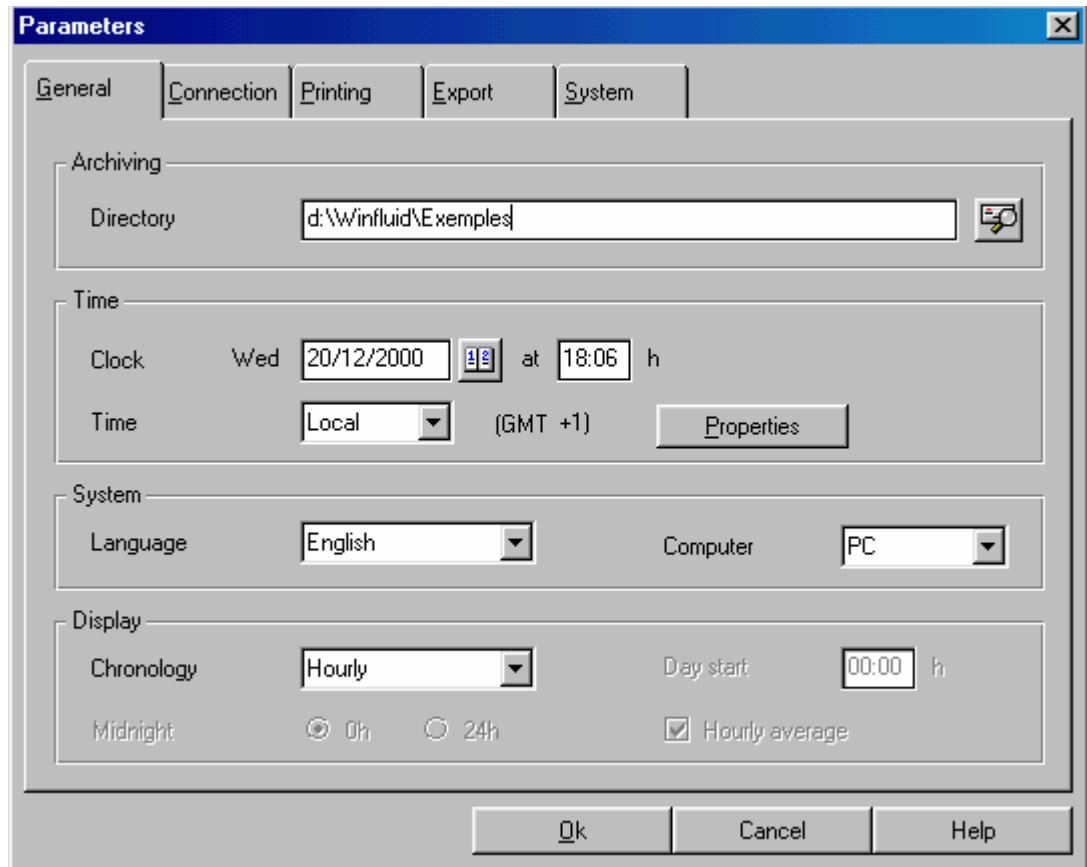


QUICK CONFIGURATION OF THE MAINSTREAM III WITH WINFLUID

I Step 1 : Winfluid configuration

The first step consists of informing Winfluid of its immediate environment. The configuration menu is accessible by clicking in the tool bar on **PARAMETERS**



A dialog box is displayed, giving information for the different options:


- **General** : Define the hard disk directory where the saved files will be stored, check the date and time. Leave the default display for the other options (except for a particular case)
- **Connection** : Define the logger (Mainstream III) and the communication mode
- **Printing, Export, System**: These options have no effect on the configuration

Note : This menu should be altered for each connection with a logger of a different type. If a logger of a different type is used, the following error message will appear "**Logger undetected**" or "**Wrong logger**".

I Step 2 : Configuration of the Mainstream III

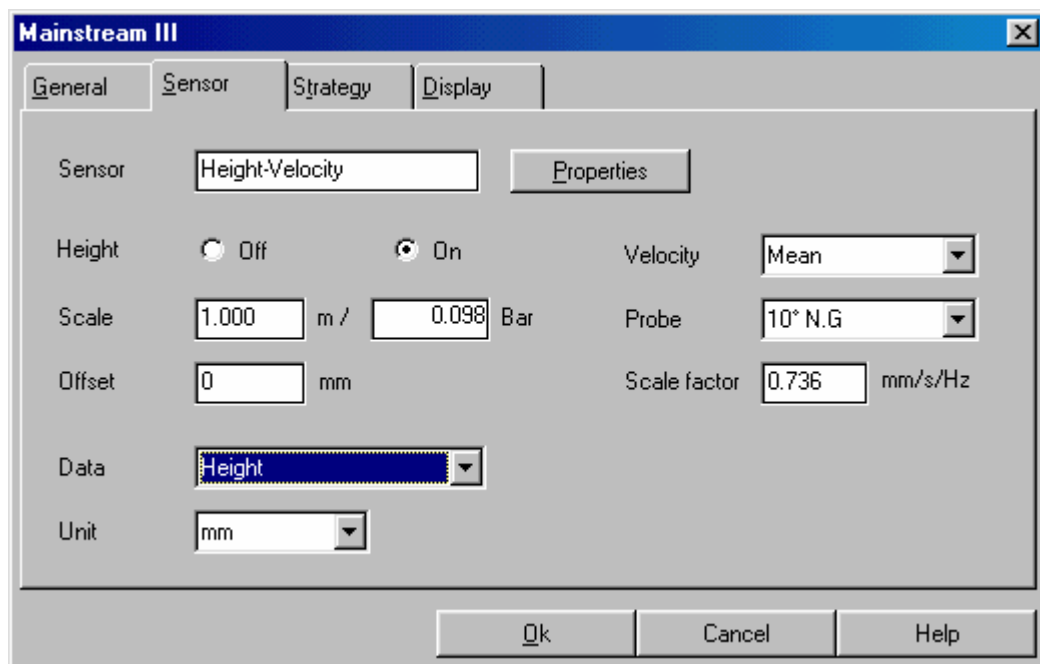
The main screen of Winfluid enables to access to the general menus (programming, upload, process). To configure the logger, click on **Programming**.

A. Input channel

The Mainstream III has a height input channel and a velocity input channel. To configure those two inputs, click on the shortcut  (input channels) :

- **Site** : define the name of the files logging
- **Note** : personal annotation,
- **Telephone No.** : in case of modem link

Click on **sensor**, and

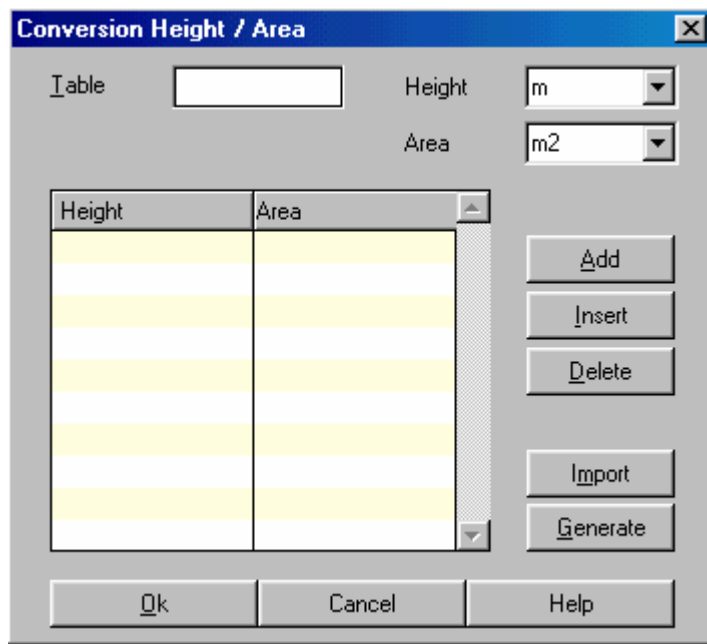


Two strategy allow to calculate the flow :

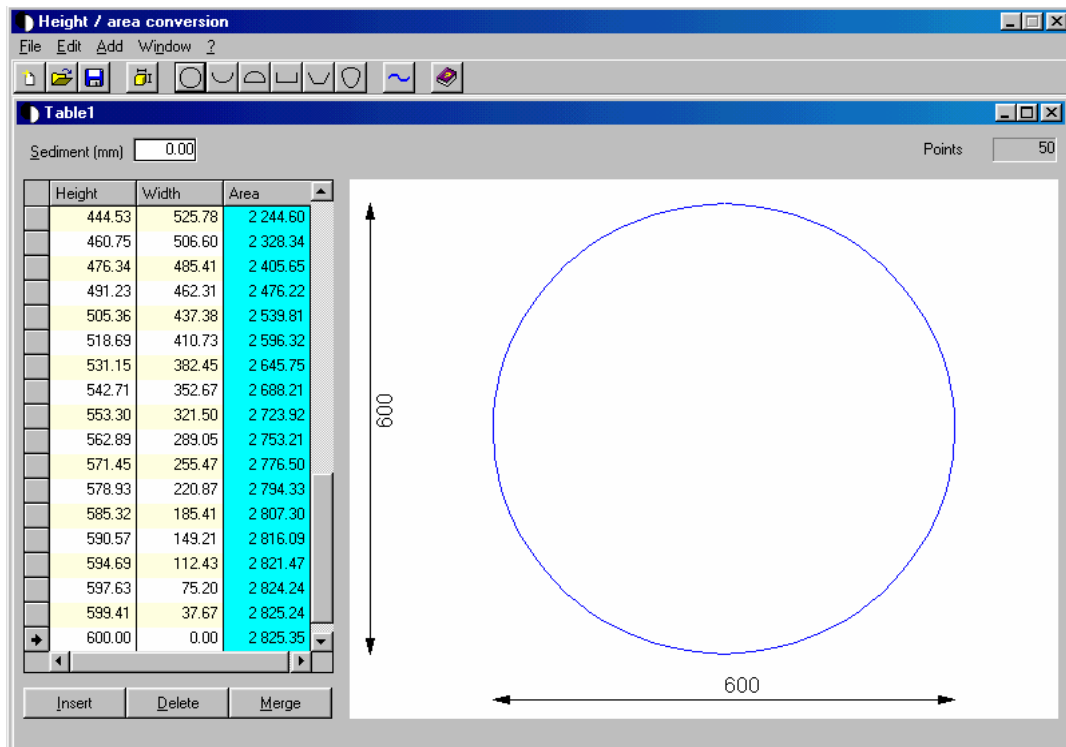
- Height/area conversion : creation of a height/wetted cross section conversion table. The flow is the product of the wetted cross section and the mean velocity
- Height/flow conversion : creation of a height/flow conversion table.


- **Height/area** : click on Table

The dialog box "Height/area conversion" is displayed:



Click on **Generate** and define the section of the pipe :



Click on the icon  to transfer data to Winfluid

Give a name to the conversion table (name of the data file)

Confirm the height/area conversion by OK.

- Define pressure sensor full scale (in meter or Bar)
- Define the velocity logging mode
 - Stopped : no logging of velocity.
 - Mean : logs the average velocity measured during the logging period
 - Peak : logs the maximum velocity measured during the logging period
- Scale factor : Velocity sensor gradient (mm/s/Z)

STRATEGY

- **Period** : Logging period
- **Measurement** : Velocity sense measurement
 - Unidirectionnal : velocity and flow are positive regardless of the current direction
 - Bi-directionnal : velocity and flow are positive for current in the normal direction, and negative for current in the reverse direction
- **Emission** : Ultrasonic emission mode
 - Low : one pulse train per measurement
 - High : several pulse trains per measurement
- **Warm-up** : Sensor power time

DISPLAY

- **Data** : Enables and disables the display of the corresponding parameter on the logger LCD
- **Unit** : Display unit of the corresponding data on the display

CONFIRM THE DIALOG BOX BY OK

B Output channel

The portable M III enables to command samplers on treshold or/and flow mode

➤ Threshold mode : select the output channel n°6

- Define the starting source (height, signal, quality, velocity, flow)
- Define the open contact value (sampler starting)
- Define the closed contact value (sampler locking)

The screenshot shows the 'Output channels' dialog box with 'Channel 6' selected. The 'Type' is set to 'Contact 2'. The 'Source' is set to 'Height'. The 'Contact open' value is 150.00 mm, and the 'Contact closed' value is 100.00 mm. Buttons for 'Ok', 'Cancel', and 'Help' are visible at the bottom.

Note : Choose values which are far enough from each other. Moreover, you can define the starting type.

- If $CO > CC$: Ascending starting
- If $CO < CC$: Descending starting
-

The $CO-CC$ value called Hysteresis ensures a security marge

ACCEPT BY OK

➤ Volume mode : select the output channel 5


Define the volume which will generate an impulse

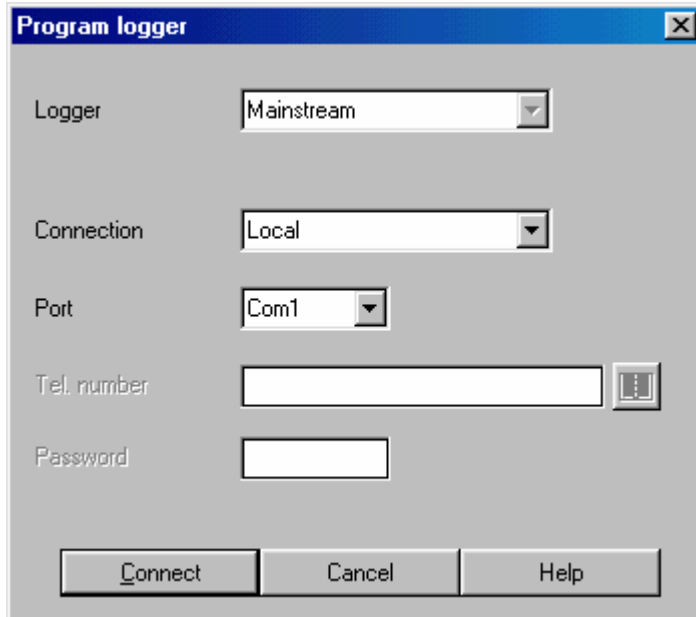
The screenshot shows the 'Output channels' dialog box with 'Channel 5' selected. The 'Type' is set to 'Contact 1'. The 'Source' is set to 'Volume'. The 'Volume/pulse' value is 100.00 l. Buttons for 'Ok', 'Cancel', and 'Help' are visible at the bottom.

ACCEPT BY OK

Note: For the programming of the sampler, see at the end of this document.

To send the configuration page to the Mainstream III, click on the icon 

The dialog box "Program logger" is displayed, click on 



Program logger

Logger: Mainstream

Connection: Local

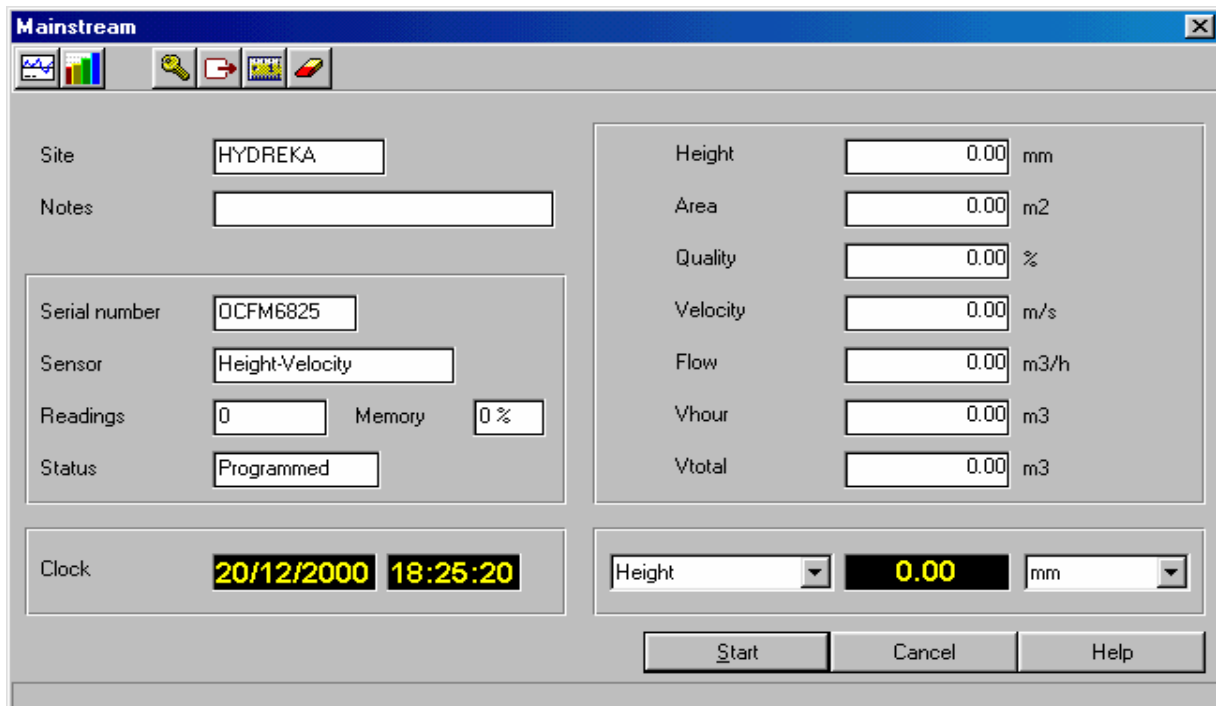
Port: Com1

Tel. number:

Password:

Buttons:

Before starting the logger, it is necessary to define the pressure sensor scaling (offset)



Mainstream

Site: HYDREKA

Notes:

Serial number: OCFM6825

Sensor: Height-Velocity

Readings: 0 Memory: 0%

Status: Programmed

Height: 0.00 mm

Area: 0.00 m2

Quality: 0.00 %

Velocity: 0.00 m/s

Flow: 0.00 m3/h


Vhour: 0.00 m3

Vtotal: 0.00 m3

Clock: 20/12/2000 18:25:20

Height: mm

Buttons:


Click on the icon .

Confirm programming and start data logging by clicking on START.


III Real time reading and measurement download

In order to check that the logger has been correctly configured and it is logging, click on .

The dialog box MAINSTREAM is displayed :

- Check that the state option displays "**Recording**"
- Data acquisition can be displayed in real time in the form of a graph by clicking on .

To load the data, click on UPLOAD

Logged data can be saved by clicking on .

IV Sampler programming for control

The programming methodology will always be realised in the same order

- **Step 1** : logger configuration and starting (see precedent paragraph)
- **Step 2** : sampler programming
- **Step 3** : connect the logger to the sampler
- **Step 4** : sampler running

- **Threshold mode**

Sampler programming in TIME mode

Step 2

- *Programming*
- *Time* : define the time between each sampling
- *Multiplexed sampling* : choice between 1 sampling in various bottles or various sampling in 1 bottle (define number and volume)
- *Collected volume* : if selecting NO at the precedent option, define the volume to be collected
- *Aspiration height* : height between the liquid and sampler
- *Starting hour* : NO

Programming sequence finished

Step 3 : Connect the logger to the sampler

Step 4 : Sampler running

- Press on *start sampling*, define the bottle receiving the first sampling
- Press on *Valid/program*

The LCD displays "samp locked".

- **Volume mode**

Step 2

- *Programming*
- *Flow* : define the impulses number which will enable one sampling
- *Multiplexed sampling* : choice between 1 sampling in various bottles or various sampling in 1 bottle (define number and volume)
- *Collected volume* : if selecting NO at the precedent option, define the volume to be collected
- *Aspiration height* : height between the liquid and sampler
- *Starting hour* : NO

Programming sequence finished

Step 3 : Connect the logger to the sampler

Step 4 : Sampler running

- Press on *start sampling*, define the bottle receiving the first sampling
- Press on *Valid/program*