

New Digital Wireless Microphone System for
Hybrid Conferences in Education and Business



A High Quality Digital Wireless Microphone System for Highly Productive Lectures & Meetings

We know that regardless of whether your end user is teaching a class, making a presentation, or participating in hybrid in-person/virtual conference or meeting, the technology is always second to the content. Panasonic developed this product line with end user feedback, featuring simplified and intuitive controls so the end user can be confident that the technology will work the way they want it to and not get in the way of what they want to say.



1.9GHz Digital Wireless Microphone System



● Optimized for Dialog Clarity & Speech Intelligibility

Panasonic's 1.9 GHz Digital Wireless Microphone System was developed for higher education and enterprise in mind by focusing on a wider frequency range (100 Hz – 15 kHz) vs. the human voice with built-in noise suppression technology and a low cut filter. This provides – superior dialog clarity, wirelessly.

● FCC Compliant Wireless Transmission (1.9 GHz)

Why settle for wireless transmission on the shrinking UHF spectrum? Panasonic's digital wireless microphone system operates in the 1.9 GHz band using the DECT protocol, which is out of scope for current and near-future FCC restrictions on wireless spectrum. 1.9GHz is within FCC compliance, and is relatively low in signal saturation, providing free and clear operation.





● Adjustable Range Antenna

Panasonic's wireless microphone antenna features an adjustable range with four settings so that you can cover just the area where wireless microphones are needed instead of blasting your facility or campus with wireless signals past the location of the room the gear is being used in.

● Durable, Backed by a 3-Year Warranty

Panasonic has a legacy of developing and delivering ruggedized products to meet the needs of education and business, and our digital wireless microphone system is no exception. Don't let the weight of the product fool you – just like Panasonic's Toughbook laptop computers, this digital wireless microphone system was developed to be lightweight yet stand up to higher education and corporate as well as rental and staging environments.

Product Lineup

 Wireless Handheld Microphone WX-ST200	 Lavalier Microphone+ Wireless Bodypack WX-ST400	 Lavalier Microphone WX-SM410	 Desktop Charging Console WX-SZ200	 Wireless Antenna WX-SA250	 Wireless Receiver (2 ch) WX-SR202	 Wireless Receiver (4 ch) WX-SR204	 Expansion Wireless Receiver (4 ch) WX-SE200
 18 inch Gooseneck Microphone (for WX-ST600 only) WM-KG645	 Wireless Desktop Transmitter (for Gooseneck Microphone) WX-ST600	 Wireless Microphone (Boundary type) WX-ST700	 Networked Desktop Charger WX-SZ600	 Wireless Receiver (2 ch) WX-SR202DN	 Wireless Receiver (4 ch) WX-SR204DN	 Expansion Wireless Receiver (4 ch) WX-SE200DN	

Wireless Microphone System

This system is engineered from the ground up to provide a consistent audio experience regardless of whether your end users are physically in the room or attending a meeting or class remotely. Panasonic's 1.9 GHz Digital Wireless Microphone System solves several problems with today's hybrid in-person/remote experiences.



High-Quality Sound

Panasonic's new wireless gooseneck and boundary unidirectional microphones provide clear sound capture and the DECT wireless system ensures dialog clarity even in hybrid conferences with a large number of attendees.

These two new wireless microphone additions include two modes of operation – Always On (for a hands free experience) or Push-To-Talk (for conferences & panels with larger active participants) In addition, Panasonic has included a smart buffer which prevents the beginning of the speech from being cut off when the user starts to speak from standby with the push-to-talk button prevents the beginning of the conversation from being cut off.

Microphone and Camera Linkage in Conference Mode

Panasonic's new wireless gooseneck and boundary microphones can be linked to a PTZ camera by setting the receiver to conference mode*. The conference mode can detect the microphone in a talk state and point the camera at the speaker registered at the preset point**.

*Microphone system must be put in Push-To-Talk (PTT) mode.
**For more information on conference mode, see page 9.

Long Operating Time

Panasonic's new wireless gooseneck and boundary microphones can be powered by two AA alkaline or NI-MH rechargeable batteries. Regardless of which type of battery you choose, these wireless microphones can last approx. 13 hours before needing to be charged, which is basically a full day of meetings. Charge the mics overnight or in-between meetings using Panasonic's WX-SZ600 Networked Charger.



18 inch Gooseneck Microphone (for WX-ST600 only)

WM-KG645

Designed for use with the WX-ST600 wireless tabletop transmitter, this 18 inch gooseneck microphone puts the unidirectional electret microphone at the correct height for the speaker, eliminating the need for them to bend forward.

- Unidirectional electret condenser microphone
- Directional characteristic: Cardioid
- Gooseneck length: 18-5/16 inches (465 mm)
- XLR3-M Cannon Connector (for insertion into WX-ST600 wireless tabletop transmitter)
- Phantom power is supplied by the connected wireless WX-ST600 tabletop transmitter.

Wireless Desktop Transmitter (for Gooseneck Microphone)

WX-ST600

1.9 GHz DECT Wireless Tabletop Transmitter designed for the Panasonic WM-KG645 provides stable sound capture and transmission with good sound quality and dialog clarity in a wide area with little interference.

- Designed for Panasonic's 18 inch Gooseneck Microphone
- Two operation modes: Always ON or Push-To-Talk (PTT)
- The talk switch can be used to toggle (ON/OFF) or PTT (talk while held down).
- Talk ON/OFF can also be controlled externally (receiver side).
- 4-level volume indicator
- Battery life: Approx. 13 Hours (Ni-MH AA x 2)
- 3.5 mm audio input (monaural mix) for transmission of external sound sources.

Wireless Microphone (Boundary type)

WX-ST700

1.9 GHz DECT Digital Wireless Boundary Microphone provides stable sound capture and transmission with good sound quality and high speech intelligibility in a wide area with little interference.

- Unidirectional electret condenser microphone
- Two operation modes: Always ON or Push-To-Talk (PTT)
- The talk switch can be used to select (ON/OFF) or PTT (talk while held down).
- Talk ON/OFF can also be controlled externally (receiver side).
- 4-level volume indicator
- Battery life: Approx. 13 Hours (Ni-MH AA x 2)
- 3.5 mm audio input (monaural mix) for transmission of external sound sources.

Networked Desktop Charger

WX-SZ600

This universal charger can charge any combination of four Panasonic mics and features a network connection for remote monitoring so your IT team doesn't have to run around to physically check all of the rooms at the end of the day in order to ensure the microphones are being charged.

- This charger can charge up to four WX-ST600 or WX-ST700 units simultaneously. Current WX-ST200 and WX-ST400 models can also be charged.
- Contactless charging – no metal leads to align.
- The network function allows the status of each charging slot to be checked remotely using operation software**.

**API available; Control Modules for Crestron, Extron, and Q-SYS also available.

Example 1 Hybrid In-Person/Virtual Classrooms

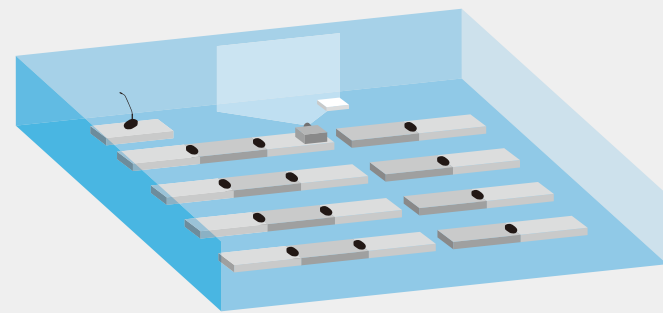
For hybrid lectures in a lecture hall, an instructor can use a gooseneck and wireless boundary microphones at each student's seat. This allows the instructors' voice as well as the students' voice to be heard clearly online, and allows online students to accurately grasp the content of the lecture.



System Configuration Example

Wireless Desktop Transmitter	WX-ST600	1
Gooseneck Microphone	WM-KG645	1
Wireless Microphone (Boundary type)	WX-ST700	12
Wireless Receiver (4 ch)*	WX-SR204 (WX-SR204DN)	1
Wireless Antenna	WX-SA250	1
Battery Charger	WX-SZ600	4

*It needs to be set to conference mode.



Example 2 Board Meetings

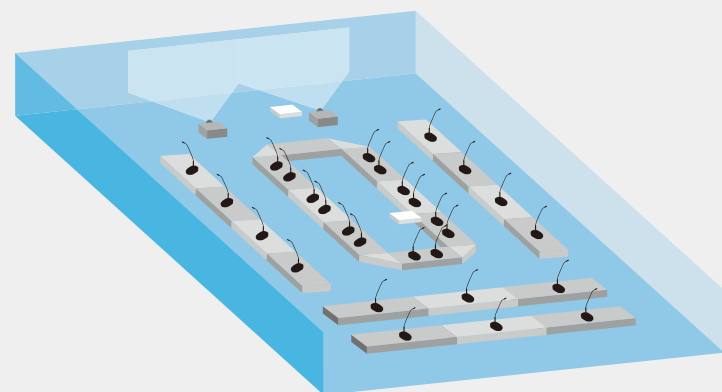
In large hybrid in-person/virtual board meetings with more than 20 people attending in person, it is necessary to ensure that what is said in the conference room is also conveyed to the remote attendees. By placing a gooseneck and wireless transmitter at each participant's seat, the speaker's voice can be heard clearly online, so no important conference remarks are missed.



System Configuration Example

Wireless Desktop Transmitter	WX-ST600	28
Gooseneck Microphone	WM-KG645	28
Wireless Receiver (4 ch)*	WX-SR204 (WX-SR204DN)	1
Expansion Wireless Receiver*	WX-SE200 (WX-SE200DN)	1
Wireless Antenna	WX-SA250	2
Battery Charger	WX-SZ600	7

*It needs to be set to conference mode.



LED Indicators to Visually Check Connection Status and Transmit Volume Level

The WX-ST700 boundary microphone and WX-ST600 wireless transmitter are equipped with LED indicators to visually check the microphone connection status and volume, making it easy to notice a poor connection or sound quality. This allows for safe use during important meetings.

WX-ST700

1 Charge indicator (USB)

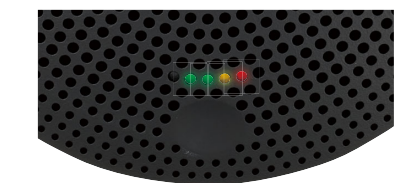


2 Talk indicator

3 Status indicator (Power indicator)



4 Talk indicator



5 Mic input level meter

All off : No input
 On (1 green) : Low input level
 On (2 green) : Appropriate input level
 On (orange) : Close to peak
 On (red) : Peak

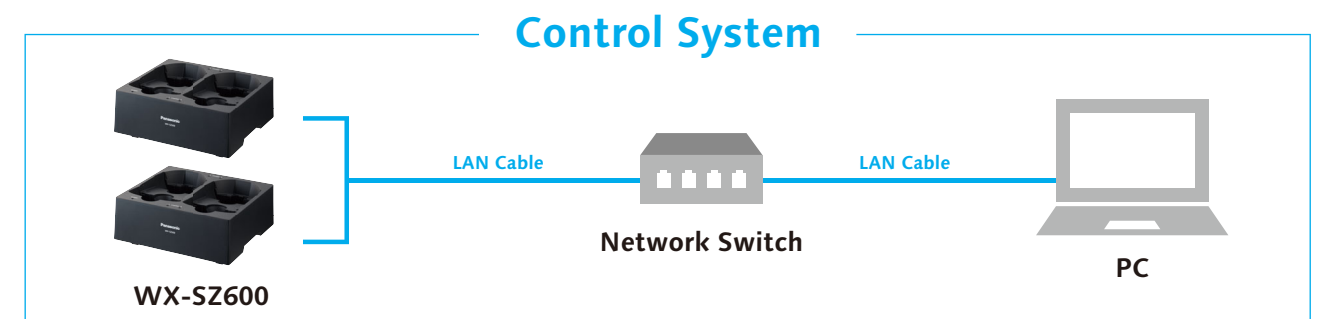


6 Charge indicator (Charger)

Network Function to Remotely Check Charging Status

The WX-SZ600 charger has network capabilities, allowing users to remotely check the status of each charging slot from an operational support software or via a compatible 3rd party control system***.

***Crestron, Extron, Q-SYS modules available



Wireless Receivers



We Speak Dante and AES67: Introducing New Dante Wireless Microphone Receivers

You asked for them so here they are – Three new wireless microphone receivers with Dante connectivity. All 3 new models feature Dante primary and secondary connections and support for AES67 mode.



Wireless Receiver (2-channel)
WX-SR202DN



Wireless Receiver (4-channel)
WX-SR204DN



Expansion Wireless Receiver (4-channel)
WX-SE200DN



Wireless Receiver WX-SR202DN/ WX-SR204DN

2-channel and 4-channel Dante wireless receivers for use with any of Panasonic's 1.9 GHz DECT wireless microphone transmitters (WX-ST200, WX-ST400, WX-ST600, WX-ST700). Features eight x RJ45 ports for up to eight WX-SA250 antennas (one antenna required to be connected to each receiver).

- WX-SR202DN has two channels for wireless microphones / WX-SR204DN has four channels for wireless microphones
- Dante output has primary and secondary ports, and the audio output can be selected according to the connected devices, with channel-specific output and mixing output as Dante output, and mixing output as analog output.
- Compatible with Dante Domain Manager
- AES67 Mode support
- Eight RJ45 connections for up to eight antennas
- One RJ45 connection for LAN (for control via third party control system)
- WX-SR204DN ONLY: One RJ45 EXT port for expansion receiver

Expansion Wireless Receiver WX-SE200DN

Add up to four additional channels to a four channel wireless microphone system without the need for an additional antenna in the room with this easy to use expansion receiver (WX-SR204DN required).

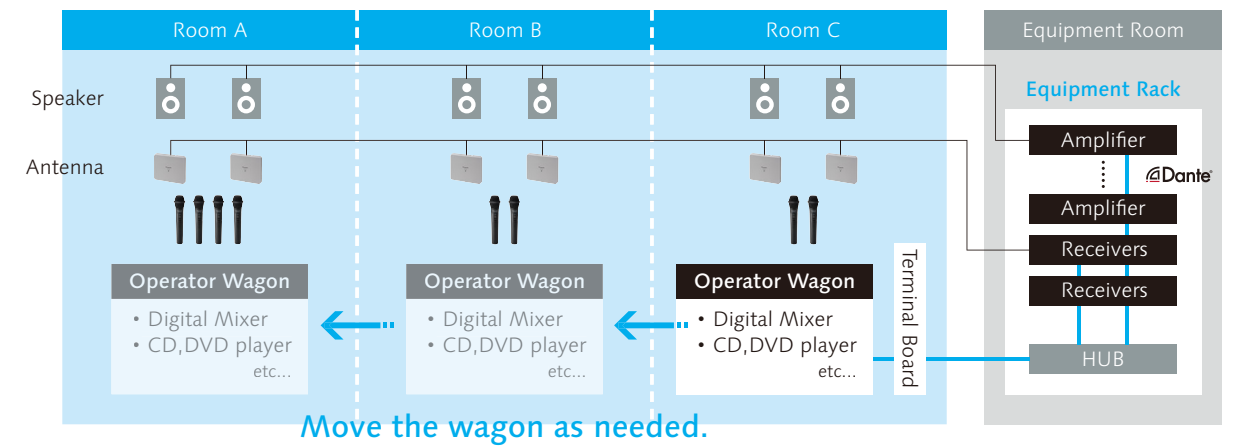
- One RJ45 connection (to "EXT" port on WX-SR204DN four channel receivers).
- Dante output has primary and secondary ports, and the audio output can be selected according to the connected device, with separate channel output and mixing output as Dante output, and mixing output as analog output.
- Compatible with Dante Domain Manager
- AES67 Mode support

Wire Saving

The advantage of Dante, which transmits signals over LAN cables, is wire saving. Conventional analog lines require a cable for each channel from the wireless receiver to the mixer and from the mixer to the amplifier, but Dante can be operated with only a cable for each receiver and amplifier. This greatly reduces the number of cables required, making multi-channel conferences and lectures easier to handle.

Split Conference Room Operation with Long-Distance Transmission

Another advantage of Dante is minimal degradation in sound quality even with long-distance transmission. Even in a split conference hall where wireless receivers and amplifiers are all installed in an equipment room far from the conference room to manage multiple conference rooms, Dante can be operated simply and trouble-free by moving the operator wagon for each meeting.



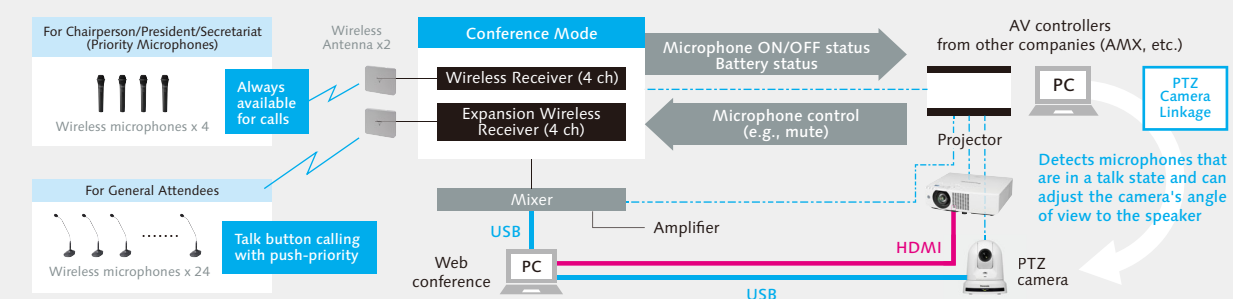
Conference Mode

Up to 48 microphones can be registered and up to eight microphones can be used simultaneously*. To prevent confusion due to an increase in the number of speakers during multi-channel operation, priority microphone settings and a microphone restriction function are also provided, allowing even large groups to proceed smoothly with conferences.

*Requires interlocking with the talk switch.

28 wireless microphones (8 microphones used simultaneously)

In conference mode, one wireless receiver (4-channel) can register 24 microphones. When priority microphones are registered, the priority microphones occupy one channel.



Wireless Desktop Transmitter (for gooseneck microphone)

WX-ST600



Wireless	Used frequencies	1921.536 MHz to 1928.448 MHz
	Antenna	Internal antenna
Microphone input connector		XLR3-F (Output DC12V)
Frequency response		100 Hz to 15 kHz
External input connector		-14 dBV line-in Ø3.5 mm stereo mini jack (Monaural mix)
connector for charge (USB Type-C)		USB Type-C (Battery charging and power supply to WX-ST600) *WX-ST600 can be used when powered by USB Type-C Use a USB power adapter of DC 5 V 500 mA or more for power supply
Battery type		Rechargeable battery: Ni-MH AA-size battery x 2 Dry-cell battery: alkaline AA-size battery x 2
Battery runtime Assuming continuous use at a 25 °C (77 °F) temperature with Panasonic batteries		Approx. 13 hours (Ni-MH AA-size battery BK-3MCCA)
Front indicator		Talk indicator, Input level meter, Charge indicator (Charger)
Rear indicator		Charge indicator (USB), Talk indicator, Status indicator
Operating temperature range		5 °C to 35 °C (41 °F to 95 °F)
Operating humidity range		10 % to 90 % (no condensation)
Dimensions		88 mm (W) x 46 mm (H) x 135 mm (D) (3-15/32 inches x 1-13/16 inches x 5-5/16 inches)
Mass		280 g (0.62 lb) (including LR6PA alkaline battery)
Finish		Black finish

Gooseneck Microphone (for WX-ST600 only)

WM-KG645



Microphone type	Unidirectional electret condenser microphone
Directional characteristic	Cardioid
Frequency response	40 Hz to 20 kHz
Sensitivity	-40 dB (10 mV) (0dB=1V/Pa, 1kHz)
Output impedance	600 Ω ±30 %
Maximum input sound pressure level	127 dB SPL (1 kHz at 1 % THD)
Dynamic range	103 dB (1 kHz at Max SPL)
Power	12 to 48 V DC Phantom Power, 4 mA
Microphone output connector	3Pins XLR-M Pin1:Earth, Pin2:Hot, Pin3:Cold
Operating temperature range	5 °C to 35 °C (41 °F to 95 °F)
Operating humidity range	10 % to 90 % (no condensation)
Dimensions	465 mm (L) x Ø19 mm (Connector) x Ø12.8 mm (Microphone) (18-5/16 inches x 3/4 inches x 1/2 inches)
Mass	160 g (0.35 lb)(including LR6PA alkaline battery)
Finish	Black finish

Wireless Microphone (Boundary type)

WX-ST700



Wireless	Used frequencies	1921.536 MHz to 1928.448 MHz
	Antenna	Internal antenna
Microphone type		Unidirectional electret condenser microphone
Sound collection range		120 degree range symmetrically from the front
Max SPL		130 dB SPL (Sensitivity setting [SENS L])
Frequency response		100 Hz to 15 kHz
External input connector		-14 dBV line-in Ø3.5 mm stereo mini jack (Monaural mix)
connector for charge (USB Type-C)		USB Type-C (Battery charging and power supply to WX-ST700) *WX-ST700 can be used when powered by USB Type-C Use a USB power adapter of DC 5 V 500 mA or more for power supply
Battery type		Rechargeable battery: Ni-MH AA-size battery x 2 Dry-cell battery: alkaline AA-size battery x 2
Battery runtime Assuming continuous use at a 25 °C (77 °F) temperature with Panasonic batteries		Approx. 13 hours (Ni-MH AA-size battery BK-3MCCA)
Front indicator		Talk indicator, Input level meter, Charge indicator (Charger)
Rear indicator		Charge indicator (USB), Talk indicator
Operating temperature range		5 °C to 35 °C (41 °F to 95 °F)
Operating humidity range		10 % to 90 % (no condensation)
Dimensions		88 mm (W) x 35 mm (H) x 135 mm (D) (3-15/32 inches x 1-3/8 inches x 5-5/16 inches)
Mass		205 g (0.45 lb) (including LR6PA alkaline battery)
Finish		Black finish

Battery charger

WX-SZ600



Power		AC120 V 60 Hz (Included original AC adaptor)
Power consumption		12 W maximum
Charging ports		4 (2: flat surface)
Charging time		Approx. 6 hours :WX-ST200, WX-ST400 Approx. 10 hours:WX-ST600, WX-ST700 (assuming external temperature of 25 °C (77 °F), Ni-MH AA-size battery BK-3MCCA)
Display (indicators)		POWER indicator CHARGE indicators (on either charging port)
Network connector	Connector	RJ-45
	Transmission method	100BASE-TX
Operating temperature range		5 °C to 35 °C (41 °F to 95 °F)
Operating humidity range		10 % to 90 % (no condensation)
Dimensions	Charger	200 mm (W) x 83 mm (H) x 180 mm (D) (7-7/8 inches x 3-9/32 inches x 7-3/32 inches) (except protuberances)
	AC adaptor	115 mm (W) x 36 mm (H) x 57 mm (D) (4-17/32 inches x 1-13/32 inches x 2-1/4 inches) (except DC cable and power cord)
Mass	Charger	Approx. 610 g (1.34 lb) (except AC adaptor and power cord)
	AC adaptor	Approx. 230 g (0.51 lb) (except power cord)
Finish	Charger	Black finish

Wireless Receiver (2-channel)

WX-SR202DN



Wireless Receiver (4-channel)

WX-SR204DN



Power		AC120 V 60 Hz
Power consumption		58 W
Frequency response		50 Hz to 15 kHz
Wireless antenna connectors	Maximum connections	8
	Connector	RJ-45
Extension receiver output connector	Compatible cables	Cat 5, Cat 5e, or Cat 6 straight (non-crossover) LAN cable
	No. of connectors	0 (WX-SR202DN) 1 (WX-SR204DN)
External input connector	Connector	RJ-45
	Compatible cables	Cat 5, Cat 5e, or Cat 6 straight (non-crossover) LAN cable
Mix output connector	Connector	Euroblock connector
	Input characteristic	-10 dBV equilibrium 600 Ω
Dante Primary connector	Connector	Euroblock connector
	Output characteristic	-10 dBV equilibrium 600 Ω
Dante Secondary connector	S/N	64 dB or more
	Connector	RJ-45
Network connector	Connection network	Dante network
	Output type	ch1/ch2/Mix (WX-SR202DN) ch1/ch2/ch3/ch4/Mix (WX-SR204DN)
Connector for [SET]	Indicators	LINK/ACT (Status), 1G (Speed)
	Connector	RJ-45
Display (indicators)	Connection network	Dante network
	Output type	ch1/ch2/Mix (WX-SR202DN) ch1/ch2/ch3/ch4/Mix (WX-SR204DN)
Operating temperature range	Indicators	LINK/ACT (Status), 1G (Speed)
	Connector	RJ-45
Operating humidity range	Connection network	Dante network
	Output type	ch1/ch2/Mix (WX-SR202DN) ch1/ch2/ch3/ch4/Mix (WX-SR204DN)
Dimensions	Indicators	LINK/ACT (Status), 1G (Speed)
	Connector	RJ-45
Mass	Transmission method	100BASE-TX
	Connector	USB micro type B
Finish	Common	Power, Antennas 1 to 8, Sync, Main, Remote
	Per-channel	RF level (5 steps), Audio level/Mute, Microphone Battery, Register
	Operating temperature range	0°C to 45 °C (32°F to 113 °F)
	Operating humidity range	0% to 90% (no condensation)
	Dimensions	Approx. 420 mm (W) x 44 mm (H) x 250 mm (D) (16-9/16 inches x 1-3/4 inches x 9-13/16 inches) (Not considering rubber feet, knobs, and other protuberances)
	Mass	Approx. 2.9 kg (6.39 lb)
	Finish	Black finish

Expansion Wireless Receiver (4-channel)

WX-SE200DN



Power		AC120 V 60 Hz
Power consumption		12 W
Frequency response		50 Hz to 15 kHz
Extension receiver input connector	No. of connectors	1
	Connector	RJ-45
External input connector	Compatible cables	Cat 5, Cat 5e, or Cat 6 straight (non-crossover) LAN cable
	Connector	Euroblock connector
Mix output connector	Input characteristic	-10 dBV equilibrium 600 Ω
	Connector	Euroblock connector
Dante Primary connector	Output characteristic	-10 dBV equilibrium 600 Ω
	S/N	64 dB or more
Dante Secondary connector	Connector	RJ-45
	Connection network	Dante network
Network connector	Output type	ch1/ch2/ch3/ch4/Mix
	Indicators	LINK/ACT (Status), 1G (Speed)
Connector for [SET]	Connector	RJ-45
	Transmission method	100BASE-TX
Display (indicators)	Common	Power, status
	Per-channel	RF level (5 steps), Audio level/Mute, Microphone Battery, Register
Operating temperature range		0°C to 45 °C (32°F to 113 °F)
Operating humidity range		0% to 90% (no condensation)
Dimensions		Approx. 420 mm (W) x 44 mm (H) x 250 mm (D) (16-9/16 inches x 1-3/4 inches x 9-13/16 inches) (Not considering rubber feet, knobs, and other protuberances)
Mass		Approx. 2.9 kg (6.39 lb)
Finish		Black finish

SOFTWARE

Software for Using Your Devices

This software connects your wireless receiver to a computer with a LAN cable to check the connection and operations of your wireless receiver, wireless antenna and microphone(s)

Free

Three programs provide more options when designing your system, configuring the settings and using your devices. Simply connect your system to a computer and you're ready to go.

Operations Support Software

Main Functions

System Display

- Shows whether your wireless receiver and antenna are connected
- Shows whether your system is synced
- Allows you to check the signal strength, volume, battery level, etc. of the microphones

System Settings

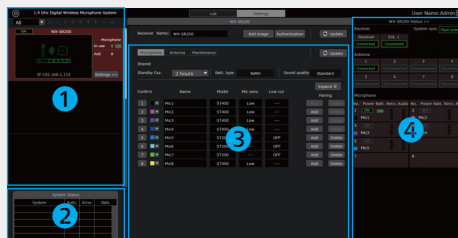
- Allows you to pair microphones and check or delete pairings
- Allows you to select an antenna field (transmitted power)
- Allows you to configure network settings

Maintenance

- Maintain the basic spectrum analyzer, DECT slot monitor, walk test logs, software version upgrades, etc.

Example Screen

- 1 Room list (thumbnail display)
- 2 Alert display area
- 3 Tool area to configure system settings for each room and perform maintenance
- 4 System display area for each room

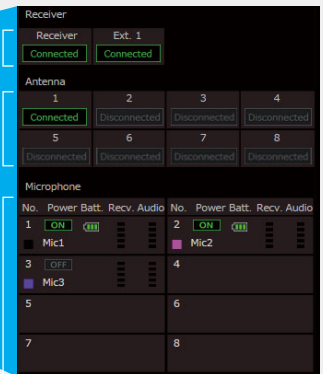


Receiver status

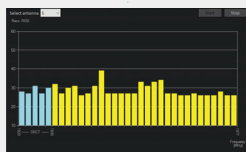
Antenna status

Microphone status

- Power
- Battery level
- Signal strength
- Volume

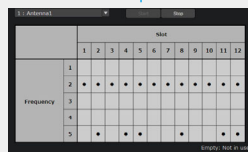


Toggle screens



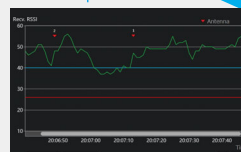
Basic spectrum analyzer

The program monitors the signal strength in the frequency bands near those used for DECT to detect sources such as mobile phone towers that are affecting the system.



DECT slot monitor

You can monitor the congestion level of the radio waves used by DECT.



Walk tests

You can perform a walk test by walking around with the microphone and checking that the wireless antenna receives a consistent signal from all areas.

Easy System Design Tool Software

- This tool helps you design your system before purchasing it.
- You can enter information such as the layout of your room(s) and the number of microphones you need and simulate signal interference.



More Information ▶ na.panasonic.com/us/audio-video-solutions/professional-audio

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Panasonic
CONNECT

Important

- Safety Precaution : Carefully read the Important Information, Installation Guide and operating instructions before using this product.
- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

- Masses and dimensions are approximate.
- Specifications are subject to change without notice.

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All information included here is valid as of May 2022.