

Networked Industrial Waterproof Intercom Terminal



AT-TW01

1. Overview

The AT-TW01 Networked Industrial Waterproof Intercom Terminal supports the standard SIP protocol and is compatible with most common IPPBX and network dispatch platforms on the market. It is specifically designed for high-humidity, high-dust environments such as subway tunnels, underground passages, highway tunnels, mines, power plants, steel mills, ports, ships, and electrolysis workshops. This terminal is suitable for installation in various harsh environments, featuring waterproof, moisture-proof, dust-proof, cold-resistant, frost-resistant, high-temperature resistant, oxidation-resistant, corrosion-resistant, and impact-resistant properties.

Key Features:

1.1 Constructed from aluminum alloy using a 1,000+ ton die-casting machine, offering high density, light weight, cold resistance, oxidation resistance, corrosion resistance, and impact resistance.

1.2 The handset is made of German Bayer ABS+PC composite material using an integrated vacuum molding process. It incorporates military-grade transmitters and receivers with permanent magnets, providing explosion-proof, waterproof, moisture-proof, dust-proof, noise-canceling, cold-resistant, frost-resistant, and impact-resistant characteristics.

1.3 The hook switch is made of stamped zinc alloy and undergoes polishing, electroplating, and other surface treatments. It incorporates an imported reed switch, which works with the permanent magnet in the handset to detect on-hook/off-hook status. The hook is cold-resistant, frost-resistant, oxidation-resistant, corrosion-resistant, and salt spray resistant.

1.4 The buttons are made of anti-aging silicone, professionally designed to be waterproof and dust-proof. Paired with gold-plated PCB contacts, they offer a comfortable tactile feel, excellent electrical performance, and a service life exceeding 500,000 presses.

1.5 The mainboard is industrial-grade and features abundant signal interface nodes for easy integration with peripheral external devices.

1.6 The housing employs multiple waterproof designs. All cable entries are sealed with professional anti-aging waterproof electronic sealant. The overall protection rating of the terminal reaches IP68.

1.7 The loudspeaker and audio-visual alarm light have a protection rating of IP65, making them waterproof, moisture-proof, and suitable for outdoor use.

2. Functional Description (Please confirm specific functions before delivery due to the high integration of the mainboard):

2.1 Standard Dialing: Dial numbers using the keypad after going off-hook (lifting the handset).

2.2 One-Touch Dialing: Designate a key for one-touch speed dialing via the device's web configuration page.

2.3 Automatic Dialing: The terminal can be set to dial automatically upon going off-hook.

2.4 Point-to-Point Call: Supports IP address-based point-to-point calls. Enter the target IP intercom terminal's IP address directly within the local area network to establish a call.

2.5 Dial Rule Configuration: Customize dialing rules as needed. For example, set dialing "1" to automatically call a designated IP address (e.g., 192.168.0.201) or number (e.g., 13011001100).

2.6 IP Address Announcement: Lift the handset and long-press the "#" key. The terminal will audibly announce its IP address, allowing access to its web configuration page.

2.7 SIP Account Support: Supports registration of up to two SIP accounts simultaneously.



2.8 Volume Adjustment: Ring volume and call volume can be adjusted via the web configuration interface.

2.9 Network Support: Supports IPv4 and IPv6 configuration, DHCP, and static IP address assignment.

2.10 Amplification Function: When called, the terminal rings through the loudspeaker with a flashing light prompt. After 3-5 seconds (configurable), it automatically answers in hands-free speaker mode. If answered manually by lifting the handset, it immediately switches to handset mode.

2.11 Interfacing Function: Provides abundant signal interface nodes for interconnection with surrounding external devices.

3. Specifications

Parameter	Specification
Product Material	Aluminum Alloy
Protection Level	IP68
Product Color	Outdoor Yellow
Dimensions	320*255*138mm
Power Supply	220V AC
Installation Method	Wall-mounted
SIP Lines	Maximum 2 channels
Network Interface	LAN/WAN
Network Features	
DTMF	In-band / RFC2833 / SIP INFO
Audio Codecs	G.711(A/μ) / G.729A/B/AB / G.726 / iLBC / G.722 / L16
DNS SRV	RFC3263
Firewall Traversal	VPN L2TP, DMZ
SIP Protocol	SIP 2.0
IP Call	Supports point-to-point calls
Speaker Power	8Ω, 30W
Speaker Volume	≥110dB
Ambient Temperature	-40°C to +70°C
Ambient Humidity	≥95%

4. Dimensions



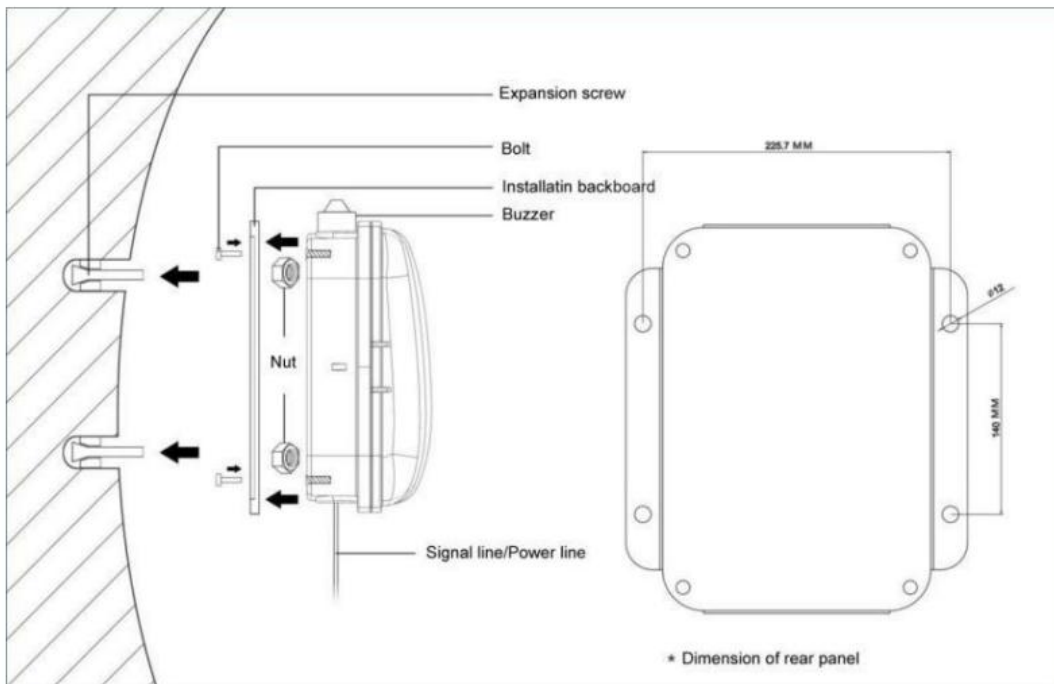


5. Installation and Configuration

5.1 Installation (Wall-mounted):

- a. Use the provided M8 bolts to secure the terminal to the mounting backplate.
- b. Drill 4 x $\Phi 10$ mm holes (225.5mm x 140mm spacing) on the wall according to the template on the backplate. Insert the provided expansion bolts.
- c. Secure the terminal and backplate assembly to the wall using the provided nuts.
- d. Connect the power cord, network cable, and speaker cable according to the port labels.
- e. Installation is complete.

Please refer to the installation diagram:

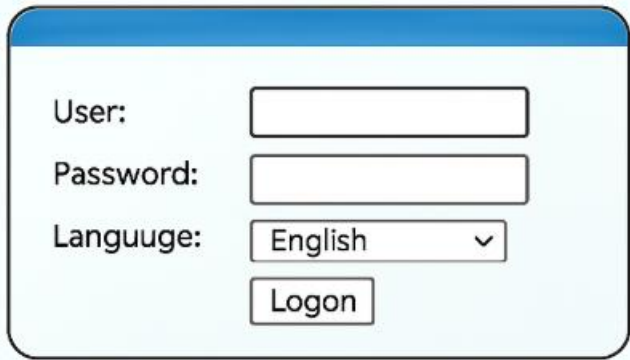


5.2 Configuration:

- a. Go off-hook (lift handset), press and hold "#" to hear the terminal's IP address.
- b. On a PC within the same LAN, open a browser, enter the IP address heard, and access the configuration page (Figure 1: Login Page).
- c. Navigate to Network Settings and configure a static IP address if required (Figure 2: Network Configuration).
- d. Navigate to SIP Settings. Configure Account, Password, and Server address (provided by your IPPBX or dispatch platform) (Figure 3: SIP Account Configuration).
- e. Navigate to Intercom Settings. Configure "Auto Answer", "Volume", etc. (Figures 4 & 5).
- f. Navigate to Security/Alarm Settings. Configure warning light input (Figure 6). By default, the warning light activates during ringing.
- g. Go off-hook, dial the control room number, and test call quality.
- h. Call this terminal from the control room to test ringing, amplification, conversation, and auto-hang-up functions.

Note: If using an IPPBX or network dispatch platform, please refer to its documentation for server-side configuration, or request remote assistance from our engineers.

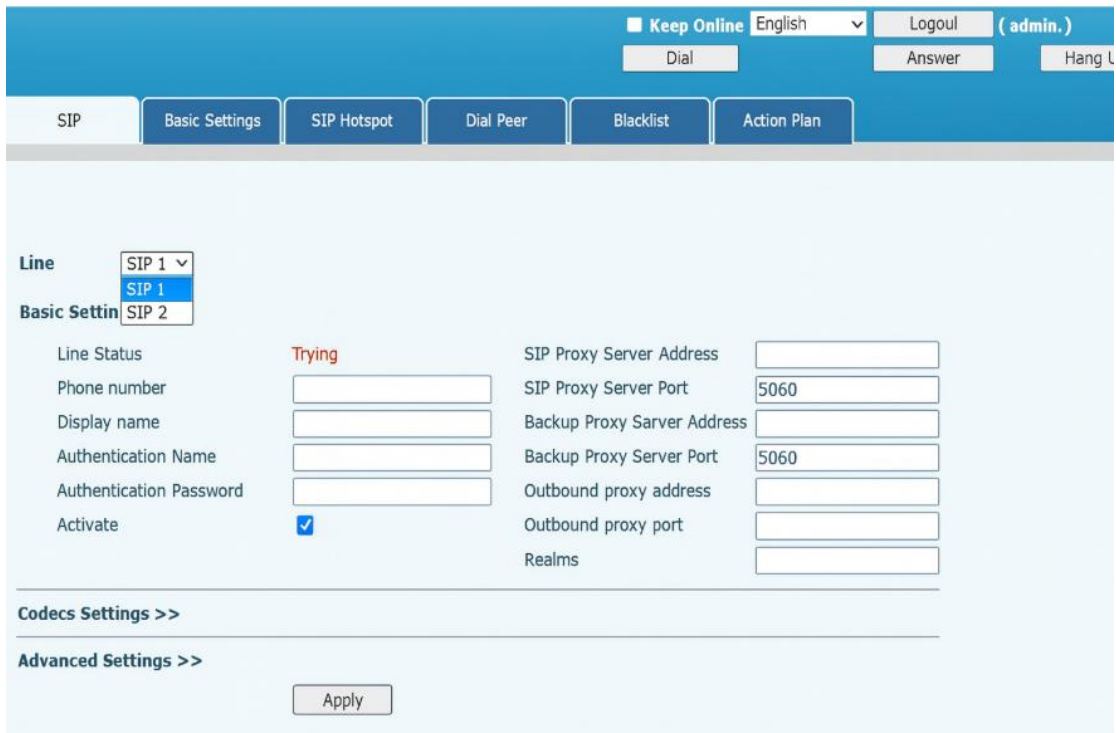
Figure 1: Login Page



The image shows a login page with a light blue background and a blue header bar. It contains the following elements:

- User:** A text input field.
- Password:** A text input field.
- Language:** A dropdown menu with "English" selected and a downward arrow.
- Logon:** A button.

Figure 2: Network Configuration

Figure 3: SIP Account Configuration


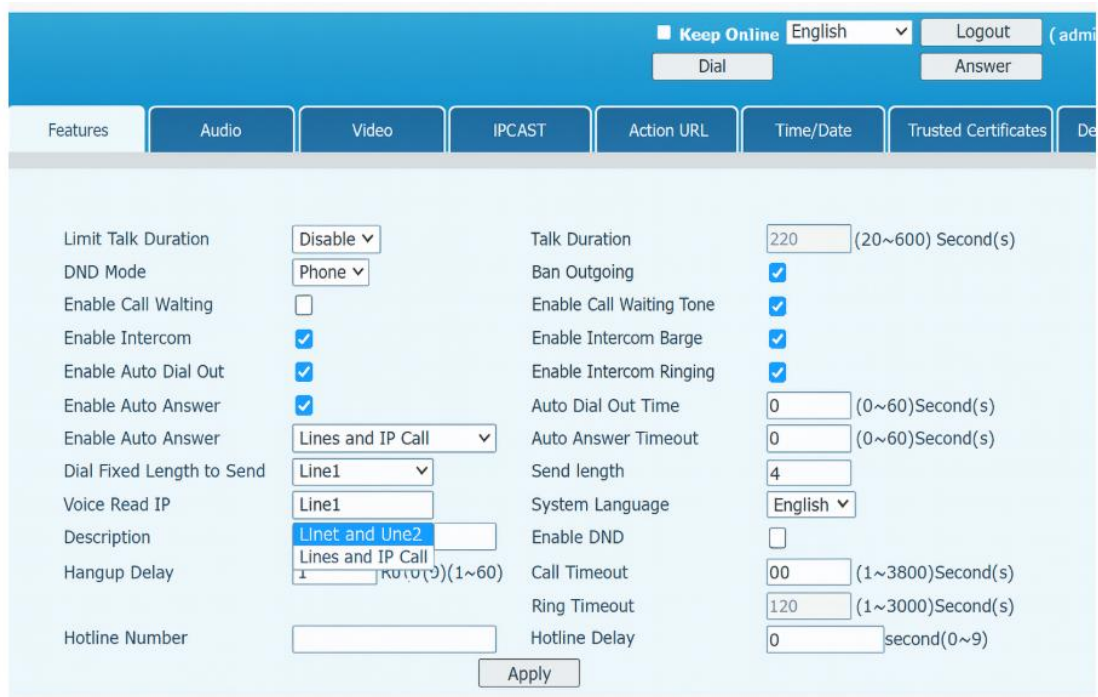
Keep Online English (admin.)

SIP Basic Settings SIP Hotspot Dial Peer Blacklist Action Plan

Line SIP 1
 SIP 1
 Basic Settings SIP 2

Line Status **Trying** SIP Proxy Server Address
 Phone number SIP Proxy Server Port 5060
 Display name Backup Proxy Sarver Address
 Authentication Name Backup Proxy Server Port 5060
 Authentication Password Outbound proxy address
 Activate Outbound proxy port
 Realms

[Codecs Settings >>](#)
[Advanced Settings >>](#)

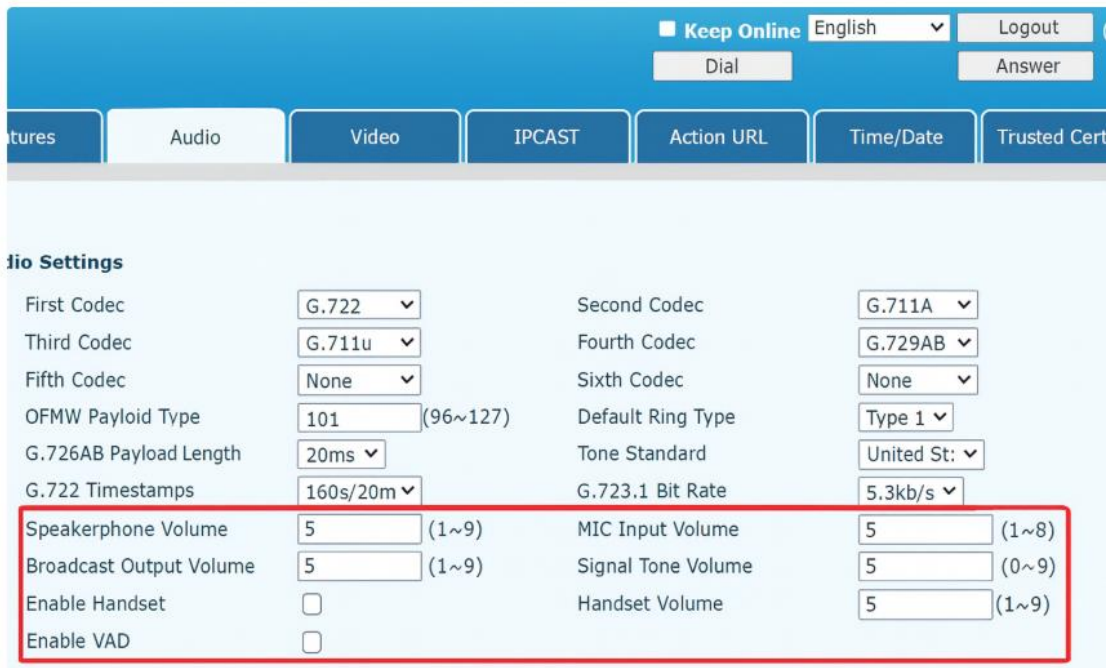
Figure 4: Function Settings


Keep Online English (admin.)

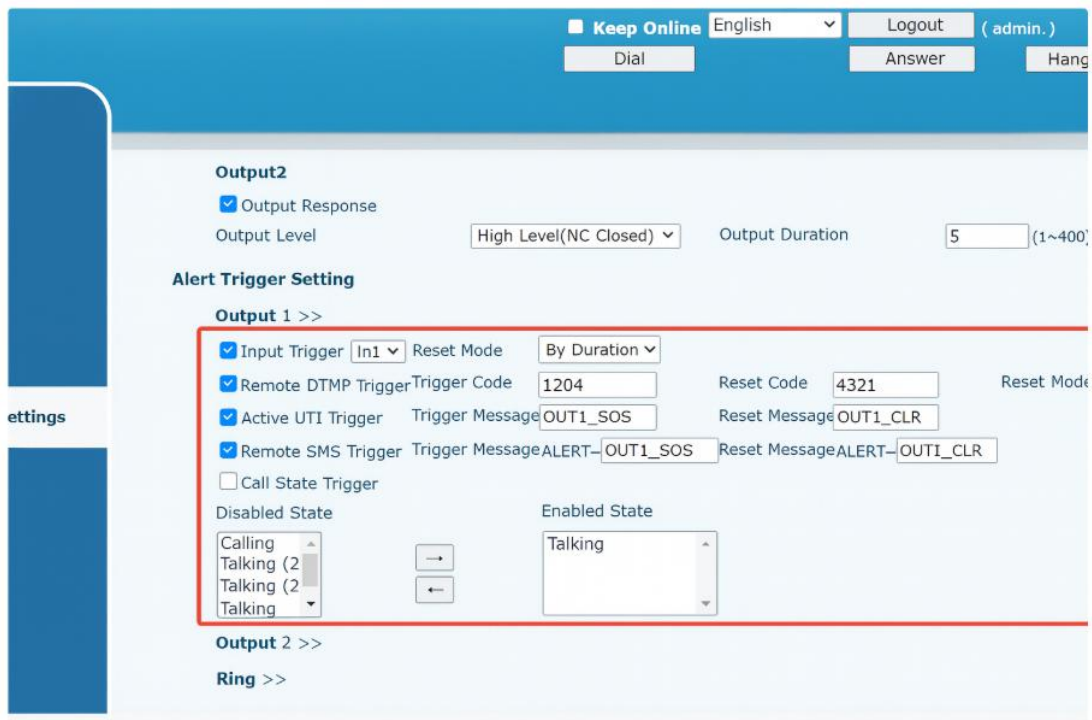
Features Audio Video IPCAST Action URL Time/Date Trusted Certificates De

Limit Talk Duration Disable
 DND Mode Phone
 Enable Call Waiting
 Enable Intercom
 Enable Auto Dial Out
 Enable Auto Answer
 Enable Auto Answer Lines and IP Call
 Dial Fixed Length to Send Line1
 Voice Read IP Line1
 Description Line1 and Une2
 Lines and IP Call
 Hangup Delay 1 (1~60)
 Hotline Number

Talk Duration 220 (20~600) Second(s)
 Ban Outgoing
 Enable Call Waiting Tone
 Enable Intercom Barge
 Enable Intercom Ringing
 Auto Dial Out Time 0 (0~60)Second(s)
 Auto Answer Timeout 0 (0~60)Second(s)
 Send length 4
 System Language English
 Enable DND
 Call Timeout 00 (1~3800)Second(s)
 Ring Timeout 120 (1~3000)Second(s)
 Hotline Delay 0 second(0~9)

Figure 5: Audio Settings


First Codec	G.722	Second Codec	G.711A
Third Codec	G.711u	Fourth Codec	G.729AB
Fifth Codec	None	Sixth Codec	None
OFMW Payload Type	101 (96~127)	Default Ring Type	Type 1
G.726AB Payload Length	20ms	Tone Standard	United St:
G.722 Timestamps	160s/20m	G.723.1 Bit Rate	5.3kb/s
Speakerphone Volume	5 (1~9)	MIC Input Volume	5 (1~8)
Broadcast Output Volume	5 (1~9)	Signal Tone Volume	5 (0~9)
Enable Handset	<input type="checkbox"/>	Handset Volume	5 (1~9)
Enable VAD	<input type="checkbox"/>		

Figure 6: Warning Light Settings


Output2

Output Response

Output Level: High Level(NC Closed) Output Duration: 5 (1~400)

Alert Trigger Setting

Output 1 >>

Input Trigger: In1 Reset Mode: By Duration

Remote DTMP Trigger: Trigger Code: 1204 Reset Code: 4321 Reset Mode:

Active UTI Trigger: Trigger Message: OUT1_SOS Reset Message: OUT1_CLR

Remote SMS Trigger: Trigger Message: ALERT-OUT1_SOS Reset Message: ALERT-OUT1_CLR

Call State Trigger

Disabled State: Calling, Talking (2), Talking (2), Talking

Enabled State: Talking

Output 2 >>

Ring >>

6. Packing List

- IP Waterproof Intercom Terminal (complete unit): 1
- Mounting Backplate: 1
- Waterproof Speaker: 1
- Mounting Bolts (M8x12): 4



Expansion Bolts (M10x40): 4

Factory Serial Number: Affixed to terminal cover

Warranty Card: 1

User Manual: 1

7. Warranty

All our products undergo thorough testing before shipment. In accordance with national consumer protection regulations, we provide a three-year warranty for defects arising from non-human causes or natural disasters, starting from the date of shipment. After the warranty period expires, repair services will be available at a reasonable charge.