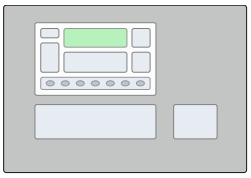
The Rafiki Driver



The Rafiki driver connects to the Fike Safety Technology Duonet and Quadnet fire detection system. Available for ObSys and Commander.

This document relates to Rafiki driver version 1.0

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

Contents

Compatibility with the Fike System

The Rafiki driver allows North to interface with a Fike Safety Technology, previously Rafiki Protection, fire detection system.

The driver connects, via an RS232 serial connection, to a Fike Duonet or Quadnet addressable fire control panel (Fig. 1), and can communicate with a network of panels.

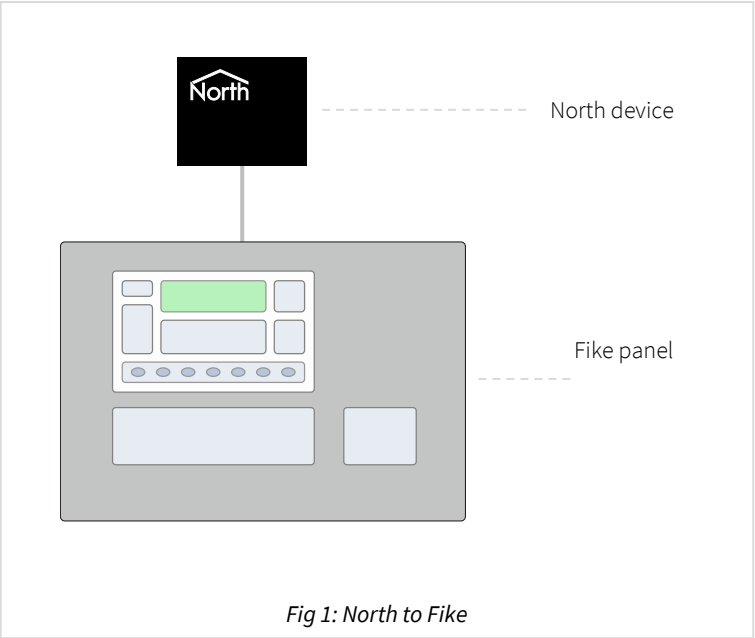


Fig 1: North to Fike

Equipment

Fike Safety Technology products compatible with the driver include:

- Fike Duonet – two loop panel
- Fike Quadnet – four loop panel

Values

The driver can typically access the following values:

- Reset panel
- Sounders
- System state
- Panel state
- Loop device state
- Zone state

Using the Driver

On ObSys, the Rafiki driver is pre-installed. On Commander, the driver is available to download in the file 'Bank7 Rafiki.cdm'. On all of these North devices, you can use the driver to create an interface to Fike. Once started, you will need to set up the driver before it can communicate with the Fike fire detection system.

Making the Cable

Using the RS232 cable specification, connect the North Device COM port to the 'BMS' port in the Fike panel. Connector types at each end of the cable are shown.

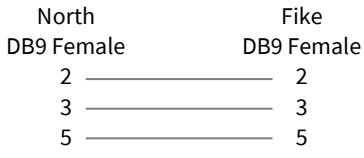


Fig 2 North to Fike cable

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

Starting the Interface

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

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

The driver setup object (Mc), labelled **Rafiki 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 **Rafiki 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 Fike panel.

Checking Communications

You can check that the interface is communicating by reading the **Comms OK** object (DS) A value of 'Yes' indicated the driver has connected to, and is communicating with, the Fike panel.

Alarms

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

Format

North-format alarms contains six text fields. The Rafiki 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
Rafiki Fire System	Panel 1 Loop 1 Device 3 Zone 1	Fire	1	01/03/20	14:29:48
Rafiki Fire System	Panel 1 Loop 1 Device 3 Zone 1	Silence	3	01/03/20	14:55:12
Rafiki Fire System	Panel 2 Loop 2 Device 4 Zone 2	Reset	3	11/03/20	11:26:26

Point Field

Point field can be:

Panel *a*

Panel *a* Loop *b*

Panel *a* Loop *b* Dev *c*

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

System

Condition and Priority Field

The following conditions can be sent by the driver:

Condition	Priority
Fire	1
Fault	2
Clear	2
Silence	3
Reset	3
Evacuate	1
Initialising	4
System ready	4
Mute	3
Battery disconn	2
Neg earth fault	2
Loop/open short	2
Panel fault	2
Loop fault	2

Apart from 'Fire', 'Fault' and 'Clear', condition text is generated by the panel and subject to change.

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 Rafiki System (S1) contains Panel 1 (P1), which itself contains a 'Panel Ok' Value (C0). Therefore, the complete object reference is 'S1.P1.C0'

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.C0) – therefore the complete object reference is 'IP.CDIP.S1.P1.C0'

Device Top-Level Objects

When an interface is started using the Rafiki 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
Rafiki Setup Set up the Rafiki driver, started on interface *c* (*c* is the interface number)	M*c*	Fixed Container: On the Commander platform this will be *[CDM v20\Rafiki v10]* On the ObSys platform this will be *[OSM v20\Rafiki v10]*
Rafiki Fire System Access Fike system connected to interface *c* (*c* is the interface number)	S*c*	Variable Container: *[Rafiki v10\Network]*

Rafiki Driver Setup

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

The Rafiki driver contains the following objects:

Description	Reference	Type
RS232 COM Port	RS.COM	Obj\Num:1…8; Adjustable
Device Label Label displayed when scanning the system and within alarms	DL	Obj\Text: 20 chars; Adjustable
Comms OK Indicates whether data has been received from the panel in the last 60 seconds	DS	Obj\NoYes

Rafiki Fire System

Object Type: *[Rafiki v10\Network]*

A Rafiki system is a network of Fike fire detection panels.

The Panel object (P*x*) provides access to objects on a Rafiki panel network. The ability to perform actions on an individual panel, e.g. reset, silence, etc may also be available. Contents for the maximum number of zones, loops, devices and panels are shown via North engineering software even though all these devices may not be connected.

The Rafiki system contains the following objects:

Description	Reference	Type
Panel *x* The panel address, *x*, is in the range 1...250. However, a network is typically limited to 8 panels.	P*x*	Fixed Container: *[Rafiki v10\Panel]*

Panel

Object Type: *[Rafiki v10\Panel]*

A Rafiki Panel is a Fike fire detection panel and contains the following objects:

Description	Reference	Type
Panel Alarm State Each object will contain a value relating to an 'OK' status by default, regardless of whether this panel has been configured.	C	Obj\Enum Values: 0=OK, 2=Fault, 4=Fire
Panel OK	C0	Obj\NoYes
Panel in Fault	C2	Obj\NoYes
Panel in Fire	C4	Obj\NoYes
Remote Actions Contains objects for resetting latched events, silencing sounders, and muting panel buzzer	A	Fixed container: *[Rafiki v10\Actions]*
Loop *x* The loop number, x, is in the range 1..4. Quadnet panels support 4 loops, and Duonet 2 loops	L*x*	Fixed Container *[Rafiki v10\Loop]*
Zone *y* The zone number, y, is in the range 1…128	Z*y*	Fixed Container *[Rafiki v10\Zone]*

Actions

Object Type: *[Rafiki v10\Actions]*

The Rafiki panel actions object contains the following objects:

Description	Reference	Type
Reset Panel	R	Obj/NoYes; Adjustable only
Silence Sounder	S	Obj/NoYes; Adjustable only
Evacuate	E	Obj/NoYes; Adjustable only
Silence Buzzer	X	Obj/NoYes; Adjustable only

Loop

Object Type: *[Rafiki v10\Loop]*

A Rafiki loop contains the following objects:

Description	Reference	Type
Loop Alarm State	C	Obj\ENum Values: 0=Ok, 2=Fault, 4=Fire
Loop OK	C0	Obj\NoYes
Loop in Fault	C2	Obj\NoYes
Loop in Fire	C4	Obj\NoYes
Device *x* The device number, x, is in the range of 1 to 200	D*x*	Fixed Container: *[Rafiki v10\Device]*

Device

Object Type: *[Rafiki v10\Device]*

The Rafiki device contains the following objects:

Description	Reference	Type
Device Alarm State	C	Obj\ENum Values: 0=Ok, 2=Fault, 4=Fire
Device Ok	C0	Obj\NoYes
Device in Fault	C2	Obj\NoYes
Device in Fire	C4	Obj\NoYes

Zone

Object Type: *[Rafiki v10\Zone]*

A Rafiki zone is a fire detection zone within a Fike panel.

Description	Reference	Type
Zone Alarm State	C	Obj\ENum Values: 0=Ok, 2=Fault, 4=Fire
Zone Devices Ok	C0	Obj\NoYes
Zone Devices in Fault	C2	Obj\NoYes
Zone Devices in Fire	C4	Obj\NoYes

Driver Versions

Version	Build Date	Details
1.0	15/08/2012	Driver released

Next Steps…

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

North Building Technologies Ltd
+44 (0) 1273 694422
support@northbt.com
www.northbt.com

Author: LH
Checked by: JF

Document issued 07/10/2020.