

SHURE®

Performance Gear Series Wireless

Shure Performance Gear Wireless

Designed especially for performers who manage their own sound, Shure Performance Gear professional audio products deliver legendary Shure sound quality, stage-proven durability and hassle-free setup for worry-free performance.

Performance Gear Wireless systems are available in a variety of configurations - for handheld, guitar, headset and presentation applications. Manual frequency selection and transmitter setup provide specific choice and precise control to locate the clearest channel, every time.

System Components

All systems include

- Internal Antenna Diversity PG4 receiver
- One 9 volt battery
- Power supply
- User guide

Vocalist systems include

- Microphone Head
- PG2 handheld transmitter
- Microphone clip

Lavalier, Headworn, and Instrument systems include

- PG1 body pack transmitter
- Microphone (choice of PG185, PG30)

Guitar systems include

- PG1 bodypack transmitter
- 4-pin mini connector (TA4F) to 1/4" connector cable

PG4 Receiver Features

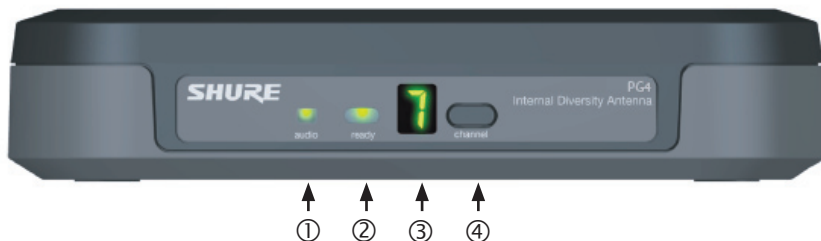


Figure 1. Front Panel

① **audio LED**

Indicates strength of incoming audio signal: green for normal, amber for strong, red for peak.

② **ready LED**

Green LED indicates system is ready for use.

③ **Channel Display**

See "System Setup" on page 6.

④ **channel button**

Press and hold to change the frequency channel.

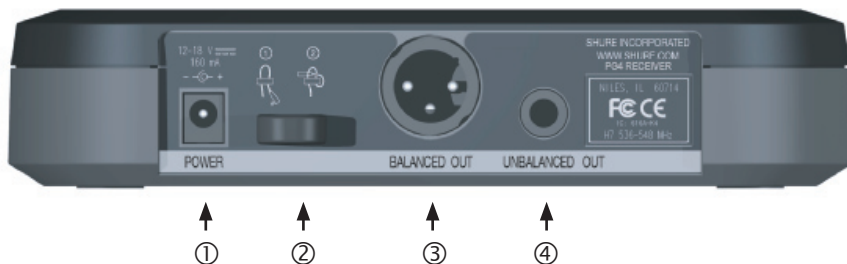


Figure 2. Back Panel

① **AC adapter jack**

② **Adapter cord relief**

③ **XLR balanced microphone output jack**

④ **1/4" unbalanced output jack**

PG2 Handheld Transmitter



- ① Power/Mute Button
- ② Power/Mute LED (See LED status below)
- ③ Channel Display (Display turns off after 10 seconds to conserve battery)
- ④ Channel Button
- ⑤ Battery Cover — Twist counter-clockwise to remove.
- ⑥ Battery Compartment

LED Status	Signifies
Green	Ready
Amber	Mute is on
Red	Battery is low
Flashing Red on startup	Battery dead (must be replaced for transmitter to operate).
Flashing Green and Red	Controls are locked
Flashing Amber and Red	Mute is on and battery is low

Figure 3.

Changing Battery

- Expected life for a 9 volt alkaline battery is approximately 8 hours.
- When the Power/Mute LED glows red, the battery should be replaced immediately.

Adjusting Gain

- Access the Gain Adjustment Switch by unscrewing the microphone head. Use the tip of a pen or a small screwdriver to move the switch. (See fig. 4)
- The switch can be positioned in two gain settings on the PG2:

Gain Setting	Suggested Uses
0dB	For quiet to normal vocal performance.
-10dB	Use only if audio is distorted due to high vocal levels.

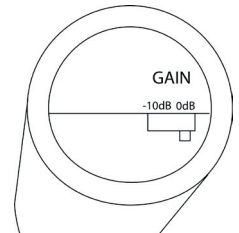


Figure 4.

PG1 Bodypack Transmitter

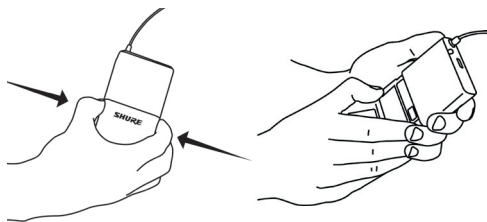


Figure 5.



Figure 6.

- ① 4-Pin Microphone Input Jack
- ② Power/Mute Button. Press and hold to turn on/off. Press and release to mute/unmute.
- ③ Power/Mute LED (see LED Status below)
- ④ Antenna
- ⑤ Channel Display
- ⑥ Channel Button
- ⑦ Gain Switch
- ⑧ 9V Battery compartment
- ⑨ Battery Cover. Pinch sides to fold open.



⑨ Battery Cover, pinch sides to fold open

LED Status

LED Status	Signifies...
Green	Ready
Amber	Mute is on
Red	Battery is low
Flashing red on startup	Battery dead (must be replaced for transmitter to operate).
Flashing Green and Red	Flashing Green and Red
Flashing Amber and Red	Mute is on and battery is low

Wearing the Bodypack Transmitter

- Clip the transmitter to belt or guitar strap as shown. If using a belt, slide the transmitter until the belt is pressed against the base of the clip.

Changing Battery

- Expected life for a 9 volt alkaline battery is approximately 8 hours.
- When the Power/Mute LED glows red, the battery should be replaced immediately.

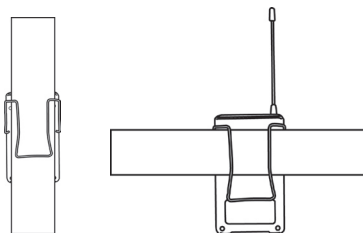


Figure 7.

Adjusting Gain

- Three gain settings are available on the PG1:

Gain Settings	Suggested Use
mic	Microphone
0	Guitar
-10	Use only if audio is distorted due to high input level

System Setup

Single Receiver Setup

In any wireless setup, each transmitter and receiver pair must be tuned to the same frequency, or channel. Follow these steps to set the transmitter and receiver to the same channel:

1. Plug in the receiver to turn power **on**. Turn transmitter power **off**.
2. Press and hold the channel button on the receiver for about one second to enter select mode. Release the button as soon as the display begins flashing.
3. Press the channel button while the number is flashing to change to the next channel *.
4. To activate a newly selected channel, simply wait until the number stops flashing.
5. Turn on the corresponding transmitter.
6. Press and hold the channel button on the transmitter to enter select mode. Release the button as soon as the display begins flashing.
7. Press the channel button while the number is flashing to change to the next channel. Scroll through the channels until the transmitter setting matches the channel on the receiver.
8. The transmitter channel is set when the number stops flashing. The green “ready” LED on the receiver will indicate the system is ready for use.

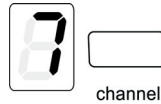


Figure 8.

***Note:** Some of the frequencies available on the PG4 receiver may be occupied by sources of interference such as broadcast television or other wireless devices. Use the Busy Indicator on the receiver channel display to avoid selecting an occupied channel while in select mode.

Busy Indicator

When selecting channels, if the display flashes between a number and a blank screen, the channel is clear. If the display flashes between a number and a dash as shown in Figure 9, the channel is busy. This means that the channel is occupied by another device or source of interference. In this case, it is recommended to select another channel.

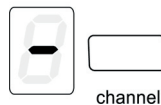


Figure 9.

Multiple System Setup

To set up multiple systems, repeat the previous steps for each transmitter and receiver pair. Once transmitters have been set, leave them on. Be sure to set each transmitter and receiver pair to a different frequency. For information about frequencies and compatibility, refer to the guide below.

TLPW Frequency and Channel Guide

In each group, channels 1,3,5,7 and 9 are a compatible set and channels 2,4,6,8 and 0 are a compatible set. When operating multiple systems, select only odd or even numbered channels for best results.

M10		674-686		R10		800-812		P11		702-714		Q11		740-752	
CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq
1	674.775	1	802.100	1	702.150	1	740.150								
2	676.700	2	803.675	2	703.600	2	741.600								
3	677.900	3	805.750	3	705.500	3	743.500								
4	682.025	4	809.100	4	707.100	4	746.400								
5	685.500	5	810.550	5	708.400	5	748.100								
6	674.025	6	802.325	6	710.100	6	751.850								
7	680.975	7	803.550	7	712.650										
8	682.775	8	805.100	8	713.850										
9	684.000	9	808.600												
0	685.900	0	810.025												

R11		770-782		R12		794-806		JB		806-810	
CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq
1	770.150	1	794.150	1	806.125						
2	771.600	2	797.500	2	806.375						
3	773.500	3	799.100	3	807.125						
4	775.100	4	800.400	4	807.750						
5	776.400	5	802.100	5	809.000						
6	778.100	6	805.850	6	809.500						
7	780.650										
8	781.850										

H7		536 - 548		K7		590 - 602		M7		662-674		T10		854 - 865	
CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq	CH	Freq
1	536.050	1	590.050	1	662.050	1	854.900								
2	542.050	2	596.050	2	668.050	2	856.575								
3	537.400	3	591.400	3	663.400	3	857.950								
4	543.400	4	597.400	4	669.400	4	861.750								
5	539.175	5	593.175	5	665.175	5	863.900								
6	545.175	6	599.175	6	671.175	6	855.275								
7	540.375	7	594.375	7	666.375	7	857.925								
8	546.375	8	600.375	8	672.375	8	861.550								
9	541.975	9	595.975	9	667.975	9	863.200								
0	547.975	0	601.975	0	673.975	0	864.500								

Troubleshooting

<i>Issue</i>	<i>LED Status</i>	<i>Solution</i>
No sound or faint sound	Transmitter Power/Mute LED on, receiver LEDs on	<ul style="list-style-type: none"> • Perform transmitter setup (see page 6). • Verify all sound system connections. • Adjust transmitter gain.
	Receiver Channel Display	<ul style="list-style-type: none"> • Make sure AC adapter is securely plugged into electrical outlet and into POWER connector on rear panel of receiver . • Make sure AC electrical outlet works and is supplying proper voltage.
	Transmitter LED glowing or flashing red	<ul style="list-style-type: none"> • Replace transmitter battery.
	Transmitter LED off	<ul style="list-style-type: none"> • Turn transmitter on. • Make sure the +/- indicators on battery match transmitter terminals. • Insert fresh battery.
Distortion or unwanted noise bursts		<ul style="list-style-type: none"> • Remove nearby sources of RF interference (CD players, computers, cell phones, digital effects, in-ear monitor systems, etc.) • Change receiver and transmitter to a different frequency. • Reduce transmitter gain. • Replace transmitter battery. • If using multiple systems, change the frequency of one of the active systems.
Sound level different from cabled guitar or microphone, or when using different guitars		<ul style="list-style-type: none"> • Adjust transmitter gain as necessary.
Cannot turn transmitter on	Transmitter LED flashing red	<ul style="list-style-type: none"> • Replace transmitter battery.

Locking and Unlocking Controls

Locking the system controls prevents accidental muting or channel adjustment during performance.

Transmitter

To lock the controls: turn the transmitter off, hold the channel button down and turn the transmitter power on. The Power/Mute LED will alternate between red and green.

To unlock the controls: with the transmitter on, hold the channel button down, and turn the transmitter off.

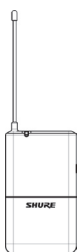
Specifications

System



Working Range	75m (250 ft.) Note: actual range depends on RF signal absorption, reflection, and interference.
Audio Frequency Response	Minimum: 45 Hz. Maximum: 15 kHz (overall system frequency depends on microphone element).
Total Harmonic Distortion	0.5%, typical Ref. +/- 33 kHz deviation, 1 kHz tone
Dynamic Range	>100 dB A-weighted
Operating Temperature Range	-18°C (0°F) to +57°C (+135°F) Note: battery characteristics may limit this range
Transmitter Audio Polarity	Positive pressure on microphone diaphragm (or positive voltage 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.

PG1 Bodypack Transmitter



Audio Input Level	-10 dBV maximum at "mic" gain position +10 dBV maximum at 0dB gain position +20 dBV maximum at -10dB gain position
Gain Adjustment Range	30 dB
Input Impedance	1MΩ
RF Transmitter Output	10 mW typical
Dimensions	110 mm H x 64 mm W x 21 mm D (4.3 x 2.5 x 0.8 in.)
Weight	75 grams (2.6 oz.) without battery
Housing	Molded poly carbonate case
Power Requirements	One 9V alkaline battery
Battery Life	>8 hours (alkaline)

PG2 Handheld Transmitter



Audio Input Level	+2 dBV maximum at -10dB position -8 dBV maximum at 0dB position
Gain Adjustment Range	10dB
RF Transmitter Output	10 mW typical
Weight	218 grams (7.7 oz.) without battery
Housing	Molded PC/ABS handle and battery cup
Power Requirements	One 9V size alkaline or rechargeable battery
Battery Life	>8 hours (alkaline)

PG4 Receiver



Dimensions	188 mm L x 103 mm W x 40 mm D (7.4 in. x 4.0 in. x 1.5 in.)
Weight	241 grams (8.5 oz)
Output Impedance	XLR connector: 200 Ω 1/4 inch connector: 1kΩ
Housing	ABS
Audio Output Level Ref.	XLR connector (into 600 Ω load): -19 dBV 1/4 inch connector (into 3000 Ω load): -5 dBV
Sensitivity	-105 dBm for 12 dB SINAD, typical
Image Rejection	>50 dB, typical
Power Requirements	12-18 Vdc at 150 mA, supplied by external power supply

Replacement Parts

All Systems	Microphone Stand Adapter (PGX2)	WA371
System-Specific	AC Adapter (120 VAC, 60 Hz)	PS20
	AC Adapter (230 VAC, 50/60 Hz, Europlug)	PS20E
	AC Adapter (230 VAC, 50/60 Hz, UK)	PS20UK
	AC Adapter (100 VAC, 50/60 Hz)	PS20J
	AC Adapter (220 VAC, 50 Hz, China)	PS20CHN
	PG58 Head with Grille	RPW108
	Belt Clip	44A8035
Optional	Universal Rack Tray	URT
	4-pin mini connector (TA4F) to 1/4" connector cable	WA302

Regulatory Information

Regulatory Information for North America, Europe, and Australia

PG1 & PG2 Transmitters: Certified to FCC Part 74 (FCC ID: “DD4PG1” and “DD4PG2”). Certified by IC in Canada under RSS-123 and RSS-102 (“IC: 616A-PG1” and “IC: 616A-PG2”). Meets the essential requirements of the European R&TTE Directive 99/5/EC (ETSI EN 300-422 Parts 1 & 2, EN 301 489 Parts 1 & 9) and are eligible to carry the CE marking.

CE 0978

PG4 Receiver: Authorized under Declaration of Conformity (DoC) provision of FCC Part 15. Certified under Industry Canada to RSS-123 (“IC: 616A-PG4”). This class B digital apparatus complies with Canadian ICES-003. Meets the essential requirements of the European R&TTE Directive 99/5/EC (EN 301 489 Parts 1 & 9, EN 300 422 Parts 1 & 2) and is eligible to carry the CE marking. Conforms to Australian EMC requirements and is eligible for C-Tick marking.



CE 0978

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

PS 20 Series Power Supplies: Conform to Safety Standard IEC 60065. PS20E and PS20UK are eligible to bear CE marking.

A ministerial license may be required to operate this equipment in certain areas.

Consult your national authority for possible requirements.

This radio equipment is intended for use in musical professional entertainment and similar applications.

Caution: changes or modifications not expressly approved by Shure Incorporated for compliance could void the user's authority to operate the equipment.

Operation of this device is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.



SHURE Incorporated <http://www.shure.com>

United States, Canada, Latin America, Caribbean:
5800 W. Touhy Avenue, Niles, IL 60714-4608, U.S.A.

Phone: 847-600-2000 U.S. Fax: 847-600-1212

Int'l Fax: 847-600-6446

Europe, Middle East, Africa:

Shure Europe GmbH, Phone: 49-7131-72140 Fax: 49-7131-721414

Asia, Pacific:

Shure Asia Limited, Phone: 852-2893-4290 Fax: 852-2893-4055