North

The YorkTalk Driver

YORK

XL Translator

The YorkTalk driver provides a link to York International chillers using the York Talk protocol. Available for Commander and ObSys.

This document relates to YorkTalk driver version 1.1

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

Contents

Compatibility with the York International System

The YorkTalk driver allows North to interface with York International chillers using the York Talk protocol.

The driver connects, via an RS232 serial connection, to a York Translator, XL Translator (Fig. 1), or ASCII MicroGateway. Depending on the gateway model, the driver provides access to a either a single chiller or network of chillers.

Fig. 1 North to York system
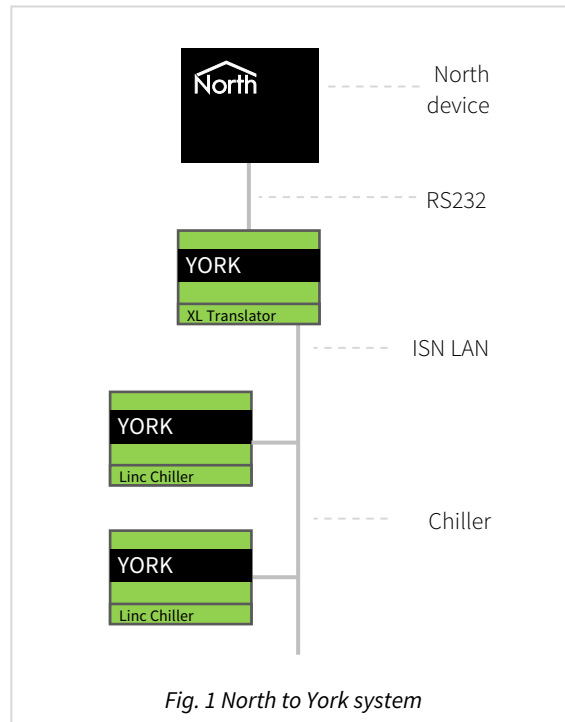
Equipment

York International equipment compatible with the driver includes:

- York Translator – direct connect to a single chiller
- ISN York Talk XL Translator – access a network of chillers, each requires a York Talk Linc module
- ASCII MicroGateway – access a network of chillers, each requires a Linc device.

Values

Typically the driver can access the following York ISN feature section locations:

- Readable values via Feature 01 Section 03 (F1.S3), and Feature 02 Section 01 (F2.S1) and Section 02 (F2.S2)
- Adjustable values via Feature 01 Section 01 (F1.S1) and Section 02 (F1.S2).

The values available at these locations will vary according to the chiller configuration itself, but typically include:

- Return water temp
- Fault status
- Run status
- Flow water temp
- Demand
- Mode

Prerequisites

If connecting via an XL Translator or ASCII MicroGateway, to access a network of chillers, these require the driver to open a terminal session with a chiller. Establishing the connection to a chiller will be slow, so you should group objects from the same chiller together in Essential Data or Data Transfer modules.

If using an XL Translator, set node switches: 1-32 'on', B 'on', A 'off'. Use the RS232 default settings of 9600 baud, 8 data bits, 1 stop bit and no parity. A password of '1' must be set within the XL firmware.

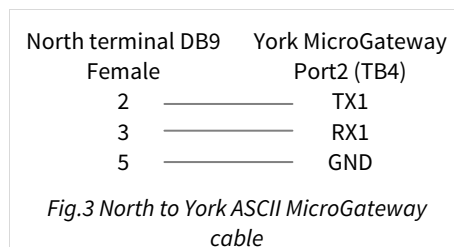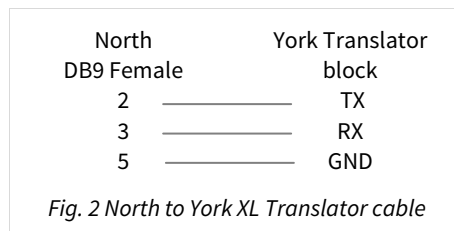If using an ASCII MicroGateway, set above using the York ISN configuration software.

On Linc Chiller devices, set node switches: 1-32 with a unique ISN LAN chiller node number (and not the local chiller node switch number), A 'on', B 'on', A 'off'. A password of '1' must be set within the Linc firmware. Replies from chillers should be formatted to start with the page number.

Using the Driver

On ObSys, the YorkTalk driver is pre-installed. On Commander, the driver is available to download in the file 'Bank15 YorkTalk.cdm'. On all of these North devices, you can use the driver to create an interface to the York system. Once started, you will need to set up the driver before it can communicate with the York system.

Making the Cable

Using the following RS232 cable specification, connect the North device COM port to port 2 on the York XL Translator (Fig. 2), or port2 (TB4) on the ASCII MicroGateway (Fig. 3):

North DB9 Female		York Translator block
2	————	TX
3	————	RX
5	————	GND

Fig. 2 North to York XL Translator cable

North terminal DB9 Female		York MicroGateway Port2 (TB4)
2	————	TX1
3	————	RX1
5	————	GND

Fig.3 North to York ASCII MicroGateway cable

The maximum RS232 cable length is 15m.

Starting the Interface

🖥 To start an interface using the York Talk driver, follow these steps:

→ **Start Engineering** your North device using ObSys

→ Navigate to **Configuration, Interfaces,** and set an unused **Interface** to 'YorkTalk' to start the particular interface

→ Navigate to the top-level of your North device and re-scan it

The driver setup object (Mc), labelled York Talk **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 **YorkTalk 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 which serial port on the North device the York system is connected

→ Set the **Operating Mode** (OM) to the type of gateway connected.

Checking Communications

You can check that the interface is communicating by accessing the **York Talk Setup** object (M*c*). The **Device State** object(DS) will read 'Connected' when the driver can communicate with the York Talk gateway.

Testing the Connection from Terminal Software

If you experience problems accessing objects within the York System, communications can be checked using a PC with any terminal emulation software (such as Putty). Connect the PC's COM port directly to the York XL Translator or ASCII MicroGateway.

The following example shows how the driver connects and requests values form the York system. All command text must be in lower case. Commands for you to enter are shown ending with a carriage return (`<CR>`).

Connect to the XL Translator

```
logon<CR>
PLEASE ENTER PASSWORD
1<CR>
YORK TALK XL 0001  WED 10-JAN-2001 09:02
>
```

Connect to a Linc chiller at node address 2

```
open 00,02<CR>
Establishing link … please wait
LINC_CHL_YI  0002  WED 10-JAN-2001 09:05
*
ele<CR>
LINC_CHL_YI  0002  WED 10-JAN-2001 09:05
*
```

View data at Feature 1 Section 1 Page 1

```
f01s01p01<CR>
P01 UNIT NO.1 LCHW SETPOINT 46.0
*
```

Disconnecting from a Linc chiller

```
close<CR>
Secondary link closed
>
```

Disconnecting from the XL Translator

```
logoff<CR>
LINK CLOSED
```

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 YorkTalk System (S1) contains a chiller at ISN Node 1 (N1) with Feature 02 Section 01 (F2.S1). An analogue input is stored in Page 09 (P9), with a Value (V). Therefore, the object reference will be 'S1.N1.F2.S1.P9.V'.

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.N1.F2.S1.P9.V) – therefore the complete object reference is 'IP.CDIP.S1.N1.F2.S1.P9.V'.

Device Top-Level Objects

When an interface is started using the YorkTalk 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
YorkTalk Setup Set up the YorkTalk driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed Container: On the Commander platform this will be *[CDM v20\YorkTalk v11]* On the ObSys platform this will be *[OSM v20\YorkTalk v11]*
YorkTalk System Access YorkTalk system connected to interface *c* (*c* is the interface number)	S*c*	Variable Container. If connected to an XL Translator or ASCII MicroGateway: *[YorkTalk v11]* If connected to a York Talk Translator: *[YorkTalk v11\Node]*

YorkTalk Setup

Object Type: *[OSM v20\YorkTalk v11]*
Object Type: *[CDM v20\YorkTalk v11]*

The YorkTalk driver contains the following objects:

Description	Reference	Type
RS232 Com Port	RS.COM	Obj\Num: 1…8; Adjustable
Operating Mode	OM	Obj\ENum; Values: 1=Direct connect to YorkTalk Translator, 2=Connected via an 'XL' to a network of chillers
Device State	DS	Obj\Enum; Values: 0=Initialising, 1=Establishing link, 2=Connected
Error Code Last error message received from YorkTalk network	EC	Obj\ENum: 0…43; See note 1

Notes

1   Error code can have the following values:

Value	Meaning
0	No error
1	Invalid Command
2	Invalid Data
3	Invalid Character
4	Nothing to edit/Insufficient priority
5	Invalid data length
6	Feature number out of range
7	Section number out of range
8	Page number out of range
9	Insufficient priority
10	Can only print at section or page level
11	Parameter type
12	Invalid parameter type
13	Edit aborted
15	Nothing to abort
16	No response from target. Wait aborted
17	Cannot abort . . . please wait
18	Channel busy
19	Cannot form this type of nested communications link
20	Cannot process this command in nested link
21	This command only available to channel 2
22	Invalid station number
23	This section is in use
40	Timed out. Link closed
41	Destination busy
43	Station not responding

YorkTalk System

Object Type: *[YorkTalk v11]*

If the driver is connected to a network of York chillers via the XL Translator or ASCII MicroGateway, then several chillers are available.

Description	Reference	Type
Node *x* The chiller node number, *x*, is in the range 1..32	N*x*	*[YorkTalk v11\Node]*

York Node

Object Type: *[YorkTalk v11\Node]*

A YorkTalk Node is a York International Linc chiller.

Limited access is provided via the York Talk protocol. Typically:

- Readable values are accessed via Feature 01 Section 03 (F1.S3), and Feature 02 Section 01 (F2.S1) and Section 02 (F2.S2)
- Adjustable values are accessed via Feature 01 Section 01 (F1.S1) and Section 02 (F1.S2).

Description	Reference	Type
Feature *a* – Section *b* The User Feature, and Section reference of a value in the York system. Use of the feature and section are dependent on engineering within the York system	F*a*.S*b*	*[YorkTalk v11\Sect]*

York Feature-Section

Object Type: *[YorkTalk v11\Sect]*

A Feature-Section reference contains pages (with values) from the chiller. Their exact use will depends on chiller model, and engineering within the York system.

Description	Reference	Type
Page *c* A page contains a value from the chiller. The Pages available are dependent on engineering within the York system	P*c*	*[YorkTalk v11\Page]*

York Page

Object Type: *[YorkTalk v11\Page]*

A York page contains a value and label.

The value may or may not be adjustable, depending on configuration within the York system.

Description	Reference	Type
Value	V	Obj\Float; Adjustable
Alternative Value Alternative access to the value, if the chiller returns an additional field in the response	V2	Obj\Float; Adjustable
Label	L	Obj\Text

Driver Versions

Version	Build Date	Details
1.0	10/06/1996	Driver released
1.1	17/05/2011	Add object V2 to parse previous value in page
1.1	02/02/2017	Release for Commander v2

Next Steps…

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

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