NITTAN

Nittan Europe Ltd.
Hipley Street,
Old Woking,
Surrey, GU22 9LQ
United Kingdom

Tel: +44 (0) 1483 769 555
Fax: +44 (0) 1483 756 686
Email: sales@nittan.co.uk
Web: www.nittan.co.uk

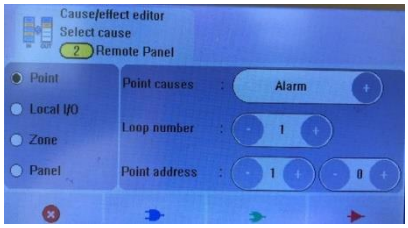
TGS-30 Evolution 1 Cause and effects hints and tips

The Evolution 1 control panel has comprehensive cause and effects (C&E) programming capabilities. The purpose of this technical guidance sheet is to provide some extra guidance and information to help with using the cause & effects to achieve more complex operation than described in the manual. The instruction manual section 8.1 describes the method to use the cause and effects on the control panel screen menu. It is recommended reading and also it is worth having those few pages of the manual handy when doing any programming as a reference. It is not the intention here to reproduce the manual pages in the entirety but rather to provide extra information.

1) Network Cause & Effects. Each panel in the network can be given a name which may help to identify it when choosing the menu selection. The name will only appear at the first selection then due to space limitations the panel is denoted by the 'Network Node number' be aware of the identity and node number of each panel.
   a) When starting a network C&E program the first request is to select the originating 'cause panel'. It is fundamental to start off by placing the C&E line in the originating panel i.e. where the activating signal is coming from.

Select the panel where the alarm originates.
It is possible to program all panels from one location across the network. Panels will be in the range 1-16. Panel address '0' relates to the local panel. A stand-alone panel will be set as address '0' if network 'disabled' is set in the network options.

b)



Then select the cause, which may be individual point, Local input circuits. Zone or zone range or then panel. In the case of a 'Point' the second selector next to address relates to the sub address.
A '0' value relates to the entire device and includes all inputs. '1' would be the first sub address '2' the second and so on up to 8 are possible but the menu does not check the type of device so be careful to use only valid inputs. Once you have set the required input port there are some logic symbols on buttons at the bottom of the screen, Left most is the 'AND' symbol selecting this will open up another selection for another device to add to the logic e.g. address 1 'AND' address 2 (double knock) must be in alarm to activate the output. The Middle button has the 'OR' symbol and in this way you can select the

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logic of either address 1 'OR' address 2 must be in alarm. The 3rd symbol on the right is for 'DIRECT' cause i.e. this single input in alarm will activate.

c)

The next step is to set the target for the effect to operate upon. The display shows the node number of the originating panel in a small yellow window and says whether this is the local panel or a remote panel. Next is a selection window for the panel number of the target. By default it is set as '0' .This is fine to choose if it is just a standalone panel system. Otherwise the panel number of the affected panel must be selected and this would include the local panel. If it is desired to operate a local output then '2' would be selected in this case. Then there are 3 radio buttons for the 'output retrigger' options. This selection has a certain impact on cause and effect functionality and should be considered carefully. The option defaults to 'never'.

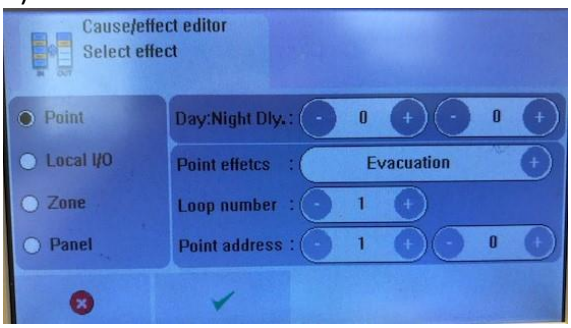
Never=this means that once the cause condition is activated the corresponding output is activated once. If a new alarm from another device or zone occurs the output of this line of C&E would not be regenerated. So if the sounder had been silenced it would not resound in the case of another alarm.

New Zone = an alarm in another zone other than the original alarm zone would resound the alarm.

Always = any new alarm will retrigger the sounders or outputs.

The retrigger should be considered if there is a need to stop outputs from an input and them to remain stopped, For example a Vent override switch. In this case use of **always** would re activate the vent output even though overridden.

d)



The Final screen is to select the output or effect required. This may be Point, local I/O, Zone or Panel. First select the radio button of the effect required.

Day Night Dly. At the top a delay time can be selected for this effect for either Day or night time. Note a maximum delay of 600 seconds (10 minutes can be applied). Hint: - tapping on the number in the middle will provide a direct entry screen for the quantity.

Point / Local I/O / Zone / Panel Effects: Then the effects option which relates to the status required of the output(s), note that evacuation means a continuous output, Warning may be an intermittent output. This operation may depend on the ability of the selected output type. In general Loop relays do not have a pulsing output.

Local I/O. The local I/O sounder circuits can be made to pulse by the use of warning effect. Note for local I/O 1 & 2 relates to the two monitored inputs and 3 & 4 relates to the mother board sounder circuits 1 & 2.

Zone. In the case of Zone a range of zones can be selected for the effect. These zones must be contiguous, if it is desired to split the zones then a new identical C&E line needs to be created for the alternative zone range. In general it is a good idea to use special zones to control groups of outputs, such that all sounders or vent modules, shut downs etc. can be controlled as a group. This provides the opportunity to disable these devices simultaneously.

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Panel. Panel level effects will apply to all outputs across the panel loop. Bear in mind that this will tend to override any individual level C&E applied. The panel is supplied with a panel level cause and effect as a default. So this should be deleted if zonal, local or point effects are required and alternative C&E lines written to handle all the sounders and outputs of the panel.
Points. In the point's effects selection a loop number selection is offered, this will always be loop 1 for the evolution 1 panels which only have 1 loop. The Individual address of the output device is selected, (Hint: - tapping on the number in the middle will provide a direct entry screen for the address). The selection box to the right of the address is to select the 'output port' of the device required. '0' will select all output ports. So for the effect all the relevant outputs will activate. Select an individual output from 1 to 8 depending on the device attributes. A table of devices and available outputs is summarised below.

Device	Input Ports	Output Ports
EV-P	0	n/a
EV-DP	0	n/a
EV-DPH-A2R / CS	0 (all) 1 (smoke) 2 (heat)	n/a
EV-PH	0 (all) 1 (smoke) 2 (heat)	n/a
EV-H-A1R / CS	0	n/a
EV—PYS	0	0
EV-MCP2 / SCI	0	n/a
EV-MiniIP	0	n/a
EV-ZMU	0 (all) 1 (ch1) 2 (ch2)	n/a
EV-SCM	n/a	0
EV-SIO	0	0
EV-MiniIP2	0	n/a
EV-2I1O	0 (all) 1 (ip1) 2 (ip2)	0
EV-IP	0	n/a
EV-OP	n/a	0
EV-ZMU2	0 (all) 1 (ch1) 2 (ch2)	0
EV-3IO	0 (all) 1 (ip1) 2 (ip2) 3(ip3)	0 (all) 1 (op1) 2 (op2) 3(op3)
EV-IO420	0 (all) 1 (ip1) 2 (4-20mA)	0
EV-SCM2	n/a	0 (all) 1 (ch1) 2 (ch2)

Once completed click on the 'tick' button to accept the C&E line, Clicking on the red circle with the white cross will delete the selections. You will be returned to the C&E lines screen and the new entry line will be displayed. Note the C&E line will not be operational until you exit the screen and save the changes. If you are unhappy with a line of C&E it can be highlighted (yellow) and deleted by touching the BIN symbol button.

Configuration Program.
The current version of configuration program is unable to store the Network cause and effects. It is unable to see the settings across the network. It is a recommendation that you should keep a written copy of the Network C&E for each panel so that in the event of a problem the C & E lines can be re-entered manually. A table is printed below which you can copy and use as a template.

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Site Name					Date				
Panel Name					Network Node No				
Causes					Effects				
Point	Local i/o	Zone	Panel	Cause	Point	Local i/o	Zone	Panel	Effect

If you need any further guidance please contact Nittan Technical Support:

Mark Durbridge
Technical Support Engineer
Email: tech@nittan.co.uk
Phone: 01483 541172 Mobile: 07511 047039

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