SHURE®

LEGENDARY
PERFORMANCE™

PG ALTA™ SERIES
WIRED MICROPHONE

PGA81
USER GUIDE

Le Guide de l'Utilisateur

Bedienungsanleitung

Guia del Usuario

Guida dell'Utente

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Руководство пользователя
日本語

사용자 가이드

繁體中文

Panduan Pengguna

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PGA81

Cardioid Condenser Microphone

PG Alta Microphones

Congratulations on the purchase of a new Shure PG Alta series microphone. The PG Alta series delivers professional quality audio at an affordable price, with solutions for capturing nearly any source, including voice, acoustic instruments, drums, and amplified electric instruments. Suitable for live and studio applications, PG Alta microphones are built to last, and meet the same rigorous quality testing standards that make all Shure products trustworthy and reliable.

General Rules for Use

- Do not cover any part of the microphone grille with your hand, as this will adversely affect microphone performance.
- Aim the microphone toward the desired sound source (such as the talker, singer, or instrument) and away from unwanted sources.
- Place the microphone as close as practical to the desired sound source.
- Work close to the microphone for extra bass response.
- Use only one microphone to pick up a single sound source.
- For better gain before feedback, use fewer microphones.
- Keep the distance between microphones at least three times the distance from each microphone to its source (“three to one rule”).
- Place microphones as far as possible from reflective surfaces.
- Add a windscreen when using the microphone outdoors.
- Avoid excessive handling to minimize pickup of mechanical noise and vibration.

Phantom Power

All condenser microphones require phantom power to operate. This microphone performs best with a 48 V DC supply (IEC-61938), but it can operate with lower voltages.

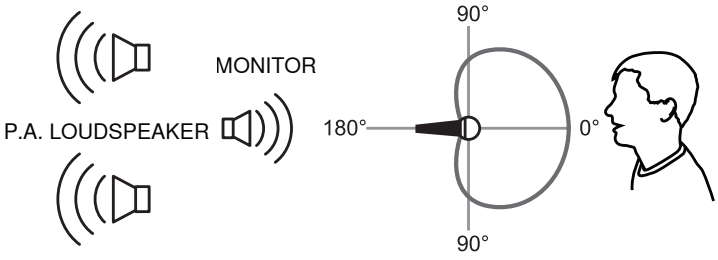
Phantom power is provided by the mixer or audio interface that the microphone is connected to, and requires the use of a **balanced** microphone cable: XLR-to-XLR or XLR-to-TRS. In most cases, there is a switch or button to activate the phantom power. See the user guide for the mixer or interface for additional information.

Proximity Effect

Directional microphones progressively boost bass frequencies as the microphone is placed in closer proximity to the source. This phenomenon, known as proximity effect, can be used to create a warmer, more powerful sound.

Avoiding Pickup of Unwanted Sound Sources

Place the microphone so that unwanted sound sources, such as monitors and loudspeakers, are directly behind it. To minimize feedback and ensure optimum rejection of unwanted sound, always test microphone placement before a performance.



Recommended Loudspeaker Locations for Cardioid Microphones

Applications

The following table provides a basic starting point for several instruments. Shure offers additional educational publications on microphone placement and recording techniques. Visit www.shure.com for more information.

Application	Distance from source	Tips
Acoustic guitar	6-12 inches (15-30 cm)	Place near the sound hole for a full sound, or near the 12th fret for a balanced, natural sound.
Drums	3-6 feet (1-2 m)	Place in front of the drum kit to capture more of the kick drum, or as an overhead (above the kit, facing down) to capture more cymbals. Consider using additional Shure microphones placed on individual drums for more mixing flexibility and a thicker sound.
Amplifiers	1-6 inches (2-15 cm)	Aim towards the center of the speaker for a clear, aggressive sound, or towards the edge of the speaker for a mellow sound.
Strings or horns	1-6 feet (30 cm - 2 m)	For a single instrument, place the microphone close to the source. For a horn or string section, arrange players at an equal distance from the microphone.
Full band	3-10 feet (1-3 m)	Face the microphone towards the group, centered between instruments.
Auxiliary percussion (congas, tambourine, etc.)	6-12 inches (15-30 cm)	Aim the microphone away from other instruments on stage for better isolation.

Tip: Close microphone placement results in a full sound due to the proximity effect. Placing the microphone farther from the source results in more room ambience.

Microphone Techniques for Stereo Recording

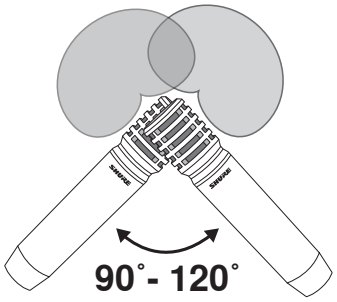
Stereo recording using two microphones adds realism by capturing sound similar to the way that humans hear. Panning (directing the signals left and right) adds width and directionality when listening on stereo systems or headphones.

Tip: Panning the signals farther apart increases stereo separation and width. Be careful of panning too far, as it may result in a hollow sound in the middle of the stereo field.

① X-Y Coincident Pair

The X-Y technique provides excellent phase coherency because sound arrives simultaneously at both microphones.

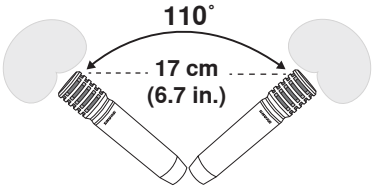
Placement: Set up the microphones with the capsules close together, but not touching. Experiment with angles between 90 and 120 degrees to capture the full width of the source.



② ORTF

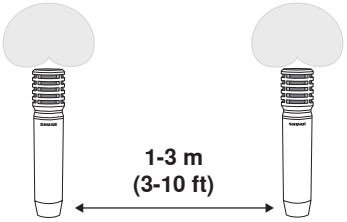
Developed as a French broadcasting standard, ORTF technique replicates the spacing and angle of human ears. It provides a natural, wide sound.

Placement: Angle the microphones at 110°, with the capsules 17 cm apart.



③ A/B Spaced Pair

Spaced pair recording can deliver a dramatic stereo effect because sound arrives at each microphone at a slightly different time, providing the listener with timing cues that localize sounds.



Note:

For drum overheads, the snare drum should be equidistant from each microphone to achieve a tight, focused sound. Use a measuring tape or piece of string to verify this distance.

Optional Accessories and Replacement Parts

Microphone Clip for SM58, SM57, SM87A, Beta 87A, Beta 87C, PGA57, PGA58, PGA48, PGA81	A25D
Black Foam Windscreen for PGA81, SM94 and SM137	A3WS

Specifications

Type

Electret Condenser

Polar Pattern

Cardioid

Frequency Response

40 to 18,000 Hz

Output Impedance

at 1 kHz, open circuit voltage

600 Ω

Sensitivity

at 1 kHz, open circuit voltage

-48.5 dBV/Pa[1] (3.8 mV)

Maximum SPL

1 kHz at 1% THD, 1 kΩ load, typical

129.5 dB SPL

Polarity

Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3

Connector

Three-pin professional audio (XLR), male

Weight

186 g (0.4 lbs)

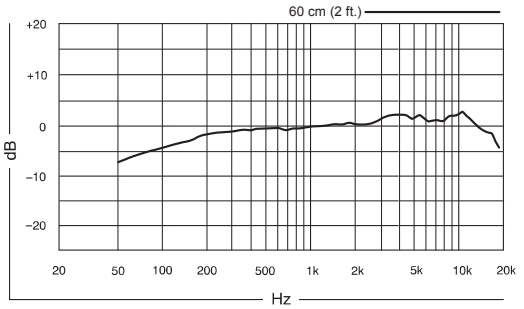
Housing

Cast Zinc

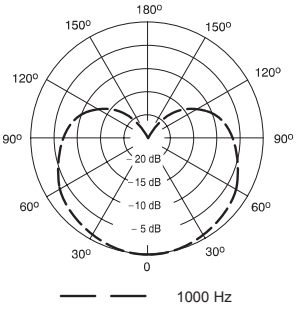
Power Requirements

11 to 52 V DC phantom power (2.0 mA)

[1] 1 Pa=94 dB SPL



Frequency Response



Polar Pattern

Certifications

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

The CE Declaration of Conformity can be obtained from: www.shure.com/europe/compliance

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