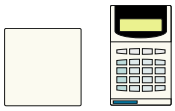
The InnerRange Driver



The InnerRange driver connects to the Inner Range Concept security and access control system. Available for Commander and ObSys.

This document relates to InnerRange driver version 1.0

Please read the *Commander Manual* or *ObSys Manual* alongside this document, available from *www.northbt.com*

Contents

Compatibility with the InnerRange System

The InnerRange driver allows North to interface with an Inner Range Concept security and access control system.

The driver connects, via an RS232 serial connection, to the Inner Range panel UART (Fig. 1).

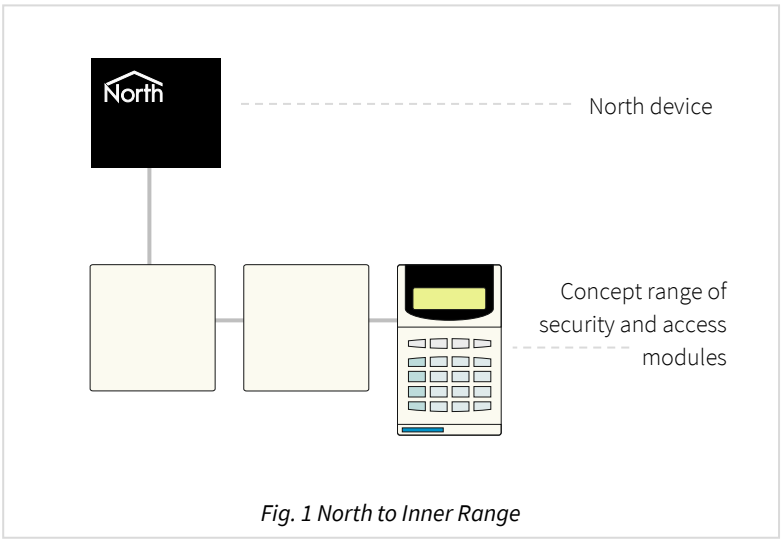


Fig. 1 North to Inner Range

Equipment

Inner Range panels compatible with the driver:

- Concept 3000/4000 controller
- Concept controller UART.

Values

The driver can typically access the following values:

- Controller module
- LCD terminals
- Expansion modules
- Readers
- Analogue expansion modules
- Door locks
- Areas
- Counters

Prerequisites

Configure one of the Concept controller's serial ports on the optional 4-port UART board (IRPX-3000) as 'PC Direct'. Make a note of the baud rate configured, and set the driver to match.

It is not recommended to use the controller's on-board UART (port 0). This is limited to 4800 baud, and typically used for commissioning only.

Using the Driver

On ObSys, the InnerRange driver is pre-installed. On Commander, the driver is available to download in the file 'Bank10 InnerRange.cdm'. On all of these North devices, you can use the driver to create an interface Inner Range. Once started, you will need to set up the driver before it can communicate with the Inner Range system.

Making the Cable

Using the RS232 cable specification, connect the North Device COM port to an available UART port. Connector types at each end of the cable are shown.

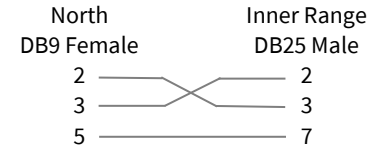


Fig 2 North to Inner Range cable

The maximum RS232 cable length is 15m and should be as short as possible.

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

Starting the Interface

To start an interface using the InnerRange driver, follow these steps:

- → **Start Engineering** your North device using ObSys
- → Navigate to **Configuration, Interfaces,** and set a unused **Interface** to 'InnerRange' to start the particular interface
- → Navigate to the top-level of your North device, then rescan it.

The driver setup object (Mc), labelled **InnerRange 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 **InnerRange Setup** object (Mc). For example, if you started interface 1 with the driver earlier, then the object reference will be 'M1'
- → Set the **RS232 Com Port** (RS.COM) to select which serial port on the North Device is connected to the Inner Range controller
- → Set the **Baud Rate** (RS.BR) to match that of the Inner Range UART port
- → Set a valid **User Number** (UN) and **PIN** (PN) so the interface can log on to the controller.

Checking Communication

You can check the interface is communicating by reading **Good Comms Link** object (LS). A value of 'yes' indicates the driver has logged on, and is connected to the Inner Range system.

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 Engineer.

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 InnerRange System (S1) contains Controller (C1), which itself contains a Zone 1 State (Z1.S). Therefore, the complete object reference is 'S1.C1.Z1.S'.

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.C1.Z1.S) – therefore the complete object reference is 'IP.CDIP.S1.C1.Z1.S'.

Device Top-Level Objects

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

Description	Reference	Type
InnerRange Setup Set up the InnerRange driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed container: On the Commander platform this will be *[CDM v20\InnerRange v10]* On the ObSys platform this will be *[OSM v20\InnerRange v10]*
InnerRange CCM Access Inner Range system connected to interface *c* (*c* is the interface number)	S*c*	Variable container: *[InnerRange v10\CCM]*

Inner Range Driver Setup

Object Type: *[OSM v20\InnerRange v10]*
Object Type: *[CDM v20\InnerRange v10]*

The Inner Range Driver Setup contains the following objects:

Description	Reference	Type
RS232 COM Port	RS.COM	Obj\Num: 0…8; Adjustable
Baud Rate	RS.BR	Obj\Num; Adjustable Values: 1200…38400
Good Comms Link Indicates driver has successfully logged on and is connected to Inner Range	LS	Obj\NoYes
PIN	PN	Obj\Text: 8 chars; Adjustable
User Number	UN	Obj\Num: 0…65535; Adjustable

InnerRange CCM

Object Type: *[InnerRange v10\CCM]*

An InnerRange CCM is a concept range of security and access modules from Inner Range. The system is a variable container and will need scanning to determine its contents.

Description	Reference	Type
Controller Info Contains system information about the controller	IN	Fixed Container: *[InnerRange v10\Info]*
Controller Control module	C1	Fixed Container: *[InnerRange v10\Controller]*
Terminal *x* The terminal number, *x*, is in the range 1…99.	T*x*	Fixed Container: *[InnerRange v10\Terminal]*
Big Expander *x* The large expansion module number, *x*, is in the range 1…99	B*x*	Fixed Container: *[InnerRange v10\Ex32]*
Expander *x* The expansion module number, *x*, is in the range 1…98	E*x*	Fixed Container: *[InnerRange v10\Ex16]*
Mini Expander *x* The small expansion module number, *x*, is in the range 1…98	M*x*	Fixed Container: *[InnerRange v10\Ex8]*
Reader *x* The reader number, *x*, is in the range 1…98	R*x*	Fixed Container: *[InnerRange v10\Reader]*
Intelligent Reader *x* The intelligent reader number, *x*, is in the range 1…98	I*x*	Fixed Container: *[InnerRange v10\IntReader]*
Analog Module *x* The analogue expansion module number, *x*, is in the range 1…98	Q*x*	Fixed Container: *[InnerRange v10\Analog]*
Door Locks	D	Fixed Container: *[InnerRange v10\Doors]*
Area States	A	Fixed Container: *[InnerRange v10\Areas]*
Counters	C	Fixed Container: *[InnerRange v10\Counters]*

Controller Info

Object Type: *[InnerRange v10\Info]*

The Controller Info contains information about the system.

Description	Reference	Type
Memory Size	M	Obj\ENum Values: 0=None, 1=8K, 2=32K, 3=64K, 4=128K,5= 256K, 6=512K
Software Version	SV	Obj\Text
GAL Code	GC	Obj\Text
Installer Lock	IL	Obj\OffOn
Serial Number	SN	Obj\Text

Controller

Object Type: *[InnerRange v10\Controller]*

Controller is the control module on an Inner Range security and access network.

The Controller object contains the following objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 48	Z*a*.S	Obj\ENum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux *b* State Aux *b* is in the range 1 to 32	X*b*.S	Obj\OffOn; Adjustable

Terminal

Object Type: *[InnerRange v10\Terminal]*

A Terminal contains the information about an LCD terminal on the Inner Range security and access network.

A Terminal object contains the following objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 10.	Z*a*.S	Obj\Enum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux b State Aux b is in the range 1 to 8.	X*b*.S	Obj\OffOn

Big Expander

Object Type: *[InnerRange v10Ex32]*

The Big Expander is a 42-zone expansion module on the Inner Range security and access network.

The Big Expander object contains the following objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 42	Z*a*.S	Obj\Enum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux b State Aux b is in the range 1 to 32	X*b*.S	Obj\OffOn

Expander

Object Type: *[InnerRange v10\Ex16]*

An Expander is a 16-zone expansion module on the Inner Range security and access network.

The Expander object contains the following Objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 16	Z*a*.S	Obj\Enum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux b State Aux b is in the range 1 to 16	X*b*.S	Obj\OffOn

Mini Expander

Object Type: *[InnerRange v10\Ex8]*

A Mini Expander is a 8-zone expansion module on the Inner Range security and access network.

The Mini Expander object contains the following Objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 16	Z*a*.S	Obj\Enum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux b State Aux b is in the range 1 to 8	X*b*.S	Obj\OffOn

Reader

Object Type: *[InnerRange v10\Reader]*

The Reader contains information about a reader unit on the Inner Range security and access network.

The Reader contains the following objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 16	Z*a*.S	Obj\Enum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux b State Aux b is in the range 1 to 8	X*b*.S	Obj\OffOn

Intelligent Reader

Object Type: *[InnerRange v10\IntelligentReader]*

The Intelligent Reader conation information about an IRDR intelligent reader on the Inner Range security and access network.

The Intelligent Reader contains the following objects:

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 16	Z*a*.S	Obj\ENum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux *a* State Aux b is in the range 1 to 16	X*a*.S	Obj\OffOn

Analog Module

Object Type: *[InnerRange v10\Analog]*

An Analog Module is an analogue expansion module on the Inner Range security access network.

The Analog Module contains the following objects

Description	Reference	Type
Zone *a* State Zone *a* is in the range of 1 to 16	Z*a*.S	Obj\ENum Values: 1=Ok, 2=Alarm, 3=Tamper, 4=Isolated
Aux *a* State Aux b is in the range 1 to 8	X*a*.S	Obj\OffOn

Door Locks

Object Type: *[InnerRange v10\Doors]*

A Door Locks is an door module on the Inner Range security access network.

Description	Reference	Type
Door *a* Door *a* is in the range of 1 to 255	*Da*.S	Obj\OffOn; Adjustable

Area States

Object Type: *[InnerRange v10\Areas]*

The Area States is an area module on the Inner Range security access network.

Description	Reference	Type
Area *a* Area *a* is in the range of 1 to 255	*Da*.S	Obj\OffOn; Adjustable

Counters

Object Type: *[InnerRange v10\Counters]*

The Counter contains counter information from the Inner Range security and access network.

Description	Reference	Type
Counter Counter *x* is in the range of 1 to 255	C*x*	Obj\Num

Driver Versions

Version	Build Date	Details
1.0	04/12/2008	Released

Next Steps…

If you require help, contact support on 01273 694422 or visit *www.northbt.com/support*

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