

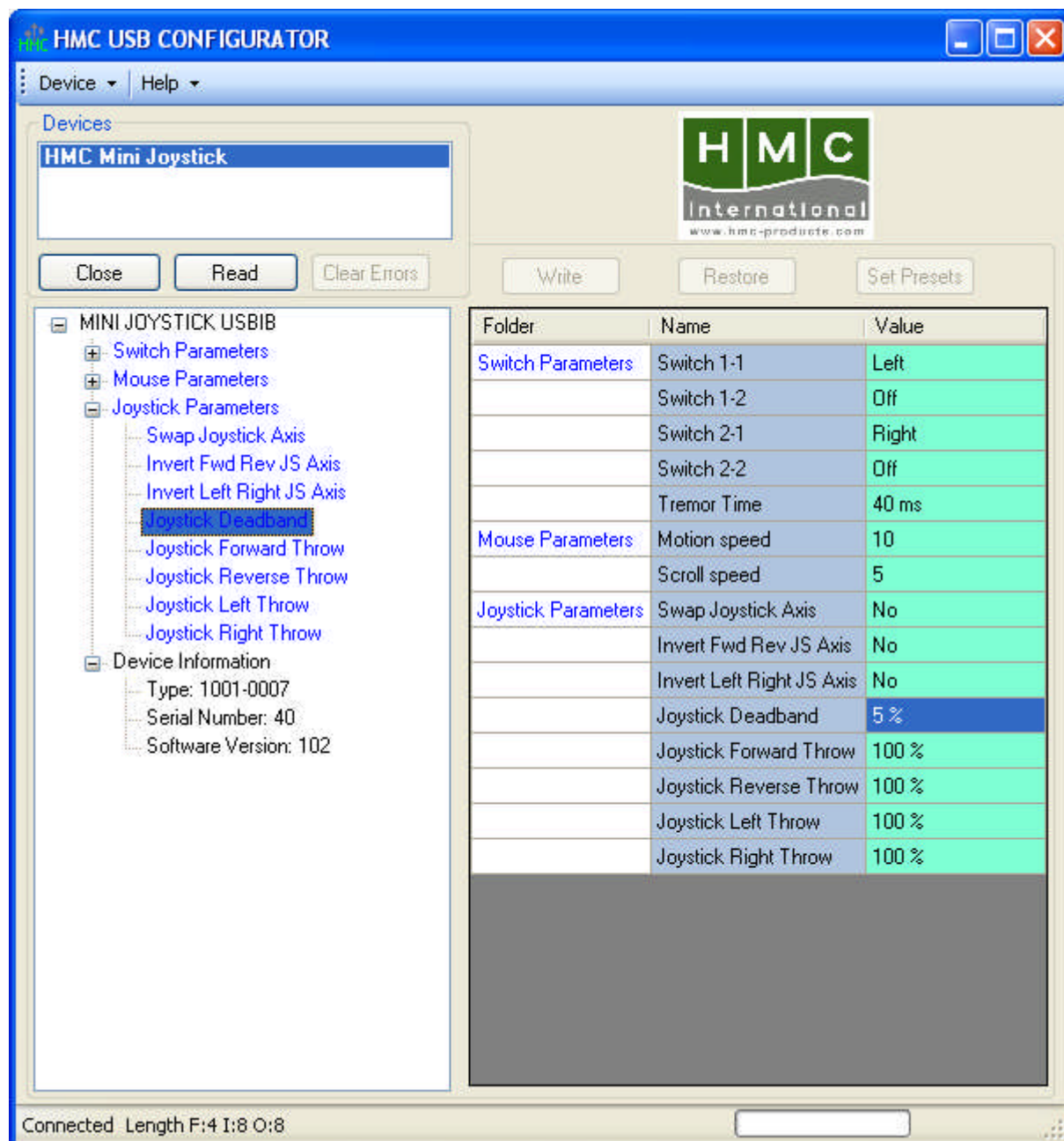
HMC USB CONFIGURATOR

1 General

The HMC USB Configurator allows in an easy way to program the HMC International USB Mouse Input devices.

This manual explains how to install and how to use the HMC USB Configurator

This manual explains how to setup the HMC International Input devices to adapt the device to the needs of the user.

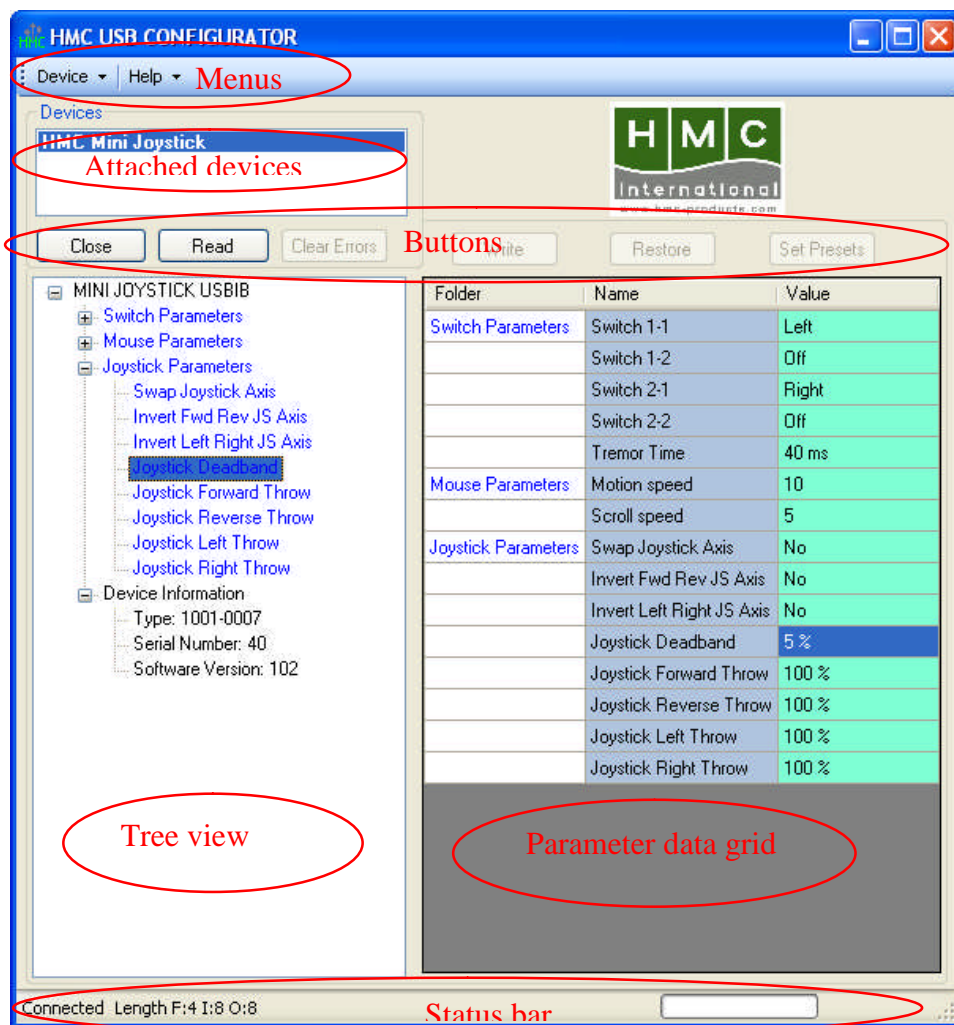


2 Using the HMC USB Configurator

2.1 How to open the HMC USB Configurator:

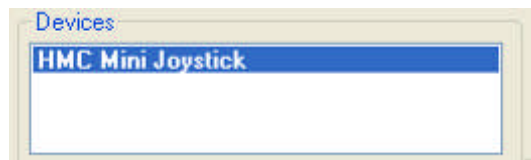
- Click **Start**
- Point to **All Programs**
- Point to **HMC International**
- Click **HMC USB Configurator**.
- For information about using **HMC USB Configurator**, click the **Help** menu in **HMC USB Configurator**.

2.2 User Interface



2.2.1 Data Windows

2.2.1.1 Attached devices



This list box shows the attached HMC International USB devices to the PC. The list is automatically refreshed when the application is started or each time an HMC International USB device is removed or attached.

If only one device is found the application will automatically read and view the device configuration settings.

2.2.1.2 Configuration tree view



This window shows a tree build up with the configuration parameter folders (nodes). These folders contain their set of parameters that can be viewed and edited in the parameter grid view.

Usage

+ box : indicates that the folder is closed, click on the box to show the contents (parameter list) of the folder. More then one folder can be set open to have an overview of the parameters of the device.

-box : indicates that the folder is open, click on the –box to close the folder.

Double click on the parameter name: the focus is set on the selected parameter in the parameter data grid view.

2.2.1.3 Parameter data grid window

The screenshot shows the MINI JOYSTICK USBIB software interface. On the left is a tree view with folders: Switch Parameters, Mouse Parameters, Joystick Parameters, and Device Information. Under Joystick Parameters, 'Joystick Deadband' is selected. On the right is a data grid window with buttons at the top: Close, Read, Clear Errors, Write, Restore, and Set Presets. The data grid has three columns: Folder, Name, and Value. It lists parameters for the selected folder and their current values.

Folder	Name	Value
Switch Parameters	Switch 1-1	Left
	Switch 1-2	Off
	Switch 2-1	Right
	Switch 2-2	Off
	Tremor Time	40 ms
Mouse Parameters	Motion speed	10
	Scroll speed	5
Joystick Parameters	Swap Joystick Axis	No
	Invert Fwd Rev JS Axis	No
	Invert Left Right JS Axis	No
	Joystick Deadband	5 %
	Joystick Forward Throw	100 %
	Joystick Reverse Throw	100 %

If a folder or parameter has been selected in the left tree view then the data grid window shows the selected folder parameters and their values.

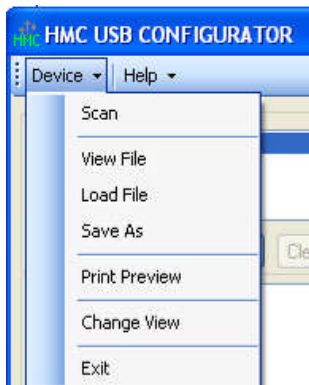
Cell colour schema

Joystick Deadband	5 %
Joystick Deadband	10 %

The parameter can be modified.

The parameter has been changed.

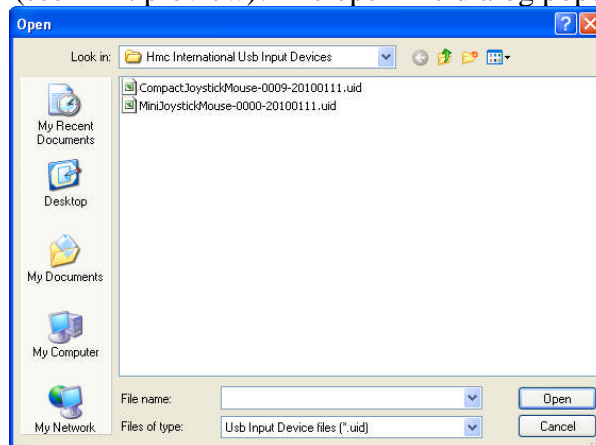
2.2.2 Menu bar



Device Menu items (click on the down arrow to drop down the menu)

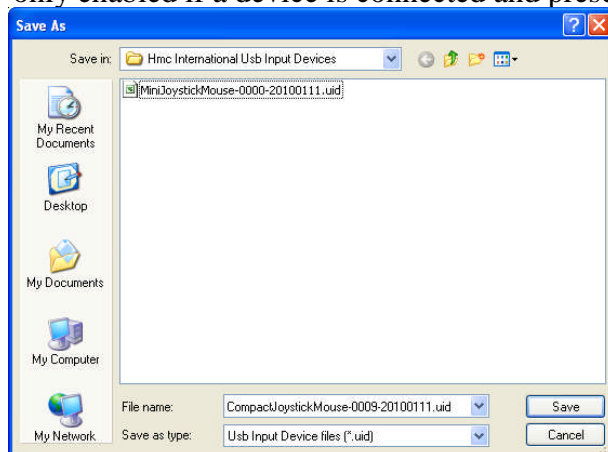
Scan : rescan the connected devices

View File : open an existing configuration file and show the print preview form (see Print preview). The open file dialog pops up to select the desired file.



Load File : open an existing configuration file and update/overwrite the parameters only enabled if a device is connected and presented in the views
An open dialog pops up to select the desired file (see View file)

Save as : save the device configuration into a file
only enabled if a device is connected and presented in the views

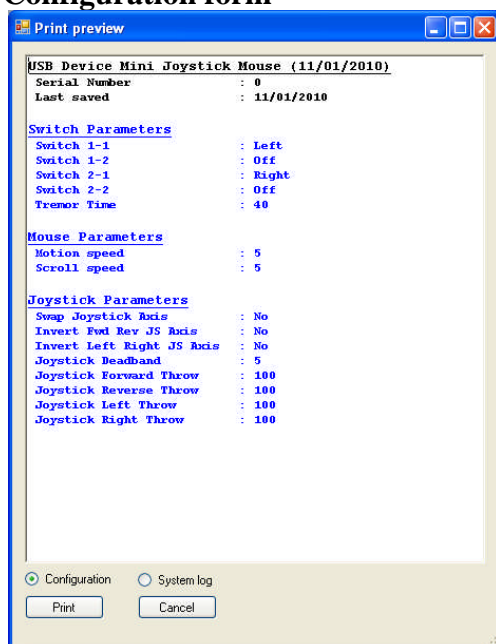


The tool proposes a filename in the following format:
deviceName-serialNumber-YYYYMMDD.uid (usb input device)

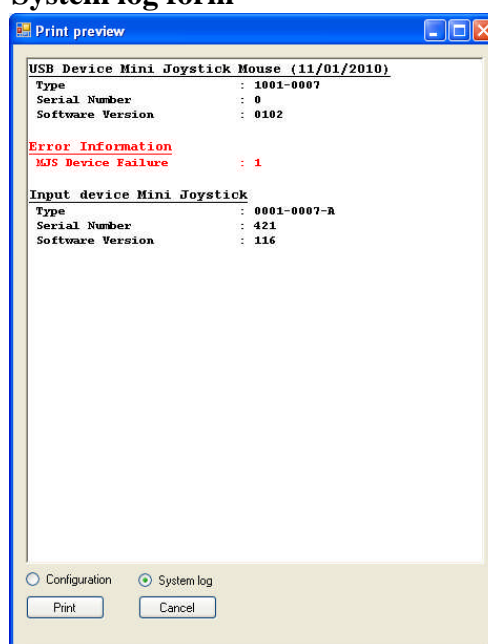
Print Preview : shows a print preview of the actual presented device data.

Select the configuration or system log button for more the concerning information.

Configuration form



System log form



When print button is clicked then the print dialog pops up to select the desired printer. Click

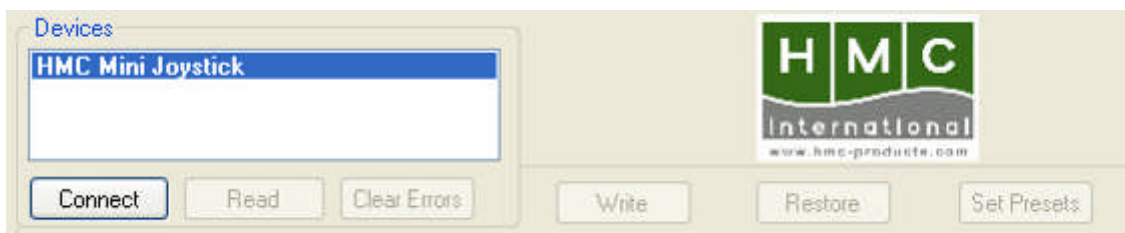
Exit : this menu item closes the HMC USB Configurator.

Help Menu items

Help Topics : this manual will be open in a separated window.

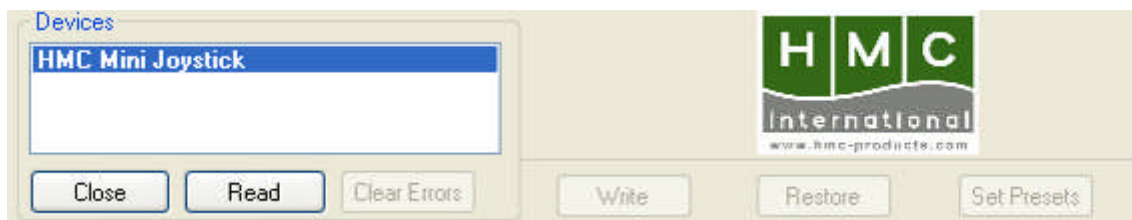
About : shows information about the HMC USB Configurator.

2.2.3 Buttons



2.2.3.1 Connect Button

Click on the connect button to establish a connection with the selected device in the Device list box. When open succeeds the device configuration is read out and the node tree is build up. After reading, the button text will be changed to Close instead of Connect.



2.2.3.2 Close button

Click on the Close button to disconnect from the open device. The tree view and data grid windows will be cleared.

2.2.3.3 Read Device Button

Click on the Read Device button to read the configuration of the device. The tree view and data grid windows are cleared. The tree view will be refilled with the devices configuration.

2.2.3.4 Write Button

Click on the Write Button will update the device his configuration with the modified values shown in the data grid window.

The Write button is only enabled when values are modified.

2.2.3.5 Restore button

Click on the Restore button to discard modified parameter values in the data grid view. The list will be populated with the actual device configuration values.

This button is only enabled when at least one parameter value is modified in the grid.

2.2.3.6 Set Presets

Click on the Set Defaults to overwrite the actual parameter values with the default value.

2.2.3.7 Clear Errors

If the treeview contains a error folder (in red color) then the this button is enabled. Click on the button will request the device to clear all errors. After the refresh of the views the error lists will not

be present as there are no errors are stored in the device error log.

2.2.4 Status bar



Left text field shows the connection state

- connected
- disconnected

Middle text field shows some information of the communication

- Length F:4 I:8 O:8 : packet lengths (Features, Input, Output)
- Timeout : communication timed out

Progress bar (right field)

- Read out the configuration takes some time in execution, the progress bar shows how far the work has progressed.

2.2.5 Editing a parameter value

- ! Cells with background colour set to light steel blue colours are read only and can not be edited.

2.2.5.1 Enter edit mode

- Double click on the desired value cell
- Select a cell (click on the cell, move up or down in the list with up or down arrow keys) and press the <ENTER> key.

2.2.5.2 Edit numeric fields

- Only digits are accepted
- To cancel editing press the <ESC> key
- Press <Enter> key to validate the (new) value.

Validation is successful: edit mode is left and the new value is shown with a yellow background (new value) or aquamarine background (original value).

Validation fails: a pop-up will appear to indicate the value is not valid, this is the case when the value is out of range.



The message text explains what the legal range is and gives also some example values.

2.2.5.3 Edit cells with preset values

Folder	Name	Value
Switch Parameters	Switch 1-1	Off
		Left
	Switch 1-2	Right
	Switch 2-1	Middle
	Switch 2-2	Left Hold
Mouse Parameters	Tremor Time	Middle Hold
		Double Click Left
		Scroll Up
		Scroll Down
Joystick Parameters	Motion speed	5
	Scroll speed	5
	Swap Joystick Axis	No
	Invert Fwd Rev JS Axis	No
	Invert Left Right JS Axis	No
	Joystick Deadband	5 %
	Joystick Forward Throw	100 %
	Joystick Reverse Throw	100 %
	Joystick Left Throw	100 %
	Joystick Right Throw	100 %

If a cell of this type is entered for editing then a list box with predefined values will appear at the location of the selected cell. In the list the actual value is high lighted.

A new value is accepted by clicking on a line in the list box.

With the up and down arrow the user can scroll in the list and accept the selected value with pressing the <ENTER> key.

<ESC> key will cancel the edit mode.

A new value is shown with a yellow background (new value) or aquamarine background (original value).

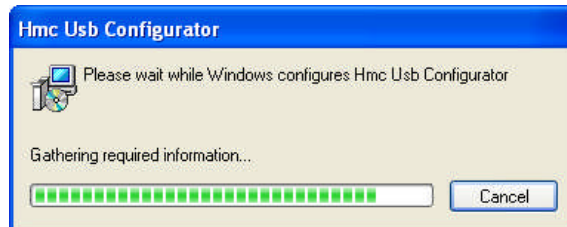
3 Installing the HMC USB Configurator

3.1 Start

Open the installer file (ex. HmcUsbConfigurator.msi).

The installer application will start and guide the user through the installation procedure.

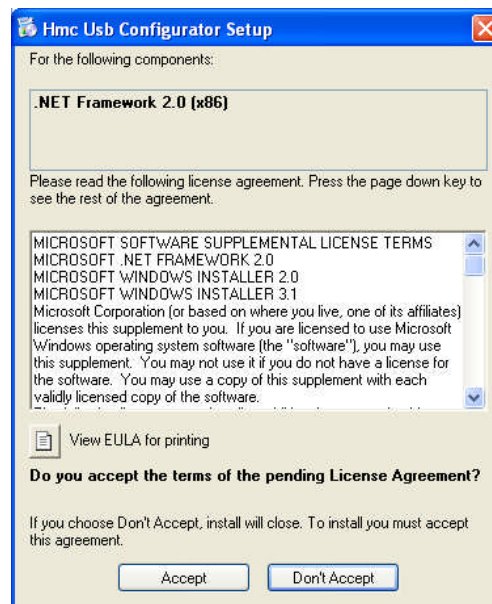
The installation takes some seconds to complete.



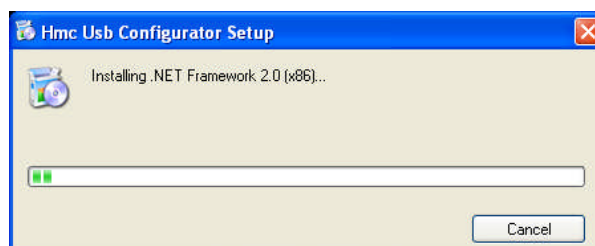
If no additional components need to be installed then the following section will be skipped and installation continuous at 3.3 Application installation

3.2 Update system when required components are not yet installed

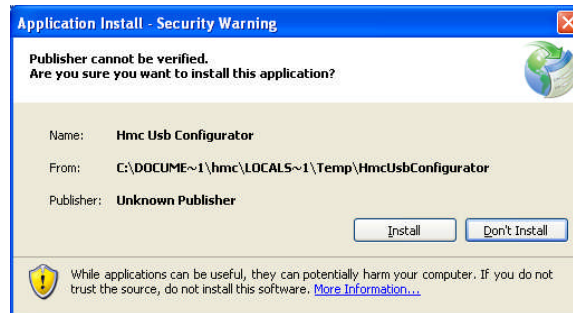
The installer checks the system for required components. If one or more components are not found then the installer will take care to download and install the required components. Make sure you have a connection to the internet.



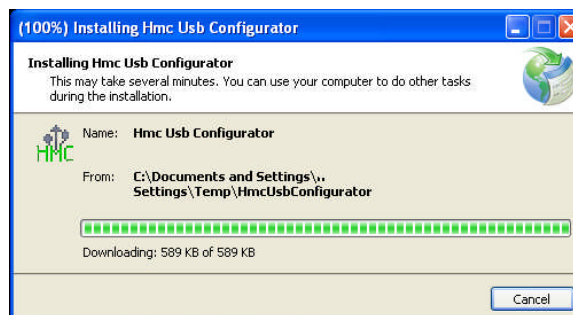
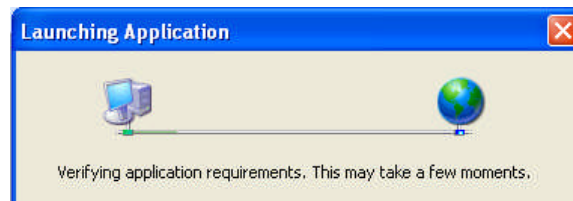
Press the <Accept button> to start the installation. Installation can take some time to complete depending of the number and type of component to be installed.



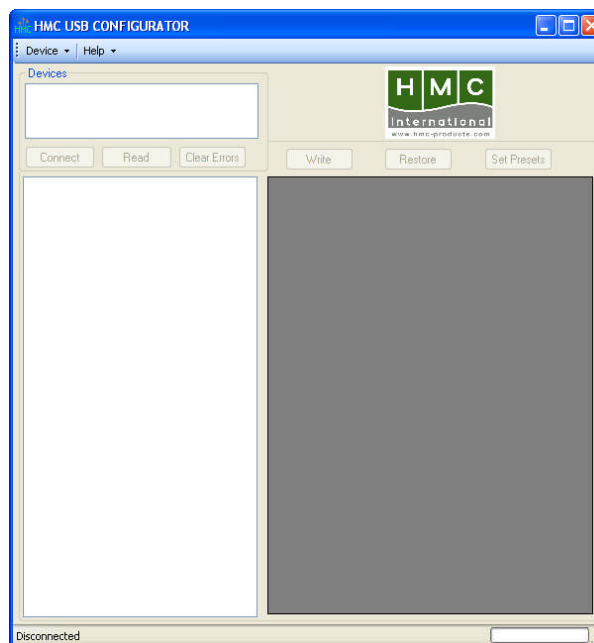
3.3 Application installation



Press <Install> Button



The installation is complete and the application is started up.



4 Programming the devices

4.1 Mini Joystick & Compact Joystick

4.1.1 Device settings

These sections view identification data of the connected device.

Device

Type	identification number
	Compact Joystick:1001-0001, Mini Joystick:1001-0007
Serial Number	serial number of the device
Software Version	firmware software version number

4.1.2 Joystick settings

These sections show the editable parameters that define the behaviour of the joystick.

Joystick

Swap Joystick Axes	Both axes are exchanged Forward/Reverse are translated to Right/Left actions and Right/Left become the Forward/Reverse actions
Invert Fwd Rev. JS Axis	Forward direction results into the reverse action and vice versa.
Invert Left Right JS Axis	Left direction results into the right action and vice versa.
Joystick Dead band	This sets the size of the joystick's neutral area. The range is 5% to 50% in 1% steps. A normal setting is 5%.
Joystick Forward Throw	This sets the amount of movement is needed to reach full forward speed. The range is 25% to 100% in 1% steps. The normal setting is 100%.
Joystick Reverse Throw	This sets the amount of movement is needed to reach full forward speed. The range is 25% to 100% in 1% steps. The normal setting is 100%.
Joystick Left Throw	This sets the amount of movement is needed to reach full left turning speed. The range is 25% to 100% in 1% steps. The normal setting is 100%.
Joystick Right Throw	This sets the amount of movement is needed to reach full left turning speed. The range is 25% to 100% in 1% steps. The normal setting is 100%.

4.1.3 Mouse settings

This section shows the editable parameters that define the mouse behaviour.

Mouse

Switch 1-1

Switch 1-2

Switch 2-1

Switch 2-2

Off	No functionality assigned
Left	Acts as the mouse left button
Right	Acts as the mouse right button
Middle	Acts as the mouse middle wheel button
Left Hold	Acts as an on/off switch for the mouse left button
Middle Hold	Acts as an on/off switch for the mouse wheel button
Double Click Left	Acts as a double click of the left mouse button
Scroll Up	Acts as the scroll wheel up direction action
Scroll Down	Acts as the scroll wheel down direction action

Motion Speed

This sets the maximum movement speed of the mouse pointer on the screen. The range is 1 to 20 in steps of 1. A normal setting is 10.

Scroll Speed

This sets the maximum scroll speed. The range is 1 to 10 in steps of 1. A normal setting is 5.

Tremor Time

This parameter can be used to reduce the effects of a user's hand tremor. This sets the amount of time the button level should be stable. The range is 20 to 2000 in steps of 1.

5 Safety and Misuse Warnings

Important warnings about the installation and the use of the device (preferable continuous text with tables or enumerations added).

Goals: warn the installer and protect the manufacturer of the device in case of problems.

Sample Text:

Attention:

- Do not install or operate the Joystick without reading, understanding and following the proper instructions, as well the installation and/or user manuals for the powerchair and any other system components, otherwise injury or damage may result.
- Joystick installation and controller system programming should only be conducted by healthcare professionals or qualified persons fully conversant with the Joystick and the Powerchair controller configuration. Incorrect configuration, installation or programming could result in an unsafe set-up of the powerchair for the user. The manufacturers accept no liability for losses of any kind resulting from such conditions.
- After the powerchair has been set up, it should be checked to ensure the entire configuration performs according to user specifications. If the powerchair does not perform to specifications, turn the powerchair off immediately and repeat the procedures until the powerchair performs as desired. Completed installation must be thoroughly checked for safe operation prior to use.
- We strongly advise that the user be instructed on proper use of the Joystick, as well as the on/off switch or additional emergency switch. A warning must be conveyed to the user that they bear responsibility to ensure the powerchair is kept in a good safe operating condition and to ensure all components and cables are protected from damage by securing in optimum position.
- The user should turn off the system while getting in and out of the powerchair. Ensure the power switch is turned off when the powerchair is not in use.
- If the powerchair operates erratically, or shows abnormal response, or either of the two LEDs on the interface (red LED marked MJ status; green LED marked DX status) flashes during use, release the joystick, turn off the system and consult the Service Agent.
- As the Joystick can be easily moved, please take care to install it in a position where it cannot be moved by accident or damaged.
- Route and secure all cabling in such a way to prevent damage by crushing, cutting or snagging.
- The Joystick may be adversely affected by strong magnetic fields in close proximity to the Hall sensor. To minimise the risks of unintentional movement or other undesirable actions, keep the Joystick away from all strong magnetic fields such as that present with the DX magnetic locking key.

6 Troubleshooting

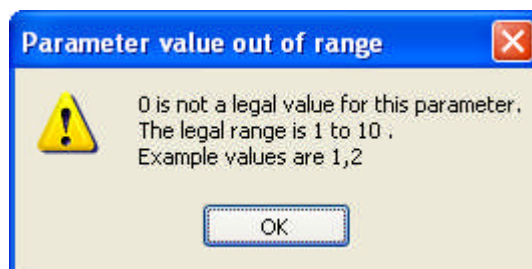
6.1 No device names appear in the list box.

- Verify if the USB connection.
- Verify if the device does not report a severe failure (Led indicator).
- Reconnect the device.

6.2 The device name appears in the format VIDvvvv&PIDpppp

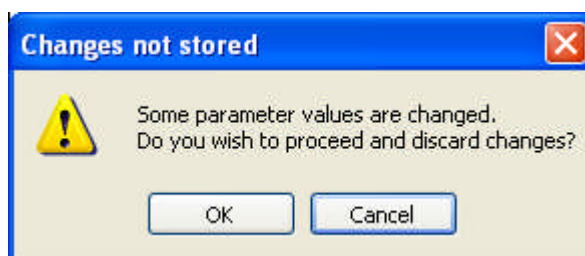
- The device is unknown by the application. Install the latest version of the application.

6.3 Popup Parameter value out of range



The edited value is out of range, read the message to understand what the legal range of values is. Press OK to correct the value or press the “Restore” or “Set Defaults” button.

6.4 Popup Changes not stored



Pops up when Close button is pressed and there is at least one parameter changed in the data grid and not yet written to the device.

Press

- OK: discard changes and open the newly selected folder.
- Cancel: discard the selection and proceed with processing of the actual open folder

7 Content

1	GENERAL	1
2	USING THE HMC USB CONFIGURATOR.....	2
2.1	HOW TO OPEN THE HMC USB CONFIGURATOR:	2
2.2	USER INTERFACE.....	2
2.2.1	<i>Data Windows.....</i>	<i>2</i>
2.2.2	<i>Menu bar.....</i>	<i>5</i>
2.2.3	<i>Buttons.....</i>	<i>7</i>
2.2.4	<i>Status bar.....</i>	<i>8</i>
2.2.5	<i>Editing a parameter value</i>	<i>8</i>
3	INSTALLING THE HMC USB CONFIGURATOR.....	10
3.1	START.....	10
3.2	UPDATE SYSTEM WHEN REQUIRED COMPONENTS ARE NOT YET INSTALLED	10
3.3	APPLICATION INSTALLATION	11
4	PROGRAMMING THE DEVICES	12
4.1	MINI JOYSTICK & COMPACT JOYSTICK	12
4.1.1	<i>Device settings.....</i>	<i>12</i>
4.1.2	<i>Joystick settings.....</i>	<i>12</i>
4.1.3	<i>Mouse settings.....</i>	<i>13</i>
5	SAFETY AND MISUSE WARNINGS	14
6	TROUBLESHOOTING.....	15
6.1	NO DEVICE NAMES APPEAR IN THE LIST BOX.	15
6.2	THE DEVICE NAME APPEARS IN THE FORMAT VIDVVVV&PIDPPPP	15
6.3	POPUP PARAMETER VALUE OUT OF RANGE	15
6.4	POPUP CHANGES NOT STORED	15
7	CONTENT	16