ULX-D®
DIGITAL WIRELESS





GENERATIONS AHEAD

Shure ULX-D Digital Wireless offers uncompromising 24-bit audio clarity and extremely efficient RF performance with single, dual, and quad channel receivers for any size professional and installed sound reinforcement application. Scalable, intelligent hardware delivers uncompromising digital wireless performance, with a wide selection of trusted Shure microphones to choose from. And with the latest additions, the ULX-D boundary and gooseneck transmitters, two additional form factors – ideal for large meetings at conference and convention centers, or for AV conferencing where DECT spectrum is not an option – complement the range.

Unmatched spectrum efficiency enables a dramatic increase in the number of simultaneous active transmitters on one TV channel, with rock-solid signal over the entire range. Optional rechargeable accessories eliminate the need for disposable batteries while offering extended run time and metering accuracy in hours and minutes. For secure transmission, all ULX-D components include AES-256 encryption. Generations ahead of any other available system in its class, ULX-D brings a new level of performance to professional and installed sound reinforcement.

Breakthrough Technologies

ULX-D® Digital Wireless represents an incredible advancement in wireless performance. Shure innovation brings to market new features and technologies that dramatically increase spectrum efficiency, dependability, and signal routing convenience.

Transparent 24-Bit Digital Audio

Signal stability with no audio artifacts extends over the entire 100 meter (300 feet) line-of-sight range using standard supplied dipole antennas.

Networked Control

Ethernet networking enables streamlined setup across multiple receivers, Wireless Workbench integration, frequency coordination via Axient Spectrum Manager, AMX® and Crestron Control® as well as Dante™ digital networked audio.

Lithium Ion Rechargeability

Lithium Ion rechargeability provides up to 11 hours of use on a single charge, while displaying battery life in hours and minutes accurate to 15 minutes.

High Density Mode

Optimizes the system by running at 1mW RF transmit power and reducing the modulation bandwidth. The result is nearly three times the number of useable frequencies, enabling up to 47 systems in an open 6MHz TV channel.

Bodypack Frequency Diversity *(Dual/Quad only)*

The signals from a common source via two bodypack transmitters with different frequencies are routed to receiver's audio outputs. In case of RF interference, switching between channels occurs in milliseconds, without interrupting the audio.

Signal Stability

The 24-bit / 48 kHz digital audio delivers incredibly clear and accurate capturing of source material. It offers a wide frequency range with flat response for superb low range and transient response.

Advanced Encryption

The AES-256 encryption provides enhanced privacy – for installations where security is key. A new, unique, randomized encryption key is generated every time encryption is enabled.

Scalable Hardware

ULX-D receivers are available in single, dual and quad channel configurations, along with a wide selection of Shure microphones to accommodate any size installation.

Form Factors

ULX-D bodypack and handheld transmitters provide complete mobility for presenters, while boundary and gooseneck base transmitters accommodate meeting rooms with flexible seating layouts.

Audio Summing *(Dual/Quad only)*

Combining of selected audio channels to be routed to all selected outputs and allows the receiver to function as a 2 or 4 channel mixer. All XLR outputs of the selected channels provide the summed audio.

Total Command of Shure Networked Audio Hardware

Shure SystemOn Audio Asset Management Software was developed for managing mission critical or large-scale deployments of Shure audio hardware, including ULX-D®, across corporate and higher education networks from one central platform.

SystemOn tracks audio levels, battery life and RF/spectrum status in real time, enabling IT administrators and AV technicians to monitor and control Shure hardware devices remotely using a laptop, smartphone or tablet.

Comprehensive Control for Shure Networked Wireless Systems

Shure Wireless Workbench® 6 software offers comprehensive control for networked Shure wireless systems and provides a rich interface to manage every facet of a performance over the network.

- Perform real-time plotting of scan data from networked Shure scanning hardware in a rich graphical environment
- Monitor and make live remote adjustments to frequency, audio level, RF muting and other equipment settings
- Configurable interference and hardware alerts
- Assign compatible frequencies to networked Shure wireless devices
- Automatically calculate backup frequencies

System Interaction Over WiFi via iOS Devices

Command and control your wireless on the go and roam the performance space while monitoring key Shure wireless system parameters in real time from any iOS device.

- Real-time, precision monitoring of critical device parameters, including:
  - RF level metering
  - Audio level metering
  - Transmitter battery level
  - Frequency Assignments with band, group and channel info
  - RF interference indicator
  - Encryption status
  - Frequency diversity status

ULX-D® Digital Wireless Receivers

ULXD4
Digital Wireless Receiver

- 20 Hz – 20 kHz frequency range with flat response
- Greater than 120 dB dynamic range
- 60 dB of adjustable system gain per channel
- Digital predictive switching diversity
- Up to 64 MHz tuning range (region dependent)
- Up to 17 active transmitters in one 6 MHz TV channel
- High Density mode enables up to 47 active transmitters in one 6 MHz TV channel
- Rock-solid signal stability with no audio artifacts over the entire range
- Optimized scanning automatically prioritizes and delivers the cleanest frequencies
- AES-256 encryption equipped for secure wireless transmission
- Ethernet networking for streamlined setup across multiple receivers
- Wireless Workbench® 6 Software for advanced coordination and control
- AXT600 Axient® Spectrum Manager compatibility
- Comprehensive 3rd party control and monitoring across subnets
- Rugged metal housing
- Remoteable ½ wave antennas
- Furnished rack hardware

Dante™

Digital Audio Networking Over Ethernet

Dante is a total solution for transporting low latency uncompressed audio over standard IP Ethernet networks with sample accurate synchronization, automatic device discovery, and easy to use signal routing.

- Send multichannel audio from ULX-D receivers to Dante-equipped mixers over a single ethernet cable
- Auto-discovery and easy audio networking with Dante Controller
- Compatible with ULXD4D & ULXD4Q receivers



ULXD4D
Dual Channel Digital Wireless Receiver

ULXD4Q
Quad Channel Digital Wireless Receiver

- 20 Hz – 20 kHz frequency range with flat response
- Greater than 120 / 130 dB (analog / digital) dynamic range
- 60 dB of adjustable system gain per channel
- Digital predictive switching diversity
- Up to 64 MHz overall tuning range (region dependent)
- Up to 17 active transmitters in one 6 MHz TV channel
- High Density mode enables up to 47 active transmitters in one 6 MHz TV channel
- Rock-solid signal stability with no audio artifacts over the entire range
- Optimized scanning automatically prioritizes and delivers the cleanest frequencies
- AES-256 encryption equipped for enhanced transmission security
- Ethernet networking for streamlined setup across multiple receivers
- Wireless Workbench 6 Software for advanced coordination and control
- AXT600 Axient® Spectrum Manager compatibility
- AMX® and Crestron Control®
- Rugged metal housing
- Remoteable ½ wave antennas
- Furnished rack hardware
- The 1RU metal chassis houses two, respectively four independent receivers, each with their own audio and RF meters, gain control and XLR outputs.
- Internal power supply
- RF cascade ports
- Bodypack Frequency Diversity safeguards against loss of audio signal caused by RF interference or by power loss in a transmitter.
- Yamaha® device ID allows simplified channel patching on CL consoles
- Audio Summing — Combining of selected audio channels to be routed to all selected outputs and allows the receiver to function as a 2 or 4 channel mixer.
- Bodypack Frequency Diversity and Audio Summing are complementary features and can be simultaneously active.
- Dante™: Digital audio is carried over standard Ethernet using shielded Cat5e (or higher) cables.

"YAMAHA" is a registered trademark of Yamaha Corporation.



ULXD4 **Digital Wireless Receiver**



ULXD4D **Dual Channel Digital Wireless Receiver**



ULXD4Q **Quad Channel Digital Wireless Receiver**

ULX-D® Digital Wireless Transmitters

ULXD1
Bodypack Transmitter

ULXD2
Handheld Transmitter

- 24-bit/48 kHz digital audio
- Flat frequency response (actual response is microphone dependent)
- >120 dB dynamic range
- AES-256 encryption for applications demanding enhanced security
- No transmitter gain adjustments needed — optimized for any input source
- High Density mode enabled via IR sync
- Shure SB900A lithium-ion rechargeable battery provides over 11 hours of battery life, precision metering, and zero memory effect
- External charging contacts for docked charging (with the SBC200 Dual Docking Charger)
- Compatible with standard AA alkaline batteries
- Backlit LCD with easy to navigate menu and controls
- 100 meter (300 feet) line-of-sight operating range (at medium RF power setting)
- Rugged metal construction
- Frequency and / or power lockout
- Interchangeable Shure microphone cartridges, including the legendary SM58® (ULXD2)
- 4-pin TQG or LEMO3 connector (ULXD1)
- Transmitter Mute Mode repurposes the on/off switch into a mute switch, enabling audio muting while preserving RF channel presence
- Detachable ¼ wave antenna (ULXD1)



ULXD6
Boundary Transmitter

- Very low latency makes the ULXD6 ideal for meetings that require live sound reinforcement
- Long transmission range (up to 100 meters/ 300 feet) for reliable performance in very large meetings at conference and convention centers
- Compatible with the full line of Shure antennas and distribution components, allowing up to 200 ULXD6 boundary microphone transmitters to be used with just one pair of receiving antennas for efficient setup
- Compatible with ULX-D® and QLX-D® digital receivers
- Optional SB900A rechargeable batteries provide up to 9 hours of runtime
- Compatible with standard AA alkaline batteries
- Optional SBC250 (2-Bay), SBC450 (4-Bay) and SBC850 (8-Bay) Networked Charging Stations allow convenient docking and charging when transmitters are not in use
- Configurable Mute button (Toggle, Push-to-Mute, Push-to-Talk, disabled) and Mute LED behavior
- Adjustable RF power, high-pass filter, and power lock settings

Available Options

- ULXD6/C Cardioid Boundary Microphone Transmitter
- ULXD6/O Omnidirectional Boundary Microphone Transmitter







ULXD8

Gooseneck Base Transmitter

- Designed for use with Shure Microflex MX405, MX410, and MX415 gooseneck microphones
- Very low latency makes the ULXD8 ideal for meetings that require live sound reinforcement
- Long transmission range (up to 100 meters/ 300 feet) for reliable performance in very large meetings at conference and convention centers
- Compatible with the full line of Shure antennas and distribution components, allowing up to 200 ULXD8 gooseneck base transmitters to be used with just one pair of receiving antennas for efficient setup
- Compatible with ULX-D® and QLX-D® digital receivers
- Optional SB900A rechargeable batteries provide up to 9 hours of runtime
- Compatible with standard AA alkaline batteries
- Optional SBC250 (2-Bay), SBC450 (4-Bay) and SBC850 (8-Bay) Networked Charging Stations allow convenient docking and charging when transmitters are not in use
- Configurable Mute button (Toggle, Push-to-Mute, Push-to-Talk, disabled) and Mute LED behavior
- Adjustable RF power, high-pass filter, power lock settings and Mute LED brightness



Rechargeability

- Advanced, intelligent Lithium-Ion chemistry
- Transmitters and receivers display remaining battery life in hours and minutes accurate to within 15 minutes
- Full charge within three hours and 50% charge in one hour – charge status LEDs for each battery
- Compatible with ULX-D transmitters, PSM® 900 and PSM 1000 bodypack receivers
- Monitor battery charging status *(SBC450/SBC850 only)*
- Configure the mute button and LED behavior *(SBC450/SBC850 only)*
- Update boundary/gooseneck Firmware *(SBC450/SBC850 only)*
- Compatible with 3rd party control devices (AMX®/Crestron®) *(SBC450/SBC850 only)*

SB900A

Shure Rechargeable Battery

Rechargeable Lithium-Ion Battery for use with Shure wireless systems



SBC220 NEW

2-Bay Networked Docking Charger

Compact 2-Bay networked docking station charges SB900A battery ULXD1, and ULXD2, wireless transmitters.



SBC250

2-Bay Networked Docking Station

Compact 2-Bay docking station charges ULXD6 or ULXD8 transmitters. Can be rack-mounted or wall-mounted with optional URT3 Rack Tray.



SBC450

4-Bay Networked Docking Station

4-Bay Networked Docking Station for ULXD6 & ULXD8 transmitters



SBC850

8-Bay Networked Docking Station

8-Bay Networked Docking Station for ULXD6 & ULXD8 transmitters



SBC200

Dual Docking Charging Station

Compact and portable two-Bay charger holds two SB900A batteries or ULXD1 & ULXD2 transmitters



SBC800

8-Bay Charging Station

Charges up to eight SB900A batteries

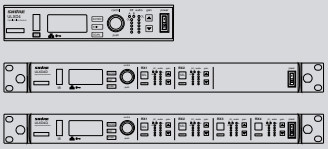


ULX-D Digital Wireless Specifications (Note: All specifications are subject to change.)

ULX-D
System

RF Carrier Range	470 – 932 MHz, varies by region
Image Rejection	>70 dB, typical
Latency	<2,9 ms (3,2 ms in High Density Mode)
RF Sensitivity	-98 dBm at 10^{-5} BER
Working Range	100 m line-of-sight *Note: Actual range depends on RF signal absorption, reflection and interference.*
Audio Frequency Range	20 Hz to 20 kHz *Note: Dependent on microphone type*
Audio Dynamic Range	Analog Output: >120 dB, A-weighted
(System Gain @ +10)	Dante™ Digital Output: 130 dB (typical), A-weighted
Total Harmonic Distortion *(–12 dBFS input, System Gain @ +10)*	<0,1%
Operating Temperature Range	-18°C to 50°C *Note: Battery characteristics may limit this range.*

ULXD4
Digital Wireless Receiver



Dimensions	ULXD4:	171 × 197 × 42 mm, W × D × H
	ULXD4D, ULXD4Q:	482 × 274 × 44 mm, W × D × H
Weight	ULXD4:	0.9 kg, without antennas
	ULXD4D:	3.36 kg, without antennas
	ULXD4Q:	3.45 kg, without antennas
Power Requirements	ULXD4:	15 V DC @ 0.6 A, supplied by external power supply (tip positive)
	ULXD4D:	100 to 240 V AC, 50-60 Hz, 0,26 A max.
	ULXD4Q:	100 to 240 V AC, 50-60 Hz, 0,32 A max.
Gain Adjustment Range	-18 to +42 dB in 1 dB steps (plus Mute setting)	
Full Scale Output	6,35 mm:	+12 dBV
	XLR:	LINE setting= +18 dBV, MIC setting= -12 dBV
Network Interface	ULXD4:	Single Port Ethernet 10/100 Mbps
	ULXD4D, ULXD4Q:	Dual Port Ethernet 1 Gbps
Network Addressing Capability	DHCP or Manual IP address, with or without gateway	
Housing	ULXD4:	Galvanized steel
	ULXD4D, ULXD4Q:	Steel; Extruded Aluminum

ULXD1
Bodypack Transmitter



Audio Frequency Range	20 Hz – 20 kHz
Gain Offset Range	0 – 21 dB (in 3 dB steps)
Battery Runtime @ 10 mW	Shure SB900A Rechargeable Li-Ion: <12 hours 2 × AA Alkaline: <11 hours
Dimensions	86 × 66 × 23 mm (3.4 × 2.6 × 0.9 in.), H × W × D
Weight	142 g, without batteries
Housing	Cast aluminum
Power	1 mW, 10 mW, 20 mW *See Frequency Range and Output Power table, varies by region.*
Antenna Type	¼ wave detachable

ULXD2
Handheld Transmitter



Audio Frequency Range	30 Hz – 20 kHz
Gain Offset Range	0 – 21 dB (in 3 dB steps)
Battery Runtime @ 10 mW	Shure SB900A Rechargeable Li-Ion: <12 hours 2 × AA Alkaline: <11 hours
Dimensions	256 × 51 mm, L × Dia. (with SM58®)
Weight	340 g, without batteries (with SM58®)
Housing	Machined aluminum
Power	1 mW, 10 mW, 20 mW *See Frequency Range and Output Power table, varies by region*
Antenna Type	Integrated single band helical

ULXD6
Boundary Transmitter



Audio Frequency Range	50 Hz – 17 kHz
Gain Offset Range	0 – 21 dB (in 3 dB steps)
Battery Runtime @ 10 mW	Shure SB900A Rechargeable Li-Ion: <9 hours 20 minutes 2 × AA Alkaline: <8 hours 40 minutes
Dimensions	113.94 × 61.83 × 34.28 mm (4.48 × 2.43 × 1.35 in.) H × W × D
Weight	241 g with AA batteries
Housing	Molded Plastic
Power	1 mW, 10 mW, 20 mW *See Frequency Range and Output Power table, varies by region*
Antenna Type	Integrated PIFA

ULXD8
Gooseneck Transmitter



Audio Frequency Range	50 Hz – 17 kHz
Gain Offset Range	0 – 21 dB (in 3 dB steps)
Battery Runtime @ 10 mW	Shure SB900A Rechargeable Li-Ion: <9 hours 2 x AA Alkaline: <8 hours 20 minutes
Dimensions	136.94 × 78.27 × 40.77 mm (5.39 x 3.08 x 1.60 in.) H × W × D
Weight	293 g with AA batteries
Housing	Molded Plastic
Power	1 mW, 10 mW, 20 mW *See Frequency Range and Output Power table, varies by region*
Antenna Type	Integrated PIFA

Europe, Middle East, Africa:
Shure Europe GmbH
Jakob-Dieffenbacher-Str. 12,
75031 Eppingen, Germany

Phone: 49-7262-92490
Fax: 49-7262-9249114
Email: info@shure.de

United States, Canada, Latin America, Caribbean:
Shure Incorporated
5800 West Touhy Avenue
Niles, IL 60714-4608 USA

Phone: 847-600-2000
Fax: 847-600-1212 (USA)
Fax: 847-600-6446
Email: info@shure.com

Asia, Pacific:
Shure Asia Limited
22/F, 625 King's Road
North Point, Island East
Hong Kong

Phone: 852-2893-4290
Fax: 852-2893-4055
Email: info@shure.com.hk

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