

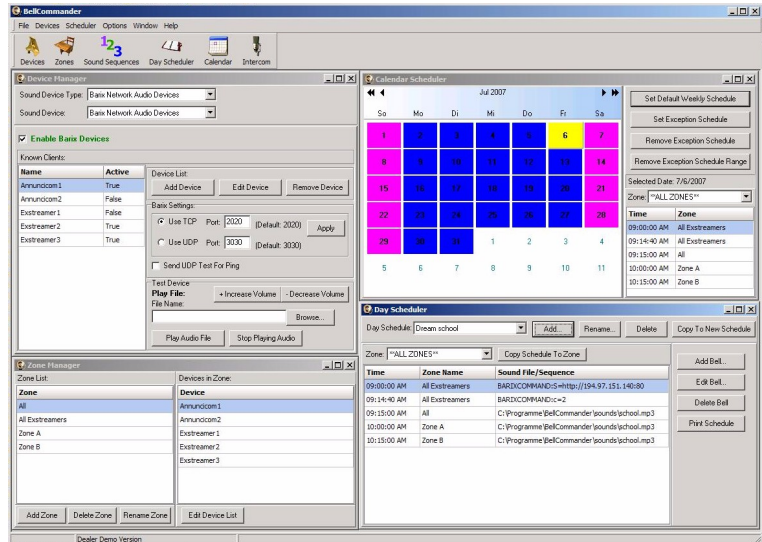
Bellcommander application note

This document should give you a short overview about Bellcommander and how to use the software together with Barix products like Exstreamer and Annunicoms. At the end it shows also configuration examples for some Barix special applications.

Bellcommander is a very powerful scheduling software to schedule bell sounds for schools or universities or companies, but it can be also used e.g. for automated (repeated) advertisements and live announcements in shopping malls or to schedule any UDP commands for Barix products/devices. Acrovista Software, the developer of the software, offers different licenses for different installation sizes (controlled devices) .

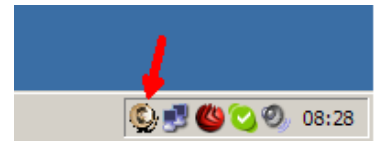
The installation of the software should not make any problems, it is compatible with the very most Windows operating systems.

A trial version you can download from:
<http://www.acrovista.com/bellcommander/>

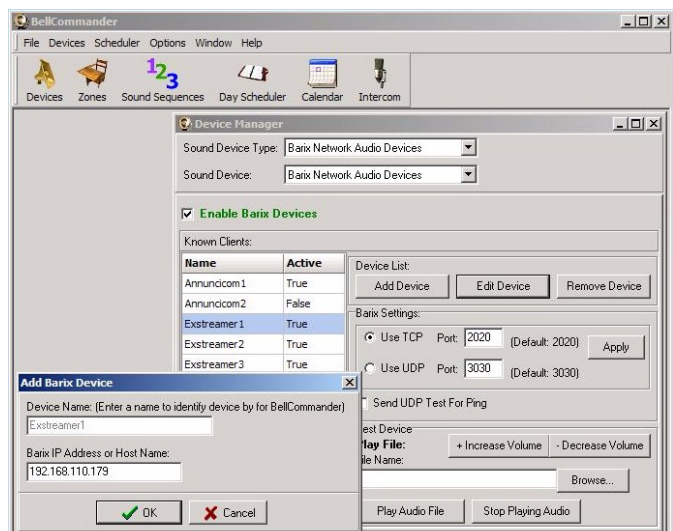


Software overview and configuration

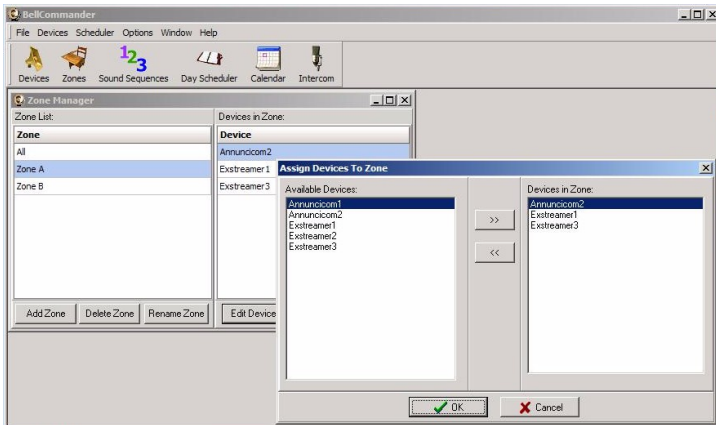
If you start Bellcommander then usually it adds an icon in the system tray and opens the empty Bellcommander window.



From the empty Bellcommander select your desired control section. In the picture on the right side is the Device Manager selected. There you can define your output devices, like local soundcards, client PC's or also Barix Exstreamer/Annunicoms . If the units are in the LAN available (and support the Barix discovering), then it is marked with "True", otherwise with "False". If they are available then you can also test these audio output devices. You can here define also IP addresses for other network devices like the Barix Barionet for command scheduling (over UDP port 12301, not changeable).



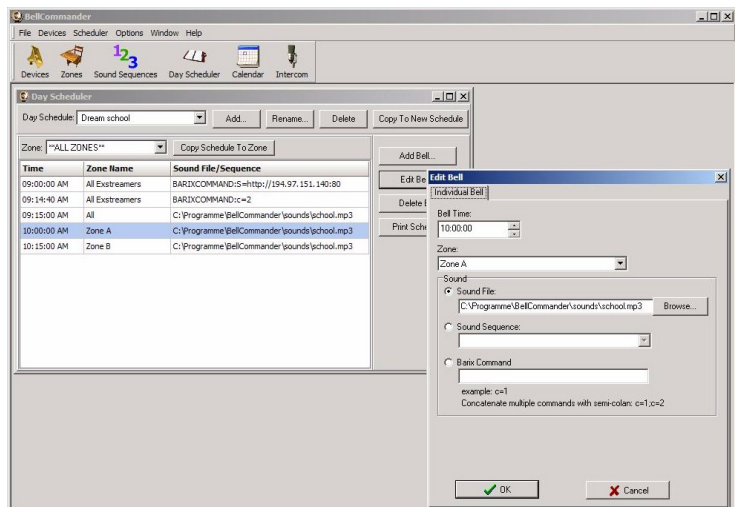
Sound Sequences gives you the possibility to combine existing single sound files to sound sequences. That feature is not really necessary for the setup.



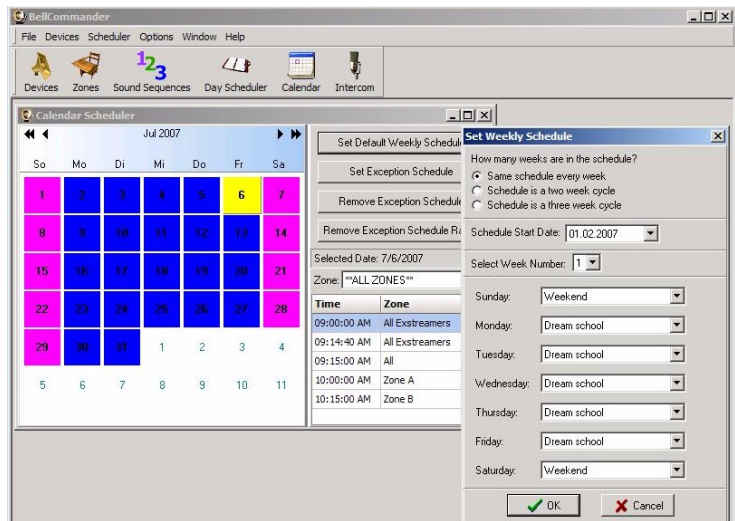
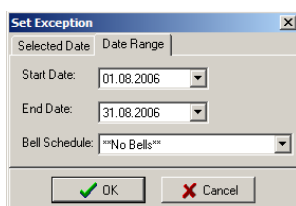
In the Zone Manager you can assign the defined devices to zones (groups).

The Day Scheduler allows you to schedule the sound files or UDP commands. Here you can create, copy, edit and audio schedules for the zones. If the schedule for Monday looks different than Tuesday, no problems - create a second schedule for Tuesday. In the Calendar Scheduler you can join them to the right day.

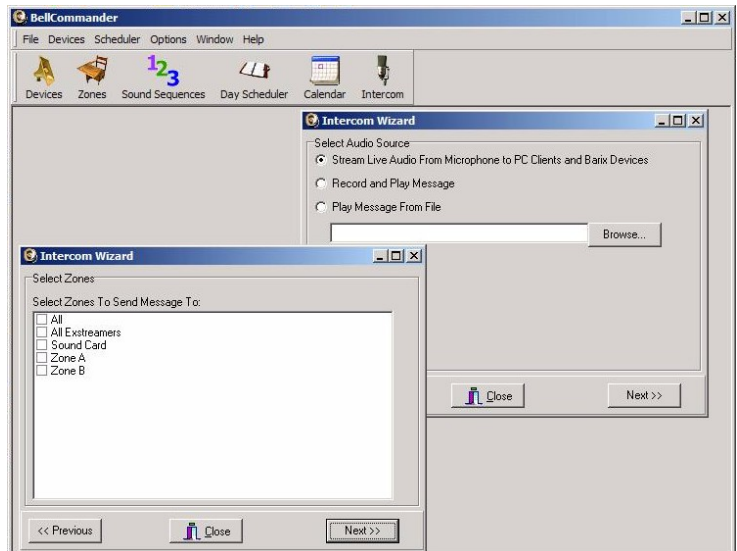
As UDP command can be sent any character string exceptional the “ ; ”. Also delaying two commands for few milliseconds is possible: e.g. `setio,1,999;sleep=250;setio,1,999` UDP commands are sent always on port 12301!



On the Calendar Scheduler you can assign your created “day schedules” to the calendar. If you different schedules or exceptions then they will be displayed in different colours or with different signs. Also exceptions you can set (e.g. for vacations).



With the Intercom feature you could play pre-recorded messages (e.g. alarms) or live announcements outside of the normal schedules to the zones.



Barix device configuration

Annunicom with standard firmware

Parameter	Value
Own Name	
Streaming mode	send on TALK
Trigger Level	1000 only for mode "send on Level"
Pre Trigger Start	0 msec
Post Trigger Play	0 msec
Buffer Underrun Mode (TCP)	disconnect
Background Stream TCP Flow Control	throw away data
Stream Packet Strategy (MP3 only)	lowest latency
Non MP3 Packet Size	1200 Bytes
Play Buffer	4096 Bytes
Receive Timeout	200 msec
TCP Priority Rx Port	0
UDP Priority Rx Port	0
Minimum Priority Message Volume	50 %
UDP Receiver Port	3030
UDP Tx Source Port	0
Radio Path	/xstream
Relay While Audio	OFF

Per default the Annunicom listens on UDP port 3030 for incoming streams. Bellcommander can stream over UDP (port 3030) to the Annunicom's UDP Receive Port as also over the "UDP Priority Rx Port". Note, when using the "UDP Priority Rx Port" then make sure the same port number is not used twice in the Annunicom configuration.

When TCP streaming is selected in Bellcommander, then configure in the Annunicom setup the "TCP Priority Rx Port" to the same port number as configured in Bellcommander.

Note, in the Annunicom configuration under Audio you have to select the same codec as defined in the Bellcommander configuration.

The Annunicom with Annunicom standard firmware supports only RAW UDP or RAW TCP streaming, no RTP!

Exstreamer with Streaming Client firmware

For Bellcommander announcements use the Streaming Client's Priority Port. This Priority port supports only RTP but all audio formats (MP3, PCM, G.711).

Define here also the same port number as defined in the Bellcommander "Advanced Settings".

The use of the "normal" URLs from the Bellcommander is not recommended, these are equipped with a soft-fade-in feature, means the volume is ramping up slowly and you will probably lose the first seconds of the audio there.

Category	Parameter	Value
Advanced Settings	PRIORITY STREAM SETTINGS	
	RTP Port	11001
	RTP delay	500 ms
	Priority Message Volume	50 %
Priority	Triggered Playlist	

The Streaming Client firmware can be only used with the RTP format from Bellcommander software!

Configuration with other Barix firmwares / applications

The Bellcommander can be used also with some other firmwares on the Barix devices, e.g. :

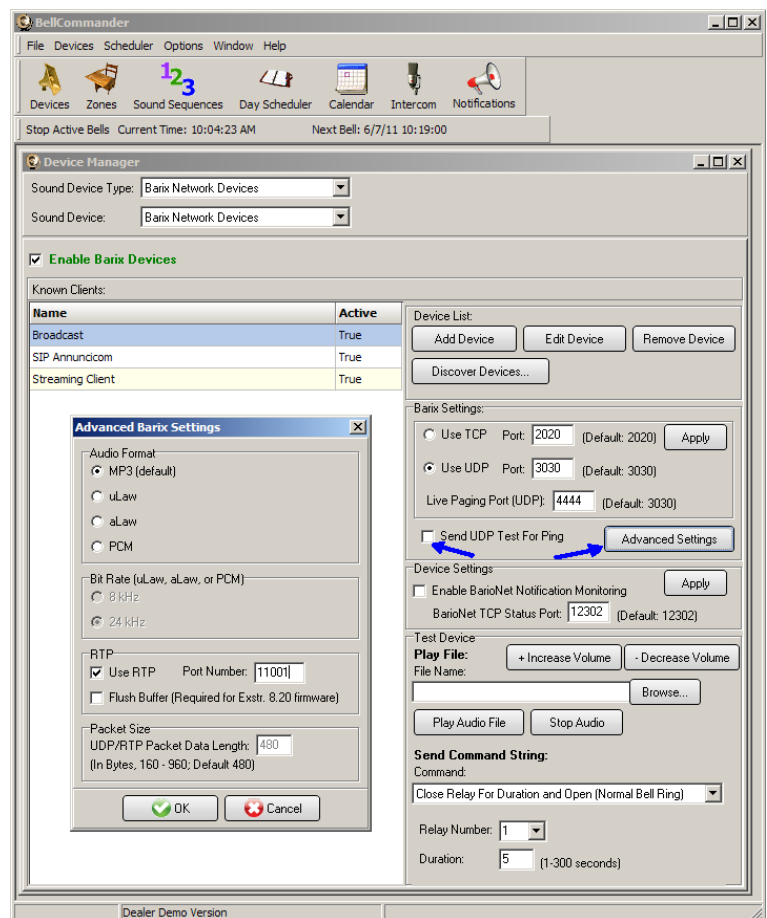
- the ABCL SIP software
- the ABCL BARP Paging software

These softwares offer beside their normal functionality often a “Priority port”, a “Notification port” or a “BGM port” to receive streams from other applications. In all mentioned softwares the additional audio network ports require a RTP stream. Here are some configuration examples.

In the Bellcommander Device configuration

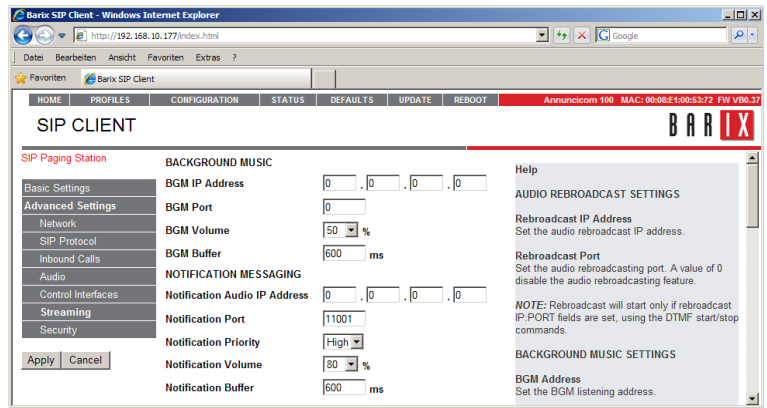
Not all Barix firmwares/application have the typically Barix discovering implemented, see firmware/applications mentioned on next pages. When no Barix Discovery feature is existing then uncheck in the “Send UDP Test for Ping” box and click on “Apply”.

To set the right streaming settings click on “Advanced Settings”, there select the desired Audio and RTP parameter and click on “Ok”. In the example on the right picture the RTP port 11001 is configured with MP3 audio format.



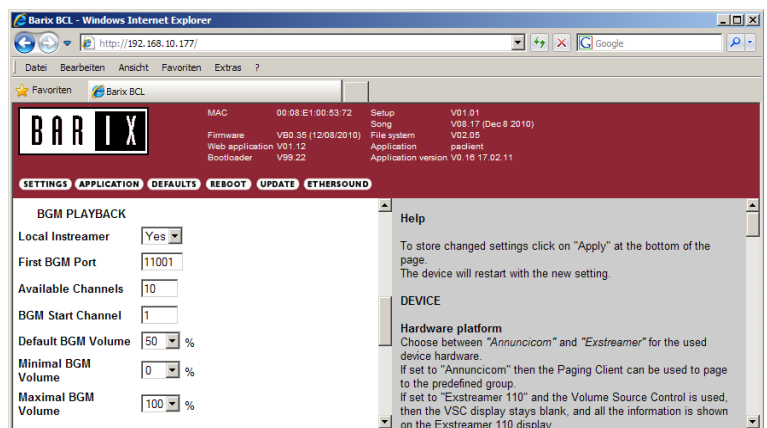
Barix ABCL SIP Client firmware

The SIP Client offers under “Streaming” settings for the BGM port and the Notification port. For occasional announcements the Notification port is the better choice. Define there the port number and set the Notification Priority. “High” will stop current SIP calls when incoming announcement are received. “Low” will play the announcement only when there is no current SIP call. The Notification port number should be the same as defined in the Bellcommander “Advanced Settings”.



Barix ABCL Paging software

This firmware allows to select a channel for BGM (Background Music). Such BGM channel can also be used for occasional announcements from Bellcommander. For that make the settings similar to the picture on the right side. It will open the BGM Port 11001 after startup. This port can be switched with the ICgraph-BARP application if needed.



Bellcommander offers a SIP-Call - forwarding function, this should also work together with Barix products.

Using the Barionet inputs for Bellcommander notification

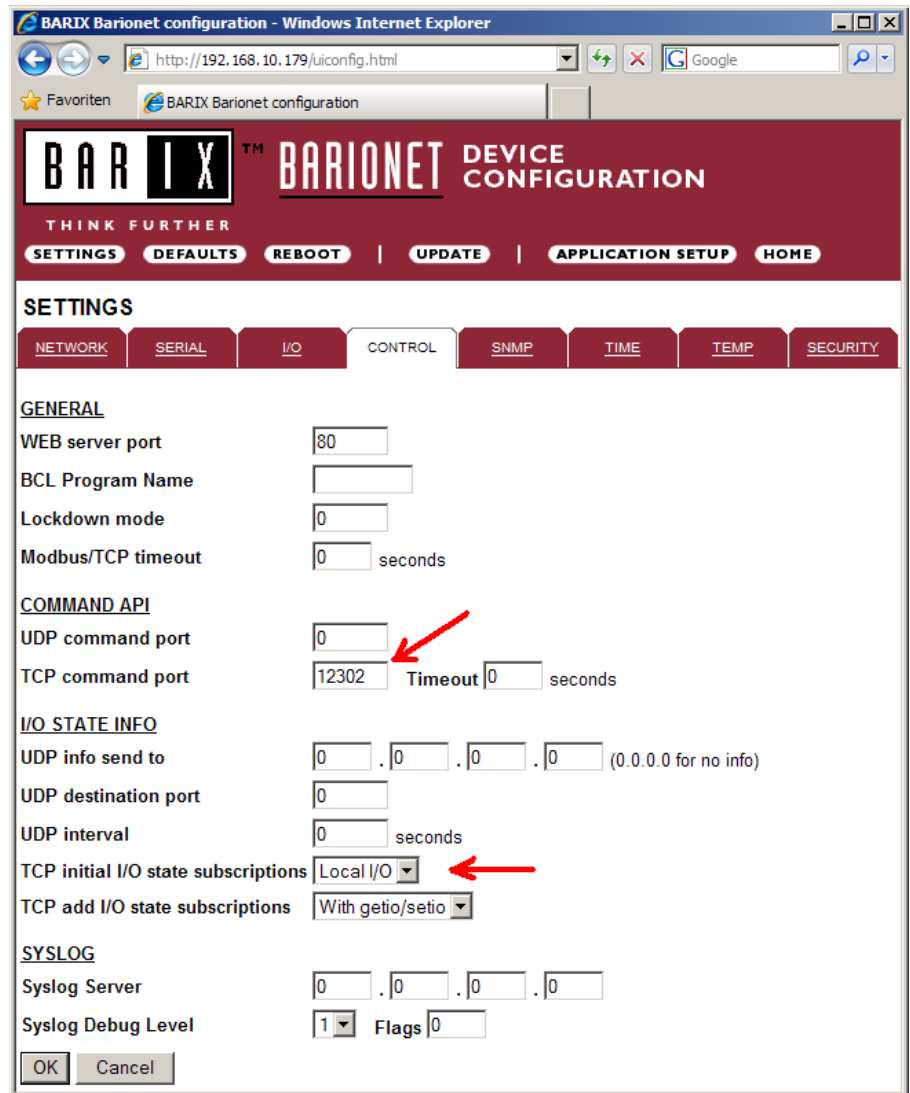
Bellcommander allows also to monitor the Barix Barionet inputs or to control the Barionet relays. Following is a example for the Barionet triggering a autmatic Bellcommander notification.

In the example the input 1 of a Barionet50 is used to trigger the notification.

The Barionet configuration the „TCP command port“ and the TCP initial I/O state subscription“ must be set like on the right picture.

The TCP command port should be set e.g. to port 12302.

The TCP initial I/O state subscription is per default on „Local I/O“, but make sure this is correctly configured..

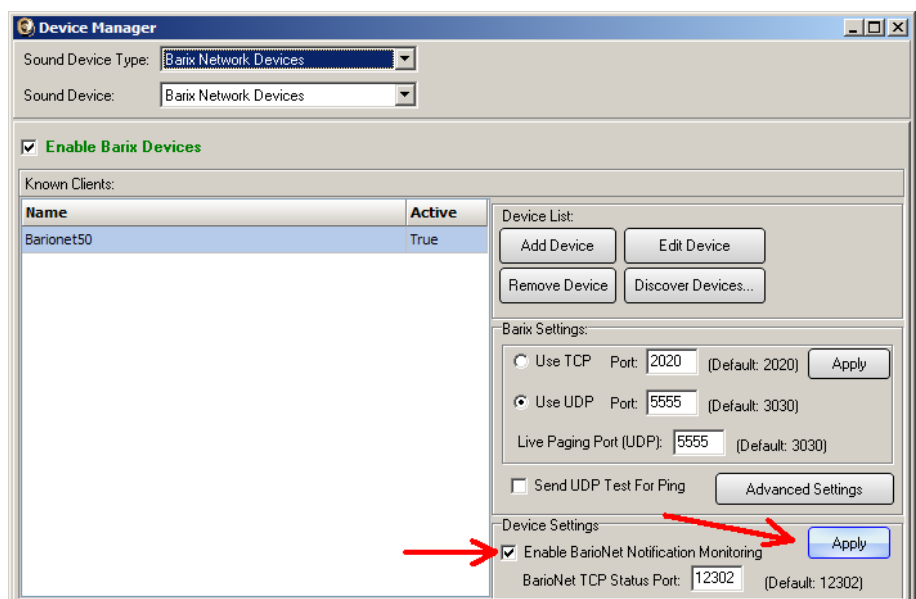


First open Bellcommander’s device manager and add the Barionet.

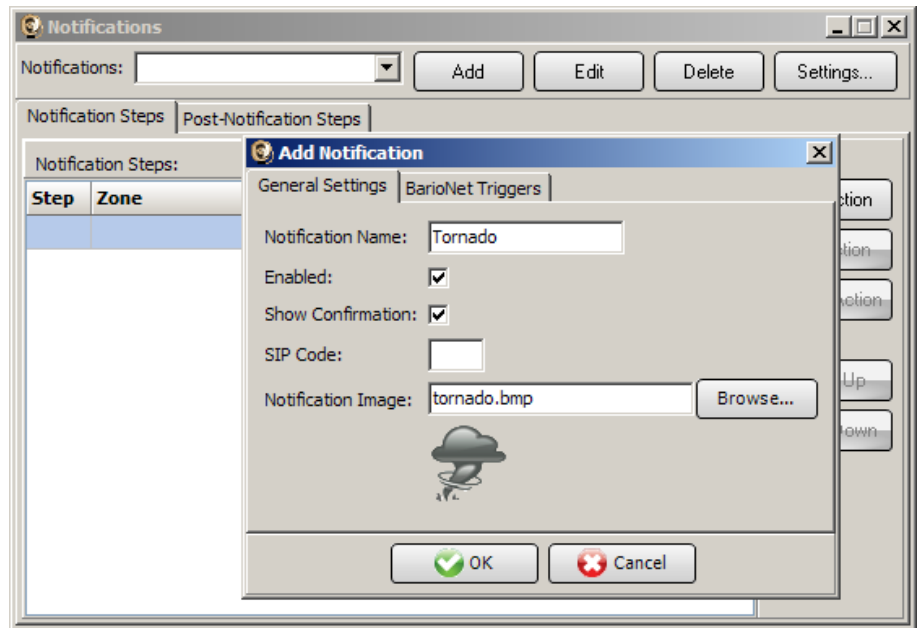
For that click „Add Device“, there define a device name and the IP address of the Barionet and click „OK“.

Thereafter check in the „Device Settings“ the „Barionet TCP Status Port“ is matching with the „TCP command port“ in the Barionet settings.

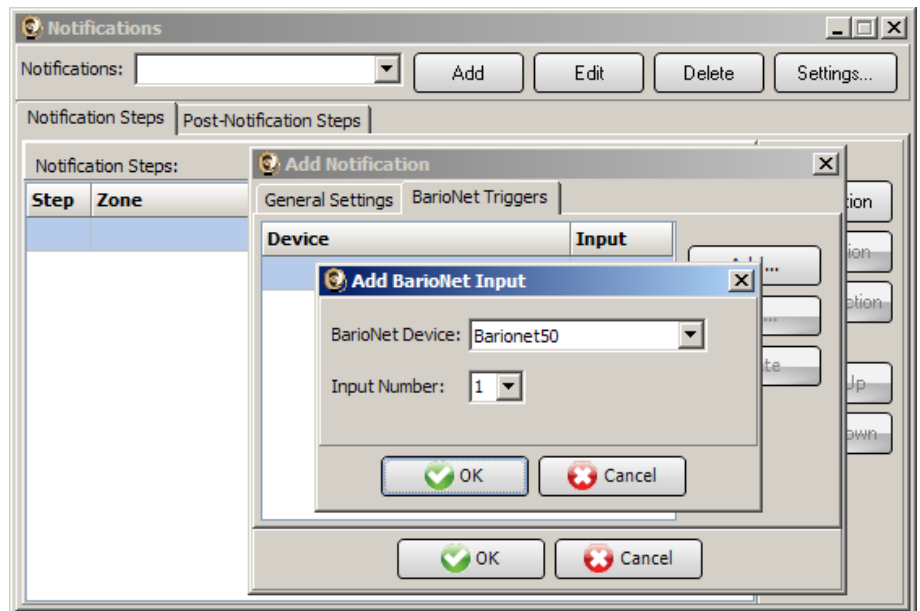
As last here, mark the box „Enable Barionet Notification Monitoring“ and click on „Apply“.



After the configuration in the device manager you have to configure the „Notification“. After selecting „**Notification**“ from the Menu button bar click on „ADD“ and enter a name for the notification. The notification should be also enabled /active and a picture should be assigned.



Assign now a Barionet input to the notification, for that select the tab „**Barionet Triggers**“ and choose there the Barionet and the desired input on the Barionet. To save the settings and close the window click „OK“.



As next define the Bellcommander action when the Barionet input is triggered. Click „**Add Action**“ and define in the opened window what should be done and finish the process by clicking „OK“.

Ready, now you will see the created notification as icon in the notification bar on the left Bellcommander side. As soon the Barionet input is triggered Bellcommander will start the assigned action, e.g. send a sound file to a selected audio zone or send a command to a Barix device.

