

# Automations and ACLinks

Technical Support Engineering  
Rosslare Security NA

For more information please see

[www.axtraxng.com](http://www.axtraxng.com)

- AC Links are used to create automations and perform custom operations on access control panel. The simplest and most common use is to unlock a door on a schedule.
- AC Links may also be used to augment the logic in a panel, to make use of unused inputs or redirect inputs to perform a different function, i.e. use the 1A input for a motion detector request to exit.
- AC Links also provide a method for triggering relays to drive external alarms for events such as door forced open or held open.
- AC Links may be used to trigger an action from a reader, a door bell is a common application.

# Automatic Door Operation

- The first example is for an Automatic Door Operation to open a door on a schedule.
- For the schedule I am using a time zone active from 8:00 AM until 4:00 PM Monday through Friday. The steps to create this time zone are shown on the next 4 slides.
- While this schedule is very simple, more complicated schedules may be created with up to 16 time segments per day, 7 days per week plus holidays.

## Timing\Time zone

Hierarchic View

Table View

- AxTraxNG
  - AC Networks
  - HomeLogiX
  - Video Integration
  - Timing
    - Time zone
    - Holidays
  - Groups
    - Access Groups
      - Cleaning
      - Employees
      - Maintenance
      - Master
      - Unauthorized
    - Access Areas
    - Output Groups
    - Input Groups
    - Card + Card Groups
    - Vehicle Access Groups
  - Global antipassbacks
  - Car Parking
  - Users
  - Status Map
  - Reports



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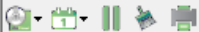
Weekdays

## Time Zone

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Holiday
08:00								
09:00								
10:00								
11:00								
12:00								
13:00								
14:00								
15:00								
16:00								
17:00								
18:00								

- Expand Timing by clicking on the + to the left.
- Select Time Zone then the Green + to create a new time zone.
- Left click and hold the mouse button at the beginning of the time period (8:00) and drag the end (16:00).
- Change the name to “Weekdays”.

Events



Date/Time	Location		
7/22/2014 11:03:08 AM	RSP-LBARNES		
7/22/2014 9:19:23 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator
7/22/2014 9:19:03 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator

- Right click in the dark blue area and select “create”.
- It should turn light blue with the red bar as shown.

The screenshot shows the AxTraxNG software interface. The main window is titled "Timing\Time zone". On the left, there is a "Hierarchic View" tree showing a structure of folders and items, including "AxTraxNG", "AC Networks", "HomeLogiX", "Video Integration", "Timing", "Time zone", "Holidays", "Groups", "Access Groups", "Access Areas", "Output Groups", "Input Groups", "Card + Card Groups", "Vehicle Access Groups", "Global antipassbacks", "Car Parking", "Users", "Status Map", and "Reports". The "Time zone" folder is expanded, showing a "Time Zone" sub-item. The main area displays a "Time Zone" configuration window. This window has a "Weekdays" tab and a grid with columns for "Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", and "Holiday". The rows represent times from 08:00 to 18:00 in one-hour increments. A red oval highlights a dark blue cell in the "Monday" column at 11:00, which has a red vertical bar next to it. The "Saturday" column is highlighted in yellow. At the bottom of the window are "New", "OK", and "Cancel" buttons. Below the window is an "Events" section with a table showing logon events.

Date/Time	Location	Operator	Event	Details
7/22/2014 11:03:08 AM	RSP-LBARNES	Administrator	Logon Operator Administrator	
7/22/2014 9:19:23 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator	
7/22/2014 9:19:03 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator	

Connected Download count: 0 | 7/22/2014 11:46 AM

Timing\Time zone

Hierarchic View Table View

- [-] AxTraxNG
  - [+] AC Networks
  - [+] HomeLogiX
  - [+] Video Integration
  - [+] Timing
    - [+] Time zone
    - [+] Holidays
  - [+] Groups
    - [+] Access Groups
      - [+] Cleaning
      - [+] Employees
      - [+] Maintenance
      - [+] Master
      - [+] Unauthorized
    - [+] Access Areas
    - [+] Output Groups
    - [+] Input Groups
    - [+] Card + Card Groups
    - [+] Vehicle Access Groups
  - [+] Global antipassbacks
  - [+] Car Parking
  - [+] Users
  - [+] Status Map
  - [+] Reports



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Main

- Repeat the previous 2 steps for each day.
- Click OK to save the new Time Zone.

Time Zone

Weekdays

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Holiday
08:00								
09:00								
10:00								
11:00								
12:00								
13:00								
14:00								
15:00								
16:00								
17:00								
18:00								

Events



Date/Time	Location	Operator	Event	Details
7/22/2014 11:03:08 AM	RSP-LBARNES	Administrator	Logon Operator Administrator	
7/22/2014 9:19:23 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator	
7/22/2014 9:19:03 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator	

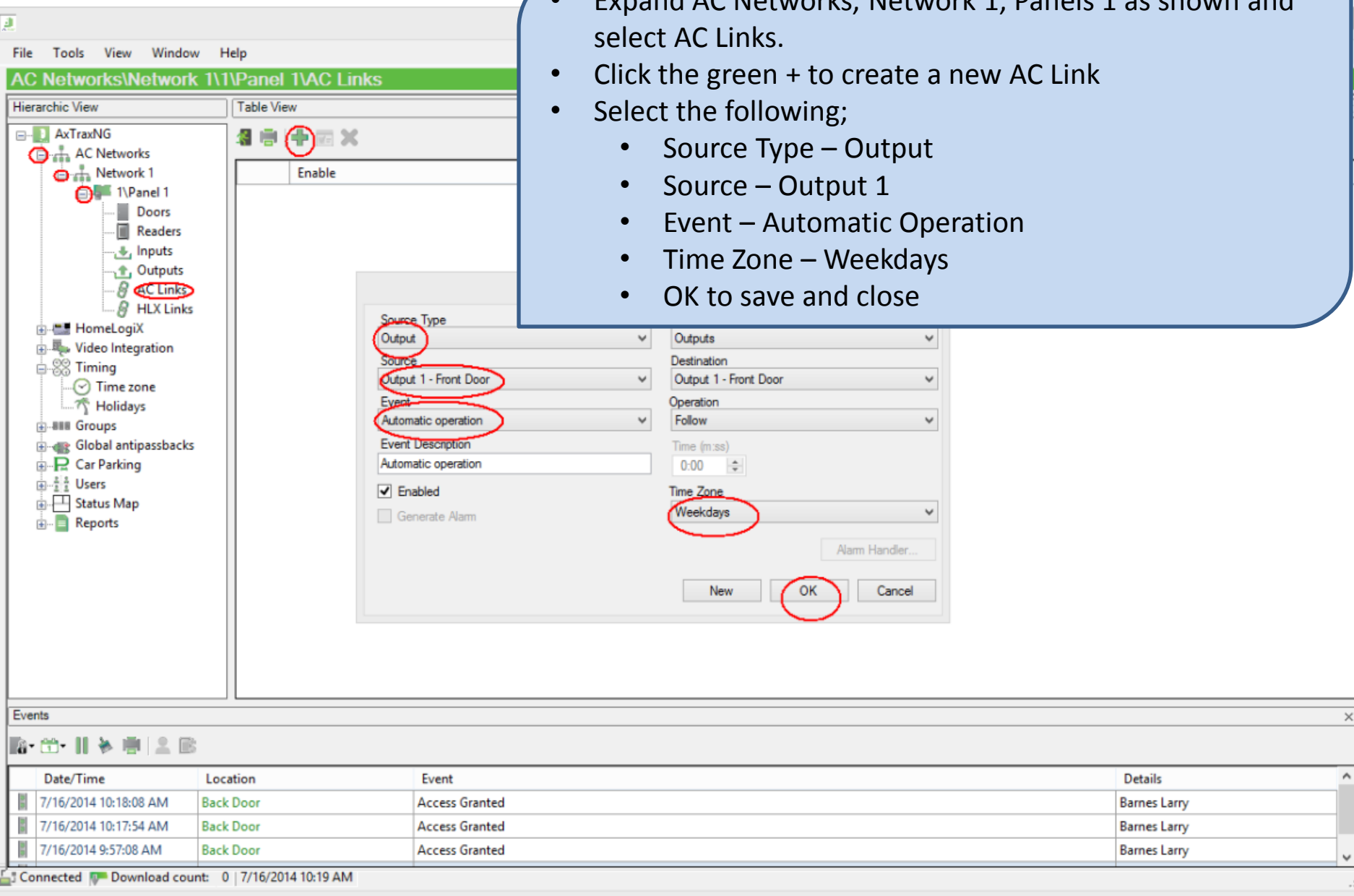
- Right click in the time segment to edit, a properties box will open as shown.
- Change the start or finish time as required and click OK to save.
- Click OK to close the properties window.

The screenshot displays the AxTraxNG software interface. The main window is titled 'Timing\Time zone'. On the left, there is a 'Hierarchic View' tree showing various system components like 'AC Networks', 'HomeLogiX', 'Video Integration', 'Timing', 'Time zone', 'Holidays', 'Groups', 'Access Groups', 'Access Areas', 'Output Groups', 'Input Groups', 'Card + Card Groups', 'Vehicle Access Groups', 'Global antipassbacks', 'Car Parking', 'Users', 'Status Map', and 'Reports'. The 'Timing' section is expanded, showing a calendar grid for 'Weekdays' from 08:00 to 18:00. A time segment from 08:00 to 16:00 on Friday is selected. A 'Period properties' dialog box is open over this segment, with 'Start from' set to 08:00 and 'Finish At' set to 16:00. The 'OK' button is circled in red. The software also features a menu bar (File, Tools, View, Window, Help) and an event log at the bottom showing recent events.

Date/Time	Location	Operator	Event	Details
7/22/2014 11:47:50 AM	RSP-LBARNES	Administrator	Edit Time zone Weekdays	
7/22/2014 11:03:08 AM	RSP-LBARNES	Administrator	Logon Operator Administrator	
7/22/2014 9:19:23 AM	RSPASUSLAPTOP	Administrator	Logon Operator Administrator	



- The next step is creating the AC Link. An Automatic Operation AC Link must be created for each door that is to be opened. They may not be created using output groups.
- Only one Automatic Operation AC Link may be used at a time for an output. In other words, you may not have two different time zones controlling the same door, you must build all of the time segments into one time zone required for the door.
- When creating an AC Link for an exterior door it is advisable to enable “First Person Delay”. This is a per door property that is accessed on the door properties window, it prevents the door from opening on an automatic operation until a user has entered a valid code(PIN or card) after the start of the time zone. This prevents an outside door from unlocking in the event of bad weather such as snow days at a school.



- Expand AC Networks, Network 1, Panels 1 as shown and select AC Links.
- Click the green + to create a new AC Link
- Select the following;
  - Source Type – Output
  - Source – Output 1
  - Event – Automatic Operation
  - Time Zone – Weekdays
  - OK to save and close

- This slide shows how to enable the First Person delay on a door.
- Expand AC Networks, Network 1, Panel 1 and highlight Doors.
- Move to the right in the table view and highlight the door you want to edit.
- Click the edit icon at the top, this opens the door properties window.
- Check the box labeled “First person delay on automatic unlock”
- Click OK to save and exit.

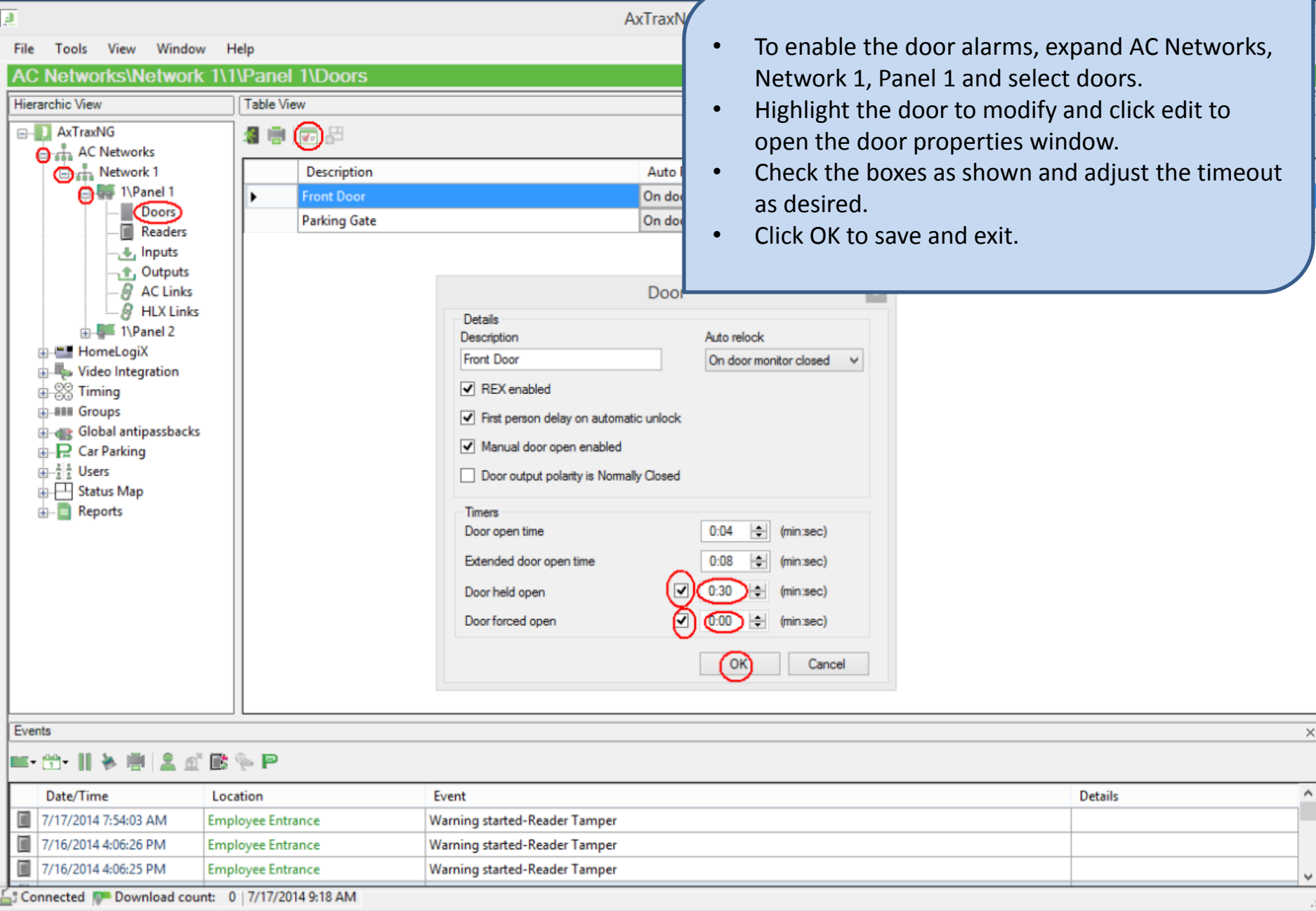
The screenshot displays the AxTraxNG software interface. On the left, a hierarchical tree view shows the structure: AC Networks > Network 1 > 1\Panel 1 > Doors. The 'Doors' folder is selected. In the center, a 'Table View' shows a list of doors: 'Front Door' (highlighted) and 'Back Door'. Above the table, there are icons for adding, deleting, and editing doors. The 'Front Door' is selected, and its properties window is open. In this window, the 'Details' section includes a description field with 'Front Door' entered. Below this, there are several checkboxes: 'REX enabled' (checked), 'First person delay on automatic unlock' (checked), and 'Manual door open enabled' (checked). There is also an unchecked checkbox for 'Door output polarity is Normally Closed'. The 'Timers' section contains four rows with dropdown menus for time values: 'Door open time' (0:04), 'Extended door open time' (0:08), 'Door held open' (0:30), and 'Door forced open' (0:00). At the bottom of the window are 'OK' and 'Cancel' buttons. At the bottom of the main application window, an 'Events' table shows a log of access events.

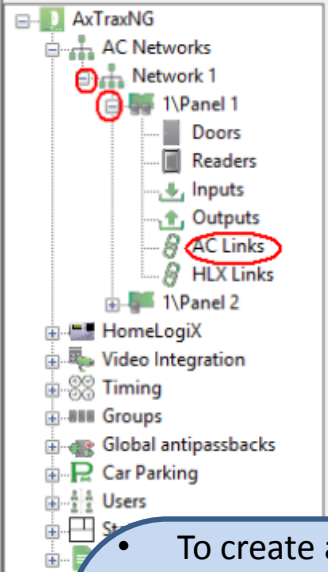
Date/Time	Location	Event	Details
7/16/2014 10:18:08 AM	Back Door	Access Granted	Barnes Larry
7/16/2014 10:17:54 AM	Back Door	Access Granted	Barnes Larry
7/16/2014 9:57:08 AM	Back Door	Access Granted	Barnes Larry

Connected Download count: 0 | 7/16/2014 10:20 AM

# Door Alarms

- This example is an AC Link to generate an alarm or alert when a door is forced open or held open.
- The door forced and door held alarm functions are built into the panel firmware by default, they both require the use of a door monitor switch.
- The door forced alarm will be triggered any time a door is opened without a valid credential or REX input to open the door, if a motion detector is used to open a door it must either be connected through the panel or provide a shunt across the door monitor switch to prevent the alarm from triggering.
- The door held open alarm is triggered when a door is held open longer than the door held open timer which is set in the door properties, by default 30 seconds.
- In the first example of door forced open, the alarm will be used to trigger the built in siren located in the panel and generate a popup on the PC. (Popup only works when AxtraxNG client is open.)
- In the second example of door held open the alarm will trigger only a chime tone from the sounder in the panel.





Enable	Source	Event Description	Time Zone
<input checked="" type="checkbox"/>	Output 1	Automatic operation	Weekdays

Link

Source Type Door	Destination Type Sounder
Source Door 1 Front Door	Destination Siren
Event Door forced open	Operation Sounder Timer
Event Description Door forced open	Time (m:ss) 0:04
<input checked="" type="checkbox"/> Enabled	Time Zone Always

Alarm Handler...

- To create an AC Link, expand AC Networks, Network 1, Panel 1 and select AC Links
- Click the green + to create a new AC Link.
- Select;
  - Source Type – Door
  - Source – Door 1
  - Event – Door Forced Open
  - Destination Type – Sounder
  - Destination – Siren
  - Operation – Sounder Timer
  - Time – as required, default is 4 S
  - Time Zone – Always (by default)
  - OK to save and close

		Details

## Link

Source Type Door	Destination Type Sounder
Source Door 1 Front Door	Destination Siren
Event Door forced open	Operation Sounder Timer
Event Description Door forced open	Time (m:ss) 0:04
<input checked="" type="checkbox"/> Enabled	Time Zone Always
<input checked="" type="checkbox"/> Generate Alarm	

Alarm Handler

New OK Cancel

## Alarm handler - PC RSP-LBARNES

Message Popup  
Alarm Message  
Front Door Force Open

 Popup Enabled

Use highlight alarm event

Select Color

Sound  
Select Wave Audio file Local Sound Enabled

Sound Now

Browse...

OK

Cancel

- To enable popup, check the box Generate Alarm then select Alarm Handler.
- Check the box Popup Enabled, optionally select a different color and add an alarm message as shown.
- Click OK to save and exit.

## Events



Date/Time	Location	Event
7/17/2014 9:20:45 AM	Front Door	Warning started-Door forced
7/17/2014 9:20:45 AM	1\Panel 1\Door 1 Monitor	Input opened
7/17/2014 9:20:42 AM	1\Panel 1\Door 1 Monitor	Input closed
7/17/2014 9:20:37 AM	Front Door	Warning started-Door forced



- When an alarm occurs a popup will appear on the PC screen as shown.
- To immediately cancel the siren check the box “Alarm Clear”.
- Click OK to close and exit.

Alarm Handle Door forced open

Alarm	Date
Door forced open	7/17/2014 9:25:30 AM
Source	Destination
Front Door	Siren
Alarm Message	
Front Door Force Open	
Alarm remarks	
<input type="checkbox"/> Alarm clear	<input type="button" value="OK"/> <input type="button" value="Cancel"/>

Events

Date/Time	Location	Event	Details
7/17/2014 9:25:30 AM	Front Door	Warning started-Door forced	
7/17/2014 9:25:30 AM	1\Panel 1\Door 1 Monitor	Input opened	
7/17/2014 9:25:30 AM	Front Door	Alarm started	Door forced open
7/17/2014 9:25:30 AM	1\Panel 1	Siren started	

Connected Download count: 0 | 7/17/2014 9:24 AM

File Tools View Window Help

AC Networks\Network 1\Panel 1\AC Links

Hierarchic View Table View

AxTraxNG

- AC Networks
  - Network 1
    - 1\Panel 1
      - Doors
      - Readers
      - Inputs
      - Outputs
      - AC Links
      - HLX Links
    - 1\Panel 2
  - HomeLogix
  - Video Integration
  - Timing
  - Groups
  - Global antipassbacks
  - Car Parking

Enable	Source
<input checked="" type="checkbox"/>	Output 1
<input checked="" type="checkbox"/>	Door 1
<input checked="" type="checkbox"/>	Reader 1
<input checked="" type="checkbox"/>	Door 1

Link

Source Type: Door

Source: Door 1 Front Door

Event: Door held open

Event Description: Front Door held open

Destination Type: Sounder

Destination: Chime

Operation: Sounder On

Time (m:ss): 0:00

Time Zone: Always

Enabled

Generate Alarm

Alarm Handler...

New OK Cancel

Date/T	Details
30/07/2	Barnes Larry
30/07/2	Barnes Larry
30/07/2	Barnes Larry
30/07/2014 12:05:57	Access Granted
30/07/2014 12:05:19	Access Granted
30/07/2014 12:04:40	Access Granted
30/07/2014 12:03:53	Access Granted

Connected Download count: 0 | 30/07/2014 12:47

- To create an AC Link, expand AC Networks, Network 1, Panel 1 and select AC Links
- Click the green + to create a new AC Link.
- Select;
  - Source Type – Door
  - Source – Door 1
  - Event – Door Held Open
  - Destination Type – Sounder
  - Destination – Chime
  - Operation – Sounder On
  - Time Zone – Always (by default)
  - OK to save and close