

SHURE®

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PERFORMANCE™

PSM® Personal Monitor Systems

PSM 300 | PSM 900 | PSM 1000

PSM® 900 PERSONAL MONITOR SYSTEM



Unprecedented combination of audio and RF performance for the most demanding professional monitoring applications.

The PSM® 900 Wireless Personal Monitor System from Shure offers an unprecedented combination of superb audio quality, robust RF performance, and category-leading features for the most demanding professional applications. CueMode allows the sound engineer to monitor different stage mixes with the touch of a button. Precision front-end RF filtering significantly reduces dropouts from RF interference, and the enhanced digital stereo encoder provides excellent stereo separation and audio clarity.

APPLICATIONS

Touring Sound
House of Worship
Broadcast
Theater
IFB

PRODUCT HIGHLIGHTS

Superb Audio Quality
Robust RF Performance
Advanced Rechargeability
CueMode
Active RF Gain Control

System Specifications

RF Carrier Range	470–960 MHz (regionally dependent)
Compatible Frequencies	20 per band
Tuning Bandwidth	36 MHz – 40 MHz (regionally dependent)
Operating Range (environment dependent)	90m (300ft)
Audio Frequency Response	38Hz – 15kHz
Stereo Separation	60 dB
Signal-To-Noise Ratio (A-Weighted)	90 dB (typical)
Total Harmonic Distortion (ref. ±34 kHz deviation @1 kHz)	<0.5% (typical)
Comping	Patented Shure Audio Reference Comping
Spurious Rejection (ref. 12 dB SINAD)	>80 dB (typical)
Frequency Stability	±2.5 ppm
MPX Pilot Tone	19 kHz (±0.3 kHz)
Modulation	FM, ±34 kHz deviation (nominal), MPX Stereo
Operating Temperature	-18°C – +57°C

Frequency Range

Band	Range	RF Output Power***
G6	470-506 MHz	10 / 50 / 100 mW
G6E	470-506 MHz	10 mW
G6J	470-506 MHz	6 / 10 mW
G14	506-542 MHz	10 mW
G14J	506-542 MHz	6 / 10 mW
G62	510-530 MHz	10 / 50 mW
G7	506-542 MHz	10 / 50 / 100 mW
G7E	506-542 MHz	10 / 50 mW
G7Z	518-542 MHz	10 / 50 / 100 mW
H21	542-578 MHz	10**/50/100 mW
K1	596-632 MHz	10 / 50 / 100 mW
K1E	596-632 MHz	10 mW
K1J	596-632 MHz	6 / 10 mW
L6	656-692 MHz	10 / 50 / 100 mW
L6E	656-692 MHz	10 / 50 mW
L6J	656-692 MHz	6 / 10 mW
P7	702-742 MHz	10 / 50 / 100 mW
Q12	748-758 MHz	10 / 50 mW
Q15	750-790 MHz	10 / 50 / 100 mW
R21	794-806 MHz	10 mW
X7	925-937.5 MHz	10 mW
X1	944-952 MHz	10 / 50 / 100 mW
X55	941-960 MHz	10 / 50 / 100 mW

***Regionally Dependent

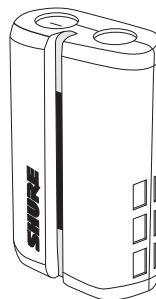
Antennas, Combiners and Accessories

EAC-IFB	Coiled IFB Earphone Cable for Shure Earphones
PA821B	8-to-1 antenna combiner for better RF performance
PA421B	4-to-1 antenna combiner with power distribution to 4 transmitters (better RF performance and eliminates need for external power supply)
PA301	Protective Cover for P9RA+ and P10R bodypack receivers
PA805SWB	Passive Directional Antenna
HA-8089	Helical Antenna (470-900 MHz)
HA-8091	Domed Helical Antenna (470-900 MHz)
HA-8241	Helical Antenna (944-952 MHz)
UA802	Coaxial Cable, BNC-BNC, RG58C/U type, 50 Ohm, 2 ft length (0.6 m)
UA806	Coaxial Cable, BNC-BNC, RG58C/U type, 50 Ohm, 6 ft length (2 m)
UA825	Coaxial Cable, BNC-BNC, RG8X/U type, 50 Ohm, 25 ft length (7.5 m)
UA850	Coaxial Cable, BNC-BNC, RG8X/U type, 50 Ohm, 50 ft length (15 m)
UA8100	Coaxial Cable, BNC-BNC, RG8X/U type, 50 Ohm, 100 ft length (30 m)
UA860SWB	Wideband Omnidirectional Antenna (470-1100 MHz)

Furnished Accessories

P9R Antenna	
UA700	470–542 MHz
UA720	596–692 MHz
UA730	692–830 MHz
UA740	830–952 MHz
P9T Antenna	
UA820G	470–530 MHz
UA820G7	500–560 MHz
UA820H4	518–578 MHz
UA820J	578–638 MHz
UA820L3	638–698 MHz
UA820B	690–746MHz
UA820Q	740–814 MHz
UA820X	900–952 MHz
95A9023	Front Mount Antenna Cable
95A2313	Zipper Bag
53A8612	Rackmount Bracket, Long
53A8611	Rackmount Bracket, Short
53B8443	Link Bar
90AR8100	Hardware Kit (Rackmounting Screws)
90B8977	Bumper Kit
Energy Efficient Switching Power Supply	
PS43US	USA
PS43BR	Brazil
PS43AR	Argentina
PS43E	Europe
PS43UK	United Kingdom
PS43AZ	Australia/New Zealand
PS43CHN	China
PS43TW	Taiwan
PS43J	Japan

Rechargeable Power Management



SB900A Rechargeable Battery

The P9RA+ bodypack is compatible with the SB900A, a lithium-ion rechargeable battery, providing up to 10 hours of continuous use and precise tracking of remaining life and charge cycle details.

SBC800 Recharging Station

Charges up to eight SB900A batteries to full capacity within three hours, with status LEDs to indicate power levels. SB900A batteries fit securely in the charger for easy, efficient storage and transport.

SBC200 Dual Docking Recharging Station

This compact and portable unit charges two SB900A batteries. Up to four SBC200's can be chained together to run off one power supply.

SBC10-100 Single Battery Recharging Station

The SBC10-100 charges one battery at a time and can be powered from either A/C power sources or USB ports.

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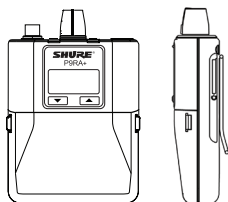
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Component Specifications

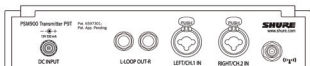
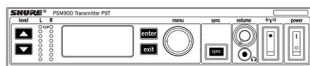
P9RA+ Wireless Bodypack Receiver



The P9RA+ is a compact, stereo bodypack receiver for use with the PSM® 900 Wireless Personal Monitor System. It offers premium features including RF Scan and Automatic Gain Control for unparalleled RF stability and channel availability, plus an advanced rechargeability option for extended usage times, all packed in the thinnest form factor available. CueMode allows monitoring of different stage mixes and storing of up to 20 separate channels from one bodypack for quick and easy reference. Optional advanced rechargeability eliminates the need for disposable batteries and provides extended usage times with reliable battery life, cycle count, and health metering.

Front-End RF Filtering	-3 dB @30.5 MHz from the center frequency of each band	
Active RF Gain Control	31 dB, Adjusts RF sensitivity to provide more RF dynamic range	
RF Sensitivity (20 dB SINAD)	2.2 µV	
Squelch Threshold	22 dB SINAD (±3 dB), default setting	
Adjacent Channel Rejection	>70 dB	
Intermodulation Attenuation	>70 dB	
Blocking	>80 dB	
Image Rejection	>90 dB	
Audio Output Power (1kHz @ <1% distortion, peak power, @16Ω)	100 mW (per output)	
Minimum Load Impedance	4 Ω	
Output Impedance	<1 Ω	
4-Band Parametric EQ	Low Shelf	Selectable Gain: ±2 dB, ±4 dB, ±6 dB @100 Hz
	Low Mid	Selectable Gain: ±2 dB, ±4 dB, ±6 dB @160 Hz, 250 Hz, 400 Hz, 500 Hz, 630 Hz Selectable Q: 0.7, 1.4, 2.9, 5.0, 11.5
	High Mid	Selectable Gain: ±2 dB, ±4 dB, ±6 dB @1 kHz, 1.6 kHz, 2.5 kHz, 4 kHz, 6.3 kHz Selectable Q: 0.7, 1.4, 2.9, 5.0, 11.5
	High Shelf	Selectable Gain: ±2 dB, ±4 dB, ±6 dB @10 kHz
Volume Limiter	Selectable: 0 dB to -48 dB in 3 dB steps (Reduces maximum output level. Selected value corresponds to volume knob increment)	
Volume Lock	Selectable: 0 dB to -70 dB (Limits volume adjustment knob. Selected value analogous to volume knob increment)	
Battery Life	4-6 hours (continuous use) AA batteries	
Net Weight	154 g, without batteries	
Dimensions	99 x 66 x 23 mm (3.9 in. x 2.6 in. x 0.9 in.) H x W x D	

P9T Wireless Transmitter



The P9T is a half-rack wireless transmitter used in conjunction with the P9RA+ Bodypack receiver as part of the PSM® 900 Wireless Personal Monitor System. It offers state-of-art technology including CueMode, IR Sync, and RF mute switch for easy setup and operation. Connections include balanced 1/4" and XLR, loop out, and headphone out. Includes rack-mounting kit, front or back mountable antennas, and power supply.

RF Output Power	Selectable: 10, 50, 100 mW (regionally dependent)
RF Output Impedance	50 Ω (typical)
Net Weight	850 g
Dimensions	197 mm x 166 mm x 42 mm (7.75in X 6.55in X 1.65in)
Power Requirement	415 mA typical @ 120VAC (with RF on 100 mW power mode, no audio)

Audio Input	
Connector Type	Combination XLR and 6.35 mm (1/4") TRS
Polarity	XLR: Non-inverting (pin 2 positive with respect to pin 3) 6.35 mm (1/4") TRS: Tip positive with respect to ring
Configuration	Electronically balanced
Impedance	70.2 kΩ (actual)
Nominal Input Level	Switchable: +4 dBu, -10 dBV
Maximum Input Level	+4 dBu: +23.3 dBu -10 dBV: +12.5 dBu
Pin Assignments	XLR: 1=ground, 2=hot, 3=cold 6.35 mm (1/4") TRS: Tip=hot, Ring=cold, Sleeve=ground
Phantom Power Protection	up to 60 V DC
Audio Output	
Connector Type	6.35 mm (1/4") TRS
Configuration	Electronically balanced
Impedance	Connected directly to inputs

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