



RPT137001 (5W 850MHz)

Wireless Repeater

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Address: 12F, Building A, Jiangshi Rd., Qianju High-Tech Park, Guangming Area,
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Website: <http://www.szatnj.com>,<https://www.atnjtech.com>



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1. PRODUCT OVERVIEW

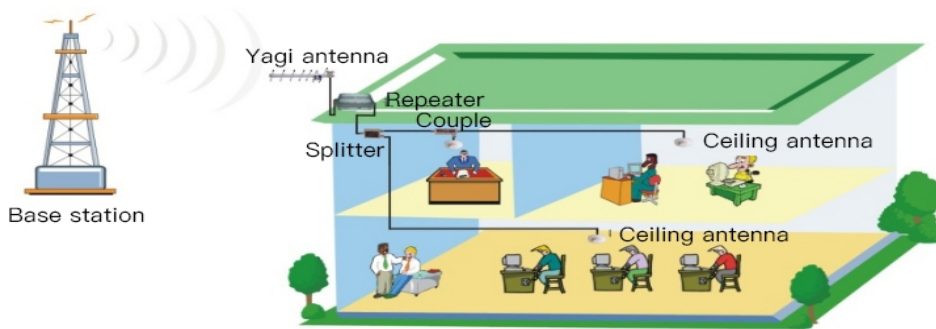
A wireless repeater system offer an affordable solution for signal coverage problem, which is faded and attenuated caused by structural obstacles. A wireless repeater system is easy to install, maintain and could help signal carriers to handle customer complaints and fill the related knowledge in communication field.

As a wireless repeater between base stations and mobile devices, it could two-way repeat signal reception, amplification and transmission to a weak-signal area or no signal coverage area to re-build the signal connection for mobile users.

2. PRODUCT APPLICATION

Expanding signal coverage, amplifying weak signal or transmitting signal to signal dead area.

Residential Area	Villa
Basement	Parking Lot
Car	High-Speed Rail
Border Zone	Village
Elevator	Ship
High Floor	Tunnel
Rural	Underground Mine
Club/Bar	Underground Facility



Application Example

3. PRODUCT FEATURES

1) AUTO POWER CONTROL

The wireless repeater has digital ALC function, and the dynamic gain adjustment range over 20dB, which ensures that the wireless repeater works in a linear state, and has high reliability and stability.

2) SIGNAL QUALITY DETECTION

The wireless repeater uses a logarithmic amplifier to detect the signal, and displays the real-time output and input signal strength. In different working environments, it could provide a reference for engineering installation without any dedicated test instrument.

3) AGC/AMPLIFICATION FOR UPLINK/DOWNLINK

After the wireless repeater system is powered on, it automatically detects the input power and adjusts the output power accordingly. Similarly, once the system calculates the downlink gain, the uplink gain can be adjusted accordingly. This function balances the amplification of the system well, and at the same time it could adjust the gains of the two channels accordingly. In addition, because the system gain is smaller than the system path loss, the automatic gain adjustment function avoids interference and noise to the system link to the maximum extent. A base station can be connected to multiple wireless repeaters.

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4. TECHNICAL SPECIFICATIONS

测试项目 Test Item		技术指标要求 Electrical Specifications	
		上行 Uplink	下行 Downlink
工作频率 Frequency		824-849 MHz	869-894 MHz
额定输出功率 Output Power		23±2dBm	37±2dBm
增益 Gain		90±3dB	90±3dB
带内平坦度 Ripple		≤5dB	≤5dB
ALC 控制范围 Auto Level Control		≥30dB	≥30dB
噪声系数 Noise Figure		≤5dB	≤5dB
驻波比 VSWR		≤1.6	
三阶互调 (dBc) Third-order intermodulation		≤-42dBc	≤-42dBc
传输时延 Group Delay		≤1us	≤1us
Spurious emissions 杂散发射	9kHz-150kHz/1kHz	≤-36	
	150kHz-30MHz/10kHz	≤-36	
	30MHz-1GHz/100kHz	≤-36	
	1GHz-12.75GHz/1MHz	≤-30	
射频接口 RF Connector		N-Female	
阻抗 Impedance		50Ω	
电源 Power supply		AC90-300V (50/60Hz)	
功耗 Power consumption		≤80W	
外形尺寸 Size		630×408×222mm	
重量 Weight		16kg	

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5. PRODUCT DESCRIPTIONS

1) INDUSTRIAL APPEARANCE DESIGN



REPEATER APPEARANCE

2) INTERFACES

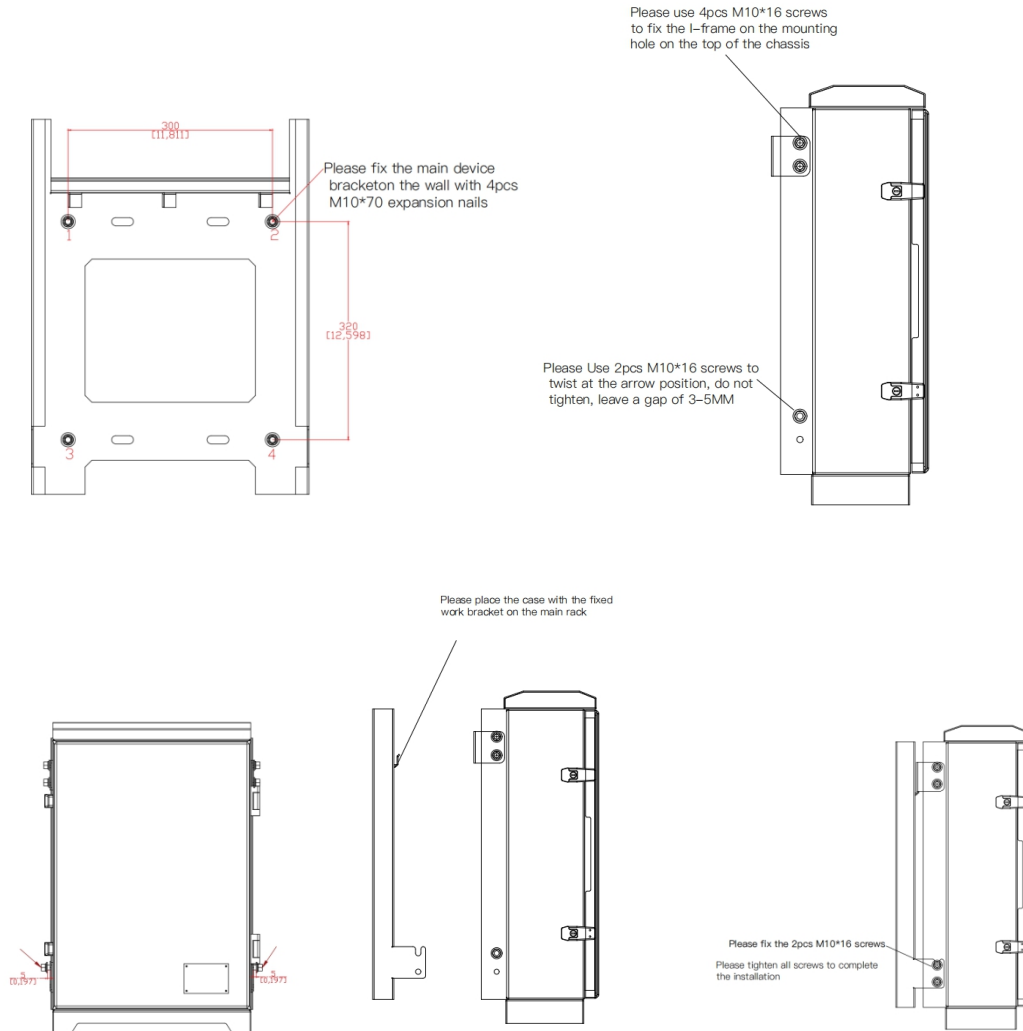


REPEATER INTERFACES

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6. INSTALLATION INSTRUCTIONS

It supports wall mounting, instructions as follows

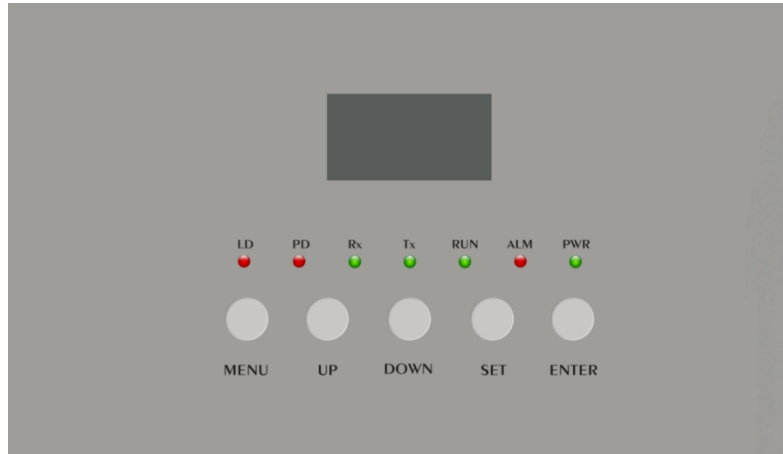


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7. BUTTON INSTRUCTIONS

The wireless repeater has been configured with the parameters of the whole machine at the factory, and generally does not need to be modified. In special circumstances, you can modify parameters it according to the following instructions;

Button Descriptions:



- MENU: Enter the menu page.
- UP: Page up, setting item selection.
- DOWN: Page down, setting item selection.
- SET: Exit the current option or page.
- ENTER: Enter the setting item.

1) SET THE CHANNEL SWITCH (CHANNEL 1 AS EXAMPLE)

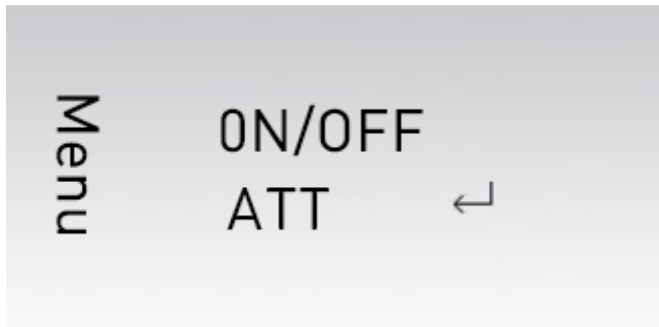
After the device starts up normally, as shown in the figure:

```

CH:01      Band 05
BS: - -    MS: - -
ATT      UL:00  DL:00
ON      Bad
    
```

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Press the menu button to enter the menu page:

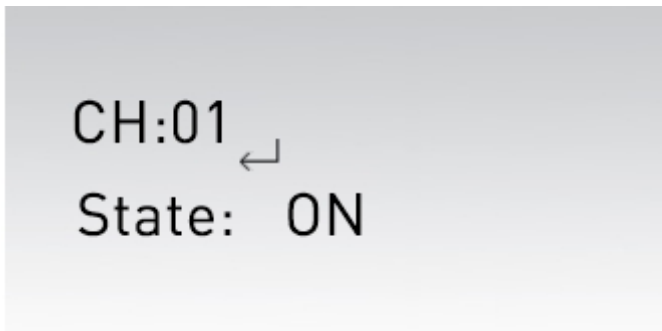


Move the cursor to the switch items by pressing UP /DOWN button, press ENTER to enter the switch setting:

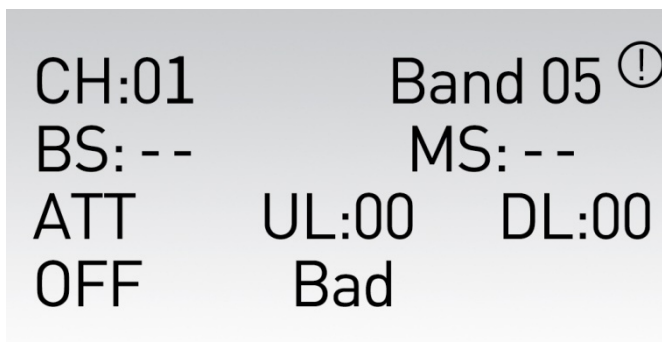


Note: When the cursor is at CH: 01, press the ENTER button, 01 will enter the flashing state, at this time you can press UP / DOWN to select the channel number (for example, by pressing UP/DOWN, you could select channel 02, and then press the SET button, 02 exits the flashing state , The channel selection 02 is succeeded).

Move the cursor to "Status: On" by UP/DOWN, press the ENTER button, "Status: On" will enter the flashing state, and then press the UP/DOWN buttons to select "Status: Off", and press the SET button to exit the blinking state. , Channel 1 channel switch is set to off. As shown in the figure:



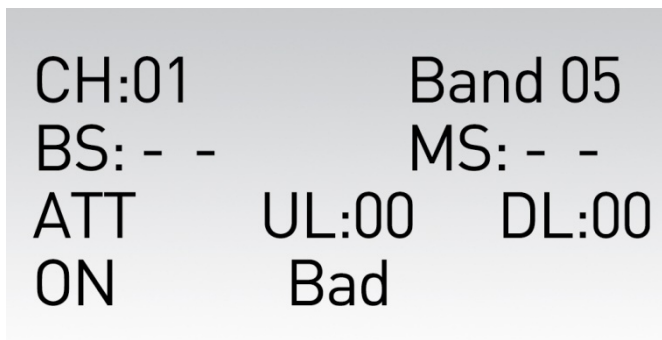
At this point, if we return to the system page, the “ON” at the bottom of the channel 1 (CH: 01) page will change to “OFF” as shown in the figure:



The other channel switch settings are the same as the channel 01 switch settings. Repeat the above steps and select the corresponding channel.

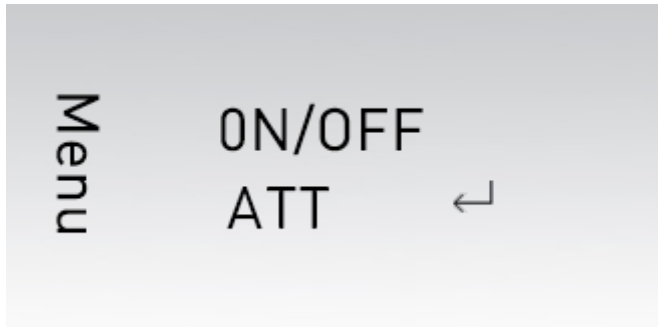
2) SET THE CHANNEL ATTENUATION (CHANE 1 AS EXAMPLE)

After the device starts up normally, as shown in the figure:

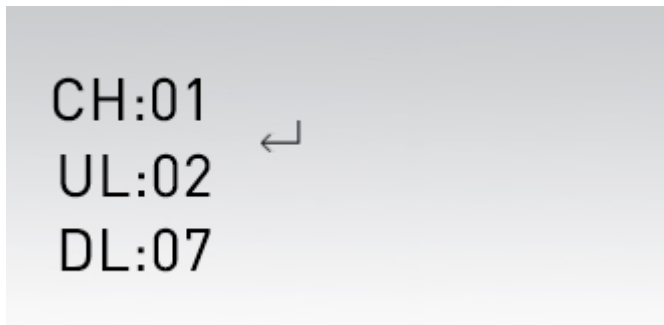


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Press the menu button to enter the menu page:



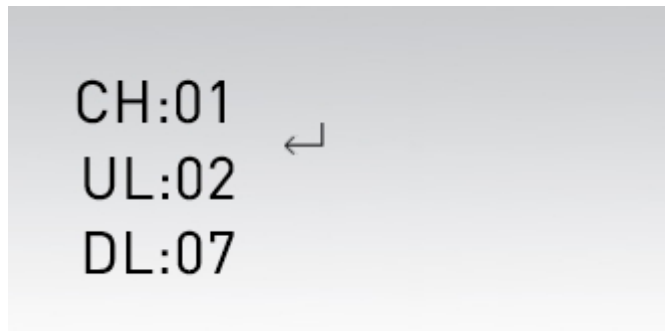
Move the cursor to the attenuation items by pressing UP /DOWN button, press ENTER to enter the attenuation setting:



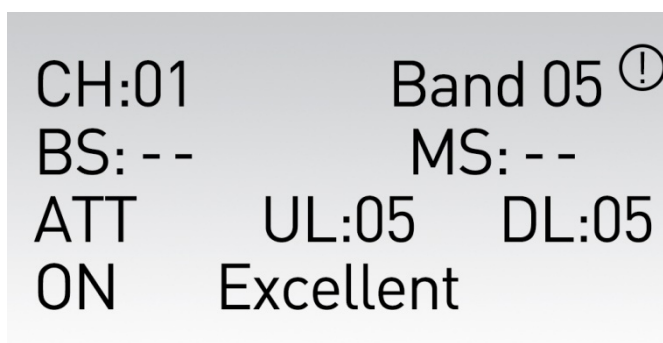
Note: When the cursor is at "CH:01", press the ENTER button, and "01" will enter the flashing state. At this time, the channel number can be selected by using UP/DOWN (for example, by pressing UP/DOWN, you could select channel "02", and then press SET button, "02" exits the flashing state, the channel selection "02" is succeeded).

Move the cursor to "Uplink: 00", press the ENTER button to make "00" enter the flashing state, and then press the UP/DWON button to increase or decrease the value (the minimum attenuation value is 00 and the maximum is 31). For example, set the uplink attenuation to 05, then Press the SET button to make "05" exit the flashing state, at this time "Upstream: 05" is set successfully. Follow the same operation to set "Downlink: 05", as shown in the figure:

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After the setting is successful, return to channel 1 of the system page, and ATT will refresh the set attenuation value "ATT UL:05 DL:05" now. As shown in the figure:



Note: If it is a dual-band or triple-band repeater, the attenuation setting of other channels is the same as the attenuation setting of channel 01. Select the corresponding channel and repeat the above steps to set the working parameters of other channels.