

HD32MT.1

TCP/IP Server
HD32MTLogger
MeteoStudio
HD 32.D Display

QUICK START
ENGLISH



MAIN POWER

The **LINE IN 100-240Vac** must be connected by the correspondent input box.
After put the Backup Battery connector like figure:



PHOTOVOLTAIC POWER

If the power supply of datalogger falls below **11.0V** (i.e. the battery near 12.0V), the datalogger goes in *LOW POWER* Mode and suspends all measures and stops the supply to the sensors, until the power supply goes to **11.8V**.

FIRST SETTING TCP/IP SERVER MODE**HDF2414 IP MODEM**

Connect the ANTENNA wire by the correspondent inputs box, to the internal antenna terminal of HDF2414 (IP MODEM). The antenna can be attached in the left bottom side of the box.

Take attention to put the Antenna far from electromagnetic interference.

Disconnect the green connector of the HDF2414 and connect it by the flying “**Configuration Cable**” with green connector, insert your *SIM* Card and connect the cable to the COM of your PC

Note: previously by a mobile phone, you must disable the request of the PIN code on the SIM (if it's active)



Figure 1

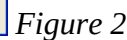
It's better to disable the Windows Firewall, for example for XP:



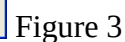
Figure 8

Re-Power if the software doesn't reach the IP MODEM in the *Output info*.

Press again the Save button if some parameter show “Save... Failed” [*].



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Other Setting (Figure 4)

Put your **APN** (for example for a *Wind* SIM is *internet.wind*)

Press the **Save** button. Check in Output Info the correct saving by the OK messages.

Press again the Save button if some parameter show “Save... Failed” [*].

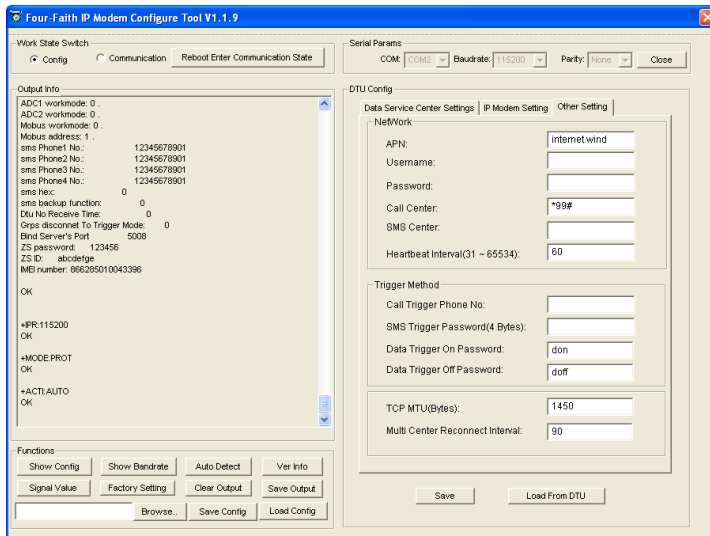


Figure 4

[*]

Note: if some parameter shows many time “Save... Failed”, may be not so. Then click **Close**, and after **Open**, power off /on the IP MODEM, and re-read all the parameters on the tab of the *DTU Config*, if are OK.

Press **Reboot Enter Communication State** wait some seconds and follow the next chapter.

TESTING THE TCP/IP SERVER MODE

To verify if the **TCPIP Server** connection works well, see the next chapter that uses the *HD32MTLogger* software.

USING TCP/IP SERVER MODE

Reconnect the **green** connector of the HDF2414 and check if the other **black** connector is inserted in the **COM PC** input of **HD32MT.1** datalogger :



Figure 11

HD32MTLOGGER

The DeltaOhm software *HD32MTLogger* permits the configuration of the HD32MT.1 and the **single station** communication:

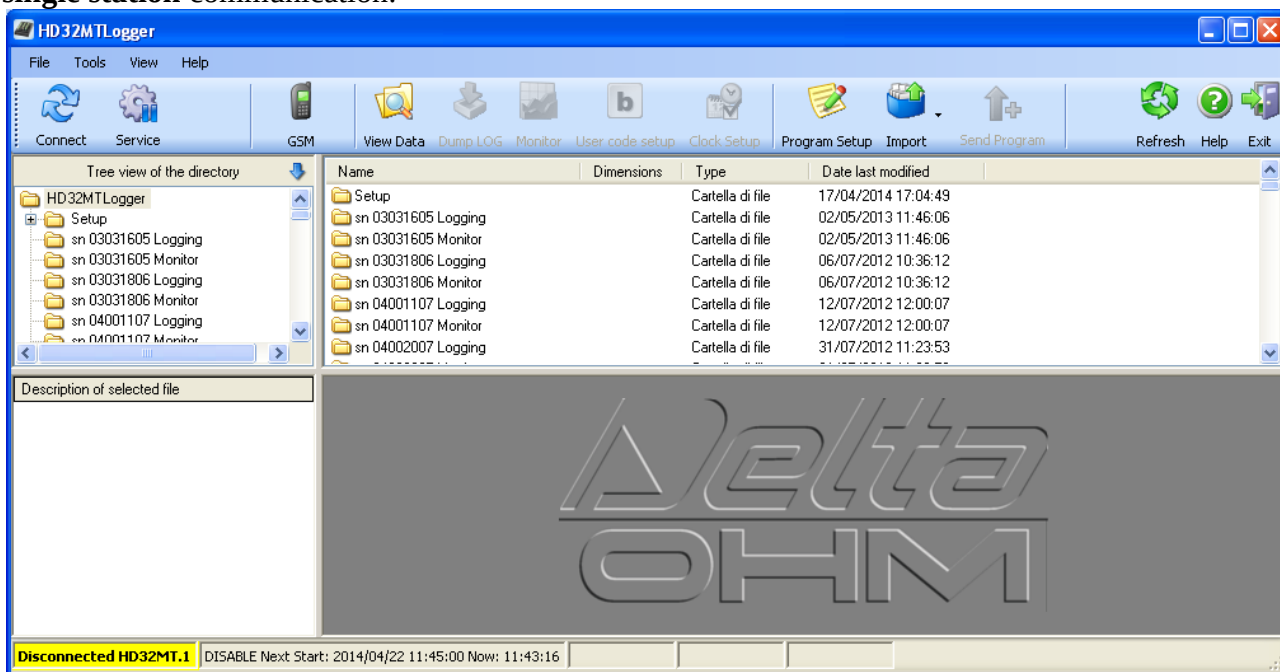


Figure 12

Press the **Service** button until the Automatic Service (if it appears) show **DISABLE** in the bottom Status bar.

TCP/IP SETUP

In the menù *Tools*, click *Choice of instrument model and connection type* and choose the **TCP/IP server connection** and press *Apply* and *Exit*. Put your **Port number** in the menù *Tools* and *TCP/IP connection setup* and press *Apply* and *Exit*:

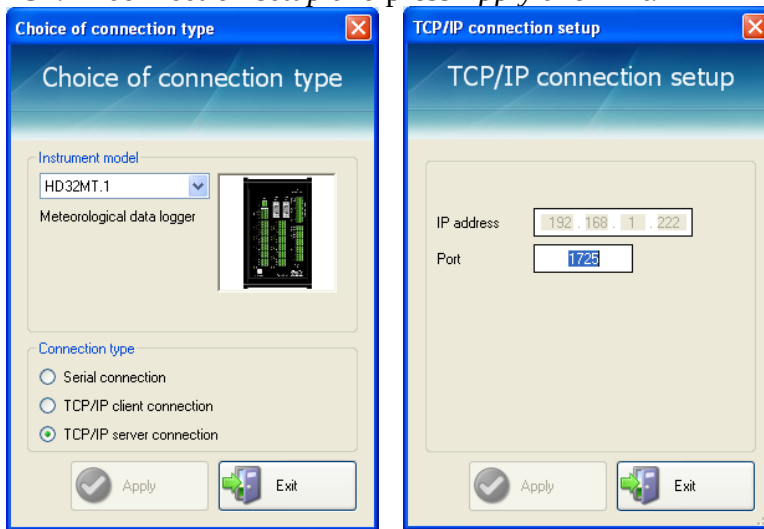


Figure 13

CONNECTION STEPS

Clicking *Connect*, (the Automatic Service becomes **DISABLE** in the same way that clicking the *Service* button), the software remains in the **LISTEN Mode** and tries to reach the HD32MT.1 of the station.

Step 1: This is the LISTEN Mode

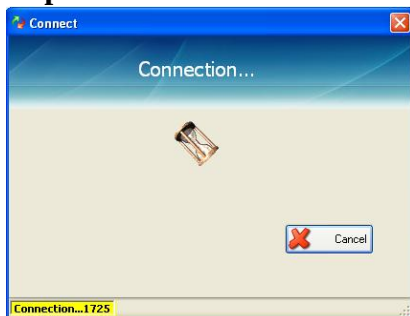


Figure 14

Step 2: The software reach the Client IP MODEM when **Reached Client** appear in the status bar:

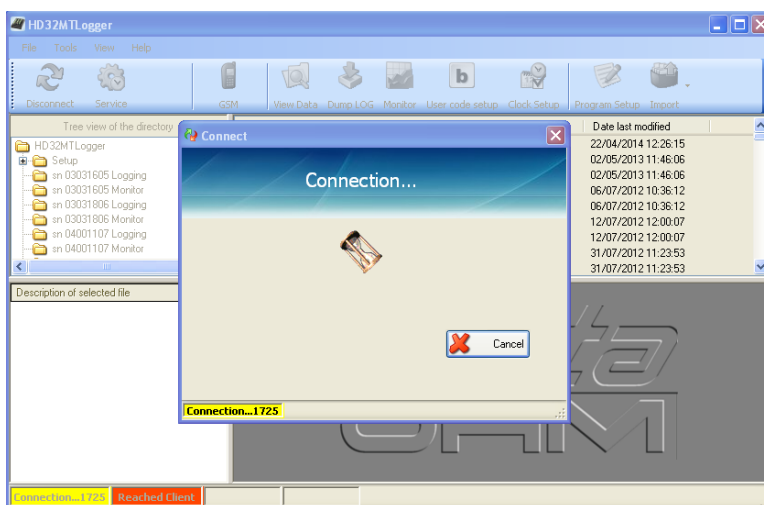


Figure 15

Note: In the Automatic Service, there is a 2.5 minutes timeout for the event “Reached Client”.

Step 3: the datalogger is transferring its Program settings

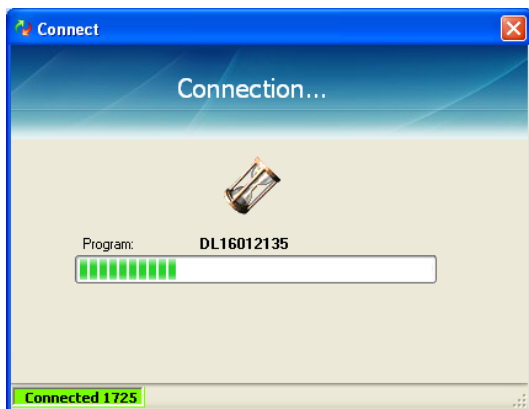


Figure 16

In the case of manual clicking *Connect* (not Automatic Service), appear also the *Datalogger Information* and *Password Insert* windows:

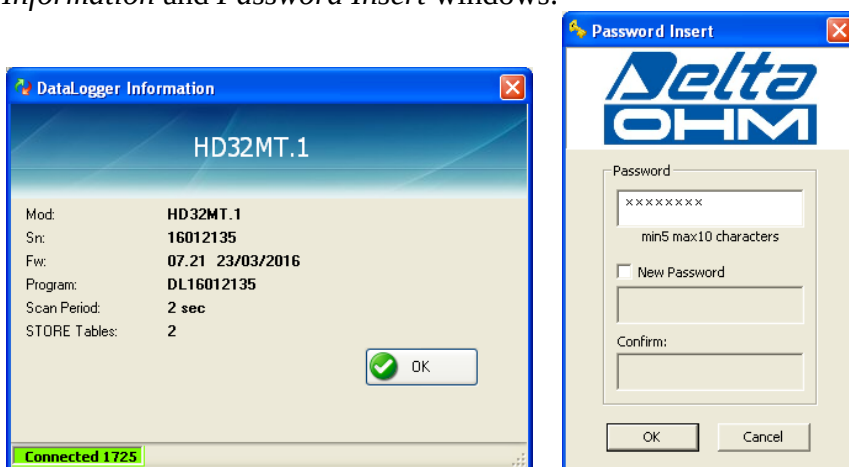


Figure 17

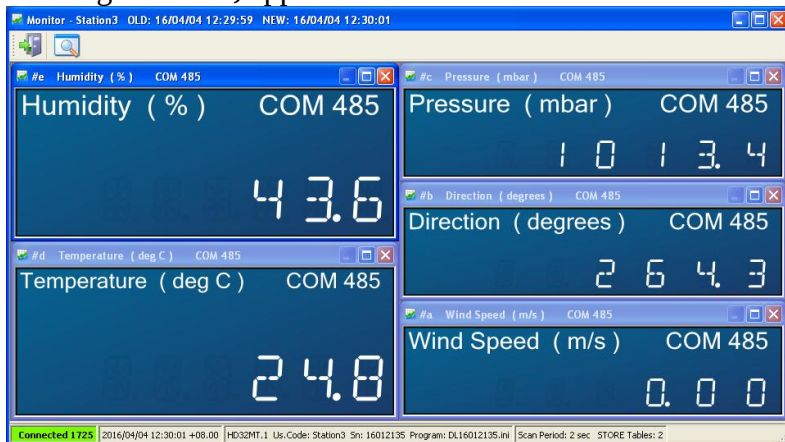
It's necessary to insert the correct Password if you desire to use *Send Program* or *User code setup* functions:

00000000 (eight zeros, default setting)

Note: if you insert a new password, you must take attention to remember it

MONITOR - SEND PROGRAM - SCHEDULING

Clicking **Monitor**, appears the Monitor of the measurements:



To change the measuring Program running on the datalogger, (see also the chapter *Programming the datalogger*, clicking the **Help**), click **Program Setup** / **RUNNING** Program:

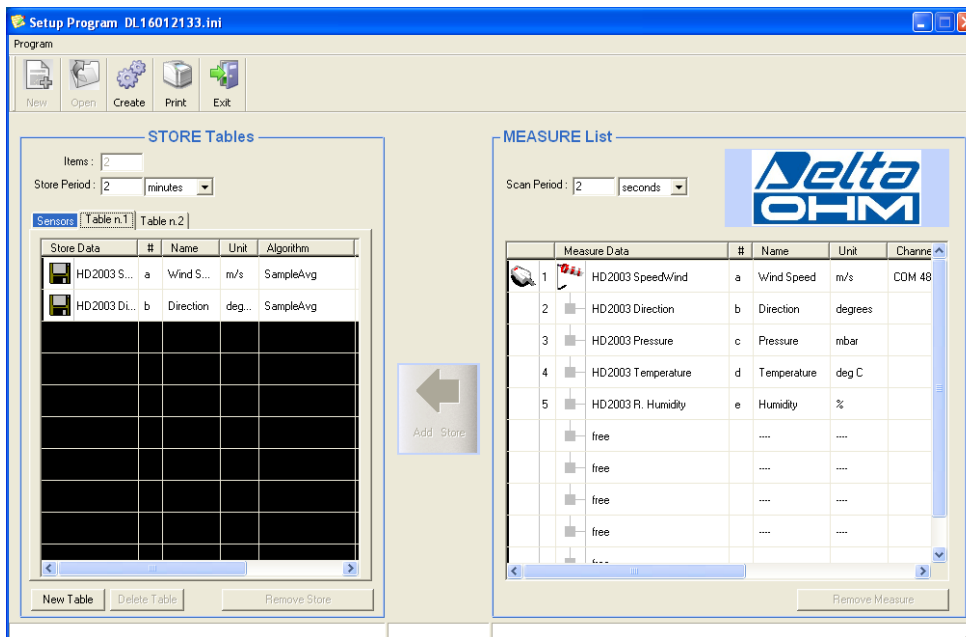


Figure 18

For example this Program has two storing tables, Table n.1 and Table n.2 (T1 and T2), the one that appears on the left shows 2 minutes of data storing of Wind Speed and Direction. When is composed a table, the quantities chosen on it, (on the example the Wind Speed and Direction), are the same that will appear together on the graphs of *HD32MTLogger* and also on *MeteoStudio* (see the below chapter *Graphical Archive of MeteoStudio*).

To send a new Program to the datalogger HD32MT.1, press the button *Send Program* and the Scheduling form appears:

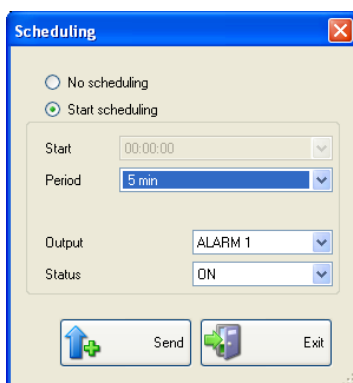


Figure 19

Start scheduling

It's possible to choose which datalogger Output ALARM (1 or 2) drives the IP MODEM power.

Choosing the Status **ON**, the modem will be always turn on (powered off only a bit after disconnection).

This is the only option available running with the software *MeteoStudio* multi stations.

Choosing the Status **SCHEDULING**, it's possible to select the moment of appointment through router and datalogger, by the *Period* 5th, 10th, 15th, 20th, 30th minute every hour. This option is used only for *HD32MTLogger* single station.

No scheduling

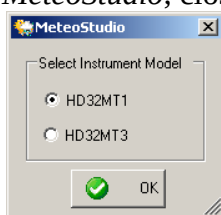
The IPMODEM is always OFF and the TCPIP Server connection is impossible. This option is necessary for Serial or RadioModem or TCPIP Client connections. If the HD32MT.1 has a running Program with *No scheduling* option, to work with TCPIP Server mode, first you must connect your PC to send to the datalogger a Scheduling Program, directly by RS232 cable to the COM PC input of HD32MT.1 and choose *Serial connection* in the above *Choice of connection type* (figure 13).

Finally, pressing *Send*, the measuring Program with the scheduling can be send to the HD32MT.1.

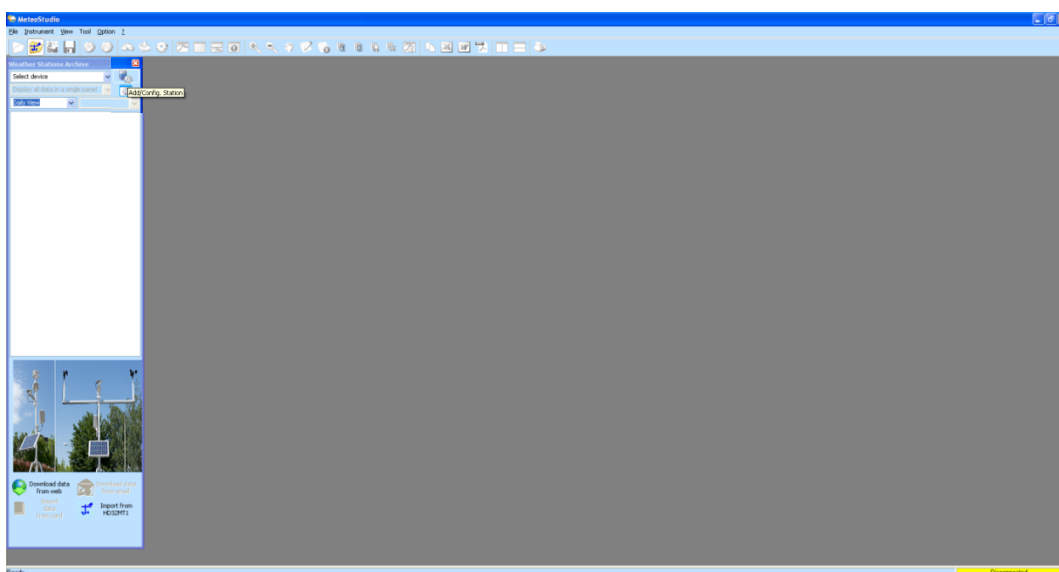
With the option *Start scheduling*, after the sending of the Program, the software disconnects the datalogger and puts the Automatic Service ENABLE (only for HD32MTLogger single station).

MeteoStudio

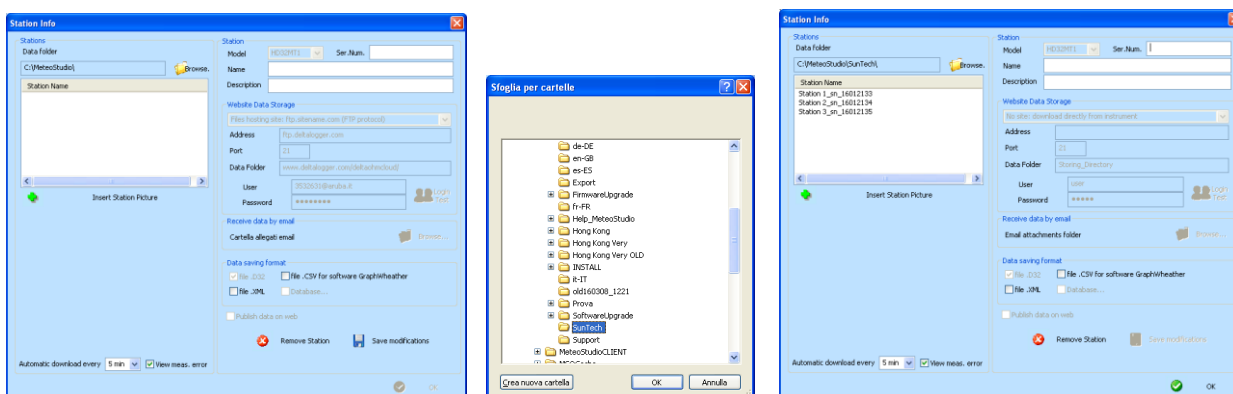
The DeltaOhm software *MeteoStudio* permits to use **multi stations** communicating. To use the *MeteoStudio*, close the *HD32MTLogger*. At the first connection, accept the HD32MT.1 datalogger:



STATIONS ARCHIVE

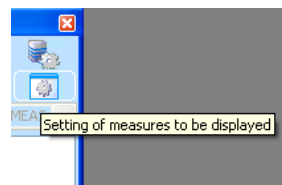


Press *File/Weather Stations* to open the **Weather Stations Archive** (if isn't open). To configure a set of Stations, press the **Add/Config Station** button on the up right side.



Press the **Browse** button, and on the \\MeteoStudio directory press the “**Crea nuova cartella**” to create a new folder with the name you desire, for example *SunTech*. Put on the **Ser. Num.** the serial number of the HD32MT.1 of the station, and put on the **Name**, the name of this station, for example *Station 1*. Press **Save modifications**. Repeat for all the stations you need. For every station you can add a picture with *Insert Station Picture* (.bmp max 210x210 pixel). The settings *Description*, *file .XML*, *file .CSV.*, *Automatic download every*, aren't important. Press **OK**.

Press the button **Setting of measures to be displayed**



Appears the form where you can select the *Time Zone*, with the selection **Use local time**, viewing for all the graphs:

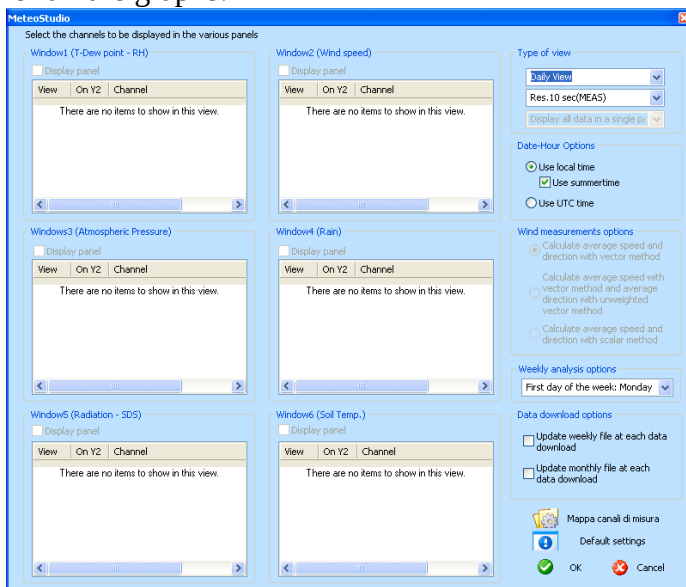
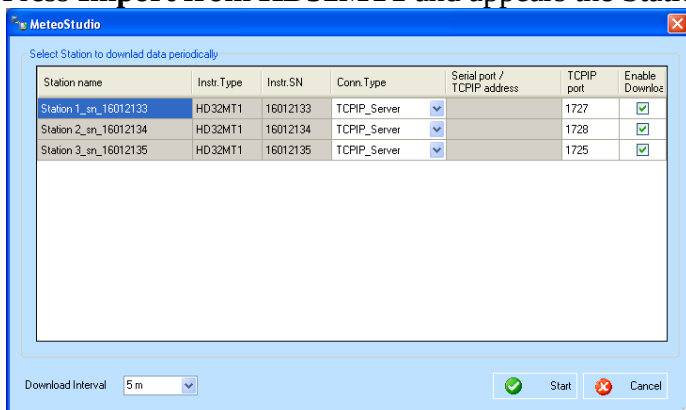


Figure 20

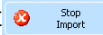
See the chapter **UTC Offset** of the HD32.D Display.
Press OK.

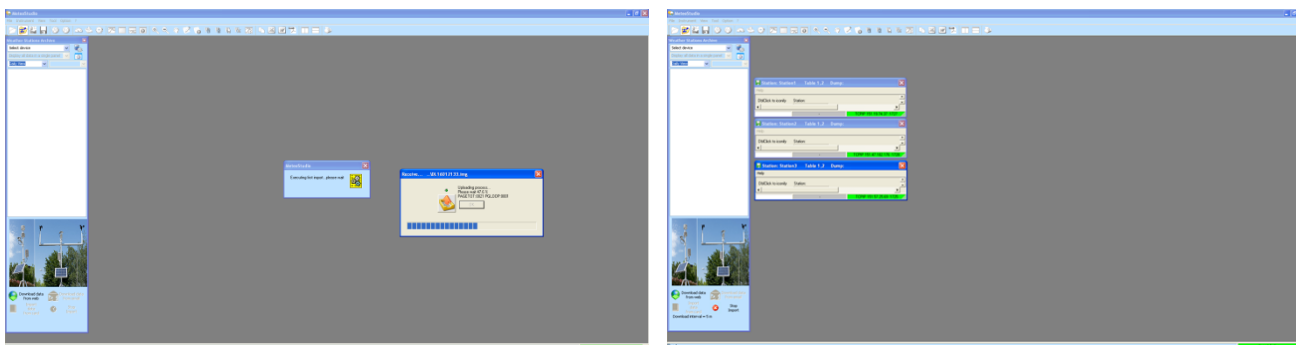
HD32MT.1 MULTI STATIONS COMMUNICATION

Press **Import from HD32MT1** and appears the Stations configured on the above *Stations Archive*:



For every station choose the **Conn. Type** (serial RS232/485 or TCP/IP Client or TCP/IP Server). Then the serial port or the address (if are necessary) and the TCP/IP port (if necessary). Click the **Enable download** of the station you desire to connect. Choose the **Download interval** through which the data coming from the stations, are memorized on the \\MeteoStudio\SunTech directory of PC.

Press **Start** to run all the software Clients that communicate whit the stations and starts the dumping of the data. Wait until all the stations are connected and **Stop Import**  appears:



Every Client is independent, it's able to connect to its station, to reconnect the station if its communication fails, to dump the data from its storing Tables. On the above example there are three clients running.

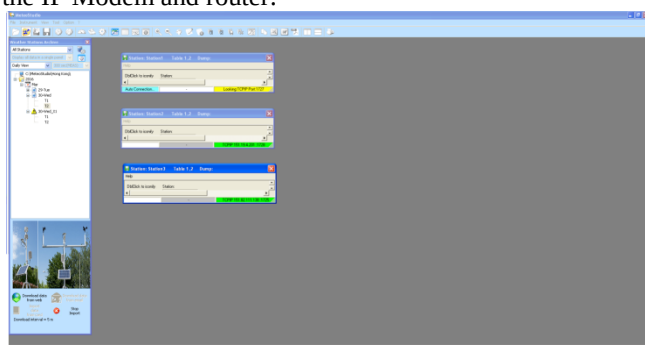
To finish the dumping of the data, press **Stop Import** and all the Clients will be closed.

Note:

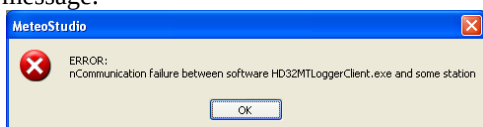
For a single client is not possible to close it manually.

If the MeteoStudio crashes and it is closed with some clients at service, please wait until all the clients automatically close themselves, before to run again the MeteoStudio.

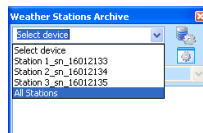
If some client aren't able to connect to them station, because there are problems on the line of communication through the IP Modem and router:



So the MeteoStudio waits 5 minutes of timeout until to free the button  and informs of the problem with this message:



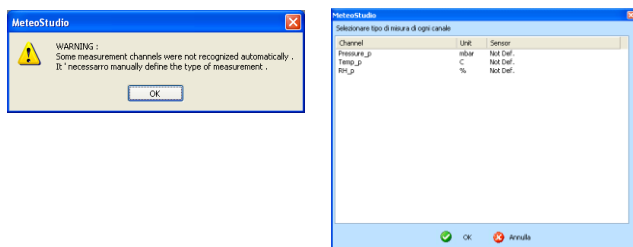
From the Weather Stations Archive, (with the clients communicating with stations or not), select a single station by its Name or **All Stations** option:



Then appears a tree with year/month and day and all the Tables coming from the stations, for example T1 and T2 (see the above chap. *Monitor-Send Program -Scheduling of HD32MTLogger*)



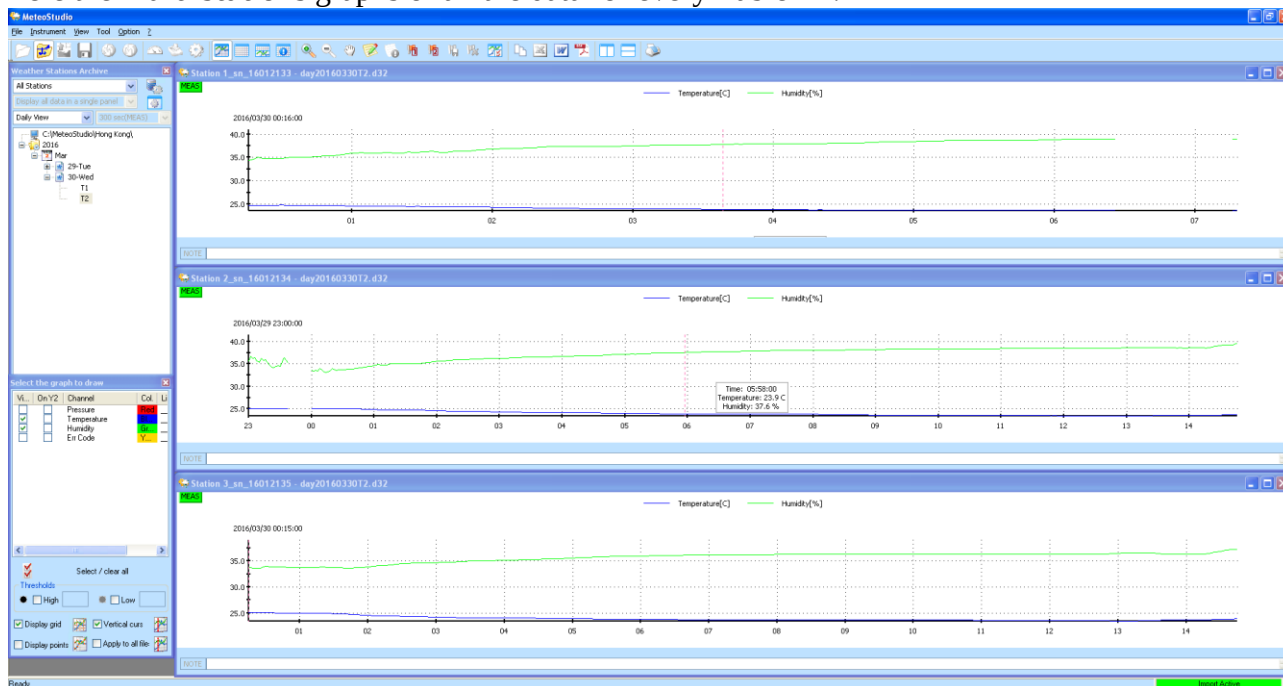
Double click for example over T2 and only first will appear the message about the type of measurements and sensors, press OK:



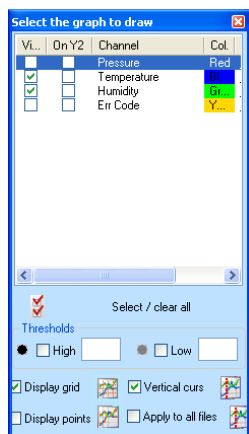
Note:

The quantities on a table, are already chosen to stay together, during the composing of the Table (see the above Fig.18 chapter Monitor-Send Program-Scheduling), and there is no necessity to specify the type of sensor or the unit.

Here the **multi stations** graphs of all the data for every Table T2:



To choose the format of every graph, use the window **Select the graph to draw**, station by station:



To close all the graphs opened:



HD32.D Display



When the IP MODEM isn't running with *MeteoStudio* or *HD32MTLogger* connected, press the **ESC** button in the HD32.D Display.

After the *WAITING FOR..* status, the Display show all the sensors measurements.

When the IP MODEM is running, after a timeout, the Display stops all measures and goes to mode switch OFF.

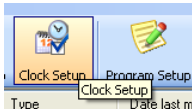
Note:

If the Display shows some *WAITING MEASURE*, press *ESC* and wait a new re-connection.

With *MeteoStudio* or *HD32MTLogger* connected to the IP Modem, the Led *On-Line* of the modem is green fixed, and the HD32.D Display shows *BYPASS MODE ACTIVATED*.

UTC OFFSET

If the **HD32.D Display** is equipped with **GPS** sensor, the Clock of the datalogger is adjusted from the HD32.D Display and is always set to the **UTC time**.

Do not change the HD32MT.1 clock with the button  of the HD2MTLogger.

All the data on the graph of *MeteoStudio* can be relative to a specific *Time Zone*. To set this, you must change the **UTC OFFS** of the HD32.D Display:



When the Display is showing measurements, after pressing **ESC**, immediately press the down arrow until **SELECT UTC OFFS** appears and then press **ENTER**. After, adjust your Time Zone with the Up/Down arrows and press ENTER (see the above Figure 20 chapter Stations Archive).