

7.2-channel network AV receiver featuring 4K Ultra HD video compatibility with HDCP 2.2 along with advanced multi-zone speaker configurations powered by high quality discrete amp circuitry. Conveniently access music wirelessly with *Bluetooth®* from your mobile devices or utilize Wi-Fi to stream online music services and high-resolution audio files.



PANDORA



Audio Features

- 7-channel powerful surround sound
 - 90 W per channel (20 Hz - 20 kHz, 0.06% THD, 2-ch driven, 8 ohms)
 - 105 W per channel (1 kHz, 0.9% THD, 2-ch driven, 8 ohms)
 - 150 W per channel (1 kHz, 10% THD, 1-ch driven, 8 ohms)
- HD Audio format decoding: Dolby TrueHD and DTS-HD Master Audio
- Full discrete amplifier design
- Pure Direct for pure Hi-Fi sound quality enjoyment
- Burr-Brown 192 kHz / 24-bit DACs for all channels
- Low-jitter PLL circuitry helps optimize sound imaging
- Assignable amplifiers for front speaker bi-amp connection
- Intelligent assignable amplifiers for Surround Back <-> Front Presence or Zone 2
- DSD 2.8 MHz / 5.6 MHz audio playback
- FLAC or WAV 192k Hz / 24-bit audio playback
- Apple Lossless audio playback
- Compressed Music Enhancer for *Bluetooth®*

- Front panel USB input (digital connection for iPod and iPhone)
- Advanced multi-language GUI with HD Font
- HDMI CEC with versatile control from AV receiver remote control
- YPAO R.S.C. (Reflected Sound Control) sound optimization for automatic speaker setup
- HDMI front panel input for devices such as camcorders and digital cameras
- Ability to change HDMI input while in Standby Through mode
- Audio Delay for adjusting lip-sync (0-500 ms)
- Background Video feature (for Radio / USB / *Bluetooth* / AUDIO / NET / AUX input)
- Programmable SCENE buttons with direct power on (BD / DVD, TV, Net and Radio)
 - Quick and simple to use
 - HDMI CEC powers up compatible TVs and Blu-ray Disc™ players

Video Features

- 4K 60p 4:4:4 Pass through
- 4K video upscaling from analog and HDMI inputs
- HDMI (6 in / 1 out) with 3D and Audio Return Channel support
- HDCP 2.2 compliant HDMI for 4K Ultra HD content (3 in / 1 out)
- Supports Deep Color (30 / 36-bit), x.v.Color, 24 Hz refresh rate and auto lip-sync compensation
- High quality video processing with precise deinterlacing
 - Motion adaptive and edge adaptive deinterlacing
 - Multi-cadence (incl. 3-2 pull-down) detection

Surround Realism

- HD Audio decoding with CINEMA DSP 3D (17 DSP programs)
- Compressed Music Enhancer with CINEMA DSP
- Dialogue Lift ensures that dialogue comes from the center of the screen
- Dialogue Level Adjustment for proper sound balance with dialogue and vocals
- Virtual Presence Speaker function for CINEMA DSP 3D
- Virtual CINEMA FRONT provides virtual surround sound with 5 speakers in the front of the room
- Virtual Surround Back Speaker for playing 7.1-channel content with a 5.1-channel system
- YPAO Volume to ensure natural sounds even at low volume
- Extra Bass enriches powerful bass even with small speakers
- SILENT CINEMA to enjoy surround sound with headphones
- Two subwoofer outputs (simultaneous outputs)

Advanced Features

- *Bluetooth* for wireless music streaming (SBC / AAC)
- Network functions
 - Wi-Fi Built-in (802.11b / g / n)
 - Easy Wi-Fi setup i.e. iOS Wi-Fi settings sharing, WPS etc.
 - AirPlay® allows music streaming from Mac®, PC, iPod®, iPhone®, iPad®
 - AV Controller app for operating various functions from iOS or Android™ smartphones and tablets
 - Access to: Internet Radio (vTuner): MP3, WMA
 - Streaming Services (Pandora®, Rhapsody®, Spotify®, SiriusXM)
 - Music files on PC / NAS: WAV, MP3, WMA, AAC, FLAC, Apple Lossless, AIFF, DSD
 - DLNA 1.5 certified
- Wireless Direct connects a mobile device directly without home network
- Gapless playback compatibility allows play without interruption

Versatile Zone Control

- Zone 2 on / off and control on front panel
- Zone max volume and initial volume setting
- Party Mode
- Remote input / output
- Programmable +12 V trigger output

Eco-Friendly Design

- ECO mode operation for about 20%* less power consumption
 - *Compared to power consumption when ECO mode is off (Yamaha measurement)
- Auto Power Standby function with variable time setting
- Low standby power consumption of 0.1 W
- Improved network and HDMI standby power consumption

Wireless Audio Streaming and Hi-Res Audio

Bluetooth support gives you the convenience of wireless music playback, while built-in Wi-Fi simplifies installation. These two features provide easy access to countless music sources. Compatibility with FLAC / WAV / AIFF (up to 192 kHz / 24-bit), Apple Lossless (up to 96 kHz / 24-bit) and DSD 2.8 MHz / 5.6 MHz formats that you can easily play high resolution audio from USB, NAS or a networked PC.



4K Ultra HD with video upconversion and HDCP 2.2

This unit completely supports the latest in HDMI standards. It can perform 4K Ultra HD upscaling to boost a lower resolution image and supports 4:4:4 video signals for more vibrant and lifelike images. This unit adheres to the HDCP 2.2 copyright protection standards for 4K video transmission and there are multiple HDCP 2.2 compliant inputs and outputs ready (3 in / 1 out) for future system expansion.

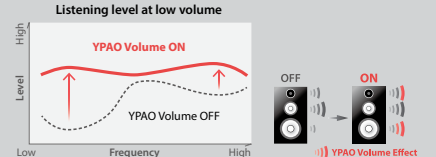
4K Ultra HD FULL SUPPORT

- 4K video at 60 frames per second supported (4:4:4)
- HDCP 2.2 (3 in / 1 out)
- 4K video upscale and/or pass-through



YPAO R.S.C (Reflected Sound Control) and YPAO Volume

YPAO measures and analyzes the room acoustics of your system to automatically adjust the various audio parameters in the listening environment. YPAO R.S.C (Reflected Sound Control) enhances the sound to studio-grade quality. YPAO Volume automatically adjusts the high and low frequency levels at any volume level so that you hear natural sounds even at low volume.



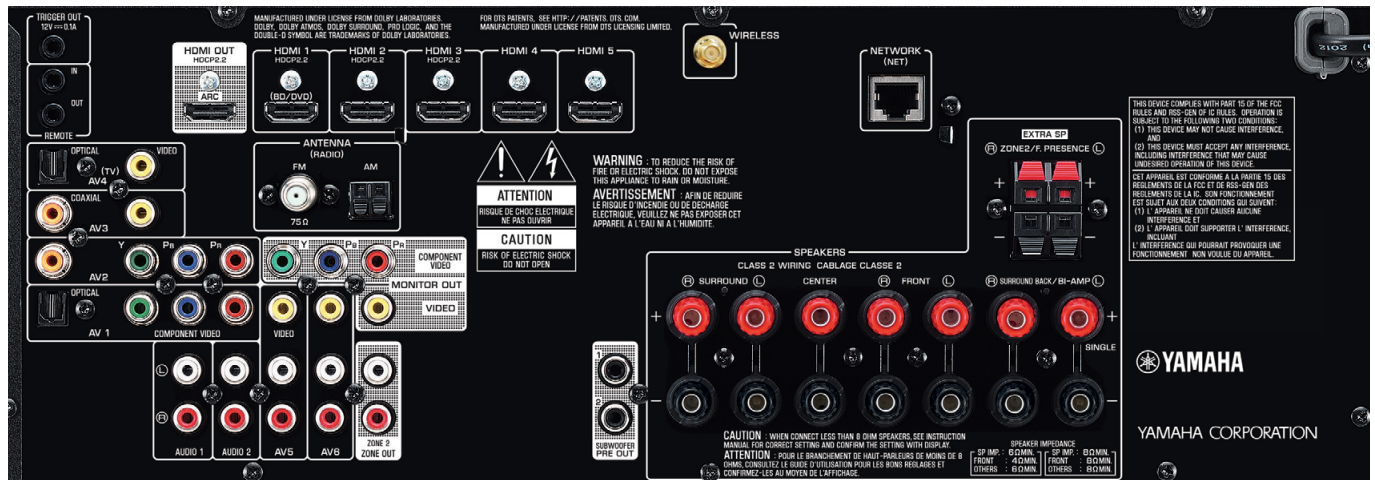
Main Specifications

Audio section

Rated output power (8 ohms, 20 Hz - 20 kHz, 0.06% THD, 2-ch driven)	
Front L/R	90 W + 90 W
Rated output power (8 ohms, 1 kHz, 0.9% THD, 2-ch driven)	
Front L/R	105 W + 105 W
Center	105 W
Surround L/R	105 W + 105 W
Surround Back L/R	105 W + 105 W
Maximum effective output power (8 ohms, 1 kHz, 10% THD, 1-ch driven)	
Front L/R	150 W + 150 W
Center	150 W
Surround L/R	150 W + 150 W
Surround Back L/R	150 W + 150 W
Dynamic power / Ch (Front L/R, 8 / 6 / 4 / 2 ohms)	
	125 / 165 / 190 / 235 W

General

Standby power consumption	
HDMI Control off, Standby Through off	0.1 W
HDMI Control on, Standby Through on	1.3 W
Network Standby on (Wired)	2.4 W
Dimensions (W x H x D)	
	17-1/8" x 6-3/4" x 14-3/8"
	17-1/8" x 9-1/4" x 14-7/8" (with antenna)
Weight	22.1 lbs.



Extensive Connections

Inputs	
HDMI*1 (audio input assignable)*2	6
HDMI (HDCP 2.2 compatible)	1
Network (Ethernet / Wi-Fi)	1 / 1
USB*1	1
USB*2	1
Radio antenna (FM / AM)	1 / 1
Optical digital	2
Coaxial digital	2
Analog audio	4
Component video (audio input assignable)	2
Composite video	4

*1 Front HDMI input is not assignable.

*2 Including front panel terminals.

* "Made for iPod" and "Made for iPhone" mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod or iPhone may affect wireless performance. AirPlay®, iPad, iPhone, iPod, iPod classic, iPod nano, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. • The **Bluetooth**® word mark and logos are registered trademarks owned by **Bluetooth SIG, Inc.** and any use of such marks by Yamaha Corporation is under license. Other trademarks and trade names are those of their respective owners. • Spotify and Spotify logo are registered trademarks of the Spotify Group. • Pandora and Pandora Internet Radio logo are registered trademarks or trademarks of Pandora Media, Inc. in the United States and/or other countries. • Rhapsody and the Rhapsody logo are registered trademarks of Rhapsody International, Inc. • SIRIUS, XM and all related marks and logos are trademarks of Sirius XM Radio Inc. and its subsidiaries. All rights reserved. Service not available in Alaska and Hawaii. • The Wi-Fi CERTIFIED Logo is a certification mark of the Wi-Fi Alliance. The Wi-Fi Protected Setup Identifier Mark is a mark of the Wi-Fi Alliance. • DUNA™ and DUNA CERTIFIED™ are trademarks or registered trademarks of Digital Living Network Alliance. All rights reserved. Unauthorized use is strictly prohibited. • Dolby, Pro Logic, and the double-D symbol are registered trademarks of Dolby Laboratories. • For DTS patents, see <http://patents.dts.com>. Manufactured under license from DTS Licensing Limited. DTS-DTS-HD, the Symbol, & DTS and the Symbol together are registered trademarks, and DTS-HD Master Audio is a trademark of DTS, Inc. © DTS, Inc. All Rights Reserved. • HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries. • Burr-Brown products are trademarks of Texas Instruments, Inc. • "x.v.Color" is a trademark of Sony Corporation. • CINEMA DSP is a trademark of Yamaha Corporation. • SILENT CINEMA is a trademark of Yamaha Corporation. • Product designs and specifications are subject to change without notice.

Outputs	
HDMI (HDCP 2.2 compatible)	1
Component video monitor	1
Composite monitor	1
Speaker*3/*4	7-ch / 9-terminals
Subwoofer	2 x mono
Headphone jack	1

*3 Assignable for surround back L/R to bi-amp (front L/R).

*4 Extra speaker terminals are assignable to Zone 2 or Presence.

Others	
Zone 2 audio out	1
Remote In / Out	1 / 1
+12 V trigger out	1