

# SHURE®

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PSM® 1000 Personal Monitor System

# PSM® 1000 PERSONAL MONITOR SYSTEM



**The PSM 1000 Personal Monitor System from Shure brings personal monitoring to its most advanced level yet.**

The full-rack, dual-channel, networkable transmitter is ideally suited for the demands of professional touring and installation applications, and the diversity bodypack receivers deliver pristine RF signal and audio quality. Networkability over Ethernet connection enables remote control of transmitter functions and comprehensive frequency coordination via Wireless Workbench® software.

## APPLICATIONS

Touring Sound  
House of Worship  
Broadcast  
Theater  
IFB

## PRODUCT HIGHLIGHTS

Touring-Grade Features and Design  
Robust RF Performance and Networked Control  
Advanced Lithium-Ion Rechargeability

# PSM® 1000 System Specifications

RF Carrier Range	470–952 MHz (regionally dependent)
Compatible Frequencies	39 per band
Tuning Bandwidth	72 MHz – 80 MHz (regionally dependent)
Operating Range (environment dependent)	90m (300ft)
Audio Frequency Response	35Hz – 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, MPX Stereo (±34 kHz deviation, nominal)
Operating Temperature	-18 to +57 °C

## Frequency Range

Band	Range	RF Output Power***
G10	470-542 MHz	10 / 50 / 100 mW
G10E	470-542 MHz	10 / 50 / 100 mW
G10J	470-542 MHz	6 / 10 mW
G11	479-542 MHz	10 mW
G62	510-530 MHz	10 mW
H8Z	518-582 MHz	10 / 50 mW
J8	554-626 MHz	10 / 50 / 100 mW
J8A	554-616 MHz	10 / 50 / 100 mW
J8E	554-626 MHz	10 / 50 mW
J8J	554-626 MHz	6 / 10 mW
K10E	596-668 MHz	10 / 50 mW
L8	626-698 MHz	10 / 50 / 100 mW
L8A	653-663 MHz	10 mW
L8E	626-698 MHz	10 / 50 mW
L8J	626-698 MHz	6 / 10 mW
L9E	670-742 MHz	10 / 50 mW
L11J	670-714 MHz	6 / 10 mW
P8	710-790 MHz	10 / 50 mW
Q21	710-787 MHz	10 / 50 mW
Q22E	750-822 MHz	10 / 50 mW
R27	794-806 MHz	10 / 50 mW
X1	944-952 MHz	10 / 50 / 100 mW
X7	925-937.5 MHz	10 mW

## Antennas, Combiners and Accessories

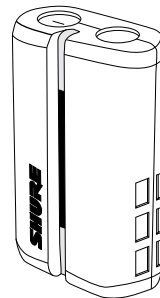
EAC-IFB	Coiled IFB Earphone Cable for Shure Earphones
PA821B	8-to-1 antenna combiner for better RF performance
PA421B	4-to-1 antenna combiner with power distribution to 4 transmitters (better RF performance and eliminates need for external power supply)
PA805SWB	Passive Directional Antenna
PA301	Protective Cover for P9RA and P10R body pack receivers
HA-8089	Helical Antenna (470-900 MHz)
HA-8091	Domed Helical Antenna (470-900 MHz)
HA-8241	Helical Antenna (944-952 MHz)
UA860SWB	Passive Omnidirectional Antenna
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)

## Furnished Accessories

<b>P10R Antenna</b>	
UA700	470–542 MHz
UA710	540–626 MHz
UA720	596–692 MHz
UA730	692–830 MHz
UA740	830–952 MHz
<b>P10T Antenna</b>	
UA820G10	470–542 MHz
UA820H8	518–582 MHz
UA820J8	554–626 MHz
UA820K1	596–668 MHz
UA820L8	626–698 MHz
UA820LCH	670–742 MHz
UA820P8	710–790 MHz
UA820Q2	750–822 MHz
UA820X	944–952 MHz
95A9023	Front Mount Antenna Cable
95A2313	Zipper Bag
53B8443	Link Bar
90AR8100	Hardware Kit (Rackmounting Screws)
90B8977	Bumper Kit

NOTE: This Radio equipment is intended for use in musical professional entertainment and similar applications. 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 RF power levels for wireless microphone products.

## Rechargeable Power Management



### SB900A Rechargeable Battery

The P10R+ 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.

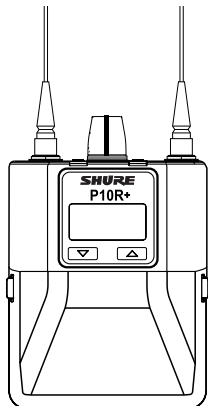
### SBC10-100 Single Battery Recharging Station

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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# Component Specifications

## P10R+ Wireless Bodypack Receiver



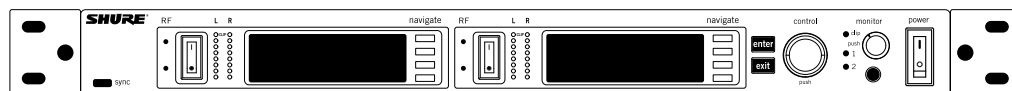
The P10R+ is a low profile, diversity bodypack receiver for use with the PSM® 1000 Wireless Personal Monitor System. It offers premium features like full bandwidth RF scan and Automatic RF Gain Control for unparalleled signal stability and channel availability, all packed in the slimmest form factor available. CueMode allows monitoring of different stage mixes and storing of up to 20 separate channels from one bodypack for quick and easy mix reference. Optional advanced rechargeability eliminates the need for disposable batteries and provides extended usage times with reliable battery life, cycle count, and health metering.

Tri-band RF Filtering	-3 dB at 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 $\mu$ V	
Squelch Threshold	22 dB SINAD ( $\pm 3$ 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, @16 $\Omega$ )	100 mW per output	
Minimum Load Impedance	4 $\Omega$	
Output Impedance	<1 $\Omega$	
4-Band Parametric EQ	Low Shelf	Selectable Gain: $\pm 2$ dB, $\pm 4$ dB, $\pm 6$ dB @100 Hz
	Low Mid	Selectable Gain: $\pm 2$ dB, $\pm 4$ dB, $\pm 6$ 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: $\pm 2$ dB, $\pm 4$ dB, $\pm 6$ 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: $\pm 2$ dB, $\pm 4$ dB, $\pm 6$ dB @10 kHz
Volume Limiter	Selectable: 0 dB to -48 dB in 3 dB steps	
Volume Lock <i>Limits volume adjustment knob. Selected value analogous to volume knob increment.</i>	Selectable: 0 dB to -70 dB	
Battery Life	4-6 hours (continuous use) with AA batteries	
Net Weight	158 g, without batteries	
Dimensions	99 mm x 66 mm x 23 mm (3.9 in. x 2.6 in. x 0.9 in.) H x W x D	

## P10T Dual Wireless Transmitter

The P10T is a networkable, full-rack, dual channel wireless transmitter used in conjunction with the P10R+ Bodypack receiver as part of the PSM® 1000 Wireless Personal Monitor System. It offers a 72 MHz wide tuning bandwidth, networked remote control via Wireless Workbench software, advanced rechargeability options, and PSM 900 backwards compatibility. Connections include balanced  $\frac{1}{4}$ " and XLR, loop out, dual Ethernet ports, and headphone monitor out. Comes with front or back mountable antennas, and power and Ethernet jumper cables.

RF Output Power	Selectable: 10, 50, 100 mW (regionally dependent)
RF Output Impedance	50 $\Omega$ (typical)
Net Weight	4.7 Kg (10.4 lb)
Dimensions	44 X 483 X 343 mm
Power Requirement (RF on, 100 mW power mode, no audio)	Input: 100-240V AC, 50/60 Hz, 0.5A max (5.5 max outlet loaded) Output: 100-240V AC, 5A max, unswitched
<b>Audio Input</b>	
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 k $\Omega$ (actual)
Nominal Input Level	Switchable: +4 dBu, -10 dBV
Maximum Input Level	+4 dBu: +29.2 dBu -10 dBV: +12.2 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
<b>Audio Output</b>	
Connector Type	6.35 mm (1/4") TRS
Configuration	Electronically balanced
Impedance	Connected directly to inputs



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