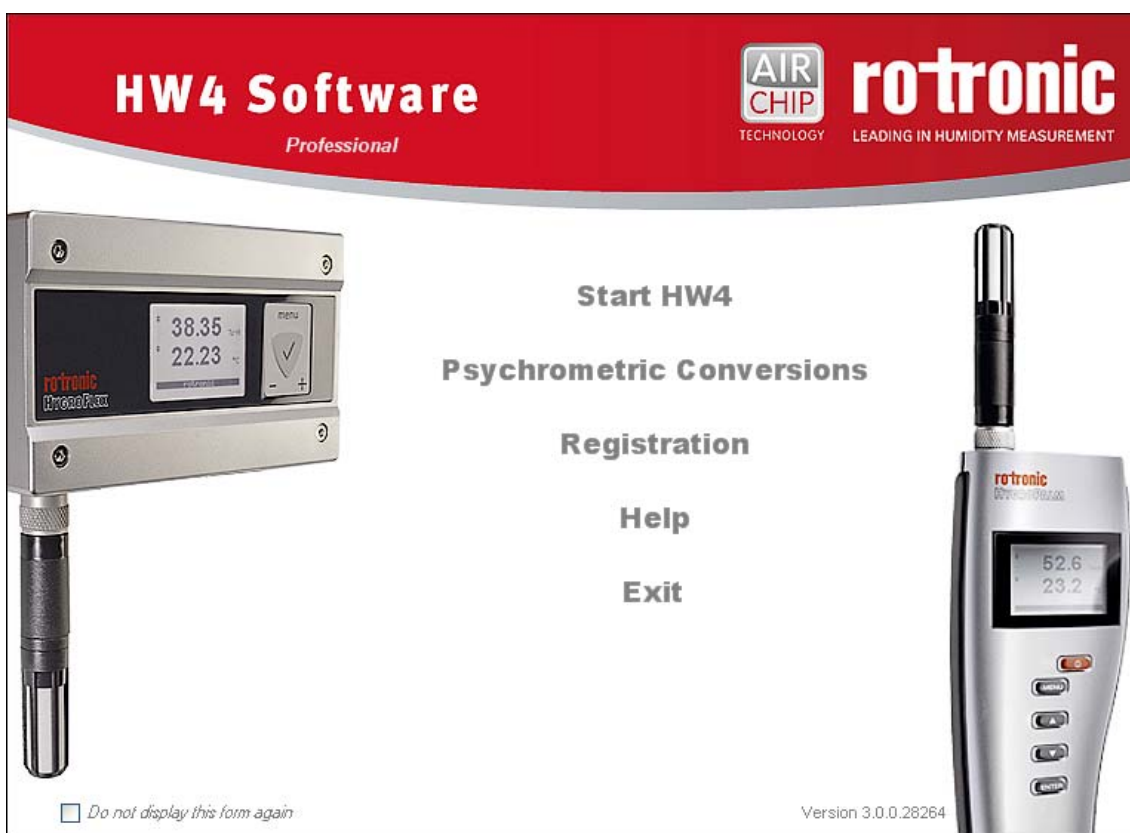


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## HW4 Software version 3

### Device Manager HygroClip Alarm (HCA)



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# 1 ORGANIZATION OF THE HW4 MANUALS

The HW4 manuals are organized in separate books so as to limit the size of the individual documents. A list of the HW4 manuals is provided in document **E-M-HW4v3-DIR**

HW4 Manuals	Contents
HW4 Main Book	General software description Installation, start-up and settings Device connection methods Functions common to all devices used with HW4
Device Specific Functions 1 (separate book for each device type or model)	Legacy devices (original HygroClip technology): <ul style="list-style-type: none"> <li>HygroLog NT data logger</li> <li>HygroFlex 2, HygroFlex 3 and M3 transmitters</li> <li>HygroLab 2 and HygroLab 3 bench indicators</li> <li>HygroPalm 2 and HygroPalm 3 portable indicators</li> <li>HygroClip DI digital interface</li> <li>HygroClip Alarm programmable logic</li> <li>HygroStat MB</li> </ul> Device Manager (device configuration) and other device specific functions
Probe Adjustment 1	Humidity and temperature adjustment function common to all legacy devices (original HygroClip technology)
Device Specific Functions 2 (separate book for each device type or model)	Devices based on the AirChip 3000 technology: <ul style="list-style-type: none"> <li>HygroClip 2 (HC2) probes</li> <li>HF3 transmitters and thermo-hygrostats</li> <li>HF4 transmitters</li> <li>HF5 transmitters</li> <li>HF6 transmitters</li> <li>HF7 transmitters</li> <li>HL20 and HL21 data loggers</li> <li>HP21, HP22 and HP23 hand-held indicators</li> <li>Custom designed OEM products</li> </ul> Device Manager (device configuration) and AirChip 3000 functions
Probe Adjustment 2	Humidity and temperature adjustment function common to all devices based on the AirChip 3000 technology
Data Recording Function	Data recording function common to all devices based on the AirChip 3000 technology

Both the HW4 manuals (software) and device specific manuals (hardware) are available on the HW4 CD. The manuals can also be downloaded from several of the ROTRONIC web sites.

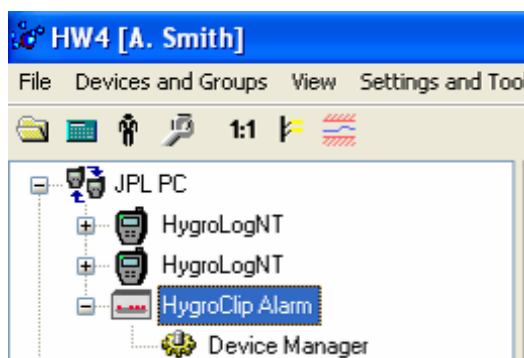
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## 2 OVERVIEW

This section of the HW4 manual covers only the HW4 functions that are unique to the HygroClip Alarm (HCA) programmable logic card. HW4 functions that are not device dependent are covered in document E-IN-HW4v3-Main.

## 3 DEVICE MANAGER

Device Manager is the only function available with the HygroClip Alarm (HCA). This is illustrated below:



To open the Device manager form, click with the mouse on Device Manager. The Device Manager form is used to configure the HygroClip Alarm and to read device specific information.

When Device Manager is started, it automatically interrogates the device and downloads its current configuration.

 A screenshot of the "Device Manager" window. The title bar is "Device Manager". The menu bar has "File" and "Help". On the left is a tree view with the following items: "Device Information", "Logical inputs", "Relays", "Programming", "Interface", and "Buttons & Switches". The "Device Information" item is selected. The main area displays the following information:
 

Device Information	
Device Type	HygroClip Alarm
Firmware Version	V2.1a
Serial Number	0056258001
Device Name	<input type="text" value="HCA Test"/>
RS-485 Address	2 <a href="#">Change RS address</a>
Device Time	11/27/2006 12:57:04 <a href="#">Synchronize with PC clock</a>
Device Protection	Disabled <a href="#">Protect device</a>
<input checked="" type="checkbox"/> Alarm when Event Memory is Full <a href="#">Open Event Viewer</a> <a href="#">Clear Event Memory</a>	

 At the bottom right are "OK" and "Exit" buttons.

The forms that are available within the Device Manager form are listed in a tree located on the left pane of the form. To select a form, click on it with the left mouse button.

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### 3.1 *Device Manager Menu Bar*

The Device manager menu bar is located at the top of the form.

#### File

- **Open:** opens the device configuration directory specified in the HW4 Settings Form - File Locations Tab - and displays all available device configuration files (extension .DAT). Any device configuration file that was previously saved can be opened to quickly configure an instrument. If so desired, any directory and any file type may be opened.
- **Save As:** saves the current configuration to a file (extension .DAT) in the device configuration directory specified in the HW4 Settings Form - File Locations Tab. If so desired, any directory and any file type may be specified.
- **Exit:** exits Device Manager

### 3.2 *Device Information*

**Device Manager**

File Help

- Device Information
- Logical inputs
- Relays
- Programming
- Interface
- Buttons & Switches

**Device Information**

Device Type: HygroClip Alarm

Firmware Version: V2.1a

Serial Number: 0056258001

Device Name: HCA Test

RS-485 Address: 2 [Change RS address](#)

Device Time: 11/27/2006 12:57:04 [Synchronize with PC clock](#)

Device Protection: Disabled [Protect device](#)

☒ Alarm when Event Memory is Full [Open Event Viewer](#)  
[Clear Event Memory](#)

OK Exit

- **Device name:** this text will be displayed next to the instrument model information. As far as possible use a unique device name.
- **RS485 address:** click on the underlined link to change the instrument address to be used in conjunction with an RS-485 network (multi-drop). Each network address should be unique and within the values of 0 to 63. Note: the default factory RS-485 address is 0. Unless necessary, do not manually modify this address. HW4 will automatically change the RS-485 address of the device, if so required.
- **Device Protection:** for a description of this function, see document E-IN-HW4v2.1-Main

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- **Open Event Viewer / Clear Event Memory:** click on one of the underlined links to view (and print) the events recorded by the device memory or to clear the memory of all recorded events. For more details, see: [HygroClip Alarm events](#).
- **Alarm when Event Memory is Full:** check this box to have the HCA send an alarm to the PC whenever the event memory is full.

### 3.3 Logical Inputs

- **Description:** this text will be displayed by HW4 in the current values table.
- **Logical Input 1 / Logical Input 2:** put a check mark in the box next to Logical Input 1 and/or Logical Input 2 to enable monitoring of the logical input alarm status by HW4. The logical state that triggers an alarm can be defined under "Logical Input Alarm".

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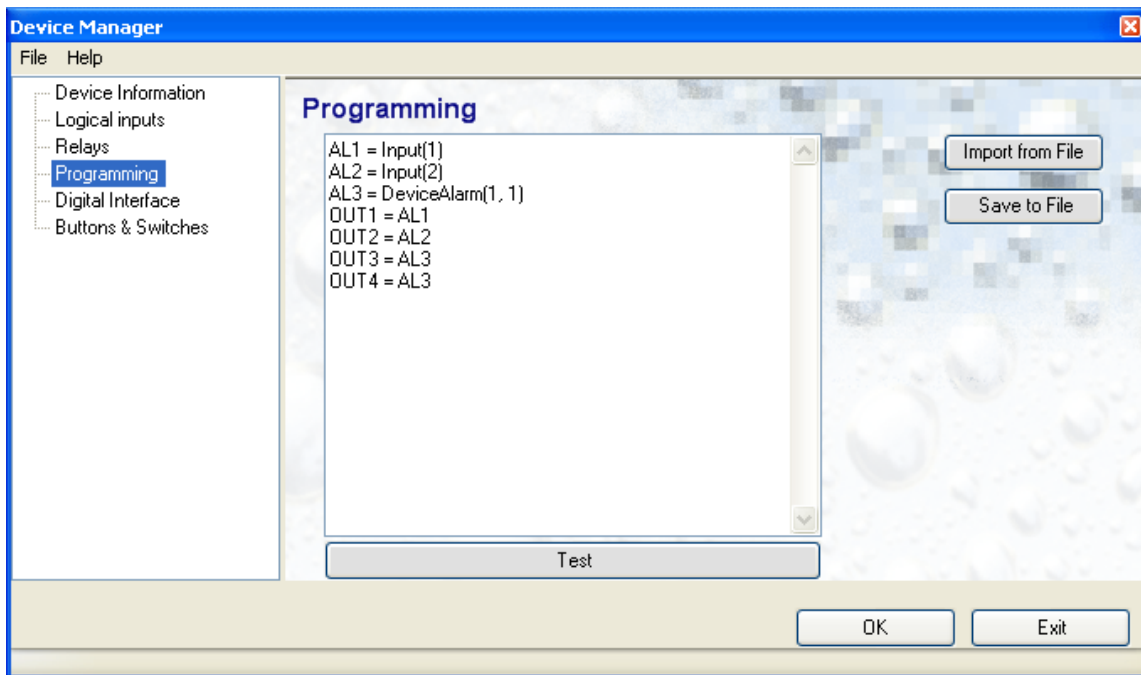
## 3.4 Relays

	Description	Relay Output Alarm
Relay 1	Relay A	<input checked="" type="checkbox"/> 1
Relay 2	Relay B	<input checked="" type="checkbox"/> 1
Relay 3	Relay C	<input checked="" type="checkbox"/> 1
Relay 4	Relay D	<input checked="" type="checkbox"/> 1

- **Description:** this text will be displayed by HW4 in the current values table.
- **Relay Output Alarm:** put a check mark in the box next to each relay to enable monitoring of the relay alarm status by HW4. The logical state that triggers an alarm can be defined under "Relay Output Alarm" (logical 1 means that the relay is energized).

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### 3.5 *Programming*



Program statements can be typed directly in the white area located under the heading “Programming”. The functionality of this area is equivalent to a simple text editor.

**For details regarding the HCA programming language, see separate HygroClip Alarm manual.**

- **Import from File:** use this button to import a program from the PC (normally, programs are files with the TXT extension and are located in the ROTRONIC\_HW4\SYS subdirectory).
- **Save to File:** use this button to save the current program to a file with the TXT extension (normally this file will be saved on the PC in the ROTRONIC\_HW4\SYS subdirectory).



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## 3.6 *Digital Interface*

The screenshot shows the 'Device Manager' application window. On the left is a tree view with the following items: File, Help, Device Information, Logical inputs, Relays, Programming, Digital Interface (highlighted), and Buttons & Switches. The main area is titled 'Digital Interface' and contains a sub-section 'Settings' for 'RS485'. The settings are as follows:

Setting	Value
Baudrate	19200
Data bits	8
Stop bits	1
Parity	None

At the bottom right of the window are 'OK' and 'Exit' buttons.

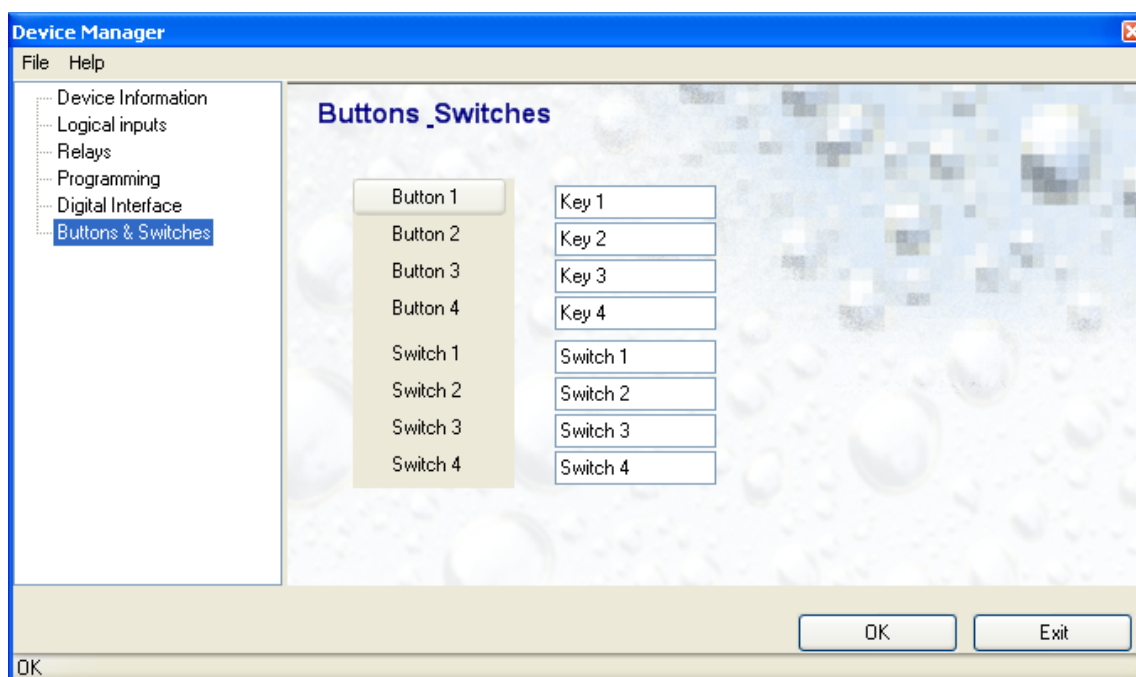
This form is used to select the RS-485 baud rate between 57600 and 19200. Other data cannot be changed from within the form. Select the Baud rate depending on which devices you plan to connect with the HCA. Devices such as the HygroFlex transmitter normally use 19200 bps.

### **IMPORTANT:**

All devices within an RS-485 multi-drop should use the same baud rate. Communication within the RS-485 multi-drop will not work when the devices are configured with different baud rates.

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### 3.7 Buttons and Switches



A virtual push button can be actuated by clicking on it with the mouse.

A virtual switch can be closed by clicking on it with the mouse as illustrated above for switch 1.

Click on the Exit button after clicking on a push button or changing the position of a switch.

## 4 HYGROCLIP ALARM EVENTS

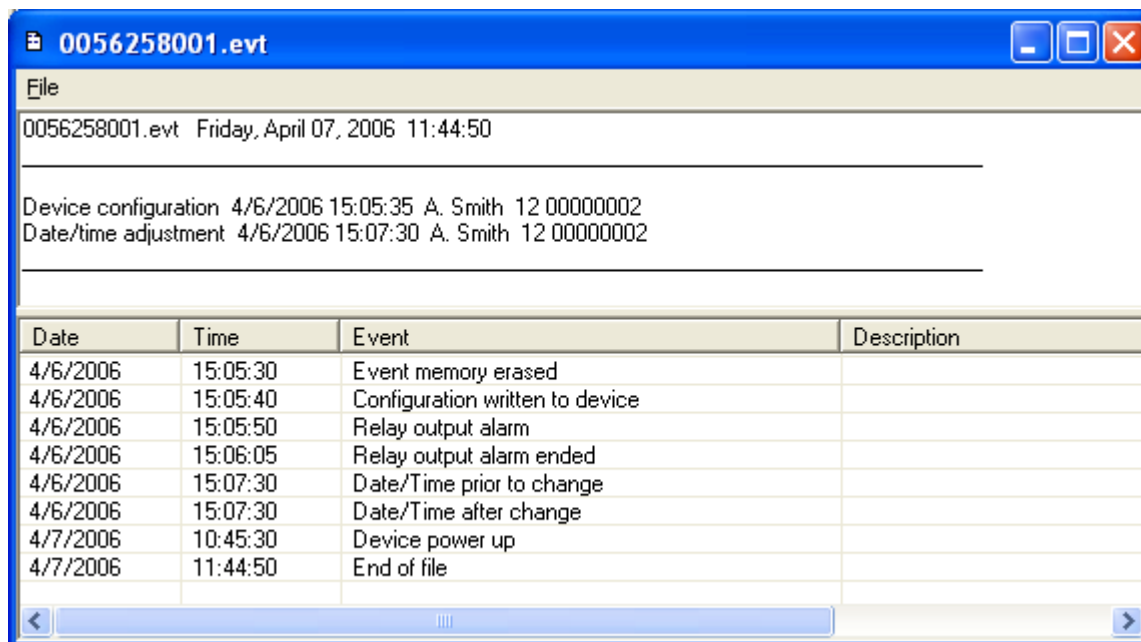
The HygroClip Alarm (HCA) features an internal memory that can retain up to 680 events. When the memory is full, the oldest event is erased whenever a new event is recorded. The following events are automatically recorded by the HCA:

- Logical input alarm
- End of logical input alarm
- Relay output alarm
- End of relay output alarm
- Device power up
- Watchdog overflow
- Configuration written to device
- Date/Time prior to being changed
- Date/Time after being changed
- RS-485 address changed
- Event memory erased

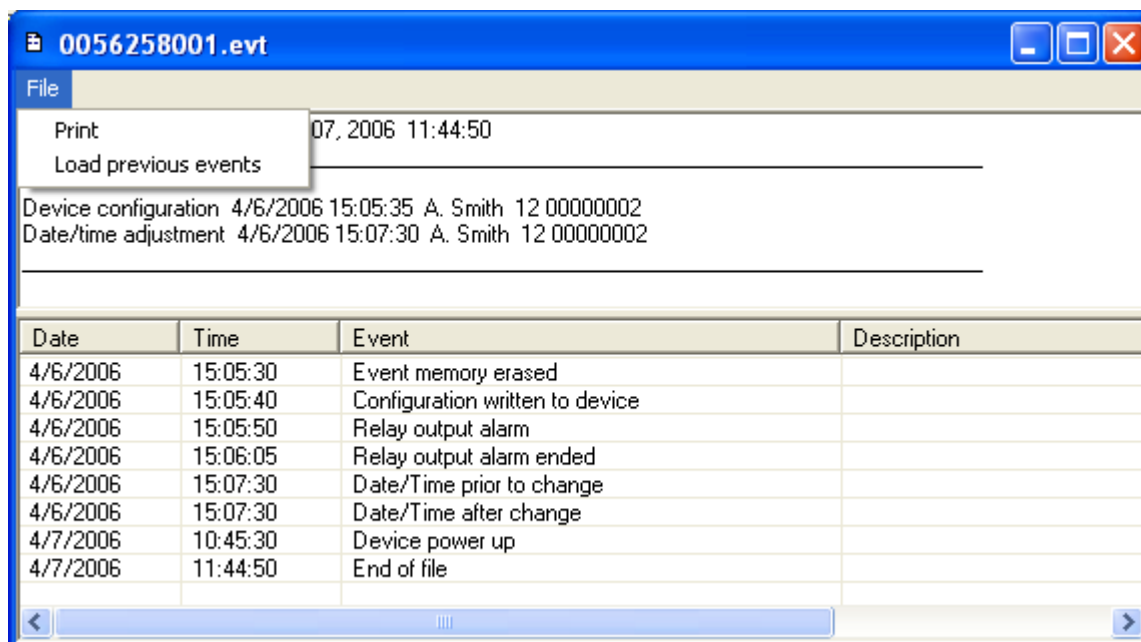
Accessing the events memory requires the HCA to be connected via RS-485 and a master device to a PC with the HW4 software. Using HW4, the Event Viewer is accessed or the event memory is cleared from the HCA device manager.

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**Event Viewer:** the Event Viewer displays the most current events.



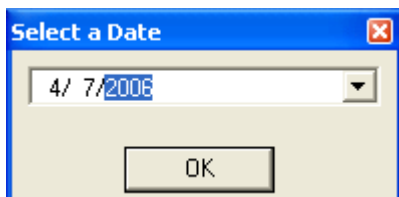
**File:** the file item is located on the Event Viewer menu bar:



**Print:** prints the current contents of the event viewer to a printer or to a file.

**Load previous events:** opens a date selection box and allows loading in the viewer events from a previous day (this operation can be repeated several times).

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## 5 DOCUMENT RELEASES

Release	Software Ver.	Date	Notes
_10	3.0.0	Jun. 18, 2010	Original release