rate

Ultimate Contrast: TVs featuring Ultimate Contrast deliver bright images and impressive black levels. To achieve this, it combines innovative direct LED backlight technology with Local Dimming or a cutting-edge OLED panel and intelligent rendering drivers.

Supreme Contrast: High-end Panasonic TVs feature Supreme Contrast, which delivers spectacular levels of deep black with bright, crisp images. It does this by combining cutting-edge Panasonic panel technology with innovative LED backlight featuring Local Dimming.

Brilliant Contrast: To give you great contrast with bright images, deep black levels and low power consumption, many Panasonic TVs feature Brilliant Contrast. It combines innovative panel and LED backlight technologies for an immersive home cinema viewing experience.

High Contrast: Panasonic TVs with High Contrast deliver a genuine home cinema atmosphere. Deep blacks and bright whites make for more dynamic images, with great colour and crisp picture quality.

4K Pure Direct / Pure Direct: During signal transmission to the TV via HDMI, colour information is slightly compromised, resulting in less-than-ideal colour shading and gradation. With Pure Direct, all colour information and full resolution is transmitted to the TV so that the picture retains its crisp, rich colours as intended.

SMART NETWORKING

Media Player 2.0: The renowned Media Player is now available with Panasonic TVs. It lets you easily enjoy your personal multimedia entertainment stored on any USB memory device. The Easy List View and Mix Folder functions make the new 2.0 version even more user friendly. In addition, HDR content is recognized automatically so you don't need to make any changes in the menu.

Web Browser: The Web Browser lets you easily browse the Internet on the TV and enjoy user-friendly features. On Panasonic 4K TVs, you can also enjoy online content in Ultra HD 4K resolution, perfect for viewing maps on screen.

Easy Mirroring: Transfer photos, videos and more from your smartphone, tablet or computer display straight to the large Panasonic TV screen. Built-in Wi-Fi capability lets you easily and quickly connect your Android-based⁴ mobile devices to the TV.

USB HDD Recording: Thanks to this function, available with many new cutting-edge Panasonic TVs, you can hook up an external USB hard disk to record TV shows or films in excellent quality. It also supports Timer Recording, Direct TV Recording and Pause Live TV.

Quattro Tuner: Four Different Types of TV Reception - All in One. Enjoy satellite, cable and TV->IP content in addition to digital terrestrial broadcasting thanks to innovative built-in tuners.

In-house TV Streaming Server & Client^{*3}: You now have the freedom to position your TV anywhere in your home. Simply wirelessly stream broadcasts from a main TV, which acts as a server, to any other TVs, tablets or smartphones in any room (via your home network).

Internet Apps: Cloud-based, the new Internet Apps functionality gives you instant and easy access to the Internet, as well as a wide range of apps, Video on Demand services, games and more.

Wireless LAN built-in: Many Panasonic TVs can be wirelessly connected to your home network. So you can take advantage of Internet Apps and DLNA networking throughout your home.

IP Home Networking: Panasonic TVs with this feature can be controlled by the Home Automation System via your IP home network, allowing you to control the TV via the Home Automation System for easy operation.

Panasonic Bluetooth® Audio Link: Play music wirelessly from connected Bluetooth® devices. Thanks to the Audio Link feature you can connect BT compatible headphones or playback your favourite music on your TV^{*5} from your mobile device via Bluetooth®.

EASY OPERATION

Swipe & Share: Unleash the full potential of your smartphone with the Panasonic TV Remote 2 app and Swipe & Share functions. Share and stream personal content like pictures, movies and music to your Panasonic TV simply from Android™ or Apple-based smartphones.

Quad-Core PRO: This ultra-powerful processor lets you enjoy smart features at high-speed with smooth interaction. Quad-Core PRO is extra efficient, as the picture is processed separately from the features. So you can easily switch between multiple apps and Web pages seamlessly without any lag time.

Vreal Smart PRO: A dedicated multimedia engine, advanced Vreal Smart PRO ensures fast processing of all your digital networking as well as high picture quality. It is the powerhouse for a full entertainment experience, providing added smart features for more versatile viewing.

TV Anywhere^{*3}: Enjoy your favourite multimedia content wherever you are. The Panasonic TV streams live broadcasts or recorded content stored on a USB HDD to your mobile device. (Panasonic Media Center App – free download available for iOS and Android™ devices.)

Panasonic TV Remote 2 app: With this app, it is easy and fun to share – simply swap multimedia or websites from your smartphone's display to the TV screen and vice versa. This newly enhanced Panasonic app goes a step further, letting you swipe and store your media from your smartphone to the TV.

my Home Screen 3.0: The new streamlined My Home Screen smart TV system helps you find your favourite content in just seconds – be it on live TV, a streaming app, or another device on your home network. You can create your own customised, graphically rich landing page, and even map your most used app to a dedicated remote control button.

Touch Pad Remote: Several new Panasonic TVs come with a smart Touch Pad Remote. Intuitively shaped with a spacious touch pad, it lets you pin your favourite apps and channels to your my Home Screen 2.0 with a touch of the 'my' button.

Voice Assistant: With Voice Assistant, voice operation is virtually just like talking. It enables you to easily speak out keyword searches and even control the TV too.

Voice Guidance: Panasonic TVs with Voice Guidance will verbally inform you of programme information, recording and other settings, and more with clear pronunciation and tone. It provides easy-to-understand operating procedures for people with impaired vision or for elderly people.

^{*3} Not in the UK / ^{**4} Ver. 4.2 and above and Miracast™ certified / ^{**5} FX700 series and above

LOGO & ICON GLOSSARY: VIDEO / AUDIO

TECHNOLOGY

ULTRAHD™ PREMIUM **Ultra HD Premium:** Is a certification program based on the stringent technical specifications standardized by the Ultra HD Alliance.

4K Networking **4K Networking:** Photographs or videos recorded in 4K resolution can be played through to your 4K television by devices with this logo.

Blu-ray 3D™ **Blu-ray 3D™:** Enjoy your favourite blockbusters in stunning 3D at home. Full HD 3D Blu-ray Disc™ Playback brilliantly reproduces images that leap off the screen, with enhanced depth, lustre and texture.

HCX PROCESSOR **HCX Processor:** Advanced picture processing that includes support for the premium HDR10+ format, and an HDR Optimizer to always provide the best HDR pictures.

HDR OPTIMIZER **HDR Optimizer:** Unique Panasonic feature which adjusts the output picture to optimise it to your TV's capabilities. It improves the details in bright areas of the picture.

4K High Precision Chroma Processor **High Precision Chroma Processor:** The 4K High Precision Chroma Processor expands the usual colour reproduction capabilities of Ultra HD Blu-ray™ to deliver much more nuanced and natural pictures.

4K Direct Chroma Upscaling **Direct Chroma Upscaling:** By upconverting Full HD chrominance and luminance signals directly into 4K signals, this technology achieves higher-precision image processing.

4K Ultra HD Upscaling **4K Ultra HD Upscaling:** This digital video format boosts conventional Full HD media to the next generation of TV resolution, which is four times higher than Full HD – delivering breathtaking image and sound quality.

ULTRA HD Blu-ray™ **ULTRA HD Blu-ray™:** New standard that raises the maximum values for the three picture quality components resolution, luminance and colour reproduction.

HDR10+ **HDR10+:** New HDR format with dynamic metadata adds extra scene by scene information to help TVs deliver the best true to life pictures.

SMART NETWORKING

DAB+ **DAB+:** DAB Plus is latest standard for digital radio broadcasting available in several countries in Europe. Products with this feature offer an outstanding quality for listening to your favourite radio station among a wide choice of channels.

Wi-Fi Built-in **Wi-Fi Built-in:** Many Panasonic video products can be wirelessly connected to your home network. So you can take advantage of Internet Apps and DLNA networking throughout your home.

Web Browser **Web Browser:** As the name implies, the Web Browser lets you easily browse the Internet on the TV and enjoy user-friendly features. And with Web Browser 4K, you can enjoy online content in high 4K resolution, perfect for viewing maps on screen.

Panasonic Music Streaming App **Panasonic Music Streaming App:** Available for all models that feature Bluetooth®, AirPlay or DLNA, this app controls wireless music streaming from any device, be it smartphone, tablet or PC, and recognises compatible wireless speakers.

AirPlay **AirPlay®:** Developed by Apple especially for Apple devices, AirPlay technology lets you stream your favourite music wirelessly from your iPhone, iPad and iPod Touch directly to AirPlay-enabled devices in the same Wi-Fi network.

Digital Audio In **Digital Audio In:** The Digital Audio In offers the possibility to connect other sources with digital connection, such as Blu-ray players, TVs, game consoles, etc.

Chromecast built-in **Chromecast built-in :** Stream audio through mobile and web apps to your Panasonic device.

Google Assistant built-in **Google Assistant built-in:** Access your product's features and content just by talking to it. No external devices required.

Works with the Google Assistant **Works with the Google Assistant:** Can connect with external Google Assistant devices, enabling voice control of your Panasonic product.

NFC™ (Near Field Communication) **NFC™ (Near Field Communication):** Enables easy pairing of the NFC-capable speaker and smartphone via Bluetooth® – at a single touch of the smart device – making troublesome settings a thing of the past.

HDMI x2 **Twin HDMI:** With Twin HDMI™, one signal output is exclusively dedicated to audio so that your home cinema media sounds incredible.

Wi-Fi CERTIFIED **Wi-Fi Certified:** Panasonic products that are Wi-Fi Certified have been specially certified by the Wi-Fi Alliance for their ability to wirelessly connect to your home network.

Internet Apps **Internet Apps:** Cloud-based, the new Internet Apps functionality gives you instant and easy access to the Internet as well as a wide range of apps, Video on Demand services, games and more.

Bluetooth **Bluetooth®:** Bluetooth® is a wireless technology standard for exchanging data over short distances from fixed and mobile devices. This means you can connect any Panasonic Bluetooth®-enabled product with other Bluetooth®-enabled devices without the cable clutter – and in high-quality.

DLNA CERTIFIED **DLNA:** Access videos, pictures and music stored in other rooms and enjoy content throughout the home by connecting compatible devices via DLNA™. The Panasonic TV Remote 2 app lets you transfer content from your iPhone / Android™ tablet or smartphone to your TV, or access your DLNA server from mobile devices.

2x CI+ **2x CI+:** Common Interface Plus (CI+) is a technical specification that adds additional security and features to the proven DVB Common Interface (CI) Standard, which gives CI+-compatible consumer electronic devices access to Pay TV Services via plug-in CI+ modules. Products with this feature offer two slots.

TV>IP SERVER **TV>IP:** This new technology using SAT>IP can flexibly distribute High and Standard Definition TV programmes throughout your home. SAT>IP allows satellite TV distribution by using your existing data network and enables the displaying and viewing of the signals on any multimedia IP device equipped with suitable software.

HIGH-QUALITY SOUND

FLAC **FLAC:** FLAC stands for Free Lossless Audio Codec and is a High Definition audio compression technology without any loss in quality. Panasonic products with FLAC compatibility enable you to listen to compressed music files without compromising on high audio quality.

3.1ch System **3.1ch System:** In addition to the usual right and left front channels and the sub-woofer channel, the systems with 3.1 additionally incorporate a center speaker for even better clarity for voices in the movies.

High Res Sound™ **High Res Sound™:** A clear listening experience is yours with High Res Sound, available for Panasonic audio products which support a playback frequency range of at least 48kHz.

XBS Master **XBS Master:** Short for Extra Bass System, XBS Master is a unique Panasonic, high-quality sound technology for even more powerful bass sound without distortion.

LincsD-Amp™ **LincsD-Amp (3rd generation):** Based on MASH noise-shaping technology, LincsD-Amp™ markedly reduces jitter and sound distortion that can affect audio clarity – producing pure, brilliant sound.

EASY OPERATION

VIERA Link **VIERA Link:** This feature allows the control of other Panasonic home AV devices via the television remote control. By pressing the VIERA Link button on the television remote, it is possible to turn on and navigate the menus of other VIERA Link equipment. IT requires an HDMI connection between the television and the external source.

Remote Recording **Remote Recording:** Functionality to set up recordings using your smartphone, tablet or PC. Just browse channel listings and select shows to record on your second screen without interrupting your main TV viewing.

TV Anywhere **TV Anywhere:** This functionality sends recordings and live TV broadcasts over the Internet to smartphones or tablets outside the home.

SPECIAL FEATURES: URBAN AUDIO / HIGH POWER AUDIO SYSTEMS

DJ JukeBox **DJ JukeBox:** Interactive feature to record your music to the internal memory via Bluetooth® for personal use and also to select songs from the the internal memory or USB.

AIRQUAKE BASS **AIRQUAKE BASS:** Unique port and bass amplification technology that pushes sounds forward without losing the resonance of sounds generated from behind the woofer unit. This further amplifies the bass to produce extremely powerful sound.

DJ Sampler **DJ Sampler:** Feature that lets you add up different types of sample sounds to match the mood and music of each song.

D.BASS BEAT **D.Bass Beat:** Amplification of the beat for more powerful enjoyment, giving you rhythmical music at its best.

SPECIAL FEATURES: HEADPHONES

IPX4 **IPX4:** Protects from splashing water regardless the direction. Keeps rain and sweat out to keep the music loud and clear.

IPX5 **IPX5:** Protects from water jets no matter the direction. Easy to clean, just hold it under running water to remove dirt and sweat.

TECHNICAL SPECIFICATIONS

TENTATIVE

TV RANGE	EZ1000 Series		FZ950 Series		FZ800 Series		FX780 Series		FX740 Series		FX700 Series		FX600 Series		FS500 Series		FS400 Series		
Available screen sizes	77"		65" / 55"		65" / 55"		75" / 65" / 55" / 49"		65" / 55" / 49"		65" / 55" / 49"		65" / 55" / 49" / 43"		49" / 40" / 32" / 24"		40" / 32"		
PICTURE QUALITY	Panel	4K ULTRA HD / Master OLED HDR with Absolute Black Filter	4K ULTRA HD / Master OLED HDR with Absolute Black Filter	4K ULTRA HD / Master OLED HDR with Absolute Black Filter	4K ULTRA HD / Master OLED HDR with Absolute Black Filter	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	4K ULTRA HD LED LCD	
	Bright Panel	Ultra Bright Panel	Ultra Bright Panel	Ultra Bright Panel	Ultra Bright Panel	Super Bright Panel	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	Bright Panel Plus	
	Screen Resolution (W x H)	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	
	Panel Drive	OLED Superb Motion Drive	OLED Superb Motion Drive	OLED Superb Motion Drive	OLED Superb Motion Drive	OLED Superb Motion Drive	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	4K 1200Hz BMR IFC	
	Picture Mode	Dynamic / Normal / Cinema / True Cinema / THX 4K (Cinema, Bright Room) / Custom / Professional Photo / Professional1+2 (Isfccc)	Dynamic / Normal / Cinema / True Cinema / THX 4K (Cinema, Bright Room) / Custom / Professional Photo / Professional1+2 (Isfccc) / Sport / Game	Dynamic / Normal / Cinema / True Cinema / THX 4K (Cinema, Bright Room) / Custom / Professional Photo / Professional1+2 (Isfccc) / Sport / Game	Dynamic / Normal / Cinema / True Cinema / THX 4K (Cinema, Bright Room) / Custom / Professional Photo / Professional1+2 (Isfccc) / Sport / Game	Dynamic / Normal / Cinema / True Cinema / THX 4K (Cinema, Bright Room) / Custom / Professional Photo / Professional1+2 (Isfccc) / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game	Dynamic / Normal / Cinema / True Cinema / Custom / Sport / Game
	Multi HDR Support**15	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	HDR10+ (TBD), HDR10, HLG	
	HDR Brightness Enhancer (auto/manual)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Contrast	Ultimate Contrast	Ultimate Contrast	Ultimate Contrast	Ultimate Contrast	Ultimate Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	Supreme Contrast	
	Colour Space	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	Wide Colour Spectrum	
	HXC Processor	• (Studio Colour HXC Processor)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Local Dimming	—	—	—	—	—	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	Local Dimming Pro	
	Adaptive Backlight Dimming	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	THX Certified Display**2	•	• (TBD)	• (TBD)	• (TBD)	• (TBD)	—	—	—	—	—	—	—	—	—	—	—	—	
	isf Mode	•	•	•	•	•	—	—	—	—	—	—	—	—	—	—	—	—	
SOUND QUALITY	Surround	VR-Audio True Surround+, Tuned by Technics	Cinema Surround Pro, Tuned by Technics	Cinema Surround Pro	Cinema Surround Pro	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	Cinema Surround	
	Speaker Output	80W (20W x2 + 20W x2)	80W (20W x2 + 20W x2)	40W (10W x2 + 10W x2)	40W (10W x2 + 10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	20W (10W x2)	
	Sound Mode	Standard / Music / Ambience / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	Standard / Music / Speech / Stadium / User	
SMART FEATURES	my Home Screen	• (2.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	• (3.0)	
	Voice Assistant / Voice Guidance	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	
	EPG	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	On Screen Display Menu Languages	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	27 Languages**13	
	Twin HD Tuner / HD Triple Tuner (Incl. DVB-S)	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	• / •	
	Unique Processing Engine	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	Quad-Core Pro	
	Wireless LAN Built-in	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Panasonic Media Center (App)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	TV Anywhere**3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	In-House TV Streaming	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	• (Server / Client)	
	Panasonic TV Remote Apps	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Swipe & Share	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Smart Calibration	•	•	•	•	•	—	—	—	—	—	—	—	—	—	—	—	—	
	Internet Apps**16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Web Browser**4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Easy Mirroring	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	DLNA**5	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	• (DTCIP-IP / DMP / DMR / DMS)	
	Bluetooth**6	• (Keyboard / Mouse)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	• (Keyboard / Mouse / Audio Device)	
	Panasonic Bluetooth Audio Link**17	—	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	IP Home Control (Crestron / Control4)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Media Player	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	• (2.0)**14	
	Support Format	AVCHD / Progressive, AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVCHD / Progressive, AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVCHD / Progressive, AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVCHD / Progressive, AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	AVI / HEVC / MKV / WMV / MP4 / M4v / FLV / 3GPP / VRO / VOB / TS / PS, MP3 / AAC / WMA Pro / FLAC / Apple Lossless / WAV, JPEG	
	HbbTV	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Te																		

TECHNICAL SPECIFICATIONS

UHD BLU-RAY™ / BLU-RAY™ DISC PLAYERS		UB820	UB420/424	UB320/330	BDT380/381	BDT280/281 BDT180/181	BDT167/168	BD84
		4K HD Blu-ray™ Player	4K HD Blu-ray™ Player	4K HD Blu-ray™ Player	Blu-ray™ Player	Blu-ray™ Player	Blu-ray™ Player	Blu-ray™ Player
PLAYABLE DISCS	BD-ROM	Ultra HD Blu-ray / FULL HD 3D / BD-Video	•	•	•	• (FULL HD 3D / BD-Video only)	• (FULL HD 3D / BD-Video only)	• (BD-Video only)
	BD-RE / BD-RE DL (Ver.3)	BDAV / AVCHD / AVCHD 3D / JPEG / MP0	•	•	•	•	•	• (BDAV / AVCHD / JPEG only)
	BD-R (Ver.1.3) / BD-R DL (Ver.2)	BDAV / AVCHD / AVCHD 3D / MKV / JPEG / MP0	•	•	•	•	•	• (BDAV / AVCHD / MKV only)
	DVD	DVD-Video	•	•	•	•	•	•
	DVD-R** / DVD-R DL** / DVD-RW**	DVD-Video / DVD Video Recording	•	•	•	•	•	•
		AVCHD / MKV	• / •* (*DVD-R / DVD-R DL)	• / •* (*DVD-R / DVD-R DL)	• / •* (*DVD-R / DVD-R DL)	• / •* (*DVD-R / DVD-R DL)	• / •* (*DVD-R / DVD-R DL)	• / •* (*DVD-R / DVD-R DL)
		FLAC / WAV / ALAC / DSD / WMA / AAC / MP3 / AIFF	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL / AIFF T80)	• (DVD-R / DVD-R DL / AIFF T80)	• (DVD-R / DVD-R DL / AIFF T80)
		JPEG / MP0	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)	• (DVD-R / DVD-R DL)* *JPEG only
	+R** / +R DL** / +RW**	Video / AVCHD	•	•	•	•	•	•
	CD, CD-R / -RW	CD-DA / DTS-CD	•	•	•	•	•	•
AUDIO SYSTEM	MKV / JPEG / MP0	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW)**
	FLAC / WAV / ALAC / WMA / AAC / MP3 / AIFF	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW)	• (CD-R / -RW / AIFF T80)	• (CD-R / -RW / AIFF T80)	• (CD-R / -RW / AIFF T80)	• (CD-R / -RW / AIFF T80)
	Dolby Digital / TrueHD (Decode a. Bitstream Output**)	•	•	•	• Decode 5.1ch	• Decode 5.1ch	• Decode 5.1ch	• Decode 5.1ch
	Dolby Digital Plus (Decode a. Bitstream Output**)	•	•	•	• Decode 5.1ch	• Decode 5.1ch	• Decode 5.1ch	• Decode 5.1ch
	DTS-HD Master Audio / DTS-HD High Res. Audio (Decode a. Bitstream Output**)	•	•	•	•	•	•	•
	FLAC	• (Max. 192kHz/24bit)	• (Max. 192kHz/24bit)	• (Max. 192kHz/24bit)	• 192kHz/24bit (5.1ch)	• 192kHz/24bit (5.1ch)	• 192kHz/24bit (5.1ch)	• 192kHz/24bit (5.1ch)
	WAV	• (Max. 384kHz/32bit)	• (Max. 384kHz/32bit)	• (Max. 192kHz/32bit)	• 192kHz/32bit (2ch)	• 192kHz/32bit (2ch)	• 192kHz/32bit (2ch)	• 192kHz/32bit (2ch)
	ALAC	• (Max. 96kHz/32bit (7.1ch), 176.4/192kHz/32bit (5.1ch))	• (Max. 96kHz/32bit (7.1ch), 176.4/192kHz/32bit (5.1ch))	• (Max. 96kHz/32bit (7.1ch), 176.4/192kHz/32bit (5.1ch))	• 192kHz/24bit (2ch)	• 192kHz/24bit (2ch)	• 192kHz/24bit (2ch)	• 192kHz/24bit (2ch)
	DSD (DFF, DSF)	• (2.8MHz (2ch / 5.1ch), 5.6MHz (2ch), 11.2MHz(2ch))	• (2.8MHz (2ch / 5.1ch), 5.6MHz (2ch), 11.2MHz(2ch))	• (2.8MHz (2ch / 5.1ch), 5.6MHz (2ch))	• 2.8MHz (2ch / 5.1ch), 5.6MHz (2ch only)	• 2.8MHz (2ch / 5.1ch), 5.6MHz (2ch only)	• 2.8MHz (2ch / 5.1ch), 5.6MHz (2ch only)	• 2.8MHz (2ch / 5.1ch), 5.6MHz (2ch only)
	AIFF	• (Max. 192kHz/32bit)	• (Max. 192kHz/32bit)	• (Max. 192kHz/32bit)	T80	T80	T80	T80
SD MEMORY CARD	Slot (Compatible Media)	—	—	—	—	—	—	—
	Playback: JPEG / MP0 / AVCHD / AVCHD 3D / MP4	—	—	—	—	—	—	—
USB	Slot	• (2)	• (2)	• (1)	• (2)	• (1)	• (1)	• (1)
	Front	1 (USB 2.0 High Speed)	1 (USB 2.0 High Speed)	1 (USB 2.0 High Speed)	1 (USB 2.0 High Speed)	1 (USB 2.0 High Speed)	1 (USB 2.0 High Speed)	1 (USB 2.0 High Speed)
	Rear	1 (USB 3.0 Super Speed)	1 (USB 3.0 Super Speed)	•	1 (USB 2.0 High Speed)	•	•	•
	Playback	FLAC / WAV / ALAC / DSD / WMA / AAC / MP3 / AIFF	•	•	• (AIFF T80)	• (AIFF T80)	• (AIFF T80)	• (AIFF T80)
	MKV / MP4 (H.264 / HEVC), TS (MPEG-2 / H.264 / HEVC)	•	•	•	—	—	—	—
	MKV / MP4 / MPEG-2 / AVCHD / AVCHD 3D / JPEG / MP0	•	•	•	•	•	•	• MKV / MP4 / MPEG-2 / AVCHD / JPEG only
	HCX Processor for Ultra HD Blu-ray / HDR	• / •	• / •	• / •	— / —	— / —	— / —	— / —
	HDR10+ / Dolby Vision	• / •**	•** / —	•** / —	—	—	—	—
HIGH-QUALITY PICTURE	Hybrid Log Gamma (HLG)	•	•	•	—	—	—	—
	HDR Optimizer	•	•	•	—	—	—	—
	4K Upscaling***	60p/50p / 4:4:4 (HDMI 2.0)	•	•	•	•	—	—
	24p / 25p	•	•	•	—	—	—	—
	4K Direct Chroma Upscaling**	• (24p/25p)	• (24p/25p)	• (24p/25p)	—	—	—	—
	4K Networking (Playback 4K Video** / 4K JPEG**)	•	•	•	•	•	•	•
	4K VOD (NETFLIX, YouTube, Amazon** etc...) TENTATIVE	•**	•**	•**	—	—	—	—
	Picture Type Presets	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live	Normal / Cinema / Fine Cinema / Retro Cinema / Animation / Live
	Block / Random / Mosquito Noise Reduction	•	•	•	•	•	•	•
	Video on Demand in HD Quality	•	•	•	•	•	•	•
	2D-3D Conversion / 3D Effect Controller	—	—	—	•	•	— / •	— / •
	Ultra HD Premium	•	•	•	—	—	—	—
	Deep Colour / x.v.Colour**	• / •	• / •	• / •	• / •	• / •	• / •	• / •
	Twin HDMI	•	•	•	—	—	—	—
	Pure Audio on HDMI (HDMI Low Clock Jitter Process)	•	•	•	—	—	—	—
HIGH-QUALITY SOUND	High-Quality Network Audio Playback (DLNA)**	•**	•**	•**	•**	•**	—	—
	High Clarity Sound Premium	•	•	•	—	—	—	—
	Digital Tube Sound / Surround Re-Master**	• (Up to 192kHz/ 32 bit)	• (Up to 192kHz/ 32 bit)	—	—	—	—	—
	Viewing Experience Controlled via Voice Google Assistant**	•	•	•	•	•	•	•
	Unit Display (Dot Matrix) / Remote Control	• / • (Simple)	— / • (Simple)	— / • (Simple)	— / • (Simple)	— / • (Simple)	— / • (Simple)	— / • (Simple)
	Subtitle Position / Brightness Adjustment	•	•	•	•	•	•	•
	VIERA Link (HDAVI Control 5)	•	•	•	•	•	•	•
	Mirroring with Smartphone / Tablet**	•	•	—	• (BDT280/81 only)	—	-	-
SMART FEATURES	Internet Apps** / Web Browser	•	•	•	• / •	• / •	• (Simple) / —	• (Simple) / —
	Wireless LAN System (Built-in)	• IEEE802.11 a/b/g/n/ac	• IEEE802.11 a/b/g/n/ac	• IEEE802.11 a/b/g/n/ac	•	• (BDT280/81 only)	—	—
	DLNA (Client & Renderer)	•	•	•	•	•	•	•
	External HDD Playback** / BD-Live**	• / •	• / •	• / •	• / •	• / •	• / •	• / •
	Network Drive Access	•	•	•	•	•	•	•
	HDMI Output / Video Output	• (2) / —	• (2) / —	• (1) / —	• (1) / —	• (1) / —	• (1) / —	• (1) / —
	Optical Output / Coaxial Output	• / —	• / —	— / —	• / —	— / —	— / —	— / —
	Analogue Audio Input / Output / 7.1ch Output	• / •	— / —	— / —	— / —	— / —	— / —	— / —
TERMINAL	LAN (Ethernet) Terminal	• for Ultra HD Blu-ray, DLNA, BD-Live***, Internet Apps*, Firmware Update	• for Ultra HD Blu-ray, DLNA, BD-Live***, Internet Apps*, Firmware Update	• for Ultra HD Blu-ray, DLNA, BD-Live***, Internet Apps*, Firmware Update	• DLNA, BD-Live***, Internet Apps*, Firmware Update	• DLNA, BD-Live***, Internet Apps*, Firmware Update	• DLNA, BD-Live***, Internet Apps*, Firmware Update	• DLNA, BD-Live***, Internet Apps*, Firmware Update
	Video System	PAL / NTSC	PAL / NTSC	PAL / NTSC	PAL / NTSC	PAL / NTSC	PAL / NTSC	PAL / NTSC
	Power Supply	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz
	Power Consumption Standby (Quick Start Off)	TBD Network Standby On / Off	TBD TBD	AC 220~240V, 50Hz 17W 0.5W	AC 220~240V, 50Hz 13W 0.5W	AC 220~240V, 50Hz 11W 0.5W	AC 220~240V, 50Hz 10W 0.5W	AC 220~240V, 50Hz 9W 0.5W
DIMENSIONS, WEIGHT	Dimensions (W x H x D)**	TBD	TBD	320 x 45 x 191mm, 1.3kg	415 x 43 x 182mm	312 x 43 x 180mm	245 x 38.5 x 175mm	245 x 38.5 x 175mm
	Weight	TBD	TBD	1.2kg	1.0kg	0.8kg	0.8kg	0.8kg

* Discs recorded and finalized on recording devices. / ** HDMI connection required. / ** For 4K Upscaling playback a TV with same resolution is required. / ** For 4K/60p video, a high speed HDMI cable supporting 18 Gbps bandwidth is required. / ** MP4 (4K/25p, 30p) bit rate up to 100Mbps/resolution up to 3840 x 2160. / ** This function is effective only when reproducing AVCHD data recorded with x.v.Color technology. The function cannot be used with BD-ROM or DVD-ROM discs. HDMI connection is required. / ** CD sampling is done at 176.4/88.2 kHz. / ** Compatible with Android** devices, Ver. 4.2 and above and Miracast certified. For information on whether the smartphone, etc., supports Miracast, contact the manufacturer of the device. / ** Requires broadband Internet service. / ** The external HDD with capacities of 2TB or less in processing NTFS / FAT32 data is supported. ** Playback is possible with some external hard disk drives. / ** To enjoy content, you will need to insert a SD (1GB or more of free space/ sold separately). Requires broadband Internet service. / ** Excluding the projecting parts. / ** MKV / JPEG only / ** Enabled by software update. / ** Amazon Video is available in UK, Germany / and Austria only. / ** (FLAC / WAV / ALAC / DSD / WMA / AAC / MP3 / AIFF) / ** Amazon Alexa

Specifications are subject to change without notice. All numbers given here are approximate. / Playability may vary depending on the contents, discs and quality of the recording. For content recorded for your personal use.

UHD BLU-RAY™ / BLU-RAY™DISC RECORDERS			UBC90 / UBS90	UBC80 / UBS80	UBC70 / UBS70	UBC86	BCT84	BWT850	BWT640
			2TB	1TB	500GB	1TB	1TB	1TB	250GB
HARD DISK CAPACITY	Built-in Hard Disk Drive								
	PLAYABLE DISCS	BD-ROM (Ver. 2.4)	Full HD 3D / BD-Video / BD Live	•	•	•	•	•	•
		Ultra HD Blu-ray		•	•	•	•	—	—
		BD-RE / BD-RE DL (Ver. 2.1)	BDAV / AVCHD / AVCHD 3D / JPEG / MP0	•**	•**	•**	•**	•	•
		BD-R (Ver. 1.3 / LTH Type Ver. 1.3) / BD-R DL (Ver. 1.3)	BDAV / AVCHD / AVCHD 3D / Xvid / MKV	•**	•**	•**	•**	•	•
		DVD, DVD-RAM	MPEG-2 (Video), MPEG-2 (VR) / AVCHD / JPEG / MP0	•	•	•	•	•	•
		DVD-R* / DVD-R DL* / DVD-RW*	MPEG-2 (Video) / AVCHD / Xvid / MKV / JPEG / MP0	•	•	•	•	•	•
		AMPEG2 (Video / VR) / AVCHD		•	•	•	•	• (only MP3)	• (Only MP3)
		+R* / +R DL* / +RW**	+VR / AVCHD / JPEG / MP0	•	•	•	•	•	•
		CD-R / -RW	Xvid / MKV / JPEG / MP0	•	•	•	•	•	•
	AAC / ALAC / FLAC / MP3 / WMA / WAV / CD-DA / DTS-CD	•	•	•	•	• (only MP3)	• (Only ALAC / FLAC)	• (Only MP3, CD-DA)	
RECORDING TIME	Hard Disk Drive	DR Mode	Ultra HD (28 Mbps)**	151h	75h	35h	T80	—	—
			DVB-T2 HD (5 Mbps)**	UBC90: 847h / UBS90: —	UBC80: 422h / UBS80: —	UBC70: 203h / UBS70: —	T80	—	—
		DR Mode	HD (14Mbps)**	303h	150h	70h	T80	150h	259h
			SD (5Mbps)**	(5Mbps): 847h	(5Mbps): 422h	203h	T80	(8Mbps): 422h	(8Mbps): 518h
		HG / HX / HE / HL / HM Mode	315h / 471h / 707h / 946h / 1370h	157h / 235h / 353h / 472h / 684h	78h / 117h / 176h / 235h / 340h	T80	157h / 235h / 353h / 472h / 684h	157h / 235h / 353h / 472h / 684h	38h / 57h / 86h / 115h / 167h
		XP / SP / LP Mode	431h / 863h / 1726h	215h / 431h / 862h	106h / 212h / 424h	T80	215h / 431h / 862h	215h / 43h / 862h	52h / 105h / 210h
	25GB BD-RE / BD-R	DR Mode	HD (14Mbps)**	3h 30min	3h 30min	3h 30min	T80	3h 30min	6h 30min
			SD (5Mbps)**	(5Mbps): 10h 15min	(5Mbps): 10h 15min	10h 15min	T80	(8Mbps): 10h 15min	(8Mbps)*: 6h 30min
			DVB-T2 HD (5Mbps)**	UBC90: 10h 15min / UBS90: —	UBC80: 10h 15min / UBS80: —	UBC70: 10h 15min / UBS70: —	T80	—	—
		HG / HX / HE / HL / HM Mode	4h / 6h / 9h / 12h / 17h 30m	4h / 6h / 9h / 12h / 17h 30m	4h / 6h / 9h / 12h / 17h 30m	T80	4h / 6h / 9h / 12h / 17h 30m	4h / 6h / 9h / 12h / 17h 30m	4h / 6h / 9h / 12h / 17h 30m
		XP / SP / LP / EP Mode	5h 15m / 10h 30m / 21h / 42h	5h 15m / 10h 30m / 21h / 42h	5h 15m / 10h 30m / 21h / 42h	T80	5h 15m / 10h 30m / 21h / 42h	5h 15m / 10h 30m / 21h / 42h	5h 15m / 10h 30m / 21h / 42h
	50GB BD-RE DL / BD-R DL	DR Mode	HD (14Mbps)**	7h 30min	7h 30min	7h 30min	T80	7h 30min	13h
			SD (5Mbps)**	(5Mbps): 21h	(5Mbps): 21h	21h	T80	(8Mbps): 21h	(8Mbps): 26h
			DVB-T2 HD (5Mbps)**	UBC90: 21h / UBS90: —	UBC80: 21h / UBS80: —	UBC70: 21h / UBS70: —	T80	—	—
		HG / HX / HE / HL / HM Mode	8h / 12h / 18h / 24h / 35h	8h / 12h / 18h / 24h / 35h	8h / 12h / 18h / 24h / 35h	T80	8h / 12h / 18h / 24h / 35h	8h / 12h / 18h / 24h / 35h	8h / 12h / 18h / 24h / 35h
SD MEMORY CARD	XP / SP / LP / EP Mode	10h 30m / 21h / 42h / 84h	10h 30m / 21h / 42h / 84h	10h 30m / 21h / 42h / 84h	—	T80	10h 30m / 21h / 42h / 84h	10h 30m / 21h / 42h / 84h	10h 30m / 21h / 42h / 84h
	4.7GB DVD-RAM / DVD-R / -RW	XP / SP / LP / EP Mode	1h / 2h / 4h	1h / 2h / 4h	1h / 2h / 4h	T80	1h / 2h / 4h / 8h	1h / 2h / 4h / 8h	1h / 2h / 4h / 8h
	8.5GB DVD-R DL / +R DL	XP / SP / LP / EP Mode	1h 45m / 3h 35 m / 7h 10m	1h 45m / 3h 35 m / 7h 10m	1h 45m / 3h 35 m / 7h 10m	T80	1h 45m / 3h 35m / 7h 10m / 14h 20m	1h 45m / 3h 35m / 7h 10m / 14h 20m	1h 45m / 3h 35m / 7h 10m / 14h 20m
	9.4GB DVD-RAM	XP / SP / LP / Mode	2h / 4h / 8h	2h / 4h / 8h	2h / 4h / 8h	T80	2h / 4h / 8h	2h / 4h / 8h	2h / 4h / 8h
	Slot (Compatible Media: SD / SDHC / SDXC)	•	—	—	•	T80	•	•	•
	Playback	MP4 / AVCHD / AVCHD 3D / JPEG / MP0	•	—	—	T80	•	•	•
	Transfer	to HDD	MP4, AVCHD, AVCHD 3D, JPEG, MP0	—	—	T80	AVCHD, AVCHD 3D, JPEG, MP0	MP4, AVCHD, AVCHD 3D, JPEG, 3D Photo	AVCHD, AVCHD 3D, Progressive, JPEG, MP0
		to BD-RE / -R	AVCHD, AVCHD 3D, JPEG (BD-RE only), MP0 (BD-RE only)	—	—	T80	AVCHD, AVCHD 3D, JPEG (BD-RE only), MP0 (BD-RE only)	AVCHD, AVCHD 3D, JPEG (BD-RE only), 3D Photo (BD-RE only)	AVCHD, AVCHD 3D, Progressive, JPEG (BD-RE only), MP0 (BD-RE only)
		to DVD-RAM / from BD-RE	JPEG, MP0	—	—	T80	JPEG, MP0	JPEG, 3D Photo	JPEG, MP0
		from HDD / DVD-RAM / DVD-R / CD	MP4 (HDD only), JPEG, MP0—	—	—	T80	MP4 (HDD only), JPEG, MP0MP4, JPEG, 3D Photo	JPEG, MP0	JPEG, MP0
USB	Slot	• (2)	• (2)	• (2)	T80	• 2 (front / rear)	• 2 (front / rear)	• 2 (front / rear)	
	Playback: Mass Storage	MPEG-2 / MP4 / Xvid / MKV / JPEG / MP0	•	•	•	T80	•	•	•
		AAC / ALAC / DSD / FLAC / MP3 / WMA / WAV	•	•	•	T80	•	•	•
	Playback: External HDD	Broadcast Stream	•	•	•	T80	•	•	•
	Transfer: Mass Storage	to HDD	MP4, AVCHD, AVCHD 3D, MKV, JPEG, MP0, AAC, ALAC, DSD, FLAC, MP3, WMA, WAV	MP4, AVCHD, AVCHD 3D, MKV, JPEG, MP0, AAC, ALAC, DSD, FLAC, MP3, WMA, WAV	MP4, AVCHD, AVCHD 3D, MKV, JPEG, MP0, AAC, ALAC, DSD, FLAC, MP3, WMA, WAV	T80	MP4, AVCHD, AVCHD 3D, Xvid, MKV, JPEG, MP0	MP4, AVCHD, AVCHD 3D, Xvid, MKV, JPEG, 3D Photo, Progressive, JPEG, MP0, AAC, ALAC, DSD, FLAC, MP3, WMA, WAV	
		to BD-RE / BD-R	AVCHD, AVCHD 3D, JPEG (BD-RE only), MP0 (BD-RE only)	AVCHD, AVCHD 3D, JPEG (BD-RE only), MP0 (BD-RE only)	AVCHD, AVCHD 3D, JPEG (BD-RE only), MP0 (BD-RE only)	T80	AVCHD, AVCHD 3D, JPEG (BD-RE only), MP0 (BD-RE only)	AVCHD, AVCHD 3D, JPEG (BD-RE only), 3D Photo (BD-RE only)	AVCHD, AVCHD 3D, Progressive, JPEG (BD-RE), MP0 (BD-RE)
		to DVD-RAM	JPEG, MP0	JPEG, MP0	JPEG, MP0	T80	JPEG, MP0	JPEG, 3D Photo	JPEG, MP0
	HDR**	4K PRO HDR, ULTRA HD PREMIUM	•	•	•	T80	—	—	—
HIGH-QUALITY PICTURE	HX Processor for Ultra HD Blu-ray** (HX Hollywood Cinema Experience**)	•	•	•	T80	—	—	—	
	HLG	•	•	•	T80	—	—	—	
	4K Direct Chroma Upscaling**	•	•	•	T80	•	•	•	
	4K Video Playback (4K 25 / 30 / 23.97 / 29.97p)** & Copy (SD or USB <-> HDD)	• (4K 50P/25P MP4)	• (4K 50P/25P MP4)	• (4K 50P/25P MP4)	T80	•	•	•	
	4K JPEG Playback / 2D->3D Conversion / 3D Effect Controller	• / - / -	• / - / -	• / - / -	T80	• / • / •	• / • / •	- / • / •	
HIGH-QUALITY SOUND	Digital Tube Sound / High Clarity Sound / Pure Sound Mode	• / • (Premium) / •	- / - / •	- / - / •	T80	• / • / •	• / • / •	- / - / •	
	192kHz Surround Re-Master**	•	•	•	T80	•	•	Up to 96kHz	
	TV-IP / TV Anywhere** (HDMI) / Multi-room TV Streaming	• / • / •	• / • / •	• / • / •	T80	- / - / •	• / • / •	- / - / -	
	Remote Recording** / Remote Viewing** (HDMI)	• / •	• / •	• / •	T80	• / •	• / • (Except BBC)	- / -	
	Panasonic Media Center App** / Web Browser**	• / •	• / •	• / •	T80	• / •	• / •	- / •	
SMART NETWORKING	Extra Storage with External HDD / Miracast**	• / •	• / •	• / •	T80	• / •	• / •	• / -	
	Connect with Full HD 3D Camcorder / Image Sharing from LUMIX**	• / •	• / •	• / •	T80	• / •	• / •	• / •	
	Internet Apps** / Wireless LAN System	• / • (Built-in)	• / • (Built-in)	• / • (Built-in)	T80	• / • (Built-in)	• / • (Built-in)	• / Capable w. optional adap	
	DLNA	• / • as Client AV / PC	• / •	• / •	T80	• / •	• / •	• / •	
	as a Server	MPEG / AVCHD / JPEG	MPEG / AVCHD / JPEG	MPEG / AVCHD / JPEG	T80	MPEG / AVCHD / JPEG	MPEG / AVCHD / JPEG	MPEG / AVCHD / JPEG	
TERMINALS	HDMI Output / Video Output / Digital Audio Output	• (2) / - / • Coaxial	• (1) / - / • Coaxial	• (1) / - / • Coaxial	T80	• / - / -	• / - / Coaxial	• / - / -	
	Analogue Audio Input / Euro SCART Input	- / -	- / -	- / -	T80	- / -	- / -	- / -	

TECHNICAL SPECIFICATIONS

TENTATIVE

HI-FI SMART SPEAKER

GA10

AMPLIFIER	Amp Type		Lincs D-Amp / 2ch (3rd generation)	
	Output Power	RMS Output Power, Front Channel	20W per channel / 8 ohm / 1kHz / 10% THD	
		Total RMS Stereo mode power		40W
SPEAKER SYSTEM	Front Speaker	Type	2-way, 3-speaker system (Bass reflex)	
		Speaker Unit	8cm Dual Voice Coil Woofer x1, 2cm Soft Dome Tweeter x2	
	Bass Expand	Bass reflex port		
NETWORK	Google Assistant built-in		•	
	Bluetooth	Version	Bluetooth ver 4.2	
		Class	Class 2	
		Codec	SBC / AAC / aptX / Fast stream	• / • / — / —
		Receiver / Transmitter		• / —
	WIFI	WLAN Standard	IEEE802.11 ac / a / b / g / n	
		Frequency Range	2.4GHz / 5GHz	
NFC	—			
STREAMING	Music services		compatible with chromecast-enabled audio apps: g.co/cast/apps	
	Music services controlled by voice		EG: Spotify, Google Play Music, TuneIn (internet radio), Deezer Enjoy hands-free music of these compatible services and more: g.co/assistant/discover EB: Spotify, Google Play Music, TuneIn (internet radio), BBC Enjoy hands-free music of these compatible services and more: g.co/assistant/discover	
NETWORK AUDIO	AirPlay		—	
	Chromecast built-in	Multi-room / Stereo Pair	• / —	
		Panasonic Music Control App*	Supported OS	• / •
		Black Berry / Windows Phone	— / —	
		Multi-room / Home Network Music Playback		• / •
		Re-transmission to other speaker	Bluetooth / CD / Radio / USB / AUX	• / — / — / — / •
	Memory			—
	Stereo Pair			• (Two GA10 pair)
	SOUND FUNCTION	EQ	Super Sound EQ, Super Bass Sound	D.Bass (control by Music Control App)
Preset EQ / Manual EQ			• (control by Music Control App)	
Wallmount mode / Surround / My sound setting			— / — / —	
Re-Master		Bluetooth Re-Master / MP3 Re-Master	• / •	
		Streaming Re-Master / CD Re-Master	— / —	
		High Res Re-Master	—	
TERMINALS	USB Port		—	
	Audio IN / OUT		AUX (3.5mm) / —	
	Mic Jack / LAN		— / —	
GENERAL	Power Supply		AC 100-240V, 50/60Hz	
	Power Consumption	Nomal Use	11W	
		Standby Power Consumption	0.5W	
	Dimmer			•
DIMENSIONS, WEIGHT	Main Unit	Dimensions (W x H x D)	100 x 284 x 100mm	
		Weight	1.7kg	

*1 Download on the App Store. Download on Google Play™.

Specifications are subject to change without notice. All figures given here are approximate.

SOUNDBARS

HTB250

HTB200

AUDIO SYSTEM	Output Channel		2.1ch	
	Power Output Home Cinema Mode (RMS)	Total Power	120W	
		Front	80W (1kHz, 6 ohms, 10% THD)	
		Subwoofer	80W (1kHz, 6 ohms, 10% THD)	
	Dolby Digital / Dolby Pro Logic II / Dolby Virtual Speaker		TBD	
	DTS Digital Surround		●	
HIGH-QUALITY SOUND	Clear-mode Dialogue / Dialogue Level Control / H.Bass		TBD	
	Sound Mode (Standard, Music, Cinema)		●	
	Up to 7.1ch Linear PCM Input via HDMI		TBD	
	Long Aero Stream Port / Dual Integrated Subwoofer		TBD	
EASY OPERATION	4K/60p Signal Pass Through		TBD	
	Auto Gain Control / ARC (Audio Return Channel)** / HDMI CEC		TBD / ● / ●	
SPEAKER SYSTEM	Front	Configuration	TBD	
		Speaker Unit	TBD	
	Subwoofer	Configuration	TBD	
		Speaker Unit	TBD	
TERMINALS	HDMI Output / HDMI Input / Optical Digital Audio Input		TBD	
	Analogue Audio Input (AUX)		TBD	
OTHERS	Power Supply		AC 220-240V, 50Hz	
		Normal Use / Standby	TBD	
	Power Consumption		TBD	
		Normal Use / Standby	TBD	
DIMENSIONS, WEIGHT	Display / Remote Control		TBD	
	Dimensions (W x H x D), Weight		TBD	

*1 ARC-compatible TV is required.

Specifications are subject to change without notice. All figures given here are approximate.

SOUNDBARS

ALL70T

HTB688

HTB488

HTB18/8

AUDIO SYSTEM	Output Channel		3.1ch	3.1ch	2.1ch	HTB18: 2.1ch / HTB8: 2ch
	Power Output Home Theatre Mode (RMS)	Total Power	350W	300W	200W	HTB18: 120W / HTB8: 80W
		Front	70W/ch (1kHz, 6 ohms, 10% THD)	60W/ch (1kHz, 6ohms, 10% THD)	50W/ch (1kHz, 6ohms, 10% THD)	HTB18: 30W/ch (1kHz, 4 ohms, 10% THD) HTB8: 40W/ch (1kHz, 8 ohms, 10% THD)
		Center / Surround	70W (1kHz, 6 ohms, 10% HD) / —	60W (1kHz, 6ohms, 10% THD) / —	— / —	— / —
		Subwoofer	140W (100Hz, 3 ohms, 10% THD)	120W (100Hz, 3ohms, 10% THD)	100W (100Hz, 3ohms, 10% THD)	60W (100Hz, 8 ohms, 10% THD) / HTB8: —
Dolby Digital / Dolby Pro Logic II / Dolby Virtual Speaker / DTS Digital Surround		● / ● / ●	● / — / — / ●	● / — / — / ●	HTB18: ● / — / — / ●, HTB8: — / — / — / —	
SMART NETWORKING & EASY OPERATION	Multi-room Audio with Qualcomm® AllPlay™ / Wireless LAN System		● / ●	— / —	— / —	— / —
	Wi-Fi Frequency Range / Ethernet (10 Base-T / 100 Base-TX)		● (5GHz/ 2.4GHz) / ●	— / —	— / —	— / —
	WPS Support / Bluetooth® Wireless Technology		● / ●	— / ●	— / ●	— / ●
	Panasonic Music Streaming App** / NFC (One-Touch Connection)**2		● / ●	● / —	● / —	● / —
	Re-streaming (Bluetooth®)*3		● (Bluetooth® only)	—	—	—
	4K/60p Signal Pass Through		● (HDCP2.2)	—	—	—
	Wireless Subwoofer / Auto Gain Control		● / ●	● / —	● / —	— / —
	IR Blaster Included / HDMI-CEC / ARC (Audio Return Channel)**4		● / ● / ●	— / ● / ●	— / ● / ●	— / — / —
	Wall-mountable / Remote Control / Display		● / ● / FL	● / ● / LED	● / ● / LED	● / ● / LED
HIGH-QUALITY SOUND	LincSD-Amp / Clear-mode Dialogue / Dialogue Level Control		— / ● / ●	— / — / —	— / — / —	— / — / —
	Multi-angle Speaker Layout		● (0° / 90°)	—	—	● (0° / 90°)
	aptX® Low Latency / H.Bass / Up to 7.1ch Linear PCM Input via HDMI		— / ● / ●	— / — / —	— / — / —	— / — / —
HIGH-QUALITY PICTURE	Full HD 3D Compatible / 1080p Output (x.v.Colour, Deep Colour)		● / ●	— / —	— / —	— / —
SPEAKER SYSTEM	Front	Configuration	1-way 1-speaker, Bass-reflex	1-way 1-speaker, Bass-reflex	1-way 1-speaker, Bass-reflex	1-way 1-speaker (HTB8: Passive radiator)
		Speaker Unit	Full Range: 6.5cm Cone Type	Full Range: 4.5 x 12cm Cone Type	Full Range: 4.5 x 12cm Cone Type	Full Range: 8cm Cone Type x2
	Centre	Configuration	1-way 1-speaker, Bass-reflex	1-way 1-speaker, Bass-reflex	—	—
		Speaker Unit	Full Range: 6.5cm Cone Type	Full Range: 4.5 x 12cm Cone Type	—	—
	Subwoofer	Configuration	1-way 1-speaker, Bass-reflex	1-way 1-speaker, Bass-reflex	1-way 1-speaker, Bass-reflex	1-way 1-speaker, Bass-reflex / HTB8: —
		Speaker Unit	Woofer: 16cm Cone Type	Woofer: 16cm Cone Type	Woofer: 16cm Cone Type / HTB8: —	
TERMINALS	HDMI Output / HDMI Input / Optical Digital Audio Input		● (TV) / ● (BD, DVD) / ● (TV)	● (ARC*) / — / ●	● (ARC*) / — / ●	— / — / ● (TV)
	Analogue Audio Input (AUX) Pin Jack		—	—	—	● (BD, DVD)
OTHERS	Power Supply		AC 220-240V, 50Hz	AC 220-240V, 50Hz	AC 220-240V, 50Hz	AC 220-240V, 50Hz
	Power Consumption	Front Normal Use	42W	30W	19W	HTB18: 35W / HTB8: 20W
			Standby (Bluetooth® standby off)	0.48W**4	0.5W**4	0.5W**4
		Subwoofer Normal Use	30W	20W	18W	—
			Standby (Power switch off)	0.48W**4	0.5W	0.5W
DIMENSIONS, WEIGHT	Front Speaker	Dimensions (W x H x D), Weight	950 x 55 x 120mm, 2.6kg	853 x 60.5 x 90mm, 2.3kg	853 x 60.5 x 90mm, 1.9kg	750 x 65.5 x 118mm, 2.3kg
	Subwoofer	Dimensions (W x H x D), Weight	180 x 378 x 303mm, 5.0kg	185 x 303 x 337mm, 4.3kg	185 x 303 x 337mm, 4.3kg	156 x 290 x 263mm, 3.0kg / HTB8: —

*1 Download on App Store. Download on Google Play™. / **1 To use NFC without downloading the app, an OS Version 4.1 or later Android™ device is required. The installation of the Panasonic Music Streaming App allows use of an Android smartphone or tablet with the NFC function and OS Version 4.1 or earlier. /

**2 When you use the Panasonic Music Streaming App to stream music on this system to other ALLPlay speakers, the video and audio output may not be synchronised during playback of video contents. If music is streamed to other ALLPlay speakers will automatically stop playing the music. /

**3 ARC-compatible TV is required. / **4 The other connected devices have to be turned off. Standby (Bluetooth® standby on) power consumption approximately 3.0W (ALL70T), 2.0W (HTB688/ HTB488). / **5 Standby (Wireless Link is not activated) power consumption approximately 1.0W (ALL70T).

Specifications are subject to change without notice. All figures given here are approximate.

COMPACT MUSIC SYSTEMS

PMX150/152

PMX80/82

PM600/602

PM250/250B

AUDIO SYSTEM	Output Channel		2ch	2ch	2ch	2ch
	Power Output (RMS)	Total Power / Front	120W / 60W (1kHz, 3 ohms, 10% THD)	120W / 60W (1kHz, 3 ohms, 10% THD)	40W / 20W (1kHz, 6 ohms, 10% THD)	20W / 10W (1kHz, 6 ohms, 10% THD)
PLAYABLE DISCS	CD, CD-R / RW	CD-DA / MP3	● / ●	● / ●	● / ●	● / ●
USB	Slot / USB Standard	● x2 / USB 2.0 High Speed	● x2 / USB 2.0 High Speed	● x2 / USB 2.0 High Speed	● x1 / USB 2.0 Full Speed	● x1 / USB 2.0 Full Speed
	Playback	MP3, AIFC, AAC, FLAC (up to 192kHz/24bit), WAV (up to 192kHz/24bit), DSD (5.6MHz/2.8MHz)	MP3, AIFC, AAC, FLAC (up to 192kHz/24bit), WAV (up to 192kHz/24bit), DSD (2.8MHz *Not Support 5.6MHz)	MP3**	MP3**	MP3**
TUNER	Band (Station Presets)	PMX150: FM (30) PMX152: FM (30), DAB Plus (20)	PMX80: FM (30) PMX82: FM (30), DAB Plus (20)	PM400: FM (30) PM402: FM (30), DAB Plus (20)	PM250: FM (30) PM250B: FM (30), DAB Plus (20)	PM250: FM (30) PM250B: FM (30), DAB Plus (20)
	RDS / Auto Tuning	● [EG] models only / ●	● [EG] models only / ●	● [EG] models only / ●	● [EG] models only / ●	● [EG] models only / ●
SMART NETWORKING	Multi-room Audio with Qualcomm® AllPlay™ / AirPlay	● / ●	— / —	— / —	— / —	— / —
	Wireless LAN System / Home Network Music Playback	● / ●	— / —	— / —	— / —	— / —
	Wi-Fi Frequency Range	● [5GHz / 2.4GHz]	—	—	—	—
	Ethernet (10 Base-T / 100 Base-TX)	●	—	—	—	—
	Bluetooth® Wireless Technology / WPS Support	● / ●	● / —	● / —	● / —	● / —
	Panasonic Music Streaming App**	●	●	●	●	●
	USB Connection for iPod / iPad / iPhone**	● [Playback, Charging]	● [Playback, Charging]	—	—	—
	Re-streaming	● [Bluetooth®, CD, Radio, USB Memory, USB-DAC, AUX]**	—	—	—	—
Net Preset Button (for Internet Radio)	● Main Unit & Remote Control (6 Presets)	—	—	—	—	
HIGH-QUALITY SOUND	Full Digital Amplifier System / LincS-D-Amp	● / ● 3rd generation	● / ● 3rd generation	● / —	● / —	● / —
	VDGA (Variable Digital Gain Amplifier)	●	●	—	—	—
	USB-DAC Function	MP3, AIFC, FLAC (up to 192kHz/24bit), WAV (up to 192kHz/24bit), DSD (5.6MHz/2.8MHz)	MP3, AIFC, FLAC (up to 192kHz/24bit), WAV (up to 192kHz/24bit), DSD (2.8MHz *Not Support 5.6MHz)	—	—	—
	XBS Master / Bluetooth® Re-Master	● / ●	● / ●	● / ●	● / ●	● / ●
	Super Sonic Tweeter	●	—	—	—	—
	Bamboo Plant Opal Cone / Bamboo Charcoal PP Cone	● [Woofer] / —	— / ● [Woofer]	— / —	— / —	— / —
	Preset EQ / Bass & Treble Control	4 (Heavy, Soft, Clear, Vocal) + Flat / ●**	4 (Heavy, Soft, Clear, Vocal) + Flat / ●**	4 (Heavy, Soft, Clear, Vocal) + Flat / ●	4 (Heavy, Soft, Clear, Vocal) + Flat / —	4 (Heavy, Soft, Clear, Vocal) + Flat / —
SPEAKER SYSTEM	Front	Configuration	3-way 3 speaker system	3-way 3 speaker system	2-way 2 speaker, Bass-reflex	1-way 1 speaker, Bass-reflex
		Speaker Unit	Woofer: 14cm Cone Type, Tweeter: 1.9m Dome Type Super Sonic Tweeter: 1.2cm Piezo Type	Woofer: 14cm Cone Type, Tweeter: 1.9m Dome Type Super Tweeter: 1.5cm Piezo Type	Woofer: PP Mica 10cm Cone Type x1 Tweeter: Paper 6cm Cone Type x1	Full Range: 10cm Cone Type
TERMINAL	LAN Terminal	●	—	—	—	—
	Analogue Audio Input (AUX) Pin Jack	●	●	—	—	—
	Headphone Output	●	●	●	—	—
OTHERS	Power Supply	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz
	Power Consumption	Normal Use / Standby	45W / 0.4W**	44W / 0.35W**	17W / 0.3W**	14W / 0.2W**
	Auto Power Off / Dimmer / Programmable Timer	● / ● / Sleep, Clock, Play Timer	● / ● / Sleep, Clock, Play Timer	● / ● / Sleep, Clock, Play Timer	● / ● / Sleep, Clock, Play Timer	● / ● / Sleep, Clock, Play Timer
	Display / Remote Control	Dot Matrix FL / ●	FL / ●	FL / ●	FL / ●	LCD / ●
DIMENSIONS, WEIGHT	Main Unit (W x H x D)	211 x 114 x 267mm, 3.0kg	211 x 114 x 267mm, 2.8kg	153 x 224 x 232mm, 1.4kg	184 x 123 x 228mm, 1.1kg	184 x 123 x 228mm, 1.1kg
	Front Speaker* (W x H x D)	161 x 238 x 264mm, 3.0kg	161 x 238 x 262mm, 2.6kg	145 x 224 x 197mm, 1.9kg	139 x 224 x 136mm, 1.3kg	139 x 224 x 136mm, 1.3kg

TECHNICAL SPECIFICATIONS

COMPACT MICRO SYSTEMS

HC-Series		HC2020	HC400/402	HC395/397	HC300/302	HC200
Connected Hi-Fi Music System		Compact Micro System	Hi-Fi Music System	Hi-Fi Music System	Hi-Fi Music System	Hi-Fi Music System
AUDIO SYSTEM	Output Channel	2ch	2ch	2ch	2ch	2ch
	Output Power	Front Channel (both ch driven) 20W per channel (8 ohms, 1kHz, 10% THD)	20W per channel (8 ohms, 1kHz, 10% THD)	20W per channel (8 ohms, 1kHz, 10% THD)	20W per channel (8 ohms, 1kHz, 10% THD)	20W per channel (8 ohms, 1kHz, 10% THD)
	Total RMS power	40W	40W	40W	20W	20W
SPEAKER SYSTEM	Type	1-way, 1-speaker system (Bass-reflex)	1-way, 1-speaker system (Bass-reflex)	1-way 1 speaker, Dual Passive Radiator	1-way, 1-speaker system (Bass-reflex)	1-way, 1-speaker system (Bass-reflex)
	Speaker Unit	Full Range: 8cm Cone Type x2, Twisted Acoustic Port x2	Full Range: 8cm Cone Type x2, Twisted Acoustic Port x2	Full Range: 6.5 cm Cone Type	Full Range: 8cm Cone Type x2, Bass Reflex Port	Full Range: 8cm Cone Type x2, Bass Reflex Port
CD / DVD	Playback Disc*1	CD, CD-R / RW	CD, CD-R / RW	CD, CD-R / RW	CD, CD-R / RW	CD, CD-R / RW
	Format	CD-DA / MP3	CD-DA / MP3	CD-DA / MP3	CD-DA / MP3	CD-DA / MP3
USB	USB Standard	USB 2.0 Full Speed	USB 2.0 Full Speed	USB 2.0 Full Speed	USB 2.0 Full Speed	USB 2.0 Full Speed
	Support Format	MP3	MP3	MP3	MP3	MP3
	Playback*2	•	•	•	•	•
	Battery Charge	1.5A only	1.5A only	1.5A only	1.5A only	1.5A only
TUNER	Station Presets	FM	30 stations	30 stations	30 stations	30 stations
		DAB Plus	20 stations	HC400: --- / HC402: 20 stations	HC300: --- / HC302 : 20 stations	—
	RDS	• (EG models only)	• (EG models only)	• (EG models only)	• (EG models only)	• (EG models only)
NETWORK	Bluetooth	Version / Class	Bluetooth® Ver 2.1 + EDR / Class 2	Bluetooth® Ver 2.1 + EDR / Class 2	Bluetooth® Ver 2.1 + EDR / Class 2	Bluetooth® Ver 2.1 + EDR / Class 2
	Wi-Fi	WLAN Standard	TBD	—	—	—
		Frequency Range	TBD	—	—	—
	Smartphone App*3	Music Streaming	TBD	• (iOS, Android, Black Berry, Windows Phone)	• (iOS, Android, Black Berry, Windows Phone)	• (iOS, Android, Black Berry, Windows Phone)
SOUND FUNCTION	Lincs D-Amp	• (3rd generation)	• (3rd generation)	• (2nd generation)	—	—
	Bluetooth Re-Master	•	•	•	•	•
	D.Bass / Clear-mode Dialogue	• / •	• / •	• / •	• / —	• / —
	Wall-mount Sound Mode / Surround Sound Mode	• / •	• / •	• / •	— / •	— / •
	Preset EQ / My Sound Setting	• / •	• / •	• / •	• / •	• / •
TERMINALS	USB Port	• [x1]	• [x1]	• [x1]	• [x1]	• [x1]
	Audio IN / OUT	AUX 3.5mm x1 / —	AUX 3.5mm x1 / —	AUX 3.5mm x1 / —	AUX 3.5mm x1 / —	— / —
	LAN	•	—	—	—	—
GENERAL	Power Supply	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz
	Power Consumption	Normal Use	TBD	23W	TBD	TBD
		Standby	TBD	Normal: 0.2W, Bluetooth: 0.3W, Network: —	TBD	TBD
	Auto Power Off / Dimmer	• / •	• / •	TBD	• / •	• / •
	5 Preset Buttons	Radio / Internet Radio	TBD	• / —	TBD	TBD
		Online Music Services	All available by Chromecast	—	—	—
	Timer Function	• (Sleep / Clock / Play)	• (Sleep / Clock / Play)	• (Sleep / Play)	• (Sleep / Clock / Play)	• (Sleep / Clock / Play)
	Wall-mountable	•	•	•	•	—
	AC Cord	Cord Length	2m	2m	1.5m	1.5m
DIMENSIONS, WEIGHT	Main Unit	Dimensions (W x H x D), Weight	TBD	420 x 225 x 102mm, 2.4kg	500 x 205 x 92mm, 2.5kg	TBD

*1 Playability may vary depending on the contents, discs and quality of the recording. / *2 Only a USB flash drive. Playback is not possible from a portable device (Apple, Android, etc.) using a USB extension cable.
*3 Download on the App Store. Download on Google Play™.

Specifications are subject to change without notice. All figures given here are approximate.

DIGITAL RADIOS

		D100	D20	D10
		Portable Digital Radio	Portable Digital Radio	Portable Digital Radio
AUDIO SYSTEM	Output Channel	2ch	1ch	1ch
	Power Output (RMS)	10W (10% THD), AC Adaptor Mode, 5W (10% THD), Battery Mode	3W (10% THD), AC Adaptor Mode, 2W (10% THD), Battery Mode	2W (10% THD), Total Power
TUNER	Band / Station Preset	FM / DAB / DAB Plus	FM (Mono) / DAB / DAB Plus	FM / DAB / DAB Plus
	Auto Tuning	•	•	• (for FM)
	Frequency Range	FM 87.5~108.0MHz (50kHz step), DAB BAND III (5A~13F) (TBD)	FM 87.5~108MHz (50kHz step)	FM 87.5~108.0MHz (50kHz step), DAB BAND III (5A~13F)
	RDS	•	•	•*1
EASY OPERATION	Bluetooth® Wireless Technology	•	•	—
	Clock (Auto Time Adjustment)	TBD	• (±/- 70 Sec. / Month)	•
	Sleep Timer / Alarm	TBD	30, 60, 90, 120 Min. / •	30, 60, 90, 120 Min. / •
	Memory Tuning	5 User Memory Tuning	5 User Memory Tuning	10 Channel Memory
	DAB scan*2	•	•	•
DESIGN	Configuration	2x 1-way 1-speaker	1-way 1-speaker	1-way 1-speaker
	Speaker Unit	TBD	5cm	Full Range: 10cm (4 ohms)
SPEAKER SYSTEM	Display	Dot Matrix Display	LCD with Backlight	LCD with Backlight
	Splash Proof	TBD	• (IPX3)	—
TERMINALS	Earphone / Headphone (3.5mm)	—	—	• (Stereo Mini)
OTHERS	Power Source	Battery	DC 4.5V (3x R6 / LR6)	DC 6V / C x4 (LR14 / LR14)
		AC	220~240V, 50/60Hz	220~240V, 50/60Hz
	Power Consumption	Normal Use	TBD	2W
DIMENSIONS, WEIGHT		Standby	0.8W (with LCD Dimmer Off)	0.6W
	Dimensions (W x H x D)	TBD	90 x 140 x 100mm	251 x 138 x 91mm
	Weight	TBD	0.7kg (with batteries), 0.6kg (w/o batteries)	1.3kg (with batteries), 1.0kg (w/o batteries)

*1 Not for RF-D10 (GN). / *2 DAB scan can be done by selecting Full Scan from menu.

Specifications are subject to change without notice. All figures given here are approximate.

URBAN AUDIO SYSTEMS

		UA7	UA4	UA3
		Urban Audio System	Party Audio System	Party Audio System
AUDIO SYSTEM	Output Channel	2ch	2ch	2ch
	Output Power	Front Channel (both ch driven) 375W per channel (3 ohms, 1kHz, 30% THD)	150W per channel (4 ohms, 1kHz, 30% THD)	150W per channel (4 ohms, 1kHz, 30% THD)
	Total RMS power	1700W	300W	300W
PLAYABLE DISCS	CD, CD-R / RW	CD-DA / MP3	• / •	• / •
USB	USB Standard	USB 2.0 full speed	USB 2.0 full speed	USB 2.0 full speed
	Support Format / Playback	MP3 / —	MP3 / —	MP3 / —
	Battery Charge	500mA only	500mA only	500mA only
TUNER	Station Presets	FM / DAB Plus	• 30 stations / —	• 30 stations / —
	RDS	•	•	•
SMART NETWORKING	Bluetooth	Version / Class	Bluetooth® Ver 2.1 + EDR / Class 2	Bluetooth® Ver 2.1 + EDR / Class 2
	Smartphone App	Music Streaming*1	• (Android)	• (Android)
SOUND FUNCTION	D.Bass / Room-Filling Expansive Sound	• / —	• / •	• / •
	Manual EQ	• (3 Band + Surround)	• (3 Band + Surround)	• (3 Band + Surround)
	DJ Function / Karaoke Function	• (Jukebox) / •	• (Jukebox) / •	• (Jukebox) / •
	Preset EQ / Manual Equalizer	• / • (Bass / Mid / Treble + Surround)	• / • (Bass / Mid / Treble)	• / • (Bass / Mid / Treble)
	Low Distortion Technology	•	•	•
SPEAKER	Front	Configuration	2-way 4-speaker system (Bass-reflex)	2-way 3-speaker system (Bass-reflex)
		Subwoofer	1-way 1-speaker system	—
	Speaker Unit	Front Speaker	6cm Tweeter x4, 8cm Woofer x4	4cm Tweeter x4, 13cm Woofer x2
		Subwoofer	16cm Super Woofer x2	—
TERMINALS	OPT-IN / USB Port	• / • [x2]	• / • [x1]	• / • [x1]
	Audio IN / OUT	AUX 3.5mm x2 / Pin Jack Stereo	AUX Pin Jack x1 / —	AUX Pin Jack x1 / —
GENERAL	Power Supply	AC 220~240V, 50Hz	AC 220~240V, 50Hz	AC 220~240V, 50Hz
	Power Consumption	Normal Use	190W	51W
		Standby: Normal / Bluetooth®	0.5W / 0.6W	0.5W / 0.6W
	Auto Power Off	•	•	•
	Dimmer / Timer Function	• / • (Sleep / Clock / Play)	• / • (Sleep / Clock / Play)	• / • (Sleep / Clock / Play)
	Illumination / Display / Remote Control	• (For Top Panel and Center) / FL / •	• (Blue Illumination) / FL / •	• (Blue Illumination) / FL / •
	DIMENSIONS, WEIGHT	Dimensions (W x H x D) / Weight	260 x 744 x 295mm / 14kg	650 x 196 x 274mm / 6.1kg

*1 Playability may vary depending on the contents, discs and quality of the recording. / *2 Download on Google Play™.

Specifications are subject to change without notice. All figures given here are approximate.

HIGH POWER AUDIO SYSTEMS

			Party Audio System	Portable Party Audio System	Party Audio System	Party Audio System	Party Audio System
AMPLIFIER	Amp Type		2ch Digital Triple-Amp	1ch Digital Triple-Amp	2ch Digital Bi-Amp	2ch	2ch
	Output Power	RMS Output Power	High / Mid / Low Channel	350W / 350W / 500W (30% THD)	TBD	350W / — / 500W (30% THD)	TBD
		Total RMS Stereo mode power		2400W	1000W	2000W	400W
		PMPO Output Power		26400W	11000W	22000W	4400W
SPEAKER SYSTEM	Front Speaker	Type	3-way, 4-speaker system	1-way 1-speaker system, Bass-reflex (High, Mid & SW)	3-way, 3-speaker system	2-way 2-speaker system	2-way 2-speaker system
		Speaker Unit	25cm Super Woofer (Hard Press Corrugation) with Illumination, 10cm Woofer x2, 6cm Tweeter	Super Woofer: 25cm Cone Type Woofer: 10cm Cone Type x2 Tweeter: 6cm Cone Type	20cm Super Woofer (Hard Press Corrugation), 8cm Woofer, 6cm Tweeter	Woofer: 16cm Cone Type Tweeter: 6cm Cone Type	Woofer: 1cm Cone Type Tweeter: 5cm Cone Type
	Subwoofer	Type / Speaker Unit	— / —	— / —	— / —	— / —	— / —
CD / DVD	Bass Expand		AIRQUAKE BASS	—	AIRQUAKE BASS	—	—
	Playback Disc		CD-R / RW	—	CD-R / RW	—	•
	Format		CD-DA / MP3	—	CD-DA / MP3	—	•
INTERNAL MEMORY	Internal memory	Capacity	4GB	—	4GB	—	—
		Media file format support	MP3	—	MP3	—	—
USB	USB Port		Double USB (Play + Rec / Play)	Double USB (Play + Rec / Play)	Double USB (Play + Rec / Play)	x1 (Play)	x1 (Play)
	USB Standard		USB 2.0 Full Speed	USB 2.0 Full Speed	USB 2.0 Full Speed	USB 2.0 Full Speed	USB 2.0 Full Speed
	Support Format		MP3	MP3	MP3	MP3	MP3
	Battery Charge		500mA	TBD	500mA	TBD	TBD
RADIO	Station Presets	FM / DAB Plus	30 stations / —	—	30 stations / —	30 stations / —	UX100: 30 stations / — UX102: 30 stations / 20 stations
	Antenna Terminal		75 Ω unbalance	TBD	75 Ω unbalance	TBD	TBD
NETWORK	Bluetooth	Version	Ver. 2.1 + EDR	TBD	Ver. 2.1 + EDR	TBD	TBD
		Class	Class 2	TBD	Class 2	TBD	TBD
		Codec	SBC / AAC / aptX / Fast stream	• / — / — / —	TBD	• / — / — / —	TBD
	NFC						

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**1 To use NFC without downloading the app, an OS Version 4.1 or later Android™ device is required. The installation of the Panasonic MAX Juke App allows use of an Android smartphone or tablet with the NFC function and OS Version 4.1 or earlier. / **2 Download on Google Play™. / **3 Standby (Bluetooth standby on) power consumption approximately 0.6W. / **4 Standby (Bluetooth® standby on) power consumption approximately 0.6W. / **5 Trolley handle fully pushed down. / **6 Transferring songs via Bluetooth requires the Panasonic MAX Juke App. / **7 RMS 30% Power Output.

Specifications are subject to change without notice. All figures given here are approximate. / Playability may vary depending on the contents, discs and quality of the recording.

TECHNICAL SPECIFICATIONS

HEADPHONES PREMIUM		HD10	HD6M	HDE10	HDE5M	HDE3M
		Headband	Headband	In-Ear	In-Ear	In-Ear
FEATURES	Driver Unit (Magnet Type: Neodymium)	50mm	40mm	11.5mm	11mm	11mm
	Impedance	18 ohms	44 ohms ±15%	34 ohms	28 ohms	20 ohms
	Sensitivity	92dB/mW	99dB/mW (at 500kHz)	108dB/mW	107dB/mW (at 500Hz)	106dB/mW (at 500Hz)
	Max. Input (Power Handling Capacity)	1500mW (IEC*)	1000mW (IEC*)	150mW (IEC*)	200mW (IEC*)	200mW (IEC*)
	Frequency Response	4Hz-50kHz	4Hz-40kHz	3Hz-50kHz	5Hz-45kHz	5Hz-40kHz
	Cord	Cord Length MiniPlug (3.5mm) / Plug Adaptor (6.3mm)	1.2m (3.0m detachable)	1.2m	1.2m	1.2m
			• / •	• / —	• / —	• / —
	Plug		Gold	Gold	Gold	Gold
	Remote / Mic	— / —	• / •	• / •	• / •	• / •
	Weight	305g (w/o cord)	240g, 228 g (w/o cord)	12g (w/o cord)	20.5g (net), 7g (w/o cord)	17.5g (net), 6g (w/o cord)
Supplied Items		Carrying pouch, 6.3mm plug adaptor, detachable cords (1.2m and 3.0m)	—	Carrying case, cord clip, cord adjustment holder, earpieces (XS, S, M, L)	Carrying case, cord adjustment holder, earpieces (XS, S, M, L, XL)	Carrying pouch, cord adjustment holder, earpieces (XS, S, M, L, XL)

HEADPHONES SPORTS		BTS55	BTS35	BTS10	HS35M
		Clip	Clip	Clip	Clip
FEATURES	Driver Unit (Magnet Type: Neodymium)	9mm	9mm	14.3mm	14.3mm
	Impedance	32 ohms	32 ohms	23 ohms	TBD
	Sensitivity	—	—	—	TBD
	Max. Input (Power Handling Capacity)	—	—	—	TBD
	Frequency Response	—	—	—	TBD
	Cord	Cord Length MiniPlug (3.5mm)	—	—	1.2m
			—	—	•
	Plug		—	—	Nickel
	Remote / Mic	• / •	• / •	• / •	— / •
	Weight	22g	21g	19g	TBD
Supplied Items		USB charging cord 0.1m, carrying case, earpieces (S, L)	USB charging cord 0.1m, earpieces (S, L)	USB charging cord 0.1m	earpieces (S, M, L)
ADVANCED	Bluetooth® Wireless Tech.	Version / Operating Distance	4.1 / Up to 10m	4.1 / Up to 10m	— / —
		Supported Profiles	A2DP, AVRCP, HSP, HFP	A2DP, AVRCP, HSP, HFP	—
		Codec	SBC, AAC	SBC	—
	Playback Time with Battery / Charging Time (25°C)		6h / 90min	6h / 90min	4h 20min / 90min
	Waterproof		IPX5 equivalent	IPX5 equivalent	IPX2 equivalent

HEADPHONES HEADBAND		HTX80B	BTD5	HF400B	HF500M	HF300M
		Headband	Headband	Headband	Headband	Headband
FEATURES	Driver Unit (Magnet Type: Neodymium)	40mm	40mm	30mm	40mm	30mm
	Impedance	32 ohms (1kHz)	32 ohms (1kHz)	32 ohms	25 ohms ±15%	35 ohms ±15 %
	Sensitivity	—	—	—	110dB/mW (at 500Hz)	110dB/mW (at 500Hz)
	Max. Input (Power Handling Capacity)	—	50mW (IEC*)	—	1000mW (IEC*)	1000mW (IEC*)
	Frequency Response	—	9Hz-24kHz	—	9Hz-26kHz	10Hz-23kHz
	Cord	Cord Length MiniPlug (3.5mm)	—	—	1.2m	1.2m
			—	—	•	•
	Plug		Gold	—	Gold	Gold
	Remote / Mic	• / •	• / —	• / •	• / •	• / •
	Weight	190g	155g (w/o cord)	130g	144g, 120g (w/o cord)	124g, 98g (w/o cord)
Supplied Items		USB charging cord 0.5m	USB charging cord 0.6m	USB charging cord 0.1m	—	—
ADVANCED	Bluetooth® Wireless Tech.	Version / Operating Distance	4.1 / Up to 10m	3.0 / Up to 10m	4.1 / Up to 10m	— / —
		Supported Profiles / Codec	A2DP, AVRCP, HSP, HFP / SBC	A2DP, AVRCP, HSP, HFP / SBC	A2DP, AVRCP, HSP, HFP / SBC	—
	Playback Time with Battery / Charging Time (25°C)		24h / 3.5h	40h / 3.5h	20h / 3h	— / —

HEADPHONES IN-EAR		NJ300B	HJX6M	TCM360	TCM115	TCM55
		In-Ear	In-Ear	In-Ear	In-Ear	In-Ear
GENERAL	Driver Unit (Magnet Type: Neodymium)	9mm	12mm	9mm	9mm	14.8mm
	Impedance	16 ohms	16 ohms	14 ohms	16 ohms	25 ohms
	Sensitivity	—	103dB/mW	93dB/mW (at 1kHz)	99dB/mW	101dB/mW
	Max. Input (Power Handling Capacity)	—	100mW (IEC*)	200mW (IEC*)	200mW (IEC*)	300mW (IEC*)
	Frequency Response	—	5Hz-25kHz	6Hz-24kHz	10Hz-24kHz	10Hz-25kHz
	Cord	Cord Length MiniPlug (3.5mm)	—	1.2m	1.2m	1.2m
			—	•	•	•
	Plug		Gold	Gold	Nickel	Nickel
	Remote / Mic	• / •	• / •	• / •	• / •	• / •
	Weight	13g	6g (w/o cord)	14g, 2.5g (w/o cord)	2.5g (w/o cord)	4.3g (w/o cord)
Supplied Items		USB charging cord 0.1m, earpieces (S, M, L)	Carrying pouch, earpieces (S, M, L)	Earpieces (S, M, L)	Earpieces (S, M, L)	Earpieces (S, M, L)
ADVANCED	Bluetooth® Wireless Tech.	Version / Operating Distance	4.1 / Up to 10m	— / —	— / —	— / —
		Supported Profiles	A2DP, AVRCP, HSP, HFP	—	—	—
		Codec	SBC	—	—	—
	Playback Time with Battery / Charging Time (25°C)		4h 20min / 90min	— / —	— / —	— / —

*IEC: International Electrotechnical Commission. / Specifications are subject to change without notice. All figures given here are approximate.

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