

BC-MUX

VI Remote Control

ZAHNER

1 Introduction

The BC-MUX can be controlled via USB or via LAN with the included software.

For integration without BC-MUX software, to control the Zennium separately via Remote2, it is most convenient to control the BC-MUX via TCP/IP over LAN. For this purpose, the network interface of the BC-MUX must be configured as described in the [BC-MUX manual](#).

As an alternative, the BC-Mux can also be included in Thales as a Virtual Instrument (VI). Then it is possible to control the BC-MUX via Remote2 as acquisition channel (ACQ). More information about acquisition channels can be found in the [Signal Acquisition manual](#).

The [Remote2 manual](#) shows how to set up VIs via Remote2. The individual steps of the process are explained below.

2 Remote Control

2.1 Setup

Before the BC-MUX can be controlled remotely, it must be set up as an ACQ channel via a VI.

2.1.1 VI Path

First, the VI Path must be set with the following command. The path is the folder in which the corresponding exe and ini file are located. This can be set by default for the BC-MUX with the following command and path.

```
VI_PATH=c:\THALES\VI\BCMuxVI
```

2.1.2 VI ini File Filename

Defines the name of the ini file located under the specified path.

```
VI_INI=BCMuxVI
```

2.1.3 VI exe File Filename

Defines the name of the exe file located under the specified path.

```
VI_EXE=BCMuxVI
```

2.1.4 Start the VI

After the path and the two files have been defined, the VI can be started with the following command. After this command has been executed, wait a few seconds for the VI to start and connect to the term.

```
STARTVI
```

2.1.5 Refresh Setup

After the VI has connected to Thales, the ACQ setup must be updated with the following command.

```
SENDACQSETUP
```

This command returns OK and the setup as in the following example.

```
OK;ACQSETUP;INPUTS;4;DISP0;32;TCKV201;DISP1;33;TCKV201;  
DISP2;3184;NTC;DISP3;6144;Channel;OUTPUTS;1;DISP3;6144;  
Channel;DACS;NONE;ACTIVE CHANNEL=0;ENDSETUP
```

The part of the answer concerning the BC-MUX has been marked in bold. The ACQ channel number assigned by Thales is marked in red. This is in this case the number 3. The number is always the same as long as the number of ACQ channels does not change.

2.2 Usage

After the BC-MUX has been set up as explained in the previous steps, it can be controlled with the following commands.

2.2.1 Select BC-MUX ACQ Channel

To control the BC-MUX the ACQ channel assigned by the Thales software must be selected with the following command. This is in this case the number 3.

```
CHANNEL=3
```

2.2.2 Read the selected Channel

With the following command the channel which is currently selected can be read.

```
ANALOGIN
```

The answer is for example:

```
ACQVAL (3) = 0.000000e+00
```

The number 3 represents the BC-MUX channel number assigned by Thales. Channel 0 is selected, which means that none of the 16 channels is switched to the workstation.

2.2.3 Selection of a channel

One of the 16 channels can be switched to the workstation with the following command. In the example, channel 4 is selected.

```
ANALOGOUT=4
```