SHURE®

LEGENDARY
PERFORMANCE™

UHF-R® Wireless Microphone Systems

PREMIER WIRELESS TECHNOLOGY

UHF-R® Wireless Microphone Systems

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.

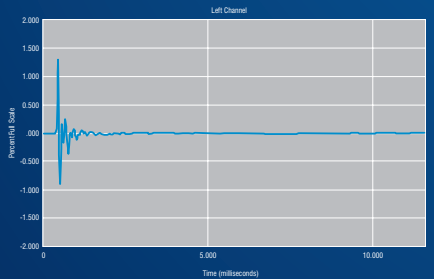
Crystal-clear audio that sounds more like wired.

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.

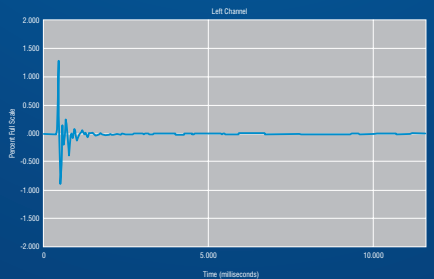
Audio Reference Companding

Audio Reference Companding

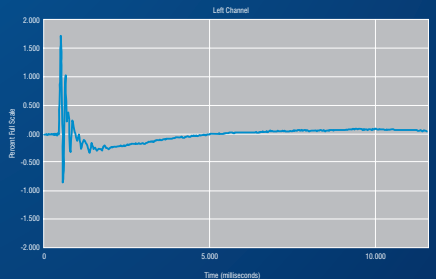
These impulse response graphs show how a transient signal is reproduced through a Shure Beta 87A™ capsule in three ways: through a wired mic, through a wireless system with Audio Reference Companding, and through a conventional wireless system. The Audio Reference Companding graph is virtually identical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

UR4S | UR4D Wireless Diversity Receiver

Available in Single Channel and Dual Channel versions.

2400 selectable frequencies across 60 MHz bandwidth

3000 selectable frequencies across 75 MHz bandwidth (region dependent)

Track Tuning Filtering Technology

Up to 40 preset compatible systems per band

Up to 160 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 Companding

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.

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

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

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

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)

Side view

Front view
(49 x 60 x 17mm)

Side view

UR1 Bodypack Transmitter

Switchable RF Power
(10/50mW or 10/100mW, regionally dependent)

Magnesium construction (3.4 oz/97g)

Frequency and Power lockout

Bit-mapped backlit LCD

2 AA batteries – Up to 8 hours continuous use

Infrared automatic transmitter sync

Removeable antenna

UR1M Micro-Bodypack Transmitter

Switchable RF Power (10mW or 50mW)

Less than half the size of standard bodypacks

Lightweight magnesium construction (2.2 oz/62g)

Conformal coated circuitry for enhanced sweat resistance

Bit-mapped backlit LCD

2 AAA batteries – Up to 9 hours continuous use

Audio level metering

TQG or LEMO3 connector options

Selectable battery metering by battery type

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 Antenna Amplifier – **UA830**

½-Wave Omnidirectional Antenna – **UA860**

Active Directional Antenna – **UA870**

3 Pin Mini LEMO3 Conversion Kit for UR1M – **WA335**

3 Pin Mini LEMO3 Jack for Lavaliers – **WA336**

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

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

Neoprene pouch for UR1M and UR1M-LEMO3, Black – **WA581B**

Neoprene pouch for UR1M and UR1M-LEMO3, White – **WA581W**

INCLUDED WIRELESS WORKBENCH® SOFTWARE

SCAN. PLAN. COMMAND.

Wireless Workbench® 5 from Shure is your wireless command center for frequency coordination of any Shure Wireless product and networked control of Shure UHF and UHF-R® series wireless systems. Now compatible with both Mac OSX and Windows Vista™, WWB5 takes the guesswork out of frequency coordination and provides a graphic display of your RF environment. Scan, plan, and command your wireless systems anywhere with the ultimate system control software from Shure.

Ethernet and USB Compatibility
No additional equipment required to connect to network hub.

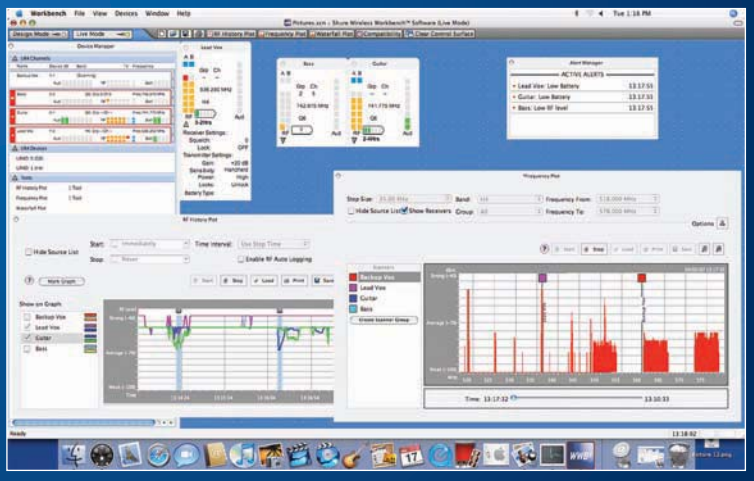
Frequency Compatibility Calculator Wizard
Scans the RF environment to assess all networked hardware and recommends frequencies for all specified wireless systems.

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.

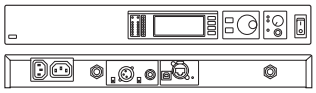
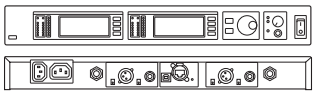
Band Limiting Feature
Allows the user to view custom frequency band parameters to align with any country or regional RF guidelines that might conflict with the available bandwidth.

Custom Frequency Group Creation
Lets you customize and save frequency groups for specific locations.



Mac OSX screenshot

UHF-R® Wireless Systems

System	**RF Carrier Frequency Range**	470–952 MHz (available frequencies depend upon applicable country regulations)
	Working Range	150 m (500 ft.) under typical conditions; 500 m (1640 ft) line of sight (NOTE: Operating range depends on many variables, including RF signal absorption, reflection and interference)
	Audio Frequency Response	40-18,000 Hz, + 1/ -3 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)	>105 dB A-weighted
	Operating Temperature Range	-18º to 57º C (0º to 135º 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 4.8 kg (10.6 lbs) UR4D 5.0 kg (11.0 lbs)
	Housing	Galvanized Steel
	Audio Output Level	+24 dBu (-6 dBu mic)
	Output Impedance	200 Ω (150 Ω mic)
	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
UR1M Micro-Bodypack Transmitter 	**Gain Adjustment Range**	-20 dB to +35 dB
	Maximum Input Level:	+5 dBu (sensitivity 0 dB) +15 dBu (sensitivity -10 dB)
	Input Impedance	200 kΩ TQG, 8.2 kΩ LEMO3
	Output Impedance	50Ω
	RF Power Output	10 mW or 10/50 mW (region dependent)
	Housing	Cast magnesium
	Connector Types	LEMO3, TQG
	Power Requirements	2 AAA batteries (alkaline, lithium primary, or NiMH types)
	Battery Life	8 hours typical
	Overall Dimensions	49 mm L x 60 mm W x 17 mm D (1.92 x 2.38 x 0.66 in.)
	Net Weight	62g (22 oz) without batteries
UR1 Bodypack Transmitter 	**Gain Adjustment Range**	-20dB to +35 dB
	Maximum Input Level:	+10 dBu (sensitivity 0 dB), +20 dBu (sensitivity -10 dB)
	Input Impedance	>1 MΩ
	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
	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	97g (3.4 oz) without batteries
UR2 Handheld Transmitter 	**Gain Adjustment Range**	-10 dB to +20 dB
	Maximum Input Level:	+4.8 dBu
	Input Impedance	1 MΩ
	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	Varies by capsule type

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AL1590 5K 4/08