

SHURE®

LEGENDARY
PERFORMANCE™

Wireless Systems

PGW | PGX | SLX® | ULX | UHF-R

SLX® WIRELESS SYSTEM

The out-of-the-box wireless solution



Sound installations need powerful wireless tools which can be set-up quickly and used confidently. SLX® Wireless Systems exceed these demands bringing unparalleled ease of set-up and exceptional audio quality into reach.

Unparalleled ease of set-up

- Auto Frequency Selection quickly locates the clearest channel
- Auto Transmitter Set-up synchronizes transmitter with receiver frequency at the touch of a button
- Quick and easy multi-system set-up with detachable antennas and included rack hardware

Exceptional audio quality – constantly

- Patented Audio Reference Companding employs, unlike conventional wireless technology, a level dependent microphone circuitry
- Wide variety of legendary Shure microphone capsules
- Predictive Diversity – automatically detects and prevents drop outs before they occur

Installation-ready

- Up to 12 compatible systems per UHF band (country-dependent)
- Rack-hardware for single and side-by-side 19" mounting included
- Rugged metal receiver construction
- Antenna front-mount cables and BNC adapter included
- Frequency and power lockouts on receiver and transmitter
- Receiver volume control on the rear of unit
- 2 "AA" batteries (included) provide over 8 hours of continuous use
- 1/4" and XLR audio outputs
- Logic-enabled transmitter (MX690, MX890) and receiver models (SLX4L), with selectable mode available
- Optional logic functionality for software echo cancellation and remote battery life monitoring

APPLICATIONS

Conference Rooms
Seminars
Churches
Theaters
Music Clubs

PRODUCT HIGHLIGHTS

Frequency Scan & Sync
Audio Reference Companding
Wide variety of legendary Shure microphone capsules
Rack-mount hardware included
Logic-enabled models available

System Specifications

All system and component specifications are subject to change.

Operating range	30 – 100 m (100 – 300 ft.) under typical conditions, depending on the transmitter type. <i>Note: actual range depends on RF signal absorption, reflection and interference.</i>
Audio frequency response (± 2dB)	45 Hz – 15 kHz
Total harmonic distortion	< 0.5%, typical (ref. ± 38 kHz deviation, 1 kHz tone)
Dynamic range (A-weighted)	> 100 dB
Operating temperature range	-18°C (0°F) to +57°C (+135°F). <i>Note: battery characteristics may limit this range.</i>
Transmitter Audio Polarity	Positive pressure on microphone diaphragm (or positive voltage applied to tip of WA302 phone plug) produces positive voltage on pin 2 (with respect to pin 3 of low impedance output) and the tip of the high impedance 1/4-inch output.

Frequency Range and Transmitter

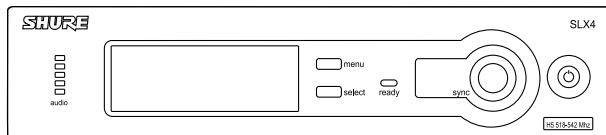
Band	Range	SLX1 / SLX2	MX690 / MX890
H5	518 – 542 MHz	≤ 30 mW	≤ 10 mW
J3	572 – 596 MHz	≤ 30 mW	≤ 10 mW
L4	638 – 662 MHz	≤ 30 mW	≤ 10 mW
P4	702 – 726 MHz	≤ 30 mW	≤ 10 mW
R5	800 – 820 MHz	≤ 20 mW	≤ 10 mW
S6	838 – 865 MHz	≤ 10 mW	≤ 10 mW
JB	806 – 810 MHz	≤ 10 mW	≤ 10 mW
Q4	740 – 752 MHz	≤ 10 mW	≤ 10 mW

NOTE: This radio apparatus may be capable of operating on some frequencies not authorized in your region. Please contact your national authority to obtain information on authorized frequencies and output power levels for wireless microphone products in your region.

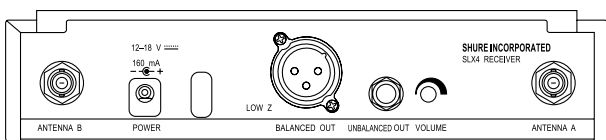
Optional Accessories

UA221	Passive antenna splitter; recommended for 2 receivers
UA844E	Antenna/power distribution system; recommended for 3 or more receivers
UA820	1/2 wave antenna
UA860SWB	1/2 wave antenna (wideband)
PA705	Passive directional antenna
UA505	Remote antenna mounting bracket kit for UA820
WA610	Universal hard carrying case
UA870WB	Active directional antenna; usable only in combination with UA844E
UA830WB	In-line RF amplifier; usable only in combination with UA844E

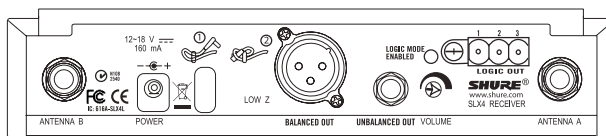
SLX4/SLX4L Wireless Receiver



SLX4/SLX4L Receiver Front



SLX4 Receiver Rear

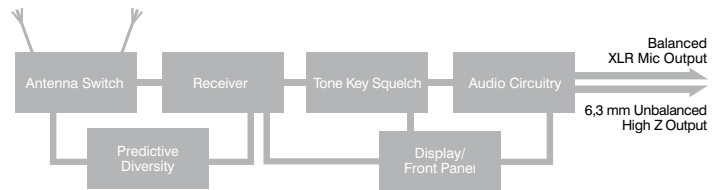


SLX4L Receiver Rear

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Receiver Block Diagram



Logic Compatibility (optional)

A logic circuitry and associated removable block connector is provided on the SLX4L, that connects to logic interfaces of external devices to provide remote monitoring of mute status and transmitter battery life. It is especially designed to function optimally with microphone mixers and audio processors that incorporate software echo cancellers. Supported models include MX690 and MX890 transmitters.

SLX4L	Logic enabled wireless receiver
MX690	Microflex wireless boundary microphone
MX890	Microflex wireless desktop base

Architectural Specifications

The wireless receiver shall be a microprocessor controlled diversity system including a tone key (32.768 kHz) to provide improved operation reliability and prevent switching noises in a 9.5"71U metal housing. The system shall allow the selection of up to 960 operating frequencies and preprogrammed groups with up to 12 compatible channels. An open frequency shall be selected automatically and synchronized with the transmitter via an infrared signal. It shall provide a RF-reception LED, LED audio metering and a backlit LCD showing frequency group and channel, low battery status of the transmitter and locked/unlocked status. The wireless receiver shall have noise sensitive and tone key squelch, volume level control on the rear of the unit, XLR and phone jack audio output as well as the possibility to lock the frequency and power settings. Rack-mounting as well as antenna front-mounting hardware shall be included with the wireless receiver.

SLX4L ONLY: The receiver shall have a selectable Logic Enabled Mode, which allows it to send transmitter mute status and transmitter battery status to external devices via TTL logic on the output block connector.

Audio frequency response (± 2 dB)	45 Hz – 15 kHz
Dynamic range	> 100 dB(A)
System distortion (at 1 kHz; ± 38 kHz modulation)	< 0.5%
Audio output level (ref. ± 38 kHz deviation, 1 kHz tone)	XLR connector (into 600 Ω load): -13 dBV 1/4 inch connector (into 3000 Ω load): -2 dBV
Output impedance	XLR: 200 Ω 1/4 inch: 1 k Ω
Sensitivity	-105 dBm for 12 dB SINAD, typical
Image rejection	> 70 dB, typical
RF carrier frequency	518 – 865 MHz (refer to the frequency supplement supplied with the system)
Logic Connections (SLX4L only)	Pin 1: Logic output, Transmitter Mute Status. Mute=low (0 V). Sinks up to 100 mA. Absolute maximum -0.7 to 5.5V DC Pin 2: Logic ground Pin 3: Logic output, Battery Status. Good=low (0 V). Sinks up to 100 mA. Absolute maximum -0.7 to 5.5V DC
Power	12 – 18 Vdc at 150 mA, supplied by external power supply
Housing	Galvanized steel
Dimensions (H x W x D)	42 mm x 197 mm x 134 mm (1.65 x 7.76 x 5.28 in.)

SLX1 Bodypack Transmitter

Architectural Specifications

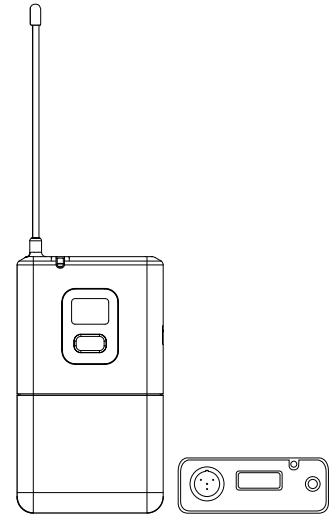
SLX1: The wireless bodypack shall be a professional transmitter for audio signals with switchable carrier frequencies as well as pre-programmed groups with up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The transmitter shall send a tone key (32.768 kHz) to provide improved operation reliability and prevent switching noises. The audio signal should be mutable. The transmitter shall have a 3-position input attenuator (+15, 0, -10 dB), a timed backlit LCD showing a frequency group and channel, battery strength and locked/unlocked status. 4-pin mini-connector (TA4F). Frequency and power locking capability shall be included. 2 "AA" alkaline batteries and softcase shall be included.

Product Specifications

Audio input level	+10 dBV max. at 0 dB gain position
Carrier frequency	518 – 865 MHz (available frequencies depend on applicable country regulations)
RF output level	10 – 30 mW (dependent on frequency version)
Power	2 "AA" size alkaline or rechargeable batteries
Battery life	> 8 hours
Housing	Molded ABS case
Dimensions (H x W x D)	108 mm x 64 mm x 19 mm
Weight	81 grams (3 oz.) without batteries

Microphone Options

PG185	Condenser capsule, cardioid lavalier mic
WL93	Condenser capsule, omnidirectional lavalier mic
WL183	Condenser capsule, omnidirectional lavalier mic
WL184	Condenser capsule, supercardioid lavalier mic
WL185	Condenser capsule, cardioid lavalier mic
WL50	Condenser capsule, omnidirectional lavalier mic
WL51	Condenser capsule, cardioid lavalier mic
WCB6	Condenser capsule, omnidirectional Countryman lavalier mic
PG30	Condenser capsule, cardioid headworn mic
WH20	Dynamic capsule, cardioid headworn mic
WH30	Condenser capsule, cardioid headworn mic
WCM16	Condenser capsule, hypercardioid headworn mic
WBH53	Condenser capsule, omnidirectional headworn mic
WBH54	Condenser capsule, supercardioid headworn mic
WCE6/WCE6i	Condenser capsule, omnidirectional or cardioid / hypercardioid Countryman earset mic
WB98H/C	Condenser capsule, cardioid instrument clip mic



SLX1
Bodypack Transmitter

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SLX2 Handheld Transmitter

Architectural Specifications

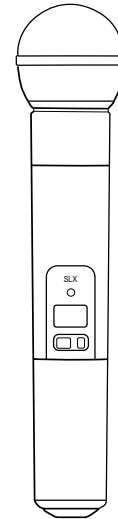
SLX2: The wireless microphone shall be a professional transmitter for audio signals with switchable carrier frequencies; preprogrammed groups with up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The transmitter shall send a tone key (32.768 kHz) to provide improved operation reliability and prevent switching noises. The capsule shall be mutable. It shall have an input attenuator switch (0, -10 dB), a timed backlit LCD showing frequency group and channel, battery strength and locked/unlocked status. Frequency and power locking capability shall be included. 2 "AA" alkaline batteries, mic clamp and softcase shall be included.

Product Specifications

Audio input level	+2 dBV max. at -10 dB gain position
Carrier frequency	518 – 865 MHz (available frequencies depend on applicable country regulations)
RF output level	10 – 30 mW (dependent on frequency version)
Power	2 "AA" size alkaline or rechargeable batteries
Battery life	> 8 hours
Housing	Molded ABS handle and battery cup
Overall dimensions (L x Ø)	SLX2/SM58®, SLX2/Beta58: 254 x 51 mm SLX2/SM86, SLX2/Beta87: 243 x 51 mm
Weight	290 grams (10.2 oz.) without batteries

Microphone Options

SLX2/SM58	Dynamic capsule, cardioid handheld mic
SLX2/SM86	Condenser capsule, cardioid handheld mic
SLX2/Beta58A	Dynamic capsule, supercardioid handheld mic
SLX2/Beta87A	Condenser capsule, supercardioid handheld mic
SLX2/Beta87C	Condenser capsule, cardioid handheld mic



SLX2
Handheld Transmitter

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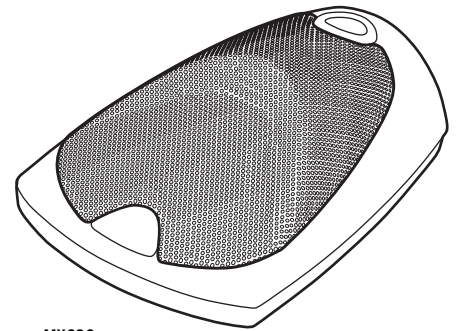
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MX690 Wireless Boundary and MX890 Wireless Desktop Base

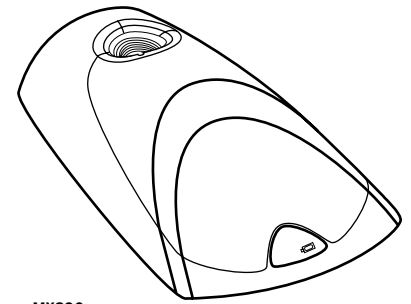
Architectural Specifications

MX690: The microphone shall be a surface mounted, black condenser microphone with a cardioid polar pattern. The microphone shall include a bi-color LED status indicator and a programmable mute switch. The microphone shall have an integrated wireless transmitter for audio signals with switchable carrier frequencies as well as preprogrammed groups up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The microphone shall be resistant to RF interference from portable mobile and handheld devices. The frequency range shall be 50 Hz to 17 kHz and the sensitivity shall be 22 mV/Pa.

MX890: The wireless desk stand shall be a transmitter base for audio signals with switchable carrier frequencies as well as preprogrammed groups with up to 12 compatible channels. An infrared signal shall be used to synchronize the frequency between transmitter and receiver. The wireless desktop base shall exclusively be used with the MX405 and MX410 series gooseneck microphones and shall feature a programmable mute switch.



MX690
Wireless Boundary Microphone
L x W x H: 148 mm x 87 mm x 43 mm
(5 13/16" x 3 3/8" x 1 11/16")



MX890
Wireless Desktop Base
L x W x H: 148 mm x 87 mm x 43 mm
(5 3/4" x 3 7/16" x 1 11/16")

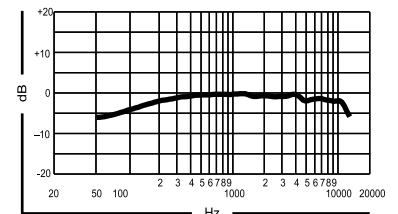
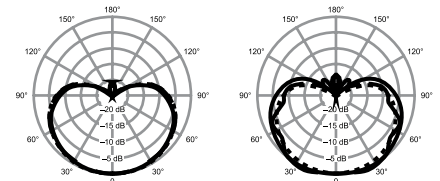
Product Specifications

MX690 Microphone Specifications

Type	Condenser (electret bias)
Audio frequency response	50 Hz – 17 kHz
Polar pattern	Cardioid
Sensitivity (at 1 kHz, open circuit voltage; 1 Pascal = 94 dB SPL)	-33 dBV/Pa (22 mV)
Dynamic range	96 dB (1 kΩ load at 1 kHz)
Common mode rejection	45 dB minimum (10 Hz to 100 kHz)
Preamplifier output clipping level (1% THD)	-6 dBV (0.5 V)
Polarity	Positive sound pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of output XLR connector or tip relative to ring of 1/4" phone plug (both on SLX4 or SLX4L wireless receiver).

MX690 and MX890 Transmitter Specifications

RF power	≤ 10 mW
Operating range	30 m (100 ft.) Note: Actual range depends on RF signal absorption, reflection, and interference
Frequency stability	±10 ppm
Maximum frequency deviation	45 kHz
Oscillator type	Phase-locked loop (PLL) controlled synthesizer
Power requirements	3 V (2 AA alkaline or rechargeable batteries)
Battery life	≥ 8 hours (alkaline)
Power consumption	130 mA, ± 15 mA
Operating temperature range	-18 – 57 °C (0 – 135 °F) Note: Battery may limit this range
Dimensions (H x W x L)	43 mm x 87 mm x 148 mm (1 11/16" x 3 3/8" x 5 13/16" inch)
Weight	MX690 Net: 318 g (11.2 oz) Packaged: 516 g (18.2 oz) MX890 Net: 312 g (11 oz) Packaged: 530 g (18.7 oz)



MX690

Available Models

MX690	Wireless boundary microphone, cardioid, mute switch
MX890	Wireless desktop base for MX405 and MX410* models, mute switch

* Please find more information on the Microflex MX405 and MX410 Gooseneck Microphones at www.shure.com and in the Shure Microflex data sheet.

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