

A large crowd of people at a concert at sunset with their hands raised. The sky is a mix of orange, red, and blue. The crowd is dense, and many people have their hands raised in the air, some making peace signs. The scene is illuminated by warm, golden light from the setting sun.

SHURE[®]

UHF-R™ WIRELESS MICROPHONE SYSTEMS

UHF-R™ Wireless Systems
PREMIER WIRELESS TECHNOLOGY

UHF-R™

WIRELESS ON A NEW SCALE

Offering you more productivity, more reliability and more control, UHF-R is premier wireless technology that helps you master the complexities of large-scale wireless installations. UHF-R takes wireless to a completely new level.

Unparalleled control for complex installations.

UHF-R automates setup and control operations to save you time and effort on even the most complex networked installations. UHF-R's usability innovations include networked Automatic Frequency Selection with group scan, infrared automatic transmitter sync and smart menu-driven system operation for fast setup and intuitive operation.

Superior RF performance and reliability for every installation.

With 2400 selectable frequencies across 60 MHz of bandwidth, UHF-R provides up to 40 simultaneous compatible systems per band. Advanced Track Tuning Filtering Technology, by shifting the RF filter along with the selected frequency, allows you to deploy this added bandwidth without audio degradation or interference. All UHF-R components – including the compact, sweat-resistant bodypack – are engineered to withstand the abuses of the road. You can rely on UHF-R for consistently reliable performance, always.

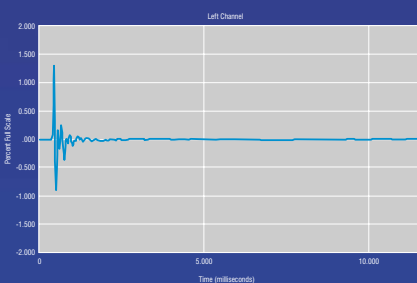
Crystal-clear audio that sounds more like wired.

Shure's patented Audio Reference Companding delivers crystal-clear audio transmission, far superior to conventional wireless. Unlike other wireless systems, Shure uses a variable companding ratio that responds to the audio level – eliminating wireless artifacts and substantially increasing dynamic range.

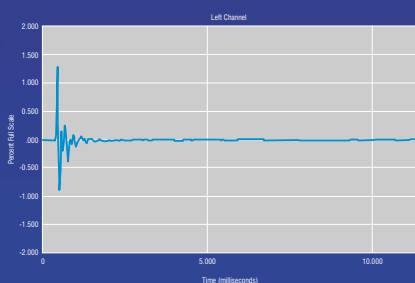


Audio Reference Companding

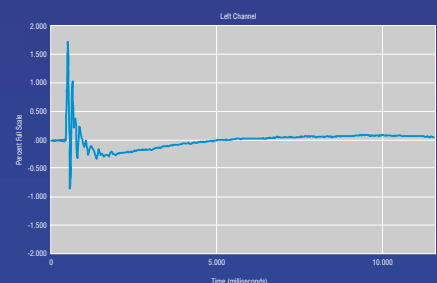
These impulse response graphs show how a transient signal is reproduced through a Shure Beta 87A™ capsule in three ways: through a wired mic, through a wireless system with Audio Reference Companding, and through a conventional wireless system. The Audio Reference Companding graph is virtually identical to the wired graph, while the conventional wireless system shows far less accurate audio reproduction.



Wired Beta 87A
Reference mic



Wireless Beta 87A with variable-ratio
Audio Reference Companding.
Virtually indistinguishable from wired mic (left panel).



Wireless Beta 87A with **fixed-ratio companding.**
Appreciably different from wired mic (left panel).

UHF-R™ FEATURES AND PERFORMANCE

Shure UHF-R Wireless Systems master the intense pressure and extreme conditions of any touring or installation environment, while delivering unmatched Shure sound.



KSM9/SL

UR2 Handheld Transmitter

- Switchable RF Power (10/50mW, regionally dependent)
- Frequency and Power lockout
- Bit-mapped Backlit LCD
- 2 AA Batteries –
- Up to 8 hours continuous use
- Infrared automatic transmitter sync
- All-metal die-cast construction

Handheld

- SM58® Dynamic Cardioid
- SM86 Condenser Cardioid
- SM87 Condenser SuperCardioid
- Beta 58® Dynamic SuperCardioid
- Beta 87A™ Condenser SuperCardioid
- Beta 87C™ Condenser Cardioid
- KSM9 Condenser Switchable

KSM9

- Dual diaphragm design
- Switchable polar patterns (supercardioid and cardioid)
- Advanced two-stage shock mount suspension
- Proprietary shock mount technology reduces handling noise
- KSM9 is available in black (UR2/KSM9/BK) and champagne (UR2/KSM9/SL) finishes

Multi-function Displays

UHF-R's bitmapped LCD displays provide clear access and control for all integral system functions.



Front view
(97.5 x 60 x 17mm)

UR4S | UR4D Wireless Diversity Receiver

Available in Single Channel and Dual Channel versions.

- 2400 selectable frequencies across 60 MHz bandwidth
- Track Tuning Filtering Technology
- Up to 40 preset compatible systems per band
- Up to 108 systems with multiple bands
- Networked Automatic Frequency Selection
- Infrared automatic transmitter sync (including custom group upload)
- Flash memory to store six 60-channel custom frequency groups
- Shure's patented Audio Reference Comping
- Multi-function bit-mapped backlit LCD
- USB and Ethernet network control and monitoring
- Remoteable antennas



Rack-mounted UR4D Receivers with UA845 Antenna / Power Distribution System.



UR1 Bodypack Transmitter

- Switchable RF Power (10/50mW or 10/100mW, regionally dependent)
- Low-profile, compact design
- Lightweight magnesium construction (94g / 3.25 oz.)
- Frequency and Power lockout
- Bit-mapped backlit LCD
- 2 AA Batteries – Up to 8 hours continuous use
- Infrared automatic transmitter sync
- Removable antenna

Any Shure headworn, lavalier or instrument mic, or the WA302 instrument cable, can be used with the UR1 bodypack.



Side view

Accessories

A range of durable, tour-tested accessories are available to customize UHF-R systems for every application.

Passive Antenna Splitter Kit – **UA221**
Recommended for 2 receivers.

Antenna/Power Distribution System – **UA845**
Recommended for 3 or more receivers.

In-line Wideband Antenna Amplifier – **UA830WB**
1/2-Wave Omnidirectional Wideband Antenna – **UA860WB**

Active Directional Wideband Antenna – **UA870WB**

Locking Bodypack Adapter for TQG connector (Included) – **WA340**

Cloth Bodypack Pouch – **WA580**
Available in Black or White.



INCLUDED WIRELESS WORKBENCH® SOFTWARE

Advanced network control and operation.

For those who require network control, Shure's Wireless Workbench offers complete PC management of networked wireless systems. Wireless Workbench is advanced software that streamlines wireless system management and provides full control of all vital system parameters. With Wireless Workbench, you have a real-time view of the entire networked environment and easy operation of individual devices.

Ethernet and USB Compatibility

No additional equipment required to connect to network hub.

Frequency Compatibility Calculator Wizard

Scans the RF environment to assess all networked hardware and recommends frequencies for all specified wireless systems.

Frequency Selection Wizard

Automatically scans and selects open frequencies for all networked UHF-R receivers.



Comprehensive Infrared Sync

Automatically syncs frequencies, custom groups, lockouts and power settings between transmitters and receivers; provides PC control of transmitter / receiver sync parameters.

Band Limiting Feature

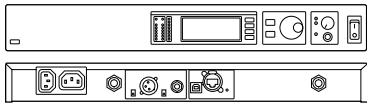
Allows the user to view custom frequency band parameters to align with any country or regional RF guidelines that might conflict with the available bandwidth.

Custom Frequency Group Creation

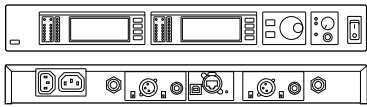
Lets you customize and save frequency groups for specific locations.

System	RF Carrier Frequency Range	518-865 MHz (available frequencies depend upon applicable country regulations)
	Working Range	150 m (500 ft.) under typical conditions; 485 m (1600 ft.) line of sight (NOTE: Operating range depends on many variables, including RF signal absorption, reflection and interference)
	Audio Frequency Response	50-15,000 Hz, +/- 2 dB (NOTE: Overall system frequency response depends on the microphone element)
	System Distortion (ref. +/-38 kHz deviation, 1 kHz modulation)	0.3% THD typical
	Dynamic Range	>102 dB or >110 dB A-weighted, region-dependent
	Ultimate Quieting (ref. 45kHz deviation)	>100 dB A-weighted
	Operating Temperature Range	-18° to 57° C (0° to 135° F) (NOTE: Battery characteristics may limit this range)

UR4S | UR4D Diversity Receiver



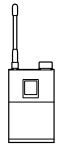
UR4S Single Channel Receiver



UR4D Dual Channel Receiver

Overall Dimensions	43.5 mm H x 482.6 mm W x 365.38 mm D (1.718 x 19.000 x 14.385 in.)
Net Weight	UR4S: 4.54 kg (10 lbs.); UR4D: 4.34 kg (9.9 lbs.)
Housing	Galvanized Steel
Audio Output Level	+ 24 dBV peak
Output Impedance	15Ω, mic level
RF Sensitivity	UR4S: -110 dBm typical for 12 dB SINAD; -105 dBm typical for 30 dB SINAD UR4D: -107 dBm typical for 12 dB SINAD; -102 dBm typical for 30 dB SINAD
Image Rejection	110 dB typical
Spurious Rejection	90 dB typical
Audio Polarity	Positive pressure on microphone diagram (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" output
Power Requirements	90 to 230 Vac, 50/60 Hz
Power Consumption	UR4S: 9.6 – 13.2 W; UR4D: 12 – 16 W; UA845: 15 -16 W

UR1 Bodypack Transmitter



Gain Adjustment Range	0 to 30 dB
Maximum Input Level:	6 Vp-p (+7 dBV) for 1% THD at minimum gain setting, 1 kHz signal
Input Impedance	18 kΩ with lavalier microphone; 1 MΩ with instrument cable
Output Impedance	50Ω
RF Power Output	10 mW, 10/50 mW, or 10/100 mW (region dependent)
Housing	Cast magnesium
Power Requirements	2 AA alkaline or rechargeable batteries
Battery Life	8 hours typical
Overall Dimensions	97.5 mm L x 60 mm W x 17 mm D (3.84 x 2.38 x 0.66 in.)
Net Weight	94 g (3.25 oz.) without batteries

UR2 Handheld Transmitter



Gain Adjustment Range	0 to 50 dB
Maximum Input Level:	3 Vp-p (+0.5dBV) for 1% THD at minimum gain setting, 1 kHz signal
Input Impedance	20 kΩ
Output Impedance	50Ω
RF Power Output	10 mW or 10/50 mW (region dependent)
Housing	Aluminum die-cast handle and aluminum machined battery cup
Power Requirements	2 AA alkaline or rechargeable batteries
Battery Life	8 hours typical
Overall Dimensions	254 mm L x 51 mm dia. (10 x 2 in.)
Net Weight	316 g (11oz.) without batteries



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