The Benning Driver

The Benning driver connects to the Benning power supply monitoring and control system. Available for ObSys and Commander.

This document relates to Benning driver version 1.0

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

Contents

Compatibility with the Benning System

The Benning driver allows North to interface with a Benning MCU 2000 power supply monitoring and control system.

The driver connects, via RS232, to the Benning MCU (Fig 1).

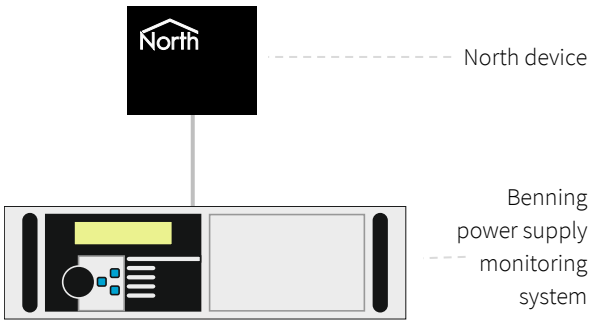

Fig. 1 North to Benning

Equipment

Benning equipment compatible with the driver includes:

- Benning MCU 2000
- Benning MCU 1000

Values

A Benning MCU contains a site-specific list values, depending on the rectifiers and cards fitted. The driver can typically access the following values:

- Measured values (floating-point number)
- Input values (digital on-off state)

Prerequisites

Configuration notes for MCU 2000: Locate the modem/relay board, with three DB9 connectors on one edge. Connect the North device to the middle DB9 connector, labelled ‘X6’. A block of three jumpers (labelled ‘X91’) configure this port. Remove the top jumper (DCD).

Using the Driver

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

Making the Cable

Using the RS232 cable specification, connect the North Device COM port to the Benning MCU port 'X6'. Connector types at each end of the cable are shown.

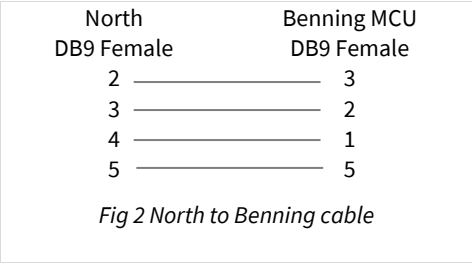

Fig 2 North to Benning cable

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

Cables are available from North, order code CABLE/BENNING/DB9.

Starting the Interface

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

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

The driver setup object (Mc), labelled **Benning 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 **Benning 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 Benning device

Checking Communications

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

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 Benning System (S1) contains Unit Info (U), which itself contains a Site Identification (ID). Therefore, the complete object reference is 'S1.U.ID'.

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.U.ID') – therefore the complete object reference is 'IP.CDIP.S1.U.UI'.

Device Top-Level Objects

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

Benning Driver Setup

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

The Benning driver contains the following objects:

Description	Reference	Type
System Label Label displayed when scanning the system	DL	Obj\Text: 20 chars; Adjustable
RS232 COM Port	RS.COM	Obj\Num:1…8; Adjustable
Comms Established	DS	Obj\NoYes

Benning System

Object Type: *[Benning v10]*

A Benning MCU contains a site-specific list of objects, scan the system to find the objects available.

Description	Reference	Type
Unit Information	U	Fixed Container: *[Benning v10\Unit]*
Measured value Floating-point value	*m*	Fixed Container: *[Benning v10\Val]*
Input state Digital state	*s*	Fixed Container: *[Benning v10\State]*

Unit Information

Object Type: *[Benning v10\Unit]*

Unit Information contains the following objects:

Description	Reference	Type
Site ID	ID	Obj/Text: 12 chars
Software ID	SW	Obj/Num

Measured Value

Object Type: *[Benning v10\Val]*

Measured Value contains the following objects:

Description	Reference	Type
Value	V	Obj/Float
Units	U	Obj/Text: 2 char

Input State

Object Type: *[Benning v10\State]*

Input State contains the following objects:

Description	Reference	Type
State	V	Obj/OffOn

Driver Versions

Version	Build Date	Details
1.0	16/08/2001	Driver released

Next Steps…

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

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