

Technical Bulletin

Syncro Fire Control Panel TB 1023 Configuring for Delayed Evacuation

The Syncro control panel has many different output switching options, made possible by the powerful cause and effect programming in the Loop Explorer configuration application. Currently, the cause and effect logic does not allow time to be selected as part of the cause and effect logic, which can result in some restrictions in operation. Such restrictions are normally overcome by use of a technique where panel inputs are used to monitor panel outputs, which in turn may be configured to be delayed.

A frequently requested configuration option that is not currently supported in cause and effect software is the following scenario;

1. A single smoke detector fire will cause only some sounders to switch either continuously or intermittently (zonal or 2 stage ringing).
2. After the panel has been in a fire condition for a period of time, the sounder sequence will switch to a full evacuation.
3. A single call point will cause an immediate total evacuation.

Items 1 and 3 in the example above can be configured by cause and effects and are currently supported by the panel configuration software.

To achieve the requirements of item 2, it is necessary to configure a panel relay as a delayed output, and use this relay to control a panel input. This input is then configured to provide an evacuation signal to all sounders.

An example of this hardware configuration is given in this bulletin. The panel outputs and inputs that have been selected require minimal changes, but this does not exclude other panel outputs or inputs from being used to provide the same functions.

Hardware Configuration

To provide a delayed evacuation, it is necessary to connect one of the panel output relays to one of the panel inputs, so that the input is operated when the output relay is switched. This example uses the Alarm contact, as this output will operate for any fire and is de-energised when the alarm signal is acknowledged, in other words it behaves as a sounder output.

The selected (Alarm contact) output shall be used to switch a panel input. This example uses the panel "CNT" input (also known as the Evacuate input), because by default, this input will switch on all sounders.

The Alarm relay Normally Open and Common contacts are wired to the remote control CNT and 0V inputs as shown in figure 1 on the next page.

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2 wires to be connected as shown



Fig 1 - Panel hardware connections

Software Configuration

Loop Explorer configuration software is used to configure the control panel to the site-specific requirements.

To provide a delayed evacuation facility, there is only one small modification required to the output properties for the Alarm relay, and this is to add a 1st Stage delay time.

This delay time is selected in the Alarm relay output properties screen, selected by highlighting the panel I/O Alarm contact in the navigator window, then clicking the Edit button on the toolbar. Select the 1st Stage Delay time to the time required between the panel detecting the fire and the sounders going to full evacuation. An example of this is shown in figure 2 on the next page, using a delay time of 3 minutes.

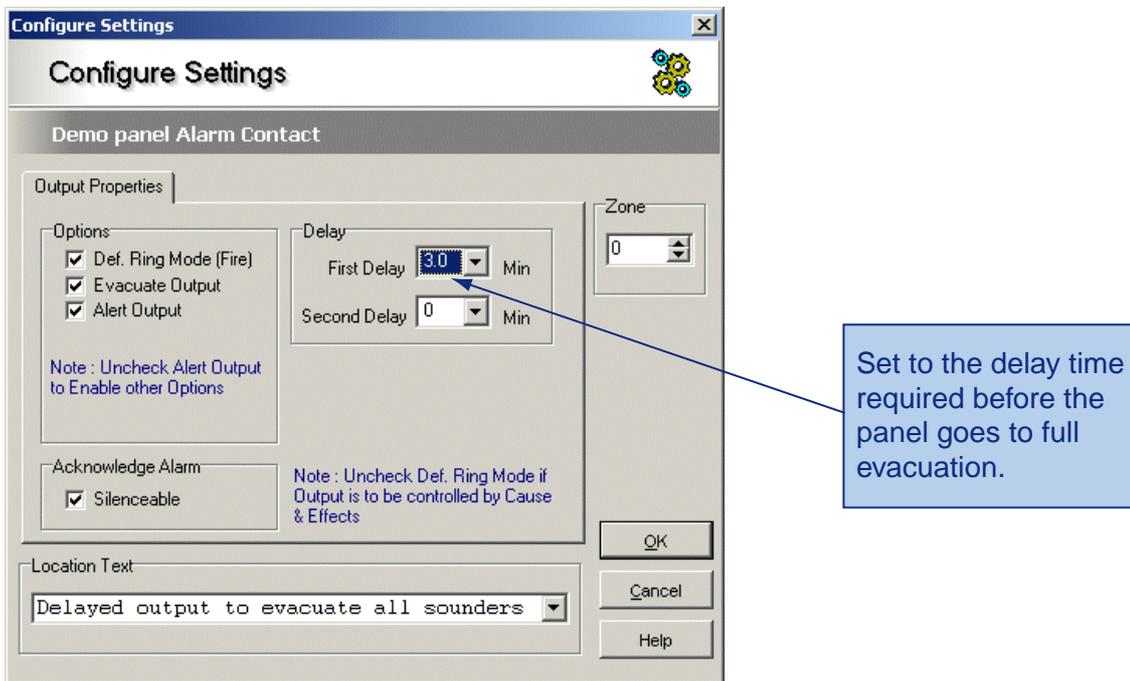


Fig 2 - Panel "Alarm Contact" configuration settings

Although the Alarm contact is used in this example, any relay output can be used, as long as it is configured to the settings shown above.

When the panel Alarm contact operates (after a delay) it will operate the selected input, which should be configured to the same settings as the Continuous Input (CNT) as shown in figure 3 below. When this input operates, all sounders will switch on, due to the default sounder output "Evacuate" output option.

Call Point Operation

Call points have the "Output Delay Bypass" input property selected as a default setting. Therefore any call point will cause the delayed Alarm Relay to operate immediately, which in turn will result in an immediate evacuation.

If the site requirement specifies that call points will not result in an immediate evacuation, then it will be necessary to deselect the "Output Delay Bypass" tick box for each call point on the system.

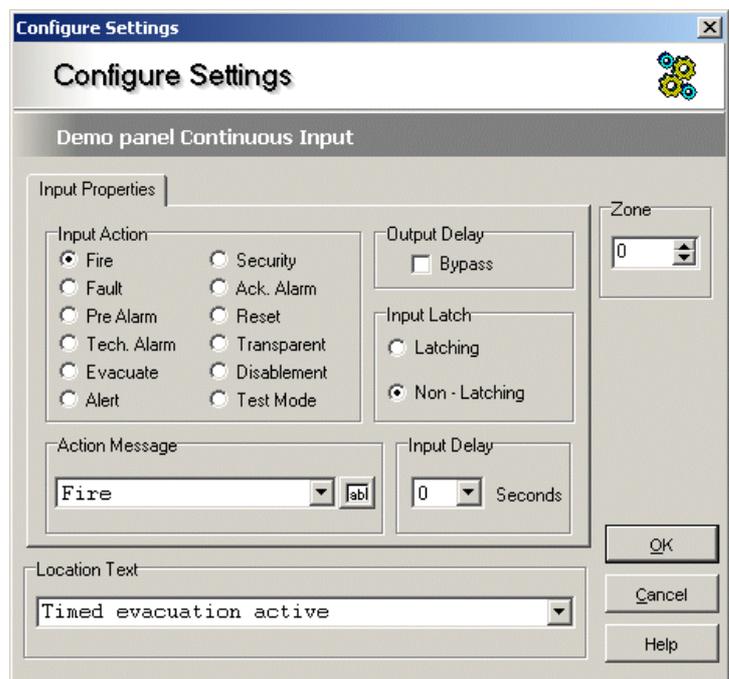


Fig 3 - Panel "Continuous" input configuration settings