Akuvox R20K Intercom

Note:

This is not everything the R20K can do, just some key features people ask about. For the full range of its capabilities, look at the admin guide which can be found in the Akuvox Knowledgebase.

Link: https://knowledge.akuvox.com/docs/akuvox-r20k-series-door-phone-administrator-guide?highlight=R20K

For **R20K-L** users:

The R20K-L works best with a Spark SIM card.

Access Device

There are 2 ways of accessing the device. You can login via its IP address or if it's connected the cloud, you can remote into the device using the Akuvox Cloud site.

IP Address

Using an IP Scanner, paste the IP address of the R20K into the browser to pull up the Login page. Login to the R20K using the admin as both the user and password.

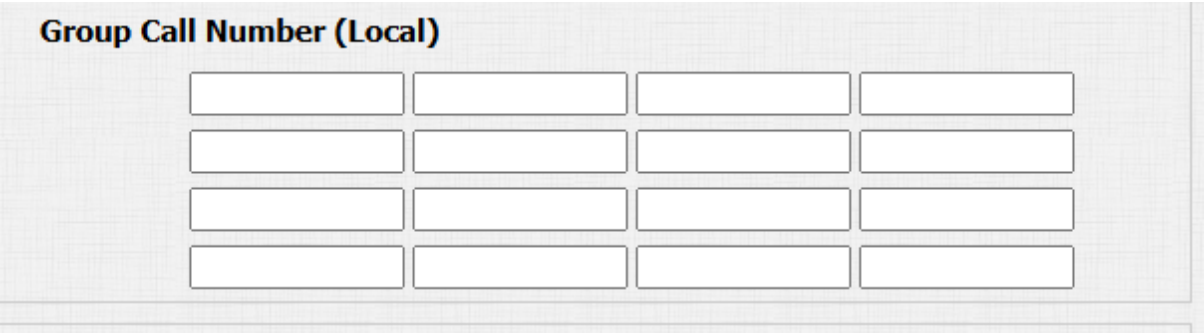
Cloud Login

Using this way, you can login to the R20K without being on the same network, but only if it is connected to the cloud.

- Login to auCloud.akuvox
- Find the site your device is in
- Go the information page for your device
- Click "Remote Control"
- It will make a connection to the device and then you'll be taken to the login page of the R20k.
- Login with admin as username and password

Group Call (Locally)

Note: If you do add SIP numbers in the boxes, it will call only those SIP numbers



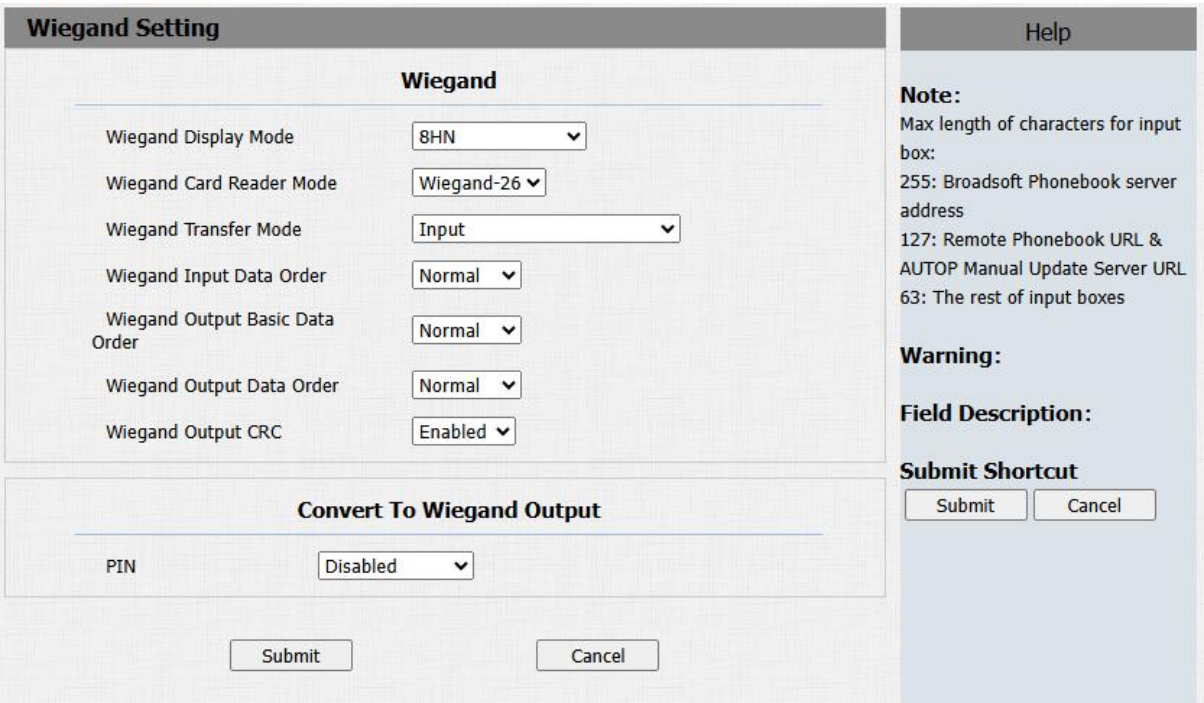
- Go to Intercom > Basic and look at Group Call
- Enter the SIP numbers you want it to call
- Submit
- The doorbell button will now call those SIP numbers

Adding Users (Local)

- Go to Intercom > Users
- Click add
- Enter the information
  - Name
  - Access Methods (PINs, RF Codes)
  - What relay you want to trigger (either or both)
  - Set Relay Schedule (optional)
  - Submit

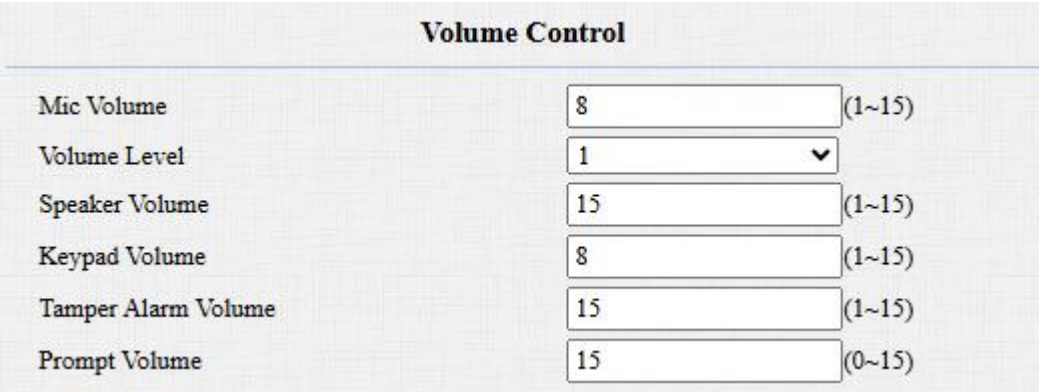
Wiegand

Go to Intercom > Wiegand



- Wiegand Display Mode: Select the Wiegand card code format from the provided options.
- Wiegand Card Reader Mode: The transmission format should be identical between the door phone and the third-party device. You can customize the card reader mode by selecting Customize, then further set up the following options:
- Wiegand Transfer Mode:
  - Input: The device serves as a receiver.
  - Output: The device serves as a sender and can directly output the data, such as a card code.
- Convert To Card No. Output: The device serves as a sender and cannot directly output the data.
- Wiegand Input Data Order: Set the Wiegand input data sequence between Normal and Reversed. If you select Reversed, then the input card number will be reversed
- Wiegand Output Basic Data Order: Set the sequence of the card data before going through Wiegand conversion and outputting the card code.
  - For example, if the card data is 0x11 0x22 0x33 0x44 and the Reversed option is selected, the data will be 0x44 0x33 0x22 0x11.
- Wiegand Output Data Order: Determine the sequence of the card data after the Wiegand conversion.
  - For example, if the card data is 0x11 0x22 0x33 0x44 0x55, it will be 0x33 0x44 0x55 after the Wiegand conversion (e.g., Wiegand 26). If Reversed is selected, the card data is 0x55 0x44 0x33.
- Wiegand Output CRC: It is enabled by default for Wiegand data inspection. Disabling it may lead to integration failure with third-party devices.
- Wiegand Open Relay: Select the relay triggered by Wiegand.

Volume Settings



- Go to Device > Audio and look at Volume Control
- Change the volume values of the sounds you want to modify

Volume Level	Set the overall volume. Level 1 volume range is roughly 80-95, and 2 is 95-109

Tamper Alarm Volume	Set the volume when the tamper alarm is triggered
Prompt Volume	Various prompts including door-opening success and failure prompts

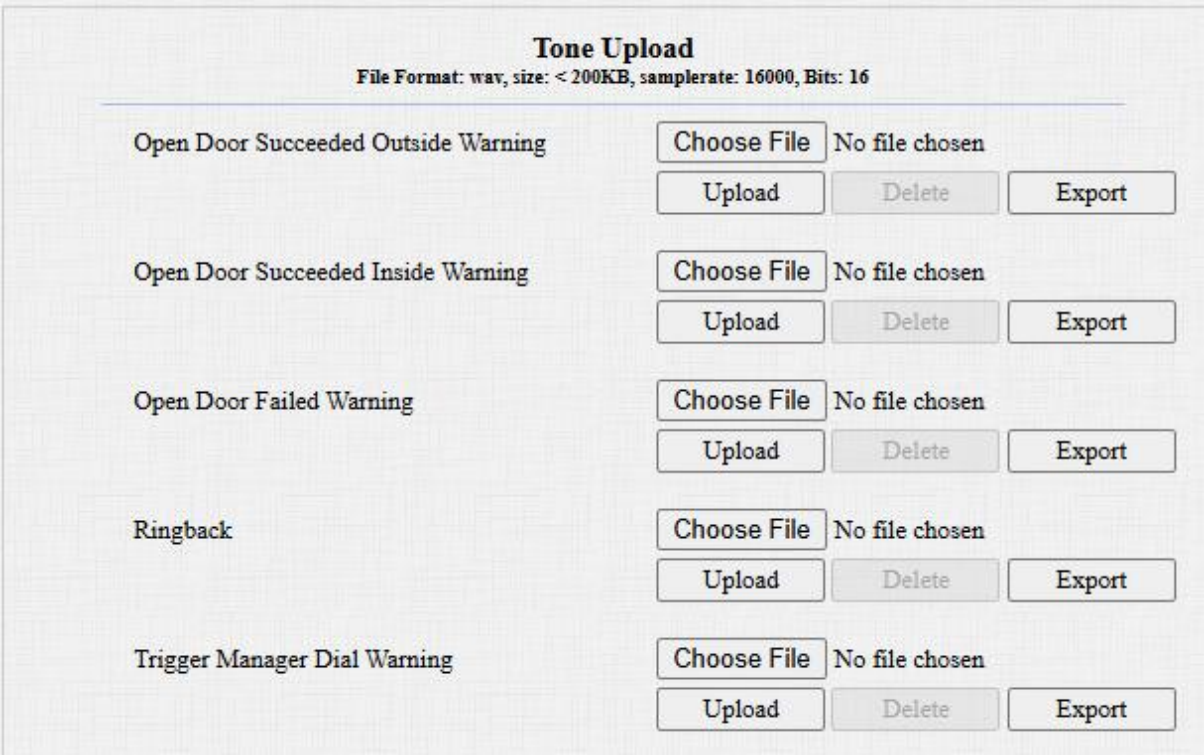
Tone Enabling/Disabling

You can enabled/disable the door opening tones by unticking/ticking boxes

- Go to Device > Audio and look at Open Door Tone Setting
- Tick or untick the boxes for the tones you want to play

Custom Tone Upload

You can upload your own custom tones to the device to play for certain actions



- Go to Device > Audio and look at Tone Upload
- The requirements of the sound file are:
  - WAV file type
  - Less than 200kb

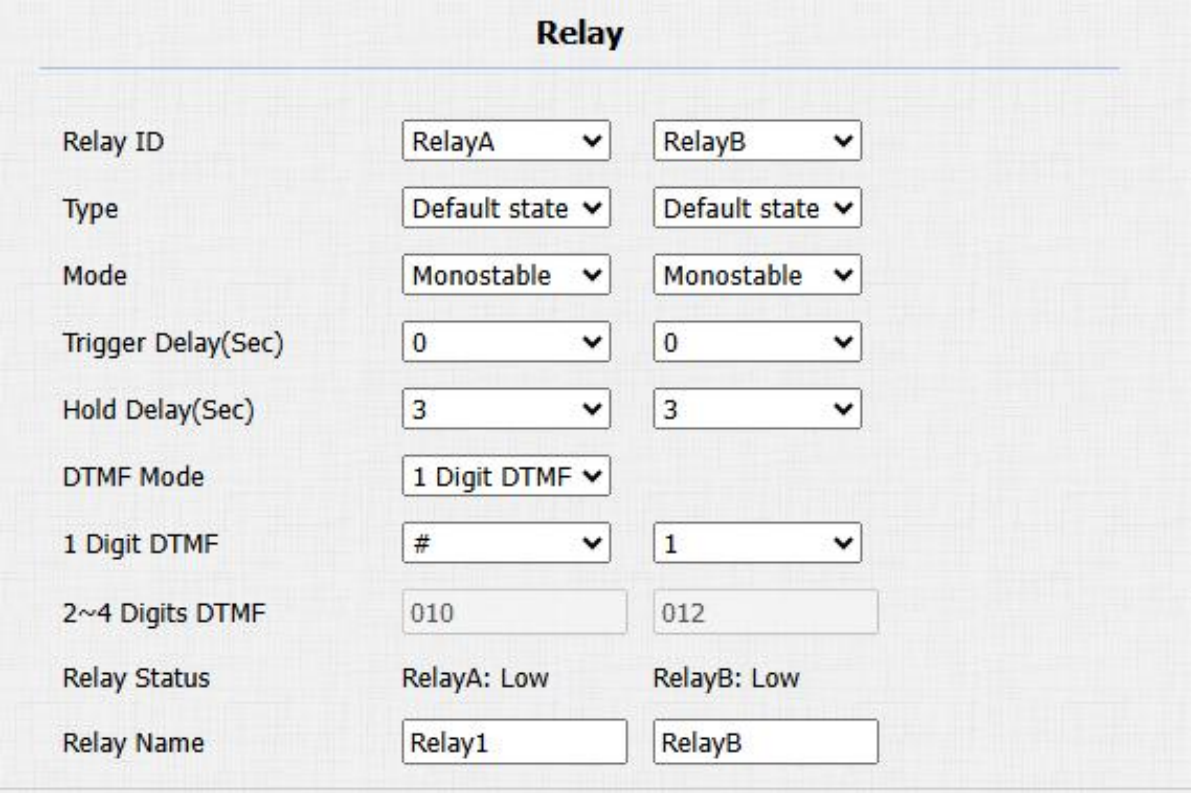
- Sample Rate - 16000
- Bits - 16

❖ Click choose, pick the file and click upload
❖ The new tone will now be uploaded if the requirements were met

Relay Configuration

The R20K comes with 2 on board relays

❖ Go to Access Control > Relay and look at Relay
❖ Here you can configure the relays to suit your needs. The adjustable settings are:



- **Relay Type**: Determine the interpretation of the Relay Status regarding the state of the door:
  - **Default State**: A "Low" status in the Relay Status field indicates that the door is closed, while "High" indicates that it is open.
  - **Invert State**: A "Low" status in the Relay Status field indicates an opened door, while "High" indicates a closed one.
- **Mode**: Specify the conditions for automatically resetting the relay status.
  - **Monostable**: The relay status resets automatically within the relay delay time after activation.
  - **Bistable**: The relay status resets upon triggering the relay again.
- **Trigger Delay** (Sec): Set the delay time before the relay triggers. For example, if set to 5 seconds, the relay activates 5 seconds after pressing the Unlock button.
- **Hold Delay** (Sec): Determine how long the relay stays activated. For example, if set to 5 seconds, the relay remains to be opened for 5 seconds before closing.

- **DTMF Mode**: Set the digits of the DTMF code.
- **1 Digit DTMF**: Define the 1-digit DTMF code within the range (0-9 and *, #) when the DTMF Mode is set to 1-digit.
- **2~4 Digits DTMF**: Set the DTMF code based on the number of digits selected in the DTMF Mode.
- **Relay Status**: Indicate the states of the relay, which are normally open and closed. By default, it shows low for normally closed (NC) and high for Normally Open (NO).
- **Relay Name**: Assign a distinct name for identification purposes.
- **Access Method**: Check the access method that can trigger the relay.

Trigger Relays using HTTP

This features you will need to enable it on both this and the device it's talking too. This will only take you on how to setup the R20K.

- Go to Access Control > Relay and look at Open Relay Via HTTP
- Enable it by ticking the box
- Enter a username and password

The R20K is now ready to receive and send HTTP requests.

The template for opening doors via HTTP is:

https://Username:Password@DeviceIp/fcgi/OpenDoor?action=OpenDoor&DoorNum=1

Receiving HTTP

If the R20K is receiving the command and not sending one, then you don't need to do anything besides just enabling HTTP.

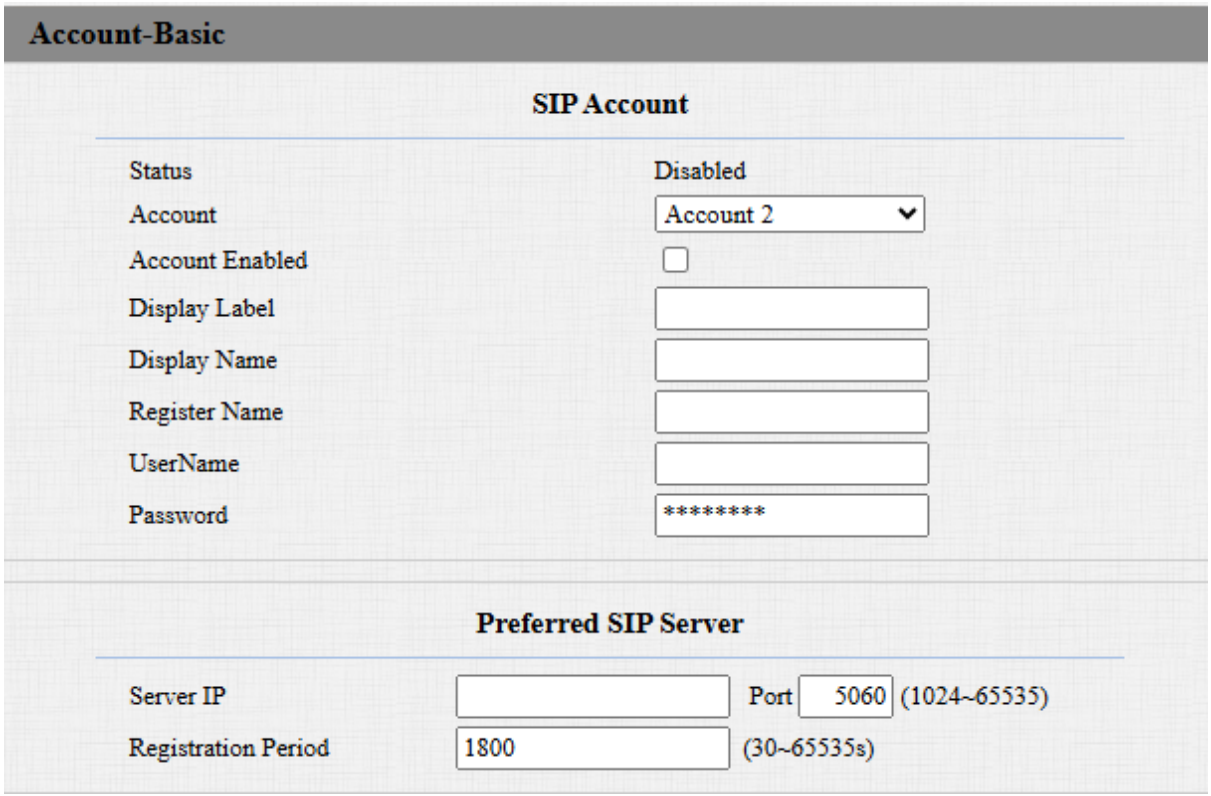
Sending HTTP

- Go to Setting > Action URL
- Enable it
- Now if you look at the list down the bottom, you can find the action you want to be the trigger for sending the HTTP request.
- Paste the HTTP request.
- Submit and test

SIP Account 2 – Third Party SIP account

This is for when you want the R20K to call pho ne numbers or you have your own SIP Server for another purpose that you want to load onto the R20K.

- Go to Account > Basic and Look at SIP Account
- Change the account to Account 2. Account 1 is reserved for the Akuvox Cloud SIP so even if it is empty, it's recommended to keep it empty.
- Click Enable Account
- Fill out the fields as necessary. I'll use 2Talk as an example:



Field	What you enter from 2Talk
Display Label	Extension Number
	+
Display Name	Extension Number
Register Name	Extension Number
Username	Extension Number
Password	Whatever password 2Talk sent you
Server IP	The server IP 2Talk sent to you

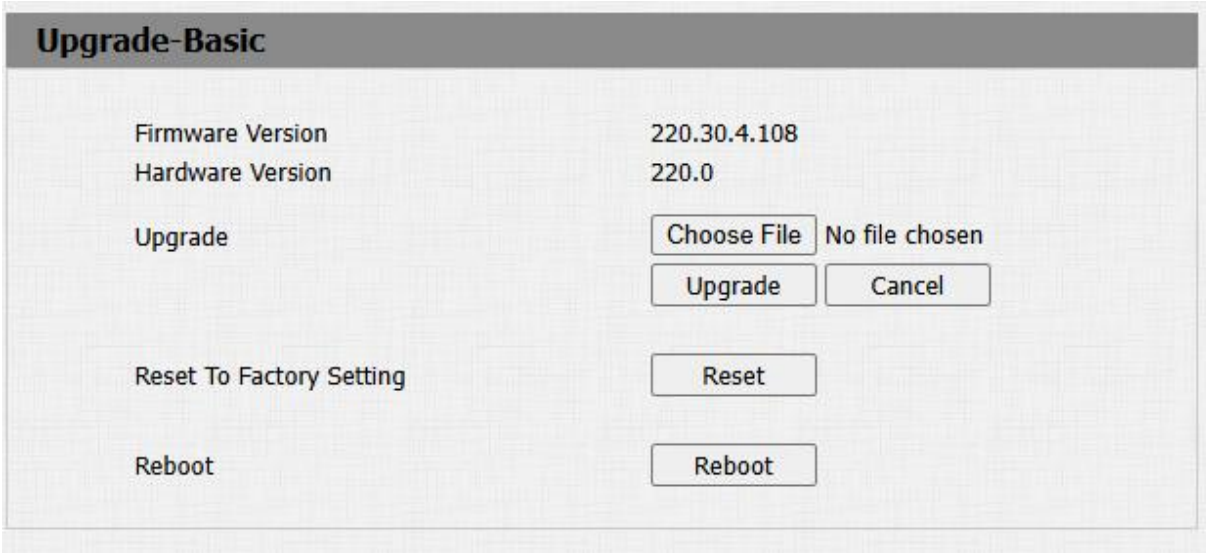
Keypad Setting

You can set the R20K to be for exclusively PINs or Calls and PINs.

- Go to Intercom > Basic and look at Keypad Setting
- Click the drop down and pick your preferred option
- Submit

Firmware Update

First you need to download the firmware from the Akuvox Knowledgebase:
https://knowledge.akuvox.com/



- Go to Upgrade > Basic
- Click Choose File
- Choose the Firmware file
- Click Upgrade
- Let it upgrade and it will reboot afterwards