



xxter Mobotix intercom configuration

xxter can be used as an intercom system in combination with several Mobotix models. You can use the T24 / T25 intercom devices or the S14M / S15M camera's in combination with an audio-mount and e.g. our intercom kit. More information about the separate parts and options can be found in our intercom kit product sheet.

This manual can be used for several models and options. For some specific devices or options, specific settings are required. When this is the case, this is clearly stated. In general there are two configuration options:

- a) Without the use of a SIP server, for a Mobotix in combination with only xxter as a client
- b) With a SIP server, for situations where you also want to use other SIP clients, for example a fixed phone on the wall, near the entrance door.

In addition to these options there are several other options: when using the S14/S15 models, are the push buttons and door release connected to KNX, or e.g. to a MX-OPT-IO1 or a MX-232-IO-Box?

This manual will state when a specific setting is needed for a specific situation, or when to skip a part because another option is used.

All screenshots in this manual are made with a S14 camera with firmware version 4.21.61 installed. Some screenshots might differ, but most settings should be the same. Please make sure you use xxter firmware version 1.9.14 or higher.

This manual does not describe how to set up the initial settings of the camera and xxter unit, please refer to the appropriate manuals to set up the initial IP settings. When using the Quick Installation Wizard of the Mobotix camera, please select the following options: Switch the microphone and speaker to on, and select JPEG encoding for the camera.

The configuration and installation will proceed with the following steps:

- 1) Configure the audio / video settings
 - 1.1) Configuration for the Mobotix camera
 - 1.2) Configuration for xxter
- 2) Configure the push buttons and the alert service
 - 2.1) Configure the alert service
 - 2.2) Configure the push buttons in the Mobotix
- 3) Configure the contact to open the door
- 4) Connect from the Internet



1. Configure audio / video

1.1. Configuration for the Mobotix camera

The examples used in this manual use the IP-address: **192.168.220.7** for the Mobotix camera. After entering the correct IP address in a browser, you log in with the administrator account. By default this is “admin” and the corresponding password “meinsm”. Click on the “Admin Menu”.

Check the speaker and microphone settings:

Select in the “Audio and VoIP Telephony” section the “Speaker and Microphone” option. Check if both are enabled.

Take note that for S14/S15, both options should be set to “external”

In this menu you can also check and set the volume of the speaker and sensitivity of the microphone.

Choose “Set” to save the settings and the back arrow at the top to return to the “Admin Menu”.

SIP server and SIP client settings:

Option a) without using a SIP server

Choose “Audio and VoIP Telephony” -> “SIP Server Settings”

Make sure the “SIP Server” settings is disabled. (OFF)

Choose “Set” to save the settings and the back arrow at the top to return to the “Admin Menu”.

Choose “Audio and VoIP Telephony” -> “SIP Client Settings”

First select “Expert Setup” on the bottom of the screen.

Set “SIP client” to enable.

Deselect any audio messages, when preferred.

Select the Codecs “PCMA, PCMU and GSM”.

Set Video to “Disabled”, the xxter will receive the video stream through M-JPEG.

Choose “Set” to save the settings and the back arrow at the top to return to the “Admin Menu”.

Continue at “**Allow incoming calls**” further on in this manual.



Option b) with the use of a SIP server:

Choose “Audio and VoIP Telephony” -> “SIP Server Settings”

Make sure the “SIP Server” settings is set to On.

As Realm we use the internal IP address of the Mobotix, for example: 192.168.220.7

Now add users, one for the intercom itself, one for xxter and one for each other client.

For example when connecting 1 additional phone, we create 3 users.

MOBOTIX S14 IntercomS14 SIP Server Settings			
SIP Server			
SIP Server:	On	Enable or disable SIP server.	
Server IP:	192.168.220.7, 10.11.108.211 IPs of the server.		
Port:	5061 UDP port of the server.		
Realm:	192.168.220.7 Realm for authentication.		
Missed calls:	Suppress	Enable notification of missed calls.	
SIP Accounts			
SIP Address	User Name	Password	
101	@192.168.220.7	101	... [Lock] [Delete]
102	@192.168.220.7	102	... [Lock] [Delete]
103	@192.168.220.7	103	... [Lock] [Delete]
[Add new SIP account]			
[Set] [Factory] [Restore] [Close]			

We use 101 for the intercom itself, 102 for xxter and 103 for the additional phone. How to set up the phone with the correct settings is not described in this manual, please refer to the manual of the phone itself.

Choose “Set” to save the settings and the back arrow at the top to return to the “Admin Menu”.

Choose “Audio and VoIP Telephony” -> “SIP Client Settings”

First select “Expert Setup” on the bottom of the screen.

Set “SIP client” to enable.



Add a new SIP account and use the settings as added above, when setting up the SIP server.

In our example: SIP address: 101@192.168.220.7

Authentication: Username 101 Password ***

Server: 192.168.220.7 Port: 5061

Select both "Available as Proxy" and "Use as Registrar".

Deselect any audio messages, when preferred.

Select the Codecs "PCMA, PCMU and GSM".

Set Video to "Disabled", the xxter will receive the video stream through M-JPEG.

Choose "Set" to save the settings and the back arrow at the top to return to the "Admin Menu".

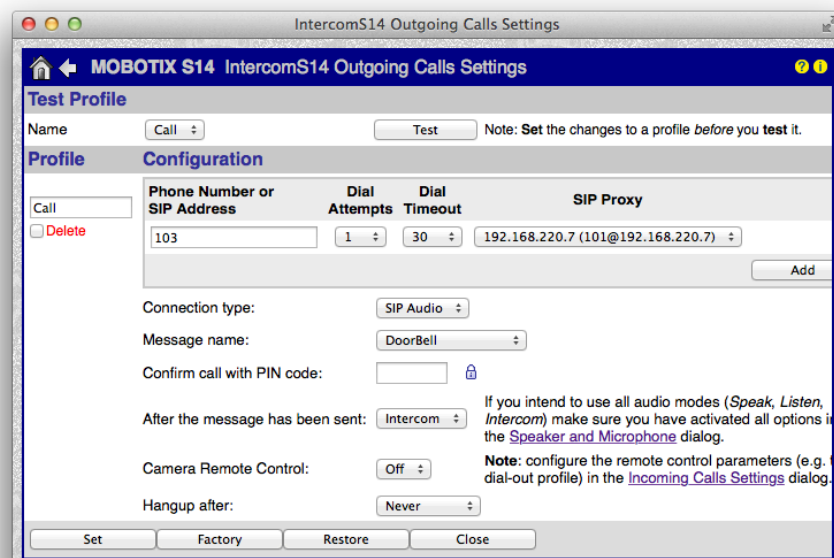
Outgoing calls (only for the option with a SIP server)

Choose "Audio and VoIP Telephony" -> "Outgoing Calls Settings"

Add a profile and give this profile a name, e.g. "Call"

For each phone, add a number (except for the xxter). In this example we added 1 additional phone number which we now add, with number 103 and select the SIP proxy.

Select a message name and select "Intercom" for "After the message has been sent".



Choose "Set" to save the settings and the back arrow at the top to return to the "Admin Menu".



Allow incoming calls (for all options)

Choose “Audio and VoIP Telephony” -> “Incoming Calls Settings”

Set the Phone Call-In to “VoIP”

Remove any PIN code, the authentication is set on a different level (later in this manual).

Set Audio Mode to “Intercom”

Set the Intercom settings “Threshold” and “Duration” to “Medium”. You might need to change these settings, depending on the local situation. (for example to compensate for background noise)

Select “Set” to save the settings and press “Close” to close this menu. When asked to save the settings permanently, choose yes.

Video view settings

Choose “Setup Menu” to enter the second menu.

First choose “Image Control” -> “General Image settings” to set up the image settings.

In this example we chose to use a normal view, instead of the panorama view. This depends on what the end-user prefers. Please note the resolution you choose, you will need this information later on in the xxter configuration.

We choose a XGA 1024x768 resolution and Display Mode “Normal”.

Choose “Set” to save the settings and the back arrow at the top to return to the menu.

Choose “Image Control” -> “JPEG Settings”

Set Video Codec to “M-JPEG”.

Choose “Set” to save the settings and press “Close” to close this menu. When asked to save the settings permanently, choose yes.



1.2. Configuration for xxter

Project: intercom

Add a new camera to your project

Give the camera a name and choose as type “Mobotix + SIP intercom”

Use the IP address of the Mobotix as the URL (in our case <http://192.168.220.7/>)

Then use the correct resolution you have chosen in the Mobotix configuration for the width and height.

All of the Mobotix intercom cameras support PTZ, so check all the three boxes: pan, zoom and tilt. Enter “admin” for the username and the corresponding password for password.

Option a) without using the SIP server:

Leave the field “SIP server” empty and use as the “xxter SIP address”: “sip:102@[IP-address mobotix]”
In our example that would be: sip:102@192.168.220.7

Leave the password field empty and choose for “SIP address to call”: sip:101@[IP-address mobotix]
In our example that would be: sip:101@192.168.220.7

Leave the other settings to the default values

Name	Example without SIP server	
Type	Mobotix + SIP intercom	
URL	http://192.168.220.7/	
URL external	http://demosip.xxter.net:8081/	
Width	1024	
Height	768	
Supports pan	<input checked="" type="checkbox"/>	
Supports zoom	<input checked="" type="checkbox"/>	
Supports tilt	<input checked="" type="checkbox"/>	
	<input checked="" type="radio"/> Always get videostream	
	<input type="radio"/> Only get videostream with wifi, single image for other connections	
	<input type="radio"/> Only get videostream with wifi, no image for other connections	
Username	admin	
Password	*****	
	<input type="checkbox"/> Display no warnings for this camera.	
SIP server		
xxter SIP address	sip:102@192.168.220.7	
xxter SIP password		
SIP address to call	sip:101@192.168.220.7	
Use STUN server		
Audio bandwidth	0	kbit/s
Video bandwidth	0	kbit/s
Door opener button	Use DTMF code:	
DTMF door code		
	<input type="button" value="Change"/>	<input type="button" value="Delete"/>



Option b) when using the SIP server:

Use the Mobotix's IP address as the SIP server address, follow by :5061 (the port number)

In our example that would be: 192.168.220.7:5061

Use as the "xxter SIP address": "sip:102@[IP-address mobotix]"

In our example that would be: sip:102@192.168.220.7

As the "xxter SIP password" use the password as entered for the account in the Mobotix configuration and choose for "SIP address to call": sip:101@[IP-address mobotix]

In our example that would be: sip:101@192.168.220.7

Leave the other settings to the default values.

Name	Example with SIP server
Type	Mobotix + SIP intercom
URL	http://192.168.220.7/
URL external	http://demosip.xxter.net:8081/
Width	1024
Height	768
Supports pan	<input checked="" type="checkbox"/>
Supports zoom	<input checked="" type="checkbox"/>
Supports tilt	<input checked="" type="checkbox"/>
<input checked="" type="radio"/> Always get videostream	
<input type="radio"/> Only get videostream with wifi, single image for other connections	
<input type="radio"/> Only get videostream with wifi, no image for other connections	
Username	admin
Password	*****
<input type="checkbox"/> Display no warnings for this camera.	
SIP server	192.168.220.7:5061
xxter SIP address	sip:102@192.168.220.7
xxter SIP password	***
SIP address to call	sip:101@192.168.220.7
Use STUN server	
Audio bandwidth	0 kbit/s
Video bandwidth	0 kbit/s
Door opener button	Use DTMF code:
DTMF door code	
<input type="button" value="Change"/>	<input type="button" value="Delete"/>

Additional settings for all options

Choose a end-user profile and add a camera to a page, and select the intercom. Reload the profile in the app. Now you should be able to see the camera view and check the audio settings from the app.

When you have successfully made a "conversation", you can restrict which SIP address is allowed to connect to the camera. Choose "Admin Menu" -> "Audio and VoIP Telephony" -> "Incoming Calls Settings". And select the SIP address in the text to the right of the "Accepted Phone Numbers", or you can use the button to add it automatically. You can add multiple address, which might be required if the clients get dynamic IP addresses.



2. Configure the push buttons and the alert service

2.1 Alert service and trigger

To alert the user when there is someone at the door, the alert service is used. Create a new alert service for the same profile on which the camera is added on a page.

Alert service Text message credits: 0

Name:

Message: [x] = value, [d]/[D] = date, [t]/[T] = time

Max. 1 message every:

Receivers

Type: To:

Conditions (any will trigger the alert)

Condition: ...
=

Choose, depending on the way the door bell button is connected, the right trigger as condition. In case this is connected to a binary input for the KNX bus, select the appropriate bit or byte value as a trigger.

If the push button is connected to an IO module or when you use the button of the T24/25, select HTTP as the trigger and set a unique value, in our example we use HTTP trigger 5.

Condition:

Trigger number:

Important: To activate the alert service, it has to be loaded onto the xxter device. Do this by reloading the configuration in the app or directly from the xxter box.

After saving the trigger, go to the “Admin Menu” of the Mobotix camera.



2.2 Configure the push buttons in the Mobotix

Choose “Transfer Profiles” -> “IP Notify Profiles”

Now add a new profile and give it a name, e.g. “xxter intercom”

Choose as type “Custom”

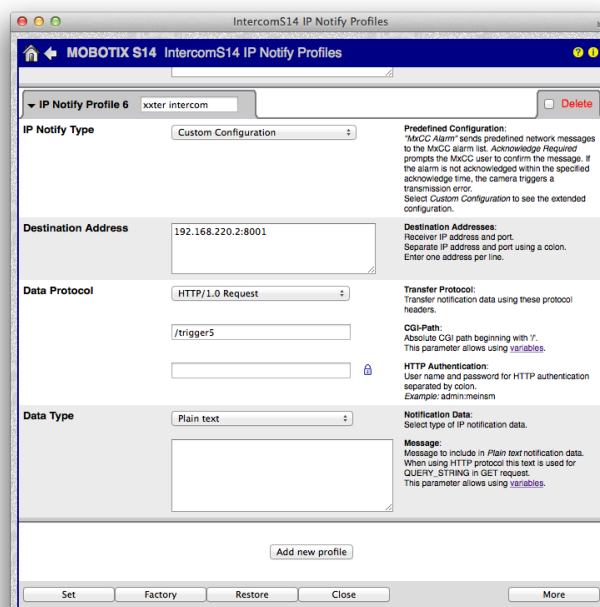
Choose as “destination address” the IP address of the xxter unit and port 8001, for example: 192.168.220.2:8001

Choose HTTP/1.0 Request as data protocol

Enter for the CGI-path: /trigger5

(or another trigger number, if you enter a different one above)

Leave the HTTP authentication field empty, and choose Plain text as type, with no Message.



Choose “Set” to save the settings and press “Close” to close this menu. And save the configuration.

When using a IO module with a connected push button

First, choose “Hardware Configuration” -> “Manage MxBus Modules” within the Admin Menu.

(we expect the module to be connected with the MxBus)

Check if the module is found and recognized correctly.

Close the menu.

Choose “General Event Settings” within the Setup Menu.

Make sure “Arming” is enabled. Actions groups will not work without the camera being armed.

Choose “Set” to save the settings and the back arrow at the top to return to the menu.

Now choose “Event Overview”

Click on Edit, next to “Signal Events”

Add a new profile here, and name it, for example “DOORBELL”



Select Signal Input and the correct input, for example “IO module 7.1”
Choose the right condition, in our case “Rising”

Choose “Set” to save the settings and press “Close” to close this menu. When asked to save the settings permanently, choose yes.

When using the button on the T24/25

Choose “General Event Settings” within the Setup Menu.
Make sure “Arming” is enabled. Actions groups will not work without the camera being armed.
Choose “Set” to save the settings and the back arrow at the top to return to the menu.

Now choose “Event Overview”
Click on Edit, next to “Signal Events”
Add a new profile here, and name it for example “DOORBELL”
Select Signal Input and the correct input, for example “Camera: Right button”
Choose the right condition, in our case “Rising”



Choose “Set” to save the settings and press “Close” to close this menu. When asked to save the settings permanently, choose yes.

Connecting the signal to an action (for IO module as well as button on T24/25)

Choose in the setup menu “Action group overview”

Add a new group, and give it a name, for example “Intercom bell” and press Edit.

Choose the just created Signal as the Event: “DOORBELL”

And add the IP notify profile “xxter intercom” as the action to preform.



IntercomS14 Action Group Details

MOBOTIX S14 IntercomS14 Action Group Details

General Settings	Value	Explanation
Action Group	IntercomBel Enabled (No time table)	Name: The name is purely informational. Arming: Controls this action group: <i>Enabled:</i> activate the group. <i>Off:</i> deactivate the group. <i>St:</i> group armed by signal input. <i>CS:</i> group armed by custom signal as defined in General Event Settings . Time Table: Time table for this action profile (Time Tables).
Event Selection	(Signal: SI) Signal: UC Signal: DEURBEL (Time: PE) (Time: TT)	Event Selection: Select the events which will trigger the actions below. Use [Ctrl]-Click to select more than one event. Events in brackets need to be activated first.
Action Details	5 Simultaneously	Action Deadtime: Time to wait [0..3600 s] before a new action can take place. Action Chaining: Choose how the status of each subaction influences the execution of all others. <i>Simultaneously:</i> All actions are executed simultaneously. <i>Simultaneously until first success:</i> Simultaneous execution, but as soon as one action succeeds (i.e. has been completed or the phone is picked up), all others are terminated. <i>Consecutively:</i> All actions are executed in the specified order. <i>Consecutively until first success:</i> Consecutive execution, but as soon as one action succeeds, the following actions are not executed. <i>Consecutively until first failure:</i> Consecutive execution, but as soon as one action fails, the following actions are not executed.
Actions	Value	Explanation
Action 1	IP Notify: xxter intercom <input type="checkbox"/> Delete 0	Action Type and Profile: Select the Action Profile to be executed. Action Timeout: If this action runs longer than the time specified [0..3600 s], it is aborted and returns an error; 0 to deactivate.
<div>Add new action</div>		
Note: <div>Set Factory Restore Close</div>		

When additional phones or clients are connected, add another action. For these clients use the correct call profile at "Phone call".

Choose "Set" to save the settings and press "Close" to close this menu. When asked to save the settings permanently, choose yes.

Now, the push button should work. Both the alert service should be called and any clients should ring when the door bell is pressed.

3. Configure the contact to open the door



To be able to open a door, there are several options. When using KNX or enOcean, add a “send value” action in your project, and select this action as the door opener button action. In that case no other settings are required.

When the door opener relay is connected to the IO module or the T24/25, you can use a DTMF code to active the door. Select “1#” as the DTMF code to send.

SIP address to call	<input type="text" value="sip:101@192.168.220.7"/>	
Use STUN server	<input type="text"/>	
Audio bandwidth	<input type="text" value="0"/>	kbit/s
Video bandwidth	<input type="text" value="0"/>	kbit/s
Door opener button	Use DTMF code:	
DTMF door code	<input type="text" value="1#"/>	
<input type="button" value="Change"/> <input type="button" value="Delete"/>		

Within the Mobotix settings, you have to select the correct output.
Choose “Hardware Configuration” -> “Assign Wires” in the Admin Menu.
Select the correct output as the “Door Release Actuator”.

Attribute	Value	Explanation
Door Position Contact	Not connected	Signal Input: Select the Signal Input connected with this device. The internal profile ~DPC in the Event Overview will use this selection.
Bolt Position Contact	Not connected	Signal Input: Select the Signal Input connected with this device. The internal profile ~BPC in the Event Overview will use this selection.
Door Release Actuator	IO Module: Door 2 circuit close	Signal Output: Select the Signal Output connected with the door release. This is used for remote control via ISDN or VoIP calls, as well as MxEasy and iPad clients. The internal action profile ~Door in the Action Group Overview will use this selection. Switch Time: Set a time the door actuator is open after being activated in seconds. The maximum value is 60s. Note that the default DoorOpener output is limited to 10s. Output Type: Select whether the actuator is active upon "circuit close" or "circuit break". In doubt, choose "circuit close".

Set Factory Restore Close Less



4. Connect from the Internet

Mobotix and xxter support multiple audio codecs with different qualities of sound. However, each has different requirements as well. Some codecs might work better on some networks, others on other networks. Within the Mobotix configuration you can select these in the “Audio and VoIP Telephony” -> “Sip Client Settings” settings in the Admin menu. The GSM codec uses less bandwidth for example and might be more suitable for 3G connections.

When the xxter unit and the intercom are located behind a firewall, router, or modem, some additional settings are required.

When the “term” EIPoH is used below, this means the External IP or Host name, this can be the external IP address of your Internet connection, but probably more useful is the xxter.net dynamic domain name. (example.xxter.net)

The settings for the Mobotix:

“Admin Menu” -> “Audio and VoIP Telephony” -> “SIP Server Settings”

When using the SIP server, change the Realm to the EIPoH.

“Admin Menu” -> “Audio and VoIP Telephony” -> “SIP Client Settings”

Change the Domain to EIPoH.

Use this address also as the “NAT Address” and set “NAT Traversal” to “Use NAT address”.

You can also use a STUN server, which might be easier and more reliable. Choose “Use STUN server” as “NAT Traversal” and enter a stun server (for example: stunserver.org)

On this page, the port numbers that are used can be found, please remember the SIP port and the Audio RTP port for the port forwarding. When using a SIP server, you need Audio RTP port instead of the SIP port.

Phone Call-In of the Admin Menu

“Accepted Phone Numbers or SIP Addresses”: Use the EIPoH (for example:
sip:102@example.xxter.net)

The xxter camera settings changes:

URL external: use the EIPoH and a free port number on your external IP, for example 8081. (EIPoH, e.g. <http://example.xxter.net:8081/>)

“xxter SIP address”: use the EIPoH (eg sip:102@example.xxter.net)

“SIP address to call”: use the EIPoH (eg sip:101@example.xxter.net)

When using any other port than the default 5060 port, add it to the “SIP address to call”, for example: sip:101@example.xxter.net:4177



Port forwarding

Within the firewall, router or modem, the following port forwarding rules need to be added:

TCP port 8081 of the external IP to port 80 of the Mobotix (or another port number, this should be the same port as set above)

UDP port 5060 of the external IP to port 5060 of the Mobotix camera.

UDP port 7078 of the external IP to port 7078 of the Mobotix camera.

(or other port numbers, as stated above)

More information about port forwarding can be found on our documentation page and on the Internet in general.