# D5828 D5836 D5828C D5836C D58LG D58C D58E

# 8/16-Channel High-Frequency Signal Amplification and Compensation System

## Description

Wireless signal amplifiers and gain boosters are specially designed for applications requiring long-distance signal amplification and compensation in scenarios such as schools, stadiums, conference rooms, stage performances, and temples. The system comes standard with 2 signal pickup inputs (expandable via relay) and 8-16 amplified signal outputs (expandable through cascading multiple units). The system effectively receives frequencies in the range of “400MHz-950MHz”, providing effective gain from 0 to +12dBm within this band. This greatly enhances the stability of signals within the coverage area of the directional antenna, reduces microphone signal dropouts during use, and correspondingly increases the effective operating range of wireless microphones. It is applicable to school radio stations, sports fields, stage performances, and multimedia rooms.

Models refer to the following: D5828 8-Channel Antenna Amplifier (Outdoor), D5836 16-Channel Antenna Amplifier (Outdoor), D5828C 8-Channel Antenna Amplifier (Indoor), D5836C 16-Channel Antenna Amplifier (Indoor), D58LG Outdoor Directional Antenna, D58C Indoor Antenna, D58E Antenna Signal Booster.

## Features

- The effective operating frequency range is 400 MHz-950 MHz, with adjustable signal gain from +2dBm to +12dBm.
- The system is broadly compatible with most UHF wireless microphone receivers on the market.
- The antenna is equipped with a high-efficiency strong filtering circuit that effectively filters and isolates

unwanted interference signals outside the operating range.

- The antenna includes a high-performance high-frequency gain chip, which enhances and compensates microphone signals without loss.
- The system distribution host provides 8+2 channels/16 channels of stable high-quality signal output (expandable through cascading multiple units).
- The system distribution host provides 4 channels of stable DC power output specifically for powering microphone receivers (each channel supports 12V/1A load).
- All coaxial cables are specialized high-frequency copper core cables with a 5-layer structure and shielding aluminum foil.
- The system includes two telescopic and steering-adjustable metal mounting stands for the directional antenna.
- The directional antenna and gain booster control circuit are ingeniously integrated, making the structure more compact and durable.
- The working parts of the directional antenna circuit are protected by a weatherproof metal casing, suitable for long-term outdoor installation.
- The system host features a system connection status indicator; the indicator light is normally on when the antenna is properly installed and functioning.
- The directional antenna features a connection status indicator; the indicator light is normally on when the directional antenna is properly connected to the system host and functioning.

## Specifications

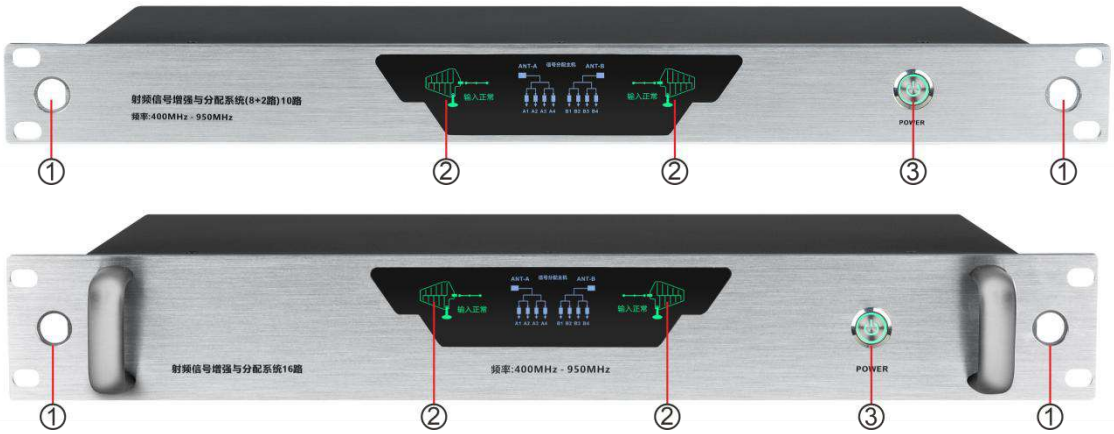
| Model | D5828 D5836 D5828C D5836C |
|---|---|
| High-Frequency Signal Input | 2 BNC inputs |
| Applicable Frequency Range | 400~950MHz |
| Input Cutoff Point | +32dBm |
| Amplified Signal Output | 8 BNC outputs + 2 BNC backup cascade outputs (8-CH) / 16 BNC outputs (16-CH) |
| RF Output Gain | +1.0dB±1dB |
| Output/Input Gain | +1.0dB±1dB |
| Output Isolation | >18dB at 400~1000MHz |
| Output/Input Impedance | 50Ω |
| Antenna Output Connector | BNC connector |
| Antenna Input Connector Power Supply | +8.0V DC / 200mA |
| Power Supply | 12~15V DC |
| Current Consumption | approximately 200mA/12V DC input |
| Package Dimensions (8 Channels & 16 Channels) | 520×380×250mm |
| Machine Dimensions (8 Channels) | 482×200×45mm |
| Machine Dimensions (16 Channels) | 482×200×66mm |
| Gross Weight (8 Channels) | 6.6kg |
| Gross Weight (16 Channels) | 7.1kg |
| Net Weight (8 Channels) | 1.96kg |
| Net Weight (16 Channels) | 2.25kg |

| Model | D58LG D58E |
|---|---|
| Antenna Type | Log-Periodic Dipole Antenna (LPDA) |
| Frequency Range | 400-950 MHz |

| | |
|---|---|
| Output Interface | Bayonet female socket (BNC) |
| Antenna Impedance | 50Ω |
| Built-in Booster | +2dB, +6dB, +8dB, +12dB (four adjustable levels) |
| Operating Status Indication | Power and gain LED indicators |
| Directionality | Horizontal 90°, Vertical 60° |
| Pointing Polarity | Vertical polarization |
| Operating Voltage | Bias power supply 8~15V DC |
| Package Dimensions (mm) | 510×360×70 |
| Machine Dimensions (mm) | 320×275×22 |
| Net Weight (1pc) | 3.5kg |

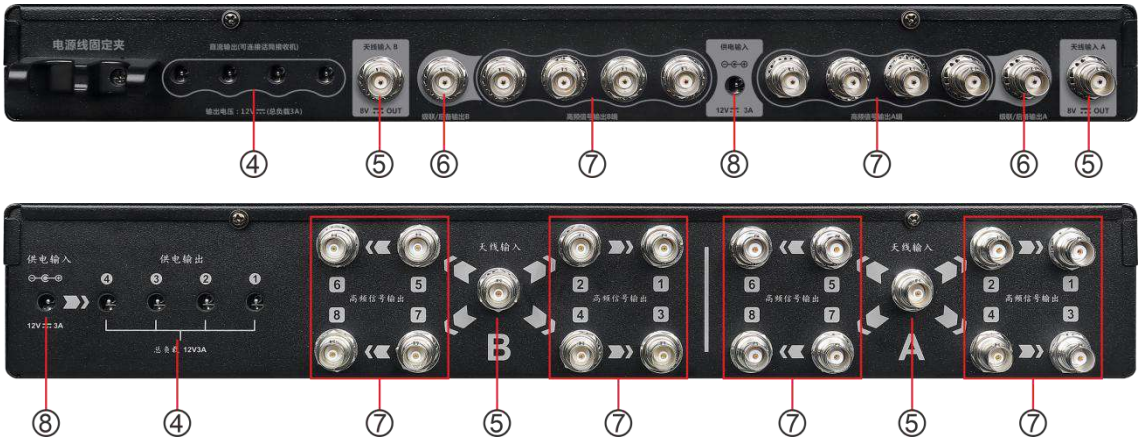
## Front / Rear Panel

### Front Panel




① Front Antenna Hole
Front backup antenna mounting hole.
② Signal Input Indicator
When the signal input is normal, it is on. When there is no signal input, it is off.
③ Power Switch
When the indicator light is on, it indicates that the power is on.

### Rear Panel



④ DC Power Output Connector

It provides 4 connectors, connected to the wireless microphone receivers with the supplied DC cables (Note: The connectors provide 12V and a maximum current 3A).

⑤ Microphone RF Signal Input

Connected to the directional antenna with the supplied cables.

⑥ MIC RF Signal Cascade Output

It is used to cascade the signal to the next distribution host; it can also serve as a backup signal output connected to the microphone receiver.

⑦ Channel RF Output Connector

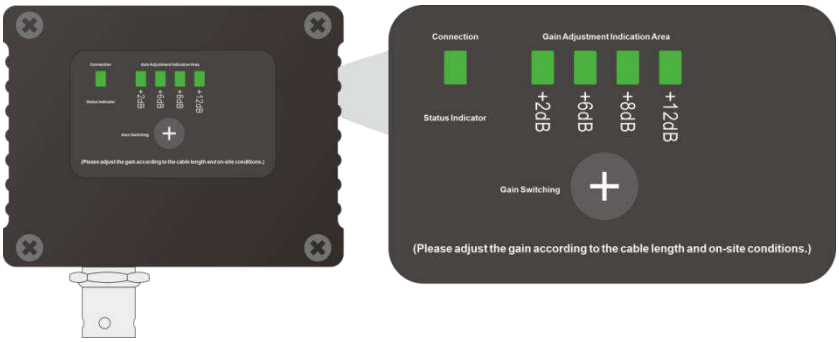
A and B are equipped with RF signal outputs with BNC connectors, which can be connected to wireless receivers.

⑧ Power Input Connector

Choose the supplied power adapter or a DC 12V 3A power supply.

## Gain Booster Adjustment

The gain booster, as the core component of the antenna amplifier system, amplifies and compensates the wireless microphone signal by adjusting the gain strength. The gain level should be set according to the cable length and the usage conditions of the microphones during installation.




The four-level adjustable gain booster can be adjusted; please match the gain to the length of the connection cable.

+2dB (for cable length: 5-10m)
+6dB (for cable length: 10-20m)
+8dB (for cable length: 20-30m)
+12dB (for cable length: 30-40m)

(To prevent misuse, this booster is designed without the signal attenuation adjustment.)

## Directional Antenna

The directional antenna is used to enhance the signal strength and quality of the microphone through the booster on the antenna after receiving the signal from the wireless microphone, and then transmit the signal to the distribution host through the coaxial cable.


① Weatherproof Metal Booster
② Connection Port to the Distribution Host
③ Stand Mounting Connector
④ Windproof Hole Design
⑤ Antenna Direction towards Microphone

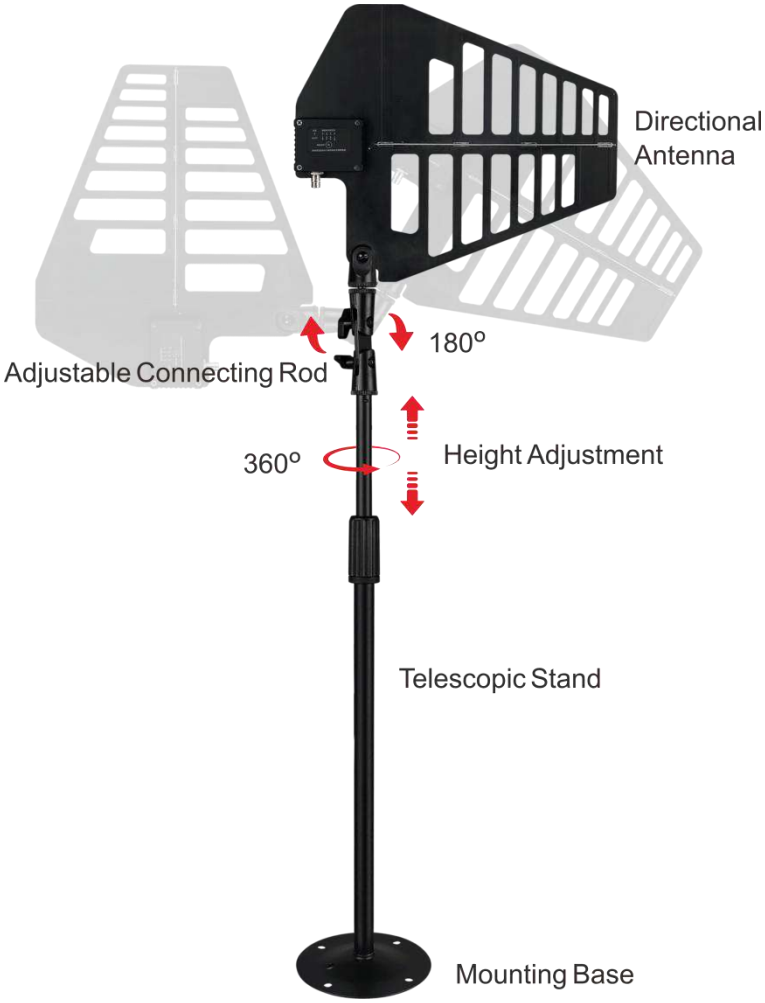
## Indoor Antenna (Optional)


Mounting Bracket

**Indoor Antenna Specifications**

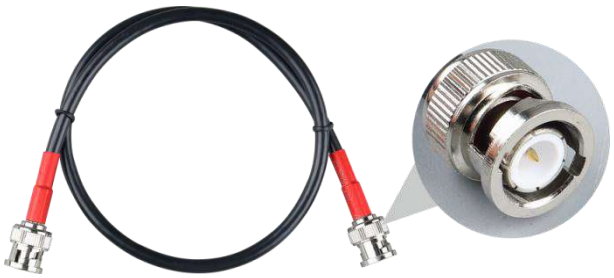
Antenna Type: Log-Periodic Dipole Antenna (LPDA)
Frequency Range: 400-950 MHz
Output Interface: Bayonet female socket (BNC)
Antenna Impedance: 50Ω
Directionality: 180°
Built-in Booster: +2dB, +6dB, +8dB, +12dB (four adjustable levels)
Operating Status Indication: Power and gain LED indicators
Operating Voltage: Bias power supply 8~15V DC
Package Dimensions (mm): 510×360×70mm
Machine Dimensions (mm): 180×175×45mm
Gross Weight: 1.1kg
Net Weight: 0.4kg

## Outdoor Stand




The directional antenna mounting connector is a standard industry interface, compatible with most floor stands and surveillance brackets available on the market.

## System Connection Cables



All interfaces in this system are bayonet (BNC) connectors. If your wireless receiver uses screw-type connectors, please contact our factory to obtain adapters.

**Coaxial Cable Specifications**

Cable Type: Foamed polyethylene insulated coaxial cable LMR195
Impedance: 50Ω
Bending Radius: 25mm
Cable Loss: ≤0.24dB/m (20 degrees)
Cable Diameter: 6mm
Material Structure: 5-layer braided and shielded copper core wire
Note: Signal attenuation for a 50-meter cable is -5dBm; signal attenuation for a 10-meter cable is negligible.

## System Connection Diagram

Cable Introduction: These two cables come standard with 5 meters. Users can customize lengths of up to 50 meters from the manufacturer based on actual installation needs. Do not replace these cables with others arbitrarily. If the installation distance exceeds 50 meters, please contact the manufacturer to increase the number of relay boosters in the system.