Akuvox
Open A Smart World


# R20A Door Phone Admin Guide

**Version 1.0**

**Dec.2017**

# About This Manual

Thank you for choosing Akuvox's R20A door phone. This manual is intended for end users, who need to properly configure the door phone. It provides all functions and configuration of R20A, the information detailed in this user manual applicable to firmware version 20.0.1.102 rom or lower version.

- Please verify the packaging content and network status before setting.
- The old firmware may be a little different from 20.0.1.102 rom about some configuration. Please consult your administrator for more information.

# Contact us

For more information about the product, please visit us atwww.akuvox.com or feel free to contact us by

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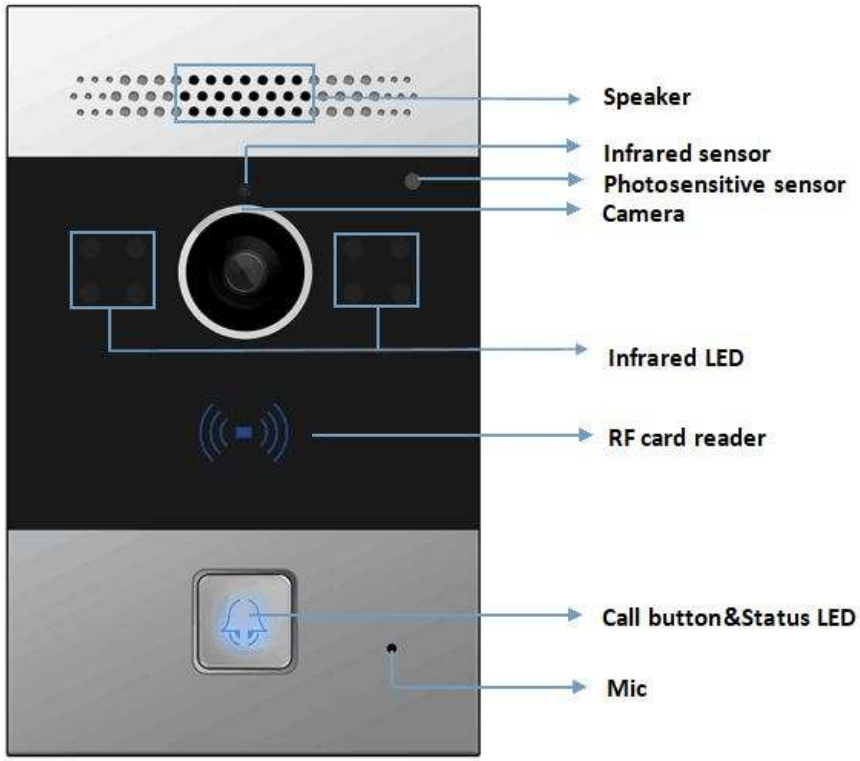
**We highly appreciate your feedback about our products.**

# Content

# 1. Product Overview

## 1.1 Instruction

Akuvox R20A is a SIP-compliant, hands-free one button video outdoor phone. It can be connected with your Akuvox IP Phone for remote unlock control and monitor. Users can operate the indoor phone to communicate with visitors via voice and video, and use RF card to unlock the door. It's applicable in villas, office and so on.



## 1.2 At a Glance

| Features | |
|---|---|
| **Physical & Power** | Body material: Zinc alloy |
| | Camera: 3 Mega pixels, automatic lighting, 120° wide angle |
| | Button: 1 call button |
| | 12V DC connector&POE |
| | Water-proof & Dust-proof: IP65 |
| **Sip Endpoint** | SIP v1(RFC2543), SIP v2(RFC3261) |
| | Audio codecs: G.711a, G.711μ, G.722, G.729 |
| | Video codecs: H.264 |
| | Echo Cancellation |
| | Voice Activation Detection & Comfort Noise Generator |
| **Video** | Resolution: up to 720p |
| | Maximum image transfer rate: 720p - 30fps |
| | High intensity IR LEDs for picture lighting during dark hours with internal light sensor |
| | Compatible to 3rdPartyVideo components, e.g. NVRs |

| | |
|---|---|
| **Door Entry Features** | Relays controlled individually by DTMF tones |
| | Camera permanently operational |
| | White balance: auto |
| | Auto-night mode with LED illumination |
| | Office door phone with on-site or hosted IP-PBX |
| | Remote site entry over Internet |
| | Apartment/flat intercom with door access control |

# 1.3 Daily Use

## 1.3.1 Making a Call

Press the call button to call out the predefined number or IP address and if LED turns green, it means the call has been answered.

## 1.3.2 Receiving a Call

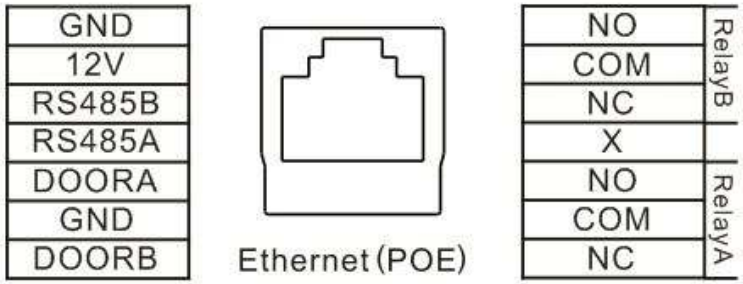
User can use IP phone or indoor monitor to call R20A and R20A will answer it automatically by default. If user disable auto answer, pressing button to answer incoming call.

### 1.3.3 Unlock by RF Card

Place the predefined RF card on the card sensor area. The door phone will announce ‘the door is now opened’ and open the door 13.56MHz and 125KHz RF card is supported by R20A.

## 1.4 Connector Introduction

| Connector | |
|---|---|
| Ethernet(POE) | Ethernet(POE) connector which can provide both power and network connection. |
| 12V/GND | External power supply terminal if POE is not available. |
| RS485A/B | RS485 terminal for automation system control(e.g. Elevator control). |
| DOORA/B | Trigger signal input terminal(e.g. Press indoor button to open relay). |
| RelayA/B | NO/NC Relay control terminal. |



# 2. Basic Setting

## 2.1 Getting Started

### 2.1.1 IP Announcement

While R20A starts up normally, hold the call button for several seconds after the Status LED turns blue, voice system will enter IP announcement mode. In announcement mode, the IP address will be announced periodically and “IP 0.0.0.0” would be announced if no IP address is gained. Press Call Button again to quilt the announcement mode.

### 2.1.2 Access the device website

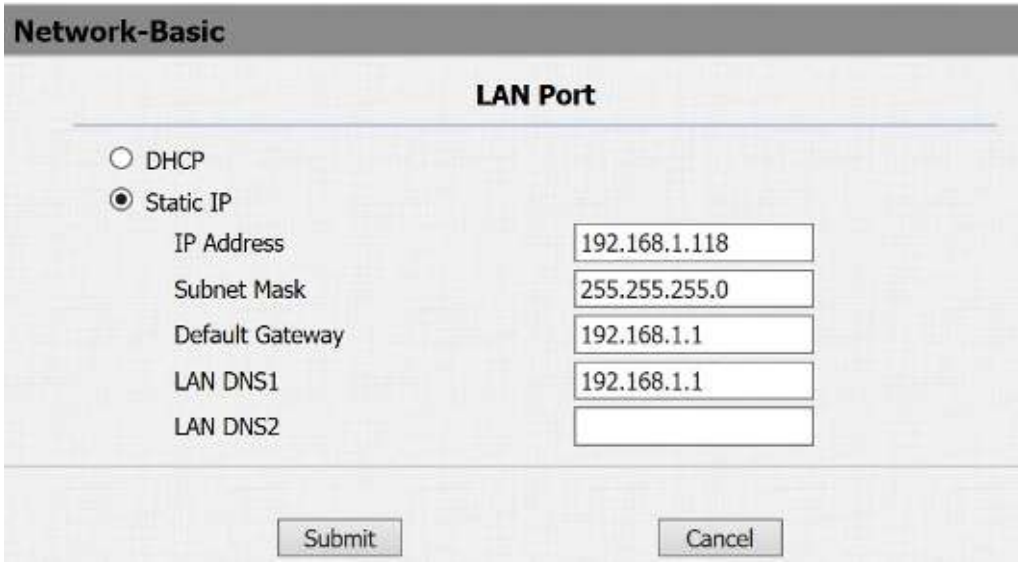
Open a Web Browser, access the corresponding IP address. Then, enter the default user name and password to login. The default administrator User Name and Password are shown below:

User name: **admin**

Password: **admin**

## 2.2 Network Setting

Go to Network->Basic, dynamically or statically to obtain address.




### 2.2.1 DHCP

R20A uses DHCP by default, it will get IP address, Subnet Mask, Default Gateway and DNS server address from DHCP server automatically.

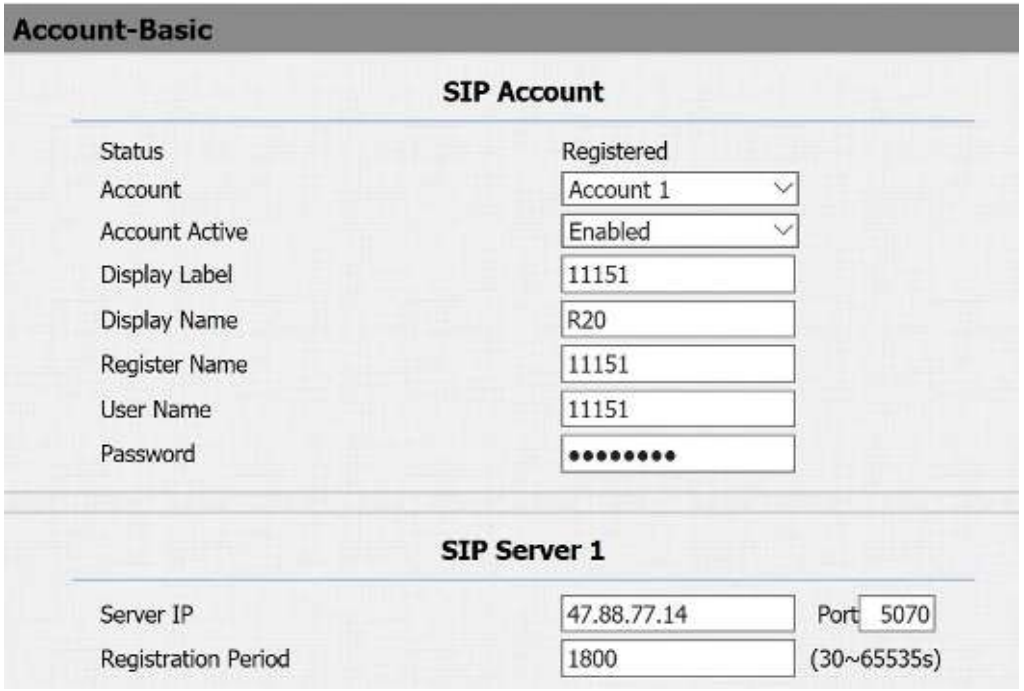
### 2.2.2 Static IP

If selected, you could manually set IP address, Subnet Mask, Default Gateway and DNS server. The figure below shows static IP setting.

## 2.3 Account

Go to Account->Basic to configure sip account and sip server.

### 2.3.1 SIP Account




**Status:** To display register result.

**Display Label**: To configure label displayed on the phone's LCD screen.

**Display Name**: To configure name sent to the other call party for displaying.

**Register Name**: To enter extension number you want and the number is allocated by SIP server.

**User Name**: To enter user name of the extension.

**Password**: To enter password for the extension.

### 2.3.2 SIP Sever 1

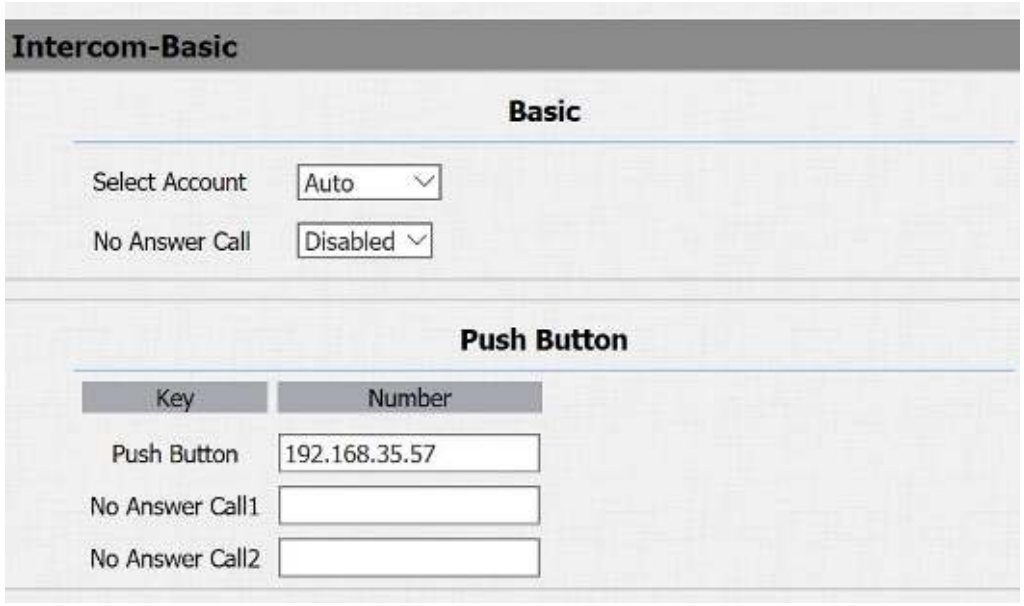
**Server IP**: To enter SIP server's IP address or URL.

## 2.4 Call Setting

Go to Intercom->Basic, to configure basic call setting.

### 2.4.1 No Answer Call

Enable it, if there is no answer from push button number over 60s (default value), R20A will call predefined 'No Answer Call' number.




### 2.4.2 Push Button

**Push Button:** To configure the destination number or IP you want to contact with. If you would like to call multiple numbers at same time, divide them by semicolon.

**No Answer Call 1&2:** To setup one or two no answer call number.

### 2.4.3 Push Button Action

**Action to execute:** To choose suitable way to receive message or snapshot when pushing button.

**HTTP URL:** If you tick HTTP URL, enter corresponding HTTP server IP address in the HTTP URL area.


### 2.4.4 Web Call

To dial out or answer incoming call from website.

### 2.4.5 Call&Dial Time

**Max Call Time:** To configure the max call time.

**Dial In Time:** To configure the max incoming dial time, available when auto answer is disabled.

**Dial Out Time:**To configure the max no answer call time.

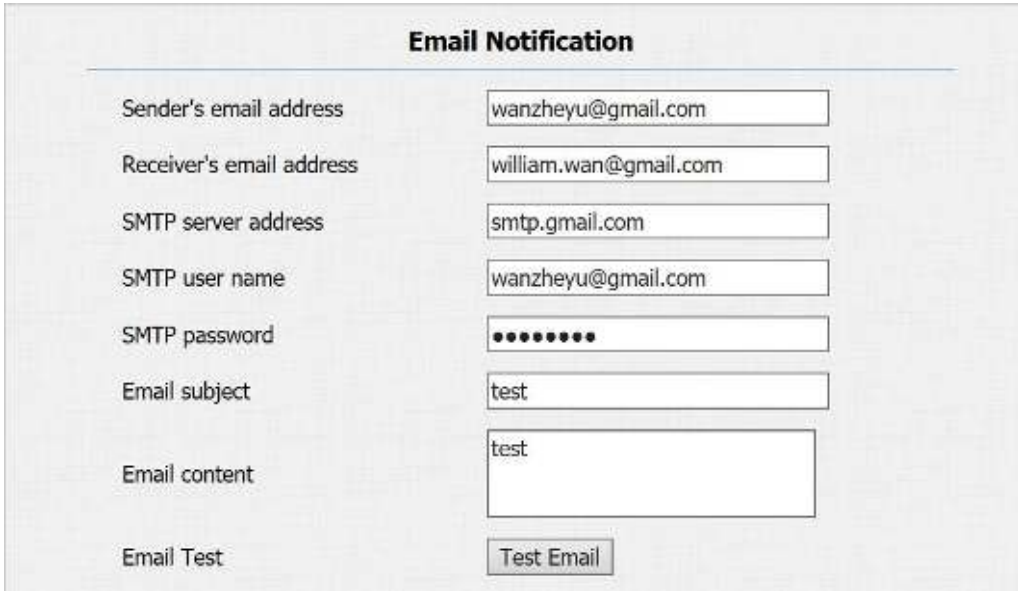
### 2.4.6 Push to Hang up

To enable or disable pushing button to hang up.

## 2.5 Action

Go to Intercom->Action to set action receiver.

### 2.5.1 Email Notification




**Sender's email address:** To configure email address of sender.

**Receiver's email address:** To configure email address of receiver.

**SMTP server address:** To configure SMTP server address of sender.

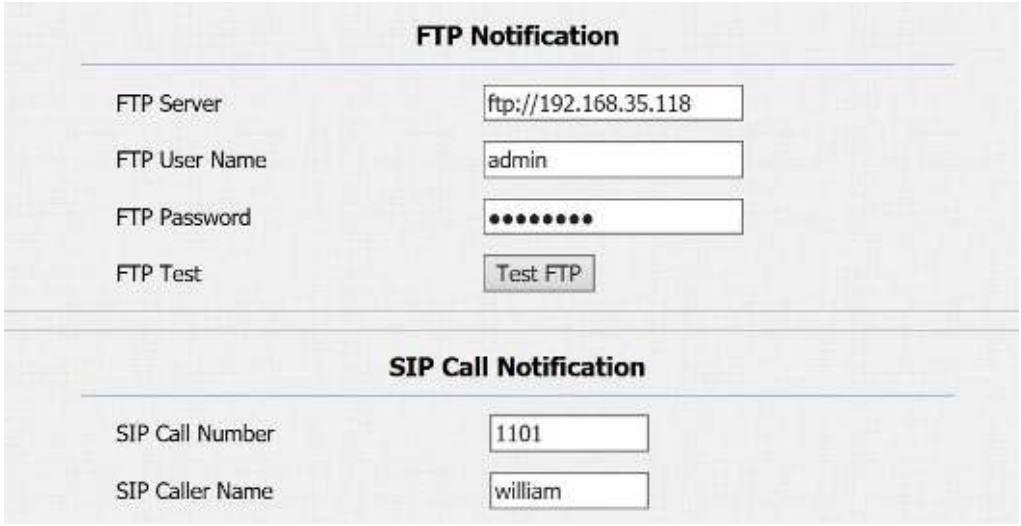
**SMTP user name:** To configure user namer of SMTP service(usually it is same with sender's email address).

**SMTP password:** To configure password of SMTP service(usually it is same with the password of sender's email).

**Email subject:** To configure subject of email.

**Email content:** To configure content of email.

**Email Test:** To test whether email notification is available.




## 2.5.2 FTP Notification

**FTP Server:** To configure URL of FTP server.

**FTP User Name:** To configure user name of FTP server.

**FTP Password:** To configure password of FTP server.

**FTP Test:** To test whether FTP notification is available.

## 2.5.3 SIP Notification

**SIP Call Number:** To configure sip call number.

**SIP Call Name:** To configure display name of R20A.

# 2.6 Card Setting

Go to Intercom->Card setting, to manage card access system.

## 2.6.1 Import/Export Card Data

R20A supports import or Export the card data file, which is convenient for administrator to deal with a large number of cards.

## 2.6.2 Obtain and Add Card

①Switch card status to 'Card Issuing' and click 'Apply' ;

②Place card on the card reader area and click 'Obtain' ;

③Name card and choose which door you want to open ;

④Click 'Add' to add it into list .

**Notes:** User can use card to access only when card status has been switched to 'Normal'.


### 2.6.3 Door Card Management

Valid card information will be shown in the list. Administrator could delete one card's access permission or empty all the list.

## 2.7 Relay Setting

Go to Intercom->Relay, to configure relay.

### 2.7.1 Relay

There are three terminal of relay: NO, NC and COM. NO stands for normally open contact while NC stands for normally closed contact.

**Notes:Relay operate a switch and does not deliver power, so user should prepare power adapter for external devices which connects to relay.**

**Relay ID:** R20A supports two relays, user can configure them respectively.

**Relay Type:** Default state means NC and COM are normally closed, while Invert state means NC and COM are normally opened.

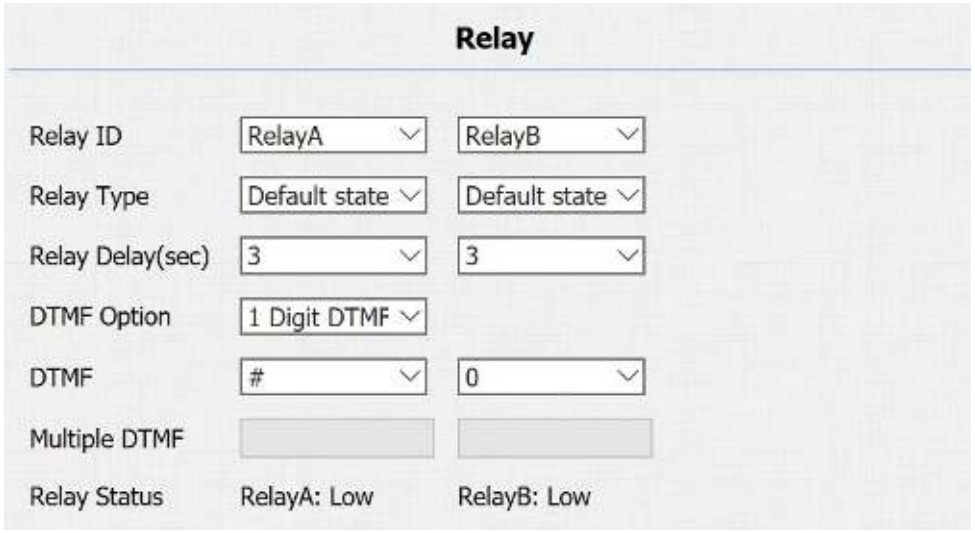
**Relay Delay:** To configure the duration of opened relay. Over the value, the relay would be closed again.

**DTMF Option:** To select digit of DTMF code, R20A supports maximum 4 digits DTMF code.

**DTMF:** To configure 1 digit DTMF code for remote unlock

**Multiple DTMF:** To configure multiple digits DTMF code for remote unlock.

**Relay Status:** Low means that COM is connecting to NC while High means that COM is connecting to NO .



## 2.7.2 WebRelay

R20A supports extra web relay.

**Type:** To choose web relay type(only supports 2N web relay currently).

**IP Address:** To enter corresponding web relay IP address.

**UserNmae:** To enter correct UserName of web relay.

**Password:** To enter correct Password of web relay.


## 2.7.3 Open Relay via HTTP

User can use a URL to remote unlock the door.

**Switch:** Enable this function. Disable by default.

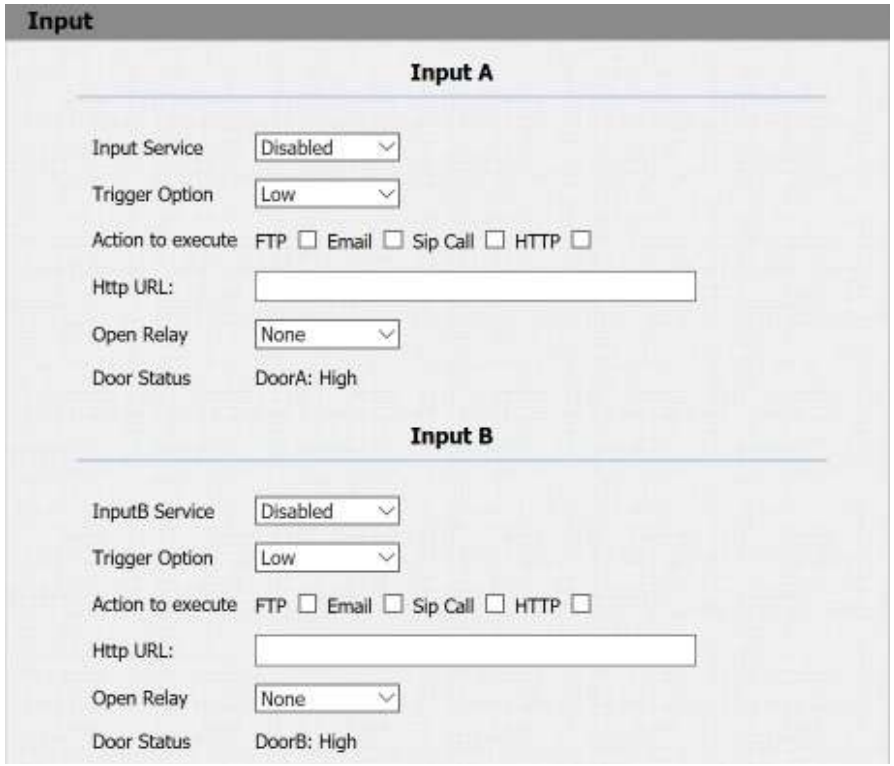
**Username & password:** Users can setup the username and password for HTTP unlock.

**URL format:**

http://IP_address/fcgi/do?action=OpenDoor&UserName=&Password=&DoorNum=1

## 2.8 Input

R20A supports two input triggers Input A/B(DOOR A/B), and go to Intercom->Input to configure.




**Input Service:** To enable or disable input trigger service.

**Trigger Option:** To choose open circuit trigger or closed circuit trigger. Low means that connection between Door terminal and GND is closed, while High means the connection is opened.

**Action to execute:** To choose which action to execute after triggering.

**Http URL:** To configure URL, If HTTP action is chosen.

**Open relay:** To configure relay to open

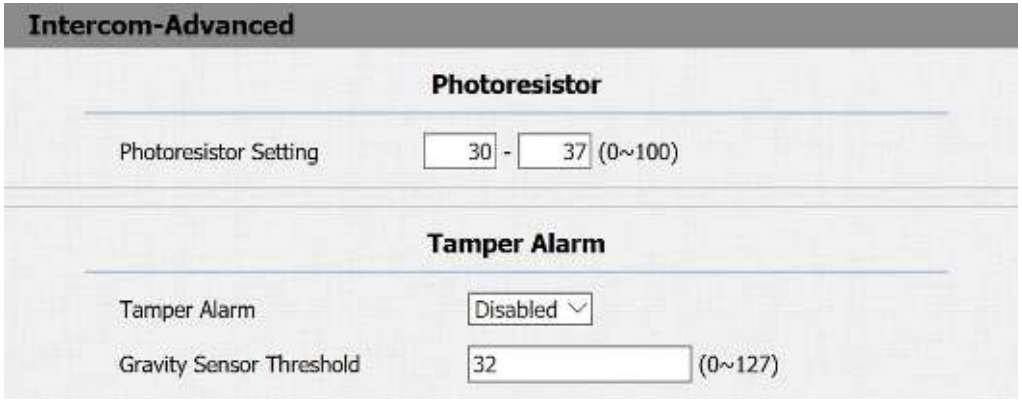
**Door status:** To show the status of input signal.

# 3. Advance Setting

## 3.1 Intercom-Advanced

**Photoresistor:** The setting is for night vision, when the surrounding of R20A is very dark, infrared LED will turn on and R20 will turn to night mode. Photoresistor value relates to light intensity and larger value mean that light intensity is smaller. User can configure the upper and lower bound and when photoresistor value is larger than upper bound, IF LED will turn on. As contrast, when photoresistor value is smaller than lower bound, infrared LED will turn off and device turns to normal mode.

**Tamper Alarm:** R20A integrates internal gravity sensor for the own security, and after enabling Tamper Alarm, if the gravity of R20A changes dramatically, the phone will alarm. Gravity Sensor Threshold stands for sensitivity of sensor.



## 3.2 LED Setting

There are five LED statuses for R20A: NORMAL, OFFLINE, CALLING, TALKING and RECEIVING.

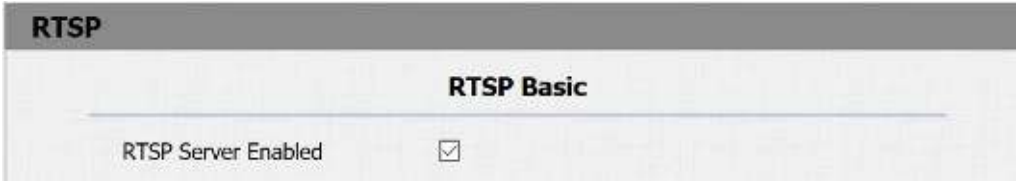
Go to Intercom->Led setting, to configure corresponding LED response.


## 3.3 Live Stream

Go to Intercom->Live Stream, check the real-time video from R20A. In addition, user also can check the real-time picture via URL: http://IP_address:8080/picture.jpg

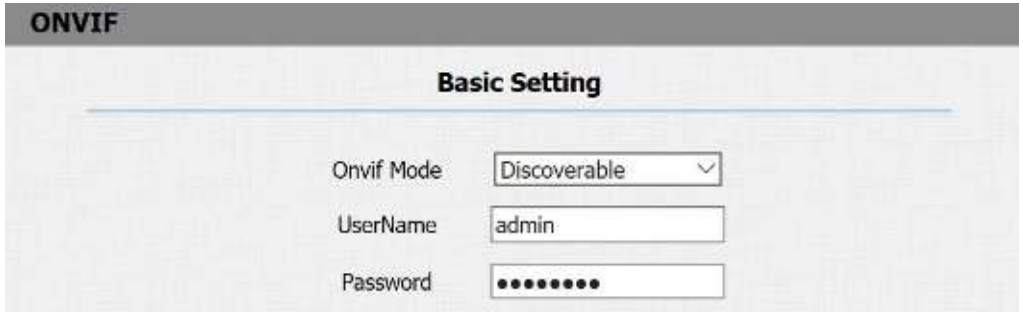
## 3.4 RTSP

R20A supports RTSP stream, go to Intercom->RTSP, to enable or disable RTSP server. The URL for RTSP stream is: rtsp://IP_address/live/ch00_0




## 3.5 Onvif

R20A supports ONVIF protocol, which means R20A's camera can be searched by other devices, like NVR, which supports ONVIF protocol as well. Go to Intercom->Onvif, to configure Onvif Mode and its username/password.

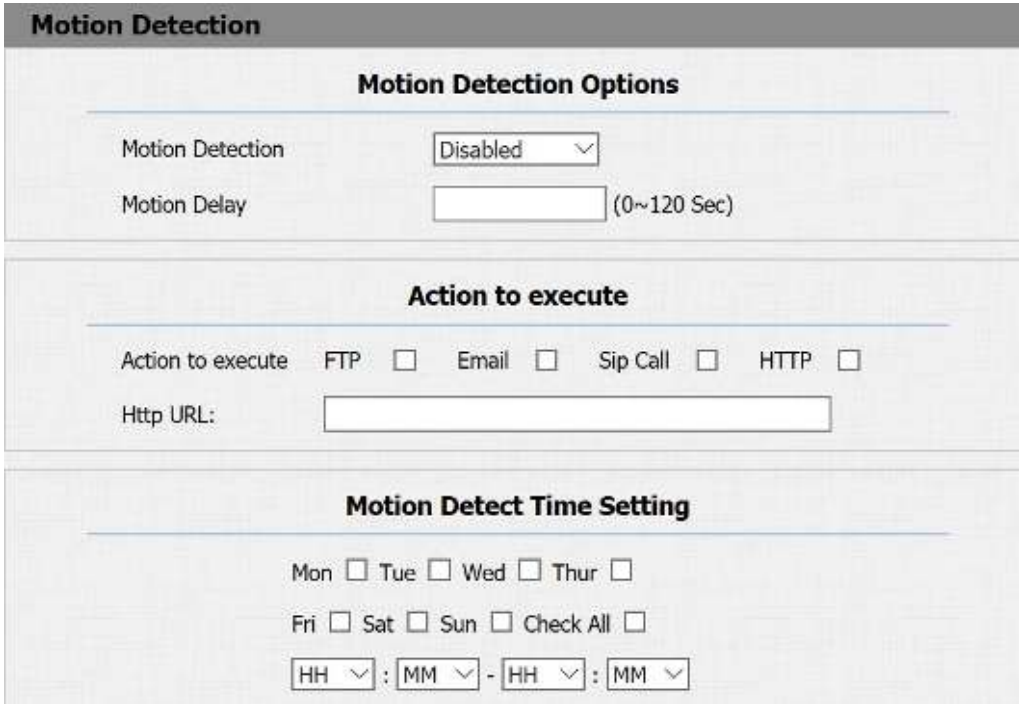



Switching Onvif Mode to undiscoverable means that User must program Onvif's URL manually.

The Onvif's URL is:
http://IP_address:8090/onvif/device_service

## 3.6 Motion

R20A supports motion detection, go to Intercom->Motion to configure detection parameter.




**Motion Detection:** To enable or disable Motion Detection

**Motion Delay:** To configure minium time gap between two snapshot.

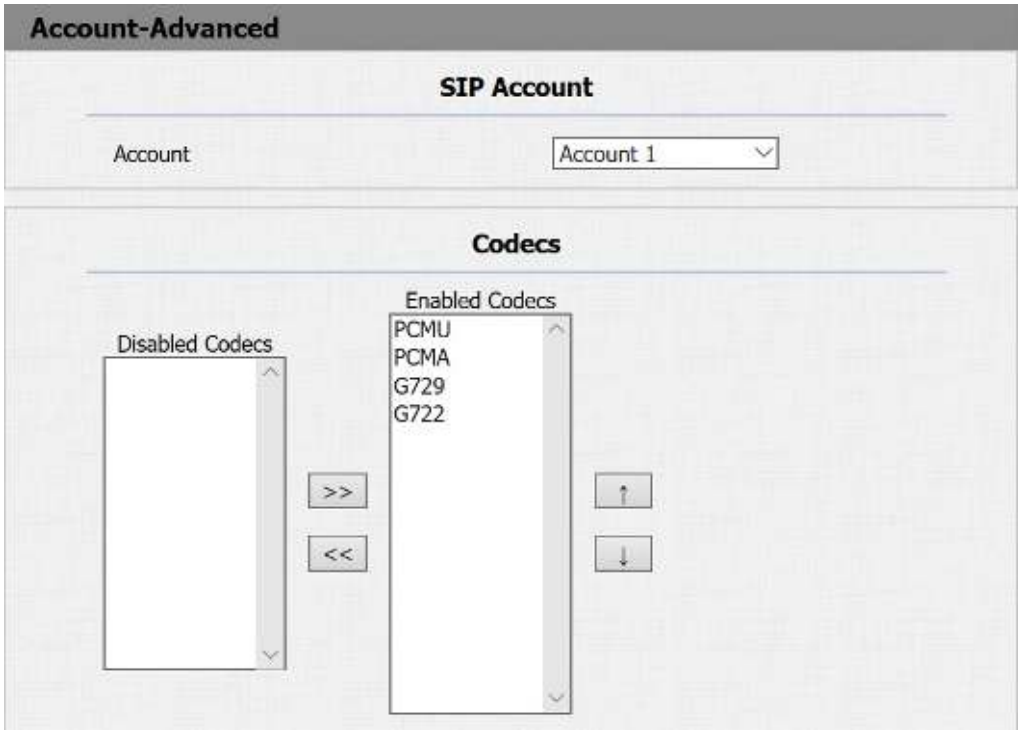
**Action to execute:** To choose which action to execute after triggering.

**Http URL:** To configure URL, If HTTP action is chosen.

**Motion Detect Time Setting:** To make Motion Detect Time for a whole week.

# 3.7 Account-Advanced

Go to Account->Advanced to configure advanced settings for account.




## 3.7.1 Audio Codec

**Sip Account:** To choose which account to configure.

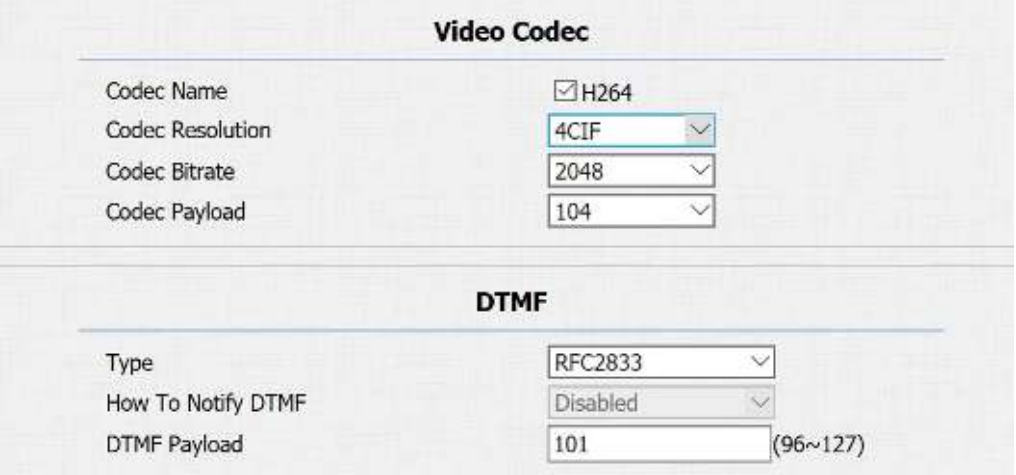
**Audio Codec:** R20A support four audio codec: PCMA, PCMU, G729, G722. Different audio codec requires different bandwidth, user can enable/disable them according to different network environment.

**Bandwidth consumption and sample rates.**

| | | | |
|---|---|---|---|
| PCMA: | 64kbit/s | 8kHz | |
| PCMU: | 64kbit/s | 8kHz | |
| G729: | 8kbit/s | 8kHz | Least consumption |
| G722: | 64kbit/s | 16kHz | Best quality |

### 3.7.2 Video Codec

R20A supports H264 standard, which provides better video quality at substantially lower bit rates than previous standards.




**Codec Resolution:** R20A supports four resolutions: QCIF, CIF, VGA, 4CIF and 720P.

**Codec Bitrate:** To configure bit rates of video stream.

**Codec Payload:** To configure RTP audio video profile.

### 3.7.3 DTMF

To configure RTP audio video profile for DTMF and its payload type.

### 3.7.4 Call

**Max Local SIP Port:** To configure maximum local sip port for designated SIP account.

**Min Local SIP Port:** To configure maximum local sip port for designated SIP account.

**Caller ID Header:** To choose Caller ID Header format

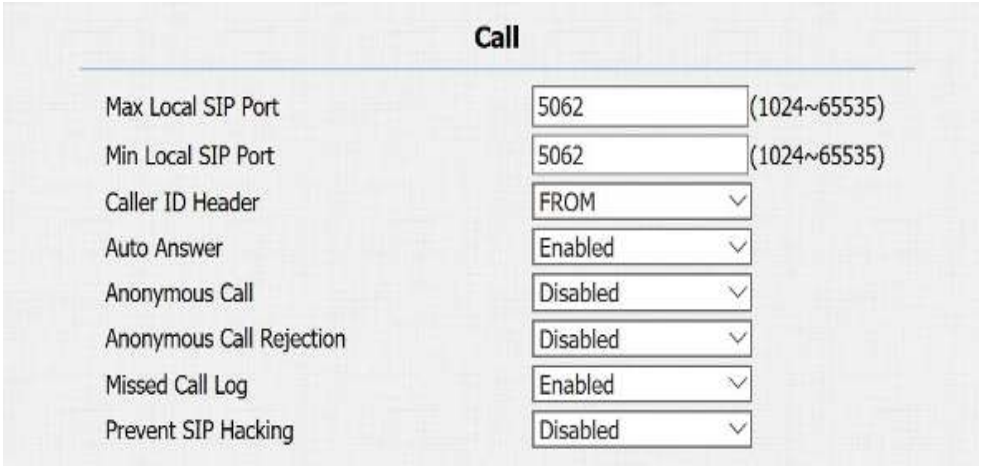
**Auto Answer:** If enabled, incoming call will be answered automatically.

**Anonymous Call:** If enabled, R20A will lock its information when calling out.

**Anonymous Call Rejection:** If enabled, calls who block their information will be screened out.

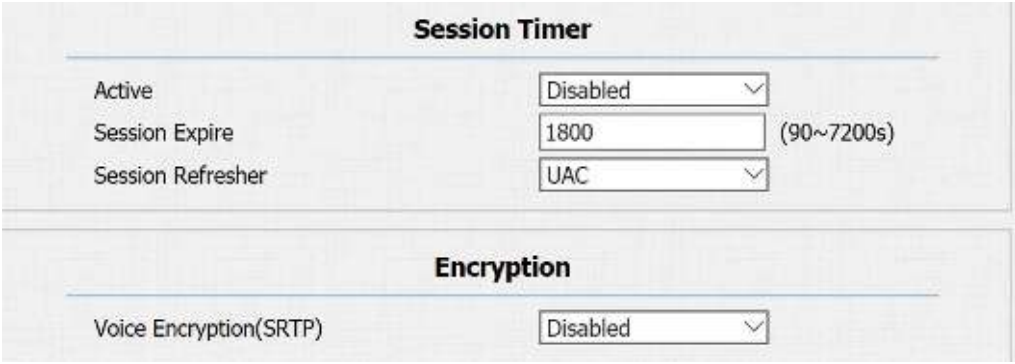
**Missed Call Log:** If enabled, any missed call will be recorded into call log.

**Prevent Hacking:** If enabled, it will prevent sip message from hacking



### 3.7.5 Session Timer

If enabled, the on going call will be disconnected automatically once the session expired unless it's been refreshed by UAC or UAS.

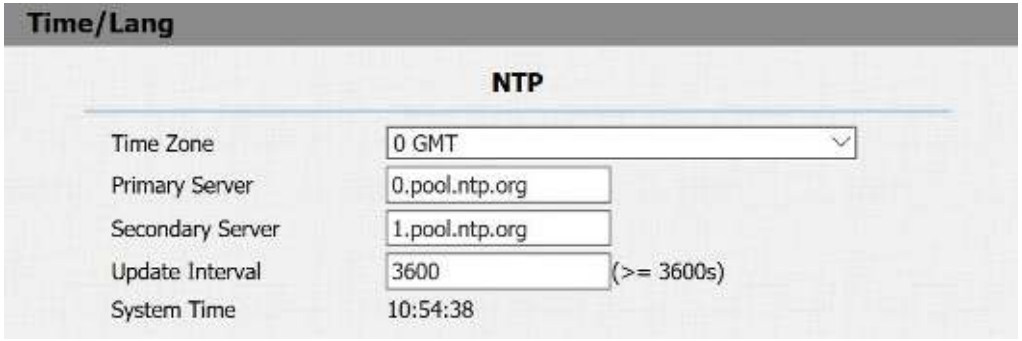



### 3.7.6 Encryption

If enabled, voice will be encrypted.

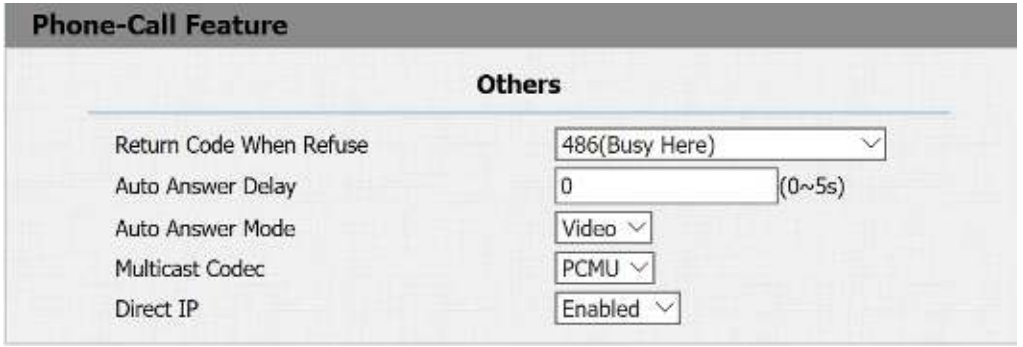
## 3.8 Time/Lang

Go to Phone->Time/Lang, to select local Time Zone for NTP server.



## 3.9 Call Feature

Go to Phone->Call Feature, to configure Phone-Call Feature.




**Return Code When Refuse:** To configure return sip status code.

**Auto Answer Delay:** To configure answer delay when receiving a call.

**Auto Answer Mode:** To choose Video or Audio mode for auto answer.

**Multicast Codec:** To configure video codec for multicast.

**Direct IP:** If disabled, incoming direct IP call will be blocked.

## 3.10 Voice

Go to Phone->Voice, to configure volume and upload tone file.

**Mic Volume:**To configure Microphone volume.

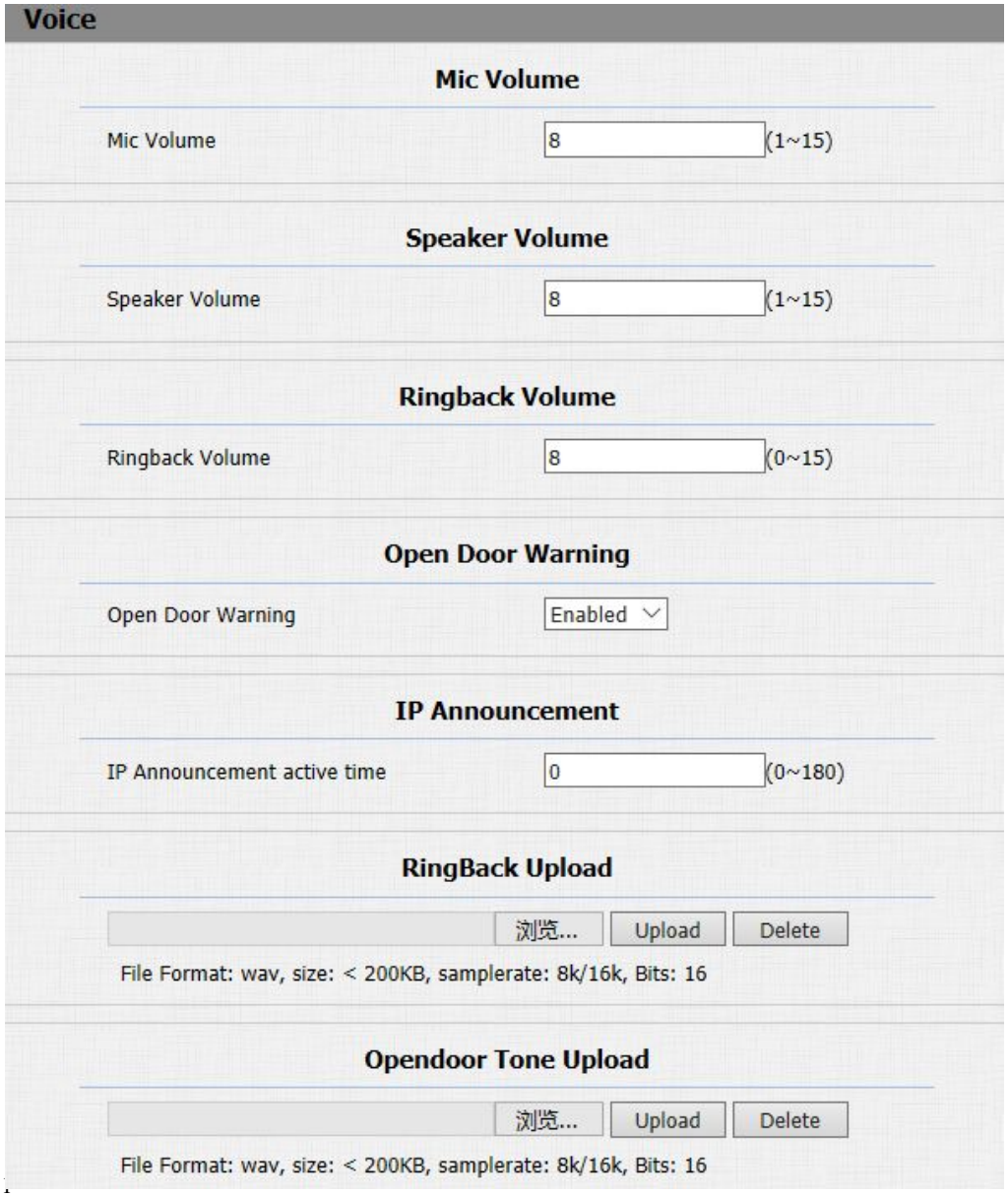
**Speaker Volume:**To configure Speaker volume.

**Open Door Warning:** Disable it, you will not hear the prompt voice when the door is opened.

**IP Announcement:**To setup the IP Announcement active time. Over the configured value, the phone will not announce its IP address, even you hold the button.

**RingBack Upload:** To upload the ring back tone by yourself.

**Opendoor Tone Upload:**To upload the Opendoor tone by yourself.



# 3.11 Log

## 3.11.1 Call Log

Go to Phone->Call Log, user can see a list of call which have dialed, received or missed. And user can delete calls from list.

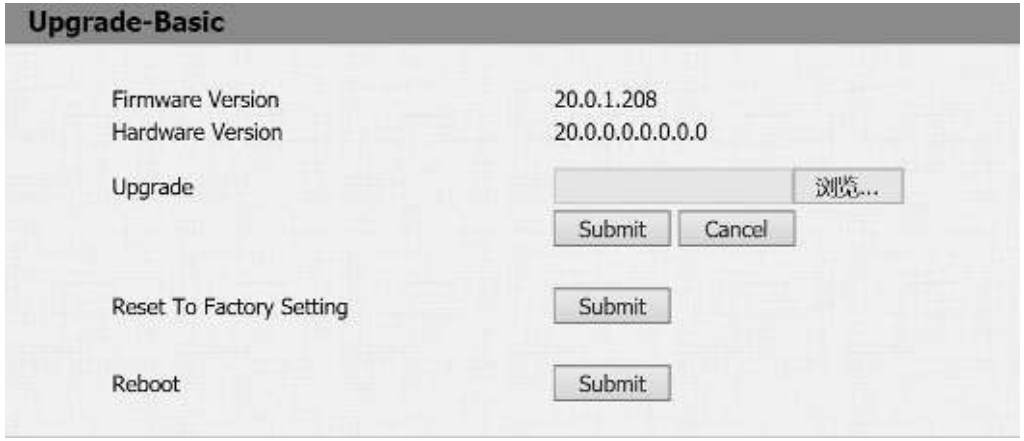

## 3.11.2 Door Log

Go to Phone->Call Log, user can see a list of door log which records card information and date.

# 3.12 Upgrade

## 3.12.1 Upgrade-Basic

Go to Upgrade->Basic, user can upgrade firmware; Reset to factory setting and reboot.

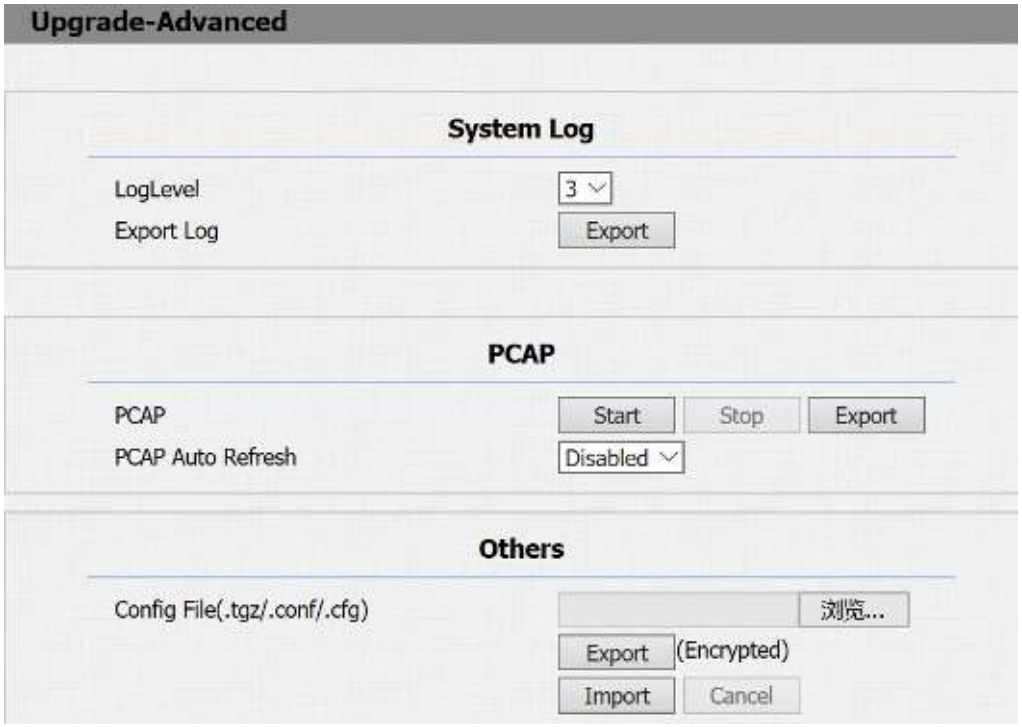



## 3.12.2 Upgrade-Advanced

**System log:** System log is used to debug, higher LogLevel means more specific system log will be recorded. When device failure occur, user can export System Log send to Akuvox techsupport and we would try our best to address the issue for you.

**PCAP:** To capture packet which is useful for us to address issue.

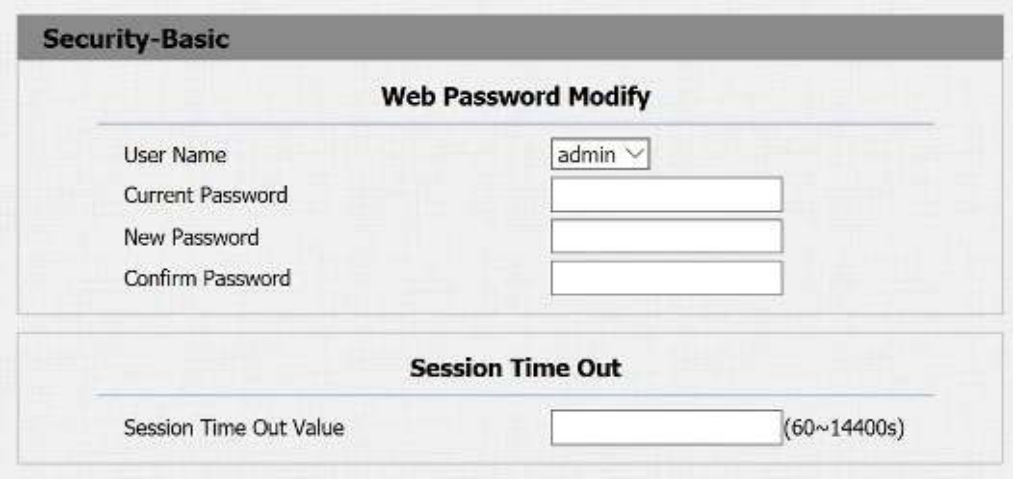
**Other:** To export and import config file.



# 3.13 Security-Basic

Go to Security->Basic, to modify password and session time.

## 3.13.1 Web Password Modify




To modify password of 'admin' or 'user' account.

## 3.13.2 Session Time Out

To configure session time out value. Over the value, user need to login again to continue configuring.