

## 1 Introduction

Panel Software version 4.52 introduces the following features:

- 1 Synchronized pulsing of sounders now available across a loop, panel or over single-fault-tolerant networked panels. Refer to Section 2 of this addendum.
- 2 Selecting the RS485 card for third-party protocol communications where an RS232 card is not fitted is now permitted. *Functions in Half-Duplex mode only and requires a compatible RS485 transceiver at the host end. Refer to Section 3 of this addendum.*
- 3 Enable/disable appended panel listing of third-party host messages resulting from actions such as RESET, SILENCE SOUNDERS, MUTE BUZZER, EVACUATE and SILENCE SOUNDERS, etc. at a Supervisor panel on a single-fault tolerant network employing event message filtering.
- 4 Panel can be configured to ignore third-party requests for time re-synchronization.

Sounder Synchronization is not available across Master/Slave networks.

This addendum describes the additional configuration options for enabling these new features.

### 1.1 Compatibility Issues

This feature will only be configurable when the following installation requirements are met:

- i Panel software at version 4.52, or later
- ii LIB\* software at version 13.02, or later
- iii Enhanced protocol-compatible loop sounders (if in doubt check with your supplier)

\* Includes the two loop circuits on the Base PCB.

### 1.2 Off-line Configuration Tool

As with earlier versions of panel software, the recommended method of configuring fire alarm control panels with these new features is by using the Windows™ Configuration Tool (WCT) v. 2.15, or later.

If the WCT is used to download panel configurations some local editing is still required at each panel as with previous versions of panel software. This procedure has not changed with the introduction of synchronized pulsing of sounders.

## 2 Sounder Synchronization

When implementing this feature for a new or existing installation, the following configuration measures will need to be taken:

- a. Upgrade of all panels' main CPU software to version 4.52, or later.
- b. Upgrade of Baseboard loop circuits and all LIB card CPU software to version 13.02, or later.
- c. Setting in each panel the 'Synchronize Sounders using Enhanced Protocol' global option or using the Windows™ Configuration Tool to enable this feature.
- d. Ensure that all sounders that are not able to support the enhanced protocol (using the option described later in this addendum or using the Windows™ Configuration Tool) are excluded. Failure to do this will result in faults.
- e. Select the pulsing rate if the default of 1 sec ON/1 sec OFF is not required. Identify and select the sounders to use the alternative rate (as described later in this addendum) or using the Windows™ Configuration Tool.
- f. Configure the required control matrix rules with the pulsing sounders option.

Only modules of type SOUNDER (software code BELL) will participate in synchronized pulsing commands. Sensors cannot be selected to participate in a synchronized operation.

Only sounders, sounder bases or sounder/strobes compatible with the enhanced loop protocol will allow implementation of this feature. Where there is a mix of compatible and non-compatible sounder devices (still must be type BELL) on an installation, the non-compatible devices **MUST** be explicitly excluded from Synchronized Pulsing, even if their outputs are not set to PULSE.

Any device configured as output STEADY or device type CTRL will not participate in synchronized operations and will function in exactly the same way as with earlier versions of panel software.

### 2.1 Option Enablement

A menu is provided to configure the synchronization of pulsing sounders and is accessed via the Configuration menu (access level 3A passcode is required). This option is a global enablement, i.e. once selected all panel loops will be affected by this change.

```
Panel Settings
-----
Synchronize Sounders on Loops using
Enhanced Protocol:
1:NO
2:YES
```

**Note:** This option can also be accessed via the **Panel Settings/Loop Options** configuration menu.

```
Device Configuration - Loop n Module nn
Type BELL Zone nnnn/nn Cell nnn
Zone <(no zone text defined) >
Loc. <Device text description >
Priority=NO SILENCEABLE NORMAL PULSE
◆=select *=edit ◆=next device ✓=finish
```

```
Device Configuration - Loop n Module nn
Set Output Module Option:
1:NORMAL PULSE
2:SLOW PULSE
▼ 3:NORMAL PULSE (Unsync.)
```

```
Set Output Module Option:
▲ 2:SLOW PULSE
3:NORMAL PULSE (Unsync.)
4:SLOW PULSE (Unsync.)
```

```
Device Configuration - Loop n Module nn
Type BELL Zone nnnn/nn Cell nnn
Zone <(no zone text defined) >
Loc. <Device text description >
Priority=NO SILENCEABLE NORM. PULSE(U)
◆=select *=edit ◆=next device ✓=finish
```

```
Type BELL Zone nnnn/nn Cell nnn
Zone <(no zone text defined) >
Loc. <Device text description >
Priority=NO SILENCEABLE SLOW PULSE(U)
◆=select *=edit ◆=next device ✓=finish
```

**Note:** If this feature is not enabled the panel will revert to the existing strategy using CLIP polls and none of the actions described in this document will be implemented.

- 1 From the **Configuration** menu, under **Panel Settings** select **Pulsing Sounder Modes**.

**Note:** To avoid compatibility issues the default selection is NO. To enable sounder synchronization select YES. If this is applied at a site with 'earlier' type sounders, i.e. they are not capable of supporting the enhanced protocol, they **must** be excluded to avoid fault messages.

- 2 To do this use the panel controls to navigate to the following panel configuration menu: **Configuration/ Loop Device Configuration/ Configure Individual Device**.

- 3 With only type BELL devices selected move the cursor to the PULSING options field (highlighted in example at left) and press the STAR pushbutton to display further options as follows:

- NORMAL PULSE
- SLOW PULSE
- NORMAL PULSE (Unsync.)
- SLOW PULSE (Unsync.)

- 4 Select the desired option. The new selection replaces the previous mode when the **Configure Individual Device** screen is re-displayed. Selecting either of the 'Unsynchronized' options results in the display typically as in the examples shown to the left.

## 2.2 Control Matrix Issues

If any panel configuration has a Control Matrix rule calling for PULSING, it is **essential** that all non-compatible sounder devices, i.e. those that do not recognize the enhanced protocol, must be configured with one of the Unsynchronized settings. This action must be taken even if these sounders are never to be included in the PULSING rules.

## 2.3 Networking Issues

When invoked on a single-fault tolerant network the pulsing synchronization feature is applied across the entire network regardless of sector divisions.

Sounder synchronization is not supported on RS485-based Master/Slave network systems.

## 3 RS485 Third-Party Protocol

When configured, this feature allows transmission of the third-party protocol through a plug-in RS485 card, as opposed to the standard operation through an RS232 card. This is a point-to-point implementation only.

The number of third-party protocol channels on any one panel is still limited to two. If two channels are in use, one of them **MUST** be via the built-in, non-isolated (diagnostic) RS232 port D-type connector (located on the lower edge of the Base PCB). The function of this RS232 port is always **FULL DUPLEX**. The other channel may be either RS232 or RS485. However, it is not possible for both cards to be used for third-party protocol comms on the same panel.

Only **HALF DUPLEX** is supported in RS485 third-party protocol mode.

When configuring the third-party protocol from the panel menus if no RS232 card is fitted, but an RS485 card is available, the warning at left displayed:

```
Panel Settings
-----
ISOLATED RS232 Port setup
WARNING: RS232 CARD NOT FITTED
But data may be routed through RS485
Card.
```

Installation may proceed, therefore, without a 'missing card' fault message being given. If the link through the RS485 card is monitored any failure of data flow will generate the usual Terminal Link fault message. The RS485 card may be fitted in either slot.

## Notes Concerning RS485 Third-Party Protocol Configuration

To successfully configure third-party protocol operations through an RS485 card make sure the following requirements are adhered to:

- i. A maximum of two RS485 cards may be fitted - DO NOT fit an RS232 card when an RS485 card is used for the second third-party protocol comms channel.
- ii. If two RS485 cards are fitted connect the third-party host to the left-hand card.
- iii. Ensure that a suitable interface and driver is provided at the host end.
- iv. Only one host system may be connected to a panel - the protocol is 'point-to-point' and not 'multi-drop'.
- v. The mode must be set to HALF DUPLEX. The default data rate is set to 9600 baud.
- vi. With only one RS485 card fitted configured either for RS485 repeater or Master/Slave network any attempt to configure the RS485 for third-party protocol comms will generate a fault. If two RS485 cards are fitted the panel software automatically selects the appropriate comms position (A or B) for each application: COMMS A for third-party protocol and COMMS B for Repeater or Master/ Slave network. Ensure that each application, where used, is correctly wired.
- vii. The presence or absence of a secondary third-party protocol channel through the non-isolated port on the Base PCB will not be an issue.

### 3 Third-party Protocol Changes

#### 3.1 Panel Listing

A supervisor panel on a network configured for network event message filtering, when communicating with a third-party host, provides a list of those panels included in the selection of the following 'panel to host' actions: RESET, SILENCE SOUNDERS, MUTE BUZZER, EVACUATE, RE-SOUND SOUNDERS, OVERRIDE INVESTIGATION DELAY, EXTEND INVESTIGATION DELAY, SOUNDER DELAYS OFF (IMMEDIATE mode), SOUNDER DELAYS ON (DELAYED mode), DAY MODE, NIGHT MODE, ÜE TEST (VdS only). This action may be disabled.

The option, accessed through the Isolated RS232 Port menu, is displayed only if the panel is a Supervisor on a single-fault tolerant network employing event message filtering (also referred to as 'sectoring').

Select the Isolated RS232 Port menu and step through the options until the screen at left is displayed.

The default is YES. Select NO when the third-party host cannot support this feature.

```
Panel Settings
-----
Sectored network: include PANEL LIST
Bitmap in RESET, etc., Messages?
1:NO
2:YES
```

#### 3.1 Time Re-synchronization Request

The control panel can receive time-re-synchronization requests from the third-party host. This option allows the panel to be configured to accept or ignore these requests.

If the panel (or the entire system if a network) has **never** had the time and date set, either manually or via a message from the third-party host, since it was powered-on, it will still accept the **first** instance of a time-synchronization request from the host, even if the option is set to NO. It will not accept subsequent such messages

Select the Isolated RS232 Port menu and step through the options until the screen at left is displayed. Select YES to allow panel responses to time re-synchronization requests from the third-party host or NO to ignore these requests.

The default is YES.

```
Panel Settings
-----
Allow time re-synchronisation from
Third Party host?
1:NO
2:YES
```