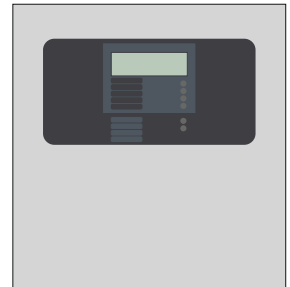




## The Advanced Driver

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The Advanced driver connects to the Advanced Electronics MxPro range of fire detection panels. Available for Commander and ObSys.

This document relates to Advanced/Advanced4000 driver version 1.4 to 1.6

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from [www.northbt.com](http://www.northbt.com)

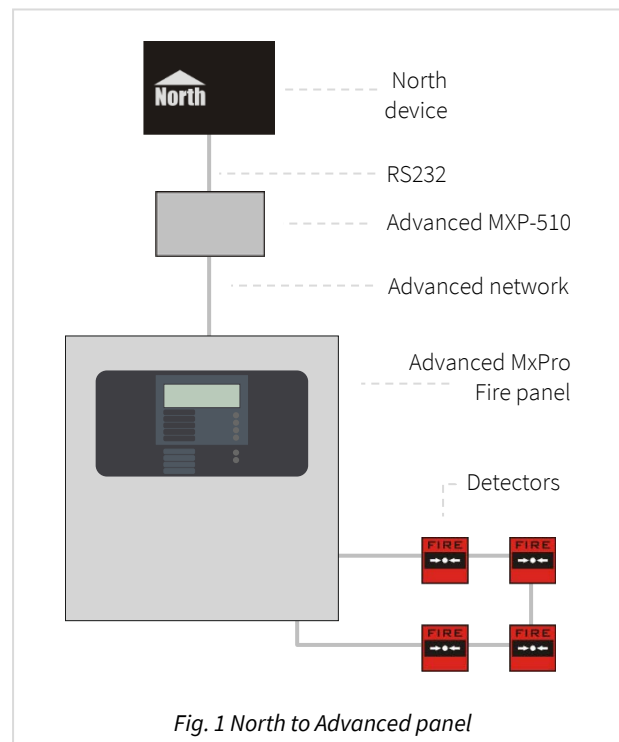
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# Compatibility with the Advanced System

The Advanced driver allows North to interface with an Advanced Electronics MxPro fire detection system.

The driver connects to an Advanced MXP-510 or MXP-010 BMS/Graphics interface (Fig. 1), and can communicate with up to 200 MxPro fire alarm control panels.



## Equipment

Advanced Electronics fire alarm control panels compatible with the driver include:

- MxPro 5 series
- MxPro 4 series
- MX5000 series
- MX4000 series

Apollo, Hochiki, Argus Vega and Nittan Evolution devices are supported.

## Values

The driver can typically access the following values:

- |                  |                     |                |
|------------------|---------------------|----------------|
| • Reset panel    | • Panel state       | • Zone state   |
| • Sounders       | • Loop state        | • Damper state |
| • External alarm | • Loop device state |                |
| • System state   | • Sub-address state |                |

States for fire, pre-alarm, fault, test, and isolation conditions are available.

Fire alarm control panels can send alarms to the Advanced driver.

## Prerequisites

An Advanced BMS/Graphics interface node is required. For MxPro 5 networks use an MXP-510, and MxPro 4 networks use an MXP-010.

Each Advanced node, including the BMS interface, must be configured with its own address and the address of the next node on the network. This can be configured from a panel or using the Advanced configuration software.

From version 1.5, this driver was renamed to 'Advanced' from 'Advanced4000'.

# Driver Operation

## Events from the panel

The driver connects to an Advanced Electronics BMS/Graphics interface, and listens for change-of-state events. These events are processed by the driver to maintain a database of active alarm states in the Advanced system.

On starting the interface, the driver synchronises its database with the Advanced system by requesting the current active alarms and labels for each device. You can also force a re-synchronisation at any time by using the Resync Interface object (RST).

The driver monitors communication with the connected node. If communications are lost, then the fault is reported. Once regained, the driver re-synchronises its database with the system and operation resumes.

## Alarms

When an event is received from an Advanced node, the driver sends this as a North-format alarm to the device's alarm processing.

## Reading from the Advanced System

On reading an object from the Advanced System, the driver typically responds with the state from its database. Exceptions to this are objects for the zone label, and analogue value – reading these will send a request to the connected panel.

## Commands to the Advanced System

Commands can be sent to the Advanced System. These can be to: silence or reset active events on the system; isolate a zone, loop device, or sub-device; or control the state of an output device.

## Load Labels from the panel

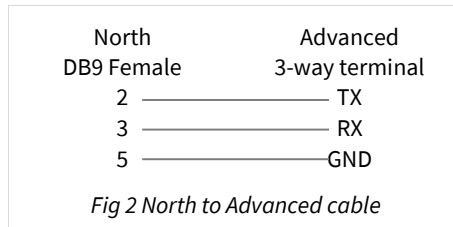
The driver can optionally be set to 'Load Labels from Panel'. When enabled, the driver on initialisation will request and store all device and sub-device labels (depending on the storage available). This device information is then made available as objects, and is useful when navigating the Advanced System objects to see labels for each device reference.

# Using the Driver

On ObSys and Commander, the Advanced driver is pre-installed. On all of these North devices, you can use the driver to create an interface to Advanced. Once started, you will need to set up the driver before it can communicate with the Advanced system.

## Making the Cable

Using the RS232 cable specification (Fig. 2), connect the North device COM port to the Advanced BMS/Graphics interface port. Connector types at each end of the cable are shown.



The maximum RS232 cable length is 15m.

Cables are available from North, order code CABLE/ADVANCED.

## Starting the Interface

- 🖥 To start an interface using the Advanced driver, follow these steps:
  - **Start Engineering** your North device using ObSys
  - Navigate to **Configuration, Interfaces**, and set an unused **Interface** to 'Advanced' to start the particular interface
  - Navigate to the top-level of your North device and re-scan it

The driver setup object (Mc), labelled **Advanced Setup**, should now be available. If this object is not available, check an interface licence is available and the driver is installed.

## Setting up the Driver

- 🖥 To set up the driver, follow these steps:
  - Navigate to the **Advanced Setup** object (Mc). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'
  - Set **RS232 COM Port** (RS.COM) to select the serial port number on the North device the Advanced panel is connected to.
  - Set the **Baud Rate** (RS.BR) to match that of the Advanced network interface. This is 38400 (default), or 19200 baud.
  - Set the **Connected node address** (ADDR) to match the address of the Advanced BMS interface.

## Checking Communications

You can check that the interface is communicating by reading the **Comms Online** object (DS). A value of 'Yes' indicates the driver has connected to, and is communicating with the Advanced system.

If a 'network node missing' fault is present, then the driver will be unable to scan for available panels on the network. Check that each panel, including the network interface panel, has been configured with the address of the next network node in the loop.

# Alarms

When the Advanced system reports an event to the driver, the driver sends a North-format alarm to the device's alarm processing.

## Format

North-format alarms contain six text fields. The Advanced driver places the following information into these fields:

**System** – copied from System Label object (DL) within driver setup

**Point** – see Point Field section below

**Condition** – see Condition and Priority Field section below

**Priority** – see Condition and Priority Field section below

**Date & Time** – from North device

## Examples

| System          | Point                             | Condition      | Priority | Date     | Time     |
|-----------------|-----------------------------------|----------------|----------|----------|----------|
| Advanced System | Panel 1 Loop 1 Dev 3.0 Zone 2 MCP | Fire           | 1        | 01/03/13 | 14:29:48 |
| Advanced System | Panel 1 Loop 1 Dev 3.0 Zone 2 MCP | Fire Cleared   | 1        | 01/03/13 | 14:35:12 |
| Advanced System | Panel 1 Loop 2 Dev 16.0 Zone 1    | Disabled       | 2        | 11/03/13 | 14:26:26 |
| Advanced System | Panel 1 Loop 2 Dev 16.0 Zone 1    | Enabled        | 2        | 11/03/13 | 14:32:02 |
| Advanced System | Panel 2 Loop 3 Dev 1.1 Zone 16    | Pre-Alarm      | 1        | 10/04/13 | 13:06:59 |
| Advanced System | Panel 2 Loop 3 Dev 1.1 Zone 16    | Alarm Cleared  | 1        | 10/04/13 | 14:17:35 |
| Advanced System | Panel 2 Loop 1 Dev 10.0 Zone 3    | Device Missing | 3        | 10/04/13 | 14:21:00 |
| Advanced System | Panel 2 Loop 1 Dev 10.0 Zone 3    | Fault Cleared  | 3        | 10/04/13 | 14:30:43 |
| Advanced System | Panel 2 Dev 12.3 Zone 20          | Fault          | 3        | 12/04/13 | 09:17:04 |
| Advanced System | Panel 1                           | Supply Fault   | 3        | 16/04/13 | 07:16:19 |
| Advanced System | Panel 1                           | Fault Cleared  | 3        | 18/04/13 | 10:23:42 |

## Point Field

Selected by the **Alarm Point field** object (AT) within driver setup.

If 'PLD reference' option is selected, Point field can be:

Panel *a*

Panel *a* Dev *c.c* Zone *d*

Panel *a* Loop *b*

Panel *a* Loop *b* Dev *c.c* Zone *d*

In addition, if the detector is a manual call point, then 'MCP' will be appended to the point field.

If 'Detector label' option is selected, Point Field contains:

Panel *a* + *device location* from the panel

'Communications' alarms generated by the driver all contain the Point field:

System

## Condition and Priority Field

The following alarm conditions can be sent by the driver:

| Condition               | Priority |
|-------------------------|----------|
| Evacuate                | 1        |
| Fire                    | 1        |
| Fire Cleared            | 1        |
| Reset                   | 1        |
| Alarm 1                 | 2        |
| Alarm 2                 | 2        |
| Alarm 3                 | 2        |
| Disabled                | 2        |
| Enabled                 | 2        |
| Group Disabled          | 2        |
| Group Enabled           | 2        |
| Outputs Disabled        | 2        |
| Outputs Enabled         | 2        |
| Pre-Alarm               | 2        |
| Alarm Cleared           | 2        |
| Record                  | 2        |
| Security Alert          | 2        |
| Supervisory             | 2        |
| Buzzer Silenced         | 3        |
| Alarms Silenced         | 3        |
| Alarms Re-sounding      | 3        |
| Fault                   | 3        |
| Fault Cleared           | 3        |
| Battery Fault           | 3        |
| Battery Low: Backup     | 3        |
| Battery Low: Main       | 3        |
| Cleared                 | 3        |
| Communications Lost     | 3        |
| Communications Regained | 3        |
| Control                 | 3        |
| Corrupt Data            | 3        |
| Device Added            | 3        |
| Device Dirty            | 3        |
| Device Missing          | 3        |
| Device Replaced         | 3        |
| Device Tamper           | 3        |
| Duplicate Address       | 3        |
| Duplicate Zone          | 3        |

| Condition              | Priority |
|------------------------|----------|
| Earth Fault            | 3        |
| Fail to Close          | 3        |
| Fail to Open           | 3        |
| High Resistance Fault  | 3        |
| Input Fault            | 3        |
| Loop Closed Circuit    | 3        |
| Loop Open Circuit      | 3        |
| Mode Failed            | 3        |
| Network Fault          | 3        |
| Network Lost           | 3        |
| Network Node Missing   | 3        |
| Not Commissioned       | 3        |
| Overload               | 3        |
| Service Required       | 3        |
| Signal Strength Fault  | 3        |
| Sounder Fault          | 3        |
| Sounder Missing        | 3        |
| Supply Fault           | 3        |
| System Fault           | 3        |
| System Fault: Clock    | 3        |
| System Fault: Display  | 3        |
| System Fault: Memory   | 3        |
| System Fault: Software | 3        |
| Too High               | 3        |
| Too Low                | 3        |
| Unable to Calibrate    | 3        |
| Wrong Device Type      | 3        |
| CPU Reset              | 4        |
| Delay Mode Off         | 4        |
| Delay Mode On          | 4        |
| Device Slightly Dirty  | 4        |
| FSD Door Open          | 4        |
| Isolator Open          | 4        |
| Keylock Operated       | 4        |
| Out of Paper           | 4        |
| Test                   | 4        |
| Test Cleared           | 4        |

## Notes

The priority field is typically used as follows:

- 1 – fire and evacuate events
- 2 – pre-alarm, security, isolation, and technical events
- 3 – fault events
- 4 – status and test events

# Object Specifications

Once an interface is started, one or more extra objects become available within the top-level object of the device. As with all North objects, each of these extra objects may contain sub-objects, (and each of these may contain sub-objects, and so on) - the whole object structure being a multi-layer hierarchy. It is possible to navigate around the objects using the ObSys Engineering Software.

Each object is specified below, along with its sub-objects.

## Example Object Reference

An example of a reference to an object in the same device: the Advanced System (S1) contains Panel 1 (P1), which contains Loop 2 (L2), which has Device 22 (D22), which contains an alarm state (C). Therefore, the complete object reference will be 'S1.P1.L2.D22.C'.

An example of a reference to an object in a different device: the IP network object (IP) contains Default Commander object (CDIP), which contains the object above (S1.P1.L2.D22.C) – therefore the complete object reference is 'IP.CDIP.S1.P1.L2.D22.C'.

## Device Top-Level Objects

When an interface is started using the Advanced driver, the objects below become available within the top-level object of the device. For example, if Interface 1 is started, then the object with references 'M1' and 'S1' become available.

| Description                                                                                                            | Reference | Type                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advanced Setup</b><br>Set up the Advanced driver, started on interface <i>c</i> ( <i>c</i> is the interface number) | Mc        | Fixed Container:<br>On the Commander platform this will be<br><i>[CDM v20\Advanced v16]</i><br>On the ObSys platforms this will be<br><i>[OSM v20\Advanced v16]</i> |
| <b>Advanced System</b><br>Access Advanced system connected to interface <i>c</i> ( <i>c</i> is the interface number)   | Sc        | Variable Container:<br><i>[Advanced v16]</i>                                                                                                                        |

# Advanced Driver Setup

Object Type: *[OSM v20\Advanced v16]*

Object Type: *[CDM v20\Advanced v16]*

Object Type: *[OSM v20\Advanced v15]*

Object Type: *[CDM v20\Advanced v15]*

Object Type: *[OSM v20\Advanced4000 v14]*

Object Type: *[CDM v20\Advanced4000 v14]*

The Advanced driver contains the following objects:

| Description                                                                                                                                                                                                | Reference | Type                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System Label</b><br>Label displayed when scanning the system and within alarms                                                                                                                          | DL        | Obj\Text: 20 Chars; Adjustable                                                                                                                                                                |
| <b>RS232 COM Port</b>                                                                                                                                                                                      | RS.COM    | Obj\Num: 1...8; Adjustable                                                                                                                                                                    |
| <b>Baud Rate</b>                                                                                                                                                                                           | RS.BR     | Obj\Num; Adjustable<br>Values: 19200, 38400                                                                                                                                                   |
| <b>Connected Node Address</b><br>Address of the connected BMS/Graphics interface                                                                                                                           | ADDR      | Obj\Num: 1...200; Adjustable                                                                                                                                                                  |
| <b>Comms Online</b><br>Indicates whether communication is established with the system                                                                                                                      | DS        | Obj\NoYes                                                                                                                                                                                     |
| <b>Alarm Point Field</b><br>Selects source of the alarm message point field                                                                                                                                | AT        | Obj\Enum: 0...1; Adjustable<br>Values: 0=PLD reference, 1=Detector label                                                                                                                      |
| <b>Alarm Condition Field</b><br>Sets alarm message condition compatibility to a previous driver version                                                                                                    | LAC       | Obj\Enum; Adjustable<br>Values: 0=Latest, 1=v13, 2=v14/v15                                                                                                                                    |
| <b>Load labels from panel</b><br>Driver requests and stores device/sub-device labels configured in system and makes them available as objects. This setting does not affect the Alarm Point field content. | LL        | Obj\NoYes; Adjustable                                                                                                                                                                         |
| <b>Label storage available</b><br>Device labels from the system are stored by the driver. Limited storage is available.                                                                                    | LC        | Obj\Num: 0...3746                                                                                                                                                                             |
| <b>Event storage available</b><br>Each event from the system must be remembered by the driver. <b>If no storage is available for a new event, the driver will not be able to remember it.</b>              | SC        | Obj\Num: 0...1500                                                                                                                                                                             |
| <b>Reset Driver</b><br>Clears the internal database and re-establishes communication with the Advanced system                                                                                              | RST       | Obj\NoYes; Adjustable                                                                                                                                                                         |
| <b>Filter Events</b><br>Ignore listening for particular event types or panel addresses. This can provide more event storage for other event types.                                                         | FE        | Fixed Container:<br>On the Commander platform this will be <a href="#">[CDM v20\Advanced v16\Filter]</a><br>On the ObSys platforms this will be <a href="#">[OSM v20\Advanced v16\Filter]</a> |

# Advanced Driver Filter Events

Object Type: [OSM v20\Advanced v16\Filter]

Object Type: [CDM v20\Advanced v16\Filter]

Object Type: [OSM v20\Advanced v15\Filter]

Object Type: [CDM v20\Advanced v15\Filter]

Object Type: [OSM v20\Advanced4000 v14\Filter]

Object Type: [CDM v20\Advanced4000 v14\Filter]

Each event from the Advanced system must be remembered by the driver. On a large Advanced fire system with a significant number of active events at any one time, use this object to select which event types are ignored by the driver – isolation, fault, damper events, etc.

If more event storage is required, use multiple interface connections to the system, with each Advanced driver configured to store events for a particular range of panels.

| Description                                                                                                                            | Reference | Type                         |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------|
| <b>Ignore Isolation events</b><br>Enable to ignore isolation events from the system                                                    | I.C1      | Obj\NoYes; Adjustable        |
| <b>Ignore Fault events</b><br>Enable to ignore fault events from the system                                                            | I.C2      | Obj\NoYes; Adjustable        |
| <b>Ignore Pre-Alarm events</b><br>Enable to ignore pre-alarm events from the system                                                    | I.C3      | Obj\NoYes; Adjustable        |
| <b>Ignore Fire events</b><br>Enable to ignore fire events from the system. This provides more event storage for other event conditions | I.C4      | Obj\NoYes; Adjustable        |
| <b>Ignore Damper events</b><br>Enable to ignore damper events from the system                                                          | I.C5      | Obj\NoYes; Adjustable        |
| <b>Ignore Test events</b><br>Enable to ignore fire test events from the system. Available from driver v1.6                             | I.C6      | Obj\NoYes; Adjustable        |
| <b>Store events from panel (start)</b><br>Lowest address of network interface panel to store events from                               | PS        | Obj\Num: 0...200; Adjustable |
| <b>Store events from panel (end)</b><br>Highest address of network interface panel to store events from                                | PE        | Obj\Num: 0...200; Adjustable |

# Advanced System

Object Type: *[Advanced v16]*

Object Type: *[Advanced v15]*

Object Type: *[Advanced4000 v14]*

The Advanced system is a network of Advanced fire detection panels. It contains objects to view the status of the whole system (P), and access information from each connected panel (Px).

| Description                                                       | Reference | Type                                                                                                                       |
|-------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Zone &amp; System Summary</b>                                  | P         | Fixed container:<br><i>[Advanced v16\System]</i>                                                                           |
| <b>Panel x</b><br>Panel number, x, can be in the range<br>1...200 | Px        | Fixed container:<br><i>[Advanced v16\Panel]</i><br>Note: an eight loop panel is presented as two panels<br>with four loops |

## Zone and Summary Information

Object Type: *[Advanced v16\System]*

Object Type: *[Advanced v15\System]*

The Zone and System Summary object contains zone, group, and network-wide status for the Advanced system. Objects are also available to perform network-wide commands – reset, silence, etc. – and activate external fire or alarm conditions.

| Description                                                                                                                                                                                                                              | Reference | Type                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------|
| <b>Commands</b><br>Contains objects for resetting latched events, silencing sounders and muting buzzer for all panels on network                                                                                                         | A         | Fixed container:<br><i>[Advanced v16\Actions]</i>                            |
| <b>System Alarm State</b>                                                                                                                                                                                                                | C         | Obj\Enum: 0...4;<br>Where: 0=OK, 1=Disablement, 2=Fault, 3=Pre-Alarm, 4=Fire |
| <b>System OK</b>                                                                                                                                                                                                                         | C0        | Obj\NoYes                                                                    |
| <b>Disablement</b>                                                                                                                                                                                                                       | C1        | Obj\NoYes                                                                    |
| <b>Fault</b>                                                                                                                                                                                                                             | C2        | Obj\NoYes                                                                    |
| <b>Pre-Alarm</b>                                                                                                                                                                                                                         | C3        | Obj\NoYes                                                                    |
| <b>Fire</b><br>Optionally append the object reference with ‘.A’ for automatic (sensor) fire events; or ‘.M’ for manual (MCP) fire events                                                                                                 | C4        | Obj\NoYes                                                                    |
| <b>Confirmed Alarm</b><br>Indicates if two or more fire alarms are active within the system (double knock).<br>Optionally append the object reference with ‘.A’ for automatic (sensor) fire events; or ‘.M’ for manual (MCP) fire events | DK        | Obj\NoYes                                                                    |
| <b>Disablement Count</b>                                                                                                                                                                                                                 | N1        | Obj\Num                                                                      |
| <b>Fault Count</b>                                                                                                                                                                                                                       | N2        | Obj\Num                                                                      |
| <b>Pre-Alarm Count</b>                                                                                                                                                                                                                   | N3        | Obj\Num                                                                      |
| <b>Fire Count</b><br>Optionally append the object reference with ‘.A’ for automatic (sensor) fire events; or ‘.M’ for manual (MCP) fire events                                                                                           | N4        | Obj\Num                                                                      |
| <b>Output Groups</b><br>Contains objects to disable output groups                                                                                                                                                                        | O         | Fixed container:<br><i>[Advanced v16\OutGroups]</i>                          |
| <b>Zone x</b><br>The zone number, x, is in the range:<br>1...1000 for MxPro 4 panels<br>1...2000 for MxPro 5 panels.                                                                                                                     | Zx        | Fixed container:<br><i>[Advanced v16\Zone]</i>                               |

# Advanced Panel

Object Type: *[Advanced v16\Panel]*

Object Type: *[Advanced v15\Panel]*

An Advanced panel contains the following objects:

| Description                                                                                                                                                                                                                                                            | Reference | Type                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------|
| <b>Panel Alarm State</b>                                                                                                                                                                                                                                               | C         | Obj\Enum: 0...4;<br>Where: 0=OK, 1=Disablement, 2=Fault, 3=Pre-Alarm, 4=Fire |
| <b>Panel OK</b>                                                                                                                                                                                                                                                        | C0        | Obj\NoYes                                                                    |
| <b>Disablement</b>                                                                                                                                                                                                                                                     | C1        | Obj\NoYes                                                                    |
| <b>Fault</b>                                                                                                                                                                                                                                                           | C2        | Obj\NoYes                                                                    |
| <b>Pre-Alarm</b>                                                                                                                                                                                                                                                       | C3        | Obj\NoYes                                                                    |
| <b>Fire</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events                                                                                                                               | C4        | Obj\NoYes                                                                    |
| <b>Disablement Count</b>                                                                                                                                                                                                                                               | N1        | Obj\Num                                                                      |
| <b>Fault Count</b>                                                                                                                                                                                                                                                     | N2        | Obj\Num                                                                      |
| <b>Pre-Alarm Count</b>                                                                                                                                                                                                                                                 | N3        | Obj\Num                                                                      |
| <b>Fire Count</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events                                                                                                                         | N4        | Obj\Num                                                                      |
| <b>On-Board Devices</b><br>Panel I/O                                                                                                                                                                                                                                   | L0        | Fixed container:<br><i>[Advanced v16\OnBoard]</i>                            |
| <b>Loop x</b><br>The loop number, x, is typically in the range 0...4. If a loop offset is configured in the panel then x is in the range offset...(offset+4).<br>An 8-loop panel consists of two 4-loop panels, with the second panels loop number in the range 5...8. | Lx        | Fixed container:<br><i>[Advanced v16\Loop]</i>                               |

## Zone

Object Type: [Advanced v16\Zone]

Object Type: [Advanced v15\Zone]

An Advanced zone contains the following objects:

| Description                                                                                                                                                                                                                              | Reference | Type                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------------------------|
| <b>Label</b>                                                                                                                                                                                                                             | L         | Obj\Text: 32 chars                                                                                              |
| <b>Zone Alarm State</b>                                                                                                                                                                                                                  | C         | Obj\Enum: 0...4;<br>Where: 0=OK, 1=Disablement, 2=Fault, 3=Pre-Alarm, 4=Fire<br>Adjustable: 0=Enable, 1=Disable |
| <b>Zone OK</b>                                                                                                                                                                                                                           | C0        | Obj\NoYes                                                                                                       |
| <b>Zone Disablement</b><br>Indicates whether devices in this zone are disabled. Can be written to in order to disable or enable a zone                                                                                                   | C1        | Obj\NoYes; Adjustable                                                                                           |
| <b>Zone Device Fault</b>                                                                                                                                                                                                                 | C2        | Obj\NoYes                                                                                                       |
| <b>Zone Device Pre-Alarm</b>                                                                                                                                                                                                             | C3        | Obj\NoYes                                                                                                       |
| <b>Zone Device Fire</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events                                                                                     | C4        | Obj\NoYes                                                                                                       |
| <b>Zone Confirmed Alarm</b><br>Indicates if two or more fire alarms are active within the zone (double knock). Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events | DK        | Obj\NoYes                                                                                                       |
| <b>Zone Device Disablement Count</b>                                                                                                                                                                                                     | N1        | Obj\Num                                                                                                         |
| <b>Zone Device Fault Count</b>                                                                                                                                                                                                           | N2        | Obj\Num                                                                                                         |
| <b>Zone Device Pre-Alarm Count</b>                                                                                                                                                                                                       | N3        | Obj\Num                                                                                                         |
| <b>Zone Device Fire Count</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events                                                                               | N4        | Obj\Num                                                                                                         |

## Output Groups

Object Type: [Advanced v16\OutGroups]

A group of Advanced outputs contains the following objects:

| Description                                                                          | Reference | Type                       |
|--------------------------------------------------------------------------------------|-----------|----------------------------|
| <b>Disable Output Group y</b><br>The output group number, y, is in the range 1...200 | Gy        | Obj\NoYes; Adjustable-only |

# Commands

Object Type: *[Advanced v16\Actions]*

The Advanced panel commands object contains the following objects:

| Description                                                             | Reference | Type                       |
|-------------------------------------------------------------------------|-----------|----------------------------|
| <b>Reset</b><br>Performs a reset on the panel                           | R         | Obj\NoYes; Adjustable only |
| <b>Sounders</b><br>Silences or re-sounds sounders                       | S         | Obj\OffOn; Adjustable only |
| <b>Buzzer</b><br>Silence the panel buzzer                               | B         | Obj\OffOn; Adjustable only |
| <b>External Fire</b><br>Triggers a fire evacuate condition on the panel | E         | Obj\OffOn; Adjustable only |
| <b>External Alert</b><br>Triggers an alarm condition on the panel       | A         | Obj\OffOn; Adjustable only |

# Loop

Object Type: *[Advanced v16\Loop]*

Object Type: *[Advanced v15\Loop]*

Object Type: *[Advanced4000 v14\Loop]*

An Advanced panel loop contains the following objects:

| Description                                                                                                                                                                              | Reference | Type                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------|
| <b>Loop Alarm State</b>                                                                                                                                                                  | C         | Obj\Enum: 0...4;<br>Where: 0=OK, 1=Disablement, 2=Fault, 3=Pre-Alarm, 4=Fire |
| <b>Loop OK</b>                                                                                                                                                                           | C0        | Obj\NoYes                                                                    |
| <b>Disablement</b>                                                                                                                                                                       | C1        | Obj\NoYes                                                                    |
| <b>Fault</b>                                                                                                                                                                             | C2        | Obj\NoYes                                                                    |
| <b>Pre-Alarm</b>                                                                                                                                                                         | C3        | Obj\NoYes                                                                    |
| <b>Fire</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events                                                 | C4        | Obj\NoYes                                                                    |
| <b>Fault Count</b>                                                                                                                                                                       | N2        | Obj\Num                                                                      |
| <b>Loop Device Count</b><br>Count of devices with a label configured. Only available if Load Labels from panel is set within driver setup                                                | N0        | Obj\Num                                                                      |
| <b>Device x or device label</b><br>The device address, x, range depends on the device manufacturer:<br>Hochiki – 1...127<br>Apollo – 1...126<br>Argus Vega – 1...240<br>Nittan – 1...254 | Dx        | Fixed container:<br><i>[Advanced v16\Device]</i>                             |

## Device

Object Type: *[Advanced v16\Device]*

Object Type: *[Advanced v15\Device]*

Object Type: *[Advanced4000 v14\Device]*

An Advanced loop device contains the following objects. Refer to documentation on the specific device for information on sub address usage.

| Description                                                                                                                                        | Reference  | Type                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Label</b><br>Only available if Load Labels from panel is set within driver setup                                                                | L          | Obj\Text: 26 chars                                                                                                                 |
| <b>Device Alarm State</b>                                                                                                                          | C          | Obj\Enum: 0...6; Adjustable<br>Where: 0=OK, 1=Disablement, 2=Fault, 3=Pre-Alarm, 4=Fire, 6=Test<br>Adjustable: 0=Enable, 1=Disable |
| <b>Device OK</b>                                                                                                                                   | C0         | Obj\NoYes                                                                                                                          |
| <b>Device Disablement</b><br>Indicates whether this device is isolated.<br>Can be written to in order to isolate or de-isolate the device.         | C1         | Obj\NoYes; Adjustable                                                                                                              |
| <b>Device in Fault</b>                                                                                                                             | C2         | Obj\NoYes                                                                                                                          |
| <b>Device in Pre-Alarm</b>                                                                                                                         | C3         | Obj\NoYes                                                                                                                          |
| <b>Device in Fire</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events | C4         | Obj\NoYes                                                                                                                          |
| <b>Damper Active</b><br>See note below                                                                                                             | C5         | Obj\NoYes                                                                                                                          |
| <b>Device in Fire Test</b><br>Available from driver v1.6                                                                                           | C6         | Obj\NoYes                                                                                                                          |
| <b>Control Output</b><br>Control state of an output device                                                                                         | O          | Obj\OffOn; Adjustable only                                                                                                         |
| <b>Sub address <i>x</i> or <i>Label</i></b><br>The sub address number, <i>x</i> , is in the range 0...16                                           | S <i>x</i> | Fixed Container:<br><i>[Advanced v16\SubDev]</i>                                                                                   |

## Damper Interface Devices

Damper interface devices (MXP-046) contain three sub-addresses:

Damper open (sub address 0) – use object S0.C5

Damper closed (sub address 1) – use object S1.C5

Damper fault (sub address 2) – use object C2

Alarms can be sent by a damper interface, North-format alarms are sent with the following Condition field:

| Alarm Condition Field | Notes                                          |
|-----------------------|------------------------------------------------|
| Control               | Sub address indicates damper open/closed event |
| Fail to Open          |                                                |
| Fail to Close         |                                                |
| Supply Fault          |                                                |
| Normal                | Clears fault or open/closed event              |

If you are using relay outputs to control dampers, then the damper state is not available directly. Instead, read the zone or loop-device state for the inputs that will cause an damper activation.

## Sub Address

Object Type: [Advanced v16\SubDev]

Object Type: [Advanced v15\SubDev]

Object Type: [Advanced4000 v14\SubDev]

An Advanced sub-address contains the following objects.

| Description                                                                                                                              | Reference | Type                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Label</b><br>Only available if Load Labels from panel is set within driver setup.                                                     | L         | Obj\Text: 26 chars                                                                                                                  |
| <b>Alarm State</b>                                                                                                                       | C         | Obj\Enum: 0...6; Adjustable<br>Where: 0=Ok, 1=Disablement, 2=Fault, 3=Pre-Alarm, 4=Fire, 6=Test.<br>Adjustable: 0=Enable, 1=Disable |
| <b>OK</b>                                                                                                                                | C0        | Obj\NoYes                                                                                                                           |
| <b>Disablement</b><br>Indicates whether this sub-address is disabled                                                                     | C1        | Obj\NoYes; Adjustable                                                                                                               |
| <b>Fault</b>                                                                                                                             | C2        | Obj\NoYes                                                                                                                           |
| <b>Pre-Alarm</b>                                                                                                                         | C3        | Obj\NoYes                                                                                                                           |
| <b>Fire</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events | C4        | Obj\NoYes                                                                                                                           |
| <b>Damper</b>                                                                                                                            | C5        | Obj\OffOn                                                                                                                           |
| <b>Device in Fire Test</b><br>Available from driver v1.6                                                                                 | C6        | Obj\NoYes                                                                                                                           |
| <b>Output</b><br>Control state of an output sub-address                                                                                  | O         | Obj\OffOn; Adjustable only                                                                                                          |
| <b>Device Type</b><br>Only available if Load Labels from panel is set within driver setup.                                               | TY        | Obj\Num: 0...34<br>See note 1                                                                                                       |
| <b>Analogue Value</b>                                                                                                                    | A         | Obj\Text: 7 chars<br>Value depends on device type                                                                                   |

## Notes

- The following device types are reported by the panel.

| Device Type | Description        |
|-------------|--------------------|
| 0           | Unknown device     |
| 1           | Ionisation smoke   |
| 2           | Optical smoke      |
| 3           | Multi              |
| 4           | Heat               |
| 5           | Zone monitor       |
| 6           | Call point (MCP)   |
| 7           | Temperature sensor |
| 8           | Volts              |
| 9           | Volts              |
| 10          | Volts              |
| 11          | Switch             |
| 12          | Sounder            |
| 13          | Monitored relay    |
| 14          | Relay              |
| 15          | Monitor            |
| 16          | Current            |

| Device Type | Description                  |
|-------------|------------------------------|
| 17          | Current                      |
| 18          | Carbon monoxide (fire)       |
| 19          | Carbon monoxide (gas sensor) |
| 20          | Flame detector               |
| 21          | Switch (monitored)           |
| 22          | Ionisation smoke             |
| 23          | Optical smoke                |
| 24          | Multi                        |
| 25          | Heat                         |
| 26          | Double address               |
| 27          | Beacon                       |
| 28          | Multi heat                   |
| 29          | Rate of rise heat            |
| 30          | Optical smoke                |
| 31          | Flame                        |
| 32          | Input                        |

| Device Type | Description |
|-------------|-------------|
| 33          | Input       |

| Device Type | Description |
|-------------|-------------|
| 34          | Sensor      |

# On-Board Devices

Object Type: *[Advanced v16\OnBoard]*

Object Type: *[Advanced v15\OnBoard]*

An Advanced panel on-board input-output contains the following objects.

| Description                     | Reference | Type                                                     |
|---------------------------------|-----------|----------------------------------------------------------|
| <b>Sounder A Fault (V)</b>      | D1.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder B Fault (V)</b>      | D1.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder C Fault (V)</b>      | D1.S2     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder D Fault (V)</b>      | D1.S3     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder A Load (mA)</b>      | D2.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder B Load (mA)</b>      | D2.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder C Load (mA)</b>      | D2.S2     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Sounder D Load (mA)</b>      | D2.S3     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Battery Fault (V)</b>        | D3.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Charger Voltage (V)</b>      | D4.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Charger Current (mA)</b>     | D4.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Charger Temperature (°C)</b> | D4.S2     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Earth Voltage (V)</b>        | D5.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>System Voltage (V)</b>       | D5.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Aux Supply (mA)</b>          | D6.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>1st Loop Load (mA)</b>       | D7.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>2nd Loop Load (mA)</b>       | D7.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>3rd Loop Load (mA)</b>       | D7.S2     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>4th Loop Load (mA)</b>       | D7.S3     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>1st Loop Voltage Out (V)</b> | D8.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>2nd Loop Voltage Out (V)</b> | D8.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>3rd Loop Voltage Out (V)</b> | D8.S2     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>4th Loop Voltage Out (V)</b> | D8.S3     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>1st Loop Voltage In (V)</b>  | D9.S0     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>2nd Loop Voltage In (V)</b>  | D9.S1     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |

| Description             | Reference | Type                                                     |
|-------------------------|-----------|----------------------------------------------------------|
| 3rd Loop Voltage In (V) | D9.S2     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| 4th Loop Voltage In (V) | D9.S3     | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 1           | D10.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 2           | D10.S1    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 3           | D10.S2    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 4           | D10.S3    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 5           | D10.S4    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 6           | D10.S5    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 7           | D10.S6    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 8           | D10.S7    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Input 9           | D10.S8    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Relay 1           | D11.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Relay 2           | D11.S1    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Relay 3           | D11.S2    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Relay 4           | D11.S3    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 1          | D11.S4    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 2          | D11.S5    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 3          | D11.S6    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 4          | D11.S7    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 5          | D11.S8    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 6          | D11.S9    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 7          | D11.S10   | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Panel Output 8          | D11.S11   | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| 1st Loop Card           | D12.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| 2nd Loop Card           | D12.S1    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| 3rd Loop Card           | D12.S2    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| 4th Loop Card           | D12.S3    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| Control Panel Interface | D13.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |

| Description               | Reference | Type                                                     |
|---------------------------|-----------|----------------------------------------------------------|
| <b>Main Supply Fault</b>  | D14.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>24V Supply Feed 1</b>  | D14.S1    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>24V Supply Feed 2</b>  | D14.S2    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Monitored Input 1</b>  | D16.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Monitored Input 2</b>  | D16.S1    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Monitored Input 3</b>  | D16.S2    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Fail-Safe Fire</b>     | D16.S3    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Monitored Output 1</b> | D16.S4    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Monitored Output 2</b> | D16.S5    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Monitored Output 3</b> | D16.S6    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>ESPA Pager</b>         | D19.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Network Earth</b>      | D21.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>LED Card 1</b>         | D22.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>LED Card 2</b>         | D22.S1    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>LED Card 3</b>         | D22.S2    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>LED Card 4</b>         | D22.S3    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>LED Card 5</b>         | D22.S4    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |
| <b>Internal Printer</b>   | D23.S0    | Fixed Container:<br><i>[Advanced v16\OnBoard\SubDev]</i> |

## On-Board I/O

Object Type: *[Advanced v16\OnBoard\SubDev]*

Object Type: *[Advanced v15\OnBoard\SubDev]*

An Advanced panel on-board I/O contains the following objects.

| Description        | Reference | Type                                                                                                                                   |
|--------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Value</b>       | A         | Obj\Text: 7 chars                                                                                                                      |
| <b>Alarm State</b> | C         | Obj\Enum: 0...6; Adjustable<br>Where: 0=Ok, 1=Disablement, 2=Fault, 3=Pre-Alarm,<br>4=Fire, 6=Test.<br>Adjustable: 0=Enable, 1=Disable |
| <b>OK</b>          | C0        | Obj\NoYes                                                                                                                              |
| <b>Disablement</b> | C1        | Obj\NoYes; Adjustable                                                                                                                  |
| <b>Fault</b>       | C2        | Obj\NoYes                                                                                                                              |
| <b>Pre-Alarm</b>   | C3        | Obj\NoYes                                                                                                                              |
| <b>Fire</b>        | C4        | Obj\NoYes                                                                                                                              |

## Zone and Summary Information (v14)

Object Type: *[Advanced4000 v14\System]*

The Zone and System Summary object contains zone, group, and network-wide status for the Advanced system. Objects are also available to perform network-wide commands – reset, silence, etc. – and activate external fire or alarm conditions.

| Description                                                                                                                              | Reference | Type                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------|
| <b>Commands</b><br>Contains objects for resetting latched events, silencing sounders and muting buzzer for all panels on network         | A         | Fixed container:<br><i>[Advanced4000 v14\Actions]</i>                     |
| <b>System Alarm State</b>                                                                                                                | C         | Obj\Enum: 0...4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| <b>System OK</b>                                                                                                                         | C0        | Obj\NoYes                                                                 |
| <b>Isolations</b>                                                                                                                        | C1        | Obj\NoYes                                                                 |
| <b>Faults</b>                                                                                                                            | C2        | Obj\NoYes                                                                 |
| <b>Pre-Alarm</b>                                                                                                                         | C3        | Obj\NoYes                                                                 |
| <b>Fire</b><br>Optionally append the object reference with ‘.A’ for automatic (sensor) fire events; or ‘.M’ for manual (MCP) fire events | C4        | Obj\NoYes                                                                 |
| <b>External Fire</b><br>Triggers a fire condition on the panel                                                                           | XF        | Obj\OffOn; Adjustable only                                                |
| <b>External Alarm</b><br>Triggers an alarm condition on the panel                                                                        | XA        | Obj\OffOn; Adjustable only                                                |
| <b>Zone x</b><br>The zone number, x, is in the range:<br>1...1000 for MxPro 4 panels<br>1...2000 for MxPro 5 panels.                     | Zx        | Fixed container:<br><i>[Advanced4000 v14\Zone]</i>                        |
| <b>Isolate Group y</b><br>The output group number, y, is in the range 1...200                                                            | Gy.I      | Obj\NoYes; Adjustable only                                                |

## Zone (v14)

Object Type: *[Advanced4000 v14\Zone]*

An Advanced zone contains the following objects:

| Description                                                                                                                                              | Reference | Type                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------|
| <b>Label</b>                                                                                                                                             | L         | Obj\Text: 32 chars                                                                                               |
| <b>Zone Alarm State</b>                                                                                                                                  | C         | Obj\Enum: 0...4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire<br>Adjustable: 0=De-Isolate, 1=Isolate |
| <b>Zone OK</b>                                                                                                                                           | C0        | Obj\NoYes                                                                                                        |
| <b>Zone Devices Isolated</b><br>Indicates whether devices in this zone are isolated. Can be written to in order to isolate or de-isolate a zone          | C1        | Obj\NoYes; Adjustable                                                                                            |
| <b>Zone Devices in Fault</b>                                                                                                                             | C2        | Obj\NoYes                                                                                                        |
| <b>Zone Devices in Pre-Alarm</b>                                                                                                                         | C3        | Obj\NoYes                                                                                                        |
| <b>Zone Devices in Fire</b><br>Optionally append the object reference with ‘.A’ for automatic (sensor) fire events; or ‘.M’ for manual (MCP) fire events | C4        | Obj\NoYes                                                                                                        |

## Advanced Panel (v14)

Object Type: *[Advanced4000 v14\Panel]*

An Advanced panel contains the following objects:

| Description                                                                                                                                                                                                                                                                                          | Reference | Type                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------|
| <b>Commands</b><br>Contains objects for resetting latched events, silencing sounders and muting panel buzzer                                                                                                                                                                                         | A         | Fixed container:<br><i>[Advanced4000 v14\Actions]</i>                     |
| <b>Panel Alarm State</b>                                                                                                                                                                                                                                                                             | C         | Obj\Enum: 0...4;<br>Where: 0=Ok, 1=Isolated, 2=Fault, 3=Pre-Alarm, 4=Fire |
| <b>Panel OK</b>                                                                                                                                                                                                                                                                                      | C0        | Obj\NoYes                                                                 |
| <b>Isolations</b>                                                                                                                                                                                                                                                                                    | C1        | Obj\NoYes                                                                 |
| <b>Faults</b>                                                                                                                                                                                                                                                                                        | C2        | Obj\NoYes                                                                 |
| <b>Pre-Alarm</b>                                                                                                                                                                                                                                                                                     | C3        | Obj\NoYes                                                                 |
| <b>Fire</b><br>Optionally append the object reference with '.A' for automatic (sensor) fire events; or '.M' for manual (MCP) fire events                                                                                                                                                             | C4        | Obj\NoYes                                                                 |
| <b>Loop x</b><br>The loop number, x, is typically in the range 0...4. If a loop offset is configured in the panel then x is in the range offset...(offset+4). Loop 0 is used for panel I/O.<br>An 8-loop panel consists of two 4-loop panels, with the second panels loop number in the range 5...8. | Lx        | Fixed container:<br><i>[Advanced4000 v14\Loop]</i>                        |

## Commands (v14)

Object Type: *[Advanced v15\Actions]*

Object Type: *[Advanced4000 v14\Actions]*

The Advanced panel commands object contains the following objects:

| Description                                         | Reference | Type                       |
|-----------------------------------------------------|-----------|----------------------------|
| <b>Reset Panel</b><br>Performs a reset on the panel | R         | Obj\NoYes; Adjustable only |
| <b>Sounders</b><br>Silences or re-sounds sounders   | S         | Obj\OffOn; Adjustable only |
| <b>Buzzer</b><br>Silence the panel buzzer           | B         | Obj\OffOn; Adjustable only |

# Driver Versions

| Version | Build Date | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.0     | 22/03/2004 | Driver released                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1.1     | 06/10/2010 | Modified driver to use new C objects<br>Alarm point and condition field changes.<br>Added background check to monitor panel<br>New Zone & System Summary object (P)<br>New driver objects for DS, RST, ADDR, II and SC<br>Maximum events increased to 450<br>Updated to protocol issue 2b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1.2     | 04/12/2013 | Fixed issue with byte-stuffing CRC (caused occasional duplicate alarms)<br>New damper state object (C5) for device<br>New analogue value (A) object for device<br>New option to load labels (and device type) from system. New objects LL and LC within driver, and L and TY within device.<br>Alarm point now includes panel number when using detector label option.<br>Alarm condition field changes<br>Isolate objects P.Zx.I, Px.Lx.Dx.I and Px.Lx.Dx.Sx.I deprecated. Use object C1 instead.<br>When a device in fault is subsequently isolated, driver now clears fault state, to report just the isolation state. This matches panel's operation. Can be disabled by using driver object ICF.<br>Modified initialisation<br>Maximum events increased to 500<br>Updated for protocol issue 3 compatibility<br>Baud rate initialized at 38400. |
| 1.2     | 05/08/2014 | Added more alarm conditions from protocol issue 3<br>If device is an MCP, alarm point now includes this<br>Default driver object LL to No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1.3     | 01/11/2017 | Increased event storage to 900.<br>Added Filter Events object to ignore event types<br>Added Filter Events object to restrict events to a range of panels<br>Added C4.A and C4.M objects for fires from auto sensors and MCPs.<br>.C objects adjustable for isolate/deisolate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 1.4     | 14/09/2018 | Modified alarm condition text. Where possible, send 'Fire Cleared', 'Pre-Alarm Cleared', and 'Fault Cleared' instead of 'Reset' or 'Normal'.<br>Driver object LAC added to enable v1.3 alarm condition text.<br>Added support for .V legacy objects (not documented)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1.4     | 19/03/2019 | Modified alarm text. Device number always includes the sub-address, '.0' previously not included.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 1.4     | 04/06/2020 | Resolved issue with Load Labels (LL) option not always loading all labels from the network.<br>Modified Panel Action objects (Px.A.x) to return "" (blank) rather than '0' when reading. Improving operation in Essential Data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1.4     | 02/02/2022 | Increased storage to 1500 events                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1.5     | 12/09/2023 | Renamed driver to Advanced.<br>Added objects for Confirmed Alarm (DK), and Event Count (Nx)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Version | Build Date | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.6     | 02/04/2024 | <p>General optimisations.</p> <p>Mod: 'isolated/de-isolated' changed to 'enabled/disabled'</p> <p>Mod: Driver object LAC updated with v1.4 alarm text option.</p> <p>Mod: External Fire (XF) and External Alarm (XA) object ref moved to Actions (A.E/A.A)</p> <p>Mod: Output Group Isolate (Gx.I) object ref changed to O.Gx</p> <p>Added fire Test state for device/sub-dev (C6)</p> <p>Added Filter Events object to ignore fire Test events</p> <p>Mod: Label store reworked and optimised. Reduced storage size to 3780 labels</p> <p>Mod: Added Lx.Nx objects</p> <p>Mod: If Local node (ADDR) incorrectly configured, driver attempts to find a node so the system can be scanned.</p> |

## Next Steps...

If you require help, contact support on 01273 694422 or visit [www.northbt.com/support](http://www.northbt.com/support)



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