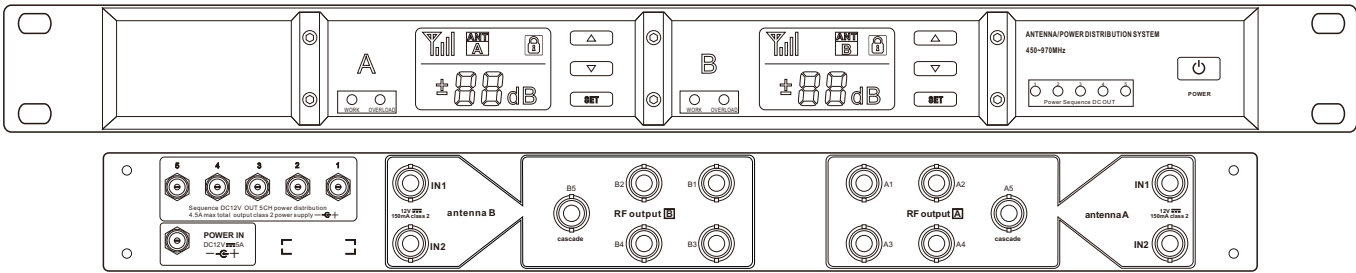


Multi-function antenna distribution system

10 CHANNEL USER’S GUIDE

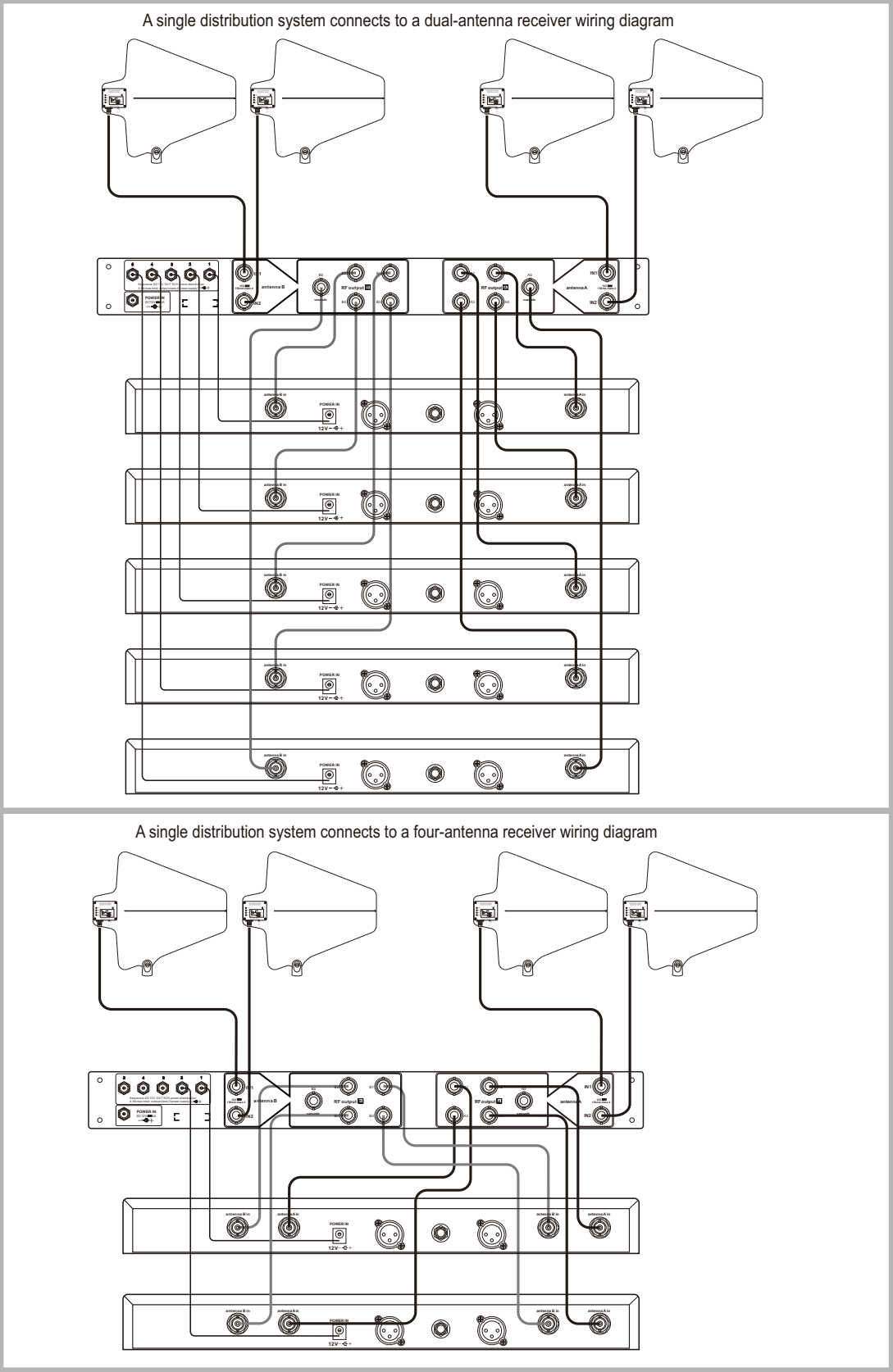


Connect Receiver

Single machine connection setting

- 1.Using a low-loss 50Ω coaxial cable, the left and right RF output ports on the antenna distribution system (1 to 4 of the output channels A and B) are connected to the corresponding left and right antenna inputs on each receiver. A cascaded port can also be used to connect the 5th wireless microphone receiver.
- 2.Connect the antenna distribution system to the power outlet using the included 12V5A power adapter.
- 3.The power input connector is connected to the wireless receiver through the power output connector of the antenna distribution system. Connect to the remaining wireless receivers in a similar manner.

Note: A 10-channel multi-function antenna distribution system can power up to 5 wireless receivers and the maximum total current should not exceed 4A.



Antenna distribution system

Brief description

The multi-function antenna distribution system panel is provided with gain indication, RF overload indication, antenna status indication and 12V output indication. Display the working status of two antennas and RF on the panel, which provides convenient monitoring function for installation and debugging.

The 10-channel antenna distribution system extends the wireless microphone system by allowing up to Five wireless receivers to share four antennas and four antennas to multiple wireless receivers to share RF signals. It also amplifies radio-frequency signals, with an adjustable 24-level gain, to compensate for insertion losses caused by distributing signals to multiple outputs.

The cascaded connector can be connected to an 5th wireless receiver or a second antenna distribution system for RF signal expansion. A DC12V power supply connector is also provided for sequence power distribution and indication to each wireless receiver.

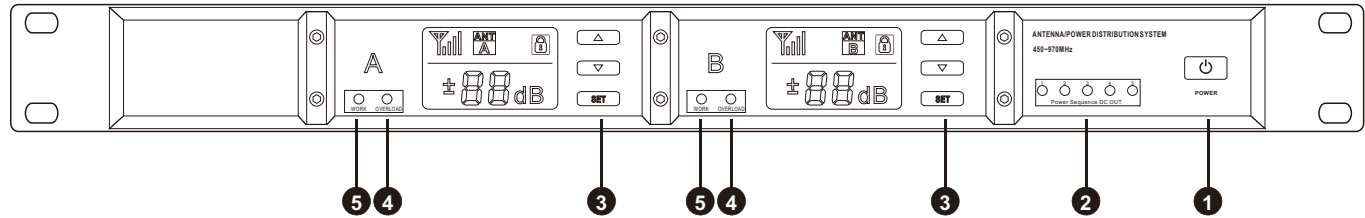
Features

- 24-level gain adjustable, LCD screen intuitive display
- 4 antenna dual-channel 10-way design, a wider range of radio reception, to achieve full coverage of the performance site signal
- RF overload indicator used to indicate the signal strength of the antenna input
- The working indicator lamp of the antenna is used to show the connection and working state of the antenna
- 5 DC12V output connectors. 1-5 connections sequence output, to avoid over-current protection caused by power distribution

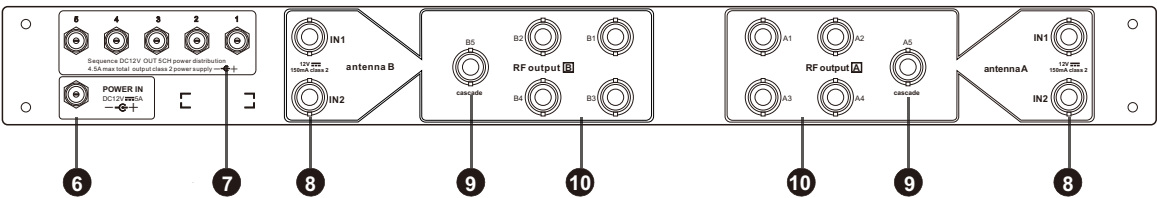
Technical parameters

- Frequency range: 450~970MHz
- Output level (gain) : -18~+6dB adjustable
- Type of connector: BNC Impedance: 50Ω
- Isolation of output connector signal: >30dB, Typical
- RF Overload LED Threshold (±2 dB) : -5dBm
- DC output: DC 12V , 5 Sequence DC Output Connector, maximum total current 4A
- Dimensions: 480 x 176 x 44 mm

Front panel



Back panel



- ①Power switch
- ②DC12V output two-color indicator lamp
- ③Independent gain adjusting buttons for channels A and B
- ④RF overload indicator
The RF overloads of antennas A and B are shown by two red leds.
- ⑤Antenna working indicator
The working status of Antenna A and antenna B is displayed by two green LED.
- ⑥DC12V/5A power input connector

System functions

The multifunctional antenna distribution system ensures maximum sensitivity and signal processing capability and provides the broadest range of radio frequencies for a wide range of radio receivers.

- Low noise and intermodulation distortion, the multifunction antenna distribution system can keep the signal clear and has the lowest distortion.
- Insertion loss compensation, 24-level gain adjustable, signal strength will be attenuated when the signal is split into multiple output ports. The antenna distribution system can compensate the signal with adjustable amplification to ensure the suitable signal for the wireless receiver.
- RF power LED indicator, RF power overload, panel"OVER LOAD" light will show red.
- The antenna working LED indicator is connected to the normal antenna leaf, and the panel"WORK" light will show green.
- Sequence DC output LED dual-color indicator, 2 seconds after Boot 1 # ~ 5 # DC connector interval 1.5 seconds to connect 12V output, orange indicator light sequence, when the detection of DC Line into the connector, the corresponding orange light turns green.
- Expansion capabilities, cascaded ports, and multi-function antenna distribution systems are specialized for large-scale wireless receiving systems. It can make Five wireless receivers use the same four antennas. Two BNC-type cascaded ports can be attached to an additional antenna distributor or wireless receiver. Large performance wireless systems can work by sharing multiple antenna RF signals.
- Compatibility, the multifunction antenna distribution system is compatible with all 450-970MHz wireless receivers in the compatible frequency range.

Antenna Distribution System

Operation

- work: Power ON by Short Press, POWER off by long press. With power-off memory function
- Unlock: Long Press SET key to unlock or lock, the display does not show the lock symbol for unlock state, adjust the settings must first unlock. To prevent misoperation, please lock when in normal use
- Gain setting:
 1. Channels A and B are regulated independently
 - 2.Short-press SET Key, the number flashes, press (▲▼) to increase or decrease gain, short-press SET key to determine
 - 3.Normal use of the gain set to“0dB”, when the panel red overload light should be reduced when the gain

Install the remote antenna

The antenna installed remotely has the advantage of not being limited by the equipment and being closer to the transmitter. The antenna can be placed anywhere within the recommended extension line length to establish a wider radio range and further reduce the possibility of signal loss.

Follow these guidelines for installing antennas remotely:

- When the antenna is properly connected and working, the panel“WORK” green light, indicating good cable and antenna performance
- The multi-function antenna distribution system has a channel a dual-antenna and b-channel dual-antenna input design, small occasions can be used in AB channel with an antenna leaf, large-scale occasions can be used with two antenna leaves connected to AB channel.
- When multiple antennas are placed, the distance between the antenna and the antenna is not less than 3 meters
- Place the antenna 3 meters away from the transmitter.
- When an extension cable is used, a gain of 1.2 db is lost for each additional 3 m of cable. If necessary, a repeater amplifier can be used to compensate for the loss. A repeater amplifier is required to compensate for 12 db gain per 30 m excess to achieve a total loss of 0 db

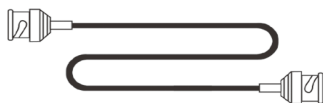
10-channel accessories:



Standard issue: 0. 5m BNC-BNC 50Ω coaxial cables ×10



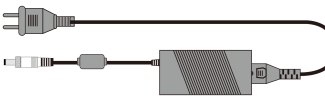
Optional BNC-TNC 50Ω coaxial cables



Standard issue: 3m BNC-BNC 50Ω coaxial cables ×2
Optional 6、10、15、20、25、30m

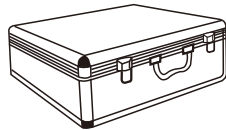


DC Power Cord: 0. 6m×5



Power adapter: 12V5A×1

Packaging:



Optional aluminum box
SIZE:540x385x140mm



Optional Carton

RF power overload

When an overloaded LED red indicator light up, it indicates that the antenna distributor is receiving a strong RF signal. To correct the overload, increase the distance between the antenna and the transmitter, or reduce the gain setting of the antenna amplifier.

Warning: Overloading the antenna amplifier results in reduced channel count and poor system performance.

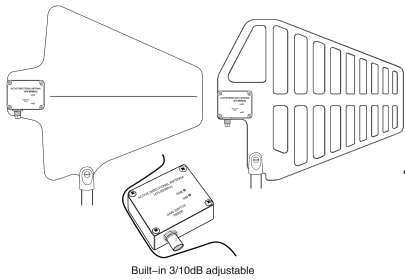
Select the antenna cable

Use 50 Ω low loss coaxial cable to provide optional antenna cables of 3-35m length.

Rack Mount Instructions

- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Keep the rack environment temperature at or below the maximum ambient temperature (Tma) specified by the manufacturer of the installed equipment.
- Provide the proper amount of air flow inside the rack as required for safe operation of the equipment.
- Do not create a hazardous condition by mounting the equipment in the rack with an uneven mechanical load.
- When connecting the equipment to the supply circuit, consider the effect that overloading of the circuits might have on over-current protection and supply wiring. Consider all equipment nameplate ratings when addressing this concern.
- Maintain reliable earthing of rack-mounted equipment. Give particular attention to indirect supply connections to the branch circuit (e.g., power strips).

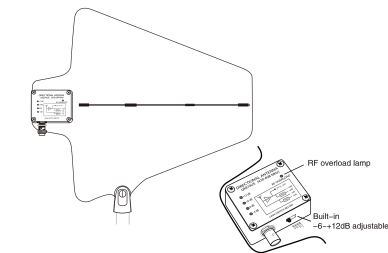
Antenna



Active Directional Antenna
Built-in, two-stage adjustable

Technical parameters:

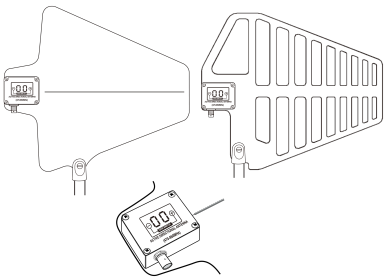
- Frequency range: 470MHz~960MHz
- Receiving angle: 70°
- Gain: Built-in 3dB/10dB ADJ
- Connect: BNC
- Impedance: 50 Ω
- Voltage: 9~12V
- Size: 360x330x35mm



Active Directional Antenna
External 4-stage gain adjustable
with RF overload lamp

Technical parameters:

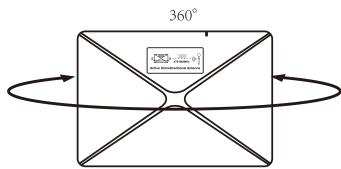
- Frequency range: 470MHz~960MHz
- Receiving angle: 70°
- RF overload lamp threshold: - 5dBm
- Gain: External -6dB--+12dB ADJ
- Connect: BNC
- Impedance: 50 Ω
- Voltage: 9~12V
- Size: 360x330x35mm



Active Directional Antenna
External 7-stage adjustable

Technical parameters:

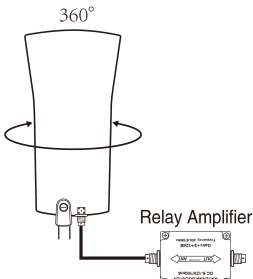
- Frequency range: 470MHz~960MHz
- Receiving angle: 70°
- Gain: External -6dB--+12dB ADJ
- Connect: BNC
- Impedance: 50 Ω
- Voltage: 9~12V
- Size: 320x280x35mm



Active Omnidirectional Antenna

Technical parameters:

- Frequency range: 470MHz~960MHz
- Receiving angle: 360°
- Gain: 12dB
- Connect: BNC
- Impedance: 50 Ω
- Voltage: 9~12V
- Size: 230x160x32mm



Passive Omnidirectional Antenna
(It needs to be connected with relay amplifier)

Technical parameters:

- Frequency range: 470MHz~960MHz
- Receiving angle: 360°
- Gain: 0dB
- Connect: BNC
- Impedance: 50 Ω
- Voltage: 9~12V
- Size: 270x130x20mm

General Description

The 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 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 wireless receivers and antenna distribution systems that provide 10~15 V DC bias
- Integrated threaded adapter mounts easily to microphone stands
- Quality, ruggedness, and reliability

Installation

- Connect the antenna to the receiver or distribution system using antenna cables (or any 50 ohm, low-loss coaxial cable).
- 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 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.

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 receivers are optimized todeliver 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.

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.

Built-in 3dB/10dB ADJ Setting	
Cable Length	Gain Setting
3~15M	3 dB
20~35M	10 dB

External-6dB ~ +12dB ADJ Setting	
Cable Length	Gain Setting
3M	-3~-6dB
3~6M	3 dB
10~15M	6 dB
20~25M	9 dB
30~35M	12 dB

POWERING ON/POWERING OFF



Last powered on

To avoid damaging internal components, the amplifier should be the **last** component in your system to be powered **on**.



First powered off

To avoid damaging internal components, the amplifier should be the **first** component in your system to be powered **off**.

CONNECTING ANTENNA CABLES

Accidentally connecting the center cable pin (power supply) to the cable housing (ground) may cause internal component damage. **Use caution when installing cables.**

SAFETY INFORMATION

! IMPORTANT SAFETY INSTRUCTIONS !

1. READ these instructions.

2. KEEP these instructions.

3. HEED all warnings.

4. FOLLOW all instructions.

5. DO NOT use this apparatus near water.


6. CLEAN ONLY with dry cloth.

7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. DO NOT defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. ONLY USE attachments/accessories specified by the manufacturer.
12.  USE only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.

14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. DO NOT expose the apparatus to dripping and splashing. DO NOT put objects filled with liquids, such as vases, on the apparatus.

16. The MAINS plug or an appliance coupler shall remain readily operable.

17. The airborne noise of the apparatus does not exceed 70dB (A).

18. Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

19. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

20. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

WARNING: Voltages in this equipment are hazardous to life. No user-serviceable parts inside. Refer all servicing to qualified service personnel. The safety certifications do not apply when the operating voltage is changed from the factory setting.

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Connect Receiver

Cascading connection settings

Cascade Port of one Antenna distribution system RF output channels A and B is connected to Antenna input port of "Antenna IN" of the second Antenna distribution system channels A and B.

- If necessary, other types of antenna distributor equipment can be connected in the same way.
- The radio receiver is connected to the power output line through a chain connection. The power output connector of the antenna distribution system should be connected to the power input connector of the radio receiver. Connect the remaining receivers in a similar manner. The antenna distribution system is connected to the AC power supply through a 12V5A power adapter.

Warning:

- When additional antenna distribution systems are added to the system, each antenna distribution system should be connected to a separate 12V5A power supply.
- Using the DC power output port to supply power to multiple antenna distribution systems in a chain connection will lead to the overload of a single power supply and may cause equipment damage.
- A 10-channel multifunctional antenna distribution system can power up to 5 wireless receivers with a DC power output port. The maximum total current should not exceed 4A.

