



Active Directional Antenna Antenne directionnelle active Aktive Richtantenne Antena direccional activa Antenna direttiva attiva Actieve richtantenne Активная направленная антенна Antena Direcional Ativa Antena Terarah Aktif アクティブ指向性アンテナ 억티브 지향성 안테나 有源指向性天线





Active Directional Antenna

General Description

The Shure UA874 uses a log periodic dipole array to offer enhanced reception when directed toward the desired coverage area. An integrated amplifier and four gain settings compensate for varying degrees of coaxial cable signal loss. The UA874 can be mounted on a microphone stand, suspended from the ceiling, or mounted to a wall using the integrated swivel adapter bracket.

Features

- Low-noise signal amplifier compensates for insertion loss in coaxial cable
- Compatible with Shure wireless receivers and antenna distribution systems that provide 10–15 V DC bias
- · Integrated threaded adapter mounts easily to microphone stands
- · Four-position gain selector switch
- · Shure quality, ruggedness, and reliability

Antenna Cables from Shure

Shure offers the following pre-terminated antenna cables:

Length	Туре	Model No.
6 foot	RG58	UA806
10 foot	RG58	PA725
25 foot	RG8X	UA825
50 foot	RG213	UA850
100 foot	RG213	UA8100

Interface



1 Gain Switch

Adjust the four-position gain switch to compensate for the calculated cable loss, based on the length and type of cable.

Caution: There may be a small RF dropout when changing the gain setting.

② Gain Mode LED

Indicates the current gain switch setting.

③ RF Overload LED

Indicates a strong RF signal that is overloading the antenna amplifier, which results in distortion or poor performance. Increase the distance between the antenna and transmitter, or lower the antenna gain setting.

NOTE: RF Overload LED does not operate for passive gain settings (-6 dB or 0 dB).

④ BNC Connector

Connect to a reciever or antenna combiner with RF inputs that supply 10–15 V DC bias.

Installation

- Connect the antenna to the receiver or distribution system using Shure antenna cables (or any 50 ohm, low-loss coaxial cable, such as RG-8U).
- The antenna only operates with receivers or distribution systems that provide 10–15 V DC bias.
- Lower the gain setting for short cable runs, or increase gain for longer runs. Note that the quality of the cable, not just the length, contributes to signal loss. A lighter-grade 50 foot cable may require more gain than a 100 foot, low-loss cable. Contact the cable manufacturer for cable loss specifications.
- · Direct the antenna toward the intended coverage area.
- Do not use this antenna for transmitting (such as with PSM transmitters)

Cable Maintenance

To maintain top performance for UA825, UA850 or UA8100 antenna cables:

- · Avoid sharp bends or kinks in the cables.
- Do not deform cables with makeshift clamps, such as bending a nail over the cable.
- Do not use in permanent outdoor installations.
- Do not expose to extreme moisture.

Antenna Placement

Use the following guidelines when mounting antennas:

- · Antennas and receivers must be from the same band.
- · Mount antennas at least four feet apart.
- Position antennas so there is nothing obstructing a line of sight to the transmitter (including the audience).
- · Keep antennas away from large metal objects.

Important: Always perform a "walk around" test to verify coverage before using a wireless system during a speech or performance. Experiment with antenna placement to find the optimum location. If necessary, mark "trouble spots" and ask presenters or performers to avoid those areas.

Setting Gain

The gain setting should only be used to compensate for the calculated cable signal loss. Additional signal gain does not mean better RF performance. Too much gain actually reduces reception range and the number of available channels. This is because Shure receivers are optimized to deliver the best performance when the sum of signal gain and cable loss equals 0 dB. Additional gain just amplifies everything in the RF range—including interference and ambient RF noise. It cannot selectively increase the signal from the transmitter.

- Use the lowest gain setting necessary to achieve good reception of the transmitter RF signal, as indicated on the receiver's RF LED or meter.
- Only increase the gain setting to compensate for the calculated cable loss.
- The –6 dB gain setting can be useful for applications with short cable runs (25 feet or less) and where the distance between the transmitter and antenna is less than 100 feet.
- Reduce gain if the antenna RF Overload LED illuminates—the signal is strong enough, so gain is not needed.

Recommend Gain Settings

Use the following chart as a guideline for setting gain based on cable type where the distance from the antenna to the transmitter is greater than 100 feet.

NOTE: For installations where the antenna is less than 75 feet from the transmitter, lower the gain setting one step.

Cable Length	Gain Setting (based on cable type)			
	RG58*	RG8X	RG213/ RG8	Low-loss RG8/ RG213**
10' (3 m)	0	0	0	0
25' (8 m)	+6*	0	0	0
50' (15 m)	*	+6	+6	0
100' (30 m)	*	+12	+6	+6

* RG58 cable has high signal loss and is not recommended for cable runs greater than 10 feet

** Low-loss RG8/RG213 cables include Times Microwave Systems LMR400 and Belden 9913 or 7810A

Find More Information Online

For setup tips and more information on wireless accessories, visit http:// www.shure.com/WirelessAccessoryWizard

Specifications

Connector Type

BNC, Female

Impedance

50 Ω

Power Requirements

10 to 15 V DC bias from coaxial connection, 75 mA

RF Frequency Range

UA874US	470–698 MHz
UA874E	470–790 MHz
UA874WB	470–900 MHz
UA874X	925–952 MHz

Reception Pattern

3 dB Beam Width 70 degrees

Third-order Overload Intercept Point (OIP3)

>30 dBm

Antenna Gain

On Axis 7.5dBi

Signal Gain

±1 dB, Switchable +12 dB +6 dB 0 dB -6 dB

RF Overload LED Threshold

–5 dBm

RF overload LED does not operate for passive gain settings

Dimensions

UA874	316 x 359 x 36 mm (H x W x D)
UA874X	224 x 234 x 36 mm (H x W x D)

Weight

UA874	317 g (11.2 oz.)
UA874X	213 g (7.5 oz.)

Operating Temperature Range

–18°C (0°F) to 63°C (145°F)

Storage Temperature Range

–29°C (-20°F) to 74°C (165°F)

Certifications

Meets essential requirements of the following European Directives:

- R&TTE Directive 99/5/EC
- WEEE Directive 2002/96/EC, as amended by 2008/34/EC
- · RoHS Directive 2002/95/EC, as amended by 2008/35/EC

Note: Please follow your regional recycling scheme for batteries and electronic waste

Meets requirements of the following standards: EN60065, EN 301 489 Parts 1 and 9.

The CE Declaration of Conformity can be obtained from Shure Incorporated or any of its European representatives. For contact information please visit www.shure.com

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

Authorized European representative: Shure Europe GmbH Headquarters Europe, Middle East & Africa Department: EMEA Approval Jakob-Dieffenbacher-Str. 12 75031 Eppingen, Germany Phone: 49-7262-92 49 0 Fax: 49-7262-92 49 11 4 Email: EMEAsupport@shure.de

Optional Accessories



DIMENSIONS



UA874X