

WF-UA80

4-channel Antenna Divider



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2 - ABOUT TRADEMARKS

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3 - INTENDED USE

The WF-UA80 is intended for professional wireless microphone systems, providing stable UHF antenna distribution for multiple receivers. It supports installations requiring reliable RF performance, consistent signal strength and orderly integration of antennas in fixed or portable setups.

4 - SAFETY INSTRUCTIONS

The WF-UA80 is designed with a focus on aesthetics and product quality. However, the system could pose a risk to personal or company property if:

- It is not used in accordance with the instructions
- It has been installed or operated by individuals unfamiliar with standard safety practices
- It has been improperly modified
- The following safety instructions have not been read carefully

4.1 Read Instructions

Read all safety and operating instructions before using the product, device, or system.

1. Retain Instructions

Keep the safety and operating instructions for future reference, ideally near the product or system.

2. Heed Warnings

Follow all warnings provided on the product and in the operating instructions.

3. Follow Instructions

Adhere strictly to all installation and operating instructions.

4. Cleaning

Unplug the product from the mains before cleaning. Do not use liquid or aerosol cleaners—use only a damp cloth.

5. Ventilation

Ensure that ventilation slots and openings are not blocked. Do not place the product on beds, sofas, rugs or similar surfaces, or in enclosed spaces like bookcases or racks unless proper ventilation is provided in line with the manufacturer's guidance.

6. Heat

Keep the product away from heat sources such as radiators, heaters, stoves, or other devices that produce heat, including amplifiers. Avoid using the product in environments that exceed standard operating temperatures.

7. Modifications

Do not use modifications, extensions, or attachments that are not approved by the manufacturer, as they may be hazardous.

8. Accessories

Only use accessories specified by the manufacturer. Do not place the product on unstable surfaces such as carts, stands, or tables not recommended by the manufacturer, as this may result in injury or damage.

9. Water and Moisture

Do not use the product near water or in damp environments—e.g., near bathtubs, sinks, or swimming pools, or in wet basements or unprotected outdoor areas.

10. Moving

If using a product and cart combination, move it with care. Sudden stops, excessive force, or uneven surfaces may cause the unit to tip over.

11. Power Sources

Use only the power source indicated on the product label. If unsure, consult your dealer or local electricity provider. For battery-powered models, follow the product instructions.

12. Power Lines

Do not install the system near overhead power lines or other electric circuits where it could fall or make contact. Take extreme care during outdoor installation.

13. Grounding or Polarisation

Do not defeat the safety purpose of a polarised or earthed plug. If the provided plug does not fit your socket, consult an electrician to replace the outlet.

14. Power Cord Protection

Route power cords so they are not likely to be walked on or pinched, particularly at plugs, sockets, and the point where they exit the product.

15. Lightning

Unplug the product during lightning storms or when unused for long periods. This helps protect against damage from lightning or power surges (unless the system needs to remain on for critical functions like evacuation alerts).

16. Overloading

Avoid overloading sockets, extension leads or built-in convenience outlets to reduce the risk of fire or electric shock.

17. Object and Liquid Entry

Never insert objects into the product through openings. Doing so may contact hazardous voltage or short-circuit parts. Never spill any liquid on the product.

18. Flammable or Explosive Substances

Do not use the product in areas where there are flammable gases or explosive substances.

19. Shock or Vibration

Avoid subjecting the product to heavy shock or vibration when transporting it.

20. Servicing

Do not attempt to service the product yourself. Opening covers may expose you to hazardous voltage. Refer servicing to qualified personnel.

21. Damage Requiring Service

Unplug the product and seek professional service if:

- The power cord or plug is damaged
- Liquid has been spilled or objects have entered the product
- The product has been exposed to water
- The product does not operate normally despite following instructions
- The product has been dropped or damaged
- There is a noticeable change in performance

22. Replacement Parts

Use only replacement parts recommended by the manufacturer. Substitutions may pose fire or shock risks.

23. Safety Check

After servicing, ask the technician to perform safety checks to confirm the product is in proper working condition.

24. Coaxial Grounding

If connecting an external cable system, ensure it is properly earthed. *U.S. models only:* Refer to NEC Article 810 for guidelines on grounding mounts, structures, and coaxial lines.

4 - SAFETY INSTRUCTIONS

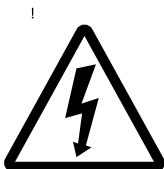
Power Connections

For permanently connected equipment, a readily accessible disconnect device must be included in the fixed wiring. For equipment with a plug, the socket must be installed close to the equipment and be easy to access.

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture. Do not open the cabinet—refer servicing to qualified personnel only.

To prevent electric shock, do not use this (polarised) plug with an extension lead or other outlet unless the blades can be fully inserted, ensuring no part of the blades is exposed.

Installation should be carried out by qualified service personnel only, in accordance with the National Electrical Code or relevant local regulations.



The lightning flash with an arrowhead symbol inside an equilateral triangle is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure, which may be strong enough to pose a risk of electric shock.



The exclamation mark inside an equilateral triangle is intended to alert the user to important operating and maintenance (servicing) instructions in the documentation provided with the appliance.

5 - WF-UA80 SYSTEM ARCHITECTURE

The WF-UA80 is a professional 4-channel antenna divider designed for multi-receiver wireless microphone systems. It delivers stable RF distribution and simplifies complex setups by sharing a single pair of antennas across multiple receivers.

Key features include:

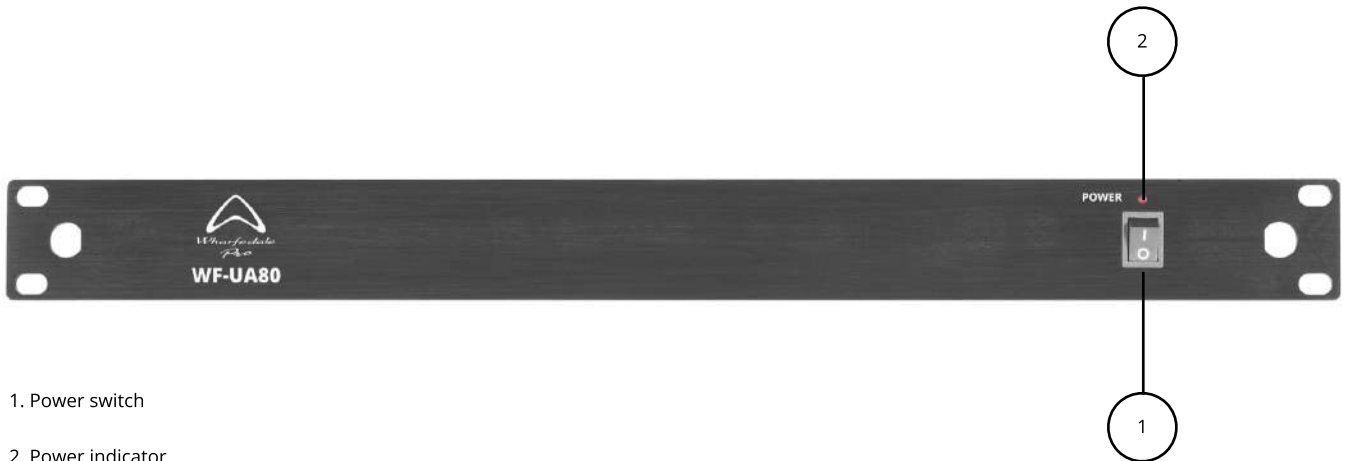
- **Four-channel RF distribution:** Splits a single antenna pair to feed up to four wireless receivers with consistent signal strength.
- **Low-noise design:** Ensures clean, reliable reception and minimises interference for drop-out-free performance.
- **Wide-band operation:** Supports UHF frequencies used by most professional wireless systems.
- **Cascade capability:** Additional WF-UA80 units can be linked to expand large multi-receiver installations.
- **Integrated power supply:** Provides DC power outputs for connected receivers, reducing cable clutter.
- **Rugged 1U rackmount chassis:** Compact and durable for touring, rental, or fixed-install use.

5.1. WF-UA80 System Components:

- WF-UA80 Main Unit
- Two detachable wide-band antennas
- AC power cord / adapter
- Four DC power cables for receiver powering
- BNC antenna cables (for receiver connections)
- User manual

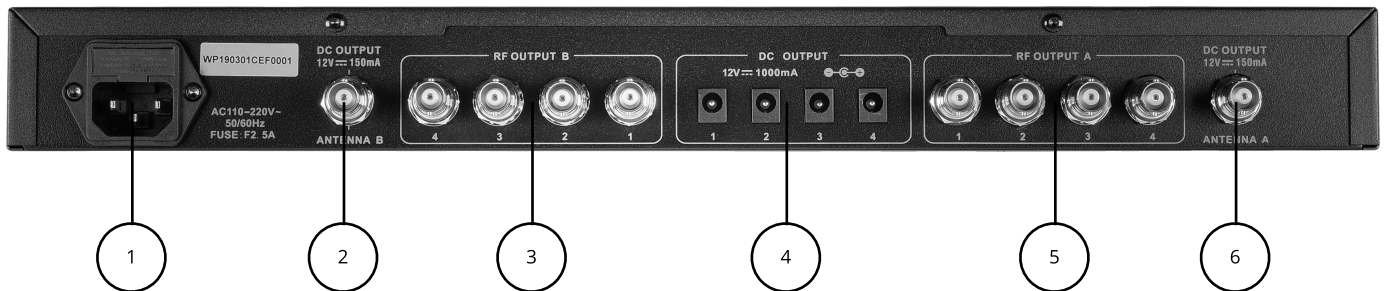
5.2 - SYSTEM OVERVIEW

5.2.1 WF-UA80 Front Panel



1. Power switch
2. Power indicator

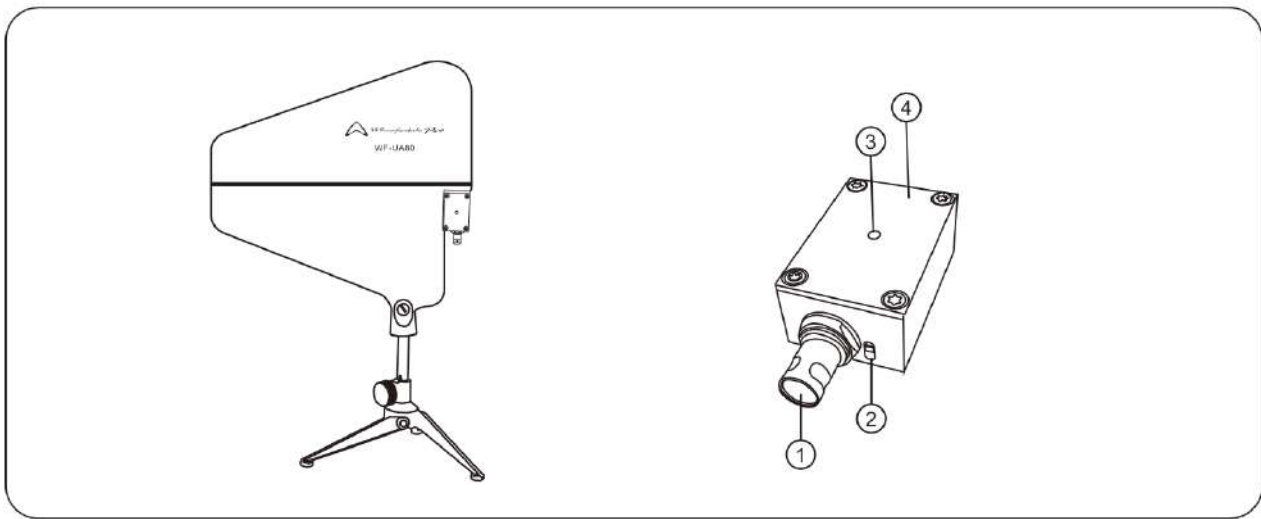
5.2.2 WF-UA80 Rear Panel



1. Power Output Jack: AC-110V—220V 50Hz/60Hz
2. Antenna Input Jack B: with 12V power supply
3. Signal Output Jack B
4. DC power supply Output Jack, directly connect with wireless receiver (DC 12V/1000mA)
5. Signal Output Jack A
6. Antenna Input Jack A: with 12V power supply

5.2.3 WF-UA80 ANTENNA

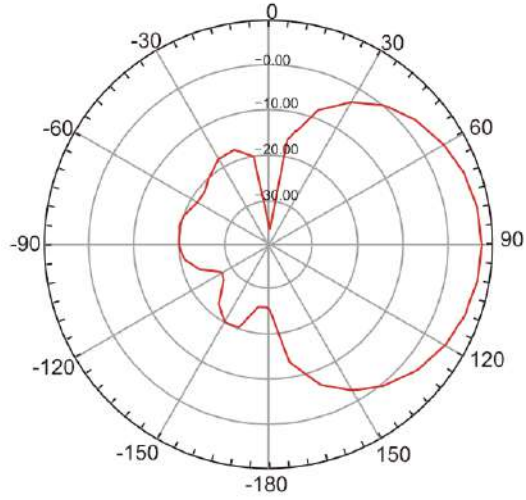
1. A bi-functional log antenna designed for UHF receiving and transmitting applications.
2. Ultra-wide band coverage from 470–960 MHz, compatible with current US and EU telecom regulations.
3. High-gain design ideal for installations requiring specific directional coverage.
4. Adjustable gain to improve signal stability and extend reception range.
5. Ultra-low intermodulation distortion with low-noise components for clean, reliable performance.



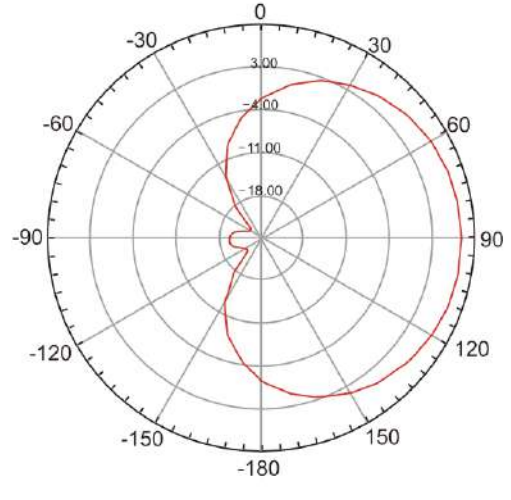
1. Antenna input and output jack
2. Gain switch for output signal
3. Power indicator
4. Booster

5.3 - ANTENNA PATTERN

Vertical



Horizontal



6 - SYSTEM CONNECTIONS AND SETUP

6.1 SYSTEM CONNECTIONS

Follow these steps to connect the WF-UA80 to your antennas and receivers.

Correct cabling and gain settings will ensure reliable signal distribution and minimal RF loss.

1. Using an antenna booster:

Connect the log antenna securely, then use a 50-ohm low-loss coaxial cable to link the booster to the wireless receiver or antenna divider (only for units that supply antenna power).

- If the cable is short, reduce the gain.
- If the cable is long, increase the gain.
- Signal quality is influenced by both cable quality and length.

2. Without an antenna booster:

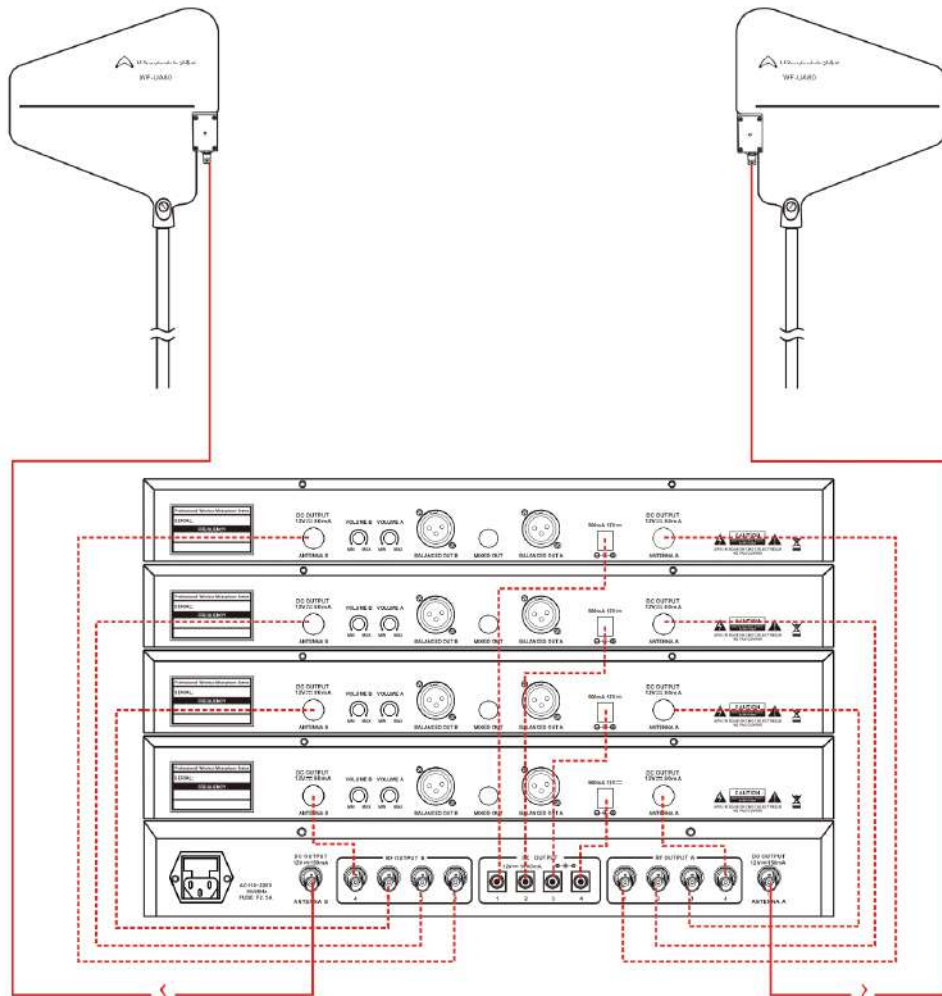
Use a 50-ohm low-loss coaxial cable to connect the log antenna directly to the wireless receiver or antenna divider.

3. Antenna direction:

Position the log antenna so it faces the coverage area for best reception.

4. Transmission only:

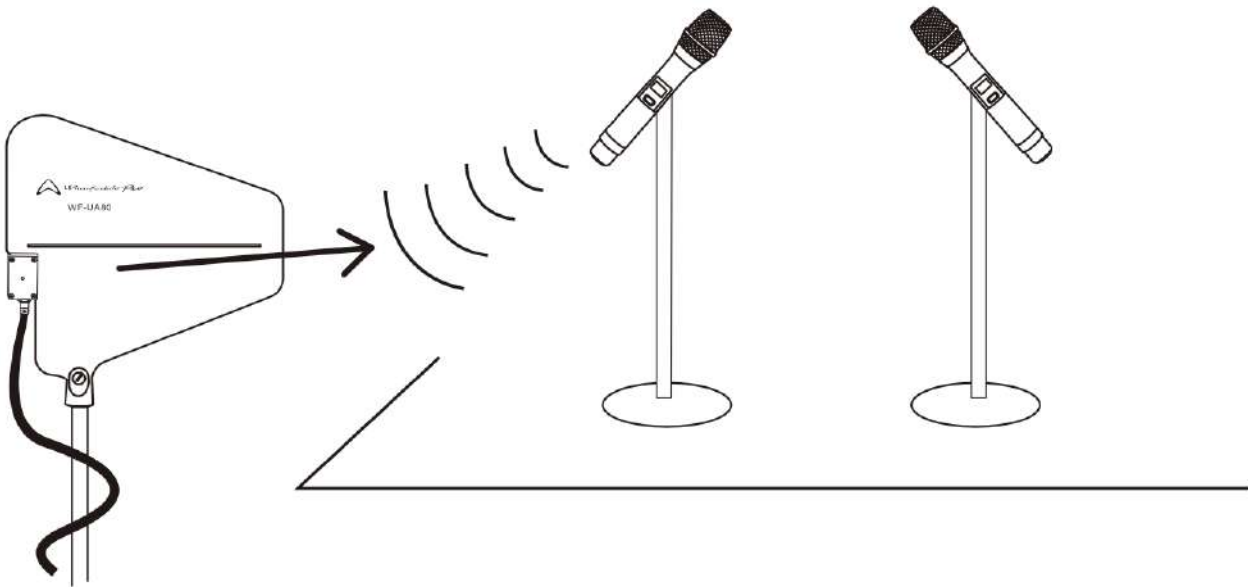
The log antenna is intended solely for transmitting signal.



6.2 - SYSTEM SETUP

To ensure optimal performance and stable reception, follow these placement and installation guidelines when setting up the WF-UA80 and its antennas:

1. Match frequency bands: The log antenna and wireless receiver must operate within the same frequency band.
2. Maintain distance: Position each log antenna at least 3 metres from the wireless receiver for best results.
3. Reduce interference: Keep antennas at least 3 metres apart from one another whenever possible.
4. Avoid noise sources: Place antennas well away from computers, digital equipment, motors, automobiles, neon lighting, and large metal objects, all of which can introduce RF noise.



7 - SPECIFICATIONS

7.1 4-channel Antenna Divider

Feature	Specification
Main Frame Size	EIA-Standard 19" 1 U
Frequency Range	UHF 470-960 MHz
Output Gain	1 dB \pm 1 dB
IIP3	+14 dBm
Noise Figure	< 2 dB
Impedance	50 Ω
Connector	BNC
Antenna Power Supply	12V / 150 mA DC
Output Power Supply	Each Channel: 12V / 1000 mA DC
Power Supply	110-240V AC 50/60 Hz
Dimensions (mm)	483 (W) x 45 (H) x 213 (D)
Weight (KG)	2.00

7.2 ACTIVE DIRECTIONAL ANTENNA WITH INTEGRATED BOOSTER AMPLIFIER

Feature	Specification
Frequency Range	UHF 470-960 MHz
Antenna Gain	7.5 dBi
VSWR	< 2 : 1
3 dB Beam-width	Vertical: 90°, Horizontal 120°
Impedance	50 Ω
Connector TNC	BNC
Dimensions (mm)	270 (W) x 269 (H) x 2.6 (D)
Weight (KG)	0.36

WHARFEDALE PRO LIMITED WARRANTY

Wharfedale Pro products are warranted of manufacturing or material defects for a period of three years from the original date of purchase. In the event of malfunction, contact your authorised Wharfedale Pro dealer or distributor for information. Please be aware that the warranty details may differ from country to country. Contact your dealer or distributor for information (available at www.wharfedalepro.com). These terms do not infringe your statutory rights.



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IAG House 13/14 Glebe Road Huntingdon Cambridgeshire PE29 7DL UK
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