



FIGURE 1
ABBILDUNG 1
FIGURA 1

NOTE: For additional technical assistance, call the Shure Customer Service Department for your region.

MODEL UA870 UHF ACTIVE DIRECTIONAL ANTENNA

The Shure UA870 is an active UHF wireless directional antenna. It features a log periodic dipole array. When compared to an omnidirectional 1/2-wave antenna, the cardioid pattern provided by the UA870 offers enhanced reception of the desired coverage area and greater rejection of RF signals outside the coverage area.

To compensate for coaxial cable signal loss, the UA870 has an on-board amplifier that offers user selectable 3 or 10 dB gain. The gain setting is indicated by two LEDs. Remote 12 Vdc power for the antenna amplifier is provided by a Shure UR4 or ULX Receiver or a Shure UA845 or UA844 Antenna Distribution System through the connecting coaxial cable.

The UA870 can be mounted on a microphone stand, suspended from the ceiling, or mounted to a wall using the integrated swivel adapter bracket. The UA870 is weather resistant for use outdoors. For best diversity performance, use two UA870 antennas.

INSTALLATION INSTRUCTIONS

1. Determine the length of cable required to connect the UA870 Antenna to the UR4 or ULX Receiver or UA845 or UA844 Antenna Distribution System.

IMPORTANT:

Always use low-loss 50 ohm cable, such as RG-8X or equivalent. Shure UA825 7.6 m (25 ft.) or UA850 15.2 m (50 ft.) or UA8100 30.4 m (100 ft) cables are recommended.

2. Set the gain switch to the appropriate setting. If you are using coaxial cables up to 7.6 m (25 ft.) long, select the 3 dB position. If using cables 7.6 m (25 ft.) or longer, select the 10 dB position. To access the gain switch, remove the cover of the preamplifier box (printed side) by unscrewing the four UR4 screws at each corner. Gain settings are marked on the pc board inside.

NOTE: The UA870 gain control is factory preset at the 10 dB position.

3. Connect one end of the antenna cable to the UA870. Then mount the antenna so that it points toward the intended coverage area. See Figure 1.
4. Connect the other end of the antenna cable to the UR4 or ULX Receiver or UA845 or UA844 Antenna Distribution System. The gain LED on the UA870 illuminates to verify that power is being provided to the antenna.

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 for the UA870.

SPECIFICATIONS

RF Frequency Range

UA870A	782-810 MHz
UA870KK	838-862 MHz
UA870MB	800-830 MHz
UA870MC	774-782 MHz
UA870UB	692-716 MHz
UA870WB	470-900 MHz
UA870USTV	470-698 MHz
UA870X	944-952 MHz

Power Source

Remote 12 Vdc from coaxial cable connection to receiver or antenna distribution system.

Power Consumption

UA870 (A, KK, MB, MC, UB, X):.....	0.81 W (12 Vdc)
UA870 (WB, USTV):68W (12Vdc)

Antenna Gain

..... 7 dB typical (on axis)

Amplifier Gain

UA870 (A, KK, MB, MC, UB, X):.....	Gain Switch at 3 dB: 3 dB ± 2 dB
.....	Gain Switch at 10 dB: 10 dB ± 2 dB
UA870 (WB, USTV)	Gain Switch at 3 dB (-2, +1.5 dB)
.....	Gain Switch at 10 dB (-1 dB, +3.0 dB)

Third Order Intercept Point (3OIP) at output

..... More than 30 dBm

Reception Pattern

..... Directional; Cardioid
3dB Beam Width: 100 degrees

Amplifier Gain Indicators

3 dB: Green LED
10 dB: Red LED